

# **Northern Region - DJ Basin**

**Wells Ranch**

**BB Section 07**

**SLW Ranch State BB07-685**

**Original Drilling**

**Plan 1**

## **Anticollision Report**

**02 October, 2017**



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>	Plan 1		
<b>Filter type:</b>	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
<b>Interpolation Method:</b>	Stations	<b>Error Model:</b>	ISCWSA
<b>Depth Range:</b>	Unlimited	<b>Scan Method:</b>	Closest Approach 3D
<b>Results Limited by:</b>	Maximum center-center distance of 10,000.0 ft	<b>Error Surface:</b>	Pedal Curve
<b>Warning Levels Evaluated at:</b>	2.00 Sigma	<b>Casing Method:</b>	Not applied

<b>Survey Tool Program</b>	<b>Date</b>	10/2/2017		
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.0	18,342.5	Plan 1 (Original Drilling)	2_MWD+IFR1+MS	A008Mb: IFR dec & multi-station analysis

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
B Section 12						
SLW Ranch B12-62-1HN - Original Drilling - As Drilled	5,766.4	10,779.0	4,617.5	4,487.0	35.399	CC
SLW Ranch B12-62-1HN - Original Drilling - As Drilled	5,800.0	10,779.0	4,617.6	4,486.8	35.308	ES
SLW Ranch B12-62-1HN - Original Drilling - As Drilled	6,450.0	10,779.0	4,673.8	4,537.8	34.357	SF
SLW Ranch B12-63-1HN - Original Drilling - As Drilled	5,924.8	10,812.0	3,940.5	3,807.8	29.705	CC
SLW Ranch B12-63-1HN - Original Drilling - As Drilled	6,000.0	10,812.0	3,941.2	3,807.7	29.520	ES
SLW Ranch B12-63-1HN - Original Drilling - As Drilled	6,450.0	10,812.0	3,981.4	3,843.8	28.929	SF
SLW Ranch B12-64-1HN - Original Drilling - As Drilled	6,142.5	10,993.0	3,349.1	3,215.6	25.072	CC
SLW Ranch B12-64-1HN - Original Drilling - As Drilled	6,200.0	10,993.0	3,349.6	3,215.3	24.937	ES
SLW Ranch B12-64-1HN - Original Drilling - As Drilled	6,500.0	10,993.0	3,377.1	3,239.7	24.583	SF
SLW Ranch B12-65-1HN - Original Drilling - As Drilled	6,270.6	10,974.0	2,677.2	2,598.4	33.948	CC
SLW Ranch B12-65-1HN - Original Drilling - As Drilled	6,278.6	10,974.0	2,677.2	2,598.3	33.919	ES
SLW Ranch B12-65-1HN - Original Drilling - As Drilled	6,550.0	10,974.0	2,704.5	2,623.7	33.483	SF
SLW Ranch B12-65HN - Original Drilling - As Drilled	6,332.7	10,992.0	2,126.1	2,047.3	26.980	CC
SLW Ranch B12-65HN - Original Drilling - As Drilled	6,350.0	10,992.0	2,126.2	2,047.2	26.922	ES
SLW Ranch B12-65HN - Original Drilling - As Drilled	6,550.0	10,992.0	2,142.8	2,062.3	26.615	SF
SLW Ranch B12-66-1HN - Original Drilling - As Drilled	6,403.2	11,132.0	1,817.9	1,737.7	22.663	CC, ES
SLW Ranch B12-66-1HN - Original Drilling - As Drilled	6,600.0	11,132.0	1,833.5	1,751.3	22.320	SF
SLW Ranch B12-67-1HN - Original Drilling - Original Drill	6,521.7	11,248.0	1,215.8	1,081.3	9.040	CC
SLW Ranch B12-67-1HN - Original Drilling - Original Drill	6,550.0	11,248.0	1,216.3	1,081.0	8.989	ES
SLW Ranch B12-67-1HN - Original Drilling - Original Drill	6,650.0	11,248.0	1,225.6	1,088.3	8.926	SF
SLW Ranch B12-79HN - Original Drilling - As Drilled	6,500.3	11,130.2	5,126.0	5,023.6	50.039	CC, ES
SLW Ranch B12-79HN - Original Drilling - As Drilled	6,700.0	11,204.3	5,166.6	5,062.1	49.425	SF
SLW Ranch B13-69HN - Original Drilling - As Drilled	5,696.6	10,833.0	4,832.8	4,702.0	36.960	CC
SLW Ranch B13-69HN - Original Drilling - As Drilled	5,700.0	10,833.0	4,832.8	4,702.0	36.951	ES
SLW Ranch B13-69HN - Original Drilling - As Drilled	6,450.0	10,833.0	4,897.1	4,760.4	35.818	SF
Thomson B12-12 - Wellbore #1 - Wellbore #1	6,355.7	5,914.8	5,120.8	5,075.9	114.155	CC, ES
Thomson B12-12 - Wellbore #1 - Wellbore #1	6,700.0	6,185.8	5,218.0	5,171.2	111.283	SF
Trebor B12-05 - Wellbore #1 - As Drilled	6,383.2	5,996.0	4,417.8	4,371.4	95.071	CC, ES
Trebor B12-05 - Wellbore #1 - As Drilled	6,650.0	6,327.7	4,477.0	4,428.6	92.467	SF
Trebor B12-06 - Wellbore #1 - As Drilled	6,386.9	6,024.9	3,234.1	3,188.9	71.552	CC, ES
Trebor B12-06 - Wellbore #1 - As Drilled	6,650.0	6,340.3	3,293.9	3,246.7	69.842	SF
Trebor B12-07 - Wellbore #1 - As Drilled	6,341.6	6,007.8	2,263.2	2,217.9	50.006	CC
Trebor B12-07 - Wellbore #1 - As Drilled	6,350.0	6,015.8	2,263.2	2,217.9	49.935	ES
Trebor B12-07 - Wellbore #1 - As Drilled	6,550.0	6,220.7	2,295.9	2,249.1	49.079	SF
Trebor B12-19 - Wellbore #1 - As Drilled	6,418.2	6,076.9	3,728.5	3,683.2	82.357	CC, ES
Trebor B12-19 - Wellbore #1 - As Drilled	6,650.0	6,277.9	3,778.1	3,731.4	80.877	SF
Trebor B12-8 - Wellbore #1 - As Drilled	4,817.2	4,637.5	1,378.6	1,344.8	40.720	CC

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
B Section 12						
Trebor B12-8 - Wellbore #1 - As Drilled	4,900.0	4,714.2	1,379.0	1,344.5	39.981	ES
Trebor B12-8 - Wellbore #1 - As Drilled	6,350.0	6,029.6	1,515.6	1,470.2	33.320	SF



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<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
BB Section 06						
Skurich-Roth 21-06 - Original Drilling - Original Drilling - A	9,070.8	6,670.8	4,924.6	4,863.8	80.933	CC
Skurich-Roth 21-06 - Original Drilling - Original Drilling - A	9,100.0	6,670.6	4,924.7	4,863.6	80.592	ES
Skurich-Roth 21-06 - Original Drilling - Original Drilling - A	11,500.0	6,661.7	5,489.2	5,408.1	67.710	SF
Skurich-Roth 23-06 - Original Drilling - Original Drilling - A	9,109.0	6,713.0	2,353.3	2,292.1	38.439	CC, ES
Skurich-Roth 23-06 - Original Drilling - Original Drilling - A	9,700.0	6,737.5	2,426.1	2,360.1	36.746	SF
Skurich-Roth 24-06 - Original Drilling - Original Drilling - A	9,064.2	6,644.7	1,051.3	990.4	17.277	CC, ES
Skurich-Roth 24-06 - Original Drilling - Original Drilling - A	9,200.0	6,645.1	1,060.0	998.1	17.115	SF
Skurich-Roth 33-06 - Original Drilling - Original Drilling - A	10,344.0	6,703.5	2,300.8	2,227.4	31.353	CC, ES
Skurich-Roth 33-06 - Original Drilling - Original Drilling - A	10,900.0	6,687.2	2,366.9	2,288.5	30.219	SF
Skurich-Roth 42-06 - Original Drilling - Original Drilling - A	11,625.6	6,715.2	3,605.1	3,517.5	41.171	CC
Skurich-Roth 42-06 - Original Drilling - Original Drilling - A	11,700.0	6,716.8	3,605.9	3,517.4	40.781	ES
Skurich-Roth 42-06 - Original Drilling - Original Drilling - A	12,600.0	6,735.6	3,734.1	3,637.3	38.588	SF
Skurich-Roth 6D - Original Drilling - Original Drilling - As	8,613.4	6,553.5	4,302.7	4,245.9	75.769	CC, ES
Skurich-Roth 6D - Original Drilling - Original Drilling - As	10,600.0	6,501.1	4,737.7	4,665.3	65.422	SF
Skurich-Rothe 11-06 - Original Drilling - Original Drilling -	7,789.9	6,651.0	4,970.4	4,906.3	77.550	CC
Skurich-Rothe 11-06 - Original Drilling - Original Drilling -	7,800.0	6,651.0	4,970.4	4,906.3	77.496	ES
Skurich-Rothe 11-06 - Original Drilling - Original Drilling -	10,300.0	6,650.7	5,566.2	5,484.6	68.193	SF
Skurich-Rothe 12-06 - Original Drilling - Original Drilling -	7,867.0	6,611.2	3,702.8	3,650.8	71.160	CC
Skurich-Rothe 12-06 - Original Drilling - Original Drilling -	7,900.0	6,611.4	3,703.0	3,650.8	70.942	ES
Skurich-Rothe 12-06 - Original Drilling - Original Drilling -	9,500.0	6,620.1	4,046.0	3,983.3	64.546	SF
Skurich-Rothe 13-06 - Original Drilling - Original Drilling -	7,745.4	6,611.8	2,375.7	2,322.0	44.241	CC, ES
Skurich-Rothe 13-06 - Original Drilling - Original Drilling -	8,300.0	6,606.5	2,439.4	2,382.9	43.173	SF
Skurich-Rothe 14-06 - Original Drilling - Original Drilling -	7,826.9	6,643.2	1,040.7	988.8	20.055	CC, ES
Skurich-Rothe 14-06 - Original Drilling - Original Drilling -	7,900.0	6,646.9	1,043.3	991.1	19.989	SF
Skurich-Rothe 22-06 - Original Drilling - Original Drilling -	9,052.4	6,601.6	3,425.4	3,364.7	56.471	CC
Skurich-Rothe 22-06 - Original Drilling - Original Drilling -	9,100.0	6,601.3	3,425.7	3,364.6	56.086	ES
Skurich-Rothe 22-06 - Original Drilling - Original Drilling -	10,300.0	6,592.8	3,644.9	3,574.0	51.395	SF
Skurich-Rothe 31-06 - Original Drilling - Original Drilling -	10,293.5	6,868.8	4,934.4	4,861.2	67.375	CC
Skurich-Rothe 31-06 - Original Drilling - Original Drilling -	10,300.0	6,868.8	4,934.4	4,861.1	67.313	ES
Skurich-Rothe 31-06 - Original Drilling - Original Drilling -	12,400.0	6,853.7	5,363.7	5,271.7	58.323	SF
Skurich-Rothe 34-06 - Original Drilling - Original Drilling -	10,346.1	6,676.2	1,035.5	962.1	14.111	CC, ES
Skurich-Rothe 34-06 - Original Drilling - Original Drilling -	10,500.0	6,676.3	1,046.8	972.1	14.014	SF
Skurich-Rothe 41-06 - Original Drilling - Original Drilling -	11,661.0	6,760.6	4,950.8	4,862.6	56.132	CC
Skurich-Rothe 41-06 - Original Drilling - Original Drilling -	11,700.0	6,762.4	4,951.0	4,862.3	55.844	ES
Skurich-Rothe 41-06 - Original Drilling - Original Drilling -	13,500.0	6,843.6	5,279.5	5,174.0	50.043	SF
Skurich-Rothe 43-06 - Original Drilling - Original Drilling -	11,527.7	6,711.5	2,431.9	2,345.4	28.140	CC, ES
Skurich-Rothe 43-06 - Original Drilling - Original Drilling -	12,000.0	6,734.5	2,477.2	2,386.2	27.230	SF
Skurich-Rothe 44-06 - Original Drilling - Original Drilling -	11,659.4	6,728.9	1,135.3	1,047.1	12.870	CC, ES
Skurich-Rothe 44-06 - Original Drilling - Original Drilling -	11,800.0	6,729.0	1,143.9	1,054.4	12.779	SF
Skurich-Rothe 6A - Original Drilling - Original Drilling - As	11,067.0	6,683.1	1,734.0	1,652.8	21.351	CC
Skurich-Rothe 6A - Original Drilling - Original Drilling - As	11,100.0	6,683.1	1,734.3	1,652.7	21.257	ES
Skurich-Rothe 6A - Original Drilling - Original Drilling - As	11,300.0	6,683.5	1,749.6	1,666.1	20.956	SF
Skurich-Rothe 32-06 - Original Drilling - Original Drilling -	10,326.3	6,660.0	3,683.3	3,500.0	20.095	CC
Skurich-Rothe 32-06 - Original Drilling - Original Drilling -	10,400.0	6,660.0	3,684.0	3,500.0	20.013	ES
Skurich-Rothe 32-06 - Original Drilling - Original Drilling -	11,000.0	6,660.0	3,744.2	3,554.3	19.708	SF
SLW Ranch State BB06-619 - Original Drilling - Prelim	7,492.1	7,550.0	974.7	920.6	17.995	CC
SLW Ranch State BB06-619 - Original Drilling - Prelim	12,600.0	12,647.1	1,020.0	871.2	6.853	ES
SLW Ranch State BB06-619 - Original Drilling - Prelim	12,700.0	12,703.9	1,021.7	871.4	6.797	SF
SLW Ranch State BB06-631 - Original Drilling - Plan 1	12,664.6	12,395.3	1,801.2	1,650.8	11.980	CC, ES
SLW Ranch State BB06-631 - Original Drilling - Plan 1	12,800.0	12,386.9	1,806.6	1,655.4	11.947	SF
SLW Ranch State BB06-642 - Original Drilling - Plan 1	12,667.7	12,376.0	2,486.3	2,336.2	16.573	CC
SLW Ranch State BB06-642 - Original Drilling - Plan 1	12,700.0	12,369.1	2,486.5	2,336.2	16.546	ES
SLW Ranch State BB06-642 - Original Drilling - Plan 1	12,900.0	12,369.1	2,497.2	2,345.3	16.435	SF

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



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<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
BB Section 06						
SLW Ranch State BB06-652 - Original Drilling - Plan 1	12,672.2	12,150.9	3,104.3	2,954.3	20.690	CC
SLW Ranch State BB06-652 - Original Drilling - Plan 1	12,700.0	12,150.9	3,104.4	2,954.1	20.646	ES
SLW Ranch State BB06-652 - Original Drilling - Plan 1	13,100.0	12,150.9	3,133.6	2,979.7	20.369	SF
SLW Ranch State BB06-662 - Original Drilling - Plan 1	12,681.4	12,150.2	3,776.0	3,625.2	25.046	CC
SLW Ranch State BB06-662 - Original Drilling - Plan 1	12,700.0	12,150.2	3,776.1	3,625.1	25.008	ES
SLW Ranch State BB06-662 - Original Drilling - Plan 1	13,300.0	12,150.2	3,826.2	3,669.7	24.441	SF
SLW Ranch State BB06-672 - Original Drilling - Plan 1	4,399.3	3,100.0	4,220.7	4,194.3	160.050	CC
SLW Ranch State BB06-672 - Original Drilling - Plan 1	4,400.0	3,100.0	4,220.7	4,194.3	160.036	ES
SLW Ranch State BB06-672 - Original Drilling - Plan 1	13,500.0	12,492.6	4,496.2	4,336.9	28.222	SF
SLW Ranch State BB06-682 - SLW Ranch State BB06-6	4,174.4	2,852.8	4,306.2	4,281.7	175.475	CC
SLW Ranch State BB06-682 - SLW Ranch State BB06-6	4,200.0	2,863.0	4,306.3	4,281.6	174.550	ES
SLW Ranch State BB06-682 - SLW Ranch State BB06-6	13,800.0	12,588.5	5,185.7	5,023.0	31.860	SF



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## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

### Summary

Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
<b>Offset Well - Wellbore - Design</b>						
BB Section 07						
Skurich 11-07 - Original Drilling - Original Drilling - As Dri	7,715.2	6,613.5	276.2	225.1	5.404	CC, ES, SF
Skurich 13-07 - Original Drilling - Original Drilling - As Dri	1,580.5	1,527.5	2,012.5	2,001.9	189.675	CC
Skurich 13-07 - Original Drilling - Original Drilling - As Dri	2,000.0	1,934.5	2,013.4	1,999.8	148.820	ES
Skurich 13-07 - Original Drilling - Original Drilling - As Dri	8,700.0	6,639.8	3,268.6	3,211.0	56.694	SF
Skurich 21-07 - Original Drilling - Original Drilling - As Dri	8,997.5	6,639.9	299.3	239.1	4.970	CC
Skurich 21-07 - Original Drilling - Original Drilling - As Dri	9,000.0	6,640.0	299.4	239.1	4.969	ES, SF
Skurich 33-07 - Original Drilling - Original Drilling - As Dri	2,200.0	2,175.0	2,180.4	2,129.3	42.625	CC
Skurich 23-07 - Original Drilling - Original Drilling - As Dri	2,300.0	2,275.0	2,182.1	2,128.6	40.780	ES
Skurich 23-07 - Original Drilling - Original Drilling - As Dri	9,400.0	6,647.0	3,013.8	2,840.3	17.379	SF
Skurich 33-07 - Original Drilling - Original Drilling - As Dri	10,314.7	6,656.6	2,879.7	2,806.7	39.436	CC, ES
Skurich 33-07 - Original Drilling - Original Drilling - As Dri	11,000.0	6,650.2	2,960.3	2,881.4	37.524	SF
Skurich 43-07 - Original Drilling - Original Drilling - As Drill	11,639.5	6,584.9	3,184.7	3,097.6	36.561	CC
Skurich 43-07 - Original Drilling - Original Drilling - As Drill	11,700.0	6,590.6	3,185.3	3,097.5	36.280	ES
Skurich 43-07 - Original Drilling - Original Drilling - As Drill	12,400.0	6,622.1	3,274.3	3,180.2	34.816	SF
Skurich-SLW 7B - Original Drilling - Original Drilling - As	1,615.6	1,593.6	2,607.0	2,596.1	238.118	CC
Skurich-SLW 7B - Original Drilling - Original Drilling - As	2,000.0	1,960.4	2,608.4	2,594.8	191.698	ES
Skurich-SLW 7B - Original Drilling - Original Drilling - As	9,800.0	6,630.7	4,015.3	3,947.6	59.303	SF
Skurich-SLW 7D - Original Drilling - Original Drilling - As	2,200.0	2,178.0	634.7	583.5	12.394	CC
Skurich-SLW 7D - Original Drilling - Original Drilling - As	2,300.0	2,278.0	635.9	582.3	11.871	ES
Skurich-SLW 7D - Original Drilling - Original Drilling - As	8,500.0	6,650.0	1,012.2	846.1	6.093	SF
Skurich-SLW Ranch 7A - Original Drilling - Original Drilling	10,897.0	6,726.5	3,820.4	3,740.8	47.968	CC
Skurich-SLW Ranch 7A - Original Drilling - Original Drilling	10,900.0	6,726.4	3,820.4	3,740.7	47.949	ES
Skurich-SLW Ranch 7A - Original Drilling - Original Drilling	13,500.0	13,500.0	4,623.7	4,504.9	38.923	SF
SLW Ranch 12-07 - Original Drilling - Original Drilling - A	2,331.6	2,317.4	639.6	623.5	39.839	CC
SLW Ranch 12-07 - Original Drilling - Original Drilling - A	2,400.0	2,383.2	639.9	623.4	38.722	ES
SLW Ranch 12-07 - Original Drilling - Original Drilling - A	3,300.0	3,244.2	717.5	694.7	31.497	SF
SLW Ranch 14-07 - Original Drilling - Original Drilling - A	100.0	52.3	3,325.4	3,325.2	10,000.000	CC
SLW Ranch 14-07 - Original Drilling - Original Drilling - A	2,200.0	2,157.6	3,329.4	3,314.3	221.660	ES
SLW Ranch 14-07 - Original Drilling - Original Drilling - A	8,300.0	6,690.1	4,440.9	4,270.1	25.998	SF
SLW Ranch 22-07 - Original Drilling - Original Drilling - A	100.0	77.0	1,219.0	1,218.8	4,678.085	CC
SLW Ranch 22-07 - Original Drilling - Original Drilling - A	2,300.0	2,305.8	1,221.9	1,206.0	76.944	ES
SLW Ranch 22-07 - Original Drilling - Original Drilling - A	9,200.0	6,682.1	1,649.9	1,588.1	26.711	SF
SLW Ranch 24-07 - Original Drilling - Original Drilling - A	1,775.9	1,737.9	3,607.7	3,595.7	299.749	CC
SLW Ranch 24-07 - Original Drilling - Original Drilling - A	2,100.0	2,036.3	3,609.3	3,595.0	253.568	ES
SLW Ranch 24-07 - Original Drilling - Original Drilling - A	13,500.0	13,500.0	6,448.4	6,344.1	61.851	SF
SLW Ranch 31-07 - Original Drilling - Original Drilling - A	10,201.5	6,662.3	316.1	244.2	4.398	CC, ES, SF
SLW Ranch 32-07 - Original Drilling - Original Drilling - A	10,030.0	6,652.4	1,517.1	1,447.1	21.667	CC, ES
SLW Ranch 32-07 - Original Drilling - Original Drilling - A	10,200.0	6,653.5	1,526.6	1,455.1	21.359	SF
SLW Ranch 34-07 - Original Drilling - Original Drilling - A	1,754.4	1,749.4	4,279.4	4,267.4	356.683	CC
SLW Ranch 34-07 - Original Drilling - Original Drilling - A	1,900.0	1,865.6	4,279.9	4,267.0	331.137	ES
SLW Ranch 34-07 - Original Drilling - Original Drilling - A	12,100.0	6,675.7	4,899.1	4,810.6	55.351	SF
SLW Ranch 41-07 - Original Drilling - Original Drilling - A	11,608.4	6,664.1	299.2	212.0	3.432	CC, ES, SF
SLW Ranch 42-07 - Original Drilling - Original Drilling - A	11,545.9	6,689.6	1,662.4	1,575.7	19.176	CC, ES
SLW Ranch 42-07 - Original Drilling - Original Drilling - A	11,800.0	6,689.7	1,681.7	1,593.0	18.951	SF
SLW Ranch 44-07 - Original Drilling - Original Drilling - A	11,574.1	6,704.1	4,656.1	4,569.0	53.501	CC
SLW Ranch 44-07 - Original Drilling - Original Drilling - A	11,600.0	6,703.5	4,656.1	4,568.8	53.329	ES
SLW Ranch 44-07 - Original Drilling - Original Drilling - A	13,100.0	6,665.3	4,900.4	4,799.9	48.790	SF
SLW Ranch BB07-79HNL - Original Drilling - APD - Rev	6,954.5	11,467.1	5.3	-9.4	0.360	Level 1, CC, ES, SF
SLW Ranch State BB06-690 - Original Drilling - Plan 1	2,000.0	2,000.0	21.9	8.0	1.576	CC, ES, SF
SLW Ranch State BB07-615 - Original Drilling - Plan 1	2,000.0	1,985.0	2,485.3	2,471.4	179.842	CC, ES
SLW Ranch State BB07-615 - Original Drilling - Plan 1	18,342.5	17,978.2	4,948.9	4,664.8	17.415	SF
SLW Ranch State BB07-621 - Original Drilling - Plan 1	2,200.0	2,185.0	2,464.5	2,449.3	161.577	CC, ES
SLW Ranch State BB07-621 - Original Drilling - Plan 1	18,300.0	17,808.9	4,593.2	4,310.0	16.222	SF

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
BB Section 07						
SLW Ranch State BB07-627 - Original Drilling - Plan 1	2,200.0	2,185.0	2,440.4	2,425.1	159.994	CC
SLW Ranch State BB07-627 - Original Drilling - Plan 1	2,300.0	2,285.0	2,441.0	2,425.0	152.880	ES
SLW Ranch State BB07-627 - Original Drilling - Plan 1	18,200.0	17,892.1	4,182.8	3,900.3	14.803	SF
SLW Ranch State BB07-633 - Original Drilling - Plan 1	2,200.0	2,184.0	2,419.7	2,404.5	158.676	CC, ES
SLW Ranch State BB07-633 - Original Drilling - Plan 1	18,100.0	17,701.3	3,738.5	3,457.4	13.297	SF
SLW Ranch State BB07-639 - Original Drilling - Plan 1	2,200.0	2,184.0	2,398.1	2,382.9	157.261	CC, ES
SLW Ranch State BB07-639 - Original Drilling - Plan 1	18,100.0	17,875.1	3,389.7	3,108.0	12.033	SF
SLW Ranch State BB07-646 - Original Drilling - Plan 1	2,784.0	2,932.8	2,357.9	2,337.9	118.075	CC
SLW Ranch State BB07-646 - Original Drilling - Plan 1	2,800.0	2,948.7	2,357.9	2,337.8	117.398	ES
SLW Ranch State BB07-646 - Original Drilling - Plan 1	18,000.0	17,723.1	2,924.2	2,644.1	10.441	SF
SLW Ranch State BB07-650 - Original Drilling - Plan 1	6,167.8	6,664.6	2,211.1	2,163.1	46.048	CC
SLW Ranch State BB07-650 - Original Drilling - Plan 1	6,200.0	6,678.5	2,211.3	2,163.1	45.836	ES
SLW Ranch State BB07-650 - Original Drilling - Plan 1	18,000.0	17,821.5	2,508.1	2,227.9	8.952	SF
SLW Ranch State BB07-653 - Original Drilling - Plan 1	2,200.0	2,198.0	113.0	97.7	7.384	CC, ES
SLW Ranch State BB07-653 - Original Drilling - Plan 1	2,300.0	2,296.1	114.8	98.8	7.181	SF
SLW Ranch State BB07-660 - Original Drilling - Plan 1	2,200.0	2,201.0	91.1	75.8	5.951	CC, ES
SLW Ranch State BB07-660 - Original Drilling - Plan 1	17,900.0	17,949.8	1,597.2	1,317.5	5.710	SF
SLW Ranch State BB07-668 - Original Drilling - Plan 1	2,200.0	2,201.0	69.3	54.0	4.524	CC, ES
SLW Ranch State BB07-668 - Original Drilling - Plan 1	17,900.0	17,855.0	1,115.6	836.9	4.003	SF
SLW Ranch State BB07-673 - Original Drilling - Plan 1	2,200.0	2,201.0	47.4	32.1	3.099	CC, ES
SLW Ranch State BB07-673 - Original Drilling - Plan 1	17,900.0	17,903.3	723.0	443.9	2.590	SF
SLW Ranch State BB07-678 - Original Drilling - Plan 1	2,200.0	2,200.0	25.5	10.2	1.666	CC, ES
SLW Ranch State BB07-678 - Original Drilling - Plan 1	17,900.0	17,883.7	427.0	152.2	1.554	SF



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

### Summary

Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
BB Section 08						
State 11-08 - Original Drilling - Original Drilling - As Drille	12,921.4	6,692.0	257.6	44.5	1.209	Level 3, CC, ES, SF
State 5519 08-34 - Original Drilling - Original Drilling - As	15,507.0	6,758.9	4,482.1	4,348.6	33.582	CC
State 5519 08-34 - Original Drilling - Original Drilling - As	15,600.0	6,760.1	4,483.1	4,348.5	33.320	ES
State 5519 08-34 - Original Drilling - Original Drilling - As	16,500.0	6,771.3	4,591.1	4,448.6	32.216	SF
State 5519 08-43 - Original Drilling - Original Drilling - As	16,866.2	6,652.0	3,361.0	3,211.6	22.506	CC
State 5519 08-43 - Original Drilling - Original Drilling - As	16,900.0	6,653.2	3,361.1	3,211.4	22.447	ES
State 5519 08-43 - Original Drilling - Original Drilling - As	17,400.0	6,670.6	3,403.1	3,248.9	22.070	SF
State 5519 12-08 - Original Drilling - Original Drilling - As	12,915.7	6,714.2	1,776.1	1,673.6	17.329	CC, ES
State 5519 12-08 - Original Drilling - Original Drilling - As	13,100.0	6,714.1	1,785.6	1,681.5	17.147	SF
State 5519 13-08 - Original Drilling - Original Drilling - As	12,794.0	6,687.0	3,090.8	2,879.2	14.612	CC
State 5519 13-08 - Original Drilling - Original Drilling - As	12,800.0	6,687.0	3,090.8	2,879.2	14.607	ES
State 5519 13-08 - Original Drilling - Original Drilling - As	13,200.0	6,687.0	3,117.4	2,901.9	14.467	SF
State 5519 14-08 - Original Drilling - Original Drilling - As	12,573.5	6,716.0	4,784.7	4,684.4	47.721	CC
State 5519 14-08 - Original Drilling - Original Drilling - As	12,600.0	6,715.6	4,784.7	4,684.2	47.583	ES
State 5519 14-08 - Original Drilling - Original Drilling - As	14,000.0	6,692.1	4,993.5	4,880.8	44.322	SF
State 5519 21-08 - Original Drilling - Original Drilling - As	14,073.3	6,747.4	645.3	529.1	5.552	CC, ES
State 5519 21-08 - Original Drilling - Original Drilling - As	14,100.0	6,747.2	645.9	529.5	5.548	SF
State 5519 23-08 - Original Drilling - Original Drilling - As	14,202.2	6,719.1	3,167.0	3,049.3	26.912	CC, ES
State 5519 23-08 - Original Drilling - Original Drilling - As	14,700.0	6,716.4	3,206.0	3,083.7	26.217	SF
State 5519 24-08 - Original Drilling - Original Drilling - As	14,079.6	6,400.0	4,787.0	4,672.5	41.792	CC
State 5519 24-08 - Original Drilling - Original Drilling - As	14,100.0	6,400.0	4,787.1	4,672.3	41.705	ES
State 5519 24-08 - Original Drilling - Original Drilling - As	15,400.0	6,562.1	4,964.9	4,837.6	38.980	SF
State 5519 31-08 - Original Drilling - Original Drilling - As	15,766.5	6,716.7	780.2	643.6	5.711	CC, ES
State 5519 31-08 - Original Drilling - Original Drilling - As	15,800.0	6,719.4	780.9	644.0	5.703	SF
State 5519 32-08 - Original Drilling - Original Drilling - As	15,487.9	6,757.1	1,876.1	1,742.9	14.082	CC
State 5519 32-08 - Original Drilling - Original Drilling - As	15,500.0	6,757.0	1,876.2	1,742.8	14.068	ES
State 5519 32-08 - Original Drilling - Original Drilling - As	15,700.0	6,754.3	1,888.1	1,753.1	13.990	SF
State 5519 33-08 - Original Drilling - Original Drilling - As	15,475.2	6,696.9	3,225.1	3,092.4	24.297	CC
State 5519 33-08 - Original Drilling - Original Drilling - As	15,500.0	6,697.0	3,225.2	3,092.2	24.245	ES
State 5519 33-08 - Original Drilling - Original Drilling - As	16,000.0	6,700.0	3,267.6	3,130.2	23.767	SF
State 5519 41-08 - Original Drilling - Original Drilling - As	16,837.0	6,746.5	268.0	118.4	1.791	CC, ES, SF
State 5519 42-08 - Original Drilling - Original Drilling - As	16,886.0	6,765.3	1,766.4	1,616.1	11.753	CC
State 5519 42-08 - Original Drilling - Original Drilling - As	16,900.0	6,765.4	1,766.5	1,616.0	11.741	ES
State 5519 42-08 - Original Drilling - Original Drilling - As	17,000.0	6,766.2	1,770.1	1,618.7	11.695	SF
State 5519 44-08 - Original Drilling - Original Drilling - As	16,739.9	6,724.4	4,695.2	4,547.0	31.679	CC
State 5519 44-08 - Original Drilling - Original Drilling - As	16,800.0	6,724.8	4,695.6	4,546.7	31.531	ES
State 5519 44-08 - Original Drilling - Original Drilling - As	17,700.0	6,731.9	4,792.7	4,635.7	30.520	SF
State 5519 8A - Original Drilling - Original Drilling - As Dr	16,006.1	6,868.6	3,861.7	3,721.6	27.572	CC, ES
State 5519 8A - Original Drilling - Original Drilling - As Dr	16,700.0	6,829.9	3,923.5	3,777.3	26.839	SF
State 5519 8D - Original Drilling - Original Drilling - As Dr	13,530.6	6,686.3	1,044.6	935.2	9.550	CC, ES
State 5519 8D - Original Drilling - Original Drilling - As Dr	13,600.0	6,685.4	1,046.9	936.9	9.522	SF
State Lease 5519 22-08 - Original Drilling - Original Drillin	14,282.6	6,799.6	1,424.7	1,305.5	11.956	CC
State Lease 5519 22-08 - Original Drilling - Original Drillin	14,300.0	6,798.5	1,424.8	1,305.5	11.939	ES
State Lease 5519 22-08 - Original Drilling - Original Drillin	14,400.0	6,792.0	1,429.5	1,309.4	11.903	SF

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

**Summary**

Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
<b>Offset Well - Wellbore - Design</b>						
BB Section 09						
70 Ranch 11-09 - Original Drilling - Original Drilling - As D	18,342.5	6,758.6	170.9	19.2	1.127	Level 2, CC, ES, SF
70 Ranch 22-09 - Original Drilling - Original Drilling - As D	18,342.5	6,709.1	1,958.9	1,813.2	13.437	CC, ES, SF
70 Ranch 31-09 - Original Drilling - Original Drilling - As D	18,100.0	18,100.0	2,626.5	2,520.5	24.786	SF
70 Ranch 31-09 - Original Drilling - Original Drilling - As D	18,342.5	6,621.7	2,391.9	2,322.9	34.674	CC, ES
70 Ranch 41-09 - Original Drilling - Original Drilling - As D	18,342.5	6,713.8	3,817.3	3,758.9	65.369	CC, ES, SF
70 Ranch 44-09 - Original Drilling - Original Drilling - As D	18,342.5	6,622.1	5,719.8	5,584.9	42.411	CC, ES, SF
70 Ranch USX BB09-05 - Original Drilling - Original Drilling	18,149.1	6,772.4	1,687.2	1,521.6	10.187	CC, ES
70 Ranch USX BB09-05 - Original Drilling - Original Drilling	18,300.0	6,780.0	1,693.9	1,527.1	10.151	SF
70 Ranch USX BB09-07 - Original Drilling - Original Drilling	18,342.5	6,704.6	2,981.4	2,870.5	26.898	CC, ES, SF
70 Ranch USX BB09-08 - Original Drilling - Original Drilling	18,342.5	6,719.4	4,172.2	4,078.3	44.429	CC, ES, SF
70 Ranch USX BB09-09 - Original Drilling - Original Drilling	18,342.5	6,728.5	4,872.2	4,752.6	40.711	CC, ES, SF
70 Ranch USX BB09-10 - Original Drilling - Original Drilling	18,342.5	6,726.9	3,852.9	3,714.9	27.904	CC, ES, SF
70 Ranch USX BB09-11 - Original Drilling - Original Drilling	18,342.5	6,765.8	3,283.6	3,123.5	20.507	CC, ES, SF
70 Ranch USX BB09-15 - Original Drilling - Original Drilling	18,342.5	6,763.7	5,025.8	4,870.2	32.304	CC, ES, SF
70 Ranch USX BB09-63HN - Original Drilling - Original Drilling	17,600.0	10,902.0	3,969.5	3,720.6	15.951	SF
70 Ranch USX BB09-63HN - Original Drilling - Original Drilling	18,342.5	10,275.6	3,918.5	3,676.7	16.203	CC, ES
70 Ranch USX BB09-99HZ - Original Drilling - Original Drilling	18,342.5	6,528.0	382.6	282.3	3.814	CC, ES, SF
National Hog Farm 13-09 - Original Drilling - Original Drilling	18,078.0	6,844.0	3,000.2	2,835.1	18.169	CC
National Hog Farm 13-09 - Original Drilling - Original Drilling	18,100.0	6,842.8	3,000.3	2,834.9	18.142	ES
National Hog Farm 13-09 - Original Drilling - Original Drilling	18,342.5	6,829.6	3,011.9	2,844.2	17.966	SF
National Hog Farm 14-09 - Original Drilling - Original Drilling	17,627.6	6,470.2	5,043.8	4,886.2	31.991	CC
National Hog Farm 14-09 - Original Drilling - Original Drilling	17,700.0	6,470.8	5,044.4	4,885.9	31.822	ES
National Hog Farm 14-09 - Original Drilling - Original Drilling	18,342.5	6,476.5	5,094.4	4,929.5	30.895	SF
National Hog Farm 21-09 - Original Drilling - Original Drilling	18,342.5	6,715.0	1,255.5	1,186.6	18.222	CC, ES, SF
National Hog Farm 24-09 - Original Drilling - Original Drilling	18,342.5	6,979.3	4,616.5	4,451.9	28.055	CC, ES, SF

<b>Offset Design</b>													Offset Site Error:	0.0 ft
B Section 12 - SLW Ranch B12-62-1HN - Original Drilling - As Drilled													Offset Well Error:	0.0 ft
Survey Program: 286-2_MWD, 7116-2_MWD														
Reference Measured Depth (ft)	Vertical Depth (ft)	Offset Measured Depth (ft)	Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	-119.39	-3,316.4	-5,888.5	6,758.3					
100.0	100.0	48.1	48.1	0.1	0.1	-119.39	-3,316.4	-5,888.5	6,758.1	6,757.9	0.21	N/A		
200.0	200.0	150.3	150.3	0.5	0.3	-119.39	-3,316.3	-5,888.5	6,758.1	6,757.3	0.74	9,119.798		
300.0	300.0	252.5	252.5	0.8	0.4	-119.39	-3,316.0	-5,888.5	6,758.0	6,756.8	1.27	5,302.947		
400.0	400.0	347.2	347.2	1.2	0.7	-119.38	-3,315.7	-5,888.6	6,758.0	6,756.1	1.90	3,551.485		
402.3	402.3	349.3	349.3	1.2	0.7	-119.38	-3,315.7	-5,888.6	6,758.0	6,756.0	1.92	3,523.189		
500.0	500.0	438.2	438.2	1.6	1.0	-119.38	-3,315.7	-5,888.7	6,758.0	6,755.4	2.58	2,621.829		
600.0	600.0	529.2	529.2	1.9	1.3	-119.38	-3,315.8	-5,888.9	6,758.2	6,755.0	3.25	2,077.953		
700.0	700.0	949.2	949.0	2.3	2.8	-119.42	-3,315.9	-5,879.0	6,756.4	6,751.3	5.07	1,332.608		
800.0	800.0	1,022.0	1,021.7	2.6	3.1	-119.44	-3,315.9	-5,875.3	6,752.0	6,746.3	5.69	1,187.628		
900.0	900.0	1,086.4	1,086.0	3.0	3.3	-119.45	-3,316.2	-5,872.3	6,748.2	6,741.9	6.27	1,075.898		
1,000.0	1,000.0	1,148.4	1,148.0	3.4	3.5	-119.47	-3,316.3	-5,869.8	6,744.9	6,738.0	6.85	984.510		
1,100.0	1,100.0	1,262.6	1,262.0	3.7	3.9	-119.48	-3,316.0	-5,866.2	6,741.9	6,734.3	7.61	885.357		
1,200.0	1,200.0	10,779.0	6,560.5	4.1	111.5	-159.53	-3,710.4	-1,384.8	6,707.5	6,636.4	71.08	94.365		
1,300.0	1,300.0	10,779.0	6,560.5	4.4	111.5	-159.53	-3,710.4	-1,384.8	6,627.1	6,555.1	71.94	92.124		
1,400.0	1,400.0	10,779.0	6,560.5	4.8	111.5	-159.53	-3,710.4	-1,384.8	6,547.2	6,474.3	72.82	89.914		
1,500.0	1,500.0	10,779.0	6,560.5	5.1	111.5	-159.53	-3,710.4	-1,384.8	6,467.8	6,394.1	73.72	87.736		
1,600.0	1,600.0	10,779.0	6,560.5	5.5	111.5	-159.53	-3,710.4	-1,384.8	6,389.0	6,314.4	74.64	85.594		
1,700.0	1,700.0	10,779.0	6,560.5	5.9	111.5	-159.53	-3,710.4	-1,384.8	6,310.9	6,235.3	75.59	83.487		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
B Section 12 - SLW Ranch B12-62-1HN - Original Drilling - As Drilled													Offset Well Error:	0.0 ft
Survey Program: 286-2_MWD, 7116-2_MWD														
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
1,800.0	1,800.0	10,779.0	6,560.5	6.2	111.5	-159.53	-3,710.4	-1,384.8	6,233.3	6,156.8	76.56	81.416		
1,900.0	1,900.0	10,779.0	6,560.5	6.6	111.5	-159.53	-3,710.4	-1,384.8	6,156.4	6,078.9	77.55	79.384		
2,000.0	2,000.0	10,779.0	6,560.5	6.9	111.5	-159.53	-3,710.4	-1,384.8	6,080.2	6,001.6	78.57	77.390		
2,100.0	2,100.0	10,779.0	6,560.5	7.3	111.5	-159.53	-3,710.4	-1,384.8	6,004.7	5,925.1	79.60	75.435		
2,200.0	2,200.0	10,779.0	6,560.5	7.7	111.5	-159.53	-3,710.4	-1,384.8	5,929.9	5,849.2	80.66	73.520		
2,300.0	2,300.0	10,779.0	6,560.5	8.0	111.5	-110.59	-3,710.4	-1,384.8	5,856.2	5,774.5	81.74	71.641		
2,400.0	2,399.8	10,779.0	6,560.5	8.4	111.5	-112.52	-3,710.4	-1,384.8	5,784.2	5,701.3	82.88	69.793		
2,500.0	2,499.5	10,779.0	6,560.5	8.7	111.5	-114.33	-3,710.4	-1,384.8	5,714.0	5,629.9	84.06	67.976		
2,600.0	2,598.7	10,779.0	6,560.5	9.1	111.5	-116.02	-3,710.4	-1,384.8	5,645.7	5,560.4	85.29	66.195		
2,700.0	2,697.5	10,779.0	6,560.5	9.4	111.5	-117.59	-3,710.4	-1,384.8	5,579.6	5,493.0	86.57	64.455		
2,800.0	2,795.6	10,779.0	6,560.5	9.8	111.5	-119.06	-3,710.4	-1,384.8	5,515.7	5,427.8	87.89	62.759		
2,900.0	2,893.1	10,779.0	6,560.5	10.1	111.5	-120.41	-3,710.4	-1,384.8	5,454.2	5,364.9	89.25	61.110		
3,000.0	2,889.6	10,779.0	6,560.5	10.5	111.5	-121.66	-3,710.4	-1,384.8	5,395.3	5,304.6	90.66	59.513		
3,100.0	3,085.3	10,779.0	6,560.5	10.9	111.5	-122.81	-3,710.4	-1,384.8	5,339.1	5,247.0	92.10	57.970		
3,200.0	3,179.8	10,779.0	6,560.5	11.2	111.5	-123.86	-3,710.4	-1,384.8	5,285.8	5,192.2	93.58	56.483		
3,300.0	3,273.2	10,779.0	6,560.5	11.6	111.5	-124.82	-3,710.4	-1,384.8	5,235.6	5,140.5	95.10	55.056		
3,387.5	3,353.8	10,779.0	6,560.5	11.9	111.5	-125.59	-3,710.4	-1,384.8	5,194.2	5,097.8	96.44	53.858		
3,400.0	3,365.2	10,779.0	6,560.5	12.0	111.5	-125.59	-3,710.4	-1,384.8	5,188.5	5,091.9	96.64	53.691		
3,500.0	3,456.8	10,779.0	6,560.5	12.4	111.5	-125.59	-3,710.4	-1,384.8	5,143.7	5,045.5	98.20	52.379		
3,600.0	3,548.3	10,779.0	6,560.5	12.8	111.5	-125.59	-3,710.4	-1,384.8	5,100.4	5,000.6	99.78	51.118		
3,700.0	3,639.8	10,779.0	6,560.5	13.2	111.5	-125.59	-3,710.4	-1,384.8	5,058.8	4,957.4	101.36	49.909		
3,800.0	3,731.4	10,779.0	6,560.5	13.6	111.5	-125.59	-3,710.4	-1,384.8	5,018.7	4,915.8	102.95	48.751		
3,900.0	3,822.9	10,779.0	6,560.5	14.0	111.5	-125.59	-3,710.4	-1,384.8	4,980.4	4,875.9	104.53	47.644		
4,000.0	3,914.4	10,779.0	6,560.5	14.4	111.5	-125.59	-3,710.4	-1,384.8	4,943.8	4,837.7	106.12	46.587		
4,100.0	4,005.9	10,779.0	6,560.5	14.8	111.5	-125.59	-3,710.4	-1,384.8	4,909.0	4,801.3	107.70	45.580		
4,200.0	4,097.5	10,779.0	6,560.5	15.2	111.5	-125.59	-3,710.4	-1,384.8	4,875.9	4,766.7	109.27	44.622		
4,300.0	4,189.0	10,779.0	6,560.5	15.6	111.5	-125.59	-3,710.4	-1,384.8	4,844.7	4,733.9	110.83	43.712		
4,400.0	4,280.5	10,779.0	6,560.5	16.1	111.5	-125.59	-3,710.4	-1,384.8	4,815.4	4,703.0	112.38	42.849		
4,500.0	4,372.1	10,779.0	6,560.5	16.5	111.5	-125.59	-3,710.4	-1,384.8	4,788.0	4,674.1	113.91	42.033		
4,600.0	4,463.6	10,779.0	6,560.5	16.9	111.5	-125.59	-3,710.4	-1,384.8	4,762.5	4,647.1	115.42	41.263		
4,700.0	4,555.1	10,779.0	6,560.5	17.4	111.5	-125.59	-3,710.4	-1,384.8	4,739.0	4,622.1	116.90	40.538		
4,800.0	4,646.7	10,779.0	6,560.5	17.8	111.5	-125.59	-3,710.4	-1,384.8	4,717.5	4,599.2	118.36	39.858		
4,900.0	4,738.2	10,779.0	6,560.5	18.2	111.5	-125.59	-3,710.4	-1,384.8	4,698.0	4,578.3	119.79	39.221		
5,000.0	4,829.7	10,779.0	6,560.5	18.7	111.5	-125.59	-3,710.4	-1,384.8	4,680.6	4,559.5	121.18	38.626		
5,100.0	4,921.3	10,779.0	6,560.5	19.1	111.5	-125.59	-3,710.4	-1,384.8	4,665.3	4,542.8	122.53	38.074		
5,200.0	5,012.8	10,779.0	6,560.5	19.5	111.5	-125.59	-3,710.4	-1,384.8	4,652.1	4,528.2	123.85	37.562		
5,300.0	5,104.3	10,779.0	6,560.5	20.0	111.5	-125.59	-3,710.4	-1,384.8	4,641.0	4,515.8	125.13	37.091		
5,400.0	5,195.8	10,779.0	6,560.5	20.4	111.5	-125.59	-3,710.4	-1,384.8	4,632.0	4,505.6	126.35	36.659		
5,500.0	5,287.4	10,779.0	6,560.5	20.9	111.5	-125.59	-3,710.4	-1,384.8	4,625.1	4,497.6	127.54	36.265		
5,600.0	5,378.9	10,779.0	6,560.5	21.3	111.5	-125.59	-3,710.4	-1,384.8	4,620.5	4,491.8	128.67	35.909		
5,700.0	5,470.4	10,779.0	6,560.5	21.8	111.5	-125.59	-3,710.4	-1,384.8	4,617.9	4,488.2	129.75	35.590		
5,766.4	5,531.2	10,779.0	6,560.5	22.1	111.5	-125.59	-3,710.4	-1,384.8	4,617.5	4,487.0	130.44	35.399 CC		
5,800.0	5,562.0	10,779.0	6,560.5	22.2	111.5	-125.59	-3,710.4	-1,384.8	4,617.6	4,486.8	130.78	35.308 ES		
5,900.0	5,653.5	10,779.0	6,560.5	22.7	111.5	-125.59	-3,710.4	-1,384.8	4,619.4	4,487.6	131.76	35.061		
6,000.0	5,745.0	10,779.0	6,560.5	23.1	111.5	-125.59	-3,710.4	-1,384.8	4,623.4	4,490.7	132.67	34.848		
6,100.0	5,836.6	10,779.0	6,560.5	23.6	111.5	-125.59	-3,710.4	-1,384.8	4,629.5	4,496.0	133.53	34.669		
6,200.0	5,928.1	10,779.0	6,560.5	24.0	111.5	-125.59	-3,710.4	-1,384.8	4,637.8	4,503.4	134.34	34.523		
6,278.6	6,000.0	10,779.0	6,560.5	24.4	111.5	-125.59	-3,710.4	-1,384.8	4,645.8	4,510.9	134.93	34.432		
6,290.0	6,010.4	10,779.0	6,560.5	24.4	111.5	-127.08	-3,710.4	-1,384.8	4,647.2	4,512.2	135.01	34.421		
6,300.0	6,019.5	10,779.0	6,560.5	24.5	111.5	-128.94	-3,710.4	-1,384.8	4,648.5	4,513.4	135.08	34.412		
6,350.0	6,065.8	10,779.0	6,560.5	24.7	111.5	-140.11	-3,710.4	-1,384.8	4,655.9	4,520.5	135.43	34.379		
6,400.0	6,113.0	10,779.0	6,560.5	24.9	111.5	-154.91	-3,710.4	-1,384.8	4,664.4	4,528.7	135.75	34.361		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
B Section 12 - SLW Ranch B12-62-1HN - Original Drilling - As Drilled													Offset Well Error:	0.0 ft
Survey Program: 286-2_MWD, 7116-2_MWD														
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
6,450.0	6,160.7	10,779.0	6,560.5	25.1	111.5	-172.82	-3,710.4	-1,384.8	4,673.8	4,537.8	136.04	34.357 SF		
6,500.0	6,208.5	10,779.0	6,560.5	25.3	111.5	168.67	-3,710.4	-1,384.8	4,684.1	4,547.8	136.30	34.366		
6,550.0	6,255.8	10,779.0	6,560.5	25.4	111.5	152.49	-3,710.4	-1,384.8	4,695.2	4,558.7	136.54	34.387		
6,600.0	6,302.5	10,779.0	6,560.5	25.6	111.5	139.76	-3,710.4	-1,384.8	4,706.9	4,570.2	136.75	34.419		
6,650.0	6,347.9	10,779.0	6,560.5	25.7	111.5	130.07	-3,710.4	-1,384.8	4,719.2	4,582.3	136.95	34.461		
6,700.0	6,391.6	10,779.0	6,560.5	25.9	111.5	122.60	-3,710.4	-1,384.8	4,732.0	4,594.9	137.12	34.511		
6,750.0	6,433.4	10,779.0	6,560.5	26.0	111.5	116.69	-3,710.4	-1,384.8	4,745.0	4,607.8	137.27	34.568		
6,800.0	6,472.8	10,779.0	6,560.5	26.1	111.5	111.87	-3,710.4	-1,384.8	4,758.3	4,620.9	137.40	34.632		
6,850.0	6,509.4	10,779.0	6,560.5	26.2	111.5	107.84	-3,710.4	-1,384.8	4,771.7	4,634.2	137.51	34.700		
6,900.0	6,543.0	10,779.0	6,560.5	26.3	111.5	104.39	-3,710.4	-1,384.8	4,785.0	4,647.4	137.61	34.773		
6,950.0	6,573.2	10,779.0	6,560.5	26.4	111.5	101.40	-3,710.4	-1,384.8	4,798.2	4,660.5	137.69	34.849		
7,000.0	6,599.8	10,779.0	6,560.5	26.5	111.5	98.78	-3,710.4	-1,384.8	4,811.1	4,673.4	137.75	34.927		
7,050.0	6,622.5	10,779.0	6,560.5	26.6	111.5	96.49	-3,710.4	-1,384.8	4,823.6	4,685.8	137.80	35.005		
7,100.0	6,641.1	10,779.0	6,560.5	26.7	111.5	94.49	-3,710.4	-1,384.8	4,835.7	4,697.8	137.83	35.083		
7,150.0	6,655.4	10,779.0	6,560.5	26.8	111.5	92.75	-3,710.4	-1,384.8	4,847.1	4,709.2	137.86	35.161		
7,200.0	6,665.4	10,779.0	6,560.5	26.9	111.5	91.27	-3,710.4	-1,384.8	4,857.8	4,720.0	137.86	35.236		
7,250.0	6,670.8	10,779.0	6,560.5	27.0	111.5	90.03	-3,710.4	-1,384.8	4,867.8	4,729.9	137.86	35.310		
7,285.7	6,672.0	10,779.0	6,560.5	27.1	111.5	89.30	-3,710.4	-1,384.8	4,874.4	4,736.5	137.85	35.361		
7,300.0	6,672.0	10,779.0	6,560.5	27.1	111.5	89.30	-3,710.4	-1,384.8	4,876.9	4,739.1	137.84	35.381		
7,400.0	6,672.0	10,779.0	6,560.5	27.3	111.5	89.30	-3,710.4	-1,384.8	4,896.0	4,758.2	137.80	35.529		
7,500.0	6,672.0	10,779.0	6,560.5	27.6	111.5	89.30	-3,710.4	-1,384.8	4,917.0	4,779.3	137.77	35.690		
7,600.0	6,672.0	10,779.0	6,560.5	28.0	111.5	89.30	-3,710.4	-1,384.8	4,940.0	4,802.3	137.74	35.865		
7,700.0	6,672.0	10,779.0	6,560.5	28.3	111.5	89.30	-3,710.4	-1,384.8	4,964.9	4,827.2	137.71	36.054		
7,800.0	6,672.0	10,779.0	6,560.5	28.8	111.5	89.30	-3,710.4	-1,384.8	4,991.7	4,854.0	137.67	36.257		
7,900.0	6,672.0	10,779.0	6,560.5	29.3	111.5	89.30	-3,710.4	-1,384.8	5,020.3	4,882.7	137.64	36.475		
8,000.0	6,672.0	10,779.0	6,560.5	29.8	111.5	89.30	-3,710.4	-1,384.8	5,050.8	4,913.2	137.59	36.708		
8,100.0	6,672.0	10,779.0	6,560.5	30.4	111.5	89.30	-3,710.4	-1,384.8	5,083.0	4,945.5	137.54	36.955		
8,200.0	6,672.0	10,779.0	6,560.5	31.0	111.5	89.30	-3,710.4	-1,384.8	5,117.0	4,979.5	137.49	37.218		
8,300.0	6,672.0	10,779.0	6,560.5	31.7	111.5	89.30	-3,710.4	-1,384.8	5,152.8	5,015.3	137.42	37.496		
8,400.0	6,672.0	10,779.0	6,560.5	32.4	111.5	89.30	-3,710.4	-1,384.8	5,190.2	5,052.8	137.35	37.789		
8,500.0	6,672.0	10,779.0	6,560.5	33.1	111.5	89.30	-3,710.4	-1,384.8	5,229.2	5,092.0	137.26	38.097		
8,600.0	6,672.0	10,779.0	6,560.5	33.9	111.5	89.30	-3,710.4	-1,384.8	5,269.9	5,132.8	137.16	38.421		
8,700.0	6,672.0	10,779.0	6,560.5	34.7	111.5	89.30	-3,710.4	-1,384.8	5,312.2	5,175.1	137.05	38.761		
8,800.0	6,672.0	10,779.0	6,560.5	35.5	111.5	89.30	-3,710.4	-1,384.8	5,356.0	5,219.1	136.93	39.115		
8,900.0	6,672.0	10,779.0	6,560.5	36.3	111.5	89.30	-3,710.4	-1,384.8	5,401.3	5,264.5	136.79	39.485		
9,000.0	6,672.0	10,779.0	6,560.5	37.2	111.5	89.30	-3,710.4	-1,384.8	5,448.1	5,311.4	136.64	39.871		
9,100.0	6,672.0	10,779.0	6,560.5	38.1	111.5	89.30	-3,710.4	-1,384.8	5,496.3	5,359.8	136.48	40.271		
9,200.0	6,672.0	10,779.0	6,560.5	39.0	111.5	89.30	-3,710.4	-1,384.8	5,545.9	5,409.6	136.31	40.686		
9,300.0	6,672.0	10,779.0	6,560.5	39.9	111.5	89.30	-3,710.4	-1,384.8	5,596.8	5,460.7	136.12	41.116		
9,400.0	6,672.0	10,779.0	6,560.5	40.8	111.5	89.30	-3,710.4	-1,384.8	5,649.1	5,513.1	135.92	41.560		
9,500.0	6,672.0	10,779.0	6,560.5	41.8	111.5	89.30	-3,710.4	-1,384.8	5,702.6	5,566.9	135.72	42.019		
9,600.0	6,672.0	10,779.0	6,560.5	42.7	111.5	89.30	-3,710.4	-1,384.8	5,757.4	5,621.9	135.49	42.492		
9,700.0	6,672.0	10,779.0	6,560.5	43.7	111.5	89.30	-3,710.4	-1,384.8	5,813.4	5,678.1	135.26	42.978		
9,800.0	6,672.0	10,779.0	6,560.5	44.7	111.5	89.30	-3,710.4	-1,384.8	5,870.6	5,735.6	135.02	43.479		
9,900.0	6,672.0	10,779.0	6,560.5	45.7	111.5	89.30	-3,710.4	-1,384.8	5,928.9	5,794.1	134.77	43.992		
10,000.0	6,672.0	10,779.0	6,560.5	46.7	111.5	89.30	-3,710.4	-1,384.8	5,988.3	5,853.8	134.51	44.519		
10,100.0	6,672.0	10,779.0	6,560.5	47.7	111.5	89.30	-3,710.4	-1,384.8	6,048.8	5,914.6	134.24	45.059		
10,200.0	6,672.0	10,779.0	6,560.5	48.8	111.5	89.30	-3,710.4	-1,384.8	6,110.4	5,976.4	133.97	45.611		
10,300.0	6,672.0	10,779.0	6,560.5	49.8	111.5	89.30	-3,710.4	-1,384.8	6,172.9	6,039.2	133.68	46.176		
10,400.0	6,672.0	10,779.0	6,560.5	50.9	111.5	89.30	-3,710.4	-1,384.8	6,236.5	6,103.1	133.39	46.752		
10,500.0	6,672.0	10,779.0	6,560.5	51.9	111.5	89.30	-3,710.4	-1,384.8	6,300.9	6,167.8	133.10	47.341		
10,600.0	6,672.0	10,779.0	6,560.5	53.0	111.5	89.30	-3,710.4	-1,384.8	6,366.4	6,233.6	132.80	47.941		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													B Section 12 - SLW Ranch B12-62-1HN - Original Drilling - As Drilled		Offset Site Error:		0.0 ft
Survey Program: 286-2_MWD, 7116-2_MWD													Offset Well Error:		0.0 ft		
Reference		Offset		Semi Major Axis			Distance							Warning			
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor					
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)						
10,700.0	6,672.0	10,779.0	6,560.5	54.1	111.5	89.30	-3,710.4	-1,384.8	6,432.7	6,300.2	132.49	48.552					
10,800.0	6,672.0	10,779.0	6,560.5	55.2	111.5	89.30	-3,710.4	-1,384.8	6,499.8	6,367.7	132.18	49.174					
10,900.0	6,672.0	10,779.0	6,560.5	56.3	111.5	89.30	-3,710.4	-1,384.8	6,567.9	6,436.0	131.87	49.807					
11,000.0	6,672.0	10,779.0	6,560.5	57.4	111.5	89.30	-3,710.4	-1,384.8	6,636.7	6,505.1	131.55	50.451					
11,100.0	6,672.0	10,779.0	6,560.5	58.5	111.5	89.30	-3,710.4	-1,384.8	6,706.3	6,575.1	131.23	51.105					
11,200.0	6,672.0	10,779.0	6,560.5	59.6	111.5	89.30	-3,710.4	-1,384.8	6,776.7	6,645.8	130.90	51.768					
11,300.0	6,672.0	10,779.0	6,560.5	60.7	111.5	89.30	-3,710.4	-1,384.8	6,847.8	6,717.2	130.58	52.442					
11,400.0	6,672.0	10,779.0	6,560.5	61.8	111.5	89.30	-3,710.4	-1,384.8	6,919.7	6,789.4	130.25	53.125					
11,500.0	6,672.0	10,779.0	6,560.5	62.9	111.5	89.30	-3,710.4	-1,384.8	6,992.2	6,862.3	129.93	53.817					
11,600.0	6,672.0	10,779.0	6,560.5	64.1	111.5	89.30	-3,710.4	-1,384.8	7,065.4	6,935.8	129.60	54.518					
11,700.0	6,672.0	10,779.0	6,560.5	65.2	111.5	89.30	-3,710.4	-1,384.8	7,139.3	7,010.0	129.27	55.228					
11,800.0	6,672.0	10,779.0	6,560.5	66.3	111.5	89.30	-3,710.4	-1,384.8	7,213.8	7,084.9	128.94	55.946					
11,900.0	6,672.0	10,779.0	6,560.5	67.5	111.5	89.30	-3,710.4	-1,384.8	7,289.0	7,160.3	128.61	56.673					
12,000.0	6,672.0	10,779.0	6,560.5	68.6	111.5	89.30	-3,710.4	-1,384.8	7,364.7	7,236.4	128.29	57.408					
12,100.0	6,672.0	10,779.0	6,560.5	69.8	111.5	89.30	-3,710.4	-1,384.8	7,441.0	7,313.0	127.96	58.151					
12,200.0	6,672.0	10,779.0	6,560.5	70.9	111.5	89.30	-3,710.4	-1,384.8	7,517.8	7,390.2	127.63	58.901					
12,300.0	6,672.0	10,779.0	6,560.5	72.1	111.5	89.30	-3,710.4	-1,384.8	7,595.2	7,467.9	127.31	59.659					
12,400.0	6,672.0	10,779.0	6,560.5	73.2	111.5	89.30	-3,710.4	-1,384.8	7,673.2	7,546.2	126.99	60.424					
12,500.0	6,672.0	10,779.0	6,560.5	74.4	111.5	89.30	-3,710.4	-1,384.8	7,751.6	7,624.9	126.67	61.197					
12,600.0	6,672.0	10,779.0	6,560.5	75.5	111.5	89.30	-3,710.4	-1,384.8	7,830.6	7,704.2	126.35	61.976					
12,700.0	6,672.0	10,779.0	6,560.5	76.7	111.5	89.30	-3,710.4	-1,384.8	7,910.0	7,783.9	126.03	62.762					
12,800.0	6,672.0	10,779.0	6,560.5	77.9	111.5	89.30	-3,710.4	-1,384.8	7,989.9	7,864.1	125.72	63.554					
12,900.0	6,672.0	10,779.0	6,560.5	79.0	111.5	89.30	-3,710.4	-1,384.8	8,070.2	7,944.8	125.41	64.353					
13,000.0	6,672.0	10,779.0	6,560.5	80.2	111.5	89.30	-3,710.4	-1,384.8	8,151.0	8,025.9	125.10	65.158					
13,100.0	6,672.0	10,779.0	6,560.5	81.4	111.5	89.30	-3,710.4	-1,384.8	8,232.2	8,107.4	124.79	65.968					
13,200.0	6,672.0	10,779.0	6,560.5	82.6	111.5	89.30	-3,710.4	-1,384.8	8,313.8	8,189.3	124.49	66.785					
13,300.0	6,672.0	10,779.0	6,560.5	83.7	111.5	89.30	-3,710.4	-1,384.8	8,395.8	8,271.6	124.19	67.607					
13,400.0	6,672.0	10,779.0	6,560.5	84.9	111.5	89.30	-3,710.4	-1,384.8	8,478.2	8,354.3	123.89	68.435					
13,500.0	6,672.0	10,779.0	6,560.5	86.1	111.5	89.30	-3,710.4	-1,384.8	8,561.0	8,437.4	123.59	69.268					
13,600.0	6,672.0	10,779.0	6,560.5	87.3	111.5	89.30	-3,710.4	-1,384.8	8,644.2	8,520.9	123.30	70.106					
13,700.0	6,672.0	10,779.0	6,560.5	88.4	111.5	89.30	-3,710.4	-1,384.8	8,727.7	8,604.7	123.01	70.950					
13,800.0	6,672.0	10,779.0	6,560.5	89.6	111.5	89.30	-3,710.4	-1,384.8	8,811.6	8,688.8	122.73	71.798					
13,900.0	6,672.0	10,779.0	6,560.5	90.8	111.5	89.30	-3,710.4	-1,384.8	8,895.8	8,773.3	122.45	72.650					
14,000.0	6,672.0	10,779.0	6,560.5	92.0	111.5	89.30	-3,710.4	-1,384.8	8,980.3	8,858.1	122.17	73.508					
14,100.0	6,672.0	10,779.0	6,560.5	93.2	111.5	89.30	-3,710.4	-1,384.8	9,065.1	8,943.2	121.89	74.370					
14,200.0	6,672.0	10,779.0	6,560.5	94.4	111.5	89.30	-3,710.4	-1,384.8	9,150.3	9,028.7	121.62	75.236					
14,300.0	6,672.0	10,779.0	6,560.5	95.6	111.5	89.30	-3,710.4	-1,384.8	9,235.8	9,114.4	121.35	76.106					
14,400.0	6,672.0	10,779.0	6,560.5	96.8	111.5	89.30	-3,710.4	-1,384.8	9,321.5	9,200.4	121.09	76.981					
14,500.0	6,672.0	10,779.0	6,560.5	98.0	111.5	89.30	-3,710.4	-1,384.8	9,407.5	9,286.7	120.83	77.859					
14,600.0	6,672.0	10,779.0	6,560.5	99.2	111.5	89.30	-3,710.4	-1,384.8	9,493.9	9,373.3	120.57	78.741					
14,700.0	6,672.0	10,779.0	6,560.5	100.4	111.5	89.30	-3,710.4	-1,384.8	9,580.4	9,460.1	120.32	79.627					
14,800.0	6,672.0	10,779.0	6,560.5	101.6	111.5	89.30	-3,710.4	-1,384.8	9,667.3	9,547.2	120.07	80.517					
14,900.0	6,672.0	10,779.0	6,560.5	102.7	111.5	89.30	-3,710.4	-1,384.8	9,754.4	9,634.6	119.82	81.409					
15,000.0	6,672.0	10,779.0	6,560.5	103.9	111.5	89.30	-3,710.4	-1,384.8	9,841.7	9,722.2	119.58	82.306					
15,100.0	6,672.0	10,779.0	6,560.5	105.1	111.5	89.30	-3,710.4	-1,384.8	9,929.3	9,810.0	119.34	83.205					



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													B Section 12 - SLW Ranch B12-63-1HN - Original Drilling - As Drilled		Offset Site Error: 0.0 ft	
Survey Program: 381-2_MWD, 7025-2_MWD													Offset Well Error: 0.0 ft			
Reference		Offset		Semi Major Axis			Distance							Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor				
0.0	0.0	0.0	0.0	0.0	0.0	-119.23	-3,294.5	-5,888.7	6,747.9							
100.0	100.0	47.5	47.5	0.1	0.1	-119.23	-3,294.5	-5,888.7	6,747.6	6,747.4	0.21	N/A				
200.0	200.0	150.7	150.7	0.5	0.3	-119.22	-3,294.4	-5,888.7	6,747.6	6,746.8	0.74	9,060.389				
300.0	300.0	253.9	253.9	0.8	0.4	-119.22	-3,294.2	-5,888.7	6,747.5	6,746.2	1.28	5,263.991				
400.0	400.0	357.1	357.1	1.2	0.6	-119.22	-3,293.9	-5,888.7	6,747.4	6,745.5	1.82	3,709.568				
500.0	500.0	448.6	448.6	1.6	0.9	-119.22	-3,293.7	-5,888.7	6,747.2	6,744.8	2.45	2,751.377				
521.7	521.7	467.7	467.7	1.6	1.0	-119.22	-3,293.7	-5,888.7	6,747.2	6,744.6	2.60	2,599.289				
600.0	600.0	536.6	536.6	1.9	1.2	-119.22	-3,293.8	-5,888.7	6,747.3	6,744.2	3.11	2,166.183				
700.0	700.0	624.7	624.7	2.3	1.5	-119.22	-3,294.1	-5,888.7	6,747.5	6,743.7	3.78	1,786.315				
800.0	800.0	10,812.0	6,548.0	2.6	113.5	-155.70	-3,015.6	-1,361.8	6,679.2	6,618.0	61.25	109.053				
900.0	900.0	10,812.0	6,548.0	3.0	113.5	-155.70	-3,015.6	-1,361.8	6,592.5	6,530.6	61.91	106.479				
1,000.0	1,000.0	10,812.0	6,548.0	3.4	113.5	-155.70	-3,015.6	-1,361.8	6,506.2	6,443.6	62.61	103.920				
1,100.0	1,100.0	10,812.0	6,548.0	3.7	113.5	-155.70	-3,015.6	-1,361.8	6,420.3	6,357.0	63.33	101.380				
1,200.0	1,200.0	10,812.0	6,548.0	4.1	113.5	-155.70	-3,015.6	-1,361.8	6,334.8	6,270.8	64.08	98.863				
1,300.0	1,300.0	10,812.0	6,548.0	4.4	113.5	-155.70	-3,015.6	-1,361.8	6,249.8	6,184.9	64.85	96.372				
1,400.0	1,400.0	10,812.0	6,548.0	4.8	113.5	-155.70	-3,015.6	-1,361.8	6,165.2	6,099.5	65.65	93.909				
1,500.0	1,500.0	10,812.0	6,548.0	5.1	113.5	-155.70	-3,015.6	-1,361.8	6,081.0	6,014.6	66.48	91.478				
1,600.0	1,600.0	10,812.0	6,548.0	5.5	113.5	-155.70	-3,015.6	-1,361.8	5,997.4	5,930.1	67.33	89.079				
1,700.0	1,700.0	10,812.0	6,548.0	5.9	113.5	-155.70	-3,015.6	-1,361.8	5,914.2	5,846.0	68.20	86.715				
1,800.0	1,800.0	10,812.0	6,548.0	6.2	113.5	-155.70	-3,015.6	-1,361.8	5,831.6	5,762.5	69.10	84.388				
1,900.0	1,900.0	10,812.0	6,548.0	6.6	113.5	-155.70	-3,015.6	-1,361.8	5,749.6	5,679.5	70.03	82.098				
2,000.0	2,000.0	10,812.0	6,548.0	6.9	113.5	-155.70	-3,015.6	-1,361.8	5,668.1	5,597.1	70.99	79.847				
2,100.0	2,100.0	10,812.0	6,548.0	7.3	113.5	-155.70	-3,015.6	-1,361.8	5,587.2	5,515.2	71.97	77.636				
2,200.0	2,200.0	10,812.0	6,548.0	7.7	113.5	-155.70	-3,015.6	-1,361.8	5,506.9	5,433.9	72.97	75.466				
2,300.0	2,300.0	10,812.0	6,548.0	8.0	113.5	-107.20	-3,015.6	-1,361.8	5,427.6	5,353.6	74.02	73.327				
2,400.0	2,399.8	10,812.0	6,548.0	8.4	113.5	-109.57	-3,015.6	-1,361.8	5,349.6	5,274.5	75.13	71.208				
2,500.0	2,499.5	10,812.0	6,548.0	8.7	113.5	-111.79	-3,015.6	-1,361.8	5,273.1	5,196.8	76.30	69.111				
2,600.0	2,598.7	10,812.0	6,548.0	9.1	113.5	-113.87	-3,015.6	-1,361.8	5,198.3	5,120.8	77.54	67.044				
2,700.0	2,697.5	10,812.0	6,548.0	9.4	113.5	-115.81	-3,015.6	-1,361.8	5,125.3	5,046.5	78.84	65.011				
2,800.0	2,795.6	10,812.0	6,548.0	9.8	113.5	-117.61	-3,015.6	-1,361.8	5,054.3	4,974.1	80.20	63.018				
2,900.0	2,893.1	10,812.0	6,548.0	10.1	113.5	-119.28	-3,015.6	-1,361.8	4,985.5	4,903.8	81.63	61.071				
3,000.0	2,989.6	10,812.0	6,548.0	10.5	113.5	-120.82	-3,015.6	-1,361.8	4,919.0	4,835.8	83.13	59.174				
3,100.0	3,085.3	10,812.0	6,548.0	10.9	113.5	-122.24	-3,015.6	-1,361.8	4,855.0	4,770.3	84.68	57.331				
3,200.0	3,179.8	10,812.0	6,548.0	11.2	113.5	-123.54	-3,015.6	-1,361.8	4,793.7	4,707.4	86.30	55.548				
3,300.0	3,273.2	10,812.0	6,548.0	11.6	113.5	-124.73	-3,015.6	-1,361.8	4,735.3	4,647.4	87.97	53.828				
3,387.5	3,353.8	10,812.0	6,548.0	11.9	113.5	-125.69	-3,015.6	-1,361.8	4,686.7	4,597.3	89.48	52.378				
3,400.0	3,365.2	10,812.0	6,548.0	12.0	113.5	-125.69	-3,015.6	-1,361.8	4,680.0	4,590.3	89.70	52.176				
3,500.0	3,456.8	10,812.0	6,548.0	12.4	113.5	-125.69	-3,015.6	-1,361.8	4,626.8	4,535.3	91.47	50.585				
3,600.0	3,548.3	10,812.0	6,548.0	12.8	113.5	-125.69	-3,015.6	-1,361.8	4,575.2	4,481.9	93.26	49.057				
3,700.0	3,639.8	10,812.0	6,548.0	13.2	113.5	-125.69	-3,015.6	-1,361.8	4,525.2	4,430.1	95.08	47.594				
3,800.0	3,731.4	10,812.0	6,548.0	13.6	113.5	-125.69	-3,015.6	-1,361.8	4,476.9	4,380.0	96.92	46.194				
3,900.0	3,822.9	10,812.0	6,548.0	14.0	113.5	-125.69	-3,015.6	-1,361.8	4,430.3	4,331.5	98.77	44.856				
4,000.0	3,914.4	10,812.0	6,548.0	14.4	113.5	-125.69	-3,015.6	-1,361.8	4,385.5	4,284.9	100.63	43.580				
4,100.0	4,005.9	10,812.0	6,548.0	14.8	113.5	-125.69	-3,015.6	-1,361.8	4,342.5	4,240.0	102.50	42.365				
4,200.0	4,097.5	10,812.0	6,548.0	15.2	113.5	-125.69	-3,015.6	-1,361.8	4,301.5	4,197.1	104.38	41.210				
4,300.0	4,189.0	10,812.0	6,548.0	15.6	113.5	-125.69	-3,015.6	-1,361.8	4,262.3	4,156.1	106.26	40.114				
4,400.0	4,280.5	10,812.0	6,548.0	16.1	113.5	-125.69	-3,015.6	-1,361.8	4,225.2	4,117.1	108.13	39.076				
4,500.0	4,372.1	10,812.0	6,548.0	16.5	113.5	-125.69	-3,015.6	-1,361.8	4,190.2	4,080.2	109.99	38.096				
4,600.0	4,463.6	10,812.0	6,548.0	16.9	113.5	-125.69	-3,015.6	-1,361.8	4,157.2	4,045.4	111.84	37.172				
4,700.0	4,555.1	10,812.0	6,548.0	17.4	113.5	-125.69	-3,015.6	-1,361.8	4,126.5	4,012.8	113.67	36.303				
4,800.0	4,646.7	10,812.0	6,548.0	17.8	113.5	-125.69	-3,015.6	-1,361.8	4,097.9	3,982.4	115.47	35.488				
4,900.0	4,738.2	10,812.0	6,548.0	18.2	113.5	-125.69	-3,015.6	-1,361.8	4,071.6	3,954.3	117.25	34.726				

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
B Section 12 - SLW Ranch B12-63-1HN - Original Drilling - As Drilled													Offset Well Error:	0.0 ft
Survey Program:		381-2_MWD, 7025-2_MWD												
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,000.0	4,829.7	10,812.0	6,548.0	18.7	113.5	-125.69	-3,015.6	-1,361.8	4,047.6	3,928.6	118.99	34.015		
5,100.0	4,921.3	10,812.0	6,548.0	19.1	113.5	-125.69	-3,015.6	-1,361.8	4,025.9	3,905.2	120.70	33.356		
5,200.0	5,012.8	10,812.0	6,548.0	19.5	113.5	-125.69	-3,015.6	-1,361.8	4,006.6	3,884.3	122.36	32.746		
5,300.0	5,104.3	10,812.0	6,548.0	20.0	113.5	-125.69	-3,015.6	-1,361.8	3,989.7	3,865.8	123.97	32.184		
5,400.0	5,195.8	10,812.0	6,548.0	20.4	113.5	-125.69	-3,015.6	-1,361.8	3,975.3	3,849.8	125.52	31.670		
5,500.0	5,287.4	10,812.0	6,548.0	20.9	113.5	-125.69	-3,015.6	-1,361.8	3,963.3	3,836.3	127.02	31.202		
5,600.0	5,378.9	10,812.0	6,548.0	21.3	113.5	-125.69	-3,015.6	-1,361.8	3,953.9	3,825.4	128.46	30.779		
5,700.0	5,470.4	10,812.0	6,548.0	21.8	113.5	-125.69	-3,015.6	-1,361.8	3,946.9	3,817.1	129.83	30.401		
5,800.0	5,562.0	10,812.0	6,548.0	22.2	113.5	-125.69	-3,015.6	-1,361.8	3,942.5	3,811.3	131.13	30.065		
5,900.0	5,653.5	10,812.0	6,548.0	22.7	113.5	-125.69	-3,015.6	-1,361.8	3,940.6	3,808.2	132.36	29.772		
5,924.8	5,676.2	10,812.0	6,548.0	22.8	113.5	-125.69	-3,015.6	-1,361.8	3,940.5	3,807.8	132.65	29.705 CC		
6,000.0	5,745.0	10,812.0	6,548.0	23.1	113.5	-125.69	-3,015.6	-1,361.8	3,941.2	3,807.7	133.51	29.520 ES		
6,100.0	5,836.6	10,812.0	6,548.0	23.6	113.5	-125.69	-3,015.6	-1,361.8	3,944.4	3,809.8	134.59	29.307		
6,200.0	5,928.1	10,812.0	6,548.0	24.0	113.5	-125.69	-3,015.6	-1,361.8	3,950.1	3,814.5	135.58	29.134		
6,278.6	6,000.0	10,812.0	6,548.0	24.4	113.5	-125.69	-3,015.6	-1,361.8	3,956.3	3,820.0	136.31	29.025		
6,290.0	6,010.4	10,812.0	6,548.0	24.4	113.5	-127.19	-3,015.6	-1,361.8	3,957.5	3,821.1	136.41	29.012		
6,300.0	6,019.5	10,812.0	6,548.0	24.5	113.5	-129.02	-3,015.6	-1,361.8	3,958.7	3,822.2	136.50	29.001		
6,350.0	6,065.8	10,812.0	6,548.0	24.7	113.5	-140.09	-3,015.6	-1,361.8	3,965.1	3,828.2	136.91	28.960		
6,400.0	6,113.0	10,812.0	6,548.0	24.9	113.5	-154.80	-3,015.6	-1,361.8	3,972.7	3,835.4	137.29	28.937		
6,450.0	6,160.7	10,812.0	6,548.0	25.1	113.5	-172.62	-3,015.6	-1,361.8	3,981.4	3,843.8	137.62	28.929 SF		
6,500.0	6,208.5	10,812.0	6,548.0	25.3	113.5	168.94	-3,015.6	-1,361.8	3,991.0	3,853.1	137.92	28.938		
6,550.0	6,255.8	10,812.0	6,548.0	25.4	113.5	152.82	-3,015.6	-1,361.8	4,001.6	3,863.4	138.17	28.961		
6,600.0	6,302.5	10,812.0	6,548.0	25.6	113.5	140.14	-3,015.6	-1,361.8	4,012.9	3,874.5	138.39	28.998		
6,650.0	6,347.9	10,812.0	6,548.0	25.7	113.5	130.49	-3,015.6	-1,361.8	4,024.9	3,886.4	138.56	29.048		
6,700.0	6,391.6	10,812.0	6,548.0	25.9	113.5	123.05	-3,015.6	-1,361.8	4,037.5	3,898.8	138.71	29.108		
6,750.0	6,433.4	10,812.0	6,548.0	26.0	113.5	117.14	-3,015.6	-1,361.8	4,050.5	3,911.7	138.82	29.179		
6,800.0	6,472.8	10,812.0	6,548.0	26.1	113.5	112.31	-3,015.6	-1,361.8	4,063.9	3,925.0	138.89	29.259		
6,850.0	6,509.4	10,812.0	6,548.0	26.2	113.5	108.25	-3,015.6	-1,361.8	4,077.4	3,938.5	138.94	29.347		
6,900.0	6,543.0	10,812.0	6,548.0	26.3	113.5	104.76	-3,015.6	-1,361.8	4,091.1	3,952.1	138.96	29.441		
6,950.0	6,573.2	10,812.0	6,548.0	26.4	113.5	101.72	-3,015.6	-1,361.8	4,104.7	3,965.7	138.95	29.541		
7,000.0	6,599.8	10,812.0	6,548.0	26.5	113.5	99.04	-3,015.6	-1,361.8	4,118.1	3,979.2	138.91	29.645		
7,050.0	6,622.5	10,812.0	6,548.0	26.6	113.5	96.68	-3,015.6	-1,361.8	4,131.2	3,992.4	138.86	29.752		
7,100.0	6,641.1	10,812.0	6,548.0	26.7	113.5	94.59	-3,015.6	-1,361.8	4,144.0	4,005.2	138.78	29.860		
7,150.0	6,655.4	10,812.0	6,548.0	26.8	113.5	92.76	-3,015.6	-1,361.8	4,156.2	4,017.6	138.68	29.969		
7,200.0	6,665.4	10,812.0	6,548.0	26.9	113.5	91.18	-3,015.6	-1,361.8	4,167.9	4,029.3	138.57	30.078		
7,250.0	6,670.8	10,812.0	6,548.0	27.0	113.5	89.83	-3,015.6	-1,361.8	4,178.8	4,040.4	138.43	30.186		
7,285.7	6,672.0	10,812.0	6,548.0	27.1	113.5	89.02	-3,015.6	-1,361.8	4,186.1	4,047.8	138.33	30.262		
7,300.0	6,672.0	10,812.0	6,548.0	27.1	113.5	89.02	-3,015.6	-1,361.8	4,189.0	4,050.7	138.28	30.293		
7,400.0	6,672.0	10,812.0	6,548.0	27.3	113.5	89.02	-3,015.6	-1,361.8	4,210.3	4,072.3	137.97	30.515		
7,500.0	6,672.0	10,812.0	6,548.0	27.6	113.5	89.02	-3,015.6	-1,361.8	4,233.9	4,096.3	137.66	30.757		
7,600.0	6,672.0	10,812.0	6,548.0	28.0	113.5	89.02	-3,015.6	-1,361.8	4,259.8	4,122.4	137.33	31.019		
7,700.0	6,672.0	10,812.0	6,548.0	28.3	113.5	89.02	-3,015.6	-1,361.8	4,287.8	4,150.8	136.99	31.301		
7,800.0	6,672.0	10,812.0	6,548.0	28.8	113.5	89.02	-3,015.6	-1,361.8	4,317.9	4,181.3	136.63	31.603		
7,900.0	6,672.0	10,812.0	6,548.0	29.3	113.5	89.02	-3,015.6	-1,361.8	4,350.2	4,213.9	136.27	31.924		
8,000.0	6,672.0	10,812.0	6,548.0	29.8	113.5	89.02	-3,015.6	-1,361.8	4,384.5	4,248.6	135.89	32.265		
8,100.0	6,672.0	10,812.0	6,548.0	30.4	113.5	89.02	-3,015.6	-1,361.8	4,420.8	4,285.3	135.50	32.627		
8,200.0	6,672.0	10,812.0	6,548.0	31.0	113.5	89.02	-3,015.6	-1,361.8	4,459.1	4,324.0	135.09	33.008		
8,300.0	6,672.0	10,812.0	6,548.0	31.7	113.5	89.02	-3,015.6	-1,361.8	4,499.3	4,364.6	134.68	33.408		
8,400.0	6,672.0	10,812.0	6,548.0	32.4	113.5	89.02	-3,015.6	-1,361.8	4,541.3	4,407.0	134.24	33.829		
8,500.0	6,672.0	10,812.0	6,548.0	33.1	113.5	89.02	-3,015.6	-1,361.8	4,585.1	4,451.3	133.80	34.268		
8,600.0	6,672.0	10,812.0	6,548.0	33.9	113.5	89.02	-3,015.6	-1,361.8	4,630.7	4,497.4	133.34	34.728		
8,700.0	6,672.0	10,812.0	6,548.0	34.7	113.5	89.02	-3,015.6	-1,361.8	4,678.0	4,545.1	132.87	35.206		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
B Section 12 - SLW Ranch B12-63-1HN - Original Drilling - As Drilled													Offset Well Error:	0.0 ft
Survey Program:		381-2_MWD, 7025-2_MWD												
Reference		Offset		Semi Major Axis		Distance								Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
8,800.0	6,672.0	10,812.0	6,548.0	35.5	113.5	89.02	-3,015.6	-1,361.8	4,726.9	4,594.5	132.39	35.703		
8,900.0	6,672.0	10,812.0	6,548.0	36.3	113.5	89.02	-3,015.6	-1,361.8	4,777.4	4,645.5	131.90	36.219		
9,000.0	6,672.0	10,812.0	6,548.0	37.2	113.5	89.02	-3,015.6	-1,361.8	4,829.5	4,698.1	131.40	36.753		
9,100.0	6,672.0	10,812.0	6,548.0	38.1	113.5	89.02	-3,015.6	-1,361.8	4,883.1	4,752.2	130.89	37.306		
9,200.0	6,672.0	10,812.0	6,548.0	39.0	113.5	89.02	-3,015.6	-1,361.8	4,938.1	4,807.7	130.38	37.876		
9,300.0	6,672.0	10,812.0	6,548.0	39.9	113.5	89.02	-3,015.6	-1,361.8	4,994.5	4,864.7	129.85	38.464		
9,400.0	6,672.0	10,812.0	6,548.0	40.8	113.5	89.02	-3,015.6	-1,361.8	5,052.3	4,923.0	129.32	39.069		
9,500.0	6,672.0	10,812.0	6,548.0	41.8	113.5	89.02	-3,015.6	-1,361.8	5,111.4	4,982.6	128.78	39.691		
9,600.0	6,672.0	10,812.0	6,548.0	42.7	113.5	89.02	-3,015.6	-1,361.8	5,171.8	5,043.5	128.24	40.329		
9,700.0	6,672.0	10,812.0	6,548.0	43.7	113.5	89.02	-3,015.6	-1,361.8	5,233.4	5,105.7	127.69	40.983		
9,800.0	6,672.0	10,812.0	6,548.0	44.7	113.5	89.02	-3,015.6	-1,361.8	5,296.1	5,169.0	127.15	41.654		
9,900.0	6,672.0	10,812.0	6,548.0	45.7	113.5	89.02	-3,015.6	-1,361.8	5,360.0	5,233.4	126.60	42.339		
10,000.0	6,672.0	10,812.0	6,548.0	46.7	113.5	89.02	-3,015.6	-1,361.8	5,425.0	5,298.9	126.04	43.040		
10,100.0	6,672.0	10,812.0	6,548.0	47.7	113.5	89.02	-3,015.6	-1,361.8	5,491.0	5,365.5	125.49	43.756		
10,200.0	6,672.0	10,812.0	6,548.0	48.8	113.5	89.02	-3,015.6	-1,361.8	5,558.1	5,433.2	124.94	44.486		
10,300.0	6,672.0	10,812.0	6,548.0	49.8	113.5	89.02	-3,015.6	-1,361.8	5,626.2	5,501.8	124.39	45.230		
10,400.0	6,672.0	10,812.0	6,548.0	50.9	113.5	89.02	-3,015.6	-1,361.8	5,695.2	5,571.3	123.84	45.987		
10,500.0	6,672.0	10,812.0	6,548.0	51.9	113.5	89.02	-3,015.6	-1,361.8	5,765.1	5,641.8	123.29	46.758		
10,600.0	6,672.0	10,812.0	6,548.0	53.0	113.5	89.02	-3,015.6	-1,361.8	5,835.9	5,713.1	122.75	47.542		
10,700.0	6,672.0	10,812.0	6,548.0	54.1	113.5	89.02	-3,015.6	-1,361.8	5,907.5	5,785.3	122.21	48.339		
10,800.0	6,672.0	10,812.0	6,548.0	55.2	113.5	89.02	-3,015.6	-1,361.8	5,980.0	5,858.3	121.67	49.148		
10,900.0	6,672.0	10,812.0	6,548.0	56.3	113.5	89.02	-3,015.6	-1,361.8	6,053.2	5,932.1	121.14	49.969		
11,000.0	6,672.0	10,812.0	6,548.0	57.4	113.5	89.02	-3,015.6	-1,361.8	6,127.2	6,006.6	120.61	50.801		
11,100.0	6,672.0	10,812.0	6,548.0	58.5	113.5	89.02	-3,015.6	-1,361.8	6,202.0	6,081.9	120.09	51.645		
11,200.0	6,672.0	10,812.0	6,548.0	59.6	113.5	89.02	-3,015.6	-1,361.8	6,277.4	6,157.9	119.57	52.500		
11,300.0	6,672.0	10,812.0	6,548.0	60.7	113.5	89.02	-3,015.6	-1,361.8	6,353.6	6,234.5	119.06	53.365		
11,400.0	6,672.0	10,812.0	6,548.0	61.8	113.5	89.02	-3,015.6	-1,361.8	6,430.4	6,311.8	118.55	54.241		
11,500.0	6,672.0	10,812.0	6,548.0	62.9	113.5	89.02	-3,015.6	-1,361.8	6,507.8	6,389.8	118.05	55.127		
11,600.0	6,672.0	10,812.0	6,548.0	64.1	113.5	89.02	-3,015.6	-1,361.8	6,585.9	6,468.3	117.56	56.023		
11,700.0	6,672.0	10,812.0	6,548.0	65.2	113.5	89.02	-3,015.6	-1,361.8	6,664.5	6,547.4	117.07	56.928		
11,800.0	6,672.0	10,812.0	6,548.0	66.3	113.5	89.02	-3,015.6	-1,361.8	6,743.7	6,627.1	116.59	57.842		
11,900.0	6,672.0	10,812.0	6,548.0	67.5	113.5	89.02	-3,015.6	-1,361.8	6,823.5	6,707.3	116.11	58.766		
12,000.0	6,672.0	10,812.0	6,548.0	68.6	113.5	89.02	-3,015.6	-1,361.8	6,903.7	6,788.1	115.65	59.697		
12,100.0	6,672.0	10,812.0	6,548.0	69.8	113.5	89.02	-3,015.6	-1,361.8	6,984.5	6,869.4	115.18	60.638		
12,200.0	6,672.0	10,812.0	6,548.0	70.9	113.5	89.02	-3,015.6	-1,361.8	7,065.8	6,951.1	114.73	61.586		
12,300.0	6,672.0	10,812.0	6,548.0	72.1	113.5	89.02	-3,015.6	-1,361.8	7,147.6	7,033.3	114.28	62.543		
12,400.0	6,672.0	10,812.0	6,548.0	73.2	113.5	89.02	-3,015.6	-1,361.8	7,229.9	7,116.0	113.84	63.507		
12,500.0	6,672.0	10,812.0	6,548.0	74.4	113.5	89.02	-3,015.6	-1,361.8	7,312.5	7,199.1	113.41	64.478		
12,600.0	6,672.0	10,812.0	6,548.0	75.5	113.5	89.02	-3,015.6	-1,361.8	7,395.7	7,282.7	112.99	65.456		
12,700.0	6,672.0	10,812.0	6,548.0	76.7	113.5	89.02	-3,015.6	-1,361.8	7,479.2	7,366.6	112.57	66.442		
12,800.0	6,672.0	10,812.0	6,548.0	77.9	113.5	89.02	-3,015.6	-1,361.8	7,563.1	7,451.0	112.16	67.434		
12,900.0	6,672.0	10,812.0	6,548.0	79.0	113.5	89.02	-3,015.6	-1,361.8	7,647.5	7,535.7	111.75	68.432		
13,000.0	6,672.0	10,812.0	6,548.0	80.2	113.5	89.02	-3,015.6	-1,361.8	7,732.2	7,620.8	111.35	69.437		
13,100.0	6,672.0	10,812.0	6,548.0	81.4	113.5	89.02	-3,015.6	-1,361.8	7,817.2	7,706.3	110.96	70.448		
13,200.0	6,672.0	10,812.0	6,548.0	82.6	113.5	89.02	-3,015.6	-1,361.8	7,902.7	7,792.1	110.58	71.465		
13,300.0	6,672.0	10,812.0	6,548.0	83.7	113.5	89.02	-3,015.6	-1,361.8	7,988.4	7,878.2	110.21	72.487		
13,400.0	6,672.0	10,812.0	6,548.0	84.9	113.5	89.02	-3,015.6	-1,361.8	8,074.5	7,964.7	109.84	73.515		
13,500.0	6,672.0	10,812.0	6,548.0	86.1	113.5	89.02	-3,015.6	-1,361.8	8,161.0	8,051.5	109.47	74.548		
13,600.0	6,672.0	10,812.0	6,548.0	87.3	113.5	89.02	-3,015.6	-1,361.8	8,247.7	8,138.6	109.12	75.586		
13,700.0	6,672.0	10,812.0	6,548.0	88.4	113.5	89.02	-3,015.6	-1,361.8	8,334.7	8,225.9	108.77	76.629		
13,800.0	6,672.0	10,812.0	6,548.0	89.6	113.5	89.02	-3,015.6	-1,361.8	8,422.0	8,313.6	108.42	77.676		
13,900.0	6,672.0	10,812.0	6,548.0	90.8	113.5	89.02	-3,015.6	-1,361.8	8,509.6	8,401.6	108.09	78.728		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design											B Section 12 - SLW Ranch B12-63-1HN - Original Drilling - As Drilled			Offset Site Error:		0.0 ft
Survey Program: 381-2_MWD, 7025-2_MWD													Offset Well Error:		0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning		
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre +N/-S	Offset Wellbore Centre +E/-W	Between Centres	Between Ellipses	Minimum Separation	Separation Factor				
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)					
14,000.0	6,672.0	10,812.0	6,548.0	92.0	113.5	89.02	-3,015.6	-1,361.8	8,597.5	8,489.8	107.76	79.785				
14,100.0	6,672.0	10,812.0	6,548.0	93.2	113.5	89.02	-3,015.6	-1,361.8	8,685.7	8,578.2	107.44	80.845				
14,200.0	6,672.0	10,812.0	6,548.0	94.4	113.5	89.02	-3,015.6	-1,361.8	8,774.1	8,667.0	107.12	81.910				
14,300.0	6,672.0	10,812.0	6,548.0	95.6	113.5	89.02	-3,015.6	-1,361.8	8,862.7	8,755.9	106.81	82.979				
14,400.0	6,672.0	10,812.0	6,548.0	96.8	113.5	89.02	-3,015.6	-1,361.8	8,951.6	8,845.1	106.50	84.051				
14,500.0	6,672.0	10,812.0	6,548.0	98.0	113.5	89.02	-3,015.6	-1,361.8	9,040.8	8,934.5	106.20	85.127				
14,600.0	6,672.0	10,812.0	6,548.0	99.2	113.5	89.02	-3,015.6	-1,361.8	9,130.1	9,024.2	105.91	86.206				
14,700.0	6,672.0	10,812.0	6,548.0	100.4	113.5	89.02	-3,015.6	-1,361.8	9,219.7	9,114.1	105.62	87.288				
14,800.0	6,672.0	10,812.0	6,548.0	101.6	113.5	89.02	-3,015.6	-1,361.8	9,309.5	9,204.1	105.34	88.374				
14,900.0	6,672.0	10,812.0	6,548.0	102.7	113.5	89.02	-3,015.6	-1,361.8	9,399.5	9,294.4	105.07	89.462				
15,000.0	6,672.0	10,812.0	6,548.0	103.9	113.5	89.02	-3,015.6	-1,361.8	9,489.7	9,384.9	104.80	90.554				
15,100.0	6,672.0	10,812.0	6,548.0	105.1	113.5	89.02	-3,015.6	-1,361.8	9,580.1	9,475.6	104.53	91.648				
15,200.0	6,672.0	10,812.0	6,548.0	106.3	113.5	89.02	-3,015.6	-1,361.8	9,670.7	9,566.4	104.27	92.744				
15,300.0	6,672.0	10,812.0	6,548.0	107.6	113.5	89.02	-3,015.6	-1,361.8	9,761.5	9,657.5	104.02	93.843				
15,400.0	6,672.0	10,812.0	6,548.0	108.8	113.5	89.02	-3,015.6	-1,361.8	9,852.5	9,748.7	103.77	94.945				
15,500.0	6,672.0	10,812.0	6,548.0	110.0	113.5	89.02	-3,015.6	-1,361.8	9,943.6	9,840.1	103.53	96.049				



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 381-2_MWD, 7214-2_MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-119.06	-3,272.7	-5,888.9	6,737.4					
100.0	100.0	44.1	44.1	0.1	0.1	-119.06	-3,272.7	-5,888.9	6,737.2	6,737.0	0.20	N/A		
200.0	200.0	137.9	137.9	0.5	0.2	-119.06	-3,272.9	-5,888.9	6,737.3	6,736.6	0.72	9,317.178		
300.0	300.0	231.7	231.7	0.8	0.4	-119.07	-3,273.3	-5,888.9	6,737.5	6,736.2	1.24	5,414.877		
400.0	400.0	325.6	325.6	1.2	0.6	-119.07	-3,273.9	-5,888.9	6,737.8	6,736.0	1.77	3,816.569		
500.0	500.0	416.9	416.9	1.6	0.8	-119.08	-3,274.6	-5,888.8	6,738.1	6,735.8	2.35	2,869.517		
600.0	600.0	10,993.0	6,614.6	1.9	113.8	-150.39	-2,388.7	-1,357.7	6,660.7	6,607.6	53.11	125.409		
700.0	700.0	10,993.0	6,614.6	2.3	113.8	-150.39	-2,388.7	-1,357.7	6,569.7	6,516.2	53.59	122.584		
800.0	800.0	10,993.0	6,614.6	2.6	113.8	-150.39	-2,388.7	-1,357.7	6,479.0	6,424.9	54.10	119.758		
900.0	900.0	10,993.0	6,614.6	3.0	113.8	-150.39	-2,388.7	-1,357.7	6,388.6	6,334.0	54.63	116.935		
1,000.0	1,000.0	10,993.0	6,614.6	3.4	113.8	-150.39	-2,388.7	-1,357.7	6,298.5	6,243.3	55.19	114.120		
1,100.0	1,100.0	10,993.0	6,614.6	3.7	113.8	-150.39	-2,388.7	-1,357.7	6,208.7	6,152.9	55.77	111.316		
1,200.0	1,200.0	10,993.0	6,614.6	4.1	113.8	-150.39	-2,388.7	-1,357.7	6,119.1	6,062.8	56.38	108.528		
1,300.0	1,300.0	10,993.0	6,614.6	4.4	113.8	-150.39	-2,388.7	-1,357.7	6,030.0	5,972.9	57.02	105.759		
1,400.0	1,400.0	10,993.0	6,614.6	4.8	113.8	-150.39	-2,388.7	-1,357.7	5,941.1	5,883.4	57.67	103.012		
1,500.0	1,500.0	10,993.0	6,614.6	5.1	113.8	-150.39	-2,388.7	-1,357.7	5,852.6	5,794.3	58.36	100.291		
1,600.0	1,600.0	10,993.0	6,614.6	5.5	113.8	-150.39	-2,388.7	-1,357.7	5,764.5	5,705.5	59.07	97.596		
1,700.0	1,700.0	10,993.0	6,614.6	5.9	113.8	-150.39	-2,388.7	-1,357.7	5,676.8	5,617.0	59.80	94.932		
1,800.0	1,800.0	10,993.0	6,614.6	6.2	113.8	-150.39	-2,388.7	-1,357.7	5,589.5	5,529.0	60.56	92.299		
1,900.0	1,900.0	10,993.0	6,614.6	6.6	113.8	-150.39	-2,388.7	-1,357.7	5,502.7	5,441.3	61.34	89.701		
2,000.0	2,000.0	10,993.0	6,614.6	6.9	113.8	-150.39	-2,388.7	-1,357.7	5,416.2	5,354.1	62.16	87.137		
2,100.0	2,100.0	10,993.0	6,614.6	7.3	113.8	-150.39	-2,388.7	-1,357.7	5,330.3	5,267.3	63.00	84.611		
2,200.0	2,200.0	10,993.0	6,614.6	7.7	113.8	-150.39	-2,388.7	-1,357.7	5,244.9	5,181.0	63.87	82.123		
2,300.0	2,300.0	10,993.0	6,614.6	8.0	113.8	-102.52	-2,388.7	-1,357.7	5,160.1	5,095.3	64.78	79.657		
2,400.0	2,399.8	10,993.0	6,614.6	8.4	113.8	-105.50	-2,388.7	-1,357.7	5,076.4	5,010.6	65.76	77.194		
2,500.0	2,499.5	10,993.0	6,614.6	8.7	113.8	-108.31	-2,388.7	-1,357.7	4,993.7	4,926.9	66.82	74.739		
2,600.0	2,598.7	10,993.0	6,614.6	9.1	113.8	-110.95	-2,388.7	-1,357.7	4,912.3	4,844.4	67.94	72.300		
2,700.0	2,697.5	10,993.0	6,614.6	9.4	113.8	-113.41	-2,388.7	-1,357.7	4,832.4	4,763.3	69.15	69.885		
2,800.0	2,795.6	10,993.0	6,614.6	9.8	113.8	-115.70	-2,388.7	-1,357.7	4,754.1	4,683.7	70.43	67.500		
2,900.0	2,893.1	10,993.0	6,614.6	10.1	113.8	-117.82	-2,388.7	-1,357.7	4,677.6	4,605.8	71.79	65.154		
3,000.0	2,889.6	10,993.0	6,614.6	10.5	113.8	-119.78	-2,388.7	-1,357.7	4,603.1	4,529.8	73.24	62.852		
3,100.0	3,085.3	10,993.0	6,614.6	10.9	113.8	-121.58	-2,388.7	-1,357.7	4,530.7	4,456.0	74.76	60.601		
3,200.0	3,179.8	10,993.0	6,614.6	11.2	113.8	-123.24	-2,388.7	-1,357.7	4,460.8	4,384.4	76.37	58.408		
3,300.0	3,273.2	10,993.0	6,614.6	11.6	113.8	-124.75	-2,388.7	-1,357.7	4,393.4	4,315.3	78.06	56.279		
3,387.5	3,353.8	10,993.0	6,614.6	11.9	113.8	-125.96	-2,388.7	-1,357.7	4,336.7	4,257.1	79.61	54.473		
3,400.0	3,365.2	10,993.0	6,614.6	12.0	113.8	-125.96	-2,388.7	-1,357.7	4,328.8	4,248.9	79.84	54.221		
3,500.0	3,456.8	10,993.0	6,614.6	12.4	113.8	-125.96	-2,388.7	-1,357.7	4,266.1	4,184.4	81.68	52.232		
3,600.0	3,548.3	10,993.0	6,614.6	12.8	113.8	-125.96	-2,388.7	-1,357.7	4,204.9	4,121.3	83.56	50.320		
3,700.0	3,639.8	10,993.0	6,614.6	13.2	113.8	-125.96	-2,388.7	-1,357.7	4,145.2	4,059.7	85.49	48.485		
3,800.0	3,731.4	10,993.0	6,614.6	13.6	113.8	-125.96	-2,388.7	-1,357.7	4,087.1	3,999.6	87.47	46.726		
3,900.0	3,822.9	10,993.0	6,614.6	14.0	113.8	-125.96	-2,388.7	-1,357.7	4,030.6	3,941.1	89.48	45.044		
4,000.0	3,914.4	10,993.0	6,614.6	14.4	113.8	-125.96	-2,388.7	-1,357.7	3,975.8	3,884.3	91.53	43.437		
4,100.0	4,005.9	10,993.0	6,614.6	14.8	113.8	-125.96	-2,388.7	-1,357.7	3,922.8	3,829.2	93.61	41.905		
4,200.0	4,097.5	10,993.0	6,614.6	15.2	113.8	-125.96	-2,388.7	-1,357.7	3,871.7	3,776.0	95.72	40.447		
4,300.0	4,189.0	10,993.0	6,614.6	15.6	113.8	-125.96	-2,388.7	-1,357.7	3,822.5	3,724.7	97.86	39.062		
4,400.0	4,280.5	10,993.0	6,614.6	16.1	113.8	-125.96	-2,388.7	-1,357.7	3,775.3	3,675.3	100.01	37.749		
4,500.0	4,372.1	10,993.0	6,614.6	16.5	113.8	-125.96	-2,388.7	-1,357.7	3,730.2	3,628.1	102.18	36.507		
4,600.0	4,463.6	10,993.0	6,614.6	16.9	113.8	-125.96	-2,388.7	-1,357.7	3,687.3	3,582.9	104.35	35.334		
4,700.0	4,555.1	10,993.0	6,614.6	17.4	113.8	-125.96	-2,388.7	-1,357.7	3,646.6	3,540.1	106.53	34.230		
4,800.0	4,646.7	10,993.0	6,614.6	17.8	113.8	-125.96	-2,388.7	-1,357.7	3,608.2	3,499.5	108.70	33.193		
4,900.0	4,738.2	10,993.0	6,614.6	18.2	113.8	-125.96	-2,388.7	-1,357.7	3,572.2	3,461.3	110.86	32.222		
5,000.0	4,829.7	10,993.0	6,614.6	18.7	113.8	-125.96	-2,388.7	-1,357.7	3,538.7	3,425.7	113.00	31.315		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													B Section 12 - SLW Ranch B12-64-1HN - Original Drilling - As Drilled		Offset Site Error: 0.0 ft	
Survey Program: 381-2_MWD, 7214-2_MWD													Offset Well Error: 0.0 ft			
Reference		Offset		Semi Major Axis			Distance							Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor				
5,100.0	4,921.3	10,993.0	6,614.6	19.1	113.8	-125.96	-2,388.7	-1,357.7	3,507.6	3,392.5	115.11	30.471				
5,200.0	5,012.8	10,993.0	6,614.6	19.5	113.8	-125.96	-2,388.7	-1,357.7	3,479.2	3,362.0	117.19	29.688				
5,300.0	5,104.3	10,993.0	6,614.6	20.0	113.8	-125.96	-2,388.7	-1,357.7	3,453.5	3,334.3	119.23	28.966				
5,400.0	5,195.8	10,993.0	6,614.6	20.4	113.8	-125.96	-2,388.7	-1,357.7	3,430.5	3,309.3	121.21	28.302				
5,500.0	5,287.4	10,993.0	6,614.6	20.9	113.8	-125.96	-2,388.7	-1,357.7	3,410.2	3,287.1	123.13	27.696				
5,600.0	5,378.9	10,993.0	6,614.6	21.3	113.8	-125.96	-2,388.7	-1,357.7	3,392.8	3,267.8	124.99	27.145				
5,700.0	5,470.4	10,993.0	6,614.6	21.8	113.8	-125.96	-2,388.7	-1,357.7	3,378.3	3,251.5	126.77	26.649				
5,800.0	5,562.0	10,993.0	6,614.6	22.2	113.8	-125.96	-2,388.7	-1,357.7	3,366.6	3,238.1	128.47	26.206				
5,900.0	5,653.5	10,993.0	6,614.6	22.7	113.8	-125.96	-2,388.7	-1,357.7	3,357.9	3,227.8	130.08	25.815				
6,000.0	5,745.0	10,993.0	6,614.6	23.1	113.8	-125.96	-2,388.7	-1,357.7	3,352.2	3,220.6	131.59	25.474				
6,100.0	5,836.6	10,993.0	6,614.6	23.6	113.8	-125.96	-2,388.7	-1,357.7	3,349.4	3,216.4	133.01	25.182				
6,142.5	5,875.5	10,993.0	6,614.6	23.8	113.8	-125.96	-2,388.7	-1,357.7	3,349.1	3,215.6	133.58	25.072	CC			
6,200.0	5,928.1	10,993.0	6,614.6	24.0	113.8	-125.96	-2,388.7	-1,357.7	3,349.6	3,215.3	134.32	24.937	ES			
6,278.6	6,000.0	10,993.0	6,614.6	24.4	113.8	-125.96	-2,388.7	-1,357.7	3,351.9	3,216.6	135.28	24.778				
6,290.0	6,010.4	10,993.0	6,614.6	24.4	113.8	-127.48	-2,388.7	-1,357.7	3,352.5	3,217.1	135.41	24.758				
6,300.0	6,019.5	10,993.0	6,614.6	24.5	113.8	-129.27	-2,388.7	-1,357.7	3,353.2	3,217.7	135.53	24.742				
6,350.0	6,065.8	10,993.0	6,614.6	24.7	113.8	-140.08	-2,388.7	-1,357.7	3,357.3	3,221.2	136.07	24.673				
6,400.0	6,113.0	10,993.0	6,614.6	24.9	113.8	-154.54	-2,388.7	-1,357.7	3,362.7	3,226.1	136.56	24.624				
6,450.0	6,160.7	10,993.0	6,614.6	25.1	113.8	-172.13	-2,388.7	-1,357.7	3,369.3	3,232.3	137.00	24.594				
6,500.0	6,208.5	10,993.0	6,614.6	25.3	113.8	169.65	-2,388.7	-1,357.7	3,377.1	3,239.7	137.37	24.583	SF			
6,550.0	6,255.8	10,993.0	6,614.6	25.4	113.8	153.73	-2,388.7	-1,357.7	3,385.9	3,248.2	137.69	24.590				
6,600.0	6,302.5	10,993.0	6,614.6	25.6	113.8	141.23	-2,388.7	-1,357.7	3,395.7	3,257.7	137.95	24.615				
6,650.0	6,347.9	10,993.0	6,614.6	25.7	113.8	131.73	-2,388.7	-1,357.7	3,406.4	3,268.2	138.16	24.655				
6,700.0	6,391.6	10,993.0	6,614.6	25.9	113.8	124.42	-2,388.7	-1,357.7	3,417.8	3,279.5	138.31	24.711				
6,750.0	6,433.4	10,993.0	6,614.6	26.0	113.8	118.62	-2,388.7	-1,357.7	3,429.9	3,291.5	138.42	24.780				
6,800.0	6,472.8	10,993.0	6,614.6	26.1	113.8	113.87	-2,388.7	-1,357.7	3,442.6	3,304.2	138.47	24.862				
6,850.0	6,509.4	10,993.0	6,614.6	26.2	113.8	109.86	-2,388.7	-1,357.7	3,455.8	3,317.3	138.47	24.956				
6,900.0	6,543.0	10,993.0	6,614.6	26.3	113.8	106.39	-2,388.7	-1,357.7	3,469.2	3,330.7	138.44	25.060				
6,950.0	6,573.2	10,993.0	6,614.6	26.4	113.8	103.34	-2,388.7	-1,357.7	3,482.8	3,344.4	138.36	25.173				
7,000.0	6,599.8	10,993.0	6,614.6	26.5	113.8	100.63	-2,388.7	-1,357.7	3,496.5	3,358.3	138.24	25.293				
7,050.0	6,622.5	10,993.0	6,614.6	26.6	113.8	98.20	-2,388.7	-1,357.7	3,510.1	3,372.0	138.09	25.420				
7,100.0	6,641.1	10,993.0	6,614.6	26.7	113.8	96.02	-2,388.7	-1,357.7	3,523.6	3,385.7	137.90	25.552				
7,150.0	6,655.4	10,993.0	6,614.6	26.8	113.8	94.07	-2,388.7	-1,357.7	3,536.7	3,399.0	137.68	25.687				
7,200.0	6,665.4	10,993.0	6,614.6	26.9	113.8	92.35	-2,388.7	-1,357.7	3,549.4	3,412.0	137.44	25.825				
7,250.0	6,670.8	10,993.0	6,614.6	27.0	113.8	90.86	-2,388.7	-1,357.7	3,561.7	3,424.5	137.17	25.965				
7,285.7	6,672.0	10,993.0	6,614.6	27.1	113.8	89.93	-2,388.7	-1,357.7	3,570.0	3,433.0	136.97	26.065				
7,300.0	6,672.0	10,993.0	6,614.6	27.1	113.8	89.93	-2,388.7	-1,357.7	3,573.3	3,436.4	136.88	26.106				
7,400.0	6,672.0	10,993.0	6,614.6	27.3	113.8	89.93	-2,388.7	-1,357.7	3,597.9	3,461.6	136.27	26.402				
7,500.0	6,672.0	10,993.0	6,614.6	27.6	113.8	89.93	-2,388.7	-1,357.7	3,625.1	3,489.4	135.64	26.725				
7,600.0	6,672.0	10,993.0	6,614.6	28.0	113.8	89.93	-2,388.7	-1,357.7	3,654.8	3,519.8	134.99	27.074				
7,700.0	6,672.0	10,993.0	6,614.6	28.3	113.8	89.93	-2,388.7	-1,357.7	3,687.0	3,552.7	134.32	27.450				
7,800.0	6,672.0	10,993.0	6,614.6	28.8	113.8	89.93	-2,388.7	-1,357.7	3,721.7	3,588.0	133.63	27.851				
7,900.0	6,672.0	10,993.0	6,614.6	29.3	113.8	89.93	-2,388.7	-1,357.7	3,758.6	3,625.7	132.91	28.279				
8,000.0	6,672.0	10,993.0	6,614.6	29.8	113.8	89.93	-2,388.7	-1,357.7	3,797.9	3,665.7	132.18	28.732				
8,100.0	6,672.0	10,993.0	6,614.6	30.4	113.8	89.93	-2,388.7	-1,357.7	3,839.4	3,707.9	131.44	29.211				
8,200.0	6,672.0	10,993.0	6,614.6	31.0	113.8	89.93	-2,388.7	-1,357.7	3,883.0	3,752.3	130.68	29.715				
8,300.0	6,672.0	10,993.0	6,614.6	31.7	113.8	89.93	-2,388.7	-1,357.7	3,928.7	3,798.8	129.90	30.243				
8,400.0	6,672.0	10,993.0	6,614.6	32.4	113.8	89.93	-2,388.7	-1,357.7	3,976.3	3,847.2	129.12	30.796				
8,500.0	6,672.0	10,993.0	6,614.6	33.1	113.8	89.93	-2,388.7	-1,357.7	4,025.9	3,897.6	128.32	31.373				
8,600.0	6,672.0	10,993.0	6,614.6	33.9	113.8	89.93	-2,388.7	-1,357.7	4,077.4	3,949.9	127.52	31.974				
8,700.0	6,672.0	10,993.0	6,614.6	34.7	113.8	89.93	-2,388.7	-1,357.7	4,130.6	4,003.9	126.72	32.597				
8,800.0	6,672.0	10,993.0	6,614.6	35.5	113.8	89.93	-2,388.7	-1,357.7	4,185.6	4,059.7	125.91	33.244				

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													B Section 12 - SLW Ranch B12-64-1HN - Original Drilling - As Drilled		Offset Site Error: 0.0 ft	
Survey Program: 381-2_MWD, 7214-2_MWD													Offset Well Error: 0.0 ft			
Reference		Offset		Semi Major Axis			Distance							Warning		
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor					
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)					
8,900.0	6,672.0	10,993.0	6,614.6	36.3	113.8	89.93	-2,388.7	-1,357.7	4,242.2	4,117.1	125.09	33.913				
9,000.0	6,672.0	10,993.0	6,614.6	37.2	113.8	89.93	-2,388.7	-1,357.7	4,300.4	4,176.1	124.28	34.603				
9,100.0	6,672.0	10,993.0	6,614.6	38.1	113.8	89.93	-2,388.7	-1,357.7	4,360.1	4,236.7	123.46	35.315				
9,200.0	6,672.0	10,993.0	6,614.6	39.0	113.8	89.93	-2,388.7	-1,357.7	4,421.3	4,298.7	122.65	36.048				
9,300.0	6,672.0	10,993.0	6,614.6	39.9	113.8	89.93	-2,388.7	-1,357.7	4,483.9	4,362.1	121.84	36.801				
9,400.0	6,672.0	10,993.0	6,614.6	40.8	113.8	89.93	-2,388.7	-1,357.7	4,547.8	4,426.8	121.04	37.573				
9,500.0	6,672.0	10,993.0	6,614.6	41.8	113.8	89.93	-2,388.7	-1,357.7	4,613.1	4,492.8	120.24	38.365				
9,600.0	6,672.0	10,993.0	6,614.6	42.7	113.8	89.93	-2,388.7	-1,357.7	4,679.5	4,560.1	119.45	39.176				
9,700.0	6,672.0	10,993.0	6,614.6	43.7	113.8	89.93	-2,388.7	-1,357.7	4,747.1	4,628.5	118.67	40.004				
9,800.0	6,672.0	10,993.0	6,614.6	44.7	113.8	89.93	-2,388.7	-1,357.7	4,815.9	4,698.0	117.89	40.851				
9,900.0	6,672.0	10,993.0	6,614.6	45.7	113.8	89.93	-2,388.7	-1,357.7	4,885.8	4,768.6	117.12	41.715				
10,000.0	6,672.0	10,993.0	6,614.6	46.7	113.8	89.93	-2,388.7	-1,357.7	4,956.7	4,840.3	116.37	42.595				
10,100.0	6,672.0	10,993.0	6,614.6	47.7	113.8	89.93	-2,388.7	-1,357.7	5,028.5	4,912.9	115.62	43.491				
10,200.0	6,672.0	10,993.0	6,614.6	48.8	113.8	89.93	-2,388.7	-1,357.7	5,101.4	4,986.5	114.89	44.403				
10,300.0	6,672.0	10,993.0	6,614.6	49.8	113.8	89.93	-2,388.7	-1,357.7	5,175.1	5,061.0	114.16	45.330				
10,400.0	6,672.0	10,993.0	6,614.6	50.9	113.8	89.93	-2,388.7	-1,357.7	5,249.7	5,136.3	113.45	46.272				
10,500.0	6,672.0	10,993.0	6,614.6	51.9	113.8	89.93	-2,388.7	-1,357.7	5,325.2	5,212.4	112.75	47.228				
10,600.0	6,672.0	10,993.0	6,614.6	53.0	113.8	89.93	-2,388.7	-1,357.7	5,401.5	5,289.4	112.07	48.198				
10,700.0	6,672.0	10,993.0	6,614.6	54.1	113.8	89.93	-2,388.7	-1,357.7	5,478.5	5,367.1	111.40	49.181				
10,800.0	6,672.0	10,993.0	6,614.6	55.2	113.8	89.93	-2,388.7	-1,357.7	5,556.3	5,445.5	110.73	50.176				
10,900.0	6,672.0	10,993.0	6,614.6	56.3	113.8	89.93	-2,388.7	-1,357.7	5,634.7	5,524.6	110.09	51.184				
11,000.0	6,672.0	10,993.0	6,614.6	57.4	113.8	89.93	-2,388.7	-1,357.7	5,713.9	5,604.4	109.45	52.204				
11,100.0	6,672.0	10,993.0	6,614.6	58.5	113.8	89.93	-2,388.7	-1,357.7	5,793.7	5,684.8	108.83	53.236				
11,200.0	6,672.0	10,993.0	6,614.6	59.6	113.8	89.93	-2,388.7	-1,357.7	5,874.1	5,765.9	108.22	54.278				
11,300.0	6,672.0	10,993.0	6,614.6	60.7	113.8	89.93	-2,388.7	-1,357.7	5,955.1	5,847.5	107.63	55.331				
11,400.0	6,672.0	10,993.0	6,614.6	61.8	113.8	89.93	-2,388.7	-1,357.7	6,036.7	5,929.7	107.04	56.394				
11,500.0	6,672.0	10,993.0	6,614.6	62.9	113.8	89.93	-2,388.7	-1,357.7	6,118.8	6,012.4	106.47	57.468				
11,600.0	6,672.0	10,993.0	6,614.6	64.1	113.8	89.93	-2,388.7	-1,357.7	6,201.5	6,095.6	105.92	58.550				
11,700.0	6,672.0	10,993.0	6,614.6	65.2	113.8	89.93	-2,388.7	-1,357.7	6,284.7	6,179.3	105.37	59.642				
11,800.0	6,672.0	10,993.0	6,614.6	66.3	113.8	89.93	-2,388.7	-1,357.7	6,368.4	6,263.5	104.84	60.742				
11,900.0	6,672.0	10,993.0	6,614.6	67.5	113.8	89.93	-2,388.7	-1,357.7	6,452.5	6,348.2	104.32	61.851				
12,000.0	6,672.0	10,993.0	6,614.6	68.6	113.8	89.93	-2,388.7	-1,357.7	6,537.1	6,433.3	103.82	62.968				
12,100.0	6,672.0	10,993.0	6,614.6	69.8	113.8	89.93	-2,388.7	-1,357.7	6,622.1	6,518.8	103.32	64.093				
12,200.0	6,672.0	10,993.0	6,614.6	70.9	113.8	89.93	-2,388.7	-1,357.7	6,707.5	6,604.7	102.84	65.224				
12,300.0	6,672.0	10,993.0	6,614.6	72.1	113.8	89.93	-2,388.7	-1,357.7	6,793.4	6,691.0	102.37	66.363				
12,400.0	6,672.0	10,993.0	6,614.6	73.2	113.8	89.93	-2,388.7	-1,357.7	6,879.6	6,777.7	101.91	67.509				
12,500.0	6,672.0	10,993.0	6,614.6	74.4	113.8	89.93	-2,388.7	-1,357.7	6,966.2	6,864.8	101.46	68.661				
12,600.0	6,672.0	10,993.0	6,614.6	75.5	113.8	89.93	-2,388.7	-1,357.7	7,053.2	6,952.1	101.02	69.820				
12,700.0	6,672.0	10,993.0	6,614.6	76.7	113.8	89.93	-2,388.7	-1,357.7	7,140.5	7,039.9	100.59	70.984				
12,800.0	6,672.0	10,993.0	6,614.6	77.9	113.8	89.93	-2,388.7	-1,357.7	7,228.1	7,127.9	100.18	72.154				
12,900.0	6,672.0	10,993.0	6,614.6	79.0	113.8	89.93	-2,388.7	-1,357.7	7,316.1	7,216.3	99.77	73.329				
13,000.0	6,672.0	10,993.0	6,614.6	80.2	113.8	89.93	-2,388.7	-1,357.7	7,404.3	7,304.9	99.38	74.509				
13,100.0	6,672.0	10,993.0	6,614.6	81.4	113.8	89.93	-2,388.7	-1,357.7	7,492.9	7,393.9	98.99	75.694				
13,200.0	6,672.0	10,993.0	6,614.6	82.6	113.8	89.93	-2,388.7	-1,357.7	7,581.7	7,483.1	98.61	76.883				
13,300.0	6,672.0	10,993.0	6,614.6	83.7	113.8	89.93	-2,388.7	-1,357.7	7,670.9	7,572.6	98.25	78.077				
13,400.0	6,672.0	10,993.0	6,614.6	84.9	113.8	89.93	-2,388.7	-1,357.7	7,760.3	7,662.4	97.89	79.275				
13,500.0	6,672.0	10,993.0	6,614.6	86.1	113.8	89.93	-2,388.7	-1,357.7	7,849.9	7,752.4	97.54	80.477				
13,600.0	6,672.0	10,993.0	6,614.6	87.3	113.8	89.93	-2,388.7	-1,357.7	7,939.8	7,842.6	97.20	81.682				
13,700.0	6,672.0	10,993.0	6,614.6	88.4	113.8	89.93	-2,388.7	-1,357.7	8,030.0	7,933.1	96.87	82.891				
13,800.0	6,672.0	10,993.0	6,614.6	89.6	113.8	89.93	-2,388.7	-1,357.7	8,120.3	8,023.8	96.55	84.103				
13,900.0	6,672.0	10,993.0	6,614.6	90.8	113.8	89.93	-2,388.7	-1,357.7	8,210.9	8,114.7	96.24	85.318				
14,000.0	6,672.0	10,993.0	6,614.6	92.0	113.8	89.93	-2,388.7	-1,357.7	8,301.8	8,205.8	95.94	86.535				

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> B Section 12 - SLW Ranch B12-64-1HN - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 381-2_MWD, 7214-2_MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
14,100.0	6,672.0	10,993.0	6,614.6	93.2	113.8	89.93	-2,388.7	-1,357.7	8,392.8	8,297.2	95.64	87.756		
14,200.0	6,672.0	10,993.0	6,614.6	94.4	113.8	89.93	-2,388.7	-1,357.7	8,484.1	8,388.7	95.35	88.979		
14,300.0	6,672.0	10,993.0	6,614.6	95.6	113.8	89.93	-2,388.7	-1,357.7	8,575.5	8,480.4	95.07	90.204		
14,400.0	6,672.0	10,993.0	6,614.6	96.8	113.8	89.93	-2,388.7	-1,357.7	8,667.1	8,572.3	94.79	91.431		
14,500.0	6,672.0	10,993.0	6,614.6	98.0	113.8	89.93	-2,388.7	-1,357.7	8,759.0	8,664.4	94.53	92.660		
14,600.0	6,672.0	10,993.0	6,614.6	99.2	113.8	89.93	-2,388.7	-1,357.7	8,850.9	8,756.7	94.27	93.891		
14,700.0	6,672.0	10,993.0	6,614.6	100.4	113.8	89.93	-2,388.7	-1,357.7	8,943.1	8,849.1	94.02	95.123		
14,800.0	6,672.0	10,993.0	6,614.6	101.6	113.8	89.93	-2,388.7	-1,357.7	9,035.5	8,941.7	93.77	96.357		
14,900.0	6,672.0	10,993.0	6,614.6	102.7	113.8	89.93	-2,388.7	-1,357.7	9,128.0	9,034.4	93.53	97.593		
15,000.0	6,672.0	10,993.0	6,614.6	103.9	113.8	89.93	-2,388.7	-1,357.7	9,220.6	9,127.3	93.30	98.829		
15,100.0	6,672.0	10,993.0	6,614.6	105.1	113.8	89.93	-2,388.7	-1,357.7	9,313.5	9,220.4	93.07	100.066		
15,200.0	6,672.0	10,993.0	6,614.6	106.3	113.8	89.93	-2,388.7	-1,357.7	9,406.4	9,313.6	92.85	101.305		
15,300.0	6,672.0	10,993.0	6,614.6	107.6	113.8	89.93	-2,388.7	-1,357.7	9,499.6	9,406.9	92.64	102.544		
15,400.0	6,672.0	10,993.0	6,614.6	108.8	113.8	89.93	-2,388.7	-1,357.7	9,592.8	9,500.4	92.43	103.783		
15,500.0	6,672.0	10,993.0	6,614.6	110.0	113.8	89.93	-2,388.7	-1,357.7	9,686.2	9,594.0	92.23	105.023		
15,600.0	6,672.0	10,993.0	6,614.6	111.2	113.8	89.93	-2,388.7	-1,357.7	9,779.7	9,687.7	92.03	106.264		
15,700.0	6,672.0	10,993.0	6,614.6	112.4	113.8	89.93	-2,388.7	-1,357.7	9,873.4	9,781.5	91.84	107.505		
15,800.0	6,672.0	10,993.0	6,614.6	113.6	113.8	89.93	-2,388.7	-1,357.7	9,967.2	9,875.5	91.66	108.746		



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
B Section 12 - SLW Ranch B12-65-1HN - Original Drilling - As Drilled													Offset Well Error:	0.0 ft
Survey Program: 350-2_EMS, 813-2_MWD+IFR1+MS, 7002-2_MWD+IFR1+MS														
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	-101.54	-1,203.4	-5,895.4	6,017.1					
100.0	100.0	83.0	83.0	0.1	0.1	-101.54	-1,203.4	-5,895.3	6,016.9	6,016.6	0.26	N/A		
200.0	200.0	210.8	210.8	0.5	0.4	-101.54	-1,203.6	-5,894.5	6,016.3	6,015.5	0.84	7,190.649		
300.0	300.0	338.5	338.5	0.8	0.6	-101.55	-1,203.9	-5,893.2	6,015.3	6,013.9	1.41	4,270.027		
400.0	400.0	431.1	431.1	1.2	0.9	-101.55	-1,204.3	-5,892.0	6,014.2	6,012.1	2.08	2,895.235		
500.0	500.0	520.2	520.2	1.6	1.2	-101.56	-1,204.6	-5,891.0	6,013.2	6,010.4	2.76	2,182.443		
600.0	600.0	609.4	609.3	1.9	1.5	-101.56	-1,205.0	-5,890.2	6,012.3	6,008.9	3.43	1,751.230		
700.0	700.0	695.1	695.1	2.3	1.8	-101.57	-1,205.4	-5,889.5	6,011.7	6,007.7	4.04	1,487.820		
800.0	800.0	776.5	776.5	2.6	1.9	-101.57	-1,205.8	-5,889.2	6,011.3	6,006.8	4.56	1,319.706		
900.0	900.0	894.6	894.5	3.0	2.1	-101.58	-1,206.4	-5,888.8	6,011.1	6,006.1	5.05	1,191.101		
1,000.0	1,000.0	987.8	987.8	3.4	2.2	-101.58	-1,206.9	-5,888.2	6,010.7	6,005.2	5.52	1,088.792		
1,100.0	1,100.0	10,974.0	6,585.8	3.7	55.8	-141.62	-1,706.1	-1,351.2	5,934.3	5,895.9	38.37	154.646		
1,200.0	1,200.0	10,974.0	6,585.8	4.1	55.8	-141.62	-1,706.1	-1,351.2	5,841.3	5,802.8	38.56	151.477		
1,300.0	1,300.0	10,974.0	6,585.8	4.4	55.8	-141.62	-1,706.1	-1,351.2	5,748.7	5,709.9	38.76	148.297		
1,400.0	1,400.0	10,974.0	6,585.8	4.8	55.8	-141.62	-1,706.1	-1,351.2	5,656.2	5,617.2	38.98	145.111		
1,500.0	1,500.0	10,974.0	6,585.8	5.1	55.8	-141.62	-1,706.1	-1,351.2	5,564.1	5,524.9	39.21	141.921		
1,600.0	1,600.0	10,974.0	6,585.8	5.5	55.8	-141.62	-1,706.1	-1,351.2	5,472.2	5,432.7	39.44	138.732		
1,700.0	1,700.0	10,974.0	6,585.8	5.9	55.8	-141.62	-1,706.1	-1,351.2	5,380.6	5,340.9	39.70	135.546		
1,800.0	1,800.0	10,974.0	6,585.8	6.2	55.8	-141.62	-1,706.1	-1,351.2	5,289.3	5,249.3	39.96	132.367		
1,900.0	1,900.0	10,974.0	6,585.8	6.6	55.8	-141.62	-1,706.1	-1,351.2	5,198.3	5,158.0	40.24	129.197		
2,000.0	2,000.0	10,974.0	6,585.8	6.9	55.8	-141.62	-1,706.1	-1,351.2	5,107.6	5,067.1	40.52	126.039		
2,100.0	2,100.0	10,974.0	6,585.8	7.3	55.8	-141.62	-1,706.1	-1,351.2	5,017.3	4,976.5	40.83	122.895		
2,200.0	2,200.0	10,974.0	6,585.8	7.7	55.8	-141.62	-1,706.1	-1,351.2	4,927.4	4,886.3	41.14	119.767		
2,300.0	2,300.0	10,974.0	6,585.8	8.0	55.8	-94.63	-1,706.1	-1,351.2	4,837.9	4,796.5	41.47	116.648		
2,400.0	2,399.8	10,974.0	6,585.8	8.4	55.8	-98.49	-1,706.1	-1,351.2	4,749.0	4,707.2	41.83	113.530		
2,500.0	2,499.5	10,974.0	6,585.8	8.7	55.8	-102.18	-1,706.1	-1,351.2	4,660.8	4,618.5	42.21	110.414		
2,600.0	2,598.7	10,974.0	6,585.8	9.1	55.8	-105.68	-1,706.1	-1,351.2	4,573.4	4,530.7	42.62	107.305		
2,700.0	2,697.5	10,974.0	6,585.8	9.4	55.8	-108.95	-1,706.1	-1,351.2	4,486.9	4,443.9	43.06	104.208		
2,800.0	2,795.6	10,974.0	6,585.8	9.8	55.8	-112.01	-1,706.1	-1,351.2	4,401.7	4,358.2	43.53	101.126		
2,900.0	2,893.1	10,974.0	6,585.8	10.1	55.8	-114.84	-1,706.1	-1,351.2	4,317.8	4,273.8	44.03	98.064		
3,000.0	2,889.6	10,974.0	6,585.8	10.5	55.8	-117.45	-1,706.1	-1,351.2	4,235.5	4,190.9	44.57	95.027		
3,100.0	3,085.3	10,974.0	6,585.8	10.9	55.8	-119.84	-1,706.1	-1,351.2	4,154.8	4,109.7	45.15	92.019		
3,200.0	3,179.8	10,974.0	6,585.8	11.2	55.8	-122.03	-1,706.1	-1,351.2	4,076.1	4,030.3	45.78	89.045		
3,300.0	3,273.2	10,974.0	6,585.8	11.6	55.8	-124.03	-1,706.1	-1,351.2	3,999.5	3,953.1	46.45	86.113		
3,387.5	3,353.8	10,974.0	6,585.8	11.9	55.8	-125.62	-1,706.1	-1,351.2	3,934.5	3,887.4	47.07	83.585		
3,400.0	3,365.2	10,974.0	6,585.8	12.0	55.8	-125.62	-1,706.1	-1,351.2	3,925.3	3,878.1	47.16	83.231		
3,500.0	3,456.8	10,974.0	6,585.8	12.4	55.8	-125.62	-1,706.1	-1,351.2	3,852.8	3,804.8	47.93	80.381		
3,600.0	3,548.3	10,974.0	6,585.8	12.8	55.8	-125.62	-1,706.1	-1,351.2	3,781.5	3,732.8	48.74	77.583		
3,700.0	3,639.8	10,974.0	6,585.8	13.2	55.8	-125.62	-1,706.1	-1,351.2	3,711.6	3,662.0	49.59	74.842		
3,800.0	3,731.4	10,974.0	6,585.8	13.6	55.8	-125.62	-1,706.1	-1,351.2	3,643.0	3,592.5	50.48	72.163		
3,900.0	3,822.9	10,974.0	6,585.8	14.0	55.8	-125.62	-1,706.1	-1,351.2	3,575.9	3,524.5	51.41	69.552		
4,000.0	3,914.4	10,974.0	6,585.8	14.4	55.8	-125.62	-1,706.1	-1,351.2	3,510.4	3,458.1	52.39	67.012		
4,100.0	4,005.9	10,974.0	6,585.8	14.8	55.8	-125.62	-1,706.1	-1,351.2	3,446.6	3,393.2	53.40	64.547		
4,200.0	4,097.5	10,974.0	6,585.8	15.2	55.8	-125.62	-1,706.1	-1,351.2	3,384.5	3,330.1	54.45	62.162		
4,300.0	4,189.0	10,974.0	6,585.8	15.6	55.8	-125.62	-1,706.1	-1,351.2	3,324.3	3,268.8	55.53	59.860		
4,400.0	4,280.5	10,974.0	6,585.8	16.1	55.8	-125.62	-1,706.1	-1,351.2	3,266.0	3,209.3	56.66	57.645		
4,500.0	4,372.1	10,974.0	6,585.8	16.5	55.8	-125.62	-1,706.1	-1,351.2	3,209.8	3,152.0	57.82	55.518		
4,600.0	4,463.6	10,974.0	6,585.8	16.9	55.8	-125.62	-1,706.1	-1,351.2	3,155.7	3,096.7	59.00	53.482		
4,700.0	4,555.1	10,974.0	6,585.8	17.4	55.8	-125.62	-1,706.1	-1,351.2	3,103.9	3,043.7	60.22	51.541		
4,800.0	4,646.7	10,974.0	6,585.8	17.8	55.8	-125.62	-1,706.1	-1,351.2	3,054.5	2,993.1	61.47	49.695		
4,900.0	4,738.2	10,974.0	6,585.8	18.2	55.8	-125.62	-1,706.1	-1,351.2	3,007.7	2,945.0	62.73	47.947		
5,000.0	4,829.7	10,974.0	6,585.8	18.7	55.8	-125.62	-1,706.1	-1,351.2	2,963.4	2,899.4	64.01	46.296		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 350-2_EMS, 813-2_MWD+IFR1+MS, 7002-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,100.0	4,921.3	10,974.0	6,585.8	19.1	55.8	-125.62	-1,706.1	-1,351.2	2,922.0	2,856.7	65.30	44.746		
5,200.0	5,012.8	10,974.0	6,585.8	19.5	55.8	-125.62	-1,706.1	-1,351.2	2,883.4	2,816.8	66.60	43.295		
5,300.0	5,104.3	10,974.0	6,585.8	20.0	55.8	-125.62	-1,706.1	-1,351.2	2,847.7	2,779.9	67.89	41.945		
5,400.0	5,195.8	10,974.0	6,585.8	20.4	55.8	-125.62	-1,706.1	-1,351.2	2,815.2	2,746.1	69.18	40.696		
5,500.0	5,287.4	10,974.0	6,585.8	20.9	55.8	-125.62	-1,706.1	-1,351.2	2,785.9	2,715.5	70.45	39.547		
5,600.0	5,378.9	10,974.0	6,585.8	21.3	55.8	-125.62	-1,706.1	-1,351.2	2,759.9	2,688.3	71.69	38.497		
5,700.0	5,470.4	10,974.0	6,585.8	21.8	55.8	-125.62	-1,706.1	-1,351.2	2,737.4	2,664.5	72.91	37.546		
5,800.0	5,562.0	10,974.0	6,585.8	22.2	55.8	-125.62	-1,706.1	-1,351.2	2,718.3	2,644.2	74.08	36.693		
5,900.0	5,653.5	10,974.0	6,585.8	22.7	55.8	-125.62	-1,706.1	-1,351.2	2,702.8	2,627.6	75.21	35.937		
6,000.0	5,745.0	10,974.0	6,585.8	23.1	55.8	-125.62	-1,706.1	-1,351.2	2,690.9	2,614.6	76.28	35.276		
6,100.0	5,836.6	10,974.0	6,585.8	23.6	55.8	-125.62	-1,706.1	-1,351.2	2,682.7	2,605.4	77.29	34.708		
6,200.0	5,928.1	10,974.0	6,585.8	24.0	55.8	-125.62	-1,706.1	-1,351.2	2,678.2	2,599.9	78.24	34.231		
6,270.6	5,992.7	10,974.0	6,585.8	24.4	55.8	-125.62	-1,706.1	-1,351.2	2,677.2	2,598.4	78.86	33.948 CC		
6,278.6	6,000.0	10,974.0	6,585.8	24.4	55.8	-125.62	-1,706.1	-1,351.2	2,677.2	2,598.3	78.93	33.919 ES		
6,290.0	6,010.4	10,974.0	6,585.8	24.4	55.8	-127.16	-1,706.1	-1,351.2	2,677.4	2,598.4	79.03	33.880		
6,300.0	6,019.5	10,974.0	6,585.8	24.5	55.8	-128.90	-1,706.1	-1,351.2	2,677.7	2,598.6	79.11	33.848		
6,350.0	6,065.8	10,974.0	6,585.8	24.7	55.8	-139.54	-1,706.1	-1,351.2	2,680.2	2,600.7	79.51	33.708		
6,400.0	6,113.0	10,974.0	6,585.8	24.9	55.8	-153.84	-1,706.1	-1,351.2	2,684.1	2,604.2	79.88	33.602		
6,450.0	6,160.7	10,974.0	6,585.8	25.1	55.8	-171.29	-1,706.1	-1,351.2	2,689.5	2,609.3	80.21	33.531		
6,500.0	6,208.5	10,974.0	6,585.8	25.3	55.8	170.59	-1,706.1	-1,351.2	2,696.4	2,615.8	80.51	33.492		
6,550.0	6,255.8	10,974.0	6,585.8	25.4	55.8	154.75	-1,706.1	-1,351.2	2,704.5	2,623.7	80.77	33.483 SF		
6,600.0	6,302.5	10,974.0	6,585.8	25.6	55.8	142.30	-1,706.1	-1,351.2	2,713.9	2,632.9	81.00	33.504		
6,650.0	6,347.9	10,974.0	6,585.8	25.7	55.8	132.82	-1,706.1	-1,351.2	2,724.4	2,643.2	81.20	33.551		
6,700.0	6,391.6	10,974.0	6,585.8	25.9	55.8	125.49	-1,706.1	-1,351.2	2,736.0	2,654.6	81.37	33.623		
6,750.0	6,433.4	10,974.0	6,585.8	26.0	55.8	119.65	-1,706.1	-1,351.2	2,748.5	2,667.0	81.51	33.718		
6,800.0	6,472.8	10,974.0	6,585.8	26.1	55.8	114.82	-1,706.1	-1,351.2	2,761.8	2,680.2	81.63	33.834		
6,850.0	6,509.4	10,974.0	6,585.8	26.2	55.8	110.70	-1,706.1	-1,351.2	2,775.8	2,694.1	81.72	33.968		
6,900.0	6,543.0	10,974.0	6,585.8	26.3	55.8	107.10	-1,706.1	-1,351.2	2,790.3	2,708.5	81.79	34.118		
6,950.0	6,573.2	10,974.0	6,585.8	26.4	55.8	103.89	-1,706.1	-1,351.2	2,805.2	2,723.4	81.83	34.282		
7,000.0	6,599.8	10,974.0	6,585.8	26.5	55.8	100.99	-1,706.1	-1,351.2	2,820.4	2,738.6	81.85	34.457		
7,050.0	6,622.5	10,974.0	6,585.8	26.6	55.8	98.35	-1,706.1	-1,351.2	2,835.7	2,753.9	81.86	34.642		
7,100.0	6,641.1	10,974.0	6,585.8	26.7	55.8	95.95	-1,706.1	-1,351.2	2,851.0	2,769.1	81.85	34.834		
7,150.0	6,655.4	10,974.0	6,585.8	26.8	55.8	93.78	-1,706.1	-1,351.2	2,866.1	2,784.3	81.82	35.031		
7,200.0	6,665.4	10,974.0	6,585.8	26.9	55.8	91.81	-1,706.1	-1,351.2	2,880.9	2,799.2	81.77	35.232		
7,250.0	6,670.8	10,974.0	6,585.8	27.0	55.8	90.06	-1,706.1	-1,351.2	2,895.3	2,813.6	81.71	35.434		
7,285.7	6,672.0	10,974.0	6,585.8	27.1	55.8	88.95	-1,706.1	-1,351.2	2,905.3	2,823.7	81.66	35.580		
7,300.0	6,672.0	10,974.0	6,585.8	27.1	55.8	88.95	-1,706.1	-1,351.2	2,909.3	2,827.7	81.63	35.638		
7,400.0	6,672.0	10,974.0	6,585.8	27.3	55.8	88.95	-1,706.1	-1,351.2	2,938.8	2,857.3	81.48	36.070		
7,500.0	6,672.0	10,974.0	6,585.8	27.6	55.8	88.95	-1,706.1	-1,351.2	2,971.4	2,890.1	81.31	36.543		
7,600.0	6,672.0	10,974.0	6,585.8	28.0	55.8	88.95	-1,706.1	-1,351.2	3,007.0	2,925.9	81.14	37.058		
7,700.0	6,672.0	10,974.0	6,585.8	28.3	55.8	88.95	-1,706.1	-1,351.2	3,045.5	2,964.5	80.97	37.614		
7,800.0	6,672.0	10,974.0	6,585.8	28.8	55.8	88.95	-1,706.1	-1,351.2	3,086.7	3,005.9	80.79	38.209		
7,900.0	6,672.0	10,974.0	6,585.8	29.3	55.8	88.95	-1,706.1	-1,351.2	3,130.6	3,050.0	80.60	38.843		
8,000.0	6,672.0	10,974.0	6,585.8	29.8	55.8	88.95	-1,706.1	-1,351.2	3,177.1	3,096.7	80.40	39.514		
8,100.0	6,672.0	10,974.0	6,585.8	30.4	55.8	88.95	-1,706.1	-1,351.2	3,226.0	3,145.7	80.20	40.222		
8,200.0	6,672.0	10,974.0	6,585.8	31.0	55.8	88.95	-1,706.1	-1,351.2	3,277.2	3,197.2	80.00	40.965		
8,300.0	6,672.0	10,974.0	6,585.8	31.7	55.8	88.95	-1,706.1	-1,351.2	3,330.6	3,250.8	79.79	41.742		
8,400.0	6,672.0	10,974.0	6,585.8	32.4	55.8	88.95	-1,706.1	-1,351.2	3,386.2	3,306.6	79.58	42.552		
8,500.0	6,672.0	10,974.0	6,585.8	33.1	55.8	88.95	-1,706.1	-1,351.2	3,443.7	3,364.4	79.36	43.393		
8,600.0	6,672.0	10,974.0	6,585.8	33.9	55.8	88.95	-1,706.1	-1,351.2	3,503.2	3,424.1	79.14	44.265		
8,700.0	6,672.0	10,974.0	6,585.8	34.7	55.8	88.95	-1,706.1	-1,351.2	3,564.5	3,485.6	78.92	45.166		
8,800.0	6,672.0	10,974.0	6,585.8	35.5	55.8	88.95	-1,706.1	-1,351.2	3,627.5	3,548.8	78.70	46.095		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													B Section 12 - SLW Ranch B12-65-1HN - Original Drilling - As Drilled		Offset Site Error: 0.0 ft	
Survey Program: 350-2_EMS, 813-2_MWD+IFR1+MS, 7002-2_MWD+IFR1+MS													Offset Well Error: 0.0 ft			
Reference		Offset		Semi Major Axis			Distance							Warning		
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor					
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)					
8,900.0	6,672.0	10,974.0	6,585.8	36.3	55.8	88.95	-1,706.1	-1,351.2	3,692.2	3,613.7	78.47	47.051				
9,000.0	6,672.0	10,974.0	6,585.8	37.2	55.8	88.95	-1,706.1	-1,351.2	3,758.4	3,680.2	78.25	48.032				
9,100.0	6,672.0	10,974.0	6,585.8	38.1	55.8	88.95	-1,706.1	-1,351.2	3,826.1	3,748.1	78.03	49.037				
9,200.0	6,672.0	10,974.0	6,585.8	39.0	55.8	88.95	-1,706.1	-1,351.2	3,895.2	3,817.4	77.80	50.065				
9,300.0	6,672.0	10,974.0	6,585.8	39.9	55.8	88.95	-1,706.1	-1,351.2	3,965.6	3,888.0	77.58	51.115				
9,400.0	6,672.0	10,974.0	6,585.8	40.8	55.8	88.95	-1,706.1	-1,351.2	4,037.3	3,959.9	77.36	52.185				
9,500.0	6,672.0	10,974.0	6,585.8	41.8	55.8	88.95	-1,706.1	-1,351.2	4,110.1	4,033.0	77.15	53.275				
9,600.0	6,672.0	10,974.0	6,585.8	42.7	55.8	88.95	-1,706.1	-1,351.2	4,184.1	4,107.2	76.94	54.384				
9,700.0	6,672.0	10,974.0	6,585.8	43.7	55.8	88.95	-1,706.1	-1,351.2	4,259.2	4,182.4	76.73	55.511				
9,800.0	6,672.0	10,974.0	6,585.8	44.7	55.8	88.95	-1,706.1	-1,351.2	4,335.2	4,258.7	76.52	56.654				
9,900.0	6,672.0	10,974.0	6,585.8	45.7	55.8	88.95	-1,706.1	-1,351.2	4,412.2	4,335.9	76.32	57.813				
10,000.0	6,672.0	10,974.0	6,585.8	46.7	55.8	88.95	-1,706.1	-1,351.2	4,490.2	4,414.1	76.12	58.987				
10,100.0	6,672.0	10,974.0	6,585.8	47.7	55.8	88.95	-1,706.1	-1,351.2	4,569.0	4,493.1	75.93	60.175				
10,200.0	6,672.0	10,974.0	6,585.8	48.8	55.8	88.95	-1,706.1	-1,351.2	4,648.6	4,572.9	75.74	61.377				
10,300.0	6,672.0	10,974.0	6,585.8	49.8	55.8	88.95	-1,706.1	-1,351.2	4,729.0	4,653.4	75.55	62.591				
10,400.0	6,672.0	10,974.0	6,585.8	50.9	55.8	88.95	-1,706.1	-1,351.2	4,810.1	4,734.8	75.37	63.816				
10,500.0	6,672.0	10,974.0	6,585.8	51.9	55.8	88.95	-1,706.1	-1,351.2	4,892.0	4,816.8	75.20	65.053				
10,600.0	6,672.0	10,974.0	6,585.8	53.0	55.8	88.95	-1,706.1	-1,351.2	4,974.5	4,899.4	75.03	66.300				
10,700.0	6,672.0	10,974.0	6,585.8	54.1	55.8	88.95	-1,706.1	-1,351.2	5,057.6	4,982.8	74.86	67.557				
10,800.0	6,672.0	10,974.0	6,585.8	55.2	55.8	88.95	-1,706.1	-1,351.2	5,141.4	5,066.7	74.70	68.824				
10,900.0	6,672.0	10,974.0	6,585.8	56.3	55.8	88.95	-1,706.1	-1,351.2	5,225.7	5,151.1	74.55	70.099				
11,000.0	6,672.0	10,974.0	6,585.8	57.4	55.8	88.95	-1,706.1	-1,351.2	5,310.6	5,236.2	74.40	71.382				
11,100.0	6,672.0	10,974.0	6,585.8	58.5	55.8	88.95	-1,706.1	-1,351.2	5,395.9	5,321.7	74.25	72.672				
11,200.0	6,672.0	10,974.0	6,585.8	59.6	55.8	88.95	-1,706.1	-1,351.2	5,481.8	5,407.7	74.11	73.970				
11,300.0	6,672.0	10,974.0	6,585.8	60.7	55.8	88.95	-1,706.1	-1,351.2	5,568.2	5,494.2	73.97	75.274				
11,400.0	6,672.0	10,974.0	6,585.8	61.8	55.8	88.95	-1,706.1	-1,351.2	5,655.0	5,581.2	73.84	76.585				
11,500.0	6,672.0	10,974.0	6,585.8	62.9	55.8	88.95	-1,706.1	-1,351.2	5,742.3	5,668.6	73.71	77.901				
11,600.0	6,672.0	10,974.0	6,585.8	64.1	55.8	88.95	-1,706.1	-1,351.2	5,829.9	5,756.3	73.59	79.223				
11,700.0	6,672.0	10,974.0	6,585.8	65.2	55.8	88.95	-1,706.1	-1,351.2	5,918.0	5,844.5	73.47	80.550				
11,800.0	6,672.0	10,974.0	6,585.8	66.3	55.8	88.95	-1,706.1	-1,351.2	6,006.4	5,933.1	73.36	81.881				
11,900.0	6,672.0	10,974.0	6,585.8	67.5	55.8	88.95	-1,706.1	-1,351.2	6,095.2	6,022.0	73.24	83.217				
12,000.0	6,672.0	10,974.0	6,585.8	68.6	55.8	88.95	-1,706.1	-1,351.2	6,184.4	6,111.2	73.14	84.557				
12,100.0	6,672.0	10,974.0	6,585.8	69.8	55.8	88.94	-1,706.1	-1,351.2	6,273.8	6,200.8	73.04	85.900				
12,200.0	6,672.0	10,974.0	6,585.8	70.9	55.8	88.94	-1,706.1	-1,351.2	6,363.6	6,290.7	72.94	87.247				
12,300.0	6,672.0	10,974.0	6,585.8	72.1	55.8	88.94	-1,706.1	-1,351.2	6,453.7	6,380.9	72.84	88.597				
12,400.0	6,672.0	10,974.0	6,585.8	73.2	55.8	88.94	-1,706.1	-1,351.2	6,544.1	6,471.4	72.75	89.950				
12,500.0	6,672.0	10,974.0	6,585.8	74.4	55.8	88.94	-1,706.1	-1,351.2	6,634.8	6,562.1	72.67	91.306				
12,600.0	6,672.0	10,974.0	6,585.8	75.5	55.8	88.94	-1,706.1	-1,351.2	6,725.7	6,653.1	72.58	92.664				
12,700.0	6,672.0	10,974.0	6,585.8	76.7	55.8	88.94	-1,706.1	-1,351.2	6,816.9	6,744.4	72.50	94.023				
12,800.0	6,672.0	10,974.0	6,585.8	77.9	55.8	88.94	-1,706.1	-1,351.2	6,908.3	6,835.9	72.43	95.385				
12,900.0	6,672.0	10,974.0	6,585.8	79.0	55.8	88.94	-1,706.1	-1,351.2	7,000.0	6,927.6	72.35	96.749				
13,000.0	6,672.0	10,974.0	6,585.8	80.2	55.8	88.94	-1,706.1	-1,351.2	7,091.9	7,019.6	72.28	98.114				
13,100.0	6,672.0	10,974.0	6,585.8	81.4	55.8	88.94	-1,706.1	-1,351.2	7,184.0	7,111.8	72.22	99.480				
13,200.0	6,672.0	10,974.0	6,585.8	82.6	55.8	88.94	-1,706.1	-1,351.2	7,276.4	7,204.2	72.15	100.848				
13,300.0	6,672.0	10,974.0	6,585.8	83.7	55.8	88.94	-1,706.1	-1,351.2	7,368.9	7,296.8	72.09	102.216				
13,400.0	6,672.0	10,974.0	6,585.8	84.9	55.8	88.94	-1,706.1	-1,351.2	7,461.6	7,389.6	72.03	103.585				
13,500.0	6,672.0	10,974.0	6,585.8	86.1	55.8	88.94	-1,706.1	-1,351.2	7,554.5	7,482.6	71.98	104.955				
13,600.0	6,672.0	10,974.0	6,585.8	87.3	55.8	88.94	-1,706.1	-1,351.2	7,647.6	7,575.7	71.93	106.326				
13,700.0	6,672.0	10,974.0	6,585.8	88.4	55.8	88.94	-1,706.1	-1,351.2	7,740.9	7,669.0	71.88	107.696				
13,800.0	6,672.0	10,974.0	6,585.8	89.6	55.8	88.94	-1,706.1	-1,351.2	7,834.3	7,762.5	71.83	109.067				
13,900.0	6,672.0	10,974.0	6,585.8	90.8	55.8	88.94	-1,706.1	-1,351.2	7,927.9	7,856.2	71.79	110.438				
14,000.0	6,672.0	10,974.0	6,585.8	92.0	55.8	88.94	-1,706.1	-1,351.2	8,021.7	7,950.0	71.74	111.809				

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													B Section 12 - SLW Ranch B12-65-1HN - Original Drilling - As Drilled		Offset Site Error:		0.0 ft
Survey Program: 350-2_EMS, 813-2_MWD+IFR1+MS, 7002-2_MWD+IFR1+MS													Offset Well Error:		0.0 ft		
Reference		Offset		Semi Major Axis			Distance							Warning			
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre +N/-S	Offset Wellbore Centre +E/-W	Between Centres	Between Ellipses	Minimum Separation	Separation Factor					
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)						
14,100.0	6,672.0	10,974.0	6,585.8	93.2	55.8	88.94	-1,706.1	-1,351.2	8,115.6	8,043.9	71.71	113.179					
14,200.0	6,672.0	10,974.0	6,585.8	94.4	55.8	88.94	-1,706.1	-1,351.2	8,209.7	8,138.0	71.67	114.550					
14,300.0	6,672.0	10,974.0	6,585.8	95.6	55.8	88.94	-1,706.1	-1,351.2	8,303.9	8,232.2	71.63	115.920					
14,400.0	6,672.0	10,974.0	6,585.8	96.8	55.8	88.94	-1,706.1	-1,351.2	8,398.2	8,326.6	71.60	117.289					
14,500.0	6,672.0	10,974.0	6,585.8	98.0	55.8	88.94	-1,706.1	-1,351.2	8,492.7	8,421.1	71.57	118.658					
14,600.0	6,672.0	10,974.0	6,585.8	99.2	55.8	88.94	-1,706.1	-1,351.2	8,587.3	8,515.7	71.55	120.026					
14,700.0	6,672.0	10,974.0	6,585.8	100.4	55.8	88.94	-1,706.1	-1,351.2	8,682.0	8,610.5	71.52	121.393					
14,800.0	6,672.0	10,974.0	6,585.8	101.6	55.8	88.94	-1,706.1	-1,351.2	8,776.8	8,705.4	71.50	122.759					
14,900.0	6,672.0	10,974.0	6,585.8	102.7	55.8	88.94	-1,706.1	-1,351.2	8,871.8	8,800.3	71.47	124.125					
15,000.0	6,672.0	10,974.0	6,585.8	103.9	55.8	88.94	-1,706.1	-1,351.2	8,966.9	8,895.4	71.46	125.489					
15,100.0	6,672.0	10,974.0	6,585.8	105.1	55.8	88.94	-1,706.1	-1,351.2	9,062.0	8,990.6	71.44	126.852					
15,200.0	6,672.0	10,974.0	6,585.8	106.3	55.8	88.94	-1,706.1	-1,351.2	9,157.3	9,085.9	71.42	128.213					
15,300.0	6,672.0	10,974.0	6,585.8	107.6	55.8	88.94	-1,706.1	-1,351.2	9,252.7	9,181.3	71.41	129.574					
15,400.0	6,672.0	10,974.0	6,585.8	108.8	55.8	88.94	-1,706.1	-1,351.2	9,348.2	9,276.8	71.40	130.933					
15,500.0	6,672.0	10,974.0	6,585.8	110.0	55.8	88.94	-1,706.1	-1,351.2	9,443.8	9,372.4	71.39	132.290					
15,600.0	6,672.0	10,974.0	6,585.8	111.2	55.8	88.94	-1,706.1	-1,351.2	9,539.4	9,468.1	71.38	133.646					
15,700.0	6,672.0	10,974.0	6,585.8	112.4	55.8	88.94	-1,706.1	-1,351.2	9,635.2	9,563.8	71.37	135.001					
15,800.0	6,672.0	10,974.0	6,585.8	113.6	55.8	88.94	-1,706.1	-1,351.2	9,731.1	9,659.7	71.37	136.353					
15,900.0	6,672.0	10,974.0	6,585.8	114.8	55.8	88.94	-1,706.1	-1,351.2	9,827.0	9,755.6	71.36	137.704					
16,000.0	6,672.0	10,974.0	6,585.8	116.0	55.8	88.94	-1,706.1	-1,351.2	9,923.0	9,851.6	71.36	139.053					



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													B Section 12 - SLW Ranch B12-65HN - Original Drilling - As Drilled		Offset Site Error: 0.0 ft	
Survey Program: 351-2_EMS, 720-2_MWD+IFR1+MS, 7035-2_MWD+IFR1+MS													Offset Well Error: 0.0 ft			
Reference		Offset		Semi Major Axis			Distance							Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor				
0.0	0.0	0.0	0.0	0.0	0.0	-101.33	-1,181.5	-5,895.6	6,013.0							
100.0	100.0	61.7	61.7	0.1	0.1	-101.33	-1,181.5	-5,895.7	6,012.9	6,012.7	0.23	N/A				
200.0	200.0	156.6	156.6	0.5	0.3	-101.33	-1,181.4	-5,895.8	6,013.0	6,012.2	0.75	8,066.360				
300.0	300.0	251.6	251.6	0.8	0.4	-101.33	-1,181.2	-5,896.0	6,013.2	6,011.9	1.26	4,763.363				
400.0	400.0	346.5	346.5	1.2	0.6	-101.33	-1,180.9	-5,896.3	6,013.4	6,011.7	1.78	3,379.634				
500.0	500.0	459.6	459.6	1.6	1.0	-101.32	-1,180.5	-5,896.6	6,013.6	6,011.1	2.53	2,375.714				
600.0	600.0	573.7	573.7	1.9	1.4	-101.32	-1,180.0	-5,896.7	6,013.6	6,010.3	3.29	1,825.076				
700.0	700.0	736.3	736.3	2.3	1.7	-101.31	-1,179.3	-5,895.8	6,013.0	6,009.0	4.00	1,502.784				
800.0	800.0	791.9	791.9	2.6	1.8	-101.31	-1,179.4	-5,895.4	6,012.3	6,007.9	4.38	1,371.134				
900.0	900.0	10,992.0	6,569.7	3.0	55.8	-130.18	-1,138.1	-1,347.6	5,971.1	5,934.4	36.73	162.560				
1,000.0	1,000.0	10,992.0	6,569.7	3.4	55.8	-130.18	-1,138.1	-1,347.6	5,875.7	5,838.8	36.84	159.477				
1,100.0	1,100.0	10,992.0	6,569.7	3.7	55.8	-130.18	-1,138.1	-1,347.6	5,780.4	5,743.4	36.97	156.374				
1,200.0	1,200.0	10,992.0	6,569.7	4.1	55.8	-130.18	-1,138.1	-1,347.6	5,685.2	5,648.1	37.10	153.256				
1,300.0	1,300.0	10,992.0	6,569.7	4.4	55.8	-130.18	-1,138.1	-1,347.6	5,590.3	5,553.0	37.24	150.125				
1,400.0	1,400.0	10,992.0	6,569.7	4.8	55.8	-130.18	-1,138.1	-1,347.6	5,495.4	5,458.1	37.39	146.985				
1,500.0	1,500.0	10,992.0	6,569.7	5.1	55.8	-130.18	-1,138.1	-1,347.6	5,400.8	5,363.3	37.55	143.839				
1,600.0	1,600.0	10,992.0	6,569.7	5.5	55.8	-130.18	-1,138.1	-1,347.6	5,306.4	5,268.7	37.72	140.690				
1,700.0	1,700.0	10,992.0	6,569.7	5.9	55.8	-130.18	-1,138.1	-1,347.6	5,212.2	5,174.3	37.90	137.540				
1,800.0	1,800.0	10,992.0	6,569.7	6.2	55.8	-130.18	-1,138.1	-1,347.6	5,118.2	5,080.1	38.08	134.392				
1,900.0	1,900.0	10,992.0	6,569.7	6.6	55.8	-130.18	-1,138.1	-1,347.6	5,024.5	4,986.2	38.28	131.249				
2,000.0	2,000.0	10,992.0	6,569.7	6.9	55.8	-130.18	-1,138.1	-1,347.6	4,931.0	4,892.5	38.49	128.112				
2,100.0	2,100.0	10,992.0	6,569.7	7.3	55.8	-130.18	-1,138.1	-1,347.6	4,837.7	4,799.0	38.71	124.983				
2,200.0	2,200.0	10,992.0	6,569.7	7.7	55.8	-130.18	-1,138.1	-1,347.6	4,744.7	4,705.8	38.93	121.865				
2,300.0	2,300.0	10,992.0	6,569.7	8.0	55.8	-84.11	-1,138.1	-1,347.6	4,651.9	4,612.8	39.18	118.744				
2,400.0	2,399.8	10,992.0	6,569.7	8.4	55.8	-89.01	-1,138.1	-1,347.6	4,559.3	4,519.9	39.44	115.613				
2,500.0	2,499.5	10,992.0	6,569.7	8.7	55.8	-93.81	-1,138.1	-1,347.6	4,467.0	4,427.3	39.72	112.476				
2,600.0	2,598.7	10,992.0	6,569.7	9.1	55.8	-98.45	-1,138.1	-1,347.6	4,375.1	4,335.1	40.01	109.338				
2,700.0	2,697.5	10,992.0	6,569.7	9.4	55.8	-102.85	-1,138.1	-1,347.6	4,283.8	4,243.4	40.34	106.200				
2,800.0	2,795.6	10,992.0	6,569.7	9.8	55.8	-106.99	-1,138.1	-1,347.6	4,193.2	4,152.5	40.68	103.066				
2,900.0	2,893.1	10,992.0	6,569.7	10.1	55.8	-110.83	-1,138.1	-1,347.6	4,103.5	4,062.4	41.06	99.937				
3,000.0	2,989.6	10,992.0	6,569.7	10.5	55.8	-114.37	-1,138.1	-1,347.6	4,014.8	3,973.3	41.47	96.815				
3,100.0	3,085.3	10,992.0	6,569.7	10.9	55.8	-117.61	-1,138.1	-1,347.6	3,927.4	3,885.5	41.91	93.704				
3,200.0	3,179.8	10,992.0	6,569.7	11.2	55.8	-120.55	-1,138.1	-1,347.6	3,841.4	3,799.0	42.40	90.606				
3,300.0	3,273.2	10,992.0	6,569.7	11.6	55.8	-123.22	-1,138.1	-1,347.6	3,757.1	3,714.2	42.93	87.524				
3,387.5	3,353.8	10,992.0	6,569.7	11.9	55.8	-125.34	-1,138.1	-1,347.6	3,684.8	3,641.4	43.43	84.846				
3,400.0	3,365.2	10,992.0	6,569.7	12.0	55.8	-125.34	-1,138.1	-1,347.6	3,674.6	3,631.1	43.50	84.469				
3,500.0	3,456.8	10,992.0	6,569.7	12.4	55.8	-125.34	-1,138.1	-1,347.6	3,593.5	3,549.3	44.14	81.420				
3,600.0	3,548.3	10,992.0	6,569.7	12.8	55.8	-125.34	-1,138.1	-1,347.6	3,513.3	3,468.5	44.81	78.400				
3,700.0	3,639.8	10,992.0	6,569.7	13.2	55.8	-125.34	-1,138.1	-1,347.6	3,434.2	3,388.6	45.54	75.416				
3,800.0	3,731.4	10,992.0	6,569.7	13.6	55.8	-125.34	-1,138.1	-1,347.6	3,356.2	3,309.8	46.31	72.474				
3,900.0	3,822.9	10,992.0	6,569.7	14.0	55.8	-125.34	-1,138.1	-1,347.6	3,279.3	3,232.2	47.13	69.581				
4,000.0	3,914.4	10,992.0	6,569.7	14.4	55.8	-125.34	-1,138.1	-1,347.6	3,203.8	3,155.8	48.00	66.742				
4,100.0	4,005.9	10,992.0	6,569.7	14.8	55.8	-125.34	-1,138.1	-1,347.6	3,129.6	3,080.7	48.93	63.963				
4,200.0	4,097.5	10,992.0	6,569.7	15.2	55.8	-125.34	-1,138.1	-1,347.6	3,056.9	3,007.0	49.91	61.251				
4,300.0	4,189.0	10,992.0	6,569.7	15.6	55.8	-125.34	-1,138.1	-1,347.6	2,985.8	2,934.9	50.94	58.610				
4,400.0	4,280.5	10,992.0	6,569.7	16.1	55.8	-125.34	-1,138.1	-1,347.6	2,916.4	2,864.4	52.04	56.046				
4,500.0	4,372.1	10,992.0	6,569.7	16.5	55.8	-125.34	-1,138.1	-1,347.6	2,848.8	2,795.6	53.18	53.564				
4,600.0	4,463.6	10,992.0	6,569.7	16.9	55.8	-125.34	-1,138.1	-1,347.6	2,783.1	2,728.8	54.39	51.170				
4,700.0	4,555.1	10,992.0	6,569.7	17.4	55.8	-125.34	-1,138.1	-1,347.6	2,719.6	2,663.9	55.65	48.868				
4,800.0	4,646.7	10,992.0	6,569.7	17.8	55.8	-125.34	-1,138.1	-1,347.6	2,658.3	2,601.3	56.97	46.663				
4,900.0	4,738.2	10,992.0	6,569.7	18.2	55.8	-125.34	-1,138.1	-1,347.6	2,599.4	2,541.0	58.33	44.560				
5,000.0	4,829.7	10,992.0	6,569.7	18.7	55.8	-125.34	-1,138.1	-1,347.6	2,543.0	2,483.3	59.75	42.561				

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
B Section 12 - SLW Ranch B12-65HN - Original Drilling - As Drilled													Offset Well Error:	0.0 ft
Survey Program: 351-2_EMS, 720-2_MWD+IFR1+MS, 7035-2_MWD+IFR1+MS														
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
5,100.0	4,921.3	10,992.0	6,569.7	19.1	55.8	-125.34	-1,138.1	-1,347.6	2,489.4	2,428.2	61.21	40.672		
5,200.0	5,012.8	10,992.0	6,569.7	19.5	55.8	-125.34	-1,138.1	-1,347.6	2,438.7	2,376.0	62.70	38.893		
5,300.0	5,104.3	10,992.0	6,569.7	20.0	55.8	-125.34	-1,138.1	-1,347.6	2,391.2	2,326.9	64.23	37.229		
5,400.0	5,195.8	10,992.0	6,569.7	20.4	55.8	-125.34	-1,138.1	-1,347.6	2,346.9	2,281.1	65.77	35.682		
5,500.0	5,287.4	10,992.0	6,569.7	20.9	55.8	-125.34	-1,138.1	-1,347.6	2,306.1	2,238.8	67.33	34.252		
5,600.0	5,378.9	10,992.0	6,569.7	21.3	55.8	-125.34	-1,138.1	-1,347.6	2,269.0	2,200.1	68.88	32.942		
5,700.0	5,470.4	10,992.0	6,569.7	21.8	55.8	-125.34	-1,138.1	-1,347.6	2,235.8	2,165.4	70.42	31.751		
5,800.0	5,562.0	10,992.0	6,569.7	22.2	55.8	-125.34	-1,138.1	-1,347.6	2,206.6	2,134.7	71.92	30.681		
5,900.0	5,653.5	10,992.0	6,569.7	22.7	55.8	-125.34	-1,138.1	-1,347.6	2,181.6	2,108.2	73.38	29.730		
6,000.0	5,745.0	10,992.0	6,569.7	23.1	55.8	-125.34	-1,138.1	-1,347.6	2,160.9	2,086.1	74.78	28.898		
6,100.0	5,836.6	10,992.0	6,569.7	23.6	55.8	-125.34	-1,138.1	-1,347.6	2,144.7	2,068.6	76.10	28.183		
6,200.0	5,928.1	10,992.0	6,569.7	24.0	55.8	-125.34	-1,138.1	-1,347.6	2,133.1	2,055.8	77.33	27.584		
6,278.6	6,000.0	10,992.0	6,569.7	24.4	55.8	-125.34	-1,138.1	-1,347.6	2,127.2	2,049.0	78.23	27.193		
6,290.0	6,010.4	10,992.0	6,569.7	24.4	55.8	-126.89	-1,138.1	-1,347.6	2,126.7	2,048.4	78.35	27.143		
6,300.0	6,019.5	10,992.0	6,569.7	24.5	55.8	-128.58	-1,138.1	-1,347.6	2,126.4	2,048.0	78.46	27.102		
6,332.7	6,049.7	10,992.0	6,569.7	24.6	55.8	-134.94	-1,138.1	-1,347.6	2,126.1	2,047.3	78.80	26.980	CC	
6,350.0	6,065.8	10,992.0	6,569.7	24.7	55.8	-138.91	-1,138.1	-1,347.6	2,126.2	2,047.2	78.97	26.922	ES	
6,400.0	6,113.0	10,992.0	6,569.7	24.9	55.8	-152.95	-1,138.1	-1,347.6	2,127.7	2,048.2	79.44	26.785		
6,450.0	6,160.7	10,992.0	6,569.7	25.1	55.8	-170.18	-1,138.1	-1,347.6	2,131.0	2,051.1	79.85	26.688		
6,500.0	6,208.5	10,992.0	6,569.7	25.3	55.8	171.91	-1,138.1	-1,347.6	2,136.0	2,055.8	80.21	26.632		
6,550.0	6,255.8	10,992.0	6,569.7	25.4	55.8	156.22	-1,138.1	-1,347.6	2,142.8	2,062.3	80.51	26.615	SF	
6,600.0	6,302.5	10,992.0	6,569.7	25.6	55.8	143.89	-1,138.1	-1,347.6	2,151.1	2,070.4	80.76	26.635		
6,650.0	6,347.9	10,992.0	6,569.7	25.7	55.8	134.49	-1,138.1	-1,347.6	2,161.0	2,080.0	80.97	26.689		
6,700.0	6,391.6	10,992.0	6,569.7	25.9	55.8	127.20	-1,138.1	-1,347.6	2,172.3	2,091.2	81.12	26.777		
6,750.0	6,433.4	10,992.0	6,569.7	26.0	55.8	121.35	-1,138.1	-1,347.6	2,184.8	2,103.6	81.23	26.896		
6,800.0	6,472.8	10,992.0	6,569.7	26.1	55.8	116.47	-1,138.1	-1,347.6	2,198.6	2,117.3	81.30	27.042		
6,850.0	6,509.4	10,992.0	6,569.7	26.2	55.8	112.26	-1,138.1	-1,347.6	2,213.3	2,132.0	81.33	27.214		
6,900.0	6,543.0	10,992.0	6,569.7	26.3	55.8	108.52	-1,138.1	-1,347.6	2,228.9	2,147.6	81.32	27.409		
6,950.0	6,573.2	10,992.0	6,569.7	26.4	55.8	105.13	-1,138.1	-1,347.6	2,245.2	2,163.9	81.27	27.624		
7,000.0	6,599.8	10,992.0	6,569.7	26.5	55.8	102.02	-1,138.1	-1,347.6	2,262.0	2,180.8	81.20	27.857		
7,050.0	6,622.5	10,992.0	6,569.7	26.6	55.8	99.14	-1,138.1	-1,347.6	2,279.2	2,198.1	81.10	28.104		
7,100.0	6,641.1	10,992.0	6,569.7	26.7	55.8	96.46	-1,138.1	-1,347.6	2,296.6	2,215.7	80.97	28.364		
7,150.0	6,655.4	10,992.0	6,569.7	26.8	55.8	93.98	-1,138.1	-1,347.6	2,314.1	2,233.3	80.82	28.632		
7,200.0	6,665.4	10,992.0	6,569.7	26.9	55.8	91.70	-1,138.1	-1,347.6	2,331.5	2,250.9	80.65	28.908		
7,250.0	6,670.8	10,992.0	6,569.7	27.0	55.8	89.62	-1,138.1	-1,347.6	2,348.6	2,268.2	80.46	29.189		
7,285.7	6,672.0	10,992.0	6,569.7	27.1	55.8	88.27	-1,138.1	-1,347.6	2,360.6	2,280.3	80.32	29.392		
7,300.0	6,672.0	10,992.0	6,569.7	27.1	55.8	88.27	-1,138.1	-1,347.6	2,365.4	2,285.2	80.25	29.474		
7,400.0	6,672.0	10,992.0	6,569.7	27.3	55.8	88.27	-1,138.1	-1,347.6	2,401.1	2,321.3	79.83	30.079		
7,500.0	6,672.0	10,992.0	6,569.7	27.6	55.8	88.27	-1,138.1	-1,347.6	2,440.4	2,361.0	79.38	30.742		
7,600.0	6,672.0	10,992.0	6,569.7	28.0	55.8	88.27	-1,138.1	-1,347.6	2,483.1	2,404.1	78.93	31.460		
7,700.0	6,672.0	10,992.0	6,569.7	28.3	55.8	88.27	-1,138.1	-1,347.6	2,529.0	2,450.5	78.46	32.233		
7,800.0	6,672.0	10,992.0	6,569.7	28.8	55.8	88.27	-1,138.1	-1,347.6	2,578.0	2,500.0	77.98	33.057		
7,900.0	6,672.0	10,992.0	6,569.7	29.3	55.8	88.27	-1,138.1	-1,347.6	2,629.9	2,552.3	77.51	33.931		
8,000.0	6,672.0	10,992.0	6,569.7	29.8	55.8	88.27	-1,138.1	-1,347.6	2,684.5	2,607.4	77.03	34.851		
8,100.0	6,672.0	10,992.0	6,569.7	30.4	55.8	88.27	-1,138.1	-1,347.6	2,741.6	2,665.1	76.55	35.816		
8,200.0	6,672.0	10,992.0	6,569.7	31.0	55.8	88.27	-1,138.1	-1,347.6	2,801.2	2,725.2	76.07	36.823		
8,300.0	6,672.0	10,992.0	6,569.7	31.7	55.8	88.27	-1,138.1	-1,347.6	2,863.1	2,787.5	75.60	37.870		
8,400.0	6,672.0	10,992.0	6,569.7	32.4	55.8	88.27	-1,138.1	-1,347.6	2,927.1	2,851.9	75.14	38.955		
8,500.0	6,672.0	10,992.0	6,569.7	33.1	55.8	88.27	-1,138.1	-1,347.6	2,993.0	2,918.3	74.69	40.074		
8,600.0	6,672.0	10,992.0	6,569.7	33.9	55.8	88.27	-1,138.1	-1,347.6	3,060.8	2,986.6	74.24	41.227		
8,700.0	6,672.0	10,992.0	6,569.7	34.7	55.8	88.27	-1,138.1	-1,347.6	3,130.3	3,056.5	73.81	42.412		
8,800.0	6,672.0	10,992.0	6,569.7	35.5	55.8	88.27	-1,138.1	-1,347.6	3,201.5	3,128.1	73.39	43.625		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													B Section 12 - SLW Ranch B12-65HN - Original Drilling - As Drilled		Offset Site Error: 0.0 ft	
Survey Program: 351-2_EMS, 720-2_MWD+IFR1+MS, 7035-2_MWD+IFR1+MS													Offset Well Error: 0.0 ft			
Reference		Offset		Semi Major Axis		Distance								Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor				
8,900.0	6,672.0	10,992.0	6,569.7	36.3	55.8	88.27	-1,138.1	-1,347.6	3,274.2	3,201.2	72.98	44.866				
9,000.0	6,672.0	10,992.0	6,569.7	37.2	55.8	88.27	-1,138.1	-1,347.6	3,348.2	3,275.7	72.58	46.132				
9,100.0	6,672.0	10,992.0	6,569.7	38.1	55.8	88.26	-1,138.1	-1,347.6	3,423.6	3,351.4	72.19	47.422				
9,200.0	6,672.0	10,992.0	6,569.7	39.0	55.8	88.26	-1,138.1	-1,347.6	3,500.3	3,428.4	71.82	48.734				
9,300.0	6,672.0	10,992.0	6,569.7	39.9	55.8	88.26	-1,138.1	-1,347.6	3,578.1	3,506.6	71.47	50.067				
9,400.0	6,672.0	10,992.0	6,569.7	40.8	55.8	88.26	-1,138.1	-1,347.6	3,657.0	3,585.8	71.12	51.419				
9,500.0	6,672.0	10,992.0	6,569.7	41.8	55.8	88.26	-1,138.1	-1,347.6	3,736.8	3,666.1	70.79	52.789				
9,600.0	6,672.0	10,992.0	6,569.7	42.7	55.8	88.26	-1,138.1	-1,347.6	3,817.7	3,747.2	70.47	54.175				
9,700.0	6,672.0	10,992.0	6,569.7	43.7	55.8	88.26	-1,138.1	-1,347.6	3,899.4	3,829.3	70.16	55.577				
9,800.0	6,672.0	10,992.0	6,569.7	44.7	55.8	88.26	-1,138.1	-1,347.6	3,982.0	3,912.1	69.87	56.992				
9,900.0	6,672.0	10,992.0	6,569.7	45.7	55.8	88.26	-1,138.1	-1,347.6	4,065.4	3,995.8	69.59	58.421				
10,000.0	6,672.0	10,992.0	6,569.7	46.7	55.8	88.26	-1,138.1	-1,347.6	4,149.5	4,080.2	69.32	59.862				
10,100.0	6,672.0	10,992.0	6,569.7	47.7	55.8	88.26	-1,138.1	-1,347.6	4,234.3	4,165.2	69.06	61.313				
10,200.0	6,672.0	10,992.0	6,569.7	48.8	55.8	88.26	-1,138.1	-1,347.6	4,319.7	4,250.9	68.81	62.775				
10,300.0	6,672.0	10,992.0	6,569.7	49.8	55.8	88.26	-1,138.1	-1,347.6	4,405.8	4,337.2	68.58	64.247				
10,400.0	6,672.0	10,992.0	6,569.7	50.9	55.8	88.26	-1,138.1	-1,347.6	4,492.5	4,424.1	68.35	65.727				
10,500.0	6,672.0	10,992.0	6,569.7	51.9	55.8	88.26	-1,138.1	-1,347.6	4,579.7	4,511.5	68.13	67.215				
10,600.0	6,672.0	10,992.0	6,569.7	53.0	55.8	88.26	-1,138.1	-1,347.6	4,667.4	4,599.5	67.93	68.710				
10,700.0	6,672.0	10,992.0	6,569.7	54.1	55.8	88.26	-1,138.1	-1,347.6	4,755.6	4,687.9	67.73	70.212				
10,800.0	6,672.0	10,992.0	6,569.7	55.2	55.8	88.26	-1,138.1	-1,347.6	4,844.2	4,776.7	67.54	71.719				
10,900.0	6,672.0	10,992.0	6,569.7	56.3	55.8	88.26	-1,138.1	-1,347.6	4,933.4	4,866.0	67.37	73.232				
11,000.0	6,672.0	10,992.0	6,569.7	57.4	55.8	88.26	-1,138.1	-1,347.6	5,022.9	4,955.7	67.20	74.750				
11,100.0	6,672.0	10,992.0	6,569.7	58.5	55.8	88.26	-1,138.1	-1,347.6	5,112.8	5,045.7	67.03	76.273				
11,200.0	6,672.0	10,992.0	6,569.7	59.6	55.8	88.26	-1,138.1	-1,347.6	5,203.1	5,136.2	66.88	77.799				
11,300.0	6,672.0	10,992.0	6,569.7	60.7	55.8	88.26	-1,138.1	-1,347.6	5,293.7	5,227.0	66.73	79.329				
11,400.0	6,672.0	10,992.0	6,569.7	61.8	55.8	88.26	-1,138.1	-1,347.6	5,384.7	5,318.1	66.59	80.862				
11,500.0	6,672.0	10,992.0	6,569.7	62.9	55.8	88.26	-1,138.1	-1,347.6	5,475.9	5,409.5	66.46	82.398				
11,600.0	6,672.0	10,992.0	6,569.7	64.1	55.8	88.26	-1,138.1	-1,347.6	5,567.5	5,501.2	66.33	83.936				
11,700.0	6,672.0	10,992.0	6,569.7	65.2	55.8	88.26	-1,138.1	-1,347.6	5,659.4	5,593.2	66.21	85.476				
11,800.0	6,672.0	10,992.0	6,569.7	66.3	55.8	88.26	-1,138.1	-1,347.6	5,751.6	5,685.5	66.10	87.018				
11,900.0	6,672.0	10,992.0	6,569.7	67.5	55.8	88.26	-1,138.1	-1,347.6	5,844.0	5,778.0	65.99	88.561				
12,000.0	6,672.0	10,992.0	6,569.7	68.6	55.8	88.26	-1,138.1	-1,347.6	5,936.6	5,870.7	65.89	90.105				
12,100.0	6,672.0	10,992.0	6,569.7	69.8	55.8	88.26	-1,138.1	-1,347.6	6,029.5	5,963.7	65.79	91.651				
12,200.0	6,672.0	10,992.0	6,569.7	70.9	55.8	88.26	-1,138.1	-1,347.6	6,122.6	6,056.9	65.70	93.197				
12,300.0	6,672.0	10,992.0	6,569.7	72.1	55.8	88.26	-1,138.1	-1,347.6	6,216.0	6,150.4	65.61	94.743				
12,400.0	6,672.0	10,992.0	6,569.7	73.2	55.8	88.26	-1,138.1	-1,347.6	6,309.5	6,244.0	65.53	96.290				
12,500.0	6,672.0	10,992.0	6,569.7	74.4	55.8	88.26	-1,138.1	-1,347.6	6,403.3	6,337.8	65.45	97.836				
12,600.0	6,672.0	10,992.0	6,569.7	75.5	55.8	88.26	-1,138.1	-1,347.6	6,497.2	6,431.8	65.38	99.383				
12,700.0	6,672.0	10,992.0	6,569.7	76.7	55.8	88.26	-1,138.1	-1,347.6	6,591.3	6,526.0	65.31	100.929				
12,800.0	6,672.0	10,992.0	6,569.7	77.9	55.8	88.26	-1,138.1	-1,347.6	6,685.6	6,620.4	65.24	102.474				
12,900.0	6,672.0	10,992.0	6,569.7	79.0	55.8	88.25	-1,138.1	-1,347.6	6,780.1	6,714.9	65.18	104.019				
13,000.0	6,672.0	10,992.0	6,569.7	80.2	55.8	88.25	-1,138.1	-1,347.6	6,874.7	6,809.5	65.12	105.563				
13,100.0	6,672.0	10,992.0	6,569.7	81.4	55.8	88.25	-1,138.1	-1,347.6	6,969.4	6,904.4	65.07	107.106				
13,200.0	6,672.0	10,992.0	6,569.7	82.6	55.8	88.25	-1,138.1	-1,347.6	7,064.3	6,999.3	65.02	108.647				
13,300.0	6,672.0	10,992.0	6,569.7	83.7	55.8	88.25	-1,138.1	-1,347.6	7,159.4	7,094.4	64.97	110.188				
13,400.0	6,672.0	10,992.0	6,569.7	84.9	55.8	88.25	-1,138.1	-1,347.6	7,254.6	7,189.7	64.93	111.727				
13,500.0	6,672.0	10,992.0	6,569.7	86.1	55.8	88.25	-1,138.1	-1,347.6	7,349.9	7,285.0	64.89	113.264				
13,600.0	6,672.0	10,992.0	6,569.7	87.3	55.8	88.25	-1,138.1	-1,347.6	7,445.4	7,380.5	64.86	114.800				
13,700.0	6,672.0	10,992.0	6,569.7	88.4	55.8	88.25	-1,138.1	-1,347.6	7,540.9	7,476.1	64.82	116.334				
13,800.0	6,672.0	10,992.0	6,569.7	89.6	55.8	88.25	-1,138.1	-1,347.6	7,636.6	7,571.8	64.79	117.866				
13,900.0	6,672.0	10,992.0	6,569.7	90.8	55.8	88.25	-1,138.1	-1,347.6	7,732.4	7,667.6	64.76	119.396				
14,000.0	6,672.0	10,992.0	6,569.7	92.0	55.8	88.25	-1,138.1	-1,347.6	7,828.3	7,763.5	64.74	120.924				

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
B Section 12 - SLW Ranch B12-65HN - Original Drilling - As Drilled												Offset Well Error:	0.0 ft
Survey Program: 351-2_EMS, 720-2_MWD+IFR1+MS, 7035-2_MWD+IFR1+MS													
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
14,100.0	6,672.0	10,992.0	6,569.7	93.2	55.8	88.25	-1,138.1	-1,347.6	7,924.3	7,859.6	64.71	122.449	
14,200.0	6,672.0	10,992.0	6,569.7	94.4	55.8	88.25	-1,138.1	-1,347.6	8,020.4	7,955.7	64.69	123.973	
14,300.0	6,672.0	10,992.0	6,569.7	95.6	55.8	88.25	-1,138.1	-1,347.6	8,116.6	8,051.9	64.68	125.494	
14,400.0	6,672.0	10,992.0	6,569.7	96.8	55.8	88.25	-1,138.1	-1,347.6	8,212.9	8,148.2	64.66	127.013	
14,500.0	6,672.0	10,992.0	6,569.7	98.0	55.8	88.25	-1,138.1	-1,347.6	8,309.3	8,244.6	64.65	128.529	
14,600.0	6,672.0	10,992.0	6,569.7	99.2	55.8	88.25	-1,138.1	-1,347.6	8,405.7	8,341.1	64.64	130.043	
14,700.0	6,672.0	10,992.0	6,569.7	100.4	55.8	88.25	-1,138.1	-1,347.6	8,502.3	8,437.6	64.63	131.554	
14,800.0	6,672.0	10,992.0	6,569.7	101.6	55.8	88.25	-1,138.1	-1,347.6	8,598.9	8,534.3	64.62	133.063	
14,900.0	6,672.0	10,992.0	6,569.7	102.7	55.8	88.25	-1,138.1	-1,347.6	8,695.6	8,631.0	64.62	134.568	
15,000.0	6,672.0	10,992.0	6,569.7	103.9	55.8	88.25	-1,138.1	-1,347.6	8,792.4	8,727.8	64.62	136.071	
15,100.0	6,672.0	10,992.0	6,569.7	105.1	55.8	88.24	-1,138.1	-1,347.6	8,889.3	8,824.6	64.62	137.571	
15,200.0	6,672.0	10,992.0	6,569.7	106.3	55.8	88.24	-1,138.1	-1,347.6	8,986.2	8,921.6	64.62	139.068	
15,300.0	6,672.0	10,992.0	6,569.7	107.6	55.8	88.24	-1,138.1	-1,347.6	9,083.2	9,018.6	64.62	140.562	
15,400.0	6,672.0	10,992.0	6,569.7	108.8	55.8	88.24	-1,138.1	-1,347.6	9,180.2	9,115.6	64.63	142.053	
15,500.0	6,672.0	10,992.0	6,569.7	110.0	55.8	88.24	-1,138.1	-1,347.6	9,277.4	9,212.7	64.63	143.541	
15,600.0	6,672.0	10,992.0	6,569.7	111.2	55.8	88.24	-1,138.1	-1,347.6	9,374.6	9,309.9	64.64	145.025	
15,700.0	6,672.0	10,992.0	6,569.7	112.4	55.8	88.24	-1,138.1	-1,347.6	9,471.8	9,407.2	64.65	146.507	
15,800.0	6,672.0	10,992.0	6,569.7	113.6	55.8	88.24	-1,138.1	-1,347.6	9,569.1	9,504.5	64.66	147.985	
15,900.0	6,672.0	10,992.0	6,569.7	114.8	55.8	88.24	-1,138.1	-1,347.6	9,666.5	9,601.8	64.68	149.460	
16,000.0	6,672.0	10,992.0	6,569.7	116.0	55.8	88.24	-1,138.1	-1,347.6	9,763.9	9,699.2	64.69	150.931	
16,100.0	6,672.0	10,992.0	6,569.7	117.2	55.8	88.24	-1,138.1	-1,347.6	9,861.4	9,796.7	64.71	152.400	
16,200.0	6,672.0	10,992.0	6,569.7	118.4	55.8	88.24	-1,138.1	-1,347.6	9,958.9	9,894.2	64.73	153.865	



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													B Section 12 - SLW Ranch B12-66-1HN - Original Drilling - As Drilled		Offset Site Error:		0.0 ft
Survey Program: 342-2_MWD+IFR1+MS+Sag, 7006-2_MWD+IFR1+MS+Sag															Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis		Distance								Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor					
0.0	0.0	0.0	0.0	0.0	0.0	-101.09	-1,156.1	-5,895.9	6,008.3								
100.0	100.0	67.3	67.3	0.1	0.1	-101.09	-1,156.1	-5,895.9	6,008.2	6,007.9	0.24	N/A					
200.0	200.0	170.7	170.7	0.5	0.3	-101.10	-1,156.2	-5,895.8	6,008.1	6,007.4	0.77	7,816.142					
300.0	300.0	274.2	274.2	0.8	0.5	-101.10	-1,156.5	-5,895.6	6,008.0	6,006.7	1.30	4,622.568					
400.0	400.0	377.7	377.7	1.2	0.6	-101.10	-1,157.0	-5,895.3	6,007.8	6,006.0	1.83	3,281.638					
500.0	500.0	471.1	471.1	1.6	1.0	-101.11	-1,157.2	-5,895.2	6,007.7	6,005.1	2.58	2,332.108					
600.0	600.0	567.1	567.1	1.9	1.3	-101.11	-1,157.4	-5,895.1	6,007.6	6,004.4	3.27	1,839.183					
700.0	700.0	671.1	671.1	2.3	1.7	-101.11	-1,157.2	-5,895.1	6,007.6	6,003.6	3.98	1,508.120					
800.0	800.0	801.7	801.6	2.6	2.2	-101.09	-1,156.0	-5,894.9	6,007.3	6,002.5	4.79	1,252.890					
900.0	900.0	11,132.0	6,584.1	3.0	57.6	-121.14	-812.2	-1,344.2	5,930.8	5,904.6	26.14	226.902					
1,000.0	1,000.0	11,132.0	6,584.1	3.4	57.6	-121.14	-812.2	-1,344.2	5,834.4	5,808.1	26.27	222.101					
1,100.0	1,100.0	11,132.0	6,584.1	3.7	57.6	-121.14	-812.2	-1,344.2	5,738.2	5,711.7	26.41	217.266					
1,200.0	1,200.0	11,132.0	6,584.1	4.1	57.6	-121.14	-812.2	-1,344.2	5,642.0	5,615.5	26.56	212.406					
1,300.0	1,300.0	11,132.0	6,584.1	4.4	57.6	-121.14	-812.2	-1,344.2	5,546.1	5,519.3	26.72	207.527					
1,400.0	1,400.0	11,132.0	6,584.1	4.8	57.6	-121.14	-812.2	-1,344.2	5,450.2	5,423.3	26.90	202.634					
1,500.0	1,500.0	11,132.0	6,584.1	5.1	57.6	-121.14	-812.2	-1,344.2	5,354.5	5,327.5	27.08	197.733					
1,600.0	1,600.0	11,132.0	6,584.1	5.5	57.6	-121.14	-812.2	-1,344.2	5,259.0	5,231.8	27.27	192.831					
1,700.0	1,700.0	11,132.0	6,584.1	5.9	57.6	-121.14	-812.2	-1,344.2	5,163.7	5,136.2	27.48	187.933					
1,800.0	1,800.0	11,132.0	6,584.1	6.2	57.6	-121.14	-812.2	-1,344.2	5,068.5	5,040.8	27.69	183.042					
1,900.0	1,900.0	11,132.0	6,584.1	6.6	57.6	-121.14	-812.2	-1,344.2	4,973.5	4,945.6	27.92	178.164					
2,000.0	2,000.0	11,132.0	6,584.1	6.9	57.6	-121.14	-812.2	-1,344.2	4,878.7	4,850.6	28.15	173.302					
2,100.0	2,100.0	11,132.0	6,584.1	7.3	57.6	-121.14	-812.2	-1,344.2	4,784.2	4,755.8	28.40	168.462					
2,200.0	2,200.0	11,132.0	6,584.1	7.7	57.6	-121.14	-812.2	-1,344.2	4,689.8	4,661.2	28.66	163.645					
2,300.0	2,300.0	11,132.0	6,584.1	8.0	57.6	-75.55	-812.2	-1,344.2	4,595.5	4,566.6	28.93	158.827					
2,400.0	2,399.8	11,132.0	6,584.1	8.4	57.6	-81.12	-812.2	-1,344.2	4,501.2	4,472.0	29.23	153.997					
2,500.0	2,499.5	11,132.0	6,584.1	8.7	57.6	-86.73	-812.2	-1,344.2	4,406.9	4,377.4	29.54	149.173					
2,600.0	2,598.7	11,132.0	6,584.1	9.1	57.6	-92.28	-812.2	-1,344.2	4,312.9	4,283.0	29.88	144.357					
2,700.0	2,697.5	11,132.0	6,584.1	9.4	57.6	-97.65	-812.2	-1,344.2	4,219.1	4,188.9	30.23	139.554					
2,800.0	2,795.6	11,132.0	6,584.1	9.8	57.6	-102.75	-812.2	-1,344.2	4,125.8	4,095.2	30.61	134.765					
2,900.0	2,893.1	11,132.0	6,584.1	10.1	57.6	-107.52	-812.2	-1,344.2	4,033.1	4,002.1	31.03	129.992					
3,000.0	2,889.6	11,132.0	6,584.1	10.5	57.6	-111.92	-812.2	-1,344.2	3,941.2	3,909.7	31.47	125.238					
3,100.0	3,085.3	11,132.0	6,584.1	10.9	57.6	-115.92	-812.2	-1,344.2	3,850.2	3,818.3	31.95	120.504					
3,200.0	3,179.8	11,132.0	6,584.1	11.2	57.6	-119.55	-812.2	-1,344.2	3,760.4	3,727.9	32.47	115.793					
3,300.0	3,273.2	11,132.0	6,584.1	11.6	57.6	-122.81	-812.2	-1,344.2	3,671.8	3,638.8	33.05	111.108					
3,387.5	3,353.8	11,132.0	6,584.1	11.9	57.6	-125.38	-812.2	-1,344.2	3,595.6	3,562.0	33.59	107.036					
3,400.0	3,365.2	11,132.0	6,584.1	12.0	57.6	-125.38	-812.2	-1,344.2	3,584.8	3,551.2	33.67	106.463					
3,500.0	3,456.8	11,132.0	6,584.1	12.4	57.6	-125.38	-812.2	-1,344.2	3,498.9	3,464.5	34.36	101.828					
3,600.0	3,548.3	11,132.0	6,584.1	12.8	57.6	-125.38	-812.2	-1,344.2	3,413.7	3,378.6	35.10	97.247					
3,700.0	3,639.8	11,132.0	6,584.1	13.2	57.6	-125.38	-812.2	-1,344.2	3,329.4	3,293.5	35.90	92.732					
3,800.0	3,731.4	11,132.0	6,584.1	13.6	57.6	-125.38	-812.2	-1,344.2	3,246.0	3,209.2	36.76	88.293					
3,900.0	3,822.9	11,132.0	6,584.1	14.0	57.6	-125.38	-812.2	-1,344.2	3,163.5	3,125.8	37.69	83.941					
4,000.0	3,914.4	11,132.0	6,584.1	14.4	57.6	-125.38	-812.2	-1,344.2	3,082.0	3,043.4	38.68	79.688					
4,100.0	4,005.9	11,132.0	6,584.1	14.8	57.6	-125.38	-812.2	-1,344.2	3,001.7	2,962.0	39.74	75.543					
4,200.0	4,097.5	11,132.0	6,584.1	15.2	57.6	-125.38	-812.2	-1,344.2	2,922.6	2,881.7	40.87	71.515					
4,300.0	4,189.0	11,132.0	6,584.1	15.6	57.6	-125.38	-812.2	-1,344.2	2,844.8	2,802.7	42.07	67.613					
4,400.0	4,280.5	11,132.0	6,584.1	16.1	57.6	-125.38	-812.2	-1,344.2	2,768.4	2,725.1	43.36	63.847					
4,500.0	4,372.1	11,132.0	6,584.1	16.5	57.6	-125.38	-812.2	-1,344.2	2,693.6	2,648.9	44.73	60.222					
4,600.0	4,463.6	11,132.0	6,584.1	16.9	57.6	-125.38	-812.2	-1,344.2	2,620.5	2,574.3	46.18	56.746					
4,700.0	4,555.1	11,132.0	6,584.1	17.4	57.6	-125.38	-812.2	-1,344.2	2,549.2	2,501.4	47.71	53.425					
4,800.0	4,646.7	11,132.0	6,584.1	17.8	57.6	-125.38	-812.2	-1,344.2	2,479.8	2,430.5	49.34	50.265					
4,900.0	4,738.2	11,132.0	6,584.1	18.2	57.6	-125.38	-812.2	-1,344.2	2,412.6	2,361.6	51.04	47.268					
5,000.0	4,829.7	11,132.0	6,584.1	18.7	57.6	-125.38	-812.2	-1,344.2	2,347.8	2,295.0	52.83	44.440					

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



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<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 342-2_MWD+IFR1+MS+Sag, 7006-2_MWD+IFR1+MS+Sag													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,100.0	4,921.3	11,132.0	6,584.1	19.1	57.6	-125.38	-812.2	-1,344.2	2,285.5	2,230.8	54.70	41.783		
5,200.0	5,012.8	11,132.0	6,584.1	19.5	57.6	-125.38	-812.2	-1,344.2	2,225.9	2,169.3	56.64	39.297		
5,300.0	5,104.3	11,132.0	6,584.1	20.0	57.6	-125.38	-812.2	-1,344.2	2,169.4	2,110.7	58.65	36.986		
5,400.0	5,195.8	11,132.0	6,584.1	20.4	57.6	-125.38	-812.2	-1,344.2	2,116.0	2,055.3	60.72	34.848		
5,500.0	5,287.4	11,132.0	6,584.1	20.9	57.6	-125.38	-812.2	-1,344.2	2,066.1	2,003.3	62.83	32.884		
5,600.0	5,378.9	11,132.0	6,584.1	21.3	57.6	-125.38	-812.2	-1,344.2	2,019.9	1,955.0	64.97	31.091		
5,700.0	5,470.4	11,132.0	6,584.1	21.8	57.6	-125.38	-812.2	-1,344.2	1,977.7	1,910.6	67.11	29.469		
5,800.0	5,562.0	11,132.0	6,584.1	22.2	57.6	-125.38	-812.2	-1,344.2	1,939.8	1,870.6	69.24	28.015		
5,900.0	5,653.5	11,132.0	6,584.1	22.7	57.6	-125.38	-812.2	-1,344.2	1,906.3	1,835.0	71.33	26.726		
6,000.0	5,745.0	11,132.0	6,584.1	23.1	57.6	-125.38	-812.2	-1,344.2	1,877.6	1,804.3	73.35	25.598		
6,100.0	5,836.6	11,132.0	6,584.1	23.6	57.6	-125.38	-812.2	-1,344.2	1,853.9	1,778.6	75.28	24.627		
6,200.0	5,928.1	11,132.0	6,584.1	24.0	57.6	-125.38	-812.2	-1,344.2	1,835.2	1,758.2	77.08	23.810		
6,278.6	6,000.0	11,132.0	6,584.1	24.4	57.6	-125.38	-812.2	-1,344.2	1,824.3	1,745.9	78.39	23.272		
6,290.0	6,010.4	11,132.0	6,584.1	24.4	57.6	-126.96	-812.2	-1,344.2	1,823.1	1,744.6	78.57	23.203		
6,300.0	6,019.5	11,132.0	6,584.1	24.5	57.6	-128.58	-812.2	-1,344.2	1,822.3	1,743.5	78.73	23.145		
6,350.0	6,065.8	11,132.0	6,584.1	24.7	57.6	-138.60	-812.2	-1,344.2	1,819.1	1,739.6	79.49	22.885		
6,400.0	6,113.0	11,132.0	6,584.1	24.9	57.6	-152.35	-812.2	-1,344.2	1,817.9	1,737.8	80.17	22.675		
6,403.2	6,116.0	11,132.0	6,584.1	24.9	57.6	-153.35	-812.2	-1,344.2	1,817.9	1,737.7	80.22	22.663 CC, ES		
6,450.0	6,160.7	11,132.0	6,584.1	25.1	57.6	-169.32	-812.2	-1,344.2	1,818.8	1,738.0	80.79	22.514		
6,500.0	6,208.5	11,132.0	6,584.1	25.3	57.6	173.00	-812.2	-1,344.2	1,821.7	1,740.4	81.32	22.402		
6,550.0	6,255.8	11,132.0	6,584.1	25.4	57.6	157.52	-812.2	-1,344.2	1,826.6	1,744.9	81.77	22.338		
6,600.0	6,302.5	11,132.0	6,584.1	25.6	57.6	145.36	-812.2	-1,344.2	1,833.5	1,751.3	82.14	22.320 SF		
6,650.0	6,347.9	11,132.0	6,584.1	25.7	57.6	136.10	-812.2	-1,344.2	1,842.2	1,759.7	82.44	22.346		
6,700.0	6,391.6	11,132.0	6,584.1	25.9	57.6	128.91	-812.2	-1,344.2	1,852.6	1,769.9	82.65	22.414		
6,750.0	6,433.4	11,132.0	6,584.1	26.0	57.6	123.13	-812.2	-1,344.2	1,864.6	1,781.8	82.79	22.521		
6,800.0	6,472.8	11,132.0	6,584.1	26.1	57.6	118.27	-812.2	-1,344.2	1,878.1	1,795.3	82.87	22.664		
6,850.0	6,509.4	11,132.0	6,584.1	26.2	57.6	114.04	-812.2	-1,344.2	1,893.0	1,810.1	82.88	22.841		
6,900.0	6,543.0	11,132.0	6,584.1	26.3	57.6	110.25	-812.2	-1,344.2	1,909.0	1,826.2	82.83	23.047		
6,950.0	6,573.2	11,132.0	6,584.1	26.4	57.6	106.76	-812.2	-1,344.2	1,926.0	1,843.3	82.73	23.281		
7,000.0	6,599.8	11,132.0	6,584.1	26.5	57.6	103.51	-812.2	-1,344.2	1,943.9	1,861.3	82.59	23.537		
7,050.0	6,622.5	11,132.0	6,584.1	26.6	57.6	100.45	-812.2	-1,344.2	1,962.3	1,879.9	82.40	23.814		
7,100.0	6,641.1	11,132.0	6,584.1	26.7	57.6	97.57	-812.2	-1,344.2	1,981.3	1,899.1	82.18	24.108		
7,150.0	6,655.4	11,132.0	6,584.1	26.8	57.6	94.85	-812.2	-1,344.2	2,000.5	1,918.6	81.94	24.416		
7,200.0	6,665.4	11,132.0	6,584.1	26.9	57.6	92.31	-812.2	-1,344.2	2,019.8	1,938.1	81.66	24.734		
7,250.0	6,670.8	11,132.0	6,584.1	27.0	57.6	89.96	-812.2	-1,344.2	2,039.0	1,957.7	81.37	25.060		
7,285.7	6,672.0	11,132.0	6,584.1	27.1	57.6	88.40	-812.2	-1,344.2	2,052.6	1,971.5	81.14	25.297		
7,300.0	6,672.0	11,132.0	6,584.1	27.1	57.6	88.40	-812.2	-1,344.2	2,058.1	1,977.0	81.05	25.393		
7,400.0	6,672.0	11,132.0	6,584.1	27.3	57.6	88.40	-812.2	-1,344.2	2,098.6	2,018.1	80.40	26.101		
7,500.0	6,672.0	11,132.0	6,584.1	27.6	57.6	88.40	-812.2	-1,344.2	2,142.9	2,063.2	79.73	26.877		
7,600.0	6,672.0	11,132.0	6,584.1	28.0	57.6	88.40	-812.2	-1,344.2	2,191.0	2,111.9	79.05	27.717		
7,700.0	6,672.0	11,132.0	6,584.1	28.3	57.6	88.40	-812.2	-1,344.2	2,242.5	2,164.1	78.36	28.618		
7,800.0	6,672.0	11,132.0	6,584.1	28.8	57.6	88.40	-812.2	-1,344.2	2,297.2	2,219.5	77.67	29.576		
7,900.0	6,672.0	11,132.0	6,584.1	29.3	57.6	88.40	-812.2	-1,344.2	2,354.9	2,277.9	76.99	30.588		
8,000.0	6,672.0	11,132.0	6,584.1	29.8	57.6	88.40	-812.2	-1,344.2	2,415.4	2,339.0	76.31	31.650		
8,100.0	6,672.0	11,132.0	6,584.1	30.4	57.6	88.40	-812.2	-1,344.2	2,478.4	2,402.7	75.65	32.759		
8,200.0	6,672.0	11,132.0	6,584.1	31.0	57.6	88.40	-812.2	-1,344.2	2,543.8	2,468.8	75.01	33.912		
8,300.0	6,672.0	11,132.0	6,584.1	31.7	57.6	88.40	-812.2	-1,344.2	2,611.4	2,537.0	74.39	35.106		
8,400.0	6,672.0	11,132.0	6,584.1	32.4	57.6	88.40	-812.2	-1,344.2	2,681.0	2,607.2	73.78	36.337		
8,500.0	6,672.0	11,132.0	6,584.1	33.1	57.6	88.40	-812.2	-1,344.2	2,752.5	2,679.3	73.20	37.603		
8,600.0	6,672.0	11,132.0	6,584.1	33.9	57.6	88.40	-812.2	-1,344.2	2,825.8	2,753.1	72.64	38.901		
8,700.0	6,672.0	11,132.0	6,584.1	34.7	57.6	88.40	-812.2	-1,344.2	2,900.6	2,828.5	72.10	40.229		
8,800.0	6,672.0	11,132.0	6,584.1	35.5	57.6	88.40	-812.2	-1,344.2	2,976.9	2,905.4	71.59	41.585		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													B Section 12 - SLW Ranch B12-66-1HN - Original Drilling - As Drilled		Offset Site Error: 0.0 ft	
Survey Program: 342-2_MWD+IFR1+MS+Sag, 7006-2_MWD+IFR1+MS+Sag													Offset Well Error: 0.0 ft			
Reference		Offset		Semi Major Axis		Distance								Warning		
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor					
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)					
8,900.0	6,672.0	11,132.0	6,584.1	36.3	57.6	88.40	-812.2	-1,344.2	3,054.6	2,983.6	71.10	42.965				
9,000.0	6,672.0	11,132.0	6,584.1	37.2	57.6	88.40	-812.2	-1,344.2	3,133.6	3,063.0	70.63	44.368				
9,100.0	6,672.0	11,132.0	6,584.1	38.1	57.6	88.40	-812.2	-1,344.2	3,213.8	3,143.6	70.18	45.793				
9,200.0	6,672.0	11,132.0	6,584.1	39.0	57.6	88.40	-812.2	-1,344.2	3,295.0	3,225.2	69.76	47.236				
9,300.0	6,672.0	11,132.0	6,584.1	39.9	57.6	88.40	-812.2	-1,344.2	3,377.2	3,307.9	69.35	48.698				
9,400.0	6,672.0	11,132.0	6,584.1	40.8	57.6	88.40	-812.2	-1,344.2	3,460.4	3,391.5	68.97	50.175				
9,500.0	6,672.0	11,132.0	6,584.1	41.8	57.6	88.40	-812.2	-1,344.2	3,544.5	3,475.9	68.60	51.666				
9,600.0	6,672.0	11,132.0	6,584.1	42.7	57.6	88.40	-812.2	-1,344.2	3,629.4	3,561.1	68.26	53.171				
9,700.0	6,672.0	11,132.0	6,584.1	43.7	57.6	88.40	-812.2	-1,344.2	3,715.0	3,647.1	67.93	54.688				
9,800.0	6,672.0	11,132.0	6,584.1	44.7	57.6	88.40	-812.2	-1,344.2	3,801.3	3,733.7	67.62	56.216				
9,900.0	6,672.0	11,132.0	6,584.1	45.7	57.6	88.40	-812.2	-1,344.2	3,888.3	3,821.0	67.33	57.754				
10,000.0	6,672.0	11,132.0	6,584.1	46.7	57.6	88.40	-812.2	-1,344.2	3,975.9	3,908.9	67.05	59.300				
10,100.0	6,672.0	11,132.0	6,584.1	47.7	57.6	88.40	-812.2	-1,344.2	4,064.1	3,997.3	66.78	60.854				
10,200.0	6,672.0	11,132.0	6,584.1	48.8	57.6	88.40	-812.2	-1,344.2	4,152.8	4,086.3	66.54	62.416				
10,300.0	6,672.0	11,132.0	6,584.1	49.8	57.6	88.40	-812.2	-1,344.2	4,242.1	4,175.8	66.30	63.984				
10,400.0	6,672.0	11,132.0	6,584.1	50.9	57.6	88.40	-812.2	-1,344.2	4,331.8	4,265.7	66.08	65.557				
10,500.0	6,672.0	11,132.0	6,584.1	51.9	57.6	88.40	-812.2	-1,344.2	4,421.9	4,356.1	65.87	67.136				
10,600.0	6,672.0	11,132.0	6,584.1	53.0	57.6	88.40	-812.2	-1,344.2	4,512.5	4,446.8	65.67	68.718				
10,700.0	6,672.0	11,132.0	6,584.1	54.1	57.6	88.40	-812.2	-1,344.2	4,603.4	4,538.0	65.48	70.305				
10,800.0	6,672.0	11,132.0	6,584.1	55.2	57.6	88.40	-812.2	-1,344.2	4,694.8	4,629.5	65.30	71.895				
10,900.0	6,672.0	11,132.0	6,584.1	56.3	57.6	88.40	-812.2	-1,344.2	4,786.5	4,721.3	65.13	73.488				
11,000.0	6,672.0	11,132.0	6,584.1	57.4	57.6	88.40	-812.2	-1,344.2	4,878.5	4,813.5	64.97	75.083				
11,100.0	6,672.0	11,132.0	6,584.1	58.5	57.6	88.40	-812.2	-1,344.2	4,970.8	4,906.0	64.82	76.681				
11,200.0	6,672.0	11,132.0	6,584.1	59.6	57.6	88.40	-812.2	-1,344.2	5,063.4	4,998.7	64.68	78.280				
11,300.0	6,672.0	11,132.0	6,584.1	60.7	57.6	88.40	-812.2	-1,344.2	5,156.3	5,091.7	64.55	79.880				
11,400.0	6,672.0	11,132.0	6,584.1	61.8	57.6	88.40	-812.2	-1,344.2	5,249.4	5,185.0	64.43	81.481				
11,500.0	6,672.0	11,132.0	6,584.1	62.9	57.6	88.40	-812.2	-1,344.2	5,342.9	5,278.5	64.31	83.083				
11,600.0	6,672.0	11,132.0	6,584.1	64.1	57.6	88.39	-812.2	-1,344.2	5,436.5	5,372.3	64.20	84.685				
11,700.0	6,672.0	11,132.0	6,584.1	65.2	57.6	88.39	-812.2	-1,344.2	5,530.4	5,466.3	64.09	86.287				
11,800.0	6,672.0	11,132.0	6,584.1	66.3	57.6	88.39	-812.2	-1,344.2	5,624.5	5,560.5	63.99	87.889				
11,900.0	6,672.0	11,132.0	6,584.1	67.5	57.6	88.39	-812.2	-1,344.2	5,718.7	5,654.8	63.90	89.491				
12,000.0	6,672.0	11,132.0	6,584.1	68.6	57.6	88.39	-812.2	-1,344.2	5,813.2	5,749.4	63.82	91.092				
12,100.0	6,672.0	11,132.0	6,584.1	69.8	57.6	88.39	-812.2	-1,344.2	5,907.9	5,844.2	63.74	92.693				
12,200.0	6,672.0	11,132.0	6,584.1	70.9	57.6	88.39	-812.2	-1,344.2	6,002.7	5,939.1	63.66	94.292				
12,300.0	6,672.0	11,132.0	6,584.1	72.1	57.6	88.39	-812.2	-1,344.2	6,097.7	6,034.1	63.59	95.891				
12,400.0	6,672.0	11,132.0	6,584.1	73.2	57.6	88.39	-812.2	-1,344.2	6,192.9	6,129.4	63.52	97.488				
12,500.0	6,672.0	11,132.0	6,584.1	74.4	57.6	88.39	-812.2	-1,344.2	6,288.2	6,224.8	63.46	99.083				
12,600.0	6,672.0	11,132.0	6,584.1	75.5	57.6	88.39	-812.2	-1,344.2	6,383.7	6,320.3	63.41	100.677				
12,700.0	6,672.0	11,132.0	6,584.1	76.7	57.6	88.39	-812.2	-1,344.2	6,479.3	6,415.9	63.36	102.269				
12,800.0	6,672.0	11,132.0	6,584.1	77.9	57.6	88.39	-812.2	-1,344.2	6,575.0	6,511.7	63.31	103.860				
12,900.0	6,672.0	11,132.0	6,584.1	79.0	57.6	88.39	-812.2	-1,344.2	6,670.9	6,607.6	63.26	105.448				
13,000.0	6,672.0	11,132.0	6,584.1	80.2	57.6	88.39	-812.2	-1,344.2	6,766.9	6,703.7	63.22	107.034				
13,100.0	6,672.0	11,132.0	6,584.1	81.4	57.6	88.39	-812.2	-1,344.2	6,863.0	6,799.8	63.18	108.619				
13,200.0	6,672.0	11,132.0	6,584.1	82.6	57.6	88.39	-812.2	-1,344.2	6,959.2	6,896.0	63.15	110.200				
13,300.0	6,672.0	11,132.0	6,584.1	83.7	57.6	88.39	-812.2	-1,344.2	7,055.5	6,992.4	63.12	111.780				
13,400.0	6,672.0	11,132.0	6,584.1	84.9	57.6	88.39	-812.2	-1,344.2	7,151.9	7,088.8	63.09	113.356				
13,500.0	6,672.0	11,132.0	6,584.1	86.1	57.6	88.39	-812.2	-1,344.2	7,248.5	7,185.4	63.07	114.931				
13,600.0	6,672.0	11,132.0	6,584.1	87.3	57.6	88.39	-812.2	-1,344.2	7,345.1	7,282.0	63.05	116.502				
13,700.0	6,672.0	11,132.0	6,584.1	88.4	57.6	88.39	-812.2	-1,344.2	7,441.8	7,378.8	63.03	118.071				
13,800.0	6,672.0	11,132.0	6,584.1	89.6	57.6	88.39	-812.2	-1,344.2	7,538.6	7,475.6	63.01	119.637				
13,900.0	6,672.0	11,132.0	6,584.1	90.8	57.6	88.39	-812.2	-1,344.2	7,635.5	7,572.5	63.00	121.200				
14,000.0	6,672.0	11,132.0	6,584.1	92.0	57.6	88.39	-812.2	-1,344.2	7,732.4	7,669.4	62.99	122.760				

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Survey Program: 342-2_MWD+IFR1+MS+Sag, 7006-2_MWD+IFR1+MS+Sag												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
14,100.0	6,672.0	11,132.0	6,584.1	93.2	57.6	88.38	-812.2	-1,344.2	7,829.5	7,766.5	62.98	124.317	
14,200.0	6,672.0	11,132.0	6,584.1	94.4	57.6	88.38	-812.2	-1,344.2	7,926.6	7,863.6	62.97	125.870	
14,300.0	6,672.0	11,132.0	6,584.1	95.6	57.6	88.38	-812.2	-1,344.2	8,023.8	7,960.8	62.97	127.421	
14,400.0	6,672.0	11,132.0	6,584.1	96.8	57.6	88.38	-812.2	-1,344.2	8,121.0	8,058.1	62.97	128.969	
14,500.0	6,672.0	11,132.0	6,584.1	98.0	57.6	88.38	-812.2	-1,344.2	8,218.4	8,155.4	62.97	130.513	
14,600.0	6,672.0	11,132.0	6,584.1	99.2	57.6	88.38	-812.2	-1,344.2	8,315.7	8,252.8	62.97	132.054	
14,700.0	6,672.0	11,132.0	6,584.1	100.4	57.6	88.38	-812.2	-1,344.2	8,413.2	8,350.2	62.98	133.591	
14,800.0	6,672.0	11,132.0	6,584.1	101.6	57.6	88.38	-812.2	-1,344.2	8,510.7	8,447.7	62.98	135.125	
14,900.0	6,672.0	11,132.0	6,584.1	102.7	57.6	88.38	-812.2	-1,344.2	8,608.3	8,545.3	62.99	136.655	
15,000.0	6,672.0	11,132.0	6,584.1	103.9	57.6	88.38	-812.2	-1,344.2	8,705.9	8,642.9	63.00	138.182	
15,100.0	6,672.0	11,132.0	6,584.1	105.1	57.6	88.38	-812.2	-1,344.2	8,803.6	8,740.6	63.02	139.706	
15,200.0	6,672.0	11,132.0	6,584.1	106.3	57.6	88.38	-812.2	-1,344.2	8,901.3	8,838.3	63.03	141.225	
15,300.0	6,672.0	11,132.0	6,584.1	107.6	57.6	88.38	-812.2	-1,344.2	8,999.1	8,936.1	63.04	142.741	
15,400.0	6,672.0	11,132.0	6,584.1	108.8	57.6	88.38	-812.2	-1,344.2	9,097.0	9,033.9	63.06	144.254	
15,500.0	6,672.0	11,132.0	6,584.1	110.0	57.6	88.38	-812.2	-1,344.2	9,194.9	9,131.8	63.08	145.762	
15,600.0	6,672.0	11,132.0	6,584.1	111.2	57.6	88.38	-812.2	-1,344.2	9,292.8	9,229.7	63.10	147.267	
15,700.0	6,672.0	11,132.0	6,584.1	112.4	57.6	88.38	-812.2	-1,344.2	9,390.8	9,327.6	63.12	148.768	
15,800.0	6,672.0	11,132.0	6,584.1	113.6	57.6	88.38	-812.2	-1,344.2	9,488.8	9,425.6	63.15	150.265	
15,900.0	6,672.0	11,132.0	6,584.1	114.8	57.6	88.37	-812.2	-1,344.2	9,586.9	9,523.7	63.17	151.759	
16,000.0	6,672.0	11,132.0	6,584.1	116.0	57.6	88.37	-812.2	-1,344.2	9,685.0	9,621.8	63.20	153.248	
16,100.0	6,672.0	11,132.0	6,584.1	117.2	57.6	88.37	-812.2	-1,344.2	9,783.1	9,719.9	63.23	154.733	
16,200.0	6,672.0	11,132.0	6,584.1	118.4	57.6	88.37	-812.2	-1,344.2	9,881.3	9,818.0	63.25	156.215	
16,300.0	6,672.0	11,132.0	6,584.1	119.6	57.6	88.37	-812.2	-1,344.2	9,979.5	9,916.2	63.28	157.692	



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													B Section 12 - SLW Ranch B12-67-1HN - Original Drilling - Original Drilling		Offset Site Error: 0.0 ft	
Survey Program: 345-2_EMS, 812-2_MWD, 7159-2_MWD													Offset Well Error: 0.0 ft			
Reference		Offset		Semi Major Axis			Distance							Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor				
0.0	0.0	0.0	0.0	0.0	0.0	-100.89	-1,134.2	-5,896.2	6,004.4							
100.0	100.0	61.6	61.6	0.1	0.1	-100.89	-1,134.2	-5,896.2	6,004.3	6,004.1	0.23	N/A				
200.0	200.0	156.3	156.3	0.5	0.3	-100.89	-1,134.1	-5,896.3	6,004.4	6,003.6	0.74	8,064.714				
300.0	300.0	251.0	251.0	0.8	0.4	-100.88	-1,133.9	-5,896.5	6,004.6	6,003.3	1.26	4,762.099				
400.0	400.0	345.8	345.8	1.2	0.6	-100.88	-1,133.6	-5,896.9	6,004.9	6,003.1	1.78	3,375.391				
500.0	500.0	454.1	454.1	1.6	1.0	-100.88	-1,133.2	-5,897.2	6,005.1	6,002.6	2.52	2,379.653				
600.0	600.0	562.4	562.4	1.9	1.4	-100.87	-1,132.7	-5,897.4	6,005.2	6,002.0	3.27	1,837.575				
700.0	700.0	670.7	670.7	2.3	1.7	-100.87	-1,132.2	-5,897.5	6,005.2	6,001.2	4.01	1,496.622				
800.0	800.0	11,248.0	6,571.5	2.6	118.7	-97.65	-179.8	-1,339.2	5,961.7	5,924.8	36.87	161.706				
900.0	900.0	11,248.0	6,571.5	3.0	118.7	-97.65	-179.8	-1,339.2	5,864.3	5,827.4	36.92	158.819				
1,000.0	1,000.0	11,248.0	6,571.5	3.4	118.7	-97.65	-179.8	-1,339.2	5,767.0	5,730.1	36.99	155.914				
1,100.0	1,100.0	11,248.0	6,571.5	3.7	118.7	-97.65	-179.8	-1,339.2	5,669.9	5,632.8	37.06	152.993				
1,200.0	1,200.0	11,248.0	6,571.5	4.1	118.7	-97.65	-179.8	-1,339.2	5,572.8	5,535.7	37.14	150.059				
1,300.0	1,300.0	11,248.0	6,571.5	4.4	118.7	-97.65	-179.8	-1,339.2	5,475.8	5,438.6	37.22	147.114				
1,400.0	1,400.0	11,248.0	6,571.5	4.8	118.7	-97.65	-179.8	-1,339.2	5,379.0	5,341.7	37.31	144.161				
1,500.0	1,500.0	11,248.0	6,571.5	5.1	118.7	-97.65	-179.8	-1,339.2	5,282.3	5,244.8	37.41	141.202				
1,600.0	1,600.0	11,248.0	6,571.5	5.5	118.7	-97.65	-179.8	-1,339.2	5,185.6	5,148.1	37.51	138.239				
1,700.0	1,700.0	11,248.0	6,571.5	5.9	118.7	-97.65	-179.8	-1,339.2	5,089.2	5,051.5	37.62	135.275				
1,800.0	1,800.0	11,248.0	6,571.5	6.2	118.7	-97.65	-179.8	-1,339.2	4,992.8	4,955.1	37.74	132.311				
1,900.0	1,900.0	11,248.0	6,571.5	6.6	118.7	-97.65	-179.8	-1,339.2	4,896.6	4,858.8	37.86	129.349				
2,000.0	2,000.0	11,248.0	6,571.5	6.9	118.7	-97.65	-179.8	-1,339.2	4,800.6	4,762.6	37.98	126.390				
2,100.0	2,100.0	11,248.0	6,571.5	7.3	118.7	-97.65	-179.8	-1,339.2	4,704.7	4,666.6	38.11	123.437				
2,200.0	2,200.0	11,248.0	6,571.5	7.7	118.7	-97.65	-179.8	-1,339.2	4,609.0	4,570.8	38.25	120.491				
2,300.0	2,300.0	11,248.0	6,571.5	8.0	118.7	-51.73	-179.8	-1,339.2	4,513.2	4,474.8	38.40	117.534				
2,400.0	2,399.8	11,248.0	6,571.5	8.4	118.7	-57.54	-179.8	-1,339.2	4,416.9	4,378.3	38.55	114.564				
2,500.0	2,499.5	11,248.0	6,571.5	8.7	118.7	-64.07	-179.8	-1,339.2	4,320.3	4,281.6	38.71	111.597				
2,600.0	2,598.7	11,248.0	6,571.5	9.1	118.7	-71.26	-179.8	-1,339.2	4,223.4	4,184.6	38.88	108.631				
2,700.0	2,697.5	11,248.0	6,571.5	9.4	118.7	-78.95	-179.8	-1,339.2	4,126.5	4,087.4	39.05	105.665				
2,800.0	2,795.6	11,248.0	6,571.5	9.8	118.7	-86.86	-179.8	-1,339.2	4,029.4	3,990.2	39.24	102.695				
2,900.0	2,893.1	11,248.0	6,571.5	10.1	118.7	-94.70	-179.8	-1,339.2	3,932.5	3,893.1	39.44	99.716				
3,000.0	2,889.6	11,248.0	6,571.5	10.5	118.7	-102.17	-179.8	-1,339.2	3,835.9	3,796.2	39.66	96.721				
3,100.0	3,085.3	11,248.0	6,571.5	10.9	118.7	-109.05	-179.8	-1,339.2	3,739.6	3,699.7	39.91	93.702				
3,200.0	3,179.8	11,248.0	6,571.5	11.2	118.7	-115.21	-179.8	-1,339.2	3,643.8	3,603.6	40.20	90.649				
3,300.0	3,273.2	11,248.0	6,571.5	11.6	118.7	-120.64	-179.8	-1,339.2	3,548.7	3,508.2	40.53	87.552				
3,387.5	3,353.8	11,248.0	6,571.5	11.9	118.7	-124.80	-179.8	-1,339.2	3,466.2	3,425.4	40.88	84.799				
3,400.0	3,365.2	11,248.0	6,571.5	12.0	118.7	-124.80	-179.8	-1,339.2	3,454.5	3,413.6	40.93	84.405				
3,500.0	3,456.8	11,248.0	6,571.5	12.4	118.7	-124.80	-179.8	-1,339.2	3,360.9	3,319.5	41.40	81.187				
3,600.0	3,548.3	11,248.0	6,571.5	12.8	118.7	-124.80	-179.8	-1,339.2	3,267.6	3,225.7	41.94	77.919				
3,700.0	3,639.8	11,248.0	6,571.5	13.2	118.7	-124.80	-179.8	-1,339.2	3,174.8	3,132.2	42.55	74.607				
3,800.0	3,731.4	11,248.0	6,571.5	13.6	118.7	-124.80	-179.8	-1,339.2	3,082.4	3,039.1	43.26	71.257				
3,900.0	3,822.9	11,248.0	6,571.5	14.0	118.7	-124.80	-179.8	-1,339.2	2,990.5	2,946.4	44.06	67.877				
4,000.0	3,914.4	11,248.0	6,571.5	14.4	118.7	-124.80	-179.8	-1,339.2	2,899.1	2,854.1	44.96	64.477				
4,100.0	4,005.9	11,248.0	6,571.5	14.8	118.7	-124.80	-179.8	-1,339.2	2,808.3	2,762.3	45.99	61.066				
4,200.0	4,097.5	11,248.0	6,571.5	15.2	118.7	-124.80	-179.8	-1,339.2	2,718.2	2,671.1	47.14	57.659				
4,300.0	4,189.0	11,248.0	6,571.5	15.6	118.7	-124.80	-179.8	-1,339.2	2,628.8	2,580.3	48.44	54.267				
4,400.0	4,280.5	11,248.0	6,571.5	16.1	118.7	-124.80	-179.8	-1,339.2	2,540.1	2,490.2	49.90	50.906				
4,500.0	4,372.1	11,248.0	6,571.5	16.5	118.7	-124.80	-179.8	-1,339.2	2,452.4	2,400.9	51.53	47.591				
4,600.0	4,463.6	11,248.0	6,571.5	16.9	118.7	-124.80	-179.8	-1,339.2	2,365.6	2,312.2	53.35	44.338				
4,700.0	4,555.1	11,248.0	6,571.5	17.4	118.7	-124.80	-179.8	-1,339.2	2,279.9	2,224.5	55.39	41.164				
4,800.0	4,646.7	11,248.0	6,571.5	17.8	118.7	-124.80	-179.8	-1,339.2	2,195.4	2,137.8	57.65	38.085				
4,900.0	4,738.2	11,248.0	6,571.5	18.2	118.7	-124.80	-179.8	-1,339.2	2,112.3	2,052.1	60.15	35.115				
5,000.0	4,829.7	11,248.0	6,571.5	18.7	118.7	-124.80	-179.8	-1,339.2	2,030.7	1,967.7	62.93	32.271				

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													B Section 12 - SLW Ranch B12-67-1HN - Original Drilling - Original Drilling		Offset Site Error: 0.0 ft	
Survey Program: 345-2_EMS, 812-2_MWD, 7159-2_MWD													Offset Well Error: 0.0 ft			
Reference		Offset		Semi Major Axis			Distance							Warning		
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor					
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)					
5,100.0	4,921.3	11,248.0	6,571.5	19.1	118.7	-124.80	-179.8	-1,339.2	1,950.8	1,884.8	65.99	29.563				
5,200.0	5,012.8	11,248.0	6,571.5	19.5	118.7	-124.80	-179.8	-1,339.2	1,872.8	1,803.4	69.35	27.005				
5,300.0	5,104.3	11,248.0	6,571.5	20.0	118.7	-124.80	-179.8	-1,339.2	1,797.0	1,724.0	73.04	24.604				
5,400.0	5,195.8	11,248.0	6,571.5	20.4	118.7	-124.80	-179.8	-1,339.2	1,723.7	1,646.6	77.06	22.369				
5,500.0	5,287.4	11,248.0	6,571.5	20.9	118.7	-124.80	-179.8	-1,339.2	1,653.2	1,571.7	81.42	20.304				
5,600.0	5,378.9	11,248.0	6,571.5	21.3	118.7	-124.80	-179.8	-1,339.2	1,585.8	1,499.7	86.12	18.414				
5,700.0	5,470.4	11,248.0	6,571.5	21.8	118.7	-124.80	-179.8	-1,339.2	1,522.1	1,430.9	91.15	16.699				
5,800.0	5,562.0	11,248.0	6,571.5	22.2	118.7	-124.80	-179.8	-1,339.2	1,462.4	1,365.9	96.47	15.159				
5,900.0	5,653.5	11,248.0	6,571.5	22.7	118.7	-124.80	-179.8	-1,339.2	1,407.3	1,305.2	102.04	13.792				
6,000.0	5,745.0	11,248.0	6,571.5	23.1	118.7	-124.80	-179.8	-1,339.2	1,357.3	1,249.5	107.78	12.594				
6,100.0	5,836.6	11,248.0	6,571.5	23.6	118.7	-124.80	-179.8	-1,339.2	1,313.1	1,199.5	113.58	11.561				
6,200.0	5,928.1	11,248.0	6,571.5	24.0	118.7	-124.80	-179.8	-1,339.2	1,275.1	1,155.8	119.32	10.687				
6,278.6	6,000.0	11,248.0	6,571.5	24.4	118.7	-124.80	-179.8	-1,339.2	1,250.2	1,126.5	123.67	10.109				
6,290.0	6,010.4	11,248.0	6,571.5	24.4	118.7	-126.47	-179.8	-1,339.2	1,247.0	1,122.7	124.29	10.033				
6,300.0	6,019.5	11,248.0	6,571.5	24.5	118.7	-127.89	-179.8	-1,339.2	1,244.5	1,119.6	124.83	9.969				
6,350.0	6,065.8	11,248.0	6,571.5	24.7	118.7	-137.02	-179.8	-1,339.2	1,233.2	1,105.8	127.43	9.677				
6,400.0	6,113.0	11,248.0	6,571.5	24.9	118.7	-149.96	-179.8	-1,339.2	1,224.6	1,094.8	129.82	9.433				
6,450.0	6,160.7	11,248.0	6,571.5	25.1	118.7	-166.21	-179.8	-1,339.2	1,218.9	1,086.9	131.95	9.237				
6,500.0	6,208.5	11,248.0	6,571.5	25.3	118.7	176.72	-179.8	-1,339.2	1,216.1	1,082.3	133.79	9.090				
6,521.7	6,229.1	11,248.0	6,571.5	25.4	118.7	169.85	-179.8	-1,339.2	1,215.8	1,081.3	134.49	9.040	CC			
6,550.0	6,255.8	11,248.0	6,571.5	25.4	118.7	161.75	-179.8	-1,339.2	1,216.3	1,081.0	135.31	8.989	ES			
6,600.0	6,302.5	11,248.0	6,571.5	25.6	118.7	149.99	-179.8	-1,339.2	1,219.5	1,083.0	136.48	8.935				
6,650.0	6,347.9	11,248.0	6,571.5	25.7	118.7	141.02	-179.8	-1,339.2	1,225.6	1,088.3	137.30	8.926	SF			
6,700.0	6,391.6	11,248.0	6,571.5	25.9	118.7	134.02	-179.8	-1,339.2	1,234.5	1,096.7	137.77	8.961				
6,750.0	6,433.4	11,248.0	6,571.5	26.0	118.7	128.30	-179.8	-1,339.2	1,246.1	1,108.2	137.90	9.037				
6,800.0	6,472.8	11,248.0	6,571.5	26.1	118.7	123.38	-179.8	-1,339.2	1,260.3	1,122.6	137.70	9.152				
6,850.0	6,509.4	11,248.0	6,571.5	26.2	118.7	118.96	-179.8	-1,339.2	1,276.7	1,139.5	137.21	9.305				
6,900.0	6,543.0	11,248.0	6,571.5	26.3	118.7	114.84	-179.8	-1,339.2	1,295.2	1,158.8	136.45	9.492				
6,950.0	6,573.2	11,248.0	6,571.5	26.4	118.7	110.90	-179.8	-1,339.2	1,315.6	1,180.1	135.46	9.712				
7,000.0	6,599.8	11,248.0	6,571.5	26.5	118.7	107.07	-179.8	-1,339.2	1,337.4	1,203.2	134.26	9.962				
7,050.0	6,622.5	11,248.0	6,571.5	26.6	118.7	103.32	-179.8	-1,339.2	1,360.6	1,227.7	132.89	10.239				
7,100.0	6,641.1	11,248.0	6,571.5	26.7	118.7	99.64	-179.8	-1,339.2	1,384.8	1,253.5	131.39	10.540				
7,150.0	6,655.4	11,248.0	6,571.5	26.8	118.7	96.06	-179.8	-1,339.2	1,409.8	1,280.0	129.78	10.863				
7,200.0	6,665.4	11,248.0	6,571.5	26.9	118.7	92.59	-179.8	-1,339.2	1,435.3	1,307.2	128.08	11.206				
7,250.0	6,670.8	11,248.0	6,571.5	27.0	118.7	89.28	-179.8	-1,339.2	1,461.0	1,334.7	126.32	11.566				
7,285.7	6,672.0	11,248.0	6,571.5	27.1	118.7	87.04	-179.8	-1,339.2	1,479.4	1,354.4	125.04	11.832				
7,300.0	6,672.0	11,248.0	6,571.5	27.1	118.7	87.04	-179.8	-1,339.2	1,486.8	1,362.3	124.52	11.941				
7,400.0	6,672.0	11,248.0	6,571.5	27.3	118.7	87.04	-179.8	-1,339.2	1,541.3	1,420.4	120.90	12.748				
7,500.0	6,672.0	11,248.0	6,571.5	27.6	118.7	87.04	-179.8	-1,339.2	1,600.2	1,482.9	117.33	13.638				
7,600.0	6,672.0	11,248.0	6,571.5	28.0	118.7	87.04	-179.8	-1,339.2	1,663.1	1,549.2	113.85	14.607				
7,700.0	6,672.0	11,248.0	6,571.5	28.3	118.7	87.04	-179.8	-1,339.2	1,729.5	1,619.0	110.50	15.652				
7,800.0	6,672.0	11,248.0	6,571.5	28.8	118.7	87.04	-179.8	-1,339.2	1,798.9	1,691.7	107.29	16.767				
7,900.0	6,672.0	11,248.0	6,571.5	29.3	118.7	87.04	-179.8	-1,339.2	1,871.2	1,767.0	104.24	17.951				
8,000.0	6,672.0	11,248.0	6,571.5	29.8	118.7	87.04	-179.8	-1,339.2	1,945.9	1,844.6	101.36	19.198				
8,100.0	6,672.0	11,248.0	6,571.5	30.4	118.7	87.04	-179.8	-1,339.2	2,022.8	1,924.2	98.64	20.506				
8,200.0	6,672.0	11,248.0	6,571.5	31.0	118.7	87.04	-179.8	-1,339.2	2,101.7	2,005.6	96.09	21.871				
8,300.0	6,672.0	11,248.0	6,571.5	31.7	118.7	87.04	-179.8	-1,339.2	2,182.3	2,088.6	93.71	23.288				
8,400.0	6,672.0	11,248.0	6,571.5	32.4	118.7	87.04	-179.8	-1,339.2	2,264.4	2,172.9	91.47	24.755				
8,500.0	6,672.0	11,248.0	6,571.5	33.1	118.7	87.04	-179.8	-1,339.2	2,347.9	2,258.6	89.39	26.267				
8,600.0	6,672.0	11,248.0	6,571.5	33.9	118.7	87.04	-179.8	-1,339.2	2,432.7	2,345.3	87.44	27.822				
8,700.0	6,672.0	11,248.0	6,571.5	34.7	118.7	87.04	-179.8	-1,339.2	2,518.6	2,433.0	85.62	29.417				
8,800.0	6,672.0	11,248.0	6,571.5	35.5	118.7	87.04	-179.8	-1,339.2	2,605.5	2,521.6	83.92	31.047				

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 345-2_EMS, 812-2_MWD, 7159-2_MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
8,900.0	6,672.0	11,248.0	6,571.5	36.3	118.7	87.04	-179.8	-1,339.2	2,693.4	2,611.0	82.34	32.711		
9,000.0	6,672.0	11,248.0	6,571.5	37.2	118.7	87.04	-179.8	-1,339.2	2,782.0	2,701.1	80.86	34.405		
9,100.0	6,672.0	11,248.0	6,571.5	38.1	118.7	87.04	-179.8	-1,339.2	2,871.4	2,791.9	79.48	36.126		
9,200.0	6,672.0	11,248.0	6,571.5	39.0	118.7	87.03	-179.8	-1,339.2	2,961.5	2,883.3	78.19	37.873		
9,300.0	6,672.0	11,248.0	6,571.5	39.9	118.7	87.03	-179.8	-1,339.2	3,052.2	2,975.2	76.99	39.642		
9,400.0	6,672.0	11,248.0	6,571.5	40.8	118.7	87.03	-179.8	-1,339.2	3,143.5	3,067.6	75.87	41.432		
9,500.0	6,672.0	11,248.0	6,571.5	41.8	118.7	87.03	-179.8	-1,339.2	3,235.2	3,160.4	74.82	43.240		
9,600.0	6,672.0	11,248.0	6,571.5	42.7	118.7	87.03	-179.8	-1,339.2	3,327.5	3,253.7	73.84	45.063		
9,700.0	6,672.0	11,248.0	6,571.5	43.7	118.7	87.03	-179.8	-1,339.2	3,420.2	3,347.3	72.92	46.902		
9,800.0	6,672.0	11,248.0	6,571.5	44.7	118.7	87.03	-179.8	-1,339.2	3,513.3	3,441.2	72.06	48.752		
9,900.0	6,672.0	11,248.0	6,571.5	45.7	118.7	87.03	-179.8	-1,339.2	3,606.8	3,535.5	71.26	50.613		
10,000.0	6,672.0	11,248.0	6,571.5	46.7	118.7	87.03	-179.8	-1,339.2	3,700.6	3,630.1	70.51	52.484		
10,100.0	6,672.0	11,248.0	6,571.5	47.7	118.7	87.03	-179.8	-1,339.2	3,794.7	3,724.9	69.80	54.362		
10,200.0	6,672.0	11,248.0	6,571.5	48.8	118.7	87.03	-179.8	-1,339.2	3,889.2	3,820.0	69.14	56.247		
10,300.0	6,672.0	11,248.0	6,571.5	49.8	118.7	87.03	-179.8	-1,339.2	3,983.9	3,915.4	68.53	58.137		
10,400.0	6,672.0	11,248.0	6,571.5	50.9	118.7	87.03	-179.8	-1,339.2	4,078.8	4,010.9	67.95	60.031		
10,500.0	6,672.0	11,248.0	6,571.5	51.9	118.7	87.03	-179.8	-1,339.2	4,174.0	4,106.6	67.40	61.928		
10,600.0	6,672.0	11,248.0	6,571.5	53.0	118.7	87.03	-179.8	-1,339.2	4,269.5	4,202.6	66.89	63.828		
10,700.0	6,672.0	11,248.0	6,571.5	54.1	118.7	87.03	-179.8	-1,339.2	4,365.1	4,298.7	66.41	65.728		
10,800.0	6,672.0	11,248.0	6,571.5	55.2	118.7	87.02	-179.8	-1,339.2	4,460.9	4,395.0	65.96	67.629		
10,900.0	6,672.0	11,248.0	6,571.5	56.3	118.7	87.02	-179.8	-1,339.2	4,556.9	4,491.4	65.54	69.530		
11,000.0	6,672.0	11,248.0	6,571.5	57.4	118.7	87.02	-179.8	-1,339.2	4,653.1	4,587.9	65.14	71.429		
11,100.0	6,672.0	11,248.0	6,571.5	58.5	118.7	87.02	-179.8	-1,339.2	4,749.4	4,684.7	64.77	73.327		
11,200.0	6,672.0	11,248.0	6,571.5	59.6	118.7	87.02	-179.8	-1,339.2	4,845.9	4,781.5	64.42	75.222		
11,300.0	6,672.0	11,248.0	6,571.5	60.7	118.7	87.02	-179.8	-1,339.2	4,942.5	4,878.4	64.09	77.115		
11,400.0	6,672.0	11,248.0	6,571.5	61.8	118.7	87.02	-179.8	-1,339.2	5,039.3	4,975.5	63.78	79.005		
11,500.0	6,672.0	11,248.0	6,571.5	62.9	118.7	87.02	-179.8	-1,339.2	5,136.2	5,072.7	63.50	80.890		
11,600.0	6,672.0	11,248.0	6,571.5	64.1	118.7	87.02	-179.8	-1,339.2	5,233.2	5,170.0	63.22	82.772		
11,700.0	6,672.0	11,248.0	6,571.5	65.2	118.7	87.02	-179.8	-1,339.2	5,330.3	5,267.3	62.97	84.650		
11,800.0	6,672.0	11,248.0	6,571.5	66.3	118.7	87.02	-179.8	-1,339.2	5,427.5	5,364.8	62.73	86.522		
11,900.0	6,672.0	11,248.0	6,571.5	67.5	118.7	87.02	-179.8	-1,339.2	5,524.9	5,462.3	62.51	88.390		
12,000.0	6,672.0	11,248.0	6,571.5	68.6	118.7	87.01	-179.8	-1,339.2	5,622.3	5,560.0	62.29	90.253		
12,100.0	6,672.0	11,248.0	6,571.5	69.8	118.7	87.01	-179.8	-1,339.2	5,719.8	5,657.7	62.10	92.110		
12,200.0	6,672.0	11,248.0	6,571.5	70.9	118.7	87.01	-179.8	-1,339.2	5,817.4	5,755.5	61.91	93.961		
12,300.0	6,672.0	11,248.0	6,571.5	72.1	118.7	87.01	-179.8	-1,339.2	5,915.1	5,853.3	61.74	95.806		
12,400.0	6,672.0	11,248.0	6,571.5	73.2	118.7	87.01	-179.8	-1,339.2	6,012.8	5,951.2	61.58	97.646		
12,500.0	6,672.0	11,248.0	6,571.5	74.4	118.7	87.01	-179.8	-1,339.2	6,110.6	6,049.2	61.43	99.479		
12,600.0	6,672.0	11,248.0	6,571.5	75.5	118.7	87.01	-179.8	-1,339.2	6,208.5	6,147.3	61.28	101.306		
12,700.0	6,672.0	11,248.0	6,571.5	76.7	118.7	87.01	-179.8	-1,339.2	6,306.5	6,245.4	61.15	103.127		
12,800.0	6,672.0	11,248.0	6,571.5	77.9	118.7	87.01	-179.8	-1,339.2	6,404.6	6,343.5	61.03	104.941		
12,900.0	6,672.0	11,248.0	6,571.5	79.0	118.7	87.01	-179.8	-1,339.2	6,502.6	6,441.7	60.92	106.748		
13,000.0	6,672.0	11,248.0	6,571.5	80.2	118.7	87.00	-179.8	-1,339.2	6,600.8	6,540.0	60.81	108.549		
13,100.0	6,672.0	11,248.0	6,571.5	81.4	118.7	87.00	-179.8	-1,339.2	6,699.0	6,638.3	60.71	110.343		
13,200.0	6,672.0	11,248.0	6,571.5	82.6	118.7	87.00	-179.8	-1,339.2	6,797.3	6,736.7	60.62	112.131		
13,300.0	6,672.0	11,248.0	6,571.5	83.7	118.7	87.00	-179.8	-1,339.2	6,895.6	6,835.0	60.53	113.911		
13,400.0	6,672.0	11,248.0	6,571.5	84.9	118.7	87.00	-179.8	-1,339.2	6,993.9	6,933.5	60.46	115.685		
13,500.0	6,672.0	11,248.0	6,571.5	86.1	118.7	87.00	-179.8	-1,339.2	7,092.4	7,032.0	60.39	117.452		
13,600.0	6,672.0	11,248.0	6,571.5	87.3	118.7	87.00	-179.8	-1,339.2	7,190.8	7,130.5	60.32	119.212		
13,700.0	6,672.0	11,248.0	6,571.5	88.4	118.7	87.00	-179.8	-1,339.2	7,289.3	7,229.1	60.26	120.965		
13,800.0	6,672.0	11,248.0	6,571.5	89.6	118.7	86.99	-179.8	-1,339.2	7,387.9	7,327.6	60.21	122.711		
13,900.0	6,672.0	11,248.0	6,571.5	90.8	118.7	86.99	-179.8	-1,339.2	7,486.4	7,426.3	60.16	124.450		
14,000.0	6,672.0	11,248.0	6,571.5	92.0	118.7	86.99	-179.8	-1,339.2	7,585.1	7,524.9	60.11	126.182		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													B Section 12 - SLW Ranch B12-67-1HN - Original Drilling - Original Drilling		Offset Site Error:		0.0 ft
Survey Program: 345-2_EMS, 812-2_MWD, 7159-2_MWD															Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning			
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor						
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)						
14,100.0	6,672.0	11,248.0	6,571.5	93.2	118.7	86.99	-179.8	-1,339.2	7,683.7	7,623.6	60.07	127.907					
14,200.0	6,672.0	11,248.0	6,571.5	94.4	118.7	86.99	-179.8	-1,339.2	7,782.4	7,722.4	60.04	129.625					
14,300.0	6,672.0	11,248.0	6,571.5	95.6	118.7	86.99	-179.8	-1,339.2	7,881.1	7,821.1	60.01	131.336					
14,400.0	6,672.0	11,248.0	6,571.5	96.8	118.7	86.99	-179.8	-1,339.2	7,979.9	7,919.9	59.98	133.041					
14,500.0	6,672.0	11,248.0	6,571.5	98.0	118.7	86.98	-179.8	-1,339.2	8,078.7	8,018.7	59.96	134.738					
14,600.0	6,672.0	11,248.0	6,571.5	99.2	118.7	86.98	-179.8	-1,339.2	8,177.5	8,117.6	59.94	136.428					
14,700.0	6,672.0	11,248.0	6,571.5	100.4	118.7	86.98	-179.8	-1,339.2	8,276.3	8,216.4	59.92	138.112					
14,800.0	6,672.0	11,248.0	6,571.5	101.6	118.7	86.98	-179.8	-1,339.2	8,375.2	8,315.3	59.91	139.788					
14,900.0	6,672.0	11,248.0	6,571.5	102.7	118.7	86.98	-179.8	-1,339.2	8,474.1	8,414.2	59.91	141.458					
15,000.0	6,672.0	11,248.0	6,571.5	103.9	118.7	86.98	-179.8	-1,339.2	8,573.1	8,513.2	59.90	143.120					
15,100.0	6,672.0	11,248.0	6,571.5	105.1	118.7	86.98	-179.8	-1,339.2	8,672.0	8,612.1	59.90	144.776					
15,200.0	6,672.0	11,248.0	6,571.5	106.3	118.7	86.97	-179.8	-1,339.2	8,771.0	8,711.1	59.90	146.425					
15,300.0	6,672.0	11,248.0	6,571.5	107.6	118.7	86.97	-179.8	-1,339.2	8,870.0	8,810.1	59.91	148.067					
15,400.0	6,672.0	11,248.0	6,571.5	108.8	118.7	86.97	-179.8	-1,339.2	8,969.0	8,909.1	59.91	149.702					
15,500.0	6,672.0	11,248.0	6,571.5	110.0	118.7	86.97	-179.8	-1,339.2	9,068.1	9,008.2	59.92	151.331					
15,600.0	6,672.0	11,248.0	6,571.5	111.2	118.7	86.97	-179.8	-1,339.2	9,167.2	9,107.2	59.93	152.952					
15,700.0	6,672.0	11,248.0	6,571.5	112.4	118.7	86.97	-179.8	-1,339.2	9,266.3	9,206.3	59.95	154.567					
15,800.0	6,672.0	11,248.0	6,571.5	113.6	118.7	86.96	-179.8	-1,339.2	9,365.4	9,305.4	59.97	156.175					
15,900.0	6,672.0	11,248.0	6,571.5	114.8	118.7	86.96	-179.8	-1,339.2	9,464.5	9,404.5	59.99	157.777					
16,000.0	6,672.0	11,248.0	6,571.5	116.0	118.7	86.96	-179.8	-1,339.2	9,563.7	9,503.6	60.01	159.371					
16,100.0	6,672.0	11,248.0	6,571.5	117.2	118.7	86.96	-179.8	-1,339.2	9,662.8	9,602.8	60.03	160.959					
16,200.0	6,672.0	11,248.0	6,571.5	118.4	118.7	86.96	-179.8	-1,339.2	9,762.0	9,702.0	60.06	162.541					
16,300.0	6,672.0	11,248.0	6,571.5	119.6	118.7	86.95	-179.8	-1,339.2	9,861.2	9,801.1	60.09	164.115					
16,400.0	6,672.0	11,248.0	6,571.5	120.8	118.7	86.95	-179.8	-1,339.2	9,960.4	9,900.3	60.12	165.683					



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													B Section 12 - SLW Ranch B12-79HN - Original Drilling - As Drilled		Offset Site Error:		0.0 ft
Survey Program: 287-2_MWD, 7123-2_MWD													Offset Well Error:		0.0 ft		
Reference		Offset		Semi Major Axis			Distance							Warning			
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor						
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)						
0.0	0.0	0.0	0.0	0.0	0.0	-119.71	-3,360.1	-5,888.0	6,779.5								
100.0	100.0	39.4	39.4	0.1	0.1	-119.71	-3,360.1	-5,888.0	6,779.3	6,779.1	0.19	N/A					
200.0	200.0	124.9	124.9	0.5	0.2	-119.71	-3,360.5	-5,888.0	6,779.5	6,778.8	0.70	9,707.019					
300.0	300.0	210.4	210.4	0.8	0.4	-119.72	-3,361.2	-5,888.0	6,779.9	6,778.7	1.20	5,632.522					
400.0	400.0	298.8	298.8	1.2	0.5	-119.73	-3,362.3	-5,888.0	6,780.5	6,778.8	1.74	3,907.577					
500.0	500.0	411.5	411.5	1.6	0.9	-119.74	-3,363.5	-5,888.1	6,781.1	6,778.6	2.49	2,723.101					
600.0	600.0	524.3	524.2	1.9	1.3	-119.74	-3,364.3	-5,888.2	6,781.5	6,778.3	3.25	2,089.738					
700.0	700.0	638.6	638.5	2.3	1.7	-119.74	-3,364.5	-5,888.4	6,781.8	6,777.8	4.01	1,693.235					
800.0	800.0	773.3	773.3	2.6	2.2	-119.74	-3,364.2	-5,888.1	6,781.5	6,776.6	4.82	1,405.790					
900.0	900.0	854.1	854.0	3.0	2.5	-119.74	-3,363.8	-5,888.1	6,781.2	6,775.7	5.46	1,242.268					
935.3	935.3	881.3	881.2	3.1	2.6	-119.74	-3,363.6	-5,888.1	6,781.2	6,775.5	5.68	1,193.976					
1,000.0	1,000.0	934.8	934.8	3.4	2.7	-119.74	-3,363.5	-5,888.3	6,781.3	6,775.2	6.10	1,112.141					
1,100.0	1,100.0	1,054.6	1,054.5	3.7	3.2	-119.74	-3,363.5	-5,888.1	6,781.1	6,774.2	6.87	986.649					
1,127.7	1,127.7	1,073.8	1,073.7	3.8	3.2	-119.74	-3,363.5	-5,888.1	6,781.1	6,774.0	7.04	963.332					
1,200.0	1,200.0	1,117.0	1,117.0	4.1	3.4	-119.74	-3,363.6	-5,888.1	6,781.2	6,773.8	7.45	910.320					
1,300.0	1,300.0	1,117.0	1,117.0	4.4	3.4	-119.74	-3,363.6	-5,888.1	6,782.4	6,774.6	7.81	868.743					
1,400.0	1,400.0	1,156.5	1,156.5	4.8	3.5	-119.74	-3,364.1	-5,888.6	6,784.4	6,776.1	8.30	816.959					
1,500.0	1,500.0	1,211.0	1,210.9	5.1	3.7	-119.74	-3,365.5	-5,890.6	6,788.3	6,779.4	8.85	766.734					
1,600.0	1,600.0	1,211.0	1,210.9	5.5	3.7	-119.74	-3,365.5	-5,890.6	6,792.5	6,783.3	9.21	737.692					
1,700.0	1,700.0	1,211.0	1,210.9	5.9	3.7	-119.74	-3,365.5	-5,890.6	6,798.1	6,788.6	9.56	711.086					
1,800.0	1,800.0	1,211.0	1,210.9	6.2	3.7	-119.74	-3,365.5	-5,890.6	6,805.3	6,795.4	9.91	686.657					
1,900.0	1,900.0	1,258.0	1,257.8	6.6	3.9	-119.74	-3,367.6	-5,893.4	6,813.1	6,802.7	10.43	653.225					
2,000.0	2,000.0	1,309.0	1,308.5	6.9	4.1	-119.75	-3,370.7	-5,897.5	6,822.6	6,811.7	10.96	622.386					
2,100.0	2,100.0	1,309.0	1,308.5	7.3	4.1	-119.75	-3,370.7	-5,897.5	6,832.7	6,821.4	11.31	604.329					
2,200.0	2,200.0	1,309.0	1,308.5	7.7	4.1	-119.75	-3,370.7	-5,897.5	6,844.2	6,832.6	11.65	587.598					
2,300.0	2,300.0	1,353.4	1,352.6	8.0	4.2	-68.54	-3,374.3	-5,901.6	6,856.0	6,843.8	12.15	564.312					
2,400.0	2,399.8	1,403.0	1,401.6	8.4	4.4	-68.36	-3,379.4	-5,906.7	6,867.8	6,855.1	12.66	542.300					
2,500.0	2,499.5	1,403.0	1,401.6	8.7	4.4	-68.15	-3,379.4	-5,906.7	6,879.1	6,866.1	12.99	529.503					
2,600.0	2,598.7	1,438.6	1,436.8	9.1	4.6	-67.99	-3,383.9	-5,910.5	6,890.3	6,876.8	13.45	512.103					
2,700.0	2,697.5	1,497.0	1,494.2	9.4	4.8	-67.90	-3,392.6	-5,916.9	6,901.2	6,887.2	14.00	492.829					
2,800.0	2,795.6	1,509.1	1,506.0	9.8	4.8	-67.74	-3,394.5	-5,918.2	6,911.6	6,897.2	14.37	480.809					
2,900.0	2,893.1	1,569.3	1,564.9	10.1	5.1	-67.71	-3,405.7	-5,924.3	6,921.5	6,906.6	14.94	463.410					
3,000.0	2,989.6	1,696.1	1,688.3	10.5	5.6	-67.94	-3,432.5	-5,935.1	6,930.4	6,914.7	15.78	439.184					
3,100.0	3,085.3	1,683.0	1,675.6	10.9	5.6	-67.75	-3,429.7	-5,934.0	6,938.7	6,922.6	16.05	432.320					
3,200.0	3,179.8	1,720.6	1,712.1	11.2	5.7	-67.73	-3,438.0	-5,937.4	6,946.5	6,930.0	16.54	420.098					
3,300.0	3,273.2	10,249.0	6,569.2	11.6	64.5	-51.86	28.7	-6,246.8	6,946.7	6,878.9	67.86	102.364					
3,387.5	3,353.8	10,587.0	6,569.1	11.9	70.1	-49.49	366.5	-6,243.3	6,884.3	6,811.1	73.18	94.073					
3,400.0	3,365.2	10,589.6	6,569.1	12.0	70.1	-49.46	369.1	-6,243.2	6,875.3	6,802.0	73.29	93.805					
3,500.0	3,456.8	10,610.5	6,569.0	12.4	70.5	-49.23	390.0	-6,242.5	6,804.0	6,729.8	74.18	91.721					
3,600.0	3,548.3	10,628.0	6,568.8	12.8	70.7	-49.03	407.5	-6,242.0	6,733.2	6,658.2	75.03	89.737					
3,700.0	3,639.8	10,628.0	6,568.8	13.2	70.7	-49.03	407.5	-6,242.0	6,663.2	6,587.6	75.65	88.082					
3,800.0	3,731.4	10,654.2	6,568.6	13.6	71.2	-48.73	433.7	-6,241.3	6,593.9	6,517.2	76.65	86.026					
3,900.0	3,822.9	10,666.5	6,568.5	14.0	71.4	-48.59	446.0	-6,241.0	6,525.3	6,447.9	77.46	84.239					
4,000.0	3,914.4	10,678.8	6,568.3	14.4	71.6	-48.45	458.3	-6,240.7	6,457.6	6,379.3	78.29	82.487					
4,100.0	4,005.9	10,691.1	6,568.2	14.8	71.8	-48.31	470.6	-6,240.4	6,390.6	6,311.5	79.12	80.771					
4,200.0	4,097.5	10,703.5	6,568.1	15.2	72.0	-48.17	483.0	-6,240.2	6,324.4	6,244.5	79.96	79.091					
4,300.0	4,189.0	4,300.0	6,567.9	15.6	34.4	-47.44	547.1	-6,238.7	6,259.0	6,212.4	46.64	134.197					
4,400.0	4,280.5	10,843.0	6,568.1	16.1	74.3	-46.58	622.4	-6,236.2	6,194.3	6,111.0	83.35	74.320					
4,500.0	4,372.1	10,862.9	6,568.3	16.5	74.6	-46.35	642.3	-6,235.4	6,130.3	6,046.0	84.33	72.696					
4,600.0	4,463.6	10,882.9	6,568.4	16.9	75.0	-46.12	662.3	-6,234.6	6,067.2	5,981.9	85.32	71.112					
4,700.0	4,555.1	10,903.0	6,568.6	17.4	75.3	-45.89	682.4	-6,233.8	6,005.1	5,918.7	86.32	69.568					
4,800.0	4,646.7	10,912.0	6,568.7	17.8	75.4	-45.79	691.4	-6,233.5	5,943.8	5,856.7	87.17	68.190					

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 287-2_MWD, 7123-2_MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
4,900.0	4,738.2	10,912.0	6,568.7	18.2	75.4	-45.79	691.4	-6,233.5	5,883.7	5,795.8	87.88	66.949		
5,000.0	4,829.7	10,912.0	6,568.7	18.7	75.4	-45.79	691.4	-6,233.5	5,824.6	5,736.0	88.60	65.737		
5,100.0	4,921.3	10,941.2	6,569.1	19.1	75.9	-45.45	720.6	-6,232.5	5,766.4	5,676.7	89.76	64.241		
5,200.0	5,012.8	10,949.7	6,569.2	19.5	76.1	-45.35	729.0	-6,232.3	5,709.5	5,618.9	90.61	63.009		
5,300.0	5,104.3	10,958.2	6,569.3	20.0	76.2	-45.25	737.6	-6,232.1	5,653.7	5,562.2	91.47	61.810		
5,400.0	5,195.8	10,966.9	6,569.4	20.4	76.4	-45.16	746.2	-6,231.9	5,599.1	5,506.8	92.33	60.646		
5,500.0	5,287.4	10,975.6	6,569.6	20.9	76.5	-45.05	755.0	-6,231.7	5,545.8	5,452.6	93.18	59.515		
5,600.0	5,378.9	11,007.0	6,570.1	21.3	77.0	-44.69	786.4	-6,231.4	5,493.8	5,399.4	94.38	58.209		
5,700.0	5,470.4	11,007.0	6,570.1	21.8	77.0	-44.69	786.4	-6,231.4	5,442.9	5,347.8	95.10	57.234		
5,800.0	5,562.0	11,007.0	6,570.1	22.2	77.0	-44.69	786.4	-6,231.4	5,393.4	5,297.6	95.81	56.290		
5,900.0	5,653.5	11,007.0	6,570.1	22.7	77.0	-44.69	786.4	-6,231.4	5,345.3	5,248.8	96.52	55.379		
6,000.0	5,745.0	11,030.7	6,570.5	23.1	77.4	-44.42	810.0	-6,231.3	5,298.6	5,201.0	97.59	54.295		
6,100.0	5,836.6	11,046.5	6,570.8	23.6	77.7	-44.23	825.8	-6,231.3	5,253.2	5,154.7	98.52	53.319		
6,200.0	5,928.1	11,062.4	6,571.1	24.0	78.0	-44.05	841.8	-6,231.3	5,209.4	5,109.9	99.45	52.379		
6,278.6	6,000.0	11,075.1	6,571.3	24.4	78.2	-43.90	854.4	-6,231.3	5,175.9	5,075.7	100.18	51.667		
6,290.0	6,010.4	11,077.0	6,571.4	24.4	78.2	-45.98	856.3	-6,231.3	5,171.1	5,070.8	100.28	51.565		
6,300.0	6,019.5	11,078.7	6,571.4	24.5	78.2	-47.66	858.1	-6,231.4	5,167.0	5,066.6	100.38	51.475		
6,350.0	6,065.8	11,101.0	6,571.9	24.7	78.6	-57.73	880.3	-6,231.5	5,149.3	5,048.2	101.05	50.955		
6,400.0	6,113.0	11,101.0	6,571.9	24.9	78.6	-71.57	880.3	-6,231.5	5,136.4	5,035.0	101.38	50.667		
6,450.0	6,160.7	11,111.1	6,572.1	25.1	78.8	-88.31	890.4	-6,231.5	5,128.7	5,026.8	101.84	50.357		
6,500.0	6,208.5	11,130.1	6,572.5	25.3	79.1	-105.48	909.4	-6,231.7	5,126.0	5,023.6	102.44	50.041		
6,500.3	6,208.8	11,130.2	6,572.5	25.3	79.1	-105.58	909.5	-6,231.7	5,126.0	5,023.6	102.44	50.039 CC, ES		
6,550.0	6,255.8	11,149.0	6,572.9	25.4	79.4	-120.23	928.3	-6,231.8	5,128.6	5,025.6	103.01	49.789		
6,600.0	6,302.5	11,167.8	6,573.4	25.6	79.7	-131.45	947.1	-6,231.9	5,136.3	5,032.7	103.55	49.602		
6,650.0	6,347.9	11,186.3	6,573.8	25.7	80.0	-139.57	965.6	-6,231.9	5,149.0	5,044.9	104.06	49.481		
6,700.0	6,391.6	11,204.3	6,574.2	25.9	80.3	-145.40	983.6	-6,232.0	5,166.6	5,062.1	104.54	49.425 SF		
6,750.0	6,433.4	11,196.0	6,574.0	26.0	80.2	-149.94	975.3	-6,232.0	5,189.0	5,084.5	104.57	49.625		
6,800.0	6,472.8	11,196.0	6,574.0	26.1	80.2	-153.28	975.3	-6,232.0	5,215.9	5,111.2	104.70	49.818		
6,850.0	6,509.4	11,219.2	6,574.5	26.2	80.6	-155.51	998.5	-6,232.1	5,246.8	5,141.7	105.18	49.886		
6,900.0	6,543.0	11,224.7	6,574.6	26.3	80.7	-157.38	1,004.0	-6,232.2	5,281.7	5,176.3	105.35	50.135		
6,950.0	6,573.2	11,229.6	6,574.7	26.4	80.8	-158.79	1,008.9	-6,232.2	5,319.9	5,214.4	105.49	50.431		
7,000.0	6,599.8	11,233.8	6,574.8	26.5	80.8	-159.85	1,013.1	-6,232.3	5,361.2	5,255.6	105.60	50.768		
7,050.0	6,622.5	11,237.4	6,574.8	26.6	80.9	-160.59	1,016.7	-6,232.3	5,405.1	5,299.4	105.69	51.142		
7,100.0	6,641.1	11,240.4	6,574.8	26.7	81.0	-161.04	1,019.7	-6,232.3	5,451.1	5,345.3	105.75	51.546		
7,150.0	6,655.4	11,242.6	6,574.9	26.8	81.0	-161.15	1,021.9	-6,232.4	5,498.8	5,393.0	105.80	51.975		
7,200.0	6,665.4	11,244.2	6,574.9	26.9	81.0	-160.64	1,023.5	-6,232.4	5,547.7	5,441.9	105.82	52.424		
7,250.0	6,670.8	11,245.1	6,574.9	27.0	81.0	-157.52	1,024.4	-6,232.4	5,597.4	5,491.6	105.84	52.887		
7,285.7	6,672.0	11,245.4	6,574.9	27.1	81.0	-25.96	1,024.6	-6,232.4	5,633.1	5,527.2	105.84	53.222		
7,300.0	6,672.0	11,245.4	6,574.9	27.1	81.0	-26.05	1,024.7	-6,232.4	5,647.4	5,541.5	105.84	53.357		
7,400.0	6,672.0	11,245.5	6,574.9	27.3	81.0	-26.69	1,024.8	-6,232.4	5,747.4	5,641.5	105.84	54.302		
7,500.0	6,672.0	11,245.7	6,574.9	27.6	81.0	-27.33	1,025.0	-6,232.4	5,847.4	5,741.5	105.84	55.247		
7,600.0	6,672.0	11,245.9	6,574.9	28.0	81.0	-27.97	1,025.2	-6,232.4	5,947.4	5,841.5	105.84	56.191		
7,700.0	6,672.0	11,246.1	6,574.9	28.3	81.0	-28.61	1,025.3	-6,232.4	6,047.4	5,941.5	105.84	57.134		
7,800.0	6,672.0	11,246.2	6,574.9	28.8	81.1	-29.25	1,025.5	-6,232.4	6,147.4	6,041.5	105.85	58.077		
7,900.0	6,672.0	11,246.4	6,574.9	29.3	81.1	-29.89	1,025.7	-6,232.4	6,247.4	6,141.5	105.85	59.020		
8,000.0	6,672.0	11,246.6	6,574.9	29.8	81.1	-30.53	1,025.9	-6,232.4	6,347.4	6,241.5	105.86	59.962		
8,100.0	6,672.0	11,246.7	6,574.9	30.4	81.1	-31.17	1,026.0	-6,232.4	6,447.4	6,341.5	105.86	60.903		
8,200.0	6,672.0	11,246.9	6,574.9	31.0	81.1	-31.81	1,026.2	-6,232.4	6,547.4	6,441.5	105.87	61.843		
8,300.0	6,672.0	11,247.1	6,574.9	31.7	81.1	-32.44	1,026.4	-6,232.4	6,647.4	6,541.5	105.88	62.783		
8,400.0	6,672.0	11,247.3	6,574.9	32.4	81.1	-33.08	1,026.5	-6,232.4	6,747.3	6,641.5	105.89	63.723		
8,500.0	6,672.0	11,247.4	6,574.9	33.1	81.1	-33.71	1,026.7	-6,232.4	6,847.3	6,741.5	105.90	64.661		
8,600.0	6,672.0	11,247.6	6,574.9	33.9	81.1	-34.34	1,026.9	-6,232.4	6,947.3	6,841.4	105.91	65.599		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													B Section 12 - SLW Ranch B12-79HN - Original Drilling - As Drilled		Offset Site Error:		0.0 ft
Survey Program: 287-2_MWD, 7123-2_MWD													Offset Well Error:		0.0 ft		
Reference		Offset		Semi Major Axis			Distance							Warning			
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor						
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)						
8,700.0	6,672.0	11,247.8	6,574.9	34.7	81.1	-34.97	1,027.1	-6,232.4	7,047.3	6,941.4	105.92	66.536					
8,800.0	6,672.0	11,248.0	6,574.9	35.5	81.1	-35.60	1,027.2	-6,232.4	7,147.3	7,041.4	105.93	67.473					
8,900.0	6,672.0	11,248.1	6,574.9	36.3	81.1	-36.22	1,027.4	-6,232.4	7,247.3	7,141.4	105.94	68.408					
9,000.0	6,672.0	11,248.3	6,574.9	37.2	81.1	-36.84	1,027.6	-6,232.4	7,347.3	7,241.4	105.96	69.343					
9,100.0	6,672.0	11,248.5	6,574.9	38.1	81.1	-37.46	1,027.8	-6,232.4	7,447.3	7,341.4	105.97	70.277					
9,200.0	6,672.0	11,248.6	6,574.9	39.0	81.1	-38.07	1,027.9	-6,232.4	7,547.3	7,441.3	105.99	71.210					
9,300.0	6,672.0	11,248.8	6,574.9	39.9	81.1	-38.68	1,028.1	-6,232.4	7,647.3	7,541.3	106.00	72.142					
9,400.0	6,672.0	11,249.0	6,574.9	40.8	81.1	-39.29	1,028.3	-6,232.4	7,747.3	7,641.3	106.02	73.073					
9,500.0	6,672.0	11,249.2	6,574.9	41.8	81.1	-39.89	1,028.5	-6,232.4	7,847.3	7,741.3	106.04	74.004					
9,600.0	6,672.0	11,249.3	6,574.9	42.7	81.1	-40.49	1,028.6	-6,232.4	7,947.3	7,841.3	106.06	74.933					
9,700.0	6,672.0	11,249.5	6,574.9	43.7	81.1	-41.08	1,028.8	-6,232.5	8,047.3	7,941.2	106.08	75.861					
9,800.0	6,672.0	11,249.7	6,574.9	44.7	81.1	-41.67	1,029.0	-6,232.5	8,147.3	8,041.2	106.10	76.789					
9,900.0	6,672.0	11,249.9	6,574.9	45.7	81.1	-42.25	1,029.2	-6,232.5	8,247.3	8,141.2	106.12	77.715					
10,000.0	6,672.0	11,250.0	6,574.9	46.7	81.1	-42.83	1,029.3	-6,232.5	8,347.3	8,241.2	106.15	78.640					
10,100.0	6,672.0	11,250.2	6,574.9	47.7	81.1	-43.40	1,029.5	-6,232.5	8,447.3	8,341.1	106.17	79.565					
10,200.0	6,672.0	11,250.4	6,575.0	48.8	81.1	-43.97	1,029.7	-6,232.5	8,547.3	8,441.1	106.19	80.488					
10,300.0	6,672.0	11,250.6	6,575.0	49.8	81.1	-44.53	1,029.9	-6,232.5	8,647.3	8,541.1	106.22	81.410					
10,400.0	6,672.0	11,250.7	6,575.0	50.9	81.1	-45.09	1,030.0	-6,232.5	8,747.3	8,641.1	106.25	82.331					
10,500.0	6,672.0	11,250.9	6,575.0	51.9	81.1	-45.64	1,030.2	-6,232.5	8,847.3	8,741.0	106.27	83.251					
10,600.0	6,672.0	11,251.1	6,575.0	53.0	81.1	-46.18	1,030.4	-6,232.5	8,947.3	8,841.0	106.30	84.169					
10,700.0	6,672.0	11,251.3	6,575.0	54.1	81.1	-46.72	1,030.6	-6,232.5	9,047.3	8,941.0	106.33	85.087					
10,800.0	6,672.0	11,251.5	6,575.0	55.2	81.1	-47.25	1,030.7	-6,232.5	9,147.3	9,040.9	106.36	86.003					
10,900.0	6,672.0	11,251.6	6,575.0	56.3	81.1	-47.78	1,030.9	-6,232.5	9,247.3	9,140.9	106.39	86.918					
11,000.0	6,672.0	11,251.8	6,575.0	57.4	81.1	-48.30	1,031.1	-6,232.5	9,347.3	9,240.9	106.42	87.832					
11,100.0	6,672.0	11,252.0	6,575.0	58.5	81.1	-48.82	1,031.3	-6,232.5	9,447.3	9,340.8	106.45	88.745					
11,200.0	6,672.0	11,252.2	6,575.0	59.6	81.2	-49.33	1,031.4	-6,232.5	9,547.3	9,440.8	106.49	89.656					
11,300.0	6,672.0	11,252.3	6,575.0	60.7	81.2	-49.83	1,031.6	-6,232.5	9,647.3	9,540.8	106.52	90.566					
11,400.0	6,672.0	11,252.5	6,575.0	61.8	81.2	-50.33	1,031.8	-6,232.5	9,747.3	9,640.7	106.56	91.474					
11,500.0	6,672.0	11,252.7	6,575.0	62.9	81.2	-50.82	1,032.0	-6,232.5	9,847.3	9,740.7	106.59	92.382					
11,600.0	6,672.0	11,252.9	6,575.0	64.1	81.2	-51.30	1,032.2	-6,232.5	9,947.3	9,840.6	106.63	93.288					



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 270-2_MWD, 7119-2_MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-119.55	-3,338.2	-5,888.2	6,768.9					
100.0	100.0	39.9	39.9	0.1	0.1	-119.55	-3,338.2	-5,888.2	6,768.7	6,768.5	0.19	N/A		
200.0	200.0	126.7	126.7	0.5	0.2	-119.55	-3,338.2	-5,888.4	6,768.9	6,768.2	0.70	9,667.509		
300.0	300.0	213.5	213.5	0.8	0.4	-119.55	-3,338.2	-5,888.8	6,769.3	6,768.0	1.21	5,609.803		
400.0	400.0	310.7	310.7	1.2	0.6	-119.55	-3,338.2	-5,889.4	6,769.8	6,768.0	1.81	3,749.156		
500.0	500.0	427.2	427.2	1.6	1.0	-119.54	-3,338.0	-5,890.1	6,770.2	6,767.6	2.58	2,627.011		
600.0	600.0	543.7	543.7	1.9	1.4	-119.54	-3,337.5	-5,890.6	6,770.4	6,767.0	3.35	2,021.861		
700.0	700.0	667.7	667.7	2.3	1.9	-119.53	-3,336.8	-5,890.8	6,770.3	6,766.1	4.14	1,633.654		
800.0	800.0	788.8	788.8	2.6	2.3	-119.52	-3,336.0	-5,890.5	6,769.7	6,764.8	4.93	1,374.531		
900.0	900.0	893.7	893.7	3.0	2.7	-119.52	-3,335.1	-5,890.2	6,769.1	6,763.4	5.65	1,197.753		
1,000.0	1,000.0	996.4	996.4	3.4	3.0	-119.51	-3,334.1	-5,890.0	6,768.3	6,761.9	6.37	1,061.984		
1,100.0	1,100.0	1,116.8	1,116.8	3.7	3.5	-119.50	-3,332.4	-5,889.7	6,767.5	6,760.3	7.16	945.288		
1,200.0	1,200.0	1,212.1	1,212.1	4.1	3.8	-119.49	-3,331.2	-5,889.3	6,766.5	6,758.6	7.86	861.304		
1,300.0	1,300.0	10,833.0	6,550.6	4.4	112.2	-160.80	-3,936.6	-1,370.7	6,746.5	6,671.8	74.68	90.341		
1,400.0	1,400.0	10,833.0	6,550.6	4.8	112.2	-160.80	-3,936.6	-1,370.7	6,668.1	6,592.5	75.58	88.229		
1,500.0	1,500.0	10,833.0	6,550.6	5.1	112.2	-160.80	-3,936.6	-1,370.7	6,590.4	6,513.9	76.50	86.148		
1,600.0	1,600.0	10,833.0	6,550.6	5.5	112.2	-160.80	-3,936.6	-1,370.7	6,513.2	6,435.8	77.44	84.101		
1,700.0	1,700.0	10,833.0	6,550.6	5.9	112.2	-160.80	-3,936.6	-1,370.7	6,436.7	6,358.3	78.41	82.090		
1,800.0	1,800.0	10,833.0	6,550.6	6.2	112.2	-160.80	-3,936.6	-1,370.7	6,360.8	6,281.4	79.40	80.114		
1,900.0	1,900.0	10,833.0	6,550.6	6.6	112.2	-160.80	-3,936.6	-1,370.7	6,285.6	6,205.2	80.40	78.176		
2,000.0	2,000.0	10,833.0	6,550.6	6.9	112.2	-160.80	-3,936.6	-1,370.7	6,211.1	6,129.7	81.43	76.275		
2,100.0	2,100.0	10,833.0	6,550.6	7.3	112.2	-160.80	-3,936.6	-1,370.7	6,137.4	6,054.9	82.48	74.412		
2,200.0	2,200.0	10,833.0	6,550.6	7.7	112.2	-160.80	-3,936.6	-1,370.7	6,064.4	5,980.8	83.55	72.588		
2,300.0	2,300.0	10,833.0	6,550.6	8.0	112.2	-111.73	-3,936.6	-1,370.7	5,992.6	5,907.9	84.64	70.800		
2,400.0	2,399.8	10,833.0	6,550.6	8.4	112.2	-113.54	-3,936.6	-1,370.7	5,922.5	5,836.7	85.78	69.044		
2,500.0	2,499.5	10,833.0	6,550.6	8.7	112.2	-115.24	-3,936.6	-1,370.7	5,854.3	5,767.3	86.96	67.321		
2,600.0	2,598.7	10,833.0	6,550.6	9.1	112.2	-116.83	-3,936.6	-1,370.7	5,788.2	5,700.0	88.19	65.635		
2,700.0	2,697.5	10,833.0	6,550.6	9.4	112.2	-118.30	-3,936.6	-1,370.7	5,724.2	5,634.7	89.45	63.990		
2,800.0	2,795.6	10,833.0	6,550.6	9.8	112.2	-119.67	-3,936.6	-1,370.7	5,662.6	5,571.8	90.76	62.389		
2,900.0	2,893.1	10,833.0	6,550.6	10.1	112.2	-120.94	-3,936.6	-1,370.7	5,603.5	5,511.4	92.11	60.835		
3,000.0	2,989.6	10,833.0	6,550.6	10.5	112.2	-122.10	-3,936.6	-1,370.7	5,547.0	5,453.5	93.49	59.332		
3,100.0	3,085.3	10,833.0	6,550.6	10.9	112.2	-123.17	-3,936.6	-1,370.7	5,493.4	5,398.5	94.91	57.882		
3,200.0	3,179.8	10,833.0	6,550.6	11.2	112.2	-124.15	-3,936.6	-1,370.7	5,442.7	5,346.3	96.35	56.487		
3,300.0	3,273.2	10,833.0	6,550.6	11.6	112.2	-125.04	-3,936.6	-1,370.7	5,395.1	5,297.3	97.83	55.150		
3,387.5	3,353.8	10,833.0	6,550.6	11.9	112.2	-125.75	-3,936.6	-1,370.7	5,356.1	5,257.0	99.13	54.029		
3,400.0	3,365.2	10,833.0	6,550.6	12.0	112.2	-125.75	-3,936.6	-1,370.7	5,350.7	5,251.4	99.32	53.873		
3,500.0	3,456.8	10,833.0	6,550.6	12.4	112.2	-125.75	-3,936.6	-1,370.7	5,308.6	5,207.7	100.83	52.646		
3,600.0	3,548.3	10,833.0	6,550.6	12.8	112.2	-125.75	-3,936.6	-1,370.7	5,268.0	5,165.6	102.36	51.468		
3,700.0	3,639.8	10,833.0	6,550.6	13.2	112.2	-125.75	-3,936.6	-1,370.7	5,229.0	5,125.1	103.88	50.337		
3,800.0	3,731.4	10,833.0	6,550.6	13.6	112.2	-125.75	-3,936.6	-1,370.7	5,191.6	5,086.2	105.40	49.254		
3,900.0	3,822.9	10,833.0	6,550.6	14.0	112.2	-125.75	-3,936.6	-1,370.7	5,155.9	5,049.0	106.93	48.219		
4,000.0	3,914.4	10,833.0	6,550.6	14.4	112.2	-125.75	-3,936.6	-1,370.7	5,121.9	5,013.5	108.45	47.230		
4,100.0	4,005.9	10,833.0	6,550.6	14.8	112.2	-125.75	-3,936.6	-1,370.7	5,089.7	4,979.7	109.96	46.288		
4,200.0	4,097.5	10,833.0	6,550.6	15.2	112.2	-125.75	-3,936.6	-1,370.7	5,059.2	4,947.8	111.46	45.392		
4,300.0	4,189.0	10,833.0	6,550.6	15.6	112.2	-125.75	-3,936.6	-1,370.7	5,030.5	4,917.6	112.94	44.541		
4,400.0	4,280.5	10,833.0	6,550.6	16.1	112.2	-125.75	-3,936.6	-1,370.7	5,003.7	4,889.3	114.41	43.734		
4,500.0	4,372.1	10,833.0	6,550.6	16.5	112.2	-125.75	-3,936.6	-1,370.7	4,978.7	4,862.9	115.86	42.970		
4,600.0	4,463.6	10,833.0	6,550.6	16.9	112.2	-125.75	-3,936.6	-1,370.7	4,955.6	4,838.3	117.29	42.250		
4,700.0	4,555.1	10,833.0	6,550.6	17.4	112.2	-125.75	-3,936.6	-1,370.7	4,934.5	4,815.8	118.70	41.572		
4,800.0	4,646.7	10,833.0	6,550.6	17.8	112.2	-125.75	-3,936.6	-1,370.7	4,915.3	4,795.2	120.07	40.936		
4,900.0	4,738.2	10,833.0	6,550.6	18.2	112.2	-125.75	-3,936.6	-1,370.7	4,898.0	4,776.6	121.42	40.340		
5,000.0	4,829.7	10,833.0	6,550.6	18.7	112.2	-125.75	-3,936.6	-1,370.7	4,882.7	4,760.0	122.73	39.784		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 270-2_MWD, 7119-2_MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,100.0	4,921.3	10,833.0	6,550.6	19.1	112.2	-125.75	-3,936.6	-1,370.7	4,869.5	4,745.5	124.01	39.268		
5,200.0	5,012.8	10,833.0	6,550.6	19.5	112.2	-125.75	-3,936.6	-1,370.7	4,858.2	4,733.0	125.25	38.790		
5,300.0	5,104.3	10,833.0	6,550.6	20.0	112.2	-125.75	-3,936.6	-1,370.7	4,849.0	4,722.6	126.44	38.350		
5,400.0	5,195.8	10,833.0	6,550.6	20.4	112.2	-125.75	-3,936.6	-1,370.7	4,841.9	4,714.3	127.60	37.946		
5,500.0	5,287.4	10,833.0	6,550.6	20.9	112.2	-125.75	-3,936.6	-1,370.7	4,836.8	4,708.1	128.71	37.579		
5,600.0	5,378.9	10,833.0	6,550.6	21.3	112.2	-125.75	-3,936.6	-1,370.7	4,833.8	4,704.0	129.77	37.248		
5,696.6	5,467.3	10,833.0	6,550.6	21.8	112.2	-125.75	-3,936.6	-1,370.7	4,832.8	4,702.0	130.76	36.960 CC		
5,700.0	5,470.4	10,833.0	6,550.6	21.8	112.2	-125.75	-3,936.6	-1,370.7	4,832.8	4,702.0	130.79	36.951 ES		
5,800.0	5,562.0	10,833.0	6,550.6	22.2	112.2	-125.75	-3,936.6	-1,370.7	4,833.9	4,702.1	131.76	36.688		
5,900.0	5,653.5	10,833.0	6,550.6	22.7	112.2	-125.75	-3,936.6	-1,370.7	4,837.1	4,704.4	132.67	36.459		
6,000.0	5,745.0	10,833.0	6,550.6	23.1	112.2	-125.75	-3,936.6	-1,370.7	4,842.3	4,708.8	133.54	36.262		
6,100.0	5,836.6	10,833.0	6,550.6	23.6	112.2	-125.75	-3,936.6	-1,370.7	4,849.6	4,715.2	134.35	36.097		
6,200.0	5,928.1	10,833.0	6,550.6	24.0	112.2	-125.75	-3,936.6	-1,370.7	4,858.9	4,723.8	135.11	35.963		
6,278.6	6,000.0	10,833.0	6,550.6	24.4	112.2	-125.75	-3,936.6	-1,370.7	4,867.7	4,732.0	135.67	35.880		
6,290.0	6,010.4	10,833.0	6,550.6	24.4	112.2	-127.24	-3,936.6	-1,370.7	4,869.2	4,733.4	135.75	35.870		
6,300.0	6,019.5	10,833.0	6,550.6	24.5	112.2	-129.11	-3,936.6	-1,370.7	4,870.6	4,734.8	135.81	35.863		
6,350.0	6,065.8	10,833.0	6,550.6	24.7	112.2	-140.34	-3,936.6	-1,370.7	4,878.5	4,742.3	136.14	35.834		
6,400.0	6,113.0	10,833.0	6,550.6	24.9	112.2	-155.18	-3,936.6	-1,370.7	4,887.3	4,750.9	136.44	35.819		
6,450.0	6,160.7	10,833.0	6,550.6	25.1	112.2	-173.13	-3,936.6	-1,370.7	4,897.1	4,760.4	136.72	35.818 SF		
6,500.0	6,208.5	10,833.0	6,550.6	25.3	112.2	168.33	-3,936.6	-1,370.7	4,907.7	4,770.7	136.98	35.828		
6,550.0	6,255.8	10,833.0	6,550.6	25.4	112.2	152.12	-3,936.6	-1,370.7	4,919.0	4,781.8	137.21	35.850		
6,600.0	6,302.5	10,833.0	6,550.6	25.6	112.2	139.37	-3,936.6	-1,370.7	4,930.9	4,793.5	137.42	35.881		
6,650.0	6,347.9	10,833.0	6,550.6	25.7	112.2	129.66	-3,936.6	-1,370.7	4,943.3	4,805.7	137.61	35.922		
6,700.0	6,391.6	10,833.0	6,550.6	25.9	112.2	122.19	-3,936.6	-1,370.7	4,956.2	4,818.4	137.79	35.969		
6,750.0	6,433.4	10,833.0	6,550.6	26.0	112.2	116.28	-3,936.6	-1,370.7	4,969.3	4,831.3	137.94	36.024		
6,800.0	6,472.8	10,833.0	6,550.6	26.1	112.2	111.46	-3,936.6	-1,370.7	4,982.5	4,844.4	138.08	36.083		
6,850.0	6,509.4	10,833.0	6,550.6	26.2	112.2	107.44	-3,936.6	-1,370.7	4,995.8	4,857.6	138.21	36.147		
6,900.0	6,543.0	10,833.0	6,550.6	26.3	112.2	104.01	-3,936.6	-1,370.7	5,009.0	4,870.6	138.32	36.214		
6,950.0	6,573.2	10,833.0	6,550.6	26.4	112.2	101.04	-3,936.6	-1,370.7	5,021.9	4,883.5	138.41	36.283		
7,000.0	6,599.8	10,833.0	6,550.6	26.5	112.2	98.46	-3,936.6	-1,370.7	5,034.6	4,896.1	138.49	36.353		
7,050.0	6,622.5	10,833.0	6,550.6	26.6	112.2	96.20	-3,936.6	-1,370.7	5,046.8	4,908.3	138.56	36.423		
7,100.0	6,641.1	10,833.0	6,550.6	26.7	112.2	94.24	-3,936.6	-1,370.7	5,058.5	4,919.9	138.62	36.493		
7,150.0	6,655.4	10,833.0	6,550.6	26.8	112.2	92.55	-3,936.6	-1,370.7	5,069.6	4,930.9	138.66	36.561		
7,200.0	6,665.4	10,833.0	6,550.6	26.9	112.2	91.11	-3,936.6	-1,370.7	5,079.9	4,941.2	138.70	36.626		
7,250.0	6,670.8	10,833.0	6,550.6	27.0	112.2	89.93	-3,936.6	-1,370.7	5,089.4	4,950.7	138.72	36.689		
7,285.7	6,672.0	10,833.0	6,550.6	27.1	112.2	89.23	-3,936.6	-1,370.7	5,095.7	4,956.9	138.72	36.733		
7,300.0	6,672.0	10,833.0	6,550.6	27.1	112.2	89.23	-3,936.6	-1,370.7	5,098.1	4,959.4	138.72	36.750		
7,400.0	6,672.0	10,833.0	6,550.6	27.3	112.2	89.23	-3,936.6	-1,370.7	5,116.1	4,977.4	138.74	36.875		
7,500.0	6,672.0	10,833.0	6,550.6	27.6	112.2	89.23	-3,936.6	-1,370.7	5,136.1	4,997.3	138.77	37.012		
7,600.0	6,672.0	10,833.0	6,550.6	28.0	112.2	89.23	-3,936.6	-1,370.7	5,157.9	5,019.1	138.80	37.161		
7,700.0	6,672.0	10,833.0	6,550.6	28.3	112.2	89.23	-3,936.6	-1,370.7	5,181.5	5,042.7	138.83	37.323		
7,800.0	6,672.0	10,833.0	6,550.6	28.8	112.2	89.23	-3,936.6	-1,370.7	5,207.0	5,068.1	138.86	37.497		
7,900.0	6,672.0	10,833.0	6,550.6	29.3	112.2	89.23	-3,936.6	-1,370.7	5,234.2	5,095.3	138.90	37.684		
8,000.0	6,672.0	10,833.0	6,550.6	29.8	112.2	89.23	-3,936.6	-1,370.7	5,263.3	5,124.3	138.93	37.885		
8,100.0	6,672.0	10,833.0	6,550.6	30.4	112.2	89.23	-3,936.6	-1,370.7	5,294.0	5,155.1	138.95	38.099		
8,200.0	6,672.0	10,833.0	6,550.6	31.0	112.2	89.23	-3,936.6	-1,370.7	5,326.5	5,187.5	138.97	38.328		
8,300.0	6,672.0	10,833.0	6,550.6	31.7	112.2	89.23	-3,936.6	-1,370.7	5,360.7	5,221.7	138.99	38.570		
8,400.0	6,672.0	10,833.0	6,550.6	32.4	112.2	89.23	-3,936.6	-1,370.7	5,396.5	5,257.5	138.99	38.826		
8,500.0	6,672.0	10,833.0	6,550.6	33.1	112.2	89.23	-3,936.6	-1,370.7	5,433.9	5,294.9	138.98	39.097		
8,600.0	6,672.0	10,833.0	6,550.6	33.9	112.2	89.23	-3,936.6	-1,370.7	5,472.8	5,333.9	138.97	39.382		
8,700.0	6,672.0	10,833.0	6,550.6	34.7	112.2	89.23	-3,936.6	-1,370.7	5,513.4	5,374.4	138.94	39.682		
8,800.0	6,672.0	10,833.0	6,550.6	35.5	112.2	89.23	-3,936.6	-1,370.7	5,555.4	5,416.5	138.90	39.996		

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 270-2_MWD, 7119-2_MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
8,900.0	6,672.0	10,833.0	6,550.6	36.3	112.2	89.23	-3,936.6	-1,370.7	5,598.9	5,460.1	138.85	40.325		
9,000.0	6,672.0	10,833.0	6,550.6	37.2	112.2	89.23	-3,936.6	-1,370.7	5,643.9	5,505.1	138.78	40.668		
9,100.0	6,672.0	10,833.0	6,550.6	38.1	112.2	89.23	-3,936.6	-1,370.7	5,690.2	5,551.5	138.70	41.025		
9,200.0	6,672.0	10,833.0	6,550.6	39.0	112.2	89.23	-3,936.6	-1,370.7	5,738.0	5,599.4	138.61	41.397		
9,300.0	6,672.0	10,833.0	6,550.6	39.9	112.2	89.23	-3,936.6	-1,370.7	5,787.1	5,648.6	138.51	41.782		
9,400.0	6,672.0	10,833.0	6,550.6	40.8	112.2	89.23	-3,936.6	-1,370.7	5,837.5	5,699.1	138.39	42.182		
9,500.0	6,672.0	10,833.0	6,550.6	41.8	112.2	89.23	-3,936.6	-1,370.7	5,889.1	5,750.9	138.26	42.595		
9,600.0	6,672.0	10,833.0	6,550.6	42.7	112.2	89.23	-3,936.6	-1,370.7	5,942.0	5,803.9	138.12	43.021		
9,700.0	6,672.0	10,833.0	6,550.6	43.7	112.2	89.23	-3,936.6	-1,370.7	5,996.1	5,858.2	137.96	43.461		
9,800.0	6,672.0	10,833.0	6,550.6	44.7	112.2	89.23	-3,936.6	-1,370.7	6,051.4	5,913.6	137.80	43.915		
9,900.0	6,672.0	10,833.0	6,550.6	45.7	112.2	89.23	-3,936.6	-1,370.7	6,107.9	5,970.2	137.62	44.381		
10,000.0	6,672.0	10,833.0	6,550.6	46.7	112.2	89.23	-3,936.6	-1,370.7	6,165.4	6,028.0	137.44	44.860		
10,100.0	6,672.0	10,833.0	6,550.6	47.7	112.2	89.23	-3,936.6	-1,370.7	6,224.0	6,086.8	137.24	45.351		
10,200.0	6,672.0	10,833.0	6,550.6	48.8	112.2	89.23	-3,936.6	-1,370.7	6,283.7	6,146.7	137.04	45.854		
10,300.0	6,672.0	10,833.0	6,550.6	49.8	112.2	89.23	-3,936.6	-1,370.7	6,344.4	6,207.6	136.82	46.370		
10,400.0	6,672.0	10,833.0	6,550.6	50.9	112.2	89.23	-3,936.6	-1,370.7	6,406.1	6,269.5	136.60	46.897		
10,500.0	6,672.0	10,833.0	6,550.6	51.9	112.2	89.23	-3,936.6	-1,370.7	6,468.7	6,332.4	136.37	47.435		
10,600.0	6,672.0	10,833.0	6,550.6	53.0	112.2	89.23	-3,936.6	-1,370.7	6,532.3	6,396.2	136.13	47.985		
10,700.0	6,672.0	10,833.0	6,550.6	54.1	112.2	89.23	-3,936.6	-1,370.7	6,596.8	6,460.9	135.89	48.546		
10,800.0	6,672.0	10,833.0	6,550.6	55.2	112.2	89.23	-3,936.6	-1,370.7	6,662.2	6,526.6	135.64	49.118		
10,900.0	6,672.0	10,833.0	6,550.6	56.3	112.2	89.23	-3,936.6	-1,370.7	6,728.4	6,593.0	135.38	49.700		
11,000.0	6,672.0	10,833.0	6,550.6	57.4	112.2	89.23	-3,936.6	-1,370.7	6,795.5	6,660.4	135.12	50.292		
11,100.0	6,672.0	10,833.0	6,550.6	58.5	112.2	89.23	-3,936.6	-1,370.7	6,863.4	6,728.5	134.86	50.894		
11,200.0	6,672.0	10,833.0	6,550.6	59.6	112.2	89.23	-3,936.6	-1,370.7	6,932.0	6,797.4	134.59	51.506		
11,300.0	6,672.0	10,833.0	6,550.6	60.7	112.2	89.23	-3,936.6	-1,370.7	7,001.4	6,867.1	134.31	52.128		
11,400.0	6,672.0	10,833.0	6,550.6	61.8	112.2	89.23	-3,936.6	-1,370.7	7,071.6	6,937.5	134.04	52.759		
11,500.0	6,672.0	10,833.0	6,550.6	62.9	112.2	89.23	-3,936.6	-1,370.7	7,142.5	7,008.7	133.76	53.399		
11,600.0	6,672.0	10,833.0	6,550.6	64.1	112.2	89.23	-3,936.6	-1,370.7	7,214.0	7,080.5	133.47	54.048		
11,700.0	6,672.0	10,833.0	6,550.6	65.2	112.2	89.23	-3,936.6	-1,370.7	7,286.3	7,153.1	133.19	54.705		
11,800.0	6,672.0	10,833.0	6,550.6	66.3	112.2	89.23	-3,936.6	-1,370.7	7,359.2	7,226.3	132.91	55.371		
11,900.0	6,672.0	10,833.0	6,550.6	67.5	112.2	89.23	-3,936.6	-1,370.7	7,432.7	7,300.1	132.62	56.045		
12,000.0	6,672.0	10,833.0	6,550.6	68.6	112.2	89.23	-3,936.6	-1,370.7	7,506.8	7,374.5	132.33	56.728		
12,100.0	6,672.0	10,833.0	6,550.6	69.8	112.2	89.23	-3,936.6	-1,370.7	7,581.6	7,449.5	132.04	57.417		
12,200.0	6,672.0	10,833.0	6,550.6	70.9	112.2	89.23	-3,936.6	-1,370.7	7,656.9	7,525.2	131.75	58.115		
12,300.0	6,672.0	10,833.0	6,550.6	72.1	112.2	89.23	-3,936.6	-1,370.7	7,732.8	7,601.3	131.47	58.820		
12,400.0	6,672.0	10,833.0	6,550.6	73.2	112.2	89.23	-3,936.6	-1,370.7	7,809.2	7,678.1	131.18	59.532		
12,500.0	6,672.0	10,833.0	6,550.6	74.4	112.2	89.23	-3,936.6	-1,370.7	7,886.2	7,755.3	130.89	60.251		
12,600.0	6,672.0	10,833.0	6,550.6	75.5	112.2	89.23	-3,936.6	-1,370.7	7,963.7	7,833.1	130.60	60.977		
12,700.0	6,672.0	10,833.0	6,550.6	76.7	112.2	89.23	-3,936.6	-1,370.7	8,041.7	7,911.4	130.31	61.710		
12,800.0	6,672.0	10,833.0	6,550.6	77.9	112.2	89.23	-3,936.6	-1,370.7	8,120.2	7,990.1	130.03	62.449		
12,900.0	6,672.0	10,833.0	6,550.6	79.0	112.2	89.23	-3,936.6	-1,370.7	8,199.1	8,069.4	129.74	63.194		
13,000.0	6,672.0	10,833.0	6,550.6	80.2	112.2	89.23	-3,936.6	-1,370.7	8,278.5	8,149.1	129.46	63.946		
13,100.0	6,672.0	10,833.0	6,550.6	81.4	112.2	89.23	-3,936.6	-1,370.7	8,358.4	8,229.2	129.18	64.704		
13,200.0	6,672.0	10,833.0	6,550.6	82.6	112.2	89.23	-3,936.6	-1,370.7	8,438.7	8,309.8	128.90	65.467		
13,300.0	6,672.0	10,833.0	6,550.6	83.7	112.2	89.23	-3,936.6	-1,370.7	8,519.4	8,390.8	128.62	66.236		
13,400.0	6,672.0	10,833.0	6,550.6	84.9	112.2	89.23	-3,936.6	-1,370.7	8,600.5	8,472.2	128.35	67.010		
13,500.0	6,672.0	10,833.0	6,550.6	86.1	112.2	89.23	-3,936.6	-1,370.7	8,682.0	8,554.0	128.07	67.790		
13,600.0	6,672.0	10,833.0	6,550.6	87.3	112.2	89.23	-3,936.6	-1,370.7	8,763.9	8,636.1	127.80	68.575		
13,700.0	6,672.0	10,833.0	6,550.6	88.4	112.2	89.23	-3,936.6	-1,370.7	8,846.2	8,718.7	127.53	69.365		
13,800.0	6,672.0	10,833.0	6,550.6	89.6	112.2	89.23	-3,936.6	-1,370.7	8,928.9	8,801.6	127.26	70.160		
13,900.0	6,672.0	10,833.0	6,550.6	90.8	112.2	89.23	-3,936.6	-1,370.7	9,011.9	8,884.9	127.00	70.960		
14,000.0	6,672.0	10,833.0	6,550.6	92.0	112.2	89.23	-3,936.6	-1,370.7	9,095.2	8,968.5	126.74	71.764		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> B Section 12 - SLW Ranch B13-69HN - Original Drilling - As Drilled												<b>Offset Site Error:</b>	0.0 ft
Survey Program: 270-2_MWD, 7119-2_MWD												<b>Offset Well Error:</b>	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
14,100.0	6,672.0	10,833.0	6,550.6	93.2	112.2	89.23	-3,936.6	-1,370.7	9,178.9	9,052.4	126.48	72.573	
14,200.0	6,672.0	10,833.0	6,550.6	94.4	112.2	89.23	-3,936.6	-1,370.7	9,262.9	9,136.7	126.22	73.386	
14,300.0	6,672.0	10,833.0	6,550.6	95.6	112.2	89.23	-3,936.6	-1,370.7	9,347.3	9,221.3	125.97	74.204	
14,400.0	6,672.0	10,833.0	6,550.6	96.8	112.2	89.23	-3,936.6	-1,370.7	9,431.9	9,306.2	125.72	75.025	
14,500.0	6,672.0	10,833.0	6,550.6	98.0	112.2	89.23	-3,936.6	-1,370.7	9,516.8	9,391.4	125.47	75.851	
14,600.0	6,672.0	10,833.0	6,550.6	99.2	112.2	89.23	-3,936.6	-1,370.7	9,602.1	9,476.9	125.22	76.681	
14,700.0	6,672.0	10,833.0	6,550.6	100.4	112.2	89.23	-3,936.6	-1,370.7	9,687.6	9,562.6	124.98	77.514	
14,800.0	6,672.0	10,833.0	6,550.6	101.6	112.2	89.23	-3,936.6	-1,370.7	9,773.4	9,648.7	124.74	78.351	
14,900.0	6,672.0	10,833.0	6,550.6	102.7	112.2	89.23	-3,936.6	-1,370.7	9,859.5	9,735.0	124.50	79.191	
15,000.0	6,672.0	10,833.0	6,550.6	103.9	112.2	89.23	-3,936.6	-1,370.7	9,945.8	9,821.6	124.27	80.035	



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-108.14	-1,785.0	-5,448.9	5,734.1					
100.0	100.0	46.4	46.4	0.1	0.1	-108.14	-1,785.0	-5,448.9	5,733.8	5,733.6	0.21	N/A		
200.0	200.0	150.4	150.4	0.5	0.4	-108.14	-1,785.2	-5,448.6	5,733.6	5,732.7	0.84	6,861.858		
300.0	300.0	243.7	243.7	0.8	0.7	-108.14	-1,785.3	-5,448.4	5,733.4	5,731.9	1.52	3,772.068		
400.0	400.0	348.0	348.0	1.2	1.0	-108.14	-1,785.4	-5,448.3	5,733.4	5,731.1	2.24	2,556.401		
500.0	500.0	466.1	466.1	1.6	1.5	-108.14	-1,785.4	-5,447.9	5,733.0	5,730.0	3.01	1,901.733		
600.0	600.0	571.9	571.9	1.9	1.8	-108.14	-1,785.1	-5,447.4	5,732.5	5,728.7	3.74	1,531.276		
700.0	700.0	665.7	665.7	2.3	2.2	-108.14	-1,784.8	-5,446.9	5,731.9	5,727.5	4.43	1,293.672		
800.0	800.0	760.6	760.6	2.6	2.5	-108.14	-1,784.6	-5,446.6	5,731.5	5,726.4	5.12	1,119.016		
900.0	900.0	856.3	856.3	3.0	2.8	-108.14	-1,784.3	-5,446.3	5,731.2	5,725.4	5.82	985.474		
1,000.0	1,000.0	949.8	949.8	3.4	3.1	-108.14	-1,784.0	-5,446.2	5,730.9	5,724.4	6.50	881.541		
1,100.0	1,100.0	1,040.1	1,040.1	3.7	3.5	-108.13	-1,783.5	-5,446.3	5,730.8	5,723.7	7.17	798.752		
1,109.2	1,109.2	1,048.2	1,048.2	3.7	3.5	-108.13	-1,783.4	-5,446.3	5,730.8	5,723.6	7.24	791.992		
1,200.0	1,200.0	1,132.9	1,132.9	4.1	3.8	-108.13	-1,783.0	-5,446.5	5,730.9	5,723.0	7.86	729.461		
1,300.0	1,300.0	1,233.5	1,233.4	4.4	4.1	-108.12	-1,782.5	-5,446.7	5,731.0	5,722.4	8.56	669.118		
1,400.0	1,400.0	1,348.4	1,348.4	4.8	4.5	-108.12	-1,782.1	-5,447.0	5,731.1	5,721.8	9.32	614.645		
1,500.0	1,500.0	1,462.4	1,462.4	5.1	4.9	-108.12	-1,782.0	-5,446.5	5,730.7	5,720.6	10.08	568.438		
1,600.0	1,600.0	1,554.5	1,554.5	5.5	5.3	-108.12	-1,781.9	-5,446.2	5,730.3	5,719.6	10.76	532.452		
1,700.0	1,700.0	1,650.4	1,650.3	5.9	5.6	-108.11	-1,781.6	-5,446.1	5,730.1	5,718.6	11.46	500.180		
1,800.0	1,800.0	1,765.2	1,765.2	6.2	6.0	-108.12	-1,781.6	-5,445.8	5,729.8	5,717.6	12.22	469.018		
1,900.0	1,900.0	1,884.7	1,884.6	6.6	6.4	-108.12	-1,781.8	-5,444.9	5,729.2	5,716.2	12.99	440.936		
2,000.0	2,000.0	1,980.0	1,980.0	6.9	6.7	-108.13	-1,782.2	-5,444.0	5,728.4	5,714.7	13.69	418.576		
2,100.0	2,100.0	2,078.3	2,078.3	7.3	7.1	-108.13	-1,782.7	-5,443.1	5,727.7	5,713.3	14.39	398.090		
2,200.0	2,200.0	2,176.4	2,176.4	7.7	7.4	-108.15	-1,783.6	-5,442.1	5,727.0	5,712.0	15.09	379.533		
2,300.0	2,300.0	2,276.4	2,276.3	8.0	7.8	-57.20	-1,784.4	-5,441.2	5,725.5	5,709.7	15.79	362.500		
2,400.0	2,399.8	2,382.3	2,382.2	8.4	8.2	-57.31	-1,785.1	-5,440.1	5,721.9	5,705.4	16.52	346.442		
2,500.0	2,499.5	2,487.5	2,487.5	8.7	8.5	-57.49	-1,785.5	-5,439.1	5,716.4	5,699.2	17.24	331.658		
2,600.0	2,598.7	2,585.1	2,585.1	9.1	8.9	-57.72	-1,785.7	-5,438.2	5,709.0	5,691.1	17.93	318.432		
2,700.0	2,697.5	2,667.0	2,666.9	9.4	9.2	-57.99	-1,785.9	-5,437.5	5,699.9	5,681.3	18.57	307.017		
2,800.0	2,795.6	2,768.4	2,768.3	9.8	9.5	-58.35	-1,786.4	-5,436.8	5,689.2	5,669.9	19.27	295.228		
2,900.0	2,893.1	2,881.9	2,881.8	10.1	9.9	-58.80	-1,786.8	-5,435.8	5,676.5	5,656.5	20.02	283.572		
3,000.0	2,989.6	2,945.8	2,945.7	10.5	10.1	-59.19	-1,787.1	-5,435.2	5,662.2	5,641.6	20.59	274.953		
3,100.0	3,085.3	3,000.0	2,999.9	10.9	10.3	-59.60	-1,787.3	-5,435.2	5,646.9	5,625.7	21.14	267.166		
3,200.0	3,179.8	3,068.0	3,067.9	11.2	10.6	-60.09	-1,787.7	-5,435.5	5,630.5	5,608.8	21.73	259.137		
3,300.0	3,273.2	3,133.2	3,133.1	11.6	10.8	-60.61	-1,788.2	-5,436.1	5,613.0	5,590.7	22.31	251.554		
3,387.5	3,353.8	3,188.2	3,188.1	11.9	11.0	-61.09	-1,788.5	-5,437.0	5,596.9	5,574.1	22.82	245.237		
3,400.0	3,365.2	3,200.0	3,199.9	12.0	11.0	-61.13	-1,788.6	-5,437.2	5,594.6	5,571.7	22.91	244.204		
3,500.0	3,456.8	3,279.7	3,279.6	12.4	11.3	-61.42	-1,788.8	-5,438.9	5,576.0	5,552.4	23.56	236.720		
3,600.0	3,548.3	3,366.2	3,366.1	12.8	11.6	-61.74	-1,788.9	-5,440.8	5,557.7	5,533.5	24.23	229.364		
3,700.0	3,639.8	3,461.8	3,461.6	13.2	11.9	-62.09	-1,789.2	-5,442.9	5,539.7	5,514.8	24.94	222.081		
3,800.0	3,731.4	3,561.3	3,561.1	13.6	12.3	-62.45	-1,789.2	-5,445.1	5,521.8	5,496.1	25.68	215.045		
3,900.0	3,822.9	3,656.4	3,656.2	14.0	12.6	-62.81	-1,789.2	-5,447.1	5,504.0	5,477.6	26.40	208.485		
4,000.0	3,914.4	3,748.0	3,747.8	14.4	12.9	-63.15	-1,789.0	-5,449.1	5,486.4	5,459.3	27.12	202.333		
4,100.0	4,005.9	3,854.2	3,854.0	14.8	13.3	-63.54	-1,788.6	-5,451.4	5,469.0	5,441.2	27.89	196.121		
4,200.0	4,097.5	3,967.8	3,967.6	15.2	13.7	-63.96	-1,787.9	-5,453.5	5,451.4	5,422.8	28.69	190.043		
4,300.0	4,189.0	4,117.6	4,117.3	15.6	14.2	-64.52	-1,786.2	-5,455.5	5,433.5	5,403.9	29.61	183.505		
4,400.0	4,280.5	4,238.8	4,238.5	16.1	14.6	-64.98	-1,784.5	-5,456.0	5,414.9	5,384.5	30.44	177.891		
4,500.0	4,372.1	4,335.4	4,335.1	16.5	15.0	-65.35	-1,783.2	-5,456.2	5,396.3	5,365.1	31.19	173.012		
4,600.0	4,463.6	4,428.3	4,428.0	16.9	15.3	-65.70	-1,781.9	-5,456.2	5,377.8	5,345.9	31.93	168.413		
4,700.0	4,555.1	4,504.3	4,503.9	17.4	15.6	-65.99	-1,780.9	-5,456.4	5,359.8	5,327.2	32.62	164.300		
4,800.0	4,646.7	4,603.8	4,603.4	17.8	15.9	-66.38	-1,779.8	-5,456.7	5,342.0	5,308.6	33.39	159.981		
4,900.0	4,738.2	4,656.0	4,655.6	18.2	16.1	-66.59	-1,779.4	-5,456.9	5,324.8	5,290.8	34.01	156.573		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,000.0	4,829.7	4,719.2	4,718.9	18.7	16.3	-66.84	-1,779.3	-5,457.5	5,308.4	5,273.8	34.66	153.142		
5,100.0	4,921.3	4,820.4	4,820.1	19.1	16.7	-67.25	-1,779.2	-5,458.5	5,292.4	5,256.9	35.45	149.307		
5,200.0	5,012.8	4,910.9	4,910.6	19.5	17.0	-67.61	-1,778.9	-5,459.4	5,276.6	5,240.4	36.20	145.777		
5,300.0	5,104.3	5,001.1	5,000.8	20.0	17.3	-67.97	-1,778.7	-5,460.3	5,261.0	5,224.0	36.95	142.392		
5,400.0	5,195.8	5,104.0	5,103.6	20.4	17.7	-68.39	-1,778.6	-5,461.2	5,245.6	5,207.9	37.74	138.985		
5,500.0	5,287.4	5,167.1	5,166.8	20.9	17.9	-68.65	-1,778.6	-5,461.8	5,230.6	5,192.2	38.41	136.185		
5,600.0	5,378.9	5,242.7	5,242.3	21.3	18.1	-68.96	-1,778.9	-5,462.8	5,216.4	5,177.2	39.12	133.352		
5,700.0	5,470.4	5,363.3	5,362.9	21.8	18.6	-69.47	-1,780.1	-5,464.0	5,202.4	5,162.4	39.98	130.134		
5,800.0	5,562.0	5,497.6	5,497.2	22.2	19.0	-70.06	-1,782.0	-5,463.6	5,187.8	5,146.9	40.88	126.895		
5,900.0	5,653.5	5,565.4	5,565.0	22.7	19.3	-70.35	-1,782.9	-5,463.3	5,173.3	5,131.8	41.57	124.440		
6,000.0	5,745.0	5,625.8	5,625.4	23.1	19.5	-70.62	-1,784.0	-5,463.2	5,159.7	5,117.4	42.24	122.151		
6,100.0	5,836.6	5,679.7	5,679.2	23.6	19.7	-70.86	-1,784.9	-5,463.6	5,146.9	5,104.0	42.89	120.014		
6,200.0	5,928.1	5,761.5	5,761.0	24.0	19.9	-71.22	-1,786.6	-5,464.6	5,134.9	5,091.3	43.63	117.706		
6,278.6	6,000.0	5,838.4	5,837.9	24.4	20.2	-71.56	-1,788.7	-5,465.1	5,125.7	5,081.5	44.25	115.837		
6,290.0	6,010.4	5,849.5	5,849.0	24.4	20.3	-73.29	-1,789.0	-5,465.2	5,124.4	5,080.1	44.34	115.570		
6,300.0	6,019.5	5,859.3	5,858.8	24.5	20.3	-74.99	-1,789.2	-5,465.3	5,123.4	5,079.0	44.42	115.340		
6,350.0	6,065.8	5,909.0	5,908.5	24.7	20.5	-85.44	-1,790.1	-5,465.9	5,120.8	5,076.0	44.81	114.268		
6,355.7	6,071.2	5,914.8	5,914.3	24.7	20.5	-86.86	-1,790.2	-5,465.9	5,120.8	5,075.9	44.86	114.155 CC, ES		
6,400.0	6,113.0	5,944.7	5,944.1	24.9	20.6	-99.53	-1,790.9	-5,466.2	5,122.5	5,077.4	45.15	113.460		
6,450.0	6,160.7	5,982.8	5,982.3	25.1	20.7	-116.85	-1,791.8	-5,466.6	5,128.4	5,083.0	45.48	112.775		
6,500.0	6,208.5	6,021.1	6,020.6	25.3	20.8	-134.89	-1,793.0	-5,467.0	5,138.6	5,092.8	45.78	112.233		
6,550.0	6,255.8	6,059.3	6,058.7	25.4	21.0	-150.76	-1,794.0	-5,467.5	5,152.8	5,106.7	46.08	111.831		
6,600.0	6,302.5	6,096.8	6,096.2	25.6	21.1	-163.35	-1,794.9	-5,468.1	5,170.9	5,124.5	46.35	111.567		
6,650.0	6,347.9	6,141.7	6,141.1	25.7	21.3	-173.16	-1,795.9	-5,469.0	5,192.7	5,146.1	46.63	111.364		
6,700.0	6,391.6	6,185.8	6,185.2	25.9	21.4	178.97	-1,796.9	-5,469.8	5,218.0	5,171.2	46.89	111.283 SF		
6,750.0	6,433.4	6,222.8	6,222.1	26.0	21.6	172.28	-1,797.8	-5,470.5	5,246.6	5,199.5	47.11	111.364		
6,800.0	6,472.8	6,255.1	6,254.4	26.1	21.7	166.19	-1,798.5	-5,471.1	5,278.2	5,230.9	47.30	111.580		
6,850.0	6,509.4	6,285.0	6,284.3	26.2	21.8	160.27	-1,799.2	-5,471.8	5,312.5	5,265.0	47.47	111.903		
6,900.0	6,543.0	6,317.9	6,317.3	26.3	21.9	154.21	-1,799.9	-5,472.5	5,349.3	5,301.6	47.64	112.279		
6,950.0	6,573.2	6,354.0	6,353.3	26.4	22.0	147.74	-1,800.8	-5,473.2	5,388.1	5,340.3	47.81	112.695		
7,000.0	6,599.8	6,385.9	6,385.1	26.5	22.1	140.58	-1,801.8	-5,473.7	5,428.6	5,380.7	47.95	113.203		
7,050.0	6,622.5	6,413.1	6,412.4	26.6	22.2	132.54	-1,802.7	-5,474.1	5,470.6	5,422.5	48.07	113.797		
7,100.0	6,641.1	6,418.7	6,418.0	26.7	22.2	123.31	-1,802.8	-5,474.2	5,513.6	5,465.5	48.11	114.612		
7,150.0	6,655.4	6,427.6	6,426.9	26.8	22.3	113.36	-1,803.1	-5,474.3	5,557.3	5,509.1	48.15	115.427		
7,200.0	6,665.4	6,433.6	6,432.9	26.9	22.3	103.07	-1,803.3	-5,474.4	5,601.3	5,553.1	48.17	116.286		
7,250.0	6,670.8	6,436.7	6,435.9	27.0	22.3	93.07	-1,803.4	-5,474.5	5,645.2	5,597.1	48.18	117.177		
7,285.7	6,672.0	6,437.0	6,436.3	27.1	22.3	86.45	-1,803.5	-5,474.5	5,676.3	5,628.2	48.18	117.827		
7,300.0	6,672.0	6,436.9	6,436.1	27.1	22.3	86.45	-1,803.5	-5,474.5	5,688.8	5,640.6	48.17	118.090		
7,400.0	6,672.0	6,435.8	6,435.1	27.3	22.3	86.43	-1,803.4	-5,474.4	5,775.8	5,727.6	48.17	119.895		
7,500.0	6,672.0	6,434.8	6,434.0	27.6	22.3	86.41	-1,803.4	-5,474.4	5,863.2	5,815.0	48.19	121.679		
7,600.0	6,672.0	6,433.8	6,433.0	28.0	22.3	86.39	-1,803.3	-5,474.4	5,951.0	5,902.8	48.21	123.441		
7,700.0	6,672.0	6,432.7	6,432.0	28.3	22.3	86.36	-1,803.3	-5,474.4	6,039.3	5,991.0	48.24	125.183		
7,800.0	6,672.0	6,431.7	6,431.0	28.8	22.3	86.34	-1,803.3	-5,474.4	6,127.8	6,079.6	48.29	126.906		
7,900.0	6,672.0	6,430.7	6,430.0	29.3	22.3	86.32	-1,803.2	-5,474.4	6,216.8	6,168.4	48.34	128.610		
8,000.0	6,672.0	6,429.7	6,429.0	29.8	22.3	86.30	-1,803.2	-5,474.3	6,306.0	6,257.6	48.40	130.297		
8,100.0	6,672.0	6,428.8	6,428.0	30.4	22.3	86.28	-1,803.2	-5,474.3	6,395.6	6,347.1	48.46	131.968		
8,200.0	6,672.0	6,427.8	6,427.0	31.0	22.3	86.26	-1,803.1	-5,474.3	6,485.5	6,437.0	48.54	133.623		
8,300.0	6,672.0	6,426.8	6,426.1	31.7	22.3	86.24	-1,803.1	-5,474.3	6,575.7	6,527.1	48.61	135.263		
8,400.0	6,672.0	6,425.9	6,425.1	32.4	22.3	86.22	-1,803.1	-5,474.3	6,666.2	6,617.5	48.70	136.890		
8,500.0	6,672.0	6,424.9	6,424.2	33.1	22.3	86.20	-1,803.1	-5,474.3	6,756.9	6,708.1	48.79	138.503		
8,600.0	6,672.0	6,424.0	6,423.3	33.9	22.3	86.18	-1,803.0	-5,474.3	6,847.9	6,799.0	48.88	140.104		
8,700.0	6,672.0	6,423.1	6,422.4	34.7	22.3	86.16	-1,803.0	-5,474.2	6,939.1	6,890.2	48.97	141.693		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design B Section 12 - Thomson B12-12 - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
8,800.0	6,672.0	6,422.2	6,421.5	35.5	22.3	86.14	-1,803.0	-5,474.2	7,030.6	6,981.6	49.07	143.271		
8,900.0	6,672.0	6,421.3	6,420.6	36.3	22.2	86.13	-1,802.9	-5,474.2	7,122.4	7,073.2	49.17	144.839		
9,000.0	6,672.0	6,420.4	6,419.7	37.2	22.2	86.11	-1,802.9	-5,474.2	7,214.3	7,165.0	49.28	146.397		
9,100.0	6,672.0	6,419.5	6,418.8	38.1	22.2	86.09	-1,802.9	-5,474.2	7,306.5	7,257.1	49.39	147.946		
9,200.0	6,672.0	6,418.7	6,417.9	39.0	22.2	86.07	-1,802.8	-5,474.2	7,398.8	7,349.3	49.50	149.486		
9,300.0	6,672.0	6,417.8	6,417.1	39.9	22.2	86.05	-1,802.8	-5,474.2	7,491.4	7,441.8	49.61	151.018		
9,400.0	6,672.0	6,417.0	6,416.2	40.8	22.2	86.03	-1,802.8	-5,474.2	7,584.2	7,534.4	49.72	152.542		
9,500.0	6,672.0	6,416.1	6,415.4	41.8	22.2	86.02	-1,802.8	-5,474.1	7,677.1	7,627.3	49.83	154.058		
9,600.0	6,672.0	9,600.0	6,402.1	42.7	33.4	85.75	-1,802.3	-5,474.0	7,770.2	7,709.2	61.07	127.245		
9,700.0	6,672.0	9,700.0	6,400.3	43.7	33.8	85.71	-1,802.3	-5,474.0	7,863.5	7,802.0	61.53	127.792		
9,800.0	6,672.0	9,800.0	6,398.4	44.7	34.1	85.67	-1,802.2	-5,473.9	7,957.0	7,895.0	62.00	128.332		
9,900.0	6,672.0	9,900.0	6,396.6	45.7	34.5	85.63	-1,802.2	-5,473.9	8,050.6	7,988.1	62.47	128.865		
10,000.0	6,672.0	10,000.0	6,394.7	46.7	34.8	85.59	-1,802.1	-5,473.9	8,144.4	8,081.4	62.94	129.391		
10,100.0	6,672.0	10,100.0	6,392.9	47.7	35.2	85.55	-1,802.1	-5,473.8	8,238.3	8,174.9	63.41	129.911		
10,200.0	6,672.0	10,200.0	6,391.0	48.8	35.5	85.51	-1,802.0	-5,473.8	8,332.3	8,268.4	63.89	130.425		
10,300.0	6,672.0	10,300.0	6,389.2	49.8	35.9	85.48	-1,802.0	-5,473.8	8,426.5	8,362.2	64.36	130.932		
10,400.0	6,672.0	10,400.0	6,387.4	50.9	36.2	85.44	-1,801.9	-5,473.7	8,520.9	8,456.0	64.83	131.435		
10,500.0	6,672.0	10,500.0	6,385.5	51.9	36.6	85.40	-1,801.9	-5,473.7	8,615.3	8,550.0	65.30	131.931		
10,600.0	6,672.0	10,600.0	6,383.7	53.0	36.9	85.36	-1,801.8	-5,473.7	8,709.9	8,644.1	65.77	132.422		
10,700.0	6,672.0	10,700.0	6,381.8	54.1	37.3	85.32	-1,801.8	-5,473.6	8,804.6	8,738.4	66.25	132.909		
10,800.0	6,672.0	10,800.0	6,380.0	55.2	37.6	85.28	-1,801.7	-5,473.6	8,899.5	8,832.7	66.72	133.390		
10,900.0	6,672.0	10,900.0	6,378.1	56.3	38.0	85.25	-1,801.7	-5,473.6	8,994.4	8,927.2	67.19	133.866		
11,000.0	6,672.0	11,000.0	6,376.3	57.4	38.3	85.21	-1,801.6	-5,473.5	9,089.4	9,021.8	67.66	134.338		
11,100.0	6,672.0	6,419.1	6,418.4	58.5	22.2	86.06	-1,802.9	-5,474.2	9,184.6	9,132.9	51.77	177.412		
11,200.0	6,672.0	6,416.0	6,415.3	59.6	22.2	86.00	-1,802.8	-5,474.1	9,279.9	9,228.0	51.88	178.867		
11,300.0	6,672.0	6,412.7	6,412.0	60.7	22.2	85.93	-1,802.7	-5,474.1	9,375.3	9,323.3	51.99	180.320		
11,400.0	6,672.0	6,409.2	6,408.4	61.8	22.2	85.86	-1,802.5	-5,474.0	9,470.7	9,418.6	52.10	181.772		
11,500.0	6,672.0	6,405.4	6,404.7	62.9	22.2	85.78	-1,802.4	-5,474.0	9,566.3	9,514.1	52.21	183.224		
11,600.0	6,672.0	6,401.4	6,400.7	64.1	22.2	85.70	-1,802.3	-5,474.0	9,662.0	9,609.6	52.32	184.674		
11,700.0	6,672.0	6,397.1	6,396.3	65.2	22.2	85.61	-1,802.1	-5,473.9	9,757.7	9,705.3	52.43	186.124		
11,800.0	6,672.0	6,392.4	6,391.7	66.3	22.1	85.51	-1,802.0	-5,473.8	9,853.5	9,801.0	52.53	187.575		
11,900.0	6,672.0	6,387.4	6,386.7	67.5	22.1	85.41	-1,801.8	-5,473.8	9,949.4	9,896.8	52.64	189.026		



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-95.13	-483.7	-5,391.1	5,413.2					
100.0	100.0	29.2	29.2	0.1	0.1	-95.13	-483.7	-5,391.1	5,412.7	5,412.6	0.18	N/A		
200.0	200.0	122.4	122.4	0.5	0.3	-95.13	-483.7	-5,391.1	5,412.8	5,412.1	0.74	7,343.286		
300.0	300.0	207.8	207.8	0.8	0.6	-95.13	-483.7	-5,391.4	5,413.1	5,411.7	1.39	3,882.077		
400.0	400.0	343.9	343.9	1.2	1.0	-95.13	-483.7	-5,391.5	5,413.1	5,410.9	2.23	2,430.248		
500.0	500.0	449.1	449.1	1.6	1.4	-95.12	-483.5	-5,391.1	5,412.7	5,409.8	2.95	1,833.071		
600.0	600.0	539.4	539.4	1.9	1.7	-95.12	-483.4	-5,390.8	5,412.5	5,408.9	3.63	1,492.518		
700.0	700.0	631.6	631.6	2.3	2.0	-95.12	-483.1	-5,390.8	5,412.4	5,408.1	4.31	1,256.680		
800.0	800.0	736.9	736.9	2.6	2.4	-95.12	-482.9	-5,390.8	5,412.4	5,407.3	5.03	1,075.388		
900.0	900.0	846.3	846.3	3.0	2.8	-95.11	-482.4	-5,390.5	5,412.1	5,406.3	5.77	937.343		
1,000.0	1,000.0	933.1	933.1	3.4	3.1	-95.11	-482.4	-5,390.3	5,411.9	5,405.4	6.44	840.935		
1,014.1	1,014.1	944.1	944.1	3.4	3.1	-95.11	-482.4	-5,390.3	5,411.9	5,405.3	6.52	829.458		
1,100.0	1,100.0	1,011.8	1,011.8	3.7	3.4	-95.11	-482.3	-5,390.5	5,412.0	5,404.9	7.07	765.678		
1,200.0	1,200.0	1,095.0	1,095.0	4.1	3.6	-95.11	-482.0	-5,390.9	5,412.5	5,404.8	7.72	701.383		
1,300.0	1,300.0	1,194.6	1,194.6	4.4	4.0	-95.10	-481.5	-5,391.6	5,413.2	5,404.7	8.42	642.675		
1,400.0	1,400.0	1,321.7	1,321.7	4.8	4.4	-95.10	-480.9	-5,392.2	5,413.6	5,404.3	9.23	586.805		
1,500.0	1,500.0	1,421.7	1,421.7	5.1	4.8	-95.09	-480.4	-5,392.3	5,413.6	5,403.7	9.93	545.017		
1,600.0	1,600.0	1,500.0	1,500.0	5.5	5.1	-95.09	-480.2	-5,392.6	5,414.0	5,403.5	10.56	512.465		
1,700.0	1,700.0	1,606.8	1,606.8	5.9	5.4	-95.09	-480.1	-5,393.2	5,414.6	5,403.3	11.30	479.325		
1,800.0	1,800.0	1,725.6	1,725.6	6.2	5.9	-95.09	-479.9	-5,393.5	5,414.8	5,402.7	12.07	448.637		
1,900.0	1,900.0	1,823.0	1,822.9	6.6	6.2	-95.08	-479.5	-5,393.7	5,415.0	5,402.2	12.77	424.107		
2,000.0	2,000.0	1,954.3	1,954.3	6.9	6.7	-95.07	-478.9	-5,393.4	5,414.6	5,401.1	13.58	398.584		
2,100.0	2,100.0	2,069.1	2,069.1	7.3	7.1	-95.07	-478.8	-5,392.8	5,414.1	5,399.8	14.34	377.470		
2,200.0	2,200.0	2,171.8	2,171.8	7.7	7.4	-95.08	-479.0	-5,391.9	5,413.3	5,398.3	15.06	359.446		
2,300.0	2,300.0	2,294.0	2,293.9	8.0	7.8	-44.13	-479.4	-5,390.8	5,411.2	5,395.3	15.84	341.592		
2,400.0	2,399.8	2,393.2	2,393.2	8.4	8.2	-44.24	-480.0	-5,389.5	5,406.2	5,389.7	16.54	326.873		
2,500.0	2,499.5	2,500.6	2,500.5	8.7	8.6	-44.43	-480.7	-5,388.1	5,398.7	5,381.5	17.27	312.697		
2,600.0	2,598.7	2,642.9	2,642.8	9.1	9.1	-44.73	-482.6	-5,385.5	5,388.3	5,370.2	18.11	297.509		
2,700.0	2,697.5	2,837.7	2,837.5	9.4	9.7	-45.22	-487.8	-5,379.3	5,374.3	5,355.2	19.14	280.830		
2,800.0	2,795.6	3,023.9	3,023.1	9.8	10.4	-45.86	-496.3	-5,369.6	5,356.1	5,336.0	20.13	266.020		
2,900.0	2,893.1	3,182.4	3,181.0	10.1	11.0	-46.60	-507.2	-5,358.7	5,334.3	5,313.2	21.04	253.482		
3,000.0	2,989.6	3,313.6	3,311.2	10.5	11.5	-47.38	-518.3	-5,348.3	5,309.2	5,287.4	21.86	242.820		
3,100.0	3,085.3	3,410.4	3,407.3	10.9	11.9	-48.15	-527.3	-5,340.1	5,281.8	5,259.2	22.57	233.993		
3,200.0	3,179.8	3,494.2	3,490.3	11.2	12.2	-48.95	-535.8	-5,332.9	5,252.2	5,229.0	23.24	226.020		
3,300.0	3,273.2	3,568.0	3,563.5	11.6	12.5	-49.78	-543.8	-5,326.7	5,220.9	5,197.0	23.87	218.692		
3,387.5	3,353.8	3,651.8	3,646.4	11.9	12.8	-50.65	-553.3	-5,319.6	5,192.1	5,167.6	24.50	211.911		
3,400.0	3,365.2	3,666.7	3,661.1	12.0	12.9	-50.73	-555.1	-5,318.3	5,187.9	5,163.3	24.60	210.867		
3,500.0	3,456.8	3,802.6	3,795.4	12.4	13.4	-51.44	-572.4	-5,305.7	5,153.7	5,128.3	25.47	202.314		
3,600.0	3,548.3	3,876.1	3,867.6	12.8	13.7	-51.84	-583.2	-5,298.4	5,119.6	5,093.5	26.14	195.849		
3,700.0	3,639.8	3,973.1	3,962.8	13.2	14.2	-52.40	-598.8	-5,288.5	5,085.9	5,058.9	26.91	188.997		
3,800.0	3,731.4	4,048.9	4,037.1	13.6	14.5	-52.85	-611.6	-5,280.5	5,052.3	5,024.7	27.61	182.983		
3,900.0	3,822.9	4,112.9	4,099.8	14.0	14.8	-53.23	-622.8	-5,273.9	5,019.5	4,991.2	28.28	177.524		
4,000.0	3,914.4	4,172.9	4,158.6	14.4	15.0	-53.59	-633.3	-5,268.0	4,987.4	4,958.5	28.93	172.399		
4,100.0	4,005.9	4,262.1	4,246.0	14.8	15.4	-54.13	-649.0	-5,259.4	4,956.1	4,926.4	29.71	166.842		
4,200.0	4,097.5	4,341.3	4,323.4	15.2	15.8	-54.62	-663.4	-5,251.4	4,924.9	4,894.5	30.45	161.734		
4,300.0	4,189.0	4,404.2	4,384.9	15.6	16.0	-55.02	-675.4	-5,245.2	4,894.5	4,863.4	31.14	157.176		
4,400.0	4,280.5	4,482.4	4,461.3	16.1	16.4	-55.52	-690.3	-5,237.7	4,864.8	4,832.9	31.90	152.522		
4,500.0	4,372.1	4,556.1	4,533.4	16.5	16.7	-55.99	-703.9	-5,230.8	4,835.7	4,803.0	32.63	148.183		
4,600.0	4,463.6	4,653.8	4,629.1	16.9	17.1	-56.61	-721.3	-5,221.8	4,807.1	4,773.7	33.46	143.660		
4,700.0	4,555.1	4,742.1	4,715.8	17.4	17.5	-57.17	-735.9	-5,213.5	4,778.6	4,744.4	34.25	139.523		
4,800.0	4,646.7	4,800.0	4,772.8	17.8	17.7	-57.53	-745.0	-5,208.4	4,750.9	4,715.9	34.92	136.032		
4,900.0	4,738.2	4,861.9	4,833.8	18.2	18.0	-57.92	-754.3	-5,203.3	4,724.0	4,688.4	35.61	132.663		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,000.0	4,829.7	4,930.0	4,900.9	18.7	18.3	-58.33	-764.2	-5,198.2	4,698.1	4,661.8	36.32	129.366		
5,100.0	4,921.3	5,018.0	4,987.8	19.1	18.6	-58.88	-777.0	-5,191.7	4,672.7	4,635.6	37.09	125.970		
5,200.0	5,012.8	5,097.1	5,065.9	19.5	18.9	-59.37	-788.1	-5,186.0	4,647.8	4,609.9	37.84	122.824		
5,300.0	5,104.3	5,155.0	5,123.0	20.0	19.1	-59.73	-796.4	-5,181.9	4,623.6	4,585.1	38.52	120.040		
5,400.0	5,195.8	5,213.0	5,180.2	20.4	19.4	-60.10	-805.3	-5,178.1	4,600.5	4,561.3	39.20	117.371		
5,500.0	5,287.4	5,276.3	5,242.6	20.9	19.6	-60.51	-815.0	-5,174.2	4,578.3	4,538.4	39.89	114.759		
5,600.0	5,378.9	5,342.2	5,307.7	21.3	19.9	-60.92	-824.8	-5,170.5	4,557.0	4,516.4	40.60	112.240		
5,700.0	5,470.4	5,410.7	5,375.3	21.8	20.1	-61.36	-834.8	-5,167.1	4,536.5	4,495.2	41.31	109.806		
5,800.0	5,562.0	5,485.9	5,449.8	22.2	20.4	-61.83	-845.4	-5,163.7	4,516.8	4,474.7	42.05	107.421		
5,900.0	5,653.5	5,587.9	5,550.8	22.7	20.8	-62.46	-858.1	-5,159.8	4,497.6	4,454.7	42.86	104.927		
6,000.0	5,745.0	5,691.6	5,654.0	23.1	21.1	-63.07	-868.1	-5,156.4	4,478.5	4,434.8	43.67	102.547		
6,100.0	5,836.6	5,776.6	5,738.6	23.6	21.4	-63.57	-875.8	-5,153.7	4,459.6	4,415.2	44.42	100.394		
6,200.0	5,928.1	5,850.9	5,812.5	24.0	21.7	-64.01	-883.3	-5,151.2	4,441.4	4,396.3	45.14	98.391		
6,278.6	6,000.0	5,907.9	5,869.2	24.4	21.9	-64.36	-889.2	-5,149.4	4,427.6	4,381.9	45.70	96.880		
6,290.0	6,010.4	5,917.3	5,878.5	24.4	21.9	-66.17	-890.1	-5,149.1	4,425.7	4,379.9	45.79	96.659		
6,300.0	6,019.5	5,925.5	5,886.7	24.5	21.9	-67.86	-891.0	-5,148.9	4,424.1	4,378.2	45.86	96.467		
6,350.0	6,065.8	5,967.5	5,928.5	24.7	22.1	-78.26	-895.0	-5,147.8	4,418.8	4,372.6	46.23	95.584		
6,383.2	6,097.0	5,996.0	5,956.9	24.9	22.2	-87.18	-897.5	-5,147.1	4,417.8	4,371.4	46.47	95.071 CC, ES		
6,400.0	6,113.0	6,020.0	5,980.8	24.9	22.3	-92.38	-899.6	-5,146.6	4,418.1	4,371.5	46.62	94.771		
6,450.0	6,160.7	6,103.4	6,064.0	25.1	22.5	-109.78	-905.0	-5,145.1	4,421.5	4,374.5	47.08	93.909		
6,500.0	6,208.5	6,151.7	6,112.2	25.3	22.7	-127.68	-907.4	-5,144.3	4,429.2	4,381.8	47.42	93.401		
6,550.0	6,255.8	6,201.8	6,162.3	25.4	22.9	-143.34	-909.7	-5,143.5	4,441.2	4,393.4	47.75	93.015		
6,600.0	6,302.5	6,273.5	6,233.9	25.6	23.1	-155.72	-912.5	-5,142.4	4,457.2	4,409.1	48.12	92.633		
6,650.0	6,347.9	6,327.7	6,288.0	25.7	23.3	-165.18	-914.4	-5,141.4	4,477.0	4,428.6	48.42	92.467 SF		
6,700.0	6,391.6	6,370.5	6,330.8	25.9	23.4	-172.60	-915.9	-5,140.6	4,500.7	4,452.1	48.67	92.478		
6,750.0	6,433.4	6,415.5	6,375.7	26.0	23.6	-178.76	-917.6	-5,139.7	4,528.0	4,479.1	48.91	92.583		
6,800.0	6,472.8	6,467.6	6,427.8	26.1	23.7	175.77	-919.7	-5,138.5	4,558.6	4,509.5	49.15	92.743		
6,850.0	6,509.4	6,516.5	6,476.7	26.2	23.9	170.61	-921.7	-5,137.2	4,592.2	4,542.9	49.37	93.009		
6,900.0	6,543.0	6,537.9	6,498.0	26.3	24.0	165.34	-922.6	-5,136.6	4,628.7	4,579.2	49.50	93.511		
6,950.0	6,573.2	6,562.8	6,522.9	26.4	24.1	159.64	-923.7	-5,136.0	4,667.7	4,618.0	49.62	94.068		
7,000.0	6,599.8	6,584.9	6,544.9	26.5	24.1	153.13	-924.6	-5,135.4	4,708.8	4,659.1	49.72	94.707		
7,050.0	6,622.5	6,604.4	6,564.4	26.6	24.2	145.43	-925.5	-5,135.0	4,751.7	4,701.9	49.80	95.417		
7,100.0	6,641.1	6,622.6	6,582.6	26.7	24.3	136.17	-926.2	-5,134.6	4,796.1	4,746.2	49.87	96.179		
7,150.0	6,655.4	6,636.8	6,596.8	26.8	24.3	125.13	-926.8	-5,134.3	4,841.5	4,791.6	49.91	97.000		
7,200.0	6,665.4	6,646.9	6,606.9	26.9	24.3	112.56	-927.2	-5,134.0	4,887.5	4,837.5	49.94	97.869		
7,250.0	6,670.8	6,652.9	6,612.9	27.0	24.4	99.40	-927.5	-5,133.9	4,933.7	4,883.8	49.95	98.776		
7,285.7	6,672.0	6,654.7	6,614.7	27.1	24.4	90.37	-927.6	-5,133.9	4,966.6	4,916.7	49.94	99.442		
7,300.0	6,672.0	6,655.0	6,614.9	27.1	24.4	90.38	-927.6	-5,133.9	4,979.8	4,929.8	49.94	99.712		
7,400.0	6,672.0	6,656.9	6,616.8	27.3	24.4	90.44	-927.7	-5,133.8	5,072.0	5,022.0	49.93	101.582		
7,500.0	6,672.0	6,658.7	6,618.7	27.6	24.4	90.49	-927.7	-5,133.8	5,164.4	5,114.5	49.93	103.443		
7,600.0	6,672.0	6,660.6	6,620.6	28.0	24.4	90.55	-927.8	-5,133.8	5,257.2	5,207.2	49.93	105.294		
7,700.0	6,672.0	6,662.4	6,622.4	28.3	24.4	90.60	-927.9	-5,133.7	5,350.2	5,300.2	49.94	107.135		
7,800.0	6,672.0	6,664.3	6,624.2	28.8	24.4	90.65	-928.0	-5,133.7	5,443.4	5,393.5	49.95	108.968		
7,900.0	6,672.0	6,666.1	6,626.1	29.3	24.4	90.71	-928.0	-5,133.6	5,536.9	5,486.9	49.98	110.793		
8,000.0	6,672.0	6,667.9	6,627.9	29.8	24.4	90.76	-928.1	-5,133.6	5,630.6	5,580.6	50.00	112.609		
8,100.0	6,672.0	6,669.7	6,629.7	30.4	24.4	90.81	-928.2	-5,133.6	5,724.6	5,674.5	50.03	114.417		
8,200.0	6,672.0	6,671.5	6,631.5	31.0	24.4	90.87	-928.2	-5,133.5	5,818.7	5,768.6	50.07	116.217		
8,300.0	6,672.0	6,673.3	6,633.3	31.7	24.4	90.92	-928.3	-5,133.5	5,913.0	5,862.9	50.11	118.010		
8,400.0	6,672.0	6,675.1	6,635.0	32.4	24.4	90.97	-928.4	-5,133.5	6,007.5	5,957.4	50.15	119.796		
8,500.0	6,672.0	6,676.9	6,636.8	33.1	24.4	91.02	-928.5	-5,133.4	6,102.2	6,052.0	50.19	121.575		
8,600.0	6,672.0	6,678.6	6,638.5	33.9	24.4	91.08	-928.5	-5,133.4	6,197.1	6,146.8	50.24	123.347		
8,700.0	6,672.0	6,680.3	6,640.3	34.7	24.5	91.13	-928.6	-5,133.4	6,292.1	6,241.8	50.29	125.113		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													B Section 12 - Trebor B12-05 - Wellbore #1 - As Drilled		Offset Site Error:		0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWSG															Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance										
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning				
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)						
8,800.0	6,672.0	6,682.1	6,642.0	35.5	24.5	91.18	-928.7	-5,133.3	6,387.3	6,336.9	50.34	126.872					
8,900.0	6,672.0	6,683.8	6,643.7	36.3	24.5	91.23	-928.7	-5,133.3	6,482.6	6,432.2	50.40	128.625					
9,000.0	6,672.0	6,685.5	6,645.4	37.2	24.5	91.28	-928.8	-5,133.2	6,578.1	6,527.6	50.46	130.373					
9,100.0	6,672.0	6,687.2	6,647.1	38.1	24.5	91.33	-928.9	-5,133.2	6,673.7	6,623.2	50.51	132.114					
9,200.0	6,672.0	6,688.9	6,648.8	39.0	24.5	91.38	-928.9	-5,133.2	6,769.4	6,718.8	50.57	133.849					
9,300.0	6,672.0	6,690.5	6,650.5	39.9	24.5	91.43	-929.0	-5,133.1	6,865.2	6,814.6	50.64	135.579					
9,400.0	6,672.0	6,692.2	6,652.1	40.8	24.5	91.48	-929.1	-5,133.1	6,961.2	6,910.5	50.70	137.304					
9,500.0	6,672.0	6,693.9	6,653.8	41.8	24.5	91.53	-929.1	-5,133.1	7,057.3	7,006.5	50.76	139.023					
9,600.0	6,672.0	6,695.5	6,655.4	42.7	24.5	91.58	-929.2	-5,133.0	7,153.5	7,102.7	50.83	140.737					
9,700.0	6,672.0	6,697.1	6,657.1	43.7	24.5	91.62	-929.3	-5,133.0	7,249.8	7,198.9	50.90	142.445					
9,800.0	6,672.0	6,698.8	6,658.7	44.7	24.5	91.67	-929.3	-5,133.0	7,346.2	7,295.2	50.96	144.149					
9,900.0	6,672.0	6,700.4	6,660.4	45.7	24.5	91.72	-929.4	-5,133.0	7,442.7	7,391.6	51.03	145.847					
10,000.0	6,672.0	6,702.3	6,662.2	46.7	24.5	91.78	-929.5	-5,132.9	7,539.3	7,488.2	51.10	147.538					
10,100.0	6,672.0	6,704.2	6,664.1	47.7	24.5	91.83	-929.5	-5,132.9	7,635.9	7,584.8	51.17	149.225					
10,200.0	6,672.0	6,706.0	6,666.0	48.8	24.5	91.89	-929.6	-5,132.8	7,732.7	7,681.5	51.24	150.906					
10,300.0	6,672.0	6,707.9	6,667.8	49.8	24.5	91.95	-929.7	-5,132.8	7,829.5	7,778.2	51.31	152.583					
10,400.0	6,672.0	6,709.8	6,669.7	50.9	24.5	92.00	-929.7	-5,132.8	7,926.5	7,875.1	51.39	154.255					
10,500.0	6,672.0	6,711.6	6,671.6	51.9	24.6	92.06	-929.8	-5,132.7	8,023.5	7,972.0	51.46	155.921					
10,600.0	6,672.0	6,713.5	6,673.4	53.0	24.6	92.11	-929.9	-5,132.7	8,120.5	8,069.0	51.53	157.584					
10,700.0	6,672.0	6,715.4	6,675.3	54.1	24.6	92.17	-930.0	-5,132.7	8,217.7	8,166.1	51.61	159.241					
10,800.0	6,672.0	6,717.2	6,677.2	55.2	24.6	92.22	-930.0	-5,132.6	8,314.9	8,263.2	51.68	160.894					
10,900.0	6,672.0	6,719.1	6,679.0	56.3	24.6	92.28	-930.1	-5,132.6	8,412.2	8,360.4	51.75	162.542					
11,000.0	6,672.0	6,721.0	6,680.9	57.4	24.6	92.33	-930.2	-5,132.6	8,509.5	8,457.7	51.83	164.185					
11,100.0	6,672.0	6,722.8	6,682.8	58.5	24.6	92.39	-930.3	-5,132.5	8,606.9	8,555.0	51.90	165.823					
11,200.0	6,672.0	6,724.7	6,684.6	59.6	24.6	92.45	-930.3	-5,132.5	8,704.4	8,652.4	51.98	167.457					
11,300.0	6,672.0	6,726.6	6,686.5	60.7	24.6	92.50	-930.4	-5,132.4	8,801.9	8,749.9	52.06	169.086					
11,400.0	6,672.0	6,728.4	6,688.3	61.8	24.6	92.56	-930.5	-5,132.4	8,899.5	8,847.4	52.13	170.711					
11,500.0	6,672.0	6,730.3	6,690.2	62.9	24.6	92.61	-930.5	-5,132.4	8,997.1	8,944.9	52.21	172.331					
11,600.0	6,672.0	6,732.2	6,692.1	64.1	24.6	92.67	-930.6	-5,132.3	9,094.8	9,042.6	52.29	173.946					
11,700.0	6,672.0	6,734.0	6,693.9	65.2	24.6	92.73	-930.7	-5,132.3	9,192.6	9,140.2	52.36	175.556					
11,800.0	6,672.0	6,735.9	6,695.8	66.3	24.6	92.78	-930.8	-5,132.3	9,290.4	9,237.9	52.44	177.162					
11,900.0	6,672.0	6,737.8	6,697.7	67.5	24.6	92.84	-930.8	-5,132.2	9,388.2	9,335.7	52.52	178.764					
12,000.0	6,672.0	6,739.6	6,699.5	68.6	24.6	92.89	-930.9	-5,132.2	9,486.1	9,433.5	52.60	180.360					
12,100.0	6,672.0	6,741.5	6,701.4	69.8	24.7	92.95	-931.0	-5,132.2	9,584.0	9,531.3	52.67	181.952					
12,200.0	6,672.0	6,743.4	6,703.2	70.9	24.7	93.01	-931.1	-5,132.1	9,682.0	9,629.2	52.75	183.539					
12,300.0	6,672.0	6,745.2	6,705.1	72.1	24.7	93.06	-931.1	-5,132.1	9,780.0	9,727.2	52.83	185.121					
12,400.0	6,672.0	6,747.1	6,707.0	73.2	24.7	93.12	-931.2	-5,132.0	9,878.1	9,825.1	52.91	186.699					
12,500.0	6,672.0	6,749.0	6,708.8	74.4	24.7	93.18	-931.3	-5,132.0	9,976.1	9,923.2	52.99	188.272					



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-96.42	-457.9	-4,071.5	4,097.7					
100.0	100.0	37.3	37.3	0.1	0.1	-96.42	-457.9	-4,071.4	4,097.1	4,096.9	0.19	N/A		
200.0	200.0	140.7	140.7	0.5	0.3	-96.42	-458.0	-4,071.0	4,096.7	4,095.9	0.80	5,111.233		
257.0	257.0	186.0	186.0	0.7	0.5	-96.42	-458.2	-4,070.9	4,096.6	4,095.5	1.16	3,518.748		
300.0	300.0	225.5	225.5	0.8	0.6	-96.42	-458.3	-4,070.9	4,096.7	4,095.2	1.46	2,813.492		
400.0	400.0	324.9	324.9	1.2	1.0	-96.43	-458.7	-4,071.0	4,096.7	4,094.6	2.16	1,895.283		
500.0	500.0	420.3	420.3	1.6	1.3	-96.43	-459.0	-4,071.1	4,096.9	4,094.0	2.85	1,436.090		
600.0	600.0	509.9	509.9	1.9	1.6	-96.44	-459.4	-4,071.4	4,097.2	4,093.7	3.52	1,162.615		
700.0	700.0	607.0	607.0	2.3	1.9	-96.44	-459.7	-4,071.8	4,097.7	4,093.5	4.22	970.588		
800.0	800.0	701.5	701.5	2.6	2.3	-96.44	-459.9	-4,072.4	4,098.3	4,093.4	4.91	834.566		
900.0	900.0	808.0	808.0	3.0	2.7	-96.44	-459.9	-4,073.0	4,098.9	4,093.3	5.64	726.516		
1,000.0	1,000.0	899.8	899.8	3.4	3.0	-96.44	-459.7	-4,073.6	4,099.6	4,093.2	6.32	648.502		
1,100.0	1,100.0	1,004.3	1,004.3	3.7	3.3	-96.44	-459.5	-4,074.3	4,100.2	4,093.2	7.05	581.941		
1,200.0	1,200.0	1,116.1	1,116.1	4.1	3.7	-96.43	-459.1	-4,074.9	4,100.7	4,092.9	7.80	526.034		
1,300.0	1,300.0	1,215.1	1,215.1	4.4	4.1	-96.42	-458.4	-4,075.3	4,101.0	4,092.5	8.50	482.455		
1,400.0	1,400.0	1,317.9	1,317.9	4.8	4.4	-96.40	-457.2	-4,075.7	4,101.3	4,092.1	9.22	444.915		
1,500.0	1,500.0	1,431.7	1,431.7	5.1	4.8	-96.38	-455.6	-4,076.0	4,101.4	4,091.4	9.97	411.178		
1,600.0	1,600.0	1,549.4	1,549.3	5.5	5.2	-96.36	-454.2	-4,076.0	4,101.2	4,090.5	10.74	381.734		
1,700.0	1,700.0	1,696.4	1,696.4	5.9	5.8	-96.34	-452.4	-4,074.5	4,100.1	4,088.5	11.61	353.049		
1,800.0	1,800.0	1,810.5	1,810.4	6.2	6.2	-96.33	-451.4	-4,072.6	4,098.3	4,086.0	12.37	331.360		
1,900.0	1,900.0	1,933.8	1,933.7	6.6	6.6	-96.33	-451.3	-4,069.7	4,096.0	4,082.8	13.15	311.373		
2,000.0	2,000.0	2,032.6	2,032.4	6.9	6.9	-96.34	-451.6	-4,067.1	4,093.4	4,079.5	13.86	295.395		
2,100.0	2,100.0	2,128.9	2,128.7	7.3	7.3	-96.35	-452.6	-4,064.7	4,091.0	4,076.4	14.55	281.129		
2,200.0	2,200.0	2,245.6	2,245.3	7.7	7.7	-96.38	-454.4	-4,061.3	4,088.3	4,072.9	15.32	266.900		
2,300.0	2,300.0	2,333.1	2,332.7	8.0	8.0	-45.48	-455.8	-4,058.7	4,084.3	4,068.3	15.98	255.593		
2,400.0	2,399.8	2,407.0	2,406.7	8.4	8.2	-45.62	-456.7	-4,056.9	4,078.4	4,061.8	16.59	245.815		
2,500.0	2,499.5	2,487.0	2,486.7	8.7	8.5	-45.81	-457.5	-4,055.5	4,070.6	4,053.4	17.22	236.352		
2,600.0	2,598.7	2,571.0	2,570.7	9.1	8.8	-46.07	-458.6	-4,054.3	4,060.9	4,043.0	17.87	227.282		
2,700.0	2,697.5	2,671.5	2,671.1	9.4	9.2	-46.43	-459.9	-4,053.1	4,049.0	4,030.4	18.57	218.065		
2,800.0	2,795.6	2,770.7	2,770.3	9.8	9.5	-46.86	-461.0	-4,051.8	4,034.6	4,015.3	19.26	209.443		
2,900.0	2,893.1	2,874.4	2,874.0	10.1	9.9	-47.37	-462.4	-4,050.4	4,017.9	3,997.9	19.97	201.153		
3,000.0	2,989.6	2,957.7	2,957.3	10.5	10.2	-47.91	-463.6	-4,049.2	3,998.9	3,978.3	20.62	193.978		
3,100.0	3,085.3	3,039.2	3,038.7	10.9	10.5	-48.50	-464.7	-4,048.5	3,978.2	3,957.0	21.25	187.203		
3,200.0	3,179.8	3,138.4	3,137.9	11.2	10.8	-49.23	-465.7	-4,047.8	3,955.5	3,933.6	21.95	180.221		
3,300.0	3,273.2	3,249.6	3,249.1	11.6	11.2	-50.10	-466.9	-4,046.4	3,930.4	3,907.7	22.69	173.235		
3,387.5	3,353.8	3,342.2	3,341.7	11.9	11.5	-50.93	-468.0	-4,045.0	3,906.6	3,883.2	23.32	167.508		
3,400.0	3,365.2	3,356.5	3,356.0	12.0	11.6	-51.00	-468.2	-4,044.8	3,903.0	3,879.6	23.42	166.678		
3,500.0	3,456.8	3,457.5	3,457.0	12.4	11.9	-51.51	-469.4	-4,042.8	3,874.7	3,850.6	24.13	160.597		
3,600.0	3,548.3	3,551.5	3,551.0	12.8	12.2	-51.99	-470.6	-4,040.8	3,846.5	3,821.7	24.82	154.978		
3,700.0	3,639.8	3,644.5	3,643.9	13.2	12.6	-52.48	-471.9	-4,038.7	3,818.5	3,793.0	25.52	149.656		
3,800.0	3,731.4	3,726.2	3,725.6	13.6	12.9	-52.91	-473.2	-4,036.8	3,790.8	3,764.6	26.18	144.798		
3,900.0	3,822.9	3,793.7	3,793.1	14.0	13.1	-53.27	-474.2	-4,035.7	3,763.8	3,737.0	26.80	140.419		
4,000.0	3,914.4	3,870.3	3,869.7	14.4	13.4	-53.68	-475.3	-4,034.7	3,737.6	3,710.1	27.46	136.096		
4,100.0	4,005.9	3,950.4	3,949.7	14.8	13.6	-54.11	-476.1	-4,034.1	3,711.9	3,683.8	28.14	131.922		
4,200.0	4,097.5	4,031.6	4,030.9	15.2	13.9	-54.55	-476.7	-4,033.8	3,686.8	3,658.0	28.82	127.927		
4,300.0	4,189.0	4,112.1	4,111.5	15.6	14.2	-54.98	-477.1	-4,033.7	3,662.2	3,632.7	29.50	124.127		
4,400.0	4,280.5	4,191.8	4,191.1	16.1	14.5	-55.41	-477.4	-4,033.9	3,638.2	3,608.0	30.19	120.514		
4,500.0	4,372.1	4,280.0	4,279.3	16.5	14.8	-55.89	-477.8	-4,034.3	3,614.7	3,583.8	30.91	116.959		
4,600.0	4,463.6	4,369.5	4,368.9	16.9	15.1	-56.38	-478.1	-4,034.8	3,591.5	3,559.9	31.63	113.548		
4,700.0	4,555.1	4,457.2	4,456.6	17.4	15.4	-56.87	-478.4	-4,035.4	3,568.7	3,536.4	32.35	110.309		
4,800.0	4,646.7	4,536.3	4,535.6	17.8	15.7	-57.31	-478.7	-4,036.0	3,546.4	3,513.4	33.05	107.305		
4,900.0	4,738.2	4,621.9	4,621.2	18.2	16.0	-57.80	-479.5	-4,037.0	3,524.9	3,491.1	33.77	104.371		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,000.0	4,829.7	4,801.5	4,800.8	18.7	16.6	-58.87	-481.6	-4,036.4	3,502.3	3,467.5	34.79	100.676		
5,100.0	4,921.3	4,880.2	4,879.5	19.1	16.9	-59.33	-481.5	-4,035.6	3,479.2	3,443.7	35.50	98.018		
5,200.0	5,012.8	4,944.3	4,943.7	19.5	17.1	-59.70	-480.9	-4,035.4	3,456.9	3,420.7	36.16	95.594		
5,300.0	5,104.3	5,004.6	5,003.9	20.0	17.3	-60.05	-480.4	-4,035.9	3,435.8	3,399.0	36.82	93.316		
5,400.0	5,195.8	5,080.4	5,079.7	20.4	17.6	-60.49	-480.1	-4,036.9	3,415.6	3,378.1	37.52	91.023		
5,500.0	5,287.4	5,154.7	5,154.0	20.9	17.8	-60.93	-480.0	-4,038.1	3,396.2	3,358.0	38.23	88.841		
5,600.0	5,378.9	5,246.1	5,245.3	21.3	18.2	-61.46	-479.6	-4,040.2	3,377.5	3,338.5	38.99	86.633		
5,700.0	5,470.4	5,403.7	5,402.9	21.8	18.7	-62.38	-476.8	-4,043.0	3,358.4	3,318.5	39.95	84.066		
5,800.0	5,562.0	5,520.7	5,519.8	22.2	19.1	-63.07	-474.3	-4,043.5	3,338.2	3,297.4	40.79	81.846		
5,900.0	5,653.5	5,639.0	5,638.1	22.7	19.5	-63.80	-472.5	-4,042.3	3,317.3	3,275.7	41.63	79.691		
6,000.0	5,745.0	5,716.0	5,715.1	23.1	19.8	-64.29	-472.1	-4,041.2	3,296.8	3,254.5	42.35	77.838		
6,100.0	5,836.6	5,784.2	5,783.3	23.6	20.0	-64.74	-472.2	-4,040.5	3,277.3	3,234.2	43.06	76.111		
6,200.0	5,928.1	5,864.1	5,863.3	24.0	20.3	-65.27	-472.7	-4,040.0	3,258.7	3,214.9	43.80	74.401		
6,278.6	6,000.0	5,930.0	5,929.2	24.4	20.5	-65.71	-473.1	-4,039.8	3,244.5	3,200.1	44.39	73.091		
6,290.0	6,010.4	5,939.6	5,938.7	24.4	20.6	-67.54	-473.2	-4,039.8	3,242.5	3,198.0	44.48	72.904		
6,300.0	6,019.5	5,948.0	5,947.2	24.5	20.6	-69.23	-473.2	-4,039.7	3,240.8	3,196.3	44.55	72.744		
6,350.0	6,065.8	5,990.7	5,989.8	24.7	20.8	-79.64	-473.4	-4,039.7	3,235.3	3,190.4	44.92	72.016		
6,386.9	6,100.6	6,024.9	6,024.0	24.9	20.9	-89.69	-473.5	-4,039.7	3,234.1	3,188.9	45.20	71.552 CC, ES		
6,400.0	6,113.0	6,037.4	6,036.5	24.9	20.9	-93.74	-473.5	-4,039.7	3,234.2	3,188.9	45.30	71.399		
6,450.0	6,160.7	6,085.5	6,084.6	25.1	21.1	-111.01	-473.7	-4,039.8	3,237.6	3,191.9	45.66	70.905		
6,500.0	6,208.5	6,131.5	6,130.6	25.3	21.2	-128.94	-473.8	-4,039.8	3,245.3	3,199.3	46.00	70.550		
6,550.0	6,255.8	6,176.1	6,175.2	25.4	21.4	-144.63	-474.0	-4,039.8	3,257.4	3,211.1	46.32	70.326		
6,600.0	6,302.5	6,219.8	6,219.0	25.6	21.6	-156.99	-474.2	-4,039.9	3,273.6	3,227.0	46.61	70.228		
6,650.0	6,347.9	6,340.3	6,258.9	25.7	22.0	-166.49	-474.4	-4,039.9	3,293.9	3,246.7	47.16	69.842 SF		
6,700.0	6,391.6	6,303.4	6,302.5	25.9	21.8	-174.00	-474.8	-4,040.0	3,317.9	3,270.8	47.14	70.384		
6,750.0	6,433.4	6,345.0	6,344.1	26.0	22.0	179.76	-475.1	-4,040.1	3,345.6	3,298.2	47.38	70.617		
6,800.0	6,472.8	6,384.2	6,383.3	26.1	22.1	174.20	-475.4	-4,040.2	3,376.6	3,329.0	47.59	70.951		
6,850.0	6,509.4	6,420.7	6,419.8	26.2	22.3	168.92	-475.7	-4,040.3	3,410.6	3,362.8	47.78	71.383		
6,900.0	6,543.0	6,454.1	6,453.2	26.3	22.4	163.54	-476.0	-4,040.3	3,447.3	3,399.3	47.94	71.904		
6,950.0	6,573.2	6,484.1	6,483.3	26.4	22.5	157.74	-476.2	-4,040.4	3,486.4	3,438.3	48.08	72.509		
7,000.0	6,599.8	6,510.5	6,509.7	26.5	22.6	151.14	-476.4	-4,040.5	3,527.6	3,479.4	48.20	73.190		
7,050.0	6,622.5	6,533.1	6,532.2	26.6	22.6	143.39	-476.6	-4,040.5	3,570.6	3,522.3	48.29	73.940		
7,100.0	6,641.1	6,551.5	6,550.6	26.7	22.7	134.12	-476.8	-4,040.5	3,614.9	3,566.5	48.36	74.751		
7,150.0	6,655.4	6,565.7	6,564.8	26.8	22.8	123.17	-476.9	-4,040.6	3,660.1	3,611.7	48.41	75.614		
7,200.0	6,665.4	6,575.5	6,574.7	26.9	22.8	110.84	-477.0	-4,040.6	3,706.0	3,657.6	48.43	76.520		
7,250.0	6,670.8	6,580.9	6,580.0	27.0	22.8	98.01	-477.0	-4,040.6	3,752.1	3,703.6	48.44	77.461		
7,285.7	6,672.0	6,582.0	6,581.1	27.1	22.8	89.25	-477.0	-4,040.6	3,784.9	3,736.4	48.43	78.149		
7,300.0	6,672.0	6,581.9	6,581.1	27.1	22.8	89.25	-477.0	-4,040.6	3,798.0	3,749.6	48.43	78.427		
7,400.0	6,672.0	6,581.7	6,580.8	27.3	22.8	89.24	-477.0	-4,040.6	3,889.8	3,841.4	48.41	80.359		
7,500.0	6,672.0	6,581.5	6,580.6	27.6	22.8	89.23	-477.0	-4,040.6	3,982.1	3,933.7	48.39	82.287		
7,600.0	6,672.0	6,581.3	6,580.4	28.0	22.8	89.22	-477.0	-4,040.6	4,074.7	4,026.4	48.39	84.211		
7,700.0	6,672.0	6,581.0	6,580.2	28.3	22.8	89.21	-477.0	-4,040.6	4,167.7	4,119.3	48.39	86.131		
7,800.0	6,672.0	6,580.8	6,579.9	28.8	22.8	89.20	-477.0	-4,040.6	4,261.0	4,212.6	48.40	88.047		
7,900.0	6,672.0	6,580.6	6,579.7	29.3	22.8	89.20	-477.0	-4,040.6	4,354.6	4,306.2	48.41	89.959		
8,000.0	6,672.0	6,580.4	6,579.5	29.8	22.8	89.19	-477.0	-4,040.6	4,448.5	4,400.1	48.42	91.867		
8,100.0	6,672.0	6,580.1	6,579.3	30.4	22.8	89.18	-477.0	-4,040.6	4,542.6	4,494.2	48.44	93.772		
8,200.0	6,672.0	6,579.9	6,579.0	31.0	22.8	89.17	-477.0	-4,040.6	4,637.0	4,588.6	48.47	95.673		
8,300.0	6,672.0	6,579.7	6,578.8	31.7	22.8	89.16	-477.0	-4,040.6	4,731.7	4,683.2	48.49	97.570		
8,400.0	6,672.0	6,579.5	6,578.6	32.4	22.8	89.15	-477.0	-4,040.6	4,826.5	4,778.0	48.52	99.464		
8,500.0	6,672.0	6,579.3	6,578.4	33.1	22.8	89.14	-477.0	-4,040.6	4,921.6	4,873.0	48.56	101.355		
8,600.0	6,672.0	6,579.0	6,578.2	33.9	22.8	89.14	-477.0	-4,040.6	5,016.8	4,968.2	48.59	103.242		
8,700.0	6,672.0	6,578.8	6,577.9	34.7	22.8	89.13	-477.0	-4,040.6	5,112.2	5,063.6	48.63	105.125		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
8,800.0	6,672.0	6,578.6	6,577.7	35.5	22.8	89.12	-477.0	-4,040.6	5,207.8	5,159.2	48.67	107.006		
8,900.0	6,672.0	6,578.4	6,577.5	36.3	22.8	89.11	-477.0	-4,040.6	5,303.6	5,254.9	48.71	108.883		
9,000.0	6,672.0	6,578.1	6,577.3	37.2	22.8	89.10	-477.0	-4,040.6	5,399.5	5,350.8	48.75	110.756		
9,100.0	6,672.0	6,577.9	6,577.0	38.1	22.8	89.09	-477.0	-4,040.6	5,495.6	5,446.8	48.79	112.626		
9,200.0	6,672.0	6,577.7	6,576.8	39.0	22.8	89.08	-477.0	-4,040.6	5,591.8	5,542.9	48.84	114.493		
9,300.0	6,672.0	6,577.5	6,576.6	39.9	22.8	89.07	-477.0	-4,040.6	5,688.1	5,639.2	48.89	116.357		
9,400.0	6,672.0	6,577.2	6,576.4	40.8	22.8	89.07	-477.0	-4,040.6	5,784.6	5,735.7	48.93	118.217		
9,500.0	6,672.0	6,577.0	6,576.1	41.8	22.8	89.06	-477.0	-4,040.6	5,881.2	5,832.2	48.98	120.073		
9,600.0	6,672.0	6,576.8	6,575.9	42.7	22.8	89.05	-477.0	-4,040.6	5,977.9	5,928.9	49.03	121.927		
9,700.0	6,672.0	6,576.6	6,575.7	43.7	22.8	89.04	-477.0	-4,040.6	6,074.7	6,025.6	49.08	123.776		
9,800.0	6,672.0	6,576.3	6,575.5	44.7	22.8	89.03	-477.0	-4,040.6	6,171.6	6,122.5	49.13	125.623		
9,900.0	6,672.0	6,576.1	6,575.2	45.7	22.8	89.02	-477.0	-4,040.6	6,268.6	6,219.4	49.18	127.466		
10,000.0	6,672.0	6,575.9	6,575.0	46.7	22.8	89.01	-477.0	-4,040.6	6,365.7	6,316.5	49.23	129.305		
10,100.0	6,672.0	6,575.7	6,574.8	47.7	22.8	89.00	-477.0	-4,040.6	6,462.9	6,413.6	49.28	131.141		
10,200.0	6,672.0	6,575.4	6,574.6	48.8	22.8	88.99	-476.9	-4,040.6	6,560.2	6,510.9	49.33	132.973		
10,300.0	6,672.0	6,575.2	6,574.3	49.8	22.8	88.99	-476.9	-4,040.6	6,657.6	6,608.2	49.39	134.801		
10,400.0	6,672.0	6,575.0	6,574.1	50.9	22.8	88.98	-476.9	-4,040.6	6,755.0	6,705.6	49.44	136.626		
10,500.0	6,672.0	6,574.8	6,573.9	51.9	22.8	88.97	-476.9	-4,040.6	6,852.5	6,803.0	49.50	138.447		
10,600.0	6,672.0	6,574.5	6,573.7	53.0	22.8	88.96	-476.9	-4,040.6	6,950.1	6,900.6	49.55	140.265		
10,700.0	6,672.0	6,574.3	6,573.4	54.1	22.8	88.95	-476.9	-4,040.6	7,047.8	6,998.2	49.60	142.078		
10,800.0	6,672.0	6,574.1	6,573.2	55.2	22.8	88.94	-476.9	-4,040.6	7,145.5	7,095.9	49.66	143.888		
10,900.0	6,672.0	6,573.9	6,573.0	56.3	22.8	88.93	-476.9	-4,040.6	7,243.3	7,193.6	49.72	145.694		
11,000.0	6,672.0	6,573.6	6,572.8	57.4	22.8	88.92	-476.9	-4,040.6	7,341.2	7,291.4	49.77	147.496		
11,100.0	6,672.0	6,573.4	6,572.5	58.5	22.8	88.91	-476.9	-4,040.6	7,439.1	7,389.2	49.83	149.293		
11,200.0	6,672.0	6,573.2	6,572.3	59.6	22.8	88.91	-476.9	-4,040.6	7,537.0	7,487.1	49.89	151.087		
11,300.0	6,672.0	6,573.0	6,572.1	60.7	22.8	88.90	-476.9	-4,040.6	7,635.1	7,585.1	49.94	152.877		
11,400.0	6,672.0	6,572.7	6,571.9	61.8	22.8	88.89	-476.9	-4,040.6	7,733.1	7,683.1	50.00	154.662		
11,500.0	6,672.0	6,572.5	6,571.6	62.9	22.8	88.88	-476.9	-4,040.6	7,831.2	7,781.2	50.06	156.444		
11,600.0	6,672.0	6,572.3	6,571.4	64.1	22.8	88.87	-476.9	-4,040.6	7,929.4	7,879.3	50.12	158.221		
11,700.0	6,672.0	6,572.1	6,571.2	65.2	22.8	88.86	-476.9	-4,040.6	8,027.6	7,977.5	50.17	159.994		
11,800.0	6,672.0	6,571.8	6,571.0	66.3	22.8	88.85	-476.9	-4,040.6	8,125.9	8,075.7	50.23	161.762		
11,900.0	6,672.0	6,571.6	6,570.7	67.5	22.8	88.84	-476.9	-4,040.6	8,224.2	8,173.9	50.29	163.526		
12,000.0	6,672.0	6,571.4	6,570.5	68.6	22.8	88.83	-476.9	-4,040.6	8,322.6	8,272.2	50.35	165.286		
12,100.0	6,672.0	6,571.1	6,570.3	69.8	22.8	88.82	-476.9	-4,040.6	8,420.9	8,370.5	50.41	167.041		
12,200.0	6,672.0	6,570.9	6,570.0	70.9	22.8	88.81	-476.9	-4,040.6	8,519.4	8,468.9	50.47	168.792		
12,300.0	6,672.0	6,570.7	6,569.8	72.1	22.8	88.81	-476.9	-4,040.6	8,617.8	8,567.3	50.53	170.538		
12,400.0	6,672.0	6,570.5	6,569.6	73.2	22.8	88.80	-476.9	-4,040.6	8,716.3	8,665.7	50.59	172.279		
12,500.0	6,672.0	6,570.2	6,569.4	74.4	22.8	88.79	-476.9	-4,040.6	8,814.9	8,764.2	50.66	174.016		
12,600.0	6,672.0	6,570.0	6,569.1	75.5	22.8	88.78	-476.9	-4,040.6	8,913.4	8,862.7	50.72	175.748		
12,700.0	6,672.0	6,569.8	6,568.9	76.7	22.8	88.77	-476.9	-4,040.6	9,012.0	8,961.3	50.78	177.475		
12,800.0	6,672.0	6,569.6	6,568.7	77.9	22.8	88.76	-476.9	-4,040.6	9,110.7	9,059.8	50.84	179.198		
12,900.0	6,672.0	6,569.3	6,568.5	79.0	22.8	88.75	-476.9	-4,040.6	9,209.3	9,158.4	50.90	180.915		
13,000.0	6,672.0	6,569.1	6,568.2	80.2	22.8	88.74	-476.9	-4,040.6	9,308.0	9,257.1	50.97	182.628		
13,100.0	6,672.0	6,568.9	6,568.0	81.4	22.8	88.73	-476.9	-4,040.6	9,406.8	9,355.7	51.03	184.336		
13,200.0	6,672.0	6,568.7	6,567.8	82.6	22.8	88.72	-476.9	-4,040.6	9,505.5	9,454.4	51.09	186.038		
13,300.0	6,672.0	6,568.4	6,567.6	83.7	22.8	88.71	-476.9	-4,040.6	9,604.3	9,553.1	51.16	187.736		
13,400.0	6,672.0	6,568.2	6,567.3	84.9	22.8	88.70	-476.9	-4,040.6	9,703.1	9,651.9	51.22	189.429		
13,500.0	6,672.0	6,568.0	6,567.1	86.1	22.8	88.69	-476.9	-4,040.6	9,801.9	9,750.6	51.29	191.117		
13,600.0	6,672.0	6,567.7	6,566.9	87.3	22.8	88.68	-476.9	-4,040.6	9,900.8	9,849.4	51.35	192.799		
13,700.0	6,672.0	6,567.5	6,566.6	88.4	22.8	88.68	-476.9	-4,040.6	9,999.6	9,948.2	51.42	194.476		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-100.83	-546.2	-2,856.4	2,908.9					
100.0	100.0	23.8	23.8	0.1	0.0	-100.83	-546.2	-2,856.4	2,908.2	2,908.0	0.17	N/A		
200.0	200.0	100.0	100.0	0.5	0.2	-100.82	-546.2	-2,857.0	2,908.9	2,908.2	0.66	4,404.127		
300.0	300.0	189.2	189.2	0.8	0.5	-100.82	-546.3	-2,858.2	2,910.2	2,908.9	1.33	2,185.017		
400.0	400.0	299.8	299.8	1.2	0.9	-100.82	-546.6	-2,859.6	2,911.5	2,909.5	2.08	1,401.452		
500.0	500.0	407.4	407.4	1.6	1.3	-100.82	-546.8	-2,860.6	2,912.5	2,909.7	2.81	1,035.376		
600.0	600.0	507.5	507.5	1.9	1.6	-100.83	-547.2	-2,861.4	2,913.4	2,909.9	3.52	827.150		
700.0	700.0	620.1	620.1	2.3	2.0	-100.83	-547.6	-2,862.0	2,913.9	2,909.6	4.28	681.590		
800.0	800.0	705.6	705.6	2.6	2.3	-100.84	-548.0	-2,862.5	2,914.6	2,909.6	4.93	590.782		
900.0	900.0	809.1	809.0	3.0	2.7	-100.84	-548.2	-2,863.3	2,915.4	2,909.8	5.65	515.603		
1,000.0	1,000.0	900.9	900.8	3.4	3.0	-100.84	-548.4	-2,864.2	2,916.4	2,910.0	6.33	460.385		
1,100.0	1,100.0	1,016.5	1,016.5	3.7	3.4	-100.85	-548.9	-2,864.9	2,917.1	2,910.0	7.10	410.942		
1,200.0	1,200.0	1,104.1	1,104.0	4.1	3.7	-100.84	-549.0	-2,865.6	2,917.8	2,910.1	7.76	375.833		
1,300.0	1,300.0	1,214.7	1,214.6	4.4	4.1	-100.84	-549.0	-2,866.5	2,918.6	2,910.1	8.51	342.968		
1,400.0	1,400.0	1,302.8	1,302.7	4.8	4.4	-100.84	-549.1	-2,867.2	2,919.5	2,910.3	9.18	318.122		
1,500.0	1,500.0	1,402.1	1,402.1	5.1	4.7	-100.84	-549.4	-2,868.2	2,920.5	2,910.6	9.88	295.476		
1,600.0	1,600.0	1,497.1	1,497.0	5.5	5.1	-100.84	-549.6	-2,869.2	2,921.6	2,911.0	10.58	276.266		
1,700.0	1,700.0	1,594.8	1,594.7	5.9	5.4	-100.84	-549.5	-2,870.5	2,922.8	2,911.6	11.28	259.203		
1,800.0	1,800.0	1,703.6	1,703.5	6.2	5.8	-100.82	-549.1	-2,871.8	2,924.0	2,912.0	12.02	243.333		
1,900.0	1,900.0	1,823.7	1,823.7	6.6	6.2	-100.81	-548.4	-2,872.7	2,924.6	2,911.8	12.79	228.575		
2,000.0	2,000.0	1,935.9	1,935.8	6.9	6.6	-100.79	-547.4	-2,872.9	2,924.6	2,911.1	13.54	215.935		
2,100.0	2,100.0	2,041.3	2,041.2	7.3	7.0	-100.77	-546.3	-2,872.9	2,924.4	2,910.2	14.27	204.959		
2,200.0	2,200.0	2,147.9	2,147.8	7.7	7.3	-100.75	-545.5	-2,872.6	2,924.0	2,909.0	15.00	194.975		
2,300.0	2,300.0	2,248.1	2,248.0	8.0	7.7	-49.80	-545.0	-2,872.1	2,922.3	2,906.6	15.70	186.153		
2,400.0	2,399.8	2,355.8	2,355.7	8.4	8.1	-49.94	-544.7	-2,871.5	2,918.3	2,901.9	16.42	177.703		
2,500.0	2,499.5	2,468.1	2,467.9	8.7	8.5	-50.18	-544.0	-2,870.4	2,911.6	2,894.5	17.16	169.658		
2,600.0	2,598.7	2,559.4	2,559.3	9.1	8.8	-50.48	-543.5	-2,869.4	2,902.6	2,884.8	17.83	162.798		
2,700.0	2,697.5	2,663.6	2,663.4	9.4	9.1	-50.90	-543.2	-2,868.5	2,891.7	2,873.2	18.54	155.967		
2,800.0	2,795.6	2,756.5	2,756.4	9.8	9.5	-51.39	-543.0	-2,867.4	2,878.4	2,859.2	19.21	149.811		
2,900.0	2,893.1	2,855.0	2,854.9	10.1	9.8	-51.98	-542.8	-2,866.5	2,863.3	2,843.4	19.90	143.851		
3,000.0	2,989.6	2,959.3	2,959.2	10.5	10.2	-52.69	-542.5	-2,865.2	2,845.9	2,825.3	20.62	138.039		
3,100.0	3,085.3	3,053.9	3,053.7	10.9	10.5	-53.47	-542.6	-2,864.0	2,826.5	2,805.2	21.30	132.721		
3,200.0	3,179.8	3,143.5	3,143.3	11.2	10.8	-54.32	-542.7	-2,862.8	2,805.4	2,783.4	21.96	127.735		
3,300.0	3,273.2	3,230.1	3,230.0	11.6	11.1	-55.24	-542.9	-2,861.9	2,782.8	2,760.1	22.62	123.014		
3,387.5	3,353.8	3,307.8	3,307.6	11.9	11.4	-56.13	-542.8	-2,861.2	2,761.8	2,738.5	23.21	119.004		
3,400.0	3,365.2	3,317.7	3,317.5	12.0	11.4	-56.20	-542.8	-2,861.1	2,758.7	2,735.4	23.29	118.460		
3,500.0	3,456.8	3,397.3	3,397.1	12.4	11.7	-56.78	-542.7	-2,860.7	2,734.5	2,710.6	23.93	114.263		
3,600.0	3,548.3	3,481.3	3,481.1	12.8	12.0	-57.39	-542.5	-2,860.7	2,711.1	2,686.5	24.60	110.217		
3,700.0	3,639.8	3,566.9	3,566.7	13.2	12.3	-58.02	-542.2	-2,860.8	2,688.3	2,663.0	25.28	106.359		
3,800.0	3,731.4	3,657.1	3,656.9	13.6	12.6	-58.69	-542.0	-2,861.1	2,666.1	2,640.1	25.98	102.639		
3,900.0	3,822.9	3,757.7	3,757.5	14.0	12.9	-59.46	-542.0	-2,861.2	2,644.1	2,617.4	26.71	98.980		
4,000.0	3,914.4	3,849.5	3,849.3	14.4	13.3	-60.16	-541.7	-2,861.1	2,622.3	2,594.9	27.43	95.604		
4,100.0	4,005.9	3,938.4	3,938.3	14.8	13.6	-60.86	-541.4	-2,861.2	2,601.2	2,573.0	28.14	92.435		
4,200.0	4,097.5	4,036.1	4,035.9	15.2	13.9	-61.63	-541.1	-2,861.2	2,580.3	2,551.4	28.88	89.333		
4,300.0	4,189.0	4,129.6	4,129.4	15.6	14.2	-62.38	-540.7	-2,861.1	2,559.8	2,530.2	29.62	86.423		
4,400.0	4,280.5	4,220.9	4,220.7	16.1	14.6	-63.12	-540.0	-2,861.0	2,539.6	2,509.3	30.35	83.675		
4,500.0	4,372.1	4,304.7	4,304.5	16.5	14.9	-63.80	-539.3	-2,861.1	2,520.2	2,489.1	31.06	81.127		
4,600.0	4,463.6	4,400.9	4,400.7	16.9	15.2	-64.60	-538.9	-2,861.2	2,501.3	2,469.4	31.82	78.605		
4,700.0	4,555.1	4,493.2	4,493.0	17.4	15.5	-65.38	-538.4	-2,861.2	2,482.7	2,450.2	32.57	76.232		
4,800.0	4,646.7	4,574.1	4,573.9	17.8	15.8	-66.07	-537.9	-2,861.4	2,464.9	2,431.6	33.28	74.055		
4,900.0	4,738.2	4,676.1	4,675.9	18.2	16.2	-66.95	-537.6	-2,861.7	2,447.7	2,413.7	34.07	71.846		
5,000.0	4,829.7	4,771.7	4,771.5	18.7	16.5	-67.79	-537.2	-2,861.4	2,430.6	2,395.8	34.84	69.771		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,100.0	4,921.3	4,856.4	4,856.2	19.1	16.8	-68.55	-537.2	-2,861.2	2,414.2	2,378.6	35.58	67.860		
5,200.0	5,012.8	4,941.2	4,941.0	19.5	17.1	-69.33	-537.4	-2,861.1	2,398.6	2,362.3	36.32	66.045		
5,300.0	5,104.3	5,029.6	5,029.4	20.0	17.4	-70.15	-537.9	-2,861.0	2,383.8	2,346.7	37.07	64.299		
5,400.0	5,195.8	5,124.5	5,124.3	20.4	17.7	-71.04	-538.6	-2,861.0	2,369.6	2,331.8	37.85	62.603		
5,500.0	5,287.4	5,230.9	5,230.7	20.9	18.1	-72.05	-538.9	-2,860.4	2,355.5	2,316.9	38.67	60.917		
5,600.0	5,378.9	5,318.9	5,318.7	21.3	18.4	-72.89	-539.0	-2,860.0	2,342.0	2,302.6	39.43	59.395		
5,700.0	5,470.4	5,411.6	5,411.4	21.8	18.7	-73.77	-538.7	-2,859.7	2,329.0	2,288.8	40.21	57.922		
5,800.0	5,562.0	5,490.2	5,490.0	22.2	19.0	-74.52	-538.4	-2,859.8	2,317.0	2,276.0	40.95	56.583		
5,900.0	5,653.5	5,599.7	5,599.5	22.7	19.4	-75.58	-538.2	-2,859.8	2,305.5	2,263.8	41.78	55.179		
6,000.0	5,745.0	5,690.4	5,690.2	23.1	19.7	-76.47	-538.1	-2,859.2	2,294.3	2,251.8	42.56	53.905		
6,100.0	5,836.6	5,782.7	5,782.4	23.6	20.0	-77.39	-538.0	-2,858.6	2,283.8	2,240.5	43.35	52.684		
6,200.0	5,928.1	5,881.1	5,880.9	24.0	20.4	-78.38	-537.7	-2,857.9	2,273.8	2,229.7	44.16	51.494		
6,278.6	6,000.0	5,952.0	5,951.8	24.4	20.6	-79.09	-537.3	-2,857.3	2,266.3	2,221.5	44.77	50.618		
6,290.0	6,010.4	5,961.9	5,961.7	24.4	20.6	-80.83	-537.3	-2,857.3	2,265.3	2,220.4	44.86	50.496		
6,300.0	6,019.5	5,970.7	5,970.5	24.5	20.7	-82.58	-537.2	-2,857.2	2,264.5	2,219.6	44.94	50.392		
6,341.6	6,057.9	6,007.8	6,007.6	24.7	20.8	-91.24	-537.0	-2,857.0	2,263.2	2,217.9	45.26	50.006 CC		
6,350.0	6,065.8	6,015.8	6,015.5	24.7	20.8	-93.29	-537.0	-2,856.9	2,263.2	2,217.9	45.32	49.935 ES		
6,400.0	6,113.0	6,063.6	6,063.4	24.9	21.0	-107.73	-536.7	-2,856.7	2,265.8	2,220.1	45.70	49.577		
6,450.0	6,160.7	6,113.5	6,113.3	25.1	21.2	-125.37	-536.3	-2,856.5	2,272.3	2,226.2	46.07	49.320		
6,500.0	6,208.5	6,167.8	6,167.6	25.3	21.4	-143.73	-535.9	-2,856.1	2,282.3	2,235.9	46.44	49.150		
6,550.0	6,255.8	6,220.7	6,220.5	25.4	21.5	-159.86	-535.4	-2,855.6	2,295.9	2,249.1	46.78	49.079 SF		
6,600.0	6,302.5	6,271.4	6,271.2	25.6	21.7	-172.67	-535.0	-2,854.9	2,312.8	2,265.7	47.10	49.106		
6,650.0	6,347.9	6,316.1	6,315.9	25.7	21.9	-177.37	-534.6	-2,854.3	2,333.0	2,285.6	47.38	49.235		
6,700.0	6,391.6	6,353.0	6,352.7	25.9	22.0	-169.39	-534.5	-2,853.8	2,356.4	2,308.7	47.63	49.472		
6,750.0	6,433.4	6,388.1	6,387.8	26.0	22.1	-162.62	-534.5	-2,853.2	2,382.7	2,334.9	47.86	49.790		
6,800.0	6,472.8	6,422.5	6,422.3	26.1	22.3	-156.55	-534.6	-2,852.8	2,411.9	2,363.9	48.06	50.181		
6,850.0	6,509.4	6,455.2	6,455.0	26.2	22.4	-150.80	-534.7	-2,852.4	2,443.6	2,395.4	48.25	50.641		
6,900.0	6,543.0	6,485.1	6,484.9	26.3	22.5	-145.06	-534.9	-2,852.1	2,477.6	2,429.1	48.42	51.168		
6,950.0	6,573.2	6,514.4	6,514.2	26.4	22.6	-139.17	-535.0	-2,851.8	2,513.5	2,464.9	48.57	51.746		
7,000.0	6,599.8	6,543.0	6,542.7	26.5	22.7	-132.98	-535.2	-2,851.5	2,551.0	2,502.3	48.71	52.370		
7,050.0	6,622.5	6,567.7	6,567.4	26.6	22.8	-126.35	-535.4	-2,851.2	2,589.9	2,541.1	48.83	53.044		
7,100.0	6,641.1	6,588.2	6,587.9	26.7	22.8	-119.24	-535.7	-2,850.9	2,629.9	2,580.9	48.92	53.763		
7,150.0	6,655.4	6,604.4	6,604.1	26.8	22.9	-111.71	-535.9	-2,850.6	2,670.6	2,621.6	48.98	54.522		
7,200.0	6,665.4	6,614.9	6,614.7	26.9	22.9	-103.89	-536.0	-2,850.4	2,711.7	2,662.7	49.02	55.319		
7,250.0	6,670.8	6,621.3	6,621.1	27.0	22.9	-96.08	-536.1	-2,850.3	2,752.9	2,703.9	49.03	56.143		
7,285.7	6,672.0	6,623.1	6,622.9	27.1	23.0	-90.68	-536.1	-2,850.3	2,782.2	2,733.2	49.03	56.743		
7,300.0	6,672.0	6,623.4	6,623.1	27.1	23.0	-90.69	-536.1	-2,850.3	2,794.0	2,745.0	49.03	56.986		
7,400.0	6,672.0	6,625.2	6,624.9	27.3	23.0	-90.75	-536.1	-2,850.2	2,876.6	2,827.6	49.02	58.680		
7,500.0	6,672.0	6,627.0	6,626.7	27.6	23.0	-90.82	-536.2	-2,850.2	2,960.3	2,911.3	49.03	60.381		
7,600.0	6,672.0	6,628.8	6,628.6	28.0	23.0	-90.88	-536.2	-2,850.2	3,045.0	2,995.9	49.04	62.088		
7,700.0	6,672.0	6,630.7	6,630.4	28.3	23.0	-90.95	-536.2	-2,850.1	3,130.5	3,081.5	49.07	63.801		
7,800.0	6,672.0	6,632.5	6,632.2	28.8	23.0	-91.01	-536.2	-2,850.1	3,217.0	3,167.9	49.10	65.520		
7,900.0	6,672.0	6,634.3	6,634.1	29.3	23.0	-91.08	-536.3	-2,850.1	3,304.1	3,255.0	49.14	67.243		
8,000.0	6,672.0	6,636.2	6,635.9	29.8	23.0	-91.15	-536.3	-2,850.0	3,392.0	3,342.9	49.18	68.971		
8,100.0	6,672.0	6,638.1	6,637.8	30.4	23.0	-91.21	-536.3	-2,850.0	3,480.6	3,431.4	49.23	70.702		
8,200.0	6,672.0	6,639.9	6,639.7	31.0	23.0	-91.28	-536.3	-2,850.0	3,569.7	3,520.5	49.28	72.437		
8,300.0	6,672.0	6,641.8	6,641.5	31.7	23.0	-91.35	-536.4	-2,849.9	3,659.5	3,610.1	49.34	74.175		
8,400.0	6,672.0	6,643.7	6,643.4	32.4	23.0	-91.42	-536.4	-2,849.9	3,749.7	3,700.3	49.39	75.917		
8,500.0	6,672.0	6,645.6	6,645.3	33.1	23.0	-91.48	-536.4	-2,849.8	3,840.4	3,791.0	49.45	77.660		
8,600.0	6,672.0	6,647.5	6,647.2	33.9	23.0	-91.55	-536.4	-2,849.8	3,931.6	3,882.1	49.51	79.406		
8,700.0	6,672.0	6,649.4	6,649.1	34.7	23.0	-91.62	-536.5	-2,849.8	4,023.2	3,973.6	49.58	81.154		
8,800.0	6,672.0	6,651.3	6,651.1	35.5	23.1	-91.69	-536.5	-2,849.7	4,115.2	4,065.6	49.64	82.904		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
8,900.0	6,672.0	6,653.3	6,653.0	36.3	23.1	91.76	-536.5	-2,849.7	4,207.6	4,157.9	49.70	84.655		
9,000.0	6,672.0	6,655.2	6,655.0	37.2	23.1	91.83	-536.5	-2,849.7	4,300.3	4,250.5	49.77	86.407		
9,100.0	6,672.0	6,657.2	6,656.9	38.1	23.1	91.90	-536.6	-2,849.6	4,393.3	4,343.5	49.83	88.161		
9,200.0	6,672.0	6,659.2	6,658.9	39.0	23.1	91.97	-536.6	-2,849.6	4,486.6	4,436.7	49.90	89.915		
9,300.0	6,672.0	6,661.1	6,660.8	39.9	23.1	92.04	-536.6	-2,849.6	4,580.3	4,530.3	49.96	91.670		
9,400.0	6,672.0	6,663.1	6,662.8	40.8	23.1	92.12	-536.7	-2,849.5	4,674.1	4,624.1	50.03	93.425		
9,500.0	6,672.0	6,665.1	6,664.8	41.8	23.1	92.19	-536.7	-2,849.5	4,768.3	4,718.2	50.10	95.180		
9,600.0	6,672.0	6,667.1	6,666.8	42.7	23.1	92.26	-536.7	-2,849.4	4,862.6	4,812.5	50.16	96.935		
9,700.0	6,672.0	6,668.5	6,668.2	43.7	23.1	92.31	-536.7	-2,849.4	4,957.2	4,907.0	50.23	98.693		
9,800.0	6,672.0	6,670.4	6,670.1	44.7	23.1	92.38	-536.8	-2,849.4	5,052.0	5,001.7	50.29	100.449		
9,900.0	6,672.0	6,672.2	6,672.0	45.7	23.1	92.45	-536.8	-2,849.3	5,147.0	5,096.7	50.36	102.204		
10,000.0	6,672.0	6,674.1	6,673.8	46.7	23.1	92.51	-536.8	-2,849.3	5,242.2	5,191.8	50.43	103.958		
10,100.0	6,672.0	6,676.0	6,675.7	47.7	23.1	92.58	-536.8	-2,849.3	5,337.6	5,287.1	50.49	105.711		
10,200.0	6,672.0	6,677.8	6,677.5	48.8	23.1	92.65	-536.9	-2,849.2	5,433.1	5,382.5	50.56	107.464		
10,300.0	6,672.0	6,679.7	6,679.4	49.8	23.2	92.72	-536.9	-2,849.2	5,528.8	5,478.2	50.62	109.215		
10,400.0	6,672.0	6,681.5	6,681.3	50.9	23.2	92.78	-536.9	-2,849.2	5,624.6	5,573.9	50.69	110.965		
10,500.0	6,672.0	6,683.4	6,683.1	51.9	23.2	92.85	-536.9	-2,849.1	5,720.6	5,669.9	50.75	112.714		
10,600.0	6,672.0	6,685.3	6,685.0	53.0	23.2	92.92	-537.0	-2,849.1	5,816.7	5,765.9	50.82	114.461		
10,700.0	6,672.0	6,687.1	6,686.8	54.1	23.2	92.99	-537.0	-2,849.1	5,913.0	5,862.1	50.88	116.206		
10,800.0	6,672.0	6,689.0	6,688.7	55.2	23.2	93.05	-537.0	-2,849.0	6,009.4	5,958.4	50.95	117.950		
10,900.0	6,672.0	6,690.8	6,690.6	56.3	23.2	93.12	-537.1	-2,849.0	6,105.9	6,054.9	51.01	119.691		
11,000.0	6,672.0	6,692.7	6,692.4	57.4	23.2	93.19	-537.1	-2,849.0	6,202.5	6,151.4	51.08	121.431		
11,100.0	6,672.0	6,694.6	6,694.3	58.5	23.2	93.26	-537.1	-2,848.9	6,299.2	6,248.0	51.14	123.168		
11,200.0	6,672.0	6,696.4	6,696.1	59.6	23.2	93.32	-537.1	-2,848.9	6,396.0	6,344.8	51.21	124.903		
11,300.0	6,672.0	6,698.3	6,698.0	60.7	23.2	93.39	-537.2	-2,848.9	6,492.9	6,441.6	51.27	126.636		
11,400.0	6,672.0	6,700.1	6,699.9	61.8	23.2	93.46	-537.2	-2,848.8	6,589.9	6,538.6	51.34	128.366		
11,500.0	6,672.0	6,702.0	6,701.7	62.9	23.2	93.53	-537.2	-2,848.8	6,687.0	6,635.6	51.40	130.093		
11,600.0	6,672.0	6,703.9	6,703.6	64.1	23.2	93.60	-537.2	-2,848.8	6,784.2	6,732.7	51.47	131.818		
11,700.0	6,672.0	6,705.7	6,705.4	65.2	23.2	93.66	-537.3	-2,848.7	6,881.5	6,829.9	51.53	133.540		
11,800.0	6,672.0	6,707.6	6,707.3	66.3	23.2	93.73	-537.3	-2,848.7	6,978.8	6,927.2	51.60	135.259		
11,900.0	6,672.0	6,709.4	6,709.2	67.5	23.3	93.80	-537.3	-2,848.6	7,076.2	7,024.6	51.66	136.974		
12,000.0	6,672.0	6,711.3	6,711.0	68.6	23.3	93.87	-537.3	-2,848.6	7,173.7	7,122.0	51.73	138.687		
12,100.0	6,672.0	6,713.2	6,712.9	69.8	23.3	93.94	-537.4	-2,848.6	7,271.3	7,219.5	51.79	140.397		
12,200.0	6,672.0	6,715.0	6,714.7	70.9	23.3	94.01	-537.4	-2,848.5	7,368.9	7,317.1	51.86	142.103		
12,300.0	6,672.0	6,716.9	6,716.6	72.1	23.3	94.07	-537.4	-2,848.5	7,466.6	7,414.7	51.92	143.806		
12,400.0	6,672.0	6,718.7	6,718.4	73.2	23.3	94.14	-537.5	-2,848.5	7,564.4	7,512.4	51.99	145.505		
12,500.0	6,672.0	6,720.6	6,720.3	74.4	23.3	94.21	-537.5	-2,848.4	7,662.2	7,610.1	52.05	147.201		
12,600.0	6,672.0	6,722.5	6,722.2	75.5	23.3	94.28	-537.5	-2,848.4	7,760.0	7,707.9	52.12	148.893		
12,700.0	6,672.0	6,724.3	6,724.0	76.7	23.3	94.35	-537.5	-2,848.4	7,858.0	7,805.8	52.18	150.582		
12,800.0	6,672.0	6,726.2	6,725.9	77.9	23.3	94.42	-537.6	-2,848.3	7,955.9	7,903.7	52.25	152.267		
12,900.0	6,672.0	6,728.0	6,727.7	79.0	23.3	94.48	-537.6	-2,848.3	8,054.0	8,001.6	52.32	153.948		
13,000.0	6,672.0	6,729.9	6,729.6	80.2	23.3	94.55	-537.6	-2,848.3	8,152.0	8,099.7	52.38	155.625		
13,100.0	6,672.0	6,731.8	6,731.5	81.4	23.3	94.62	-537.6	-2,848.2	8,250.2	8,197.7	52.45	157.297		
13,200.0	6,672.0	6,733.6	6,733.3	82.6	23.3	94.69	-537.7	-2,848.2	8,348.3	8,295.8	52.52	158.966		
13,300.0	6,672.0	6,735.5	6,735.2	83.7	23.3	94.76	-537.7	-2,848.2	8,446.5	8,394.0	52.58	160.631		
13,400.0	6,672.0	6,737.3	6,737.0	84.9	23.4	94.83	-537.7	-2,848.1	8,544.8	8,492.1	52.65	162.292		
13,500.0	6,672.0	6,739.2	6,738.9	86.1	23.4	94.90	-537.7	-2,848.1	8,643.1	8,590.4	52.72	163.948		
13,600.0	6,672.0	6,741.0	6,740.7	87.3	23.4	94.97	-537.8	-2,848.0	8,741.4	8,688.6	52.79	165.600		
13,700.0	6,672.0	6,742.9	6,742.6	88.4	23.4	95.04	-537.8	-2,848.0	8,839.8	8,786.9	52.85	167.248		
13,800.0	6,672.0	6,744.8	6,744.5	89.6	23.4	95.11	-537.8	-2,848.0	8,938.2	8,885.3	52.92	168.891		
13,900.0	6,672.0	6,746.6	6,746.3	90.8	23.4	95.17	-537.8	-2,847.9	9,036.7	8,983.7	52.99	170.530		
14,000.0	6,672.0	6,748.5	6,748.2	92.0	23.4	95.24	-537.9	-2,847.9	9,135.1	9,082.1	53.06	172.164		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> B Section 12 - Trebor B12-07 - Wellbore #1 - As Drilled												<b>Offset Site Error:</b>	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWSG												<b>Offset Well Error:</b>	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
14,100.0	6,672.0	6,750.3	6,750.0	93.2	23.4	95.31	-537.9	-2,847.9	9,233.6	9,180.5	53.13	173.793	
14,200.0	6,672.0	6,752.2	6,751.9	94.4	23.4	95.38	-537.9	-2,847.8	9,332.2	9,279.0	53.20	175.418	
14,300.0	6,672.0	6,754.0	6,753.7	95.6	23.4	95.45	-538.0	-2,847.8	9,430.8	9,377.5	53.27	177.039	
14,400.0	6,672.0	6,755.9	6,755.6	96.8	23.4	95.52	-538.0	-2,847.8	9,529.4	9,476.0	53.34	178.654	
14,500.0	6,672.0	6,757.8	6,757.5	98.0	23.4	95.59	-538.0	-2,847.7	9,628.0	9,574.6	53.41	180.265	
14,600.0	6,672.0	6,759.6	6,759.3	99.2	23.4	95.66	-538.0	-2,847.7	9,726.7	9,673.2	53.48	181.871	
14,700.0	6,672.0	6,761.5	6,761.2	100.4	23.4	95.73	-538.1	-2,847.7	9,825.4	9,771.8	53.55	183.472	
14,800.0	6,672.0	6,763.3	6,763.0	101.6	23.4	95.80	-538.1	-2,847.6	9,924.1	9,870.5	53.62	185.068	



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-90.39	-32.1	-4,761.3	4,761.9					
100.0	100.0	38.3	38.3	0.1	0.1	-90.39	-32.2	-4,761.2	4,761.3	4,761.2	0.19	N/A		
200.0	200.0	143.0	143.0	0.5	0.3	-90.39	-32.4	-4,760.8	4,760.9	4,760.1	0.81	5,881.115		
268.3	268.3	196.6	196.6	0.7	0.5	-90.39	-32.4	-4,760.7	4,760.8	4,759.6	1.24	3,836.390		
300.0	300.0	222.7	222.7	0.8	0.6	-90.39	-32.4	-4,760.7	4,760.8	4,759.4	1.45	3,293.208		
400.0	400.0	307.1	307.1	1.2	0.9	-90.39	-32.2	-4,761.0	4,761.1	4,759.0	2.10	2,268.675		
500.0	500.0	408.8	408.8	1.6	1.3	-90.38	-31.9	-4,761.4	4,761.5	4,758.7	2.81	1,692.826		
600.0	600.0	508.1	508.1	1.9	1.6	-90.38	-31.6	-4,761.8	4,762.0	4,758.4	3.52	1,353.321		
700.0	700.0	593.6	593.6	2.3	1.9	-90.38	-31.2	-4,762.3	4,762.5	4,758.4	4.18	1,140.333		
800.0	800.0	690.2	690.2	2.6	2.2	-90.37	-30.7	-4,763.1	4,763.3	4,758.4	4.87	977.460		
900.0	900.0	793.9	793.8	3.0	2.6	-90.36	-30.3	-4,763.9	4,764.1	4,758.5	5.59	851.532		
1,000.0	1,000.0	884.7	884.6	3.4	2.9	-90.36	-30.0	-4,764.6	4,764.9	4,758.6	6.27	759.812		
1,100.0	1,100.0	989.1	989.1	3.7	3.3	-90.36	-29.8	-4,765.5	4,765.8	4,758.8	7.00	681.250		
1,200.0	1,200.0	1,088.4	1,088.3	4.1	3.6	-90.35	-29.4	-4,766.3	4,766.6	4,758.9	7.70	618.906		
1,300.0	1,300.0	1,172.5	1,172.5	4.4	3.9	-90.35	-29.0	-4,767.2	4,767.6	4,759.2	8.35	570.636		
1,400.0	1,400.0	1,298.9	1,298.8	4.8	4.4	-90.34	-28.6	-4,768.4	4,768.6	4,759.4	9.16	520.810		
1,500.0	1,500.0	1,373.6	1,373.6	5.1	4.6	-90.34	-28.3	-4,769.1	4,769.5	4,759.7	9.78	487.860		
1,600.0	1,600.0	1,481.5	1,481.4	5.5	5.0	-90.33	-27.6	-4,770.4	4,770.7	4,760.1	10.51	453.794		
1,700.0	1,700.0	1,597.4	1,597.4	5.9	5.4	-90.32	-26.8	-4,771.3	4,771.5	4,760.2	11.28	423.095		
1,800.0	1,800.0	1,690.7	1,690.7	6.2	5.7	-90.32	-26.5	-4,771.9	4,772.2	4,760.2	11.96	398.923		
1,900.0	1,900.0	1,833.5	1,833.4	6.6	6.2	-90.31	-25.8	-4,772.4	4,772.4	4,759.6	12.82	372.294		
2,000.0	2,000.0	1,954.5	1,954.4	6.9	6.7	-90.30	-25.3	-4,772.0	4,772.2	4,758.6	13.60	350.963		
2,100.0	2,100.0	2,099.4	2,099.3	7.3	7.2	-90.31	-25.4	-4,770.6	4,771.2	4,756.7	14.46	330.028		
2,200.0	2,200.0	2,190.7	2,190.6	7.7	7.5	-90.31	-25.5	-4,769.3	4,769.8	4,754.6	15.13	315.205		
2,300.0	2,300.0	2,297.9	2,297.8	8.0	7.9	-39.36	-25.5	-4,767.8	4,767.0	4,751.2	15.86	300.584		
2,400.0	2,399.8	2,379.6	2,379.5	8.4	8.1	-39.46	-25.7	-4,766.8	4,761.7	4,745.2	16.50	288.669		
2,500.0	2,499.5	2,476.0	2,475.9	8.7	8.5	-39.62	-25.8	-4,765.8	4,754.0	4,736.8	17.18	276.690		
2,600.0	2,598.7	2,577.6	2,577.5	9.1	8.8	-39.85	-25.9	-4,764.7	4,743.5	4,725.7	17.89	265.222		
2,700.0	2,697.5	2,690.6	2,690.5	9.4	9.2	-40.16	-25.8	-4,763.4	4,730.3	4,711.7	18.63	253.946		
2,800.0	2,795.6	2,793.2	2,793.1	9.8	9.6	-40.53	-25.9	-4,761.9	4,714.2	4,694.9	19.33	243.846		
2,900.0	2,893.1	2,902.6	2,902.5	10.1	10.0	-40.99	-26.2	-4,760.2	4,695.4	4,675.3	20.06	234.058		
3,000.0	2,989.6	3,018.9	3,018.7	10.5	10.4	-41.54	-27.0	-4,757.9	4,673.7	4,652.9	20.81	224.574		
3,100.0	3,085.3	3,116.7	3,116.5	10.9	10.7	-42.14	-29.1	-4,755.7	4,649.3	4,627.8	21.50	216.239		
3,200.0	3,179.8	3,205.1	3,204.8	11.2	11.0	-42.80	-31.8	-4,753.7	4,622.6	4,600.4	22.16	208.604		
3,300.0	3,273.2	3,326.0	3,325.6	11.6	11.5	-43.66	-35.8	-4,750.6	4,593.2	4,570.3	22.93	200.324		
3,387.5	3,353.8	3,402.5	3,402.1	11.9	11.7	-44.37	-38.3	-4,748.4	4,565.5	4,542.0	23.51	194.230		
3,400.0	3,365.2	3,415.8	3,415.3	12.0	11.8	-44.43	-38.7	-4,748.1	4,561.4	4,537.8	23.60	193.307		
3,500.0	3,456.8	3,512.7	3,512.1	12.4	12.1	-44.83	-41.9	-4,745.2	4,528.7	4,504.4	24.29	186.461		
3,600.0	3,548.3	3,574.8	3,574.2	12.8	12.3	-45.10	-44.1	-4,743.5	4,496.5	4,471.7	24.87	180.791		
3,700.0	3,639.8	3,648.3	3,647.6	13.2	12.6	-45.42	-46.9	-4,741.9	4,465.0	4,439.5	25.50	175.109		
3,800.0	3,731.4	3,733.5	3,732.8	13.6	12.9	-45.80	-50.2	-4,740.3	4,433.9	4,407.7	26.17	169.427		
3,900.0	3,822.9	3,823.6	3,822.7	14.0	13.2	-46.20	-53.8	-4,738.5	4,403.0	4,376.2	26.86	163.911		
4,000.0	3,914.4	3,906.3	3,905.4	14.4	13.5	-46.58	-57.2	-4,737.0	4,372.4	4,344.9	27.54	158.792		
4,100.0	4,005.9	3,980.2	3,979.1	14.8	13.8	-46.92	-60.2	-4,735.8	4,342.3	4,314.2	28.19	154.065		
4,200.0	4,097.5	4,070.7	4,069.6	15.2	14.1	-47.34	-63.9	-4,734.6	4,312.7	4,283.8	28.89	149.266		
4,300.0	4,189.0	4,158.3	4,157.1	15.6	14.4	-47.75	-67.7	-4,733.3	4,283.2	4,253.6	29.59	144.728		
4,400.0	4,280.5	4,239.6	4,238.3	16.1	14.7	-48.14	-71.3	-4,732.2	4,254.1	4,223.8	30.28	140.487		
4,500.0	4,372.1	4,320.4	4,319.0	16.5	14.9	-48.53	-74.9	-4,731.3	4,225.4	4,194.5	30.97	136.440		
4,600.0	4,463.6	4,415.4	4,413.9	16.9	15.3	-49.00	-79.2	-4,730.4	4,197.2	4,165.5	31.71	132.379		
4,700.0	4,555.1	4,583.9	4,582.2	17.4	15.9	-49.84	-86.6	-4,726.8	4,168.0	4,135.4	32.67	127.583		
4,800.0	4,646.7	4,664.7	4,662.9	17.8	16.2	-50.25	-89.9	-4,724.4	4,138.5	4,105.1	33.37	124.028		
4,900.0	4,738.2	4,746.8	4,744.9	18.2	16.5	-50.67	-93.3	-4,722.3	4,109.5	4,075.5	34.07	120.612		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,000.0	4,829.7	4,841.3	4,839.4	18.7	16.8	-51.16	-96.7	-4,719.9	4,080.9	4,046.0	34.82	117.210		
5,100.0	4,921.3	4,930.4	4,928.3	19.1	17.1	-51.61	-99.6	-4,717.5	4,052.3	4,016.8	35.55	113.999		
5,200.0	5,012.8	5,004.6	5,002.5	19.5	17.4	-51.99	-101.5	-4,715.9	4,024.3	3,988.0	36.24	111.057		
5,300.0	5,104.3	5,088.3	5,086.2	20.0	17.6	-52.42	-103.4	-4,714.3	3,996.8	3,959.8	36.96	108.150		
5,400.0	5,195.8	5,173.1	5,170.9	20.4	17.9	-52.85	-105.3	-4,712.8	3,969.7	3,932.0	37.68	105.351		
5,500.0	5,287.4	5,256.0	5,253.8	20.9	18.2	-53.28	-107.0	-4,711.6	3,943.0	3,904.6	38.40	102.675		
5,600.0	5,378.9	5,338.5	5,336.3	21.3	18.5	-53.71	-108.3	-4,710.6	3,916.8	3,877.7	39.13	100.108		
5,700.0	5,470.4	5,429.4	5,427.2	21.8	18.8	-54.17	-109.1	-4,709.8	3,891.1	3,851.2	39.88	97.581		
5,800.0	5,562.0	5,530.2	5,528.0	22.2	19.2	-54.69	-109.8	-4,708.6	3,865.3	3,824.6	40.65	95.077		
5,900.0	5,653.5	5,612.1	5,609.8	22.7	19.5	-55.11	-110.2	-4,707.8	3,839.9	3,798.5	41.38	92.791		
6,000.0	5,745.0	5,704.1	5,701.9	23.1	19.8	-55.59	-110.5	-4,707.1	3,814.9	3,772.7	42.14	90.527		
6,100.0	5,836.6	5,795.9	5,793.7	23.6	20.1	-56.07	-110.9	-4,706.2	3,790.1	3,747.2	42.90	88.346		
6,200.0	5,928.1	5,886.1	5,883.9	24.0	20.4	-56.56	-111.4	-4,705.4	3,765.6	3,721.9	43.66	86.252		
6,278.6	6,000.0	5,954.9	5,952.6	24.4	20.7	-56.93	-111.9	-4,704.8	3,746.6	3,702.4	44.25	84.671		
6,290.0	6,010.4	5,964.7	5,962.5	24.4	20.7	-58.83	-112.0	-4,704.7	3,743.9	3,699.5	44.33	84.446		
6,300.0	6,019.5	5,973.4	5,971.2	24.5	20.7	-60.53	-112.0	-4,704.6	3,741.6	3,697.2	44.41	84.251		
6,350.0	6,065.8	6,017.0	6,014.8	24.7	20.9	-70.89	-112.2	-4,704.3	3,732.8	3,688.1	44.78	83.357		
6,400.0	6,113.0	6,060.8	6,058.6	24.9	21.0	-84.88	-112.4	-4,704.0	3,728.8	3,683.6	45.14	82.598		
6,418.2	6,130.3	6,076.9	6,074.7	25.0	21.1	-90.83	-112.4	-4,703.9	3,728.5	3,683.2	45.27	82.357 CC, ES		
6,450.0	6,160.7	6,105.2	6,102.9	25.1	21.2	-101.97	-112.6	-4,703.8	3,729.4	3,683.9	45.50	81.973		
6,500.0	6,208.5	6,146.5	6,144.2	25.3	21.3	-119.67	-112.7	-4,703.6	3,734.8	3,688.9	45.82	81.504		
6,550.0	6,255.8	6,187.8	6,185.6	25.4	21.5	-135.07	-112.8	-4,703.5	3,744.7	3,698.6	46.13	81.174		
6,600.0	6,302.5	6,232.6	6,230.3	25.6	21.6	-147.10	-112.9	-4,703.5	3,759.2	3,712.8	46.43	80.963		
6,650.0	6,347.9	6,277.9	6,275.7	25.7	21.8	-156.19	-113.1	-4,703.4	3,778.1	3,731.4	46.71	80.877 SF		
6,700.0	6,391.6	6,319.6	6,317.3	25.9	21.9	-163.19	-113.5	-4,703.3	3,801.0	3,754.1	46.97	80.931		
6,750.0	6,433.4	6,357.3	6,355.0	26.0	22.1	-168.82	-113.9	-4,703.2	3,828.0	3,780.8	47.19	81.120		
6,800.0	6,472.8	6,392.8	6,390.5	26.1	22.2	-173.65	-114.5	-4,703.1	3,858.6	3,811.2	47.39	81.428		
6,850.0	6,509.4	6,429.4	6,427.1	26.2	22.3	-178.10	-115.1	-4,703.0	3,892.6	3,845.1	47.57	81.829		
6,900.0	6,543.0	6,463.9	6,461.6	26.3	22.4	-177.51	-115.8	-4,702.9	3,929.8	3,882.0	47.73	82.329		
6,950.0	6,573.2	6,494.9	6,492.7	26.4	22.5	-172.82	-116.6	-4,702.7	3,969.6	3,921.7	47.87	82.926		
7,000.0	6,599.8	6,519.8	6,517.5	26.5	22.6	-167.40	-117.3	-4,702.6	4,011.8	3,963.8	47.97	83.625		
7,050.0	6,622.5	6,540.5	6,538.2	26.6	22.7	-160.65	-117.9	-4,702.4	4,056.1	4,008.0	48.05	84.405		
7,100.0	6,641.1	6,557.6	6,555.3	26.7	22.8	-151.73	-118.5	-4,702.3	4,101.9	4,053.8	48.11	85.255		
7,150.0	6,655.4	6,570.8	6,568.5	26.8	22.8	-139.48	-119.0	-4,702.2	4,149.0	4,100.9	48.15	86.162		
7,200.0	6,665.4	6,580.2	6,577.8	26.9	22.8	-122.96	-119.3	-4,702.1	4,196.9	4,148.7	48.17	87.118		
7,250.0	6,670.8	6,585.4	6,583.1	27.0	22.9	-103.18	-119.6	-4,702.1	4,245.2	4,197.0	48.18	88.111		
7,285.7	6,672.0	6,586.7	6,584.4	27.1	22.9	-89.22	-119.6	-4,702.1	4,279.6	4,231.4	48.17	88.836		
7,300.0	6,672.0	6,586.8	6,584.5	27.1	22.9	-89.23	-119.6	-4,702.1	4,293.4	4,245.2	48.17	89.129		
7,400.0	6,672.0	6,587.5	6,585.2	27.3	22.9	-89.26	-119.6	-4,702.1	4,389.8	4,341.7	48.15	91.170		
7,500.0	6,672.0	6,588.2	6,585.9	27.6	22.9	-89.29	-119.7	-4,702.1	4,486.4	4,438.3	48.13	93.206		
7,600.0	6,672.0	6,588.9	6,586.6	28.0	22.9	-89.33	-119.7	-4,702.1	4,583.1	4,535.0	48.12	95.237		
7,700.0	6,672.0	6,589.6	6,587.3	28.3	22.9	-89.36	-119.7	-4,702.1	4,680.0	4,631.9	48.12	97.265		
7,800.0	6,672.0	6,590.3	6,588.0	28.8	22.9	-89.40	-119.8	-4,702.1	4,777.0	4,728.9	48.11	99.289		
7,900.0	6,672.0	6,591.0	6,588.7	29.3	22.9	-89.43	-119.8	-4,702.1	4,874.2	4,826.0	48.11	101.308		
8,000.0	6,672.0	6,591.7	6,589.4	29.8	22.9	-89.47	-119.8	-4,702.0	4,971.4	4,923.3	48.11	103.324		
8,100.0	6,672.0	6,592.4	6,590.1	30.4	22.9	-89.50	-119.8	-4,702.0	5,068.8	5,020.6	48.12	105.335		
8,200.0	6,672.0	6,593.1	6,590.8	31.0	22.9	-89.54	-119.9	-4,702.0	5,166.2	5,118.1	48.13	107.343		
8,300.0	6,672.0	6,593.8	6,591.5	31.7	22.9	-89.57	-119.9	-4,702.0	5,263.8	5,215.6	48.14	109.346		
8,400.0	6,672.0	6,594.6	6,592.2	32.4	22.9	-89.61	-119.9	-4,702.0	5,361.4	5,313.3	48.15	111.345		
8,500.0	6,672.0	6,595.3	6,592.9	33.1	22.9	-89.65	-120.0	-4,702.0	5,459.2	5,411.0	48.17	113.340		
8,600.0	6,672.0	6,596.0	6,593.7	33.9	22.9	-89.68	-120.0	-4,702.0	5,557.0	5,508.8	48.18	115.331		
8,700.0	6,672.0	6,596.7	6,594.4	34.7	22.9	-89.72	-120.0	-4,702.0	5,654.9	5,606.7	48.20	117.318		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													B Section 12 - Trebor B12-19 - Wellbore #1 - As Drilled		Offset Site Error:		0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWSG															Offset Well Error:		0.0 ft	
Reference		Offset		Semi Major Axis			Distance											
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning					
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)							
8,800.0	6,672.0	6,597.5	6,595.1	35.5	22.9	89.75	-120.1	-4,702.0	5,752.8	5,704.6	48.22	119.301						
8,900.0	6,672.0	6,598.2	6,595.8	36.3	22.9	89.79	-120.1	-4,702.0	5,850.9	5,802.6	48.24	121.280						
9,000.0	6,672.0	6,598.9	6,596.6	37.2	22.9	89.83	-120.1	-4,702.0	5,949.0	5,900.7	48.27	123.254						
9,100.0	6,672.0	6,599.7	6,597.3	38.1	22.9	89.86	-120.1	-4,702.0	6,047.1	5,998.8	48.29	125.224						
9,200.0	6,672.0	6,600.8	6,598.5	39.0	22.9	89.92	-120.2	-4,702.0	6,145.4	6,097.0	48.32	127.188						
9,300.0	6,672.0	6,602.4	6,600.0	39.9	22.9	90.00	-120.3	-4,702.0	6,243.6	6,195.3	48.35	129.144						
9,400.0	6,672.0	6,603.9	6,601.6	40.8	22.9	90.08	-120.3	-4,701.9	6,342.0	6,293.6	48.38	131.096						
9,500.0	6,672.0	6,605.6	6,603.2	41.8	22.9	90.16	-120.4	-4,701.9	6,440.4	6,392.0	48.41	133.043						
9,600.0	6,672.0	6,607.2	6,604.9	42.7	22.9	90.24	-120.5	-4,701.9	6,538.8	6,490.4	48.44	134.985						
9,700.0	6,672.0	6,608.9	6,606.6	43.7	22.9	90.33	-120.5	-4,701.9	6,637.3	6,588.8	48.47	136.922						
9,800.0	6,672.0	6,610.7	6,608.3	44.7	23.0	90.42	-120.6	-4,701.9	6,735.8	6,687.3	48.51	138.855						
9,900.0	6,672.0	6,612.5	6,610.1	45.7	23.0	90.51	-120.7	-4,701.9	6,834.4	6,785.9	48.55	140.782						
10,000.0	6,672.0	6,614.3	6,612.0	46.7	23.0	90.60	-120.8	-4,701.8	6,933.0	6,884.5	48.58	142.705						
10,100.0	6,672.0	6,616.2	6,613.9	47.7	23.0	90.70	-120.8	-4,701.8	7,031.7	6,983.1	48.62	144.622						
10,200.0	6,672.0	6,618.2	6,615.8	48.8	23.0	90.79	-120.9	-4,701.8	7,130.4	7,081.7	48.66	146.535						
10,300.0	6,672.0	6,620.2	6,617.8	49.8	23.0	90.90	-121.0	-4,701.8	7,229.1	7,180.4	48.70	148.442						
10,400.0	6,672.0	6,622.2	6,619.8	50.9	23.0	91.00	-121.1	-4,701.8	7,327.9	7,279.2	48.74	150.344						
10,500.0	6,672.0	6,624.3	6,621.9	51.9	23.0	91.11	-121.2	-4,701.8	7,426.7	7,377.9	48.78	152.240						
10,600.0	6,672.0	6,626.5	6,624.1	53.0	23.0	91.21	-121.3	-4,701.7	7,525.5	7,476.7	48.83	154.131						
10,700.0	6,672.0	6,628.7	6,626.3	54.1	23.0	91.33	-121.3	-4,701.7	7,624.4	7,575.5	48.87	156.016						
10,800.0	6,672.0	6,631.0	6,628.6	55.2	23.0	91.44	-121.4	-4,701.7	7,723.3	7,674.4	48.91	157.896						
10,900.0	6,672.0	6,633.4	6,631.0	56.3	23.0	91.56	-121.5	-4,701.7	7,822.2	7,773.3	48.96	159.770						
11,000.0	6,672.0	6,635.8	6,633.4	57.4	23.0	91.69	-121.6	-4,701.6	7,921.2	7,872.2	49.01	161.638						
11,100.0	6,672.0	6,638.3	6,635.9	58.5	23.0	91.81	-121.7	-4,701.6	8,020.2	7,971.1	49.05	163.500						
11,200.0	6,672.0	6,640.9	6,638.5	59.6	23.1	91.94	-121.8	-4,701.6	8,119.2	8,070.1	49.10	165.356						
11,300.0	6,672.0	6,643.6	6,641.2	60.7	23.1	92.08	-121.9	-4,701.5	8,218.2	8,169.1	49.15	167.206						
11,400.0	6,672.0	6,646.3	6,643.9	61.8	23.1	92.22	-122.0	-4,701.5	8,317.3	8,268.1	49.20	169.050						
11,500.0	6,672.0	6,649.2	6,646.8	62.9	23.1	92.37	-122.1	-4,701.5	8,416.3	8,367.1	49.25	170.888						
11,600.0	6,672.0	6,652.1	6,649.7	64.1	23.1	92.51	-122.2	-4,701.5	8,515.4	8,466.1	49.30	172.719						
11,700.0	6,672.0	6,655.1	6,652.7	65.2	23.1	92.67	-122.3	-4,701.4	8,614.6	8,565.2	49.35	174.544						
11,800.0	6,672.0	6,658.3	6,655.9	66.3	23.1	92.83	-122.5	-4,701.4	8,713.7	8,664.3	49.41	176.362						
11,900.0	6,672.0	6,661.5	6,659.1	67.5	23.1	93.00	-122.6	-4,701.3	8,812.9	8,763.4	49.46	178.173						
12,000.0	6,672.0	6,664.9	6,662.5	68.6	23.1	93.17	-122.7	-4,701.3	8,912.1	8,862.5	49.52	179.978						
12,100.0	6,672.0	6,668.4	6,666.0	69.8	23.2	93.34	-122.8	-4,701.3	9,011.3	8,961.7	49.57	181.775						
12,200.0	6,672.0	6,672.0	6,669.6	70.9	23.2	93.53	-122.9	-4,701.2	9,110.5	9,060.8	49.63	183.566						
12,300.0	6,672.0	6,675.8	6,673.4	72.1	23.2	93.72	-123.1	-4,701.2	9,209.7	9,160.0	49.69	185.349						
12,400.0	6,672.0	6,679.7	6,677.3	73.2	23.2	93.92	-123.2	-4,701.1	9,309.0	9,259.2	49.75	187.124						
12,500.0	6,672.0	6,683.7	6,681.3	74.4	23.2	94.13	-123.3	-4,701.1	9,408.2	9,358.4	49.81	188.893						
12,600.0	6,672.0	12,600.0	6,648.6	75.5	43.9	92.48	-122.1	-4,701.4	9,507.5	9,436.9	70.60	134.674						
12,700.0	6,672.0	12,700.0	6,649.6	76.7	44.2	92.53	-122.2	-4,701.4	9,606.8	9,535.8	71.00	135.312						
12,800.0	6,672.0	12,800.0	6,650.6	77.9	44.6	92.58	-122.2	-4,701.4	9,706.1	9,634.7	71.40	135.942						
12,900.0	6,672.0	12,900.0	6,651.6	79.0	44.9	92.63	-122.3	-4,701.4	9,805.5	9,733.7	71.80	136.564						
13,000.0	6,672.0	13,000.0	6,652.6	80.2	45.3	92.68	-122.3	-4,701.4	9,904.8	9,832.6	72.20	137.179						



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-111.74	-581.3	-1,458.1	1,570.2					
100.0	100.0	67.6	67.6	0.1	0.1	-111.73	-581.1	-1,458.0	1,569.6	1,569.3	0.25	6,398.846		
200.0	200.0	166.2	166.2	0.5	0.4	-111.71	-580.5	-1,457.7	1,569.1	1,568.2	0.89	1,758.582		
300.0	300.0	261.3	261.3	0.8	0.7	-111.70	-580.0	-1,457.8	1,568.9	1,567.3	1.58	991.316		
307.7	307.7	268.7	268.7	0.9	0.8	-111.70	-580.0	-1,457.8	1,568.9	1,567.3	1.64	959.088		
400.0	400.0	359.2	359.2	1.2	1.1	-111.68	-579.6	-1,458.0	1,569.0	1,566.7	2.28	687.368		
500.0	500.0	458.4	458.4	1.6	1.4	-111.66	-579.1	-1,458.4	1,569.1	1,566.1	2.99	525.275		
600.0	600.0	558.4	558.3	1.9	1.8	-111.63	-578.5	-1,458.8	1,569.3	1,565.6	3.69	424.727		
700.0	700.0	656.9	656.9	2.3	2.1	-111.61	-577.9	-1,459.2	1,569.5	1,565.1	4.40	356.912		
800.0	800.0	756.6	756.6	2.6	2.5	-111.58	-577.4	-1,459.8	1,569.8	1,564.7	5.10	307.553		
900.0	900.0	857.6	857.6	3.0	2.8	-111.55	-576.7	-1,460.3	1,570.0	1,564.2	5.82	269.980		
1,000.0	1,000.0	958.4	958.4	3.4	3.2	-111.53	-576.1	-1,460.7	1,570.2	1,563.7	6.53	240.613		
1,100.0	1,100.0	1,059.1	1,059.0	3.7	3.5	-111.51	-575.8	-1,461.0	1,570.4	1,563.2	7.24	217.033		
1,200.0	1,200.0	1,162.9	1,162.9	4.1	3.9	-111.50	-575.5	-1,461.2	1,570.4	1,562.5	7.96	197.377		
1,273.9	1,273.9	1,235.0	1,234.9	4.3	4.2	-111.49	-575.3	-1,461.1	1,570.3	1,561.8	8.47	185.337		
1,300.0	1,300.0	1,258.3	1,258.3	4.4	4.2	-111.49	-575.3	-1,461.2	1,570.3	1,561.7	8.65	181.592		
1,400.0	1,400.0	1,352.5	1,352.5	4.8	4.6	-111.49	-575.4	-1,461.6	1,570.8	1,561.4	9.33	168.269		
1,500.0	1,500.0	1,460.1	1,460.1	5.1	4.9	-111.48	-575.3	-1,462.1	1,571.2	1,561.1	10.07	156.044		
1,599.5	1,599.5	1,560.6	1,560.5	5.5	5.3	-111.47	-575.0	-1,462.1	1,571.1	1,560.3	10.78	145.791		
1,600.0	1,600.0	1,561.0	1,561.0	5.5	5.3	-111.47	-575.0	-1,462.1	1,571.1	1,560.3	10.78	145.747		
1,700.0	1,700.0	1,658.7	1,658.7	5.9	5.6	-111.45	-574.7	-1,462.4	1,571.2	1,559.7	11.48	136.877		
1,800.0	1,800.0	1,757.2	1,757.2	6.2	6.0	-111.44	-574.4	-1,462.6	1,571.4	1,559.2	12.18	128.998		
1,900.0	1,900.0	1,850.7	1,850.6	6.6	6.3	-111.43	-574.4	-1,463.0	1,571.8	1,558.9	12.87	122.163		
2,000.0	2,000.0	1,944.5	1,944.5	6.9	6.6	-111.42	-574.3	-1,464.0	1,572.7	1,559.1	13.55	116.046		
2,100.0	2,100.0	2,042.5	2,042.4	7.3	7.0	-111.39	-574.0	-1,465.3	1,573.8	1,559.6	14.25	110.418		
2,200.0	2,200.0	2,144.8	2,144.7	7.7	7.3	-111.36	-573.6	-1,466.7	1,575.0	1,560.0	14.97	105.211		
2,300.0	2,300.0	2,248.3	2,248.2	8.0	7.7	-60.37	-572.8	-1,468.0	1,575.0	1,559.3	15.69	100.401		
2,400.0	2,399.8	2,348.3	2,348.2	8.4	8.0	-60.52	-571.8	-1,469.3	1,573.2	1,556.8	16.39	95.995		
2,500.0	2,499.5	2,448.5	2,448.4	8.7	8.4	-60.81	-570.9	-1,470.5	1,569.7	1,552.6	17.09	91.848		
2,600.0	2,598.7	2,548.1	2,548.0	9.1	8.7	-61.24	-569.8	-1,471.7	1,564.5	1,546.7	17.79	87.944		
2,700.0	2,697.5	2,648.0	2,647.9	9.4	9.1	-61.82	-569.0	-1,472.9	1,557.7	1,539.3	18.49	84.246		
2,800.0	2,795.6	2,746.1	2,746.0	9.8	9.4	-62.53	-568.0	-1,473.9	1,549.4	1,530.2	19.18	80.760		
2,900.0	2,893.1	2,843.7	2,843.6	10.1	9.8	-63.38	-567.0	-1,475.2	1,539.7	1,519.8	19.88	77.455		
3,000.0	2,989.6	2,940.6	2,940.4	10.5	10.1	-64.37	-565.9	-1,476.3	1,528.6	1,508.0	20.57	74.310		
3,100.0	3,085.3	3,033.9	3,033.8	10.9	10.5	-65.49	-565.3	-1,477.4	1,516.5	1,495.3	21.25	71.358		
3,200.0	3,179.8	3,130.8	3,130.7	11.2	10.8	-66.80	-564.8	-1,478.5	1,503.6	1,481.6	21.95	68.498		
3,300.0	3,273.2	3,226.2	3,226.0	11.6	11.1	-68.26	-564.6	-1,479.1	1,489.6	1,466.9	22.65	65.771		
3,387.5	3,353.8	3,298.5	3,298.3	11.9	11.4	-69.52	-564.9	-1,479.7	1,477.2	1,454.0	23.22	63.606		
3,400.0	3,365.2	3,311.4	3,311.3	12.0	11.4	-69.71	-565.0	-1,479.8	1,475.5	1,452.1	23.32	63.279		
3,500.0	3,456.8	3,418.8	3,418.6	12.4	11.8	-71.34	-565.7	-1,479.9	1,461.4	1,437.4	24.07	60.723		
3,600.0	3,548.3	3,502.9	3,502.8	12.8	12.1	-72.65	-566.5	-1,479.8	1,448.3	1,423.6	24.75	58.521		
3,700.0	3,639.8	3,586.0	3,585.8	13.2	12.4	-73.96	-567.6	-1,479.8	1,436.6	1,411.1	25.43	56.484		
3,800.0	3,731.4	3,679.1	3,678.9	13.6	12.7	-75.45	-568.9	-1,480.1	1,426.2	1,400.0	26.16	54.520		
3,900.0	3,822.9	3,772.6	3,772.4	14.0	13.0	-76.97	-570.2	-1,480.2	1,416.7	1,389.8	26.89	52.680		
4,000.0	3,914.4	3,868.3	3,868.1	14.4	13.4	-78.53	-571.1	-1,480.3	1,408.1	1,380.5	27.64	50.947		
4,100.0	4,005.9	3,957.6	3,957.3	14.8	13.7	-79.99	-571.8	-1,480.3	1,400.5	1,372.2	28.37	49.368		
4,200.0	4,097.5	4,048.4	4,048.2	15.2	14.0	-81.49	-572.6	-1,480.6	1,394.3	1,365.2	29.11	47.900		
4,300.0	4,189.0	4,140.6	4,140.4	15.6	14.3	-83.04	-573.6	-1,480.5	1,389.1	1,359.3	29.86	46.523		
4,400.0	4,280.5	4,230.3	4,230.1	16.1	14.6	-84.55	-574.5	-1,480.6	1,385.2	1,354.6	30.60	45.265		
4,500.0	4,372.1	4,323.2	4,323.0	16.5	14.9	-86.12	-575.5	-1,480.6	1,382.5	1,351.2	31.36	44.083		
4,600.0	4,463.6	4,422.7	4,422.5	16.9	15.3	-87.80	-576.3	-1,480.5	1,380.8	1,348.6	32.15	42.950		
4,700.0	4,555.1	4,526.8	4,526.6	17.4	15.6	-89.56	-576.3	-1,479.9	1,379.3	1,346.4	32.95	41.861		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
4,800.0	4,646.7	4,621.5	4,621.3	17.8	16.0	-91.16	-575.8	-1,479.1	1,378.6	1,344.9	33.72	40.880		
4,817.2	4,662.4	4,637.5	4,637.3	17.9	16.0	-91.43	-575.8	-1,479.0	1,378.6	1,344.8	33.86	40.720 CC		
4,900.0	4,738.2	4,714.2	4,713.9	18.2	16.3	-92.72	-575.3	-1,478.2	1,379.0	1,344.5	34.49	39.981 ES		
5,000.0	4,829.7	4,807.1	4,806.9	18.7	16.6	-94.29	-574.8	-1,477.1	1,380.5	1,345.2	35.26	39.149		
5,100.0	4,921.3	4,899.8	4,899.5	19.1	16.9	-95.86	-574.2	-1,476.0	1,383.0	1,347.0	36.03	38.383		
5,200.0	5,012.8	4,992.7	4,992.4	19.5	17.3	-97.43	-573.7	-1,474.7	1,386.7	1,349.9	36.80	37.678		
5,300.0	5,104.3	5,081.8	5,081.5	20.0	17.6	-98.94	-573.2	-1,473.2	1,391.6	1,354.0	37.56	37.046		
5,400.0	5,195.8	5,180.8	5,180.5	20.4	17.9	-100.60	-572.6	-1,471.5	1,397.6	1,359.2	38.36	36.434		
5,500.0	5,287.4	5,272.0	5,271.7	20.9	18.2	-102.13	-571.8	-1,469.5	1,404.3	1,365.2	39.13	35.893		
5,600.0	5,378.9	5,356.7	5,356.4	21.3	18.5	-103.56	-571.5	-1,467.3	1,412.5	1,372.6	39.87	35.431		
5,700.0	5,470.4	5,445.6	5,445.2	21.8	18.8	-105.06	-571.7	-1,464.7	1,422.2	1,381.6	40.62	35.014		
5,800.0	5,562.0	5,537.6	5,537.1	22.2	19.2	-106.59	-571.8	-1,461.9	1,433.0	1,391.6	41.38	34.627		
5,900.0	5,653.5	5,626.2	5,625.7	22.7	19.5	-108.03	-571.7	-1,459.9	1,445.1	1,403.0	42.13	34.298		
6,000.0	5,745.0	5,717.8	5,717.3	23.1	19.8	-109.51	-571.9	-1,457.4	1,458.3	1,415.4	42.89	33.999		
6,100.0	5,836.6	5,813.1	5,812.6	23.6	20.1	-111.04	-572.0	-1,454.2	1,472.4	1,428.8	43.67	33.718		
6,200.0	5,928.1	5,892.0	5,891.4	24.0	20.4	-112.28	-572.2	-1,451.9	1,487.9	1,443.5	44.36	33.538		
6,278.6	6,000.0	5,964.5	5,963.9	24.4	20.7	-113.41	-572.7	-1,449.7	1,501.0	1,456.0	44.96	33.386		
6,290.0	6,010.4	5,975.1	5,974.5	24.4	20.7	-115.00	-572.7	-1,449.3	1,503.1	1,458.0	45.05	33.367		
6,300.0	6,019.5	5,984.5	5,983.8	24.5	20.7	-117.06	-572.8	-1,449.0	1,505.0	1,459.9	45.12	33.353		
6,350.0	6,065.8	6,029.6	6,028.9	24.7	20.9	-129.17	-573.1	-1,447.3	1,515.6	1,470.2	45.49	33.320 SF		
6,400.0	6,113.0	6,074.7	6,074.0	24.9	21.0	-144.82	-573.4	-1,445.7	1,527.9	1,482.0	45.84	33.332		
6,450.0	6,160.7	6,121.6	6,120.8	25.1	21.2	-163.48	-573.8	-1,443.9	1,541.5	1,495.3	46.18	33.376		
6,500.0	6,208.5	6,170.2	6,169.4	25.3	21.4	177.38	-574.3	-1,442.0	1,556.1	1,509.6	46.53	33.445		
6,550.0	6,255.8	6,217.7	6,216.8	25.4	21.5	160.72	-574.7	-1,440.0	1,571.7	1,524.8	46.86	33.543		
6,600.0	6,302.5	6,262.8	6,262.0	25.6	21.7	147.64	-575.1	-1,438.1	1,588.1	1,541.0	47.17	33.670		
6,650.0	6,347.9	6,307.0	6,306.1	25.7	21.9	137.72	-575.6	-1,436.2	1,605.3	1,557.8	47.47	33.817		
6,700.0	6,391.6	6,349.2	6,348.3	25.9	22.0	130.11	-576.1	-1,434.4	1,623.2	1,575.4	47.76	33.986		
6,750.0	6,433.4	6,389.8	6,388.8	26.0	22.2	124.12	-576.6	-1,432.5	1,641.7	1,593.7	48.04	34.173		
6,800.0	6,472.8	6,428.3	6,427.3	26.1	22.3	119.24	-577.2	-1,430.7	1,660.9	1,612.5	48.31	34.379		
6,850.0	6,509.4	6,464.5	6,463.4	26.2	22.4	115.13	-577.8	-1,428.9	1,680.5	1,632.0	48.57	34.603		
6,900.0	6,543.0	6,497.9	6,496.8	26.3	22.5	111.56	-578.5	-1,427.3	1,700.8	1,652.0	48.81	34.846		
6,950.0	6,573.2	6,531.1	6,529.9	26.4	22.6	108.43	-579.1	-1,425.6	1,721.5	1,672.5	49.05	35.098		
7,000.0	6,599.8	6,561.1	6,559.8	26.5	22.8	105.55	-579.7	-1,424.0	1,742.7	1,693.5	49.27	35.369		
7,050.0	6,622.5	6,587.4	6,586.1	26.6	22.8	102.83	-580.2	-1,422.5	1,764.4	1,714.9	49.48	35.661		
7,100.0	6,641.1	6,610.5	6,609.2	26.7	22.9	100.23	-580.6	-1,421.2	1,786.4	1,736.7	49.66	35.973		
7,150.0	6,655.4	6,630.2	6,628.9	26.8	23.0	97.70	-581.0	-1,419.9	1,808.7	1,758.9	49.82	36.304		
7,200.0	6,665.4	6,645.4	6,644.0	26.9	23.1	95.18	-581.2	-1,419.0	1,831.2	1,781.3	49.95	36.660		
7,250.0	6,670.8	6,655.6	6,654.2	27.0	23.1	92.67	-581.4	-1,418.3	1,853.9	1,803.9	50.05	37.039		
7,285.7	6,672.0	6,659.8	6,658.4	27.1	23.1	90.87	-581.5	-1,418.0	1,870.1	1,820.0	50.10	37.325		
7,300.0	6,672.0	6,661.0	6,659.6	27.1	23.1	90.91	-581.5	-1,417.9	1,876.6	1,826.5	50.12	37.443		
7,400.0	6,672.0	6,669.3	6,667.8	27.3	23.1	91.20	-581.7	-1,417.3	1,924.5	1,874.3	50.25	38.297		
7,500.0	6,672.0	6,677.9	6,676.4	27.6	23.2	91.49	-581.8	-1,416.7	1,976.3	1,925.9	50.40	39.216		
7,600.0	6,672.0	6,686.9	6,685.4	28.0	23.2	91.80	-582.0	-1,416.1	2,031.7	1,981.1	50.55	40.194		
7,700.0	6,672.0	6,696.2	6,694.7	28.3	23.2	92.12	-582.2	-1,415.4	2,090.4	2,039.7	50.70	41.228		
7,800.0	6,672.0	6,706.0	6,704.4	28.8	23.3	92.45	-582.3	-1,414.6	2,152.1	2,101.2	50.86	42.314		
7,900.0	6,672.0	6,710.6	6,709.0	29.3	23.3	92.61	-582.4	-1,414.3	2,216.5	2,165.5	51.00	43.465		
8,000.0	6,672.0	6,717.2	6,715.6	29.8	23.3	92.83	-582.6	-1,413.8	2,283.5	2,232.4	51.14	44.655		
8,100.0	6,672.0	6,724.4	6,722.7	30.4	23.3	93.08	-582.7	-1,413.3	2,352.9	2,301.6	51.28	45.884		
8,200.0	6,672.0	6,731.9	6,730.3	31.0	23.4	93.34	-582.8	-1,412.7	2,424.3	2,372.9	51.42	47.149		
8,300.0	6,672.0	6,739.5	6,737.8	31.7	23.4	93.60	-583.0	-1,412.1	2,497.8	2,446.2	51.55	48.449		
8,400.0	6,672.0	6,747.0	6,745.3	32.4	23.4	93.85	-583.2	-1,411.5	2,572.9	2,521.3	51.69	49.780		
8,500.0	6,672.0	6,754.6	6,752.9	33.1	23.4	94.11	-583.3	-1,411.0	2,649.7	2,597.9	51.81	51.141		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
8,600.0	6,672.0	6,762.1	6,760.4	33.9	23.5	94.37	-583.5	-1,410.4	2,728.0	2,676.1	51.93	52.529		
8,700.0	6,672.0	6,769.7	6,767.9	34.7	23.5	94.62	-583.6	-1,409.8	2,807.7	2,755.6	52.05	53.941		
8,800.0	6,672.0	6,777.2	6,775.4	35.5	23.5	94.88	-583.8	-1,409.2	2,888.6	2,836.4	52.16	55.375		
8,900.0	6,672.0	6,784.8	6,783.0	36.3	23.5	95.14	-583.9	-1,408.7	2,970.7	2,918.4	52.27	56.829		
9,000.0	6,672.0	6,792.3	6,790.5	37.2	23.6	95.39	-584.1	-1,408.1	3,053.8	3,001.4	52.38	58.302		
9,100.0	6,672.0	6,799.8	6,798.0	38.1	23.6	95.65	-584.2	-1,407.5	3,137.9	3,085.4	52.48	59.792		
9,200.0	6,672.0	6,807.4	6,805.5	39.0	23.6	95.91	-584.4	-1,407.0	3,222.8	3,170.3	52.58	61.297		
9,300.0	6,672.0	6,814.9	6,813.0	39.9	23.7	96.16	-584.5	-1,406.4	3,308.6	3,256.0	52.67	62.816		
9,400.0	6,672.0	6,822.5	6,820.6	40.8	23.7	96.42	-584.7	-1,405.8	3,395.2	3,342.4	52.76	64.347		
9,500.0	6,672.0	6,830.0	6,828.1	41.8	23.7	96.67	-584.8	-1,405.2	3,482.5	3,429.6	52.85	65.890		
9,600.0	6,672.0	6,837.6	6,835.6	42.7	23.7	96.93	-585.0	-1,404.7	3,570.4	3,517.5	52.94	67.443		
9,700.0	6,672.0	6,845.1	6,843.1	43.7	23.8	97.18	-585.1	-1,404.1	3,658.9	3,605.9	53.02	69.006		
9,800.0	6,672.0	6,852.6	6,850.6	44.7	23.8	97.44	-585.3	-1,403.5	3,748.1	3,694.9	53.11	70.577		
9,900.0	6,672.0	6,860.2	6,858.2	45.7	23.8	97.69	-585.4	-1,403.0	3,837.7	3,784.5	53.19	72.156		
10,000.0	6,672.0	6,867.7	6,865.7	46.7	23.9	97.94	-585.6	-1,402.4	3,927.8	3,874.5	53.26	73.741		
10,100.0	6,672.0	6,875.3	6,873.2	47.7	23.9	98.20	-585.7	-1,401.8	4,018.4	3,965.0	53.34	75.333		
10,200.0	6,672.0	6,882.8	6,880.7	48.8	23.9	98.45	-585.9	-1,401.2	4,109.4	4,056.0	53.42	76.930		
10,300.0	6,672.0	6,890.3	6,888.2	49.8	23.9	98.70	-586.0	-1,400.7	4,200.8	4,147.3	53.49	78.532		
10,400.0	6,672.0	6,897.9	6,895.7	50.9	24.0	98.96	-586.2	-1,400.1	4,292.5	4,239.0	53.56	80.138		
10,500.0	6,672.0	6,905.4	6,903.2	51.9	24.0	99.21	-586.3	-1,399.5	4,384.7	4,331.0	53.64	81.748		
10,600.0	6,672.0	6,912.9	6,910.8	53.0	24.0	99.46	-586.5	-1,398.9	4,477.1	4,423.4	53.71	83.361		
10,700.0	6,672.0	6,920.5	6,918.3	54.1	24.0	99.71	-586.6	-1,398.4	4,569.9	4,516.1	53.78	84.976		
10,800.0	6,672.0	6,928.0	6,925.8	55.2	24.1	99.97	-586.8	-1,397.8	4,662.9	4,609.1	53.85	86.594		
10,900.0	6,672.0	6,935.6	6,933.3	56.3	24.1	100.22	-586.9	-1,397.2	4,756.2	4,702.3	53.92	88.214		
11,000.0	6,672.0	6,919.0	6,916.8	57.4	24.0	99.67	-586.6	-1,398.5	4,849.9	4,796.0	53.92	89.943		
11,100.0	6,672.0	6,919.0	6,916.8	58.5	24.0	99.67	-586.6	-1,398.5	4,943.7	4,889.8	53.97	91.602		
11,200.0	6,672.0	6,919.0	6,916.8	59.6	24.0	99.68	-586.6	-1,398.5	5,037.8	4,983.8	54.02	93.263		
11,300.0	6,672.0	6,919.0	6,916.8	60.7	24.0	99.68	-586.6	-1,398.5	5,132.2	5,078.1	54.07	94.926		
11,400.0	6,672.0	6,919.0	6,916.8	61.8	24.0	99.68	-586.6	-1,398.5	5,226.7	5,172.6	54.11	96.590		
11,500.0	6,672.0	6,919.0	6,916.8	62.9	24.0	99.68	-586.6	-1,398.5	5,321.5	5,267.3	54.16	98.255		
11,600.0	6,672.0	6,919.0	6,916.8	64.1	24.0	99.68	-586.6	-1,398.5	5,416.4	5,362.2	54.21	99.922		
11,700.0	6,672.0	6,919.0	6,916.8	65.2	24.0	99.69	-586.6	-1,398.5	5,511.5	5,457.2	54.25	101.589		
11,800.0	6,672.0	6,919.0	6,916.8	66.3	24.0	99.69	-586.6	-1,398.5	5,606.8	5,552.5	54.30	103.256		
11,900.0	6,672.0	6,919.0	6,916.8	67.5	24.0	99.69	-586.6	-1,398.5	5,702.2	5,647.9	54.35	104.923		
12,000.0	6,672.0	6,919.0	6,916.8	68.6	24.0	99.69	-586.6	-1,398.5	5,797.8	5,743.5	54.39	106.591		
12,100.0	6,672.0	6,919.0	6,916.8	69.8	24.0	99.70	-586.6	-1,398.5	5,893.6	5,839.2	54.44	108.258		
12,200.0	6,672.0	6,919.0	6,916.8	70.9	24.0	99.70	-586.6	-1,398.5	5,989.5	5,935.0	54.49	109.925		
12,300.0	6,672.0	6,919.0	6,916.8	72.1	24.0	99.70	-586.6	-1,398.5	6,085.5	6,031.0	54.53	111.591		
12,400.0	6,672.0	6,919.0	6,916.8	73.2	24.0	99.70	-586.6	-1,398.5	6,181.7	6,127.1	54.58	113.256		
12,500.0	6,672.0	6,919.0	6,916.8	74.4	24.0	99.71	-586.6	-1,398.5	6,278.0	6,223.3	54.63	114.921		
12,600.0	6,672.0	6,919.0	6,916.8	75.5	24.0	99.71	-586.6	-1,398.5	6,374.4	6,319.7	54.68	116.584		
12,700.0	6,672.0	6,919.0	6,916.8	76.7	24.0	99.71	-586.6	-1,398.5	6,470.9	6,416.1	54.72	118.246		
12,800.0	6,672.0	6,919.0	6,916.8	77.9	24.0	99.71	-586.6	-1,398.5	6,567.5	6,512.7	54.77	119.906		
12,900.0	6,672.0	6,919.0	6,916.8	79.0	24.0	99.72	-586.6	-1,398.5	6,664.2	6,609.4	54.82	121.565		
13,000.0	6,672.0	6,919.0	6,916.8	80.2	24.0	99.72	-586.6	-1,398.5	6,761.0	6,706.1	54.87	123.222		
13,100.0	6,672.0	6,919.0	6,916.8	81.4	24.0	99.72	-586.6	-1,398.5	6,857.9	6,803.0	54.92	124.877		
13,200.0	6,672.0	6,919.0	6,916.8	82.6	24.0	99.73	-586.6	-1,398.5	6,954.9	6,899.9	54.97	126.530		
13,300.0	6,672.0	6,919.0	6,916.8	83.7	24.0	99.73	-586.6	-1,398.5	7,052.0	6,997.0	55.02	128.181		
13,400.0	6,672.0	6,919.0	6,916.8	84.9	24.0	99.73	-586.6	-1,398.5	7,149.1	7,094.1	55.07	129.829		
13,500.0	6,672.0	6,919.0	6,916.8	86.1	24.0	99.73	-586.6	-1,398.5	7,246.4	7,191.3	55.12	131.475		
13,600.0	6,672.0	6,919.0	6,916.8	87.3	24.0	99.74	-586.6	-1,398.5	7,343.7	7,288.5	55.17	133.119		
13,700.0	6,672.0	6,919.0	6,916.8	88.4	24.0	99.74	-586.6	-1,398.5	7,441.1	7,385.9	55.22	134.760		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												B Section 12 - Trebor B12-8 - Wellbore #1 - As Drilled		Offset Site Error:		0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWSG														Offset Well Error:		0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning			
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor					
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)						
13,800.0	6,672.0	6,919.0	6,916.8	89.6	24.0	99.74	-586.6	-1,398.5	7,538.6	7,483.3	55.27	136.399					
13,900.0	6,672.0	6,919.0	6,916.8	90.8	24.0	99.75	-586.6	-1,398.5	7,636.1	7,580.8	55.32	138.035					
14,000.0	6,672.0	6,919.0	6,916.8	92.0	24.0	99.75	-586.6	-1,398.5	7,733.7	7,678.3	55.37	139.667					
14,100.0	6,672.0	6,919.0	6,916.8	93.2	24.0	99.75	-586.6	-1,398.5	7,831.3	7,775.9	55.42	141.297					
14,200.0	6,672.0	6,919.0	6,916.8	94.4	24.0	99.76	-586.6	-1,398.5	7,929.0	7,873.6	55.48	142.924					
14,300.0	6,672.0	6,919.0	6,916.8	95.6	24.0	99.76	-586.6	-1,398.5	8,026.8	7,971.3	55.53	144.548					
14,400.0	6,672.0	6,919.0	6,916.8	96.8	24.0	99.76	-586.6	-1,398.5	8,124.6	8,069.1	55.58	146.168					
14,500.0	6,672.0	6,919.0	6,916.8	98.0	24.0	99.77	-586.6	-1,398.5	8,222.5	8,166.9	55.64	147.785					
14,600.0	6,672.0	6,919.0	6,916.8	99.2	24.0	99.77	-586.6	-1,398.5	8,320.5	8,264.8	55.69	149.399					
14,700.0	6,672.0	6,919.0	6,916.8	100.4	24.0	99.77	-586.6	-1,398.5	8,418.4	8,362.7	55.75	151.009					
14,800.0	6,672.0	6,919.0	6,916.8	101.6	24.0	99.78	-586.6	-1,398.5	8,516.5	8,460.7	55.80	152.615					
14,900.0	6,672.0	6,919.0	6,916.8	102.7	24.0	99.78	-586.6	-1,398.5	8,614.6	8,558.7	55.86	154.218					
15,000.0	6,672.0	6,919.0	6,916.8	103.9	24.0	99.78	-586.6	-1,398.5	8,712.7	8,656.8	55.92	155.818					
15,100.0	6,672.0	6,919.0	6,916.8	105.1	24.0	99.79	-586.6	-1,398.5	8,810.9	8,754.9	55.97	157.413					
15,200.0	6,672.0	6,919.0	6,916.8	106.3	24.0	99.79	-586.6	-1,398.5	8,909.1	8,853.0	56.03	159.005					
15,300.0	6,672.0	6,919.0	6,916.8	107.6	24.0	99.80	-586.6	-1,398.5	9,007.3	8,951.2	56.09	160.593					
15,400.0	6,672.0	6,919.0	6,916.8	108.8	24.0	99.80	-586.6	-1,398.5	9,105.6	9,049.5	56.15	162.177					
15,500.0	6,672.0	6,919.0	6,916.8	110.0	24.0	99.80	-586.6	-1,398.5	9,203.9	9,147.7	56.20	163.757					
15,600.0	6,672.0	6,919.0	6,916.8	111.2	24.0	99.81	-586.6	-1,398.5	9,302.3	9,246.0	56.26	165.333					
15,700.0	6,672.0	6,919.0	6,916.8	112.4	24.0	99.81	-586.6	-1,398.5	9,400.7	9,344.4	56.32	166.905					
15,800.0	6,672.0	6,919.0	6,916.8	113.6	24.0	99.82	-586.6	-1,398.5	9,499.1	9,442.7	56.38	168.473					
15,900.0	6,672.0	6,919.0	6,916.8	114.8	24.0	99.82	-586.6	-1,398.5	9,597.6	9,541.2	56.44	170.036					
16,000.0	6,672.0	6,919.0	6,916.8	116.0	24.0	99.82	-586.6	-1,398.5	9,696.1	9,639.6	56.51	171.596					
16,100.0	6,672.0	6,919.0	6,916.8	117.2	24.0	99.83	-586.6	-1,398.5	9,794.6	9,738.1	56.57	173.151					
16,200.0	6,672.0	6,919.0	6,916.8	118.4	24.0	99.83	-586.6	-1,398.5	9,893.2	9,836.6	56.63	174.701					
16,300.0	6,672.0	6,919.0	6,916.8	119.6	24.0	99.84	-586.6	-1,398.5	9,991.8	9,935.1	56.69	176.248					



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Roth 21-06 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
0.0	0.0	0.0	0.0	0.0	0.0	9.92	6,096.4	1,066.1	6,189.2					
100.0	100.0	44.6	44.6	0.1	0.1	9.92	6,096.4	1,066.1	6,189.0	6,188.8	0.20	N/A		
200.0	200.0	145.7	145.7	0.5	0.3	9.92	6,096.6	1,066.2	6,189.1	6,188.3	0.82	7,555.515		
300.0	300.0	256.8	256.8	0.8	0.7	9.92	6,096.4	1,066.7	6,189.0	6,187.5	1.57	3,953.958		
395.4	395.4	344.4	344.4	1.2	1.0	9.92	6,096.3	1,066.6	6,188.9	6,186.7	2.21	2,796.784		
400.0	400.0	348.1	348.1	1.2	1.0	9.92	6,096.3	1,066.6	6,188.9	6,186.7	2.24	2,760.069		
500.0	500.0	442.8	442.8	1.6	1.4	9.92	6,096.5	1,066.3	6,189.0	6,186.1	2.93	2,111.486		
600.0	600.0	556.3	556.3	1.9	1.8	9.92	6,096.4	1,066.4	6,189.0	6,185.3	3.69	1,679.216		
700.0	700.0	657.9	657.9	2.3	2.1	9.92	6,096.3	1,066.0	6,188.9	6,184.5	4.40	1,406.973		
797.3	797.3	746.3	746.3	2.6	2.4	9.92	6,096.3	1,065.9	6,188.8	6,183.7	5.06	1,224.038		
800.0	800.0	748.6	748.6	2.6	2.4	9.92	6,096.3	1,065.9	6,188.8	6,183.7	5.07	1,219.685		
900.0	900.0	836.3	836.3	3.0	2.7	9.91	6,096.5	1,065.4	6,188.9	6,183.1	5.74	1,078.439		
1,000.0	1,000.0	924.5	924.5	3.4	3.1	9.91	6,096.8	1,064.8	6,189.2	6,182.8	6.41	966.225		
1,100.0	1,100.0	1,016.9	1,016.9	3.7	3.4	9.90	6,097.4	1,064.4	6,189.7	6,182.6	7.09	873.437		
1,200.0	1,200.0	1,138.3	1,138.3	4.1	3.8	9.89	6,097.8	1,063.6	6,189.9	6,182.0	7.87	786.619		
1,300.0	1,300.0	1,222.3	1,222.3	4.4	4.1	9.89	6,098.2	1,063.1	6,190.2	6,181.7	8.52	726.473		
1,400.0	1,400.0	1,327.2	1,327.2	4.8	4.5	9.88	6,098.7	1,062.4	6,190.6	6,181.4	9.25	669.557		
1,500.0	1,500.0	1,427.7	1,427.7	5.1	4.8	9.88	6,099.1	1,062.1	6,190.9	6,180.9	9.96	621.859		
1,600.0	1,600.0	1,500.0	1,500.0	5.5	5.1	9.88	6,099.5	1,062.0	6,191.4	6,180.9	10.57	585.974		
1,700.0	1,700.0	1,581.1	1,581.1	5.9	5.4	9.88	6,100.3	1,062.1	6,192.4	6,181.2	11.21	552.511		
1,800.0	1,800.0	1,693.0	1,692.9	6.2	5.7	9.87	6,101.5	1,062.0	6,193.5	6,181.5	11.96	517.959		
1,900.0	1,900.0	1,810.6	1,810.6	6.6	6.2	9.88	6,102.2	1,063.0	6,194.2	6,181.5	12.73	486.679		
2,000.0	2,000.0	1,889.5	1,889.4	6.9	6.4	9.89	6,102.7	1,064.1	6,195.0	6,181.7	13.36	463.639		
2,100.0	2,100.0	1,988.0	1,987.9	7.3	6.8	9.90	6,103.5	1,065.1	6,196.0	6,182.0	14.06	440.535		
2,200.0	2,200.0	2,180.0	2,180.0	7.7	7.4	9.92	6,103.7	1,067.7	6,196.4	6,181.3	15.10	410.495		
2,300.0	2,300.0	2,298.4	2,298.3	8.0	7.9	60.98	6,102.5	1,069.5	6,194.9	6,179.0	15.86	390.507		
2,400.0	2,399.8	2,386.3	2,386.2	8.4	8.2	61.09	6,101.7	1,070.6	6,191.6	6,175.1	16.52	374.703		
2,500.0	2,499.5	2,478.6	2,478.5	8.7	8.5	61.25	6,101.0	1,071.4	6,186.9	6,169.7	17.20	359.697		
2,600.0	2,598.7	2,562.3	2,562.2	9.1	8.8	61.44	6,100.6	1,072.0	6,180.6	6,162.8	17.85	346.301		
2,700.0	2,697.5	2,651.8	2,651.7	9.4	9.1	61.70	6,100.4	1,072.6	6,173.0	6,154.4	18.52	333.390		
2,800.0	2,795.6	2,741.6	2,741.5	9.8	9.4	62.01	6,100.3	1,073.0	6,163.8	6,144.6	19.19	321.257		
2,900.0	2,893.1	2,845.3	2,845.2	10.1	9.8	62.39	6,100.3	1,073.4	6,153.2	6,133.3	19.91	309.098		
3,000.0	2,989.6	2,969.6	2,969.4	10.5	10.2	62.89	6,099.8	1,073.9	6,140.6	6,119.9	20.70	296.643		
3,100.0	3,085.3	3,104.6	3,104.5	10.9	10.7	63.49	6,098.7	1,074.1	6,126.2	6,104.6	21.53	284.508		
3,200.0	3,179.8	3,193.8	3,193.7	11.2	11.0	64.03	6,097.6	1,074.3	6,110.0	6,087.8	22.21	275.092		
3,300.0	3,273.2	3,332.2	3,332.0	11.6	11.5	64.79	6,095.6	1,074.2	6,092.1	6,069.0	23.06	264.180		
3,387.5	3,353.8	3,419.8	3,419.7	11.9	11.8	65.41	6,093.9	1,074.1	6,075.1	6,051.4	23.69	256.396		
3,400.0	3,365.2	3,434.7	3,434.6	12.0	11.8	65.46	6,093.6	1,074.1	6,072.6	6,048.8	23.79	255.223		
3,500.0	3,456.8	3,539.6	3,539.4	12.4	12.2	65.84	6,091.3	1,074.3	6,052.4	6,027.9	24.54	246.649		
3,600.0	3,548.3	3,622.4	3,622.2	12.8	12.5	66.14	6,089.3	1,074.7	6,032.5	6,007.3	25.22	239.230		
3,700.0	3,639.8	3,694.6	3,694.4	13.2	12.7	66.41	6,087.8	1,075.4	6,013.1	5,987.2	25.86	232.479		
3,800.0	3,731.4	3,770.2	3,769.9	13.6	13.0	66.69	6,086.3	1,076.2	5,994.1	5,967.6	26.53	225.936		
3,900.0	3,822.9	3,851.8	3,851.5	14.0	13.3	66.99	6,084.9	1,077.3	5,975.6	5,948.3	27.22	219.523		
4,000.0	3,914.4	3,939.9	3,939.6	14.4	13.6	67.33	6,083.4	1,078.6	5,957.4	5,929.4	27.94	213.239		
4,100.0	4,005.9	4,088.8	4,088.4	14.8	14.1	67.91	6,080.1	1,081.9	5,939.2	5,910.4	28.86	205.790		
4,200.0	4,097.5	4,270.2	4,269.7	15.2	14.7	68.63	6,073.3	1,086.2	5,919.9	5,890.0	29.89	198.055		
4,300.0	4,189.0	4,384.4	4,383.8	15.6	15.1	69.07	6,068.3	1,087.0	5,900.0	5,869.3	30.70	192.176		
4,400.0	4,280.5	4,445.2	4,444.5	16.1	15.4	69.31	6,065.9	1,086.7	5,880.3	5,849.0	31.34	187.606		
4,500.0	4,372.1	4,500.0	4,499.2	16.5	15.6	69.51	6,064.1	1,086.3	5,861.5	5,829.5	31.97	183.338		
4,600.0	4,463.6	4,545.2	4,544.5	16.9	15.7	69.68	6,063.0	1,085.8	5,843.5	5,810.9	32.57	179.416		
4,700.0	4,555.1	4,600.0	4,599.2	17.4	15.9	69.88	6,062.1	1,085.4	5,826.5	5,793.3	33.20	175.490		
4,800.0	4,646.7	4,652.0	4,651.2	17.8	16.1	70.08	6,061.6	1,085.0	5,810.3	5,776.4	33.83	171.770		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Roth 21-06 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
4,900.0	4,738.2	4,715.1	4,714.3	18.2	16.3	70.31	6,061.3	1,084.5	5,794.7	5,760.3	34.49	168.019		
5,000.0	4,829.7	4,776.4	4,775.7	18.7	16.5	70.55	6,061.1	1,084.6	5,779.9	5,744.8	35.15	164.450		
5,100.0	4,921.3	4,861.7	4,860.9	19.1	16.8	70.88	6,061.0	1,085.4	5,765.7	5,729.9	35.89	160.665		
5,200.0	5,012.8	4,959.4	4,958.6	19.5	17.2	71.27	6,060.8	1,086.5	5,751.7	5,715.1	36.67	156.855		
5,300.0	5,104.3	5,053.8	5,053.0	20.0	17.5	71.64	6,060.5	1,087.3	5,737.9	5,700.5	37.44	153.248		
5,400.0	5,195.8	5,145.2	5,144.4	20.4	17.8	71.99	6,060.6	1,087.1	5,724.3	5,686.1	38.21	149.824		
5,500.0	5,287.4	5,245.9	5,245.1	20.9	18.2	72.37	6,060.9	1,086.0	5,710.9	5,671.9	39.00	146.420		
5,600.0	5,378.9	5,348.6	5,347.8	21.3	18.5	72.75	6,061.1	1,084.6	5,697.5	5,657.7	39.81	143.125		
5,700.0	5,470.4	5,442.6	5,441.8	21.8	18.8	73.12	6,060.9	1,084.2	5,684.3	5,643.7	40.59	140.058		
5,800.0	5,562.0	5,528.9	5,528.1	22.2	19.1	73.46	6,060.5	1,084.2	5,671.3	5,630.0	41.34	137.188		
5,900.0	5,653.5	5,600.0	5,599.2	22.7	19.4	73.74	6,060.4	1,084.3	5,658.9	5,616.9	42.05	134.591		
6,000.0	5,745.0	5,694.4	5,693.6	23.1	19.7	74.12	6,060.3	1,084.8	5,646.9	5,604.1	42.83	131.852		
6,100.0	5,836.6	5,799.9	5,799.1	23.6	20.1	74.54	6,059.9	1,085.6	5,635.0	5,591.3	43.65	129.104		
6,200.0	5,928.1	5,886.5	5,885.6	24.0	20.4	74.90	6,059.4	1,086.2	5,623.3	5,578.8	44.41	126.633		
6,278.6	6,000.0	5,950.4	5,949.6	24.4	20.6	75.16	6,059.1	1,086.8	5,614.3	5,569.3	44.99	124.792		
6,290.0	6,010.4	5,959.5	5,958.6	24.4	20.6	73.75	6,059.1	1,086.9	5,612.9	5,567.9	45.07	124.528		
6,300.0	6,019.5	5,967.5	5,966.6	24.5	20.7	71.95	6,059.0	1,087.0	5,611.6	5,566.5	45.15	124.293		
6,350.0	6,065.8	6,008.7	6,007.9	24.7	20.8	60.97	6,058.8	1,087.6	5,603.7	5,558.2	45.51	123.122		
6,400.0	6,113.0	6,054.7	6,053.8	24.9	21.0	46.25	6,058.5	1,088.4	5,593.8	5,547.9	45.88	121.924		
6,450.0	6,160.7	6,101.1	6,100.2	25.1	21.1	28.27	6,058.2	1,089.4	5,581.8	5,535.6	46.23	120.738		
6,500.0	6,208.5	6,148.1	6,147.2	25.3	21.3	9.53	6,057.9	1,090.3	5,567.9	5,521.3	46.57	119.562		
6,550.0	6,255.8	6,194.9	6,194.0	25.4	21.5	-7.07	6,057.6	1,091.1	5,552.1	5,505.2	46.89	118.400		
6,600.0	6,302.5	6,241.5	6,240.6	25.6	21.6	-20.41	6,057.5	1,091.8	5,534.6	5,487.4	47.20	117.248		
6,650.0	6,347.9	6,287.0	6,286.1	25.7	21.8	-30.92	6,057.3	1,092.3	5,515.6	5,468.1	47.50	116.111		
6,700.0	6,391.6	6,335.5	6,334.7	25.9	22.0	-39.42	6,057.2	1,092.8	5,495.2	5,447.4	47.80	114.957		
6,750.0	6,433.4	6,383.8	6,382.9	26.0	22.1	-46.58	6,057.0	1,093.2	5,473.6	5,425.5	48.09	113.813		
6,800.0	6,472.8	6,425.1	6,424.2	26.1	22.3	-52.82	6,056.9	1,093.6	5,451.1	5,402.7	48.36	112.729		
6,850.0	6,509.4	6,461.4	6,460.6	26.2	22.4	-58.40	6,056.8	1,093.8	5,427.9	5,379.3	48.60	111.694		
6,900.0	6,543.0	6,494.7	6,493.8	26.3	22.5	-63.51	6,056.7	1,094.0	5,404.3	5,355.5	48.82	110.695		
6,950.0	6,573.2	6,555.9	6,555.0	26.4	22.7	-68.50	6,056.4	1,094.2	5,380.5	5,331.4	49.13	109.524		
7,000.0	6,599.8	6,614.9	6,614.0	26.5	22.9	-73.20	6,055.8	1,094.2	5,356.7	5,307.3	49.42	108.399		
7,050.0	6,622.5	6,629.4	6,628.5	26.6	23.0	-77.13	6,055.7	1,094.1	5,333.4	5,283.8	49.57	107.590		
7,100.0	6,641.1	6,647.9	6,647.0	26.7	23.0	-80.76	6,055.5	1,094.1	5,310.7	5,261.0	49.73	106.786		
7,150.0	6,655.4	6,662.1	6,661.2	26.8	23.1	-84.00	6,055.4	1,094.0	5,289.0	5,239.2	49.88	106.045		
7,200.0	6,665.4	6,671.9	6,671.0	26.9	23.1	-86.82	6,055.3	1,094.0	5,268.6	5,218.6	50.00	105.370		
7,250.0	6,670.8	6,672.8	6,676.3	27.0	23.3	-89.21	6,055.2	1,094.0	5,249.6	5,199.3	50.27	104.436		
7,285.7	6,672.0	6,672.8	6,677.3	27.1	23.3	-90.65	6,055.2	1,094.0	5,237.0	5,186.7	50.32	104.071		
7,300.0	6,672.0	6,672.9	6,677.2	27.1	23.3	-90.65	6,055.2	1,094.0	5,232.2	5,181.9	50.35	103.925		
7,400.0	6,672.0	6,672.4	6,676.7	27.3	23.3	-90.65	6,055.2	1,094.0	5,199.3	5,148.8	50.55	102.848		
7,500.0	6,672.0	6,672.9	6,676.2	27.6	23.3	-90.64	6,055.2	1,094.0	5,168.2	5,117.4	50.82	101.700		
7,600.0	6,672.0	6,672.4	6,675.7	28.0	23.3	-90.64	6,055.2	1,094.0	5,138.8	5,087.6	51.14	100.489		
7,700.0	6,672.0	6,672.9	6,675.2	28.3	23.3	-90.63	6,055.2	1,094.0	5,111.2	5,059.6	51.51	99.221		
7,800.0	6,672.0	6,672.4	6,674.7	28.8	23.3	-90.62	6,055.2	1,094.0	5,085.3	5,033.4	51.94	97.904		
7,900.0	6,672.0	6,672.9	6,674.2	29.3	23.3	-90.62	6,055.2	1,094.0	5,061.4	5,008.9	52.42	96.546		
8,000.0	6,672.0	6,675.1	6,674.2	29.8	23.1	-90.62	6,055.2	1,094.0	5,039.3	4,986.5	52.78	95.475		
8,100.0	6,672.0	6,674.7	6,673.8	30.4	23.1	-90.61	6,055.2	1,094.0	5,019.0	4,965.7	53.36	94.063		
8,200.0	6,672.0	6,674.3	6,673.4	31.0	23.1	-90.61	6,055.2	1,094.0	5,000.7	4,946.8	53.98	92.638		
8,300.0	6,672.0	6,673.9	6,673.0	31.7	23.1	-90.60	6,055.2	1,094.0	4,984.4	4,929.7	54.65	91.210		
8,400.0	6,672.0	6,673.5	6,672.6	32.4	23.1	-90.60	6,055.2	1,094.0	4,969.9	4,914.6	55.35	89.788		
8,500.0	6,672.0	6,673.1	6,672.2	33.1	23.1	-90.60	6,055.2	1,094.0	4,957.5	4,901.4	56.09	88.380		
8,600.0	6,672.0	6,672.7	6,671.8	33.9	23.1	-90.59	6,055.3	1,094.0	4,947.0	4,890.1	56.87	86.993		
8,700.0	6,672.0	6,672.2	6,671.3	34.7	23.1	-90.59	6,055.3	1,094.0	4,938.5	4,880.8	57.67	85.634		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Roth 21-06 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
8,800.0	6,672.0	6,671.8	6,670.9	35.5	23.1	-90.58	6,055.3	1,094.0	4,932.0	4,873.5	58.50	84.310		
8,900.0	6,672.0	6,671.4	6,670.5	36.3	23.1	-90.58	6,055.3	1,094.0	4,927.6	4,868.2	59.35	83.026		
9,000.0	6,672.0	6,671.0	6,670.1	37.2	23.1	-90.57	6,055.3	1,094.0	4,925.1	4,864.9	60.22	81.785		
9,070.8	6,672.0	6,670.8	6,669.9	37.8	23.1	-90.57	6,055.3	1,094.0	4,924.6	4,863.8	60.85	80.933	CC	
9,100.0	6,672.0	6,670.6	6,669.8	38.1	23.1	-90.57	6,055.3	1,094.0	4,924.7	4,863.6	61.11	80.592	ES	
9,200.0	6,672.0	6,670.3	6,669.4	39.0	23.1	-90.56	6,055.3	1,094.0	4,926.3	4,864.3	62.01	79.450		
9,300.0	6,672.0	6,669.9	6,669.0	39.9	23.1	-90.56	6,055.3	1,094.0	4,929.9	4,867.0	62.91	78.360		
9,400.0	6,672.0	6,669.5	6,668.6	40.8	23.1	-90.55	6,055.3	1,094.0	4,935.6	4,871.7	63.83	77.325		
9,500.0	6,672.0	6,669.1	6,668.2	41.8	23.1	-90.55	6,055.3	1,094.0	4,943.2	4,878.5	64.75	76.345		
9,600.0	6,672.0	6,668.7	6,667.8	42.7	23.1	-90.54	6,055.3	1,094.0	4,952.9	4,887.2	65.67	75.422		
9,700.0	6,672.0	6,668.3	6,667.4	43.7	23.1	-90.54	6,055.3	1,094.0	4,964.5	4,897.9	66.59	74.555		
9,800.0	6,672.0	6,667.9	6,667.0	44.7	23.1	-90.54	6,055.3	1,094.0	4,978.1	4,910.6	67.50	73.746		
9,900.0	6,672.0	6,667.5	6,666.6	45.7	23.1	-90.53	6,055.3	1,094.0	4,993.7	4,925.3	68.41	72.992		
10,000.0	6,672.0	6,667.2	6,666.3	46.7	23.1	-90.53	6,055.3	1,094.0	5,011.2	4,941.9	69.32	72.294		
10,100.0	6,672.0	6,666.8	6,665.9	47.7	23.1	-90.52	6,055.3	1,094.0	5,030.6	4,960.4	70.21	71.651		
10,200.0	6,672.0	6,666.4	6,665.5	48.8	23.1	-90.52	6,055.3	1,094.0	5,052.0	4,980.9	71.09	71.061		
10,300.0	6,672.0	6,666.0	6,665.1	49.8	23.1	-90.51	6,055.3	1,094.0	5,075.2	5,003.2	71.96	70.525		
10,400.0	6,672.0	6,665.7	6,664.8	50.9	23.1	-90.51	6,055.3	1,094.0	5,100.2	5,027.4	72.82	70.040		
10,500.0	6,672.0	6,665.3	6,664.4	51.9	23.1	-90.50	6,055.3	1,094.0	5,127.1	5,053.4	73.66	69.605		
10,600.0	6,672.0	6,664.9	6,664.0	53.0	23.1	-90.50	6,055.3	1,094.0	5,155.8	5,081.3	74.48	69.220		
10,700.0	6,672.0	6,664.6	6,663.7	54.1	23.1	-90.50	6,055.3	1,094.0	5,186.2	5,110.9	75.29	68.881		
10,800.0	6,672.0	6,664.2	6,663.3	55.2	23.1	-90.49	6,055.3	1,094.0	5,218.3	5,142.3	76.08	68.589		
10,900.0	6,672.0	6,663.8	6,662.9	56.3	23.1	-90.49	6,055.3	1,094.0	5,252.2	5,175.3	76.85	68.341		
11,000.0	6,672.0	6,663.5	6,662.6	57.4	23.1	-90.48	6,055.3	1,094.0	5,287.7	5,210.1	77.60	68.137		
11,100.0	6,672.0	6,663.1	6,662.2	58.5	23.1	-90.48	6,055.3	1,094.0	5,324.9	5,246.5	78.34	67.974		
11,200.0	6,672.0	6,662.8	6,661.9	59.6	23.1	-90.48	6,055.4	1,094.0	5,363.6	5,284.6	79.05	67.851		
11,300.0	6,672.0	6,662.4	6,661.5	60.7	23.1	-90.47	6,055.4	1,094.0	5,404.0	5,324.2	79.74	67.767		
11,400.0	6,672.0	6,662.0	6,661.1	61.8	23.1	-90.47	6,055.4	1,094.0	5,445.8	5,365.4	80.42	67.720		
11,500.0	6,672.0	6,661.7	6,660.8	62.9	23.1	-90.46	6,055.4	1,094.0	5,489.2	5,408.1	81.07	67.710	SF	
11,600.0	6,672.0	6,661.3	6,660.4	64.1	23.1	-90.46	6,055.4	1,094.0	5,534.0	5,452.3	81.70	67.734		
11,700.0	6,672.0	6,661.0	6,660.1	65.2	23.1	-90.45	6,055.4	1,094.0	5,580.2	5,497.9	82.31	67.791		
11,800.0	6,672.0	6,660.6	6,659.7	66.3	23.1	-90.45	6,055.4	1,094.0	5,627.9	5,545.0	82.91	67.881		
11,900.0	6,672.0	6,660.3	6,659.4	67.5	23.1	-90.45	6,055.4	1,094.0	5,676.9	5,593.4	83.48	68.002		
12,000.0	6,672.0	6,659.9	6,659.1	68.6	23.1	-90.44	6,055.4	1,094.0	5,727.2	5,643.1	84.03	68.152		
12,100.0	6,672.0	6,659.6	6,658.7	69.8	23.1	-90.44	6,055.4	1,094.0	5,778.8	5,694.2	84.57	68.332		
12,200.0	6,672.0	6,659.3	6,658.4	70.9	23.1	-90.43	6,055.4	1,094.0	5,831.6	5,746.5	85.09	68.538		
12,300.0	6,672.0	6,658.9	6,658.0	72.1	23.1	-90.43	6,055.4	1,094.0	5,885.7	5,800.1	85.58	68.772		
12,400.0	6,672.0	6,658.6	6,657.7	73.2	23.1	-90.43	6,055.4	1,094.0	5,940.9	5,854.9	86.06	69.030		
12,500.0	6,672.0	6,658.2	6,657.4	74.4	23.1	-90.42	6,055.4	1,094.0	5,997.3	5,910.8	86.52	69.314		
12,600.0	6,672.0	6,657.9	6,657.0	75.5	23.1	-90.42	6,055.4	1,094.0	6,054.8	5,967.9	86.97	69.621		
12,700.0	6,672.0	6,657.6	6,656.7	76.7	23.1	-90.41	6,055.4	1,094.0	6,113.5	6,026.1	87.40	69.950		
12,800.0	6,672.0	6,657.2	6,656.4	77.9	23.1	-90.41	6,055.4	1,094.0	6,173.1	6,085.3	87.81	70.301		
12,900.0	6,672.0	6,656.9	6,656.0	79.0	23.1	-90.41	6,055.4	1,094.0	6,233.8	6,145.6	88.21	70.674		
13,000.0	6,672.0	6,656.6	6,655.7	80.2	23.1	-90.40	6,055.4	1,094.0	6,295.5	6,206.9	88.59	71.066		
13,100.0	6,672.0	6,656.3	6,655.4	81.4	23.1	-90.40	6,055.4	1,094.0	6,358.2	6,269.2	88.95	71.478		
13,200.0	6,672.0	6,655.9	6,655.0	82.6	23.1	-90.40	6,055.4	1,094.0	6,421.8	6,332.5	89.31	71.908		
13,300.0	6,672.0	6,655.6	6,654.7	83.7	23.1	-90.39	6,055.4	1,094.0	6,486.3	6,396.6	89.64	72.356		
13,400.0	6,672.0	6,655.3	6,654.4	84.9	23.1	-90.39	6,055.4	1,094.0	6,551.7	6,461.7	89.97	72.822		
13,500.0	6,672.0	6,655.0	6,654.1	86.1	23.1	-90.38	6,055.4	1,094.0	6,617.9	6,527.7	90.28	73.304		
13,600.0	6,672.0	6,654.6	6,653.7	87.3	23.1	-90.38	6,055.4	1,094.0	6,685.0	6,594.5	90.58	73.802		
13,700.0	6,672.0	6,654.3	6,653.4	88.4	23.1	-90.38	6,055.4	1,094.0	6,752.9	6,662.1	90.87	74.316		
13,800.0	6,672.0	6,654.0	6,653.1	89.6	23.1	-90.37	6,055.4	1,094.0	6,821.6	6,730.5	91.14	74.844		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Roth 21-06 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
13,900.0	6,672.0	6,653.7	6,652.8	90.8	23.1	-90.37	6,055.4	1,094.1	6,891.1	6,799.7	91.41	75.386		
14,000.0	6,672.0	6,653.4	6,652.5	92.0	23.1	-90.37	6,055.4	1,094.1	6,961.3	6,869.6	91.66	75.943		
14,100.0	6,672.0	6,653.1	6,652.2	93.2	23.1	-90.36	6,055.4	1,094.1	7,032.2	6,940.2	91.91	76.512		
14,200.0	6,672.0	6,652.7	6,651.9	94.4	23.1	-90.36	6,055.5	1,094.1	7,103.8	7,011.6	92.14	77.094		
14,300.0	6,672.0	6,652.4	6,651.5	95.6	23.1	-90.35	6,055.5	1,094.1	7,176.0	7,083.7	92.37	77.689		
14,400.0	6,672.0	6,652.1	6,651.2	96.8	23.1	-90.35	6,055.5	1,094.1	7,248.9	7,156.4	92.59	78.295		
14,500.0	6,672.0	6,651.8	6,650.9	98.0	23.1	-90.35	6,055.5	1,094.1	7,322.5	7,229.7	92.79	78.912		
14,600.0	6,672.0	6,651.5	6,650.6	99.2	23.1	-90.34	6,055.5	1,094.1	7,396.7	7,303.7	92.99	79.541		
14,700.0	6,672.0	6,651.2	6,650.3	100.4	23.1	-90.34	6,055.5	1,094.1	7,471.4	7,378.3	93.18	80.180		
14,800.0	6,672.0	6,650.9	6,650.0	101.6	23.1	-90.34	6,055.5	1,094.1	7,546.8	7,453.4	93.37	80.829		
14,900.0	6,672.0	6,650.6	6,649.7	102.7	23.1	-90.33	6,055.5	1,094.1	7,622.7	7,529.2	93.54	81.488		
15,000.0	6,672.0	6,650.3	6,649.4	103.9	23.1	-90.33	6,055.5	1,094.1	7,699.2	7,605.5	93.71	82.156		
15,100.0	6,672.0	6,650.0	6,649.1	105.1	23.1	-90.33	6,055.5	1,094.1	7,776.2	7,682.3	93.88	82.834		
15,200.0	6,672.0	6,649.7	6,648.8	106.3	23.1	-90.32	6,055.5	1,094.1	7,853.7	7,759.6	94.03	83.520		
15,300.0	6,672.0	6,649.4	6,648.5	107.6	23.1	-90.32	6,055.5	1,094.1	7,931.7	7,837.5	94.18	84.215		
15,400.0	6,672.0	6,649.1	6,648.2	108.8	23.1	-90.32	6,055.5	1,094.1	8,010.1	7,915.8	94.33	84.918		
15,500.0	6,672.0	6,648.8	6,647.9	110.0	23.1	-90.31	6,055.5	1,094.1	8,089.1	7,994.6	94.47	85.629		
15,600.0	6,672.0	6,648.5	6,647.6	111.2	23.1	-90.31	6,055.5	1,094.1	8,168.5	8,073.9	94.60	86.347		
15,700.0	6,672.0	6,648.2	6,647.3	112.4	23.1	-90.31	6,055.5	1,094.1	8,248.4	8,153.6	94.73	87.073		
15,800.0	6,672.0	6,647.9	6,647.0	113.6	23.0	-90.30	6,055.5	1,094.1	8,328.6	8,233.8	94.85	87.806		
15,900.0	6,672.0	6,647.6	6,646.8	114.8	23.0	-90.30	6,055.5	1,094.1	8,409.4	8,314.4	94.97	88.545		
16,000.0	6,672.0	6,647.4	6,646.5	116.0	23.0	-90.30	6,055.5	1,094.1	8,490.5	8,395.4	95.09	89.291		
16,100.0	6,672.0	6,647.1	6,646.2	117.2	23.0	-90.29	6,055.5	1,094.1	8,572.0	8,476.8	95.20	90.044		
16,200.0	6,672.0	6,646.8	6,645.9	118.4	23.0	-90.29	6,055.5	1,094.1	8,653.9	8,558.5	95.30	90.803		
16,300.0	6,672.0	6,646.5	6,645.6	119.6	23.0	-90.29	6,055.5	1,094.1	8,736.1	8,640.7	95.41	91.567		
16,400.0	6,672.0	6,646.2	6,645.3	120.8	23.0	-90.28	6,055.5	1,094.1	8,818.7	8,723.2	95.51	92.337		
16,500.0	6,672.0	6,645.9	6,645.0	122.0	23.0	-90.28	6,055.5	1,094.1	8,901.7	8,806.1	95.60	93.113		
16,600.0	6,672.0	6,645.7	6,644.8	123.2	23.0	-90.28	6,055.5	1,094.1	8,985.0	8,889.3	95.69	93.894		
16,700.0	6,672.0	6,645.4	6,644.5	124.5	23.0	-90.27	6,055.5	1,094.1	9,068.7	8,972.9	95.78	94.680		
16,800.0	6,672.0	6,645.1	6,644.2	125.7	23.0	-90.27	6,055.5	1,094.1	9,152.7	9,056.8	95.87	95.471		
16,900.0	6,672.0	6,644.8	6,643.9	126.9	23.0	-90.27	6,055.5	1,094.1	9,236.9	9,141.0	95.95	96.267		
17,000.0	6,672.0	6,644.5	6,643.6	128.1	23.0	-90.26	6,055.5	1,094.1	9,321.5	9,225.5	96.03	97.068		
17,100.0	6,672.0	6,644.3	6,643.4	129.3	23.0	-90.26	6,055.5	1,094.1	9,406.4	9,310.3	96.11	97.873		
17,200.0	6,672.0	6,644.0	6,643.1	130.5	23.0	-90.26	6,055.5	1,094.1	9,491.6	9,395.4	96.18	98.682		
17,300.0	6,672.0	6,643.7	6,642.8	131.7	23.0	-90.25	6,055.5	1,094.1	9,577.1	9,480.8	96.26	99.495		
17,400.0	6,672.0	6,643.4	6,642.5	133.0	23.0	-90.25	6,055.5	1,094.1	9,662.8	9,566.5	96.33	100.312		
17,500.0	6,672.0	6,643.2	6,642.3	134.2	23.0	-90.25	6,055.5	1,094.1	9,748.8	9,652.5	96.40	101.133		
17,600.0	6,672.0	6,642.9	6,642.0	135.4	23.0	-90.24	6,055.6	1,094.1	9,835.1	9,738.7	96.46	101.958		
17,700.0	6,672.0	6,642.6	6,641.7	136.6	23.0	-90.24	6,055.6	1,094.1	9,921.6	9,825.1	96.53	102.787		



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Roth 23-06 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	17.88	3,517.8	1,134.7	3,696.4					
100.0	100.0	68.9	68.9	0.1	0.1	17.88	3,517.8	1,134.6	3,696.3	3,696.1	0.25	N/A		
200.0	200.0	184.8	184.8	0.5	0.5	17.87	3,517.9	1,134.4	3,696.3	3,695.3	0.95	3,870.930		
300.0	300.0	287.9	287.9	0.8	0.8	17.87	3,517.5	1,134.2	3,695.8	3,694.2	1.67	2,207.907		
400.0	400.0	390.3	390.3	1.2	1.2	17.87	3,517.0	1,134.1	3,695.4	3,693.0	2.39	1,545.627		
500.0	500.0	480.9	480.9	1.6	1.5	17.87	3,516.6	1,134.1	3,695.0	3,691.9	3.07	1,204.865		
600.0	600.0	578.9	578.9	1.9	1.9	17.87	3,516.5	1,134.0	3,694.8	3,691.0	3.77	980.531		
700.0	700.0	684.6	684.6	2.3	2.2	17.87	3,516.3	1,133.8	3,694.5	3,690.1	4.50	821.627		
800.0	800.0	809.5	809.5	2.6	2.7	17.87	3,515.5	1,133.5	3,693.9	3,688.6	5.29	697.887		
900.0	900.0	904.1	904.1	3.0	3.0	17.87	3,514.7	1,133.2	3,693.0	3,687.0	5.98	617.237		
1,000.0	1,000.0	1,001.8	1,001.8	3.4	3.3	17.87	3,513.9	1,133.0	3,692.2	3,685.5	6.68	552.387		
1,100.0	1,100.0	1,092.1	1,092.0	3.7	3.6	17.87	3,513.3	1,133.0	3,691.5	3,684.1	7.36	501.637		
1,200.0	1,200.0	1,196.1	1,196.0	4.1	4.0	17.87	3,512.7	1,132.7	3,690.9	3,682.8	8.08	456.687		
1,300.0	1,300.0	1,291.3	1,291.2	4.4	4.3	17.87	3,512.2	1,132.5	3,690.3	3,681.5	8.77	420.593		
1,400.0	1,400.0	1,382.7	1,382.7	4.8	4.7	17.87	3,511.8	1,132.4	3,689.9	3,680.5	9.45	390.345		
1,500.0	1,500.0	1,488.2	1,488.1	5.1	5.0	17.87	3,511.6	1,132.1	3,689.6	3,679.4	10.18	362.415		
1,600.0	1,600.0	1,579.7	1,579.6	5.5	5.4	17.87	3,511.3	1,131.8	3,689.2	3,678.4	10.86	339.732		
1,700.0	1,700.0	1,687.3	1,687.3	5.9	5.7	17.86	3,511.1	1,131.6	3,689.0	3,677.4	11.59	318.167		
1,800.0	1,800.0	1,782.7	1,782.6	6.2	6.1	17.86	3,510.8	1,131.4	3,688.6	3,676.3	12.29	300.196		
1,900.0	1,900.0	1,889.8	1,889.7	6.6	6.4	17.86	3,510.4	1,131.2	3,688.2	3,675.2	13.02	283.252		
2,000.0	2,000.0	2,013.3	2,013.2	6.9	6.9	17.86	3,509.6	1,130.6	3,687.5	3,673.7	13.81	266.975		
2,100.0	2,100.0	2,118.2	2,118.1	7.3	7.2	17.85	3,508.6	1,129.9	3,686.4	3,671.8	14.54	253.566		
2,200.0	2,200.0	2,240.8	2,240.7	7.7	7.7	17.84	3,507.0	1,128.6	3,684.7	3,669.4	15.33	240.432		
2,300.0	2,300.0	2,348.3	2,348.2	8.0	8.1	68.90	3,505.2	1,127.1	3,682.1	3,666.1	16.06	229.309		
2,400.0	2,399.8	2,449.3	2,449.2	8.4	8.4	69.04	3,503.4	1,125.6	3,678.1	3,661.4	16.77	219.392		
2,500.0	2,499.5	2,545.0	2,544.8	8.7	8.7	69.25	3,501.8	1,124.4	3,673.0	3,655.5	17.45	210.428		
2,600.0	2,598.7	2,639.8	2,639.7	9.1	9.1	69.52	3,500.2	1,123.2	3,666.7	3,648.5	18.14	202.107		
2,700.0	2,697.5	2,735.5	2,735.3	9.4	9.4	69.87	3,498.8	1,122.0	3,659.3	3,640.5	18.83	194.302		
2,800.0	2,795.6	2,833.6	2,833.4	9.8	9.8	70.30	3,497.3	1,120.8	3,650.9	3,631.4	19.53	186.900		
2,900.0	2,893.1	2,932.1	2,931.9	10.1	10.1	70.80	3,495.8	1,119.6	3,641.4	3,621.2	20.24	179.929		
3,000.0	2,989.6	3,026.8	3,026.5	10.5	10.4	71.35	3,494.4	1,118.3	3,630.9	3,609.9	20.93	173.472		
3,100.0	3,085.3	3,110.8	3,110.6	10.9	10.7	71.93	3,493.3	1,117.3	3,619.6	3,598.0	21.59	167.651		
3,200.0	3,179.8	3,181.0	3,180.7	11.2	11.0	72.50	3,492.6	1,117.0	3,607.9	3,585.7	22.20	162.483		
3,300.0	3,273.2	3,248.9	3,248.7	11.6	11.2	73.10	3,492.2	1,117.2	3,596.2	3,573.3	22.82	157.617		
3,387.5	3,353.8	3,308.0	3,307.7	11.9	11.4	73.66	3,492.1	1,117.8	3,585.9	3,562.5	23.35	153.552		
3,400.0	3,365.2	3,317.2	3,316.9	12.0	11.4	73.72	3,492.1	1,117.9	3,584.4	3,561.0	23.43	152.968		
3,500.0	3,456.8	3,390.8	3,390.6	12.4	11.7	74.20	3,492.3	1,119.0	3,573.2	3,549.1	24.07	148.433		
3,600.0	3,548.3	3,490.0	3,489.7	12.8	12.0	74.83	3,492.8	1,120.3	3,562.6	3,537.8	24.81	143.610		
3,700.0	3,639.8	3,579.0	3,578.7	13.2	12.4	75.40	3,493.3	1,121.2	3,552.4	3,526.8	25.51	139.236		
3,800.0	3,731.4	3,662.8	3,662.5	13.6	12.6	75.94	3,493.9	1,122.0	3,542.6	3,516.4	26.21	135.187		
3,900.0	3,822.9	3,754.3	3,754.0	14.0	13.0	76.53	3,494.7	1,122.9	3,533.5	3,506.6	26.93	131.216		
4,000.0	3,914.4	3,846.6	3,846.3	14.4	13.3	77.13	3,495.5	1,123.6	3,524.8	3,497.1	27.66	127.430		
4,100.0	4,005.9	3,935.3	3,935.0	14.8	13.6	77.70	3,496.3	1,124.5	3,516.5	3,488.1	28.38	123.895		
4,200.0	4,097.5	4,035.4	4,035.1	15.2	13.9	78.36	3,496.9	1,125.8	3,508.7	3,479.5	29.15	120.372		
4,300.0	4,189.0	4,137.3	4,137.0	15.6	14.3	79.04	3,497.0	1,127.3	3,500.9	3,470.9	29.92	116.990		
4,400.0	4,280.5	4,221.0	4,220.7	16.1	14.6	79.61	3,496.7	1,129.3	3,493.6	3,463.0	30.64	114.017		
4,500.0	4,372.1	4,315.9	4,315.5	16.5	14.9	80.27	3,496.2	1,132.1	3,486.9	3,455.5	31.40	111.047		
4,600.0	4,463.6	4,406.7	4,406.2	16.9	15.2	80.91	3,495.4	1,135.0	3,480.6	3,448.5	32.15	108.270		
4,700.0	4,555.1	4,475.2	4,474.8	17.4	15.5	81.40	3,494.9	1,137.6	3,475.2	3,442.4	32.82	105.885		
4,800.0	4,646.7	4,561.4	4,560.8	17.8	15.8	82.02	3,494.3	1,141.4	3,470.7	3,437.1	33.56	103.428		
4,900.0	4,738.2	4,657.8	4,657.1	18.2	16.1	82.72	3,493.4	1,145.9	3,466.6	3,432.3	34.33	100.978		
5,000.0	4,829.7	4,770.9	4,770.2	18.7	16.5	83.54	3,492.2	1,150.6	3,462.7	3,427.6	35.16	98.477		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Roth 23-06 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,100.0	4,921.3	4,889.9	4,889.1	19.1	16.9	84.37	3,491.3	1,153.2	3,458.7	3,422.6	36.01	96.035		
5,200.0	5,012.8	4,994.3	4,993.4	19.5	17.3	85.09	3,490.3	1,154.5	3,454.5	3,417.7	36.82	93.830		
5,300.0	5,104.3	5,077.0	5,076.2	20.0	17.6	85.65	3,489.8	1,155.1	3,450.8	3,413.3	37.55	91.905		
5,400.0	5,195.8	5,181.3	5,180.5	20.4	17.9	86.35	3,489.5	1,155.3	3,447.7	3,409.3	38.35	89.895		
5,500.0	5,287.4	5,278.7	5,277.9	20.9	18.3	87.00	3,489.1	1,155.1	3,444.6	3,405.4	39.13	88.019		
5,600.0	5,378.9	5,341.6	5,340.8	21.3	18.5	87.43	3,488.9	1,155.1	3,442.2	3,402.4	39.80	86.486		
5,700.0	5,470.4	5,400.0	5,399.2	21.8	18.7	87.82	3,489.1	1,155.6	3,441.3	3,400.9	40.45	85.079		
5,710.2	5,479.8	5,400.0	5,399.2	21.8	18.7	87.82	3,489.1	1,155.6	3,441.3	3,400.8	40.49	84.984		
5,800.0	5,562.0	5,453.6	5,452.7	22.2	18.9	88.19	3,489.7	1,156.6	3,441.8	3,400.7	41.07	83.794		
5,900.0	5,653.5	5,533.5	5,532.6	22.7	19.2	88.74	3,490.9	1,158.7	3,443.6	3,401.8	41.79	82.394		
6,000.0	5,745.0	5,674.2	5,673.3	23.1	19.7	89.70	3,492.1	1,161.4	3,445.1	3,402.3	42.74	80.614		
6,100.0	5,836.6	5,797.3	5,796.4	23.6	20.1	90.54	3,492.4	1,162.7	3,446.1	3,402.4	43.61	79.019		
6,200.0	5,928.1	5,890.4	5,889.4	24.0	20.4	91.17	3,492.2	1,163.4	3,447.1	3,402.7	44.38	77.671		
6,278.6	6,000.0	5,967.5	5,966.6	24.4	20.7	91.69	3,492.2	1,163.7	3,448.1	3,403.1	45.00	76.627		
6,290.0	6,010.4	5,978.8	5,977.9	24.4	20.7	90.22	3,492.2	1,163.7	3,448.2	3,403.1	45.09	76.476		
6,300.0	6,019.5	5,988.7	5,987.8	24.5	20.8	88.57	3,492.2	1,163.7	3,448.2	3,403.0	45.17	76.341		
6,350.0	6,065.8	6,036.8	6,035.9	24.7	20.9	78.34	3,492.3	1,163.7	3,446.1	3,400.5	45.55	75.652		
6,400.0	6,113.0	6,085.2	6,084.3	24.9	21.1	64.30	3,492.3	1,163.6	3,440.7	3,394.8	45.92	74.924		
6,450.0	6,160.7	6,129.9	6,129.0	25.1	21.3	46.94	3,492.4	1,163.6	3,432.1	3,385.8	46.26	74.183		
6,500.0	6,208.5	6,172.9	6,171.9	25.3	21.4	28.75	3,492.6	1,163.5	3,420.3	3,373.7	46.59	73.420		
6,550.0	6,255.8	6,215.9	6,214.9	25.4	21.6	12.64	3,492.9	1,163.4	3,405.5	3,358.6	46.89	72.624		
6,600.0	6,302.5	6,258.7	6,257.8	25.6	21.7	-0.30	3,493.2	1,163.3	3,387.7	3,340.5	47.18	71.797		
6,650.0	6,347.9	6,300.5	6,299.5	25.7	21.8	-10.54	3,493.6	1,163.2	3,367.1	3,319.7	47.46	70.945		
6,700.0	6,391.6	6,337.6	6,336.6	25.9	22.0	-18.91	3,493.7	1,163.5	3,343.9	3,296.2	47.71	70.087		
6,750.0	6,433.4	6,373.4	6,372.4	26.0	22.1	-26.13	3,493.4	1,164.3	3,318.4	3,270.5	47.95	69.209		
6,800.0	6,472.8	6,408.1	6,407.1	26.1	22.2	-32.71	3,492.8	1,165.5	3,290.8	3,242.6	48.17	68.312		
6,850.0	6,509.4	6,442.4	6,441.4	26.2	22.3	-39.00	3,492.0	1,167.0	3,261.3	3,212.9	48.39	67.396		
6,900.0	6,543.0	6,474.4	6,473.4	26.3	22.5	-45.20	3,491.2	1,168.6	3,230.2	3,181.6	48.59	66.475		
6,950.0	6,573.2	6,505.3	6,504.2	26.4	22.6	-51.45	3,490.3	1,170.3	3,197.9	3,149.1	48.79	65.548		
7,000.0	6,599.8	6,541.8	6,540.6	26.5	22.7	-57.89	3,489.2	1,172.2	3,164.6	3,115.6	48.99	64.591		
7,050.0	6,622.5	6,573.1	6,571.8	26.6	22.8	-64.32	3,488.3	1,173.7	3,130.7	3,081.5	49.18	63.659		
7,100.0	6,641.1	6,598.9	6,597.6	26.7	22.9	-70.60	3,487.5	1,174.8	3,096.6	3,047.2	49.34	62.758		
7,150.0	6,655.4	6,619.2	6,617.9	26.8	23.0	-76.56	3,487.0	1,175.7	3,062.7	3,013.2	49.48	61.894		
7,200.0	6,665.4	6,627.2	6,625.9	26.9	23.0	-81.89	3,486.7	1,176.0	3,029.5	2,979.9	49.58	61.098		
7,250.0	6,670.8	6,634.7	6,633.4	27.0	23.0	-86.74	3,486.5	1,176.3	2,997.2	2,947.6	49.68	60.333		
7,285.7	6,672.0	6,637.3	6,636.0	27.1	23.0	-89.81	3,486.5	1,176.4	2,975.1	2,925.3	49.73	59.819		
7,300.0	6,672.0	6,637.9	6,636.6	27.1	23.0	-89.82	3,486.4	1,176.5	2,966.3	2,916.6	49.76	59.619		
7,400.0	6,672.0	6,642.1	6,640.7	27.3	23.0	-89.92	3,486.3	1,176.6	2,906.6	2,856.7	49.94	58.204		
7,500.0	6,672.0	6,646.2	6,644.9	27.6	23.1	-90.02	3,486.2	1,176.8	2,849.2	2,799.0	50.17	56.785		
7,600.0	6,672.0	6,650.4	6,649.0	28.0	23.1	-90.12	3,486.1	1,177.0	2,794.1	2,743.7	50.47	55.367		
7,700.0	6,672.0	6,654.5	6,653.2	28.3	23.1	-90.22	3,486.0	1,177.2	2,741.6	2,690.8	50.82	53.951		
7,800.0	6,672.0	6,658.7	6,657.3	28.8	23.1	-90.32	3,485.9	1,177.3	2,691.8	2,640.5	51.23	52.545		
7,900.0	6,672.0	6,662.8	6,661.5	29.3	23.1	-90.42	3,485.7	1,177.5	2,644.7	2,593.0	51.70	51.155		
8,000.0	6,672.0	6,667.0	6,665.6	29.8	23.1	-90.53	3,485.6	1,177.7	2,600.7	2,548.5	52.24	49.787		
8,100.0	6,672.0	6,671.1	6,669.7	30.4	23.1	-90.63	3,485.5	1,177.9	2,559.8	2,507.0	52.83	48.450		
8,200.0	6,672.0	6,675.3	6,673.9	31.0	23.2	-90.73	3,485.4	1,178.0	2,522.2	2,468.7	53.49	47.152		
8,300.0	6,672.0	6,679.4	6,678.0	31.7	23.2	-90.83	3,485.3	1,178.2	2,488.0	2,433.8	54.20	45.901		
8,400.0	6,672.0	6,683.6	6,682.2	32.4	23.2	-90.93	3,485.2	1,178.4	2,457.4	2,402.5	54.97	44.707		
8,500.0	6,672.0	6,687.7	6,686.3	33.1	23.2	-91.03	3,485.0	1,178.6	2,430.5	2,374.8	55.78	43.576		
8,600.0	6,672.0	6,691.9	6,690.5	33.9	23.2	-91.13	3,484.9	1,178.7	2,407.5	2,350.9	56.63	42.516		
8,700.0	6,672.0	6,696.0	6,694.6	34.7	23.2	-91.23	3,484.8	1,178.9	2,388.4	2,330.9	57.50	41.535		
8,800.0	6,672.0	6,700.2	6,698.7	35.5	23.3	-91.33	3,484.7	1,179.1	2,373.4	2,315.0	58.40	40.638		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Roth 23-06 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
8,900.0	6,672.0	6,704.3	6,702.9	36.3	23.3	-91.43	3,484.6	1,179.3	2,362.5	2,303.2	59.32	39.830		
9,000.0	6,672.0	6,708.5	6,707.0	37.2	23.3	-91.53	3,484.5	1,179.4	2,355.8	2,295.6	60.23	39.113		
9,100.0	6,672.0	6,712.6	6,711.2	38.1	23.3	-91.64	3,484.4	1,179.6	2,353.3	2,292.2	61.14	38.491		
9,109.0	6,672.0	6,713.0	6,711.5	38.1	23.3	-91.64	3,484.3	1,179.6	2,353.3	2,292.1	61.22	38.439	CC, ES	
9,200.0	6,672.0	6,716.7	6,715.3	39.0	23.3	-91.74	3,484.2	1,179.8	2,355.0	2,293.0	62.03	37.964		
9,300.0	6,672.0	6,720.9	6,719.5	39.9	23.3	-91.84	3,484.1	1,180.0	2,361.0	2,298.1	62.90	37.534		
9,400.0	6,672.0	6,725.0	6,723.6	40.8	23.3	-91.94	3,484.0	1,180.1	2,371.1	2,307.4	63.74	37.198		
9,500.0	6,672.0	6,729.2	6,727.7	41.8	23.4	-92.04	3,483.9	1,180.3	2,385.4	2,320.9	64.55	36.957		
9,600.0	6,672.0	6,733.3	6,731.9	42.7	23.4	-92.14	3,483.8	1,180.5	2,403.8	2,338.5	65.31	36.807		
9,700.0	6,672.0	6,737.5	6,736.0	43.7	23.4	-92.24	3,483.7	1,180.6	2,426.1	2,360.1	66.02	36.746	SF	
9,800.0	6,672.0	6,741.6	6,740.2	44.7	23.4	-92.34	3,483.5	1,180.8	2,452.3	2,385.6	66.69	36.771		
9,900.0	6,672.0	6,745.8	6,744.3	45.7	23.4	-92.44	3,483.4	1,181.0	2,482.2	2,414.9	67.31	36.879		
10,000.0	6,672.0	6,749.9	6,748.4	46.7	23.4	-92.54	3,483.3	1,181.2	2,515.7	2,447.9	67.87	37.066		
10,100.0	6,672.0	6,754.1	6,752.6	47.7	23.4	-92.64	3,483.2	1,181.3	2,552.7	2,484.4	68.39	37.328		
10,200.0	6,672.0	6,758.2	6,756.7	48.8	23.5	-92.74	3,483.1	1,181.5	2,593.1	2,524.2	68.85	37.661		
10,300.0	6,672.0	6,762.3	6,760.9	49.8	23.5	-92.85	3,483.0	1,181.7	2,636.5	2,567.3	69.27	38.062		
10,400.0	6,672.0	6,766.5	6,765.0	50.9	23.5	-92.95	3,482.8	1,181.9	2,683.0	2,613.4	69.64	38.527		
10,500.0	6,672.0	6,770.6	6,769.1	51.9	23.5	-93.05	3,482.7	1,182.0	2,732.4	2,662.4	69.97	39.052		
10,600.0	6,672.0	6,774.8	6,773.3	53.0	23.5	-93.15	3,482.6	1,182.2	2,784.4	2,714.2	70.26	39.633		
10,700.0	6,672.0	6,778.9	6,777.4	54.1	23.5	-93.25	3,482.5	1,182.4	2,839.1	2,768.6	70.51	40.267		
10,800.0	6,672.0	6,783.1	6,781.5	55.2	23.5	-93.35	3,482.4	1,182.6	2,896.1	2,825.4	70.72	40.951		
10,900.0	6,672.0	6,787.2	6,785.7	56.3	23.6	-93.45	3,482.3	1,182.7	2,955.4	2,884.5	70.90	41.682		
11,000.0	6,672.0	6,791.4	6,789.8	57.4	23.6	-93.55	3,482.2	1,182.9	3,016.8	2,945.8	71.06	42.456		
11,100.0	6,672.0	6,795.5	6,794.0	58.5	23.6	-93.65	3,482.0	1,183.1	3,080.3	3,009.1	71.18	43.271		
11,200.0	6,672.0	6,799.6	6,798.1	59.6	23.6	-93.75	3,481.9	1,183.3	3,145.6	3,074.3	71.29	44.125		
11,300.0	6,672.0	6,803.8	6,802.2	60.7	23.6	-93.85	3,481.8	1,183.4	3,212.7	3,141.3	71.37	45.013		
11,400.0	6,672.0	6,807.9	6,806.4	61.8	23.6	-93.95	3,481.7	1,183.6	3,281.5	3,210.1	71.44	45.935		
11,500.0	6,672.0	6,812.1	6,810.5	62.9	23.6	-94.05	3,481.6	1,183.8	3,351.8	3,280.3	71.49	46.888		
11,600.0	6,672.0	6,816.2	6,814.6	64.1	23.7	-94.15	3,481.5	1,184.0	3,423.6	3,352.1	71.52	47.871		
11,700.0	6,672.0	6,820.3	6,818.8	65.2	23.7	-94.25	3,481.3	1,184.1	3,496.8	3,425.3	71.54	48.880		
11,800.0	6,672.0	6,824.5	6,822.9	66.3	23.7	-94.35	3,481.2	1,184.3	3,571.3	3,499.7	71.55	49.914		
11,900.0	6,672.0	6,828.6	6,827.1	67.5	23.7	-94.45	3,481.1	1,184.5	3,647.0	3,575.4	71.55	50.972		
12,000.0	6,672.0	6,832.8	6,831.2	68.6	23.7	-94.55	3,481.0	1,184.6	3,723.8	3,652.2	71.54	52.053		
12,100.0	6,672.0	6,836.9	6,835.3	69.8	23.7	-94.65	3,480.9	1,184.8	3,801.7	3,730.1	71.52	53.154		
12,200.0	6,672.0	6,841.0	6,839.5	70.9	23.8	-94.75	3,480.8	1,185.0	3,880.6	3,809.1	71.50	54.274		
12,300.0	6,672.0	6,845.2	6,843.6	72.1	23.8	-94.85	3,480.7	1,185.2	3,960.4	3,888.9	71.47	55.412		
12,400.0	6,672.0	6,849.3	6,847.7	73.2	23.8	-94.95	3,480.5	1,185.3	4,041.1	3,969.7	71.44	56.566		
12,500.0	6,672.0	6,853.5	6,851.9	74.4	23.8	-95.05	3,480.4	1,185.5	4,122.7	4,051.3	71.40	57.737		
12,600.0	6,672.0	6,857.6	6,856.0	75.5	23.8	-95.15	3,480.3	1,185.7	4,205.0	4,133.7	71.37	58.922		
12,700.0	6,672.0	6,861.7	6,860.1	76.7	23.8	-95.25	3,480.2	1,185.9	4,288.1	4,216.8	71.33	60.121		
12,800.0	6,672.0	6,865.9	6,864.3	77.9	23.8	-95.35	3,480.1	1,186.0	4,371.9	4,300.6	71.28	61.332		
12,900.0	6,672.0	6,870.0	6,868.4	79.0	23.9	-95.45	3,480.0	1,186.2	4,456.4	4,385.1	71.24	62.556		
13,000.0	6,672.0	6,874.2	6,872.5	80.2	23.9	-95.55	3,479.8	1,186.4	4,541.5	4,470.3	71.19	63.790		
13,100.0	6,672.0	6,878.3	6,876.7	81.4	23.9	-95.65	3,479.7	1,186.6	4,627.1	4,556.0	71.15	65.035		
13,200.0	6,672.0	6,882.4	6,880.8	82.6	23.9	-95.74	3,479.6	1,186.7	4,713.3	4,642.2	71.10	66.290		
13,300.0	6,672.0	6,886.6	6,884.9	83.7	23.9	-95.84	3,479.5	1,186.9	4,800.1	4,729.0	71.06	67.553		
13,400.0	6,672.0	6,890.7	6,889.1	84.9	23.9	-95.94	3,479.4	1,187.1	4,887.3	4,816.3	71.01	68.825		
13,500.0	6,672.0	6,894.9	6,893.2	86.1	23.9	-96.04	3,479.3	1,187.3	4,975.1	4,904.1	70.97	70.105		
13,600.0	6,672.0	6,899.0	6,897.3	87.3	24.0	-96.14	3,479.2	1,187.4	5,063.2	4,992.3	70.92	71.392		
13,700.0	6,672.0	6,903.1	6,901.5	88.4	24.0	-96.24	3,479.0	1,187.6	5,151.8	5,081.0	70.88	72.686		
13,800.0	6,672.0	6,907.3	6,905.6	89.6	24.0	-96.34	3,478.9	1,187.8	5,240.8	5,170.0	70.84	73.986		
13,900.0	6,672.0	6,911.4	6,909.7	90.8	24.0	-96.44	3,478.8	1,188.0	5,330.2	5,259.4	70.79	75.292		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Roth 23-06 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
14,000.0	6,672.0	6,915.5	6,913.8	92.0	24.0	-96.54	3,478.7	1,188.1	5,420.0	5,349.2	70.75	76.603		
14,100.0	6,672.0	6,919.7	6,918.0	93.2	24.0	-96.63	3,478.6	1,188.3	5,510.1	5,439.4	70.71	77.920		
14,200.0	6,672.0	6,923.8	6,922.1	94.4	24.0	-96.73	3,478.5	1,188.5	5,600.5	5,529.8	70.68	79.241		
14,300.0	6,672.0	6,927.9	6,926.2	95.6	24.1	-96.83	3,478.3	1,188.6	5,691.2	5,620.6	70.64	80.566		
14,400.0	6,672.0	6,932.1	6,930.4	96.8	24.1	-96.93	3,478.2	1,188.8	5,782.3	5,711.7	70.61	81.895		
14,500.0	6,672.0	6,904.0	6,902.3	98.0	24.0	-96.25	3,479.0	1,187.6	5,873.7	5,803.1	70.55	83.258		
14,600.0	6,672.0	6,904.0	6,902.3	99.2	24.0	-96.25	3,479.0	1,187.6	5,965.3	5,894.8	70.51	84.600		
14,700.0	6,672.0	6,904.0	6,902.3	100.4	24.0	-96.25	3,479.0	1,187.6	6,057.2	5,986.7	70.48	85.945		
14,800.0	6,672.0	6,904.0	6,902.3	101.6	24.0	-96.25	3,479.0	1,187.6	6,149.3	6,078.9	70.44	87.293		
14,900.0	6,672.0	6,904.0	6,902.3	102.7	24.0	-96.25	3,479.0	1,187.6	6,241.7	6,171.3	70.41	88.644		
15,000.0	6,672.0	6,904.0	6,902.3	103.9	24.0	-96.25	3,479.0	1,187.6	6,334.3	6,263.9	70.38	89.997		
15,100.0	6,672.0	6,904.0	6,902.3	105.1	24.0	-96.25	3,479.0	1,187.6	6,427.1	6,356.8	70.35	91.353		
15,200.0	6,672.0	6,904.0	6,902.3	106.3	24.0	-96.24	3,479.0	1,187.6	6,520.1	6,449.8	70.33	92.711		
15,300.0	6,672.0	6,904.0	6,902.3	107.6	24.0	-96.24	3,479.0	1,187.6	6,613.4	6,543.1	70.30	94.071		
15,400.0	6,672.0	6,904.0	6,902.3	108.8	24.0	-96.24	3,479.0	1,187.6	6,706.8	6,636.5	70.28	95.433		
15,500.0	6,672.0	6,904.0	6,902.3	110.0	24.0	-96.24	3,479.0	1,187.6	6,800.4	6,730.2	70.25	96.796		
15,600.0	6,672.0	6,904.0	6,902.3	111.2	24.0	-96.24	3,479.0	1,187.6	6,894.2	6,824.0	70.23	98.161		
15,700.0	6,672.0	6,904.0	6,902.3	112.4	24.0	-96.24	3,479.0	1,187.6	6,988.1	6,917.9	70.21	99.527		
15,800.0	6,672.0	6,904.0	6,902.3	113.6	24.0	-96.24	3,479.0	1,187.6	7,082.3	7,012.1	70.20	100.894		
15,900.0	6,672.0	6,904.0	6,902.3	114.8	24.0	-96.24	3,479.0	1,187.6	7,176.5	7,106.4	70.18	102.261		
16,000.0	6,672.0	6,904.0	6,902.3	116.0	24.0	-96.23	3,479.0	1,187.6	7,271.0	7,200.8	70.16	103.629		
16,100.0	6,672.0	6,904.0	6,902.3	117.2	24.0	-96.23	3,479.0	1,187.6	7,365.5	7,295.4	70.15	104.998		
16,200.0	6,672.0	6,904.0	6,902.3	118.4	24.0	-96.23	3,479.0	1,187.6	7,460.2	7,390.1	70.14	106.367		
16,300.0	6,672.0	6,904.0	6,902.3	119.6	24.0	-96.23	3,479.0	1,187.6	7,555.1	7,485.0	70.13	107.737		
16,400.0	6,672.0	6,904.0	6,902.3	120.8	24.0	-96.23	3,479.0	1,187.6	7,650.1	7,579.9	70.12	109.106		
16,500.0	6,672.0	6,904.0	6,902.3	122.0	24.0	-96.23	3,479.0	1,187.6	7,745.1	7,675.0	70.11	110.475		
16,600.0	6,672.0	6,904.0	6,902.3	123.2	24.0	-96.23	3,479.0	1,187.6	7,840.4	7,770.3	70.10	111.845		
16,700.0	6,672.0	6,904.0	6,902.3	124.5	24.0	-96.22	3,479.0	1,187.6	7,935.7	7,865.6	70.09	113.214		
16,800.0	6,672.0	6,904.0	6,902.3	125.7	24.0	-96.22	3,479.0	1,187.6	8,031.1	7,961.0	70.09	114.582		
16,900.0	6,672.0	6,904.0	6,902.3	126.9	24.0	-96.22	3,479.0	1,187.6	8,126.7	8,056.6	70.09	115.950		
17,000.0	6,672.0	6,904.0	6,902.3	128.1	24.0	-96.22	3,479.0	1,187.6	8,222.3	8,152.3	70.09	117.318		
17,100.0	6,672.0	6,904.0	6,902.3	129.3	24.0	-96.22	3,479.0	1,187.6	8,318.1	8,248.0	70.09	118.684		
17,200.0	6,672.0	6,904.0	6,902.3	130.5	24.0	-96.22	3,479.0	1,187.6	8,413.9	8,343.9	70.09	120.050		
17,300.0	6,672.0	6,904.0	6,902.3	131.7	24.0	-96.22	3,479.0	1,187.6	8,509.9	8,439.8	70.09	121.415		
17,400.0	6,672.0	6,904.0	6,902.3	133.0	24.0	-96.21	3,479.0	1,187.6	8,605.9	8,535.8	70.09	122.779		
17,500.0	6,672.0	6,904.0	6,902.3	134.2	24.0	-96.21	3,479.0	1,187.6	8,702.0	8,631.9	70.10	124.142		
17,600.0	6,672.0	6,904.0	6,902.3	135.4	24.0	-96.21	3,479.0	1,187.6	8,798.2	8,728.1	70.10	125.504		
17,700.0	6,672.0	6,904.0	6,902.3	136.6	24.0	-96.21	3,479.0	1,187.6	8,894.5	8,824.4	70.11	126.865		
17,800.0	6,672.0	6,904.0	6,902.3	137.8	24.0	-96.21	3,479.0	1,187.6	8,990.9	8,920.8	70.12	128.224		
17,900.0	6,672.0	6,904.0	6,902.3	139.0	24.0	-96.21	3,479.0	1,187.6	9,087.3	9,017.2	70.13	129.582		
18,000.0	6,672.0	6,904.0	6,902.3	140.3	24.0	-96.20	3,479.0	1,187.6	9,183.9	9,113.7	70.14	130.938		
18,100.0	6,672.0	6,904.0	6,902.3	141.5	24.0	-96.20	3,479.0	1,187.6	9,280.4	9,210.3	70.15	132.293		
18,200.0	6,672.0	6,904.0	6,902.3	142.7	24.0	-96.20	3,479.0	1,187.6	9,377.1	9,306.9	70.16	133.646		
18,300.0	6,672.0	6,904.0	6,902.3	143.9	24.0	-96.20	3,479.0	1,187.6	9,473.8	9,403.7	70.18	134.998		
18,342.5	6,672.0	6,904.0	6,902.3	144.4	24.0	-96.20	3,479.0	1,187.6	9,514.9	9,444.7	70.18	135.571		



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Roth 24-06 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	27.30	2,242.9	1,157.7	2,524.1					
100.0	100.0	72.5	72.5	0.1	0.1	27.31	2,242.9	1,158.0	2,524.2	2,524.0	0.25	9,911.365		
200.0	200.0	181.5	181.5	0.5	0.5	27.33	2,242.8	1,159.0	2,524.6	2,523.6	0.95	2,661.891		
300.0	300.0	286.5	286.5	0.8	0.8	27.35	2,242.2	1,159.8	2,524.4	2,522.8	1.67	1,507.684		
400.0	400.0	403.7	403.6	1.2	1.2	27.37	2,241.4	1,160.2	2,524.0	2,521.5	2.44	1,034.072		
500.0	500.0	502.2	502.1	1.6	1.6	27.38	2,240.4	1,160.3	2,523.1	2,520.0	3.14	802.840		
600.0	600.0	601.8	601.8	1.9	1.9	27.39	2,239.5	1,160.4	2,522.4	2,518.5	3.85	655.259		
700.0	700.0	717.0	717.0	2.3	2.3	27.40	2,238.0	1,160.3	2,521.2	2,516.6	4.61	546.817		
800.0	800.0	809.9	809.9	2.6	2.7	27.42	2,236.7	1,160.5	2,520.0	2,514.7	5.29	475.971		
900.0	900.0	923.0	923.0	3.0	3.1	27.44	2,234.8	1,160.6	2,518.5	2,512.4	6.05	416.358		
1,000.0	1,000.0	1,015.2	1,015.1	3.4	3.4	27.47	2,233.1	1,160.9	2,517.1	2,510.3	6.73	373.981		
1,100.0	1,100.0	1,119.6	1,119.5	3.7	3.7	27.50	2,231.1	1,161.5	2,515.6	2,508.2	7.46	337.424		
1,200.0	1,200.0	1,214.6	1,214.5	4.1	4.1	27.54	2,229.2	1,162.2	2,514.2	2,506.0	8.15	308.595		
1,300.0	1,300.0	1,300.9	1,300.7	4.4	4.4	27.57	2,227.8	1,163.1	2,513.2	2,504.4	8.81	285.314		
1,400.0	1,400.0	1,416.4	1,416.2	4.8	4.8	27.61	2,225.6	1,164.1	2,511.9	2,502.4	9.57	262.432		
1,500.0	1,500.0	1,489.6	1,489.4	5.1	5.0	27.64	2,224.4	1,165.1	2,511.1	2,500.9	10.19	246.499		
1,600.0	1,600.0	1,608.3	1,608.1	5.5	5.5	27.70	2,222.7	1,166.9	2,510.6	2,499.6	10.96	229.033		
1,700.0	1,700.0	1,713.5	1,713.3	5.9	5.8	27.74	2,220.9	1,167.8	2,509.5	2,497.8	11.69	214.702		
1,800.0	1,800.0	1,811.5	1,811.3	6.2	6.2	27.76	2,219.3	1,168.3	2,508.2	2,495.8	12.39	202.447		
1,900.0	1,900.0	1,893.6	1,893.3	6.6	6.5	27.78	2,218.4	1,168.6	2,507.4	2,494.4	13.04	192.360		
2,000.0	2,000.0	1,993.7	1,993.5	6.9	6.8	27.78	2,218.0	1,168.4	2,507.0	2,493.2	13.74	182.420		
2,100.0	2,100.0	2,092.8	2,092.5	7.3	7.2	27.75	2,218.1	1,167.3	2,506.5	2,492.1	14.45	173.498		
2,200.0	2,200.0	2,220.6	2,220.3	7.7	7.6	27.72	2,217.7	1,165.5	2,505.6	2,490.4	15.25	164.288		
2,300.0	2,300.0	2,311.5	2,311.2	8.0	7.9	27.77	2,217.2	1,164.1	2,504.0	2,488.1	15.93	157.237		
2,400.0	2,399.8	2,409.1	2,408.8	8.4	8.3	27.81	2,216.6	1,162.8	2,501.9	2,485.3	16.62	150.539		
2,500.0	2,499.5	2,509.8	2,509.5	8.7	8.6	27.96	2,215.6	1,162.4	2,499.1	2,481.8	17.33	144.249		
2,600.0	2,598.7	2,611.2	2,610.9	9.1	9.0	27.95	2,214.7	1,161.5	2,495.7	2,477.7	18.03	138.390		
2,700.0	2,697.5	2,702.1	2,701.7	9.4	9.3	27.89	2,214.1	1,160.7	2,491.8	2,473.1	18.71	133.202		
2,800.0	2,795.6	2,804.5	2,804.2	9.8	9.6	28.01	2,213.4	1,160.0	2,487.5	2,468.1	19.42	128.079		
2,900.0	2,893.1	2,893.5	2,893.2	10.1	10.0	28.07	2,212.5	1,159.9	2,482.9	2,462.8	20.09	123.582		
3,000.0	2,989.6	2,998.3	2,998.0	10.5	10.3	28.19	2,211.6	1,159.7	2,477.9	2,457.1	20.82	119.035		
3,100.0	3,085.3	3,099.8	3,099.4	10.9	10.7	28.27	2,210.7	1,158.8	2,472.5	2,450.9	21.53	114.816		
3,200.0	3,179.8	3,192.4	3,192.0	11.2	11.0	28.28	2,209.7	1,158.2	2,466.9	2,444.7	22.23	110.995		
3,300.0	3,273.2	3,288.0	3,287.7	11.6	11.3	28.19	2,208.6	1,157.7	2,461.3	2,438.4	22.93	107.336		
3,387.5	3,353.8	3,378.9	3,378.6	11.9	11.7	28.11	2,207.3	1,157.2	2,456.5	2,432.9	23.58	104.186		
3,400.0	3,365.2	3,392.0	3,391.7	12.0	11.7	28.24	2,207.0	1,157.1	2,455.8	2,432.1	23.67	103.747		
3,500.0	3,456.8	3,492.3	3,491.9	12.4	12.1	28.19	2,205.1	1,156.5	2,450.3	2,425.9	24.40	100.405		
3,600.0	3,548.3	3,582.5	3,582.1	12.8	12.4	28.05	2,203.1	1,155.9	2,445.4	2,420.2	25.11	97.387		
3,700.0	3,639.8	3,657.6	3,657.2	13.2	12.6	27.78	2,201.6	1,155.7	2,441.4	2,415.6	25.77	94.738		
3,800.0	3,731.4	3,752.4	3,752.0	13.6	13.0	28.70	2,199.9	1,156.0	2,438.6	2,412.1	26.50	92.022		
3,900.0	3,822.9	3,843.8	3,843.4	14.0	13.3	28.58	2,198.0	1,155.5	2,436.0	2,408.7	27.22	89.480		
4,000.0	3,914.4	3,917.9	3,917.5	14.4	13.5	29.31	2,196.8	1,155.8	2,434.7	2,406.8	27.89	87.291		
4,100.0	4,005.9	4,011.3	4,010.8	14.8	13.9	29.21	2,195.7	1,155.7	2,434.2	2,405.6	28.63	85.030		
4,107.8	4,013.1	4,017.2	4,016.7	14.8	13.9	29.26	2,195.6	1,155.7	2,434.2	2,405.5	28.68	84.872		
4,200.0	4,097.5	4,086.7	4,086.3	15.2	14.1	29.92	2,195.4	1,155.4	2,434.8	2,405.5	29.31	83.083		
4,300.0	4,189.0	4,161.1	4,160.6	15.6	14.4	29.62	2,195.6	1,155.2	2,436.6	2,406.6	29.98	81.278		
4,400.0	4,280.5	4,231.5	4,231.0	16.1	14.6	29.27	2,196.3	1,155.2	2,439.7	2,409.1	30.64	79.635		
4,500.0	4,372.1	4,300.0	4,299.5	16.5	14.9	29.91	2,197.5	1,155.9	2,444.5	2,413.2	31.29	78.132		
4,600.0	4,463.6	4,387.6	4,387.1	16.9	15.2	29.73	2,199.4	1,156.9	2,450.4	2,418.4	32.01	76.554		
4,700.0	4,555.1	4,502.1	4,501.5	17.4	15.6	29.79	2,201.4	1,158.1	2,456.5	2,423.7	32.83	74.818		
4,800.0	4,646.7	4,602.5	4,601.9	17.8	15.9	29.74	2,201.8	1,159.4	2,462.7	2,429.1	33.61	73.280		
4,900.0	4,738.2	4,718.7	4,718.1	18.2	16.3	29.83	2,202.0	1,160.2	2,468.9	2,434.5	34.44	71.688		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Roth 24-06 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,000.0	4,829.7	4,825.2	4,824.7	18.7	16.7	98.80	2,202.5	1,159.7	2,475.2	2,440.0	35.24	70.242		
5,100.0	4,921.3	4,946.6	4,946.0	19.1	17.1	99.90	2,202.0	1,158.0	2,480.9	2,444.8	36.09	68.740		
5,200.0	5,012.8	5,038.0	5,037.4	19.5	17.4	100.74	2,201.0	1,156.8	2,486.9	2,450.0	36.84	67.509		
5,300.0	5,104.3	5,131.2	5,130.6	20.0	17.8	101.61	2,199.2	1,156.2	2,493.5	2,455.9	37.59	66.333		
5,400.0	5,195.8	5,233.3	5,232.7	20.4	18.1	102.55	2,197.4	1,154.9	2,500.5	2,462.1	38.38	65.157		
5,500.0	5,287.4	5,323.2	5,322.5	20.9	18.4	103.36	2,196.1	1,153.4	2,507.9	2,468.8	39.12	64.112		
5,600.0	5,378.9	5,407.3	5,406.6	21.3	18.7	104.13	2,194.6	1,152.6	2,516.2	2,476.4	39.84	63.160		
5,700.0	5,470.4	5,519.8	5,519.1	21.8	19.1	105.14	2,192.5	1,150.9	2,524.9	2,484.2	40.66	62.094		
5,800.0	5,562.0	5,592.8	5,592.1	22.2	19.4	105.80	2,191.0	1,150.1	2,534.2	2,492.9	41.34	61.298		
5,900.0	5,653.5	5,669.3	5,668.5	22.7	19.6	106.50	2,189.2	1,149.9	2,544.6	2,502.6	42.03	60.540		
6,000.0	5,745.0	5,755.5	5,754.7	23.1	20.0	107.29	2,187.2	1,150.1	2,556.1	2,513.3	42.76	59.782		
6,100.0	5,836.6	5,845.0	5,844.2	23.6	20.3	108.10	2,185.2	1,150.1	2,568.2	2,524.7	43.49	59.048		
6,200.0	5,928.1	5,922.8	5,921.9	24.0	20.5	108.80	2,183.5	1,150.4	2,581.1	2,536.9	44.18	58.420		
6,278.6	6,000.0	5,972.6	5,971.8	24.4	20.7	109.25	2,182.6	1,150.9	2,592.3	2,547.6	44.67	58.025		
6,290.0	6,010.4	5,979.8	5,979.0	24.4	20.7	107.60	2,182.5	1,151.0	2,593.9	2,549.2	44.75	57.970		
6,300.0	6,019.5	5,986.1	5,985.3	24.5	20.8	106.01	2,182.4	1,151.1	2,595.3	2,550.5	44.81	57.920		
6,350.0	6,065.8	6,022.8	6,021.9	24.7	20.9	96.19	2,182.1	1,151.7	2,599.8	2,554.7	45.13	57.604		
6,400.0	6,113.0	6,063.9	6,063.0	24.9	21.0	82.65	2,181.9	1,152.3	2,600.4	2,554.9	45.46	57.196		
6,450.0	6,160.7	6,107.6	6,106.8	25.1	21.2	65.89	2,182.0	1,152.9	2,596.9	2,551.1	45.79	56.710		
6,500.0	6,208.5	6,164.1	6,163.3	25.3	21.4	48.46	2,182.0	1,153.7	2,589.2	2,543.1	46.16	56.091		
6,550.0	6,255.8	6,220.0	6,219.2	25.4	21.6	33.18	2,181.6	1,154.4	2,577.3	2,530.8	46.51	55.411		
6,600.0	6,302.5	6,253.5	6,252.6	25.6	21.7	21.06	2,181.5	1,154.9	2,561.5	2,514.8	46.75	54.789		
6,650.0	6,347.9	6,291.8	6,291.0	25.7	21.8	11.76	2,181.5	1,155.6	2,541.9	2,494.9	47.00	54.085		
6,700.0	6,391.6	6,344.3	6,343.5	25.9	22.0	4.41	2,181.6	1,156.4	2,518.6	2,471.3	47.29	53.254		
6,750.0	6,433.4	6,398.4	6,397.5	26.0	22.2	-1.82	2,181.8	1,156.9	2,491.6	2,444.0	47.58	52.362		
6,800.0	6,472.8	6,434.7	6,433.8	26.1	22.3	-7.48	2,181.9	1,157.1	2,461.2	2,413.4	47.79	51.503		
6,850.0	6,509.4	6,468.1	6,467.2	26.2	22.4	-13.00	2,181.9	1,157.5	2,427.9	2,379.9	47.97	50.612		
6,900.0	6,543.0	6,498.9	6,498.0	26.3	22.5	-18.73	2,181.8	1,157.9	2,391.9	2,343.7	48.13	49.692		
6,950.0	6,573.2	6,532.7	6,531.8	26.4	22.7	-25.10	2,181.8	1,158.3	2,353.5	2,305.2	48.30	48.724		
7,000.0	6,599.8	6,562.5	6,561.6	26.5	22.8	-32.40	2,181.9	1,158.5	2,313.1	2,264.7	48.45	47.741		
7,050.0	6,622.5	6,587.8	6,586.9	26.6	22.9	-40.88	2,182.1	1,158.7	2,271.2	2,222.6	48.58	46.752		
7,100.0	6,641.1	6,608.4	6,607.5	26.7	22.9	-50.59	2,182.3	1,158.7	2,228.1	2,179.4	48.69	45.764		
7,150.0	6,655.4	6,622.2	6,621.3	26.8	23.0	-61.17	2,182.4	1,158.8	2,184.2	2,135.5	48.77	44.791		
7,200.0	6,665.4	6,632.3	6,631.4	26.9	23.0	-72.09	2,182.5	1,158.8	2,140.2	2,091.3	48.83	43.827		
7,250.0	6,670.8	6,638.0	6,637.1	27.0	23.0	-82.48	2,182.6	1,158.8	2,096.3	2,047.4	48.88	42.883		
7,285.7	6,672.0	6,639.3	6,638.4	27.1	23.0	-89.15	2,182.6	1,158.8	2,065.4	2,016.5	48.91	42.226		
7,300.0	6,672.0	6,639.3	6,638.4	27.1	23.0	-89.15	2,182.6	1,158.8	2,053.1	2,004.1	48.92	41.966		
7,400.0	6,672.0	6,639.6	6,638.7	27.3	23.0	-89.17	2,182.6	1,158.8	1,967.9	1,918.8	49.02	40.146		
7,500.0	6,672.0	6,639.9	6,639.0	27.6	23.0	-89.18	2,182.6	1,158.8	1,884.1	1,835.0	49.15	38.335		
7,600.0	6,672.0	6,640.2	6,639.3	28.0	23.0	-89.20	2,182.6	1,158.8	1,802.0	1,752.7	49.32	36.535		
7,700.0	6,672.0	6,640.5	6,639.6	28.3	23.0	-89.22	2,182.6	1,158.8	1,721.8	1,672.3	49.55	34.748		
7,800.0	6,672.0	6,640.8	6,639.9	28.8	23.0	-89.23	2,182.6	1,158.8	1,643.8	1,594.0	49.84	32.980		
7,900.0	6,672.0	6,641.1	6,640.2	29.3	23.0	-89.25	2,182.6	1,158.8	1,568.3	1,518.0	50.21	31.235		
8,000.0	6,672.0	6,641.4	6,640.5	29.8	23.0	-89.27	2,182.6	1,158.8	1,495.6	1,444.9	50.66	29.523		
8,100.0	6,672.0	6,641.7	6,640.8	30.4	23.0	-89.28	2,182.6	1,158.8	1,426.2	1,375.0	51.21	27.852		
8,200.0	6,672.0	6,642.0	6,641.1	31.0	23.0	-89.30	2,182.6	1,158.8	1,360.7	1,308.8	51.86	26.236		
8,300.0	6,672.0	6,642.3	6,641.4	31.7	23.0	-89.32	2,182.6	1,158.8	1,299.5	1,246.9	52.64	24.689		
8,400.0	6,672.0	6,642.6	6,641.7	32.4	23.0	-89.33	2,182.6	1,158.8	1,243.4	1,189.8	53.53	23.229		
8,500.0	6,672.0	6,642.9	6,642.0	33.1	23.0	-89.35	2,182.6	1,158.8	1,193.0	1,138.5	54.53	21.878		
8,600.0	6,672.0	6,643.2	6,642.4	33.9	23.0	-89.37	2,182.6	1,158.8	1,149.1	1,093.5	55.63	20.657		
8,700.0	6,672.0	6,643.5	6,642.7	34.7	23.0	-89.38	2,182.6	1,158.8	1,112.5	1,055.7	56.79	19.589		
8,800.0	6,672.0	6,643.8	6,643.0	35.5	23.0	-89.40	2,182.6	1,158.8	1,083.9	1,025.9	57.98	18.694		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
**Anticollision Report**

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Roth 24-06 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
8,900.0	6,672.0	6,644.2	6,643.3	36.3	23.1	-89.41	2,182.6	1,158.8	1,064.0	1,004.9	59.14	17.990		
9,000.0	6,672.0	6,644.5	6,643.6	37.2	23.1	-89.43	2,182.6	1,158.8	1,053.2	993.0	60.22	17.489	CC, ES	
9,064.2	6,672.0	6,644.7	6,643.8	37.7	23.1	-89.44	2,182.6	1,158.8	1,051.3	990.4	60.85	17.277		
9,100.0	6,672.0	6,644.8	6,643.9	38.1	23.1	-89.45	2,182.6	1,158.8	1,051.9	990.7	61.16	17.197		
9,200.0	6,672.0	6,645.1	6,644.2	39.0	23.1	-89.46	2,182.6	1,158.8	1,060.0	998.1	61.93	17.115	SF	
9,300.0	6,672.0	6,645.4	6,644.5	39.9	23.1	-89.48	2,182.7	1,158.9	1,077.4	1,014.9	62.50	17.237		
9,400.0	6,672.0	6,645.7	6,644.8	40.8	23.1	-89.50	2,182.7	1,158.9	1,103.6	1,040.7	62.88	17.551		
9,500.0	6,672.0	6,646.0	6,645.1	41.8	23.1	-89.51	2,182.7	1,158.9	1,138.0	1,074.9	63.07	18.043		
9,600.0	6,672.0	6,646.3	6,645.4	42.7	23.1	-89.53	2,182.7	1,158.9	1,179.8	1,116.7	63.10	18.699		
9,700.0	6,672.0	6,646.6	6,645.7	43.7	23.1	-89.55	2,182.7	1,158.9	1,228.5	1,165.5	63.00	19.500		
9,800.0	6,672.0	6,646.9	6,646.0	44.7	23.1	-89.56	2,182.7	1,158.9	1,283.0	1,220.2	62.80	20.430		
9,900.0	6,672.0	6,647.2	6,646.3	45.7	23.1	-89.58	2,182.7	1,158.9	1,342.8	1,280.3	62.53	21.474		
10,000.0	6,672.0	6,647.5	6,646.6	46.7	23.1	-89.60	2,182.7	1,158.9	1,407.2	1,345.0	62.22	22.616		
10,100.0	6,672.0	6,647.8	6,646.9	47.7	23.1	-89.61	2,182.7	1,158.9	1,475.5	1,413.7	61.88	23.845		
10,200.0	6,672.0	6,648.1	6,647.2	48.8	23.1	-89.63	2,182.7	1,158.9	1,547.3	1,485.8	61.53	25.148		
10,300.0	6,672.0	6,648.4	6,647.5	49.8	23.1	-89.65	2,182.7	1,158.9	1,622.1	1,560.9	61.17	26.517		
10,400.0	6,672.0	6,648.7	6,647.8	50.9	23.1	-89.66	2,182.7	1,158.9	1,699.4	1,638.6	60.82	27.941		
10,500.0	6,672.0	6,649.0	6,648.1	51.9	23.1	-89.68	2,182.7	1,158.9	1,779.1	1,718.6	60.48	29.413		
10,600.0	6,672.0	6,649.3	6,648.4	53.0	23.1	-89.70	2,182.7	1,158.9	1,860.6	1,800.5	60.16	30.928		
10,700.0	6,672.0	6,649.6	6,648.7	54.1	23.1	-89.71	2,182.7	1,158.9	1,943.9	1,884.1	59.85	32.479		
10,800.0	6,672.0	6,649.9	6,649.1	55.2	23.1	-89.73	2,182.7	1,158.9	2,028.7	1,969.2	59.56	34.062		
10,900.0	6,672.0	6,650.2	6,649.4	56.3	23.1	-89.75	2,182.7	1,158.9	2,114.9	2,055.6	59.29	35.673		
11,000.0	6,672.0	6,650.6	6,649.7	57.4	23.1	-89.76	2,182.7	1,158.9	2,202.2	2,143.1	59.03	37.307		
11,100.0	6,672.0	6,650.9	6,650.0	58.5	23.1	-89.78	2,182.7	1,158.9	2,290.5	2,231.7	58.79	38.963		
11,200.0	6,672.0	6,651.2	6,650.3	59.6	23.1	-89.80	2,182.7	1,158.9	2,379.7	2,321.2	58.56	40.637		
11,300.0	6,672.0	6,651.5	6,650.6	60.7	23.1	-89.81	2,182.7	1,158.9	2,469.8	2,411.5	58.35	42.326		
11,400.0	6,672.0	6,651.8	6,650.9	61.8	23.1	-89.83	2,182.7	1,158.9	2,560.6	2,502.5	58.16	44.030		
11,500.0	6,672.0	6,652.1	6,651.2	62.9	23.1	-89.85	2,182.7	1,158.9	2,652.1	2,594.1	57.97	45.746		
11,600.0	6,672.0	6,652.4	6,651.5	64.1	23.1	-89.86	2,182.7	1,158.9	2,744.2	2,686.3	57.81	47.472		
11,700.0	6,672.0	6,652.7	6,651.8	65.2	23.1	-89.88	2,182.7	1,158.9	2,836.7	2,779.1	57.65	49.207		
11,800.0	6,672.0	6,653.0	6,652.1	66.3	23.1	-89.90	2,182.7	1,158.9	2,929.8	2,872.3	57.50	50.951		
11,900.0	6,672.0	6,653.3	6,652.4	67.5	23.1	-89.91	2,182.7	1,158.9	3,023.3	2,966.0	57.37	52.701		
12,000.0	6,672.0	6,653.6	6,652.7	68.6	23.1	-89.93	2,182.7	1,158.9	3,117.3	3,060.0	57.24	54.457		
12,100.0	6,672.0	6,653.9	6,653.0	69.8	23.1	-89.95	2,182.7	1,158.9	3,211.5	3,154.4	57.13	56.219		
12,200.0	6,672.0	6,654.2	6,653.3	70.9	23.1	-89.96	2,182.7	1,158.9	3,306.1	3,249.1	57.02	57.984		
12,300.0	6,672.0	6,654.5	6,653.6	72.1	23.1	-89.98	2,182.7	1,158.9	3,401.1	3,344.2	56.92	59.754		
12,400.0	6,672.0	6,654.8	6,653.9	73.2	23.1	-90.00	2,182.7	1,158.9	3,496.3	3,439.4	56.83	61.526		
12,500.0	6,672.0	6,655.1	6,654.3	74.4	23.1	-90.01	2,182.7	1,158.9	3,591.7	3,535.0	56.74	63.300		
12,600.0	6,672.0	6,655.4	6,654.6	75.5	23.1	-90.03	2,182.8	1,158.9	3,687.4	3,630.8	56.66	65.077		
12,700.0	6,672.0	6,655.8	6,654.9	76.7	23.1	-90.05	2,182.8	1,158.9	3,783.3	3,726.8	56.59	66.855		
12,800.0	6,672.0	6,656.1	6,655.2	77.9	23.1	-90.06	2,182.8	1,158.9	3,879.5	3,822.9	56.52	68.633		
12,900.0	6,672.0	6,656.4	6,655.5	79.0	23.1	-90.08	2,182.8	1,158.9	3,975.8	3,919.3	56.46	70.413		
13,000.0	6,672.0	6,656.7	6,655.8	80.2	23.1	-90.10	2,182.8	1,158.9	4,072.3	4,015.9	56.41	72.192		
13,100.0	6,672.0	6,657.0	6,656.1	81.4	23.1	-90.11	2,182.8	1,158.9	4,168.9	4,112.6	56.36	73.972		
13,200.0	6,672.0	6,657.3	6,656.4	82.6	23.1	-90.13	2,182.8	1,158.9	4,265.7	4,209.4	56.31	75.751		
13,300.0	6,672.0	6,657.6	6,656.7	83.7	23.1	-90.15	2,182.8	1,158.9	4,362.7	4,306.4	56.27	77.530		
13,400.0	6,672.0	6,657.9	6,657.0	84.9	23.1	-90.16	2,182.8	1,158.9	4,459.8	4,403.5	56.23	79.307		
13,500.0	6,672.0	6,658.2	6,657.3	86.1	23.1	-90.18	2,182.8	1,158.9	4,557.0	4,500.8	56.20	81.083		
13,600.0	6,672.0	6,658.5	6,657.6	87.3	23.1	-90.20	2,182.8	1,158.9	4,654.3	4,598.1	56.17	82.858		
13,700.0	6,672.0	6,658.8	6,657.9	88.4	23.1	-90.21	2,182.8	1,158.9	4,751.7	4,695.6	56.15	84.631		
13,800.0	6,672.0	6,659.1	6,658.2	89.6	23.1	-90.23	2,182.8	1,158.9	4,849.2	4,793.1	56.12	86.403		
13,900.0	6,672.0	6,659.4	6,658.5	90.8	23.1	-90.25	2,182.8	1,158.9	4,946.9	4,890.8	56.10	88.172		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Roth 24-06 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
14,000.0	6,672.0	6,659.7	6,658.9	92.0	23.1	-90.26	2,182.8	1,158.9	5,044.6	4,988.5	56.09	89.939		
14,100.0	6,672.0	6,660.1	6,659.2	93.2	23.1	-90.28	2,182.8	1,158.9	5,142.4	5,086.3	56.08	91.703		
14,200.0	6,672.0	6,660.4	6,659.5	94.4	23.1	-90.30	2,182.8	1,158.9	5,240.3	5,184.2	56.07	93.465		
14,300.0	6,672.0	6,660.7	6,659.8	95.6	23.1	-90.31	2,182.8	1,158.9	5,338.3	5,282.2	56.06	95.225		
14,400.0	6,672.0	6,661.0	6,660.1	96.8	23.1	-90.33	2,182.8	1,158.9	5,436.3	5,380.2	56.06	96.981		
14,500.0	6,672.0	6,661.3	6,660.4	98.0	23.1	-90.34	2,182.8	1,158.9	5,534.4	5,478.3	56.05	98.735		
14,600.0	6,672.0	6,661.6	6,660.7	99.2	23.1	-90.36	2,182.8	1,158.9	5,632.6	5,576.5	56.05	100.485		
14,700.0	6,672.0	6,661.9	6,661.0	100.4	23.1	-90.38	2,182.8	1,158.9	5,730.8	5,674.7	56.06	102.232		
14,800.0	6,672.0	6,662.2	6,661.3	101.6	23.1	-90.39	2,182.8	1,158.9	5,829.1	5,773.0	56.06	103.976		
14,900.0	6,672.0	6,662.5	6,661.6	102.7	23.1	-90.41	2,182.8	1,158.9	5,927.4	5,871.4	56.07	105.717		
15,000.0	6,672.0	6,662.8	6,661.9	103.9	23.1	-90.43	2,182.8	1,158.9	6,025.8	5,969.8	56.08	107.453		
15,100.0	6,672.0	6,663.1	6,662.2	105.1	23.1	-90.44	2,182.8	1,158.9	6,124.3	6,068.2	56.09	109.187		
15,200.0	6,672.0	6,663.4	6,662.5	106.3	23.1	-90.46	2,182.8	1,158.9	6,222.8	6,166.7	56.10	110.916		
15,300.0	6,672.0	6,663.7	6,662.9	107.6	23.1	-90.48	2,182.8	1,158.9	6,321.3	6,265.2	56.12	112.642		
15,400.0	6,672.0	6,664.1	6,663.2	108.8	23.1	-90.49	2,182.8	1,158.9	6,419.9	6,363.8	56.14	114.363		
15,500.0	6,672.0	6,664.4	6,663.5	110.0	23.1	-90.51	2,182.8	1,158.9	6,518.6	6,462.4	56.16	116.081		
15,600.0	6,672.0	6,664.7	6,663.8	111.2	23.1	-90.53	2,182.8	1,158.9	6,617.2	6,561.1	56.18	117.794		
15,700.0	6,672.0	6,665.0	6,664.1	112.4	23.1	-90.54	2,182.8	1,158.9	6,715.9	6,659.7	56.20	119.504		
15,800.0	6,672.0	6,665.3	6,664.4	113.6	23.1	-90.56	2,182.8	1,158.9	6,814.7	6,758.5	56.22	121.209		
15,900.0	6,672.0	6,665.6	6,664.7	114.8	23.1	-90.57	2,182.9	1,158.9	6,913.5	6,857.2	56.25	122.910		
16,000.0	6,672.0	6,665.9	6,665.0	116.0	23.1	-90.59	2,182.9	1,158.9	7,012.3	6,956.0	56.28	124.606		
16,100.0	6,672.0	6,666.2	6,665.3	117.2	23.1	-90.61	2,182.9	1,158.9	7,111.1	7,054.8	56.30	126.298		
16,200.0	6,672.0	6,666.5	6,665.6	118.4	23.1	-90.62	2,182.9	1,158.9	7,210.0	7,153.7	56.33	127.985		
16,300.0	6,672.0	6,666.8	6,665.9	119.6	23.1	-90.64	2,182.9	1,158.9	7,308.9	7,252.5	56.37	129.668		
16,400.0	6,672.0	6,667.1	6,666.3	120.8	23.1	-90.66	2,182.9	1,158.9	7,407.8	7,351.4	56.40	131.346		
16,500.0	6,672.0	6,667.5	6,666.6	122.0	23.1	-90.67	2,182.9	1,158.9	7,506.8	7,450.4	56.43	133.020		
16,600.0	6,672.0	6,667.8	6,666.9	123.2	23.1	-90.69	2,182.9	1,158.9	7,605.8	7,549.3	56.47	134.689		
16,700.0	6,672.0	6,668.1	6,667.2	124.5	23.1	-90.70	2,182.9	1,158.9	7,704.8	7,648.3	56.51	136.352		
16,800.0	6,672.0	6,668.4	6,667.5	125.7	23.1	-90.72	2,182.9	1,158.9	7,803.8	7,747.3	56.54	138.012		
16,900.0	6,672.0	6,668.7	6,667.8	126.9	23.1	-90.74	2,182.9	1,158.9	7,902.9	7,846.3	56.58	139.666		
17,000.0	6,672.0	6,669.0	6,668.1	128.1	23.1	-90.75	2,182.9	1,158.9	8,002.0	7,945.4	56.63	141.315		
17,100.0	6,672.0	6,669.3	6,668.4	129.3	23.1	-90.77	2,182.9	1,158.9	8,101.1	8,044.4	56.67	142.959		
17,200.0	6,672.0	6,669.6	6,668.7	130.5	23.1	-90.78	2,182.9	1,158.9	8,200.2	8,143.5	56.71	144.599		
17,300.0	6,672.0	6,669.9	6,669.0	131.7	23.1	-90.80	2,182.9	1,158.9	8,299.4	8,242.6	56.75	146.233		
17,400.0	6,672.0	6,670.2	6,669.3	133.0	23.1	-90.82	2,182.9	1,158.9	8,398.5	8,341.7	56.80	147.862		
17,500.0	6,672.0	6,670.5	6,669.7	134.2	23.1	-90.83	2,182.9	1,158.9	8,497.7	8,440.9	56.85	149.486		
17,600.0	6,672.0	6,670.9	6,670.0	135.4	23.1	-90.85	2,182.9	1,158.9	8,596.9	8,540.0	56.89	151.105		
17,700.0	6,672.0	6,671.2	6,670.3	136.6	23.1	-90.86	2,182.9	1,158.9	8,696.1	8,639.2	56.94	152.718		
17,800.0	6,672.0	6,671.5	6,670.6	137.8	23.1	-90.88	2,182.9	1,158.9	8,795.4	8,738.4	56.99	154.327		
17,900.0	6,672.0	6,671.8	6,670.9	139.0	23.1	-90.90	2,182.9	1,158.9	8,894.6	8,837.6	57.04	155.930		
18,000.0	6,672.0	6,672.1	6,671.2	140.3	23.1	-90.91	2,182.9	1,158.9	8,993.9	8,936.8	57.09	157.527		
18,100.0	6,672.0	6,672.4	6,671.5	141.5	23.1	-90.93	2,182.9	1,158.9	9,093.2	9,036.0	57.15	159.120		
18,200.0	6,672.0	6,672.7	6,671.8	142.7	23.2	-90.94	2,182.9	1,158.9	9,192.5	9,135.3	57.20	160.707		
18,300.0	6,672.0	6,673.0	6,672.1	143.9	23.2	-90.96	2,182.9	1,158.9	9,291.8	9,234.5	57.25	162.289		
18,342.5	6,672.0	6,673.2	6,672.3	144.4	23.2	-90.97	2,182.9	1,158.9	9,333.9	9,276.7	57.28	162.959		



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Roth 33-06 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	34.63	3,481.4	2,404.7	4,231.2					
100.0	100.0	65.0	65.0	0.1	0.1	34.64	3,481.5	2,404.9	4,231.4	4,231.1	0.24	N/A		
200.0	200.0	156.5	156.5	0.5	0.4	34.64	3,481.7	2,405.6	4,232.0	4,231.1	0.86	4,928.111		
300.0	300.0	256.1	256.1	0.8	0.7	34.65	3,481.9	2,406.4	4,232.6	4,231.1	1.57	2,702.763		
400.0	400.0	353.2	353.2	1.2	1.1	34.65	3,482.2	2,407.1	4,233.3	4,231.0	2.26	1,869.509		
500.0	500.0	451.7	451.7	1.6	1.4	34.66	3,482.6	2,407.8	4,234.1	4,231.1	2.97	1,426.690		
600.0	600.0	547.6	547.5	1.9	1.7	34.67	3,482.9	2,408.7	4,234.9	4,231.2	3.66	1,156.509		
700.0	700.0	677.8	677.8	2.3	2.2	34.66	3,484.0	2,408.8	4,235.6	4,231.1	4.48	946.403		
800.0	800.0	818.0	818.0	2.6	2.7	34.65	3,484.0	2,407.8	4,235.2	4,229.8	5.32	795.936		
900.0	900.0	915.7	915.7	3.0	3.0	34.64	3,483.6	2,407.0	4,234.4	4,228.4	6.02	703.521		
1,000.0	1,000.0	1,012.7	1,012.6	3.4	3.4	34.64	3,483.2	2,406.4	4,233.7	4,227.0	6.71	630.530		
1,100.0	1,100.0	1,112.4	1,112.3	3.7	3.7	34.63	3,482.8	2,405.7	4,233.0	4,225.6	7.42	570.465		
1,200.0	1,200.0	1,215.9	1,215.8	4.1	4.1	34.63	3,482.5	2,404.9	4,232.3	4,224.1	8.14	519.956		
1,300.0	1,300.0	1,312.5	1,312.4	4.4	4.4	34.63	3,481.9	2,404.4	4,231.6	4,222.7	8.84	478.942		
1,400.0	1,400.0	1,397.0	1,396.9	4.8	4.7	34.63	3,481.7	2,404.1	4,231.1	4,221.6	9.49	445.911		
1,461.7	1,461.7	1,445.7	1,445.7	5.0	4.9	34.62	3,481.7	2,403.9	4,231.0	4,221.1	9.88	428.229		
1,500.0	1,500.0	1,475.9	1,475.9	5.1	5.0	34.62	3,481.9	2,403.6	4,231.0	4,220.9	10.12	417.965		
1,600.0	1,600.0	1,591.2	1,591.1	5.5	5.4	34.60	3,482.9	2,402.5	4,231.1	4,220.3	10.88	388.731		
1,700.0	1,700.0	1,701.3	1,701.2	5.9	5.8	34.58	3,483.2	2,401.4	4,230.8	4,219.2	11.63	363.860		
1,800.0	1,800.0	1,817.0	1,816.9	6.2	6.2	34.58	3,482.8	2,400.6	4,230.1	4,217.7	12.39	341.413		
1,895.0	1,895.0	1,879.0	1,879.0	6.6	6.4	34.58	3,482.6	2,400.5	4,229.7	4,216.8	12.95	326.693		
1,900.0	1,900.0	1,882.3	1,882.2	6.6	6.4	34.58	3,482.5	2,400.5	4,229.7	4,216.8	12.98	325.948		
2,000.0	2,000.0	2,016.7	2,016.7	6.9	6.9	34.60	3,481.6	2,401.5	4,229.6	4,215.8	13.80	306.396		
2,100.0	2,100.0	2,097.6	2,097.5	7.3	7.2	34.60	3,481.0	2,401.7	4,229.1	4,214.7	14.45	292.766		
2,200.0	2,200.0	2,201.8	2,201.7	7.7	7.5	34.61	3,480.4	2,401.8	4,228.8	4,213.6	15.17	278.798		
2,300.0	2,300.0	2,312.2	2,312.1	8.0	7.9	85.66	3,479.5	2,402.2	4,228.1	4,212.2	15.91	265.769		
2,400.0	2,399.8	2,413.9	2,413.8	8.4	8.3	85.76	3,478.6	2,402.2	4,227.0	4,210.4	16.62	254.378		
2,500.0	2,499.5	2,498.7	2,498.6	8.7	8.6	85.89	3,477.8	2,402.6	4,225.8	4,208.6	17.27	244.737		
2,600.0	2,598.7	2,617.0	2,616.9	9.1	9.0	86.13	3,476.8	2,402.7	4,224.4	4,206.4	18.03	234.252		
2,700.0	2,697.5	2,673.5	2,673.4	9.4	9.2	86.27	3,476.8	2,402.6	4,223.1	4,204.5	18.59	227.228		
2,800.0	2,795.6	2,784.5	2,784.4	9.8	9.6	86.57	3,477.4	2,402.2	4,222.2	4,202.9	19.33	218.445		
2,900.0	2,893.1	2,890.5	2,890.4	10.1	9.9	86.92	3,477.7	2,401.4	4,220.6	4,200.5	20.06	210.447		
3,000.0	2,989.6	2,977.6	2,977.5	10.5	10.2	87.25	3,477.9	2,400.8	4,219.0	4,198.3	20.72	203.629		
3,100.0	3,085.3	3,079.8	3,079.7	10.9	10.6	87.68	3,477.9	2,400.6	4,217.5	4,196.1	21.44	196.731		
3,200.0	3,179.8	3,222.8	3,222.7	11.2	11.1	88.35	3,477.0	2,399.5	4,215.3	4,193.0	22.30	189.008		
3,300.0	3,273.2	3,290.3	3,290.2	11.6	11.3	88.72	3,476.4	2,399.1	4,213.2	4,190.2	22.91	183.894		
3,387.5	3,353.8	3,352.3	3,352.1	11.9	11.5	89.08	3,475.9	2,399.1	4,211.9	4,188.5	23.46	179.558		
3,400.0	3,365.2	3,361.1	3,361.0	12.0	11.6	89.13	3,475.8	2,399.2	4,211.8	4,188.3	23.54	178.956		
3,497.0	3,454.0	3,422.6	3,422.5	12.4	11.8	89.48	3,475.3	2,399.9	4,211.3	4,187.2	24.12	174.582		
3,500.0	3,456.8	3,424.2	3,424.1	12.4	11.8	89.49	3,475.2	2,399.9	4,211.3	4,187.1	24.14	174.457		
3,600.0	3,548.3	3,478.2	3,478.0	12.8	12.0	89.79	3,475.1	2,400.8	4,211.9	4,187.2	24.72	170.416		
3,700.0	3,639.8	3,543.3	3,543.1	13.2	12.2	90.16	3,475.4	2,402.2	4,213.7	4,188.4	25.33	166.321		
3,800.0	3,731.4	3,624.5	3,624.3	13.6	12.5	90.61	3,476.1	2,404.0	4,216.3	4,190.3	26.02	162.067		
3,900.0	3,822.9	3,742.3	3,742.1	14.0	12.9	91.28	3,476.5	2,407.0	4,219.1	4,192.2	26.83	157.238		
4,000.0	3,914.4	3,855.9	3,855.7	14.4	13.3	91.93	3,476.4	2,409.2	4,221.6	4,194.0	27.64	152.750		
4,100.0	4,005.9	3,951.2	3,951.0	14.8	13.6	92.47	3,475.8	2,411.2	4,224.3	4,196.0	28.38	148.844		
4,200.0	4,097.5	4,032.8	4,032.5	15.2	13.9	92.93	3,475.8	2,412.4	4,227.5	4,198.4	29.08	145.382		
4,300.0	4,189.0	4,103.4	4,103.2	15.6	14.2	93.32	3,476.3	2,413.4	4,231.4	4,201.7	29.74	142.284		
4,400.0	4,280.5	4,216.5	4,216.2	16.1	14.6	93.95	3,476.6	2,415.2	4,235.6	4,205.1	30.55	138.624		
4,500.0	4,372.1	4,289.3	4,289.0	16.5	14.8	94.36	3,476.5	2,416.7	4,240.3	4,209.1	31.23	135.785		
4,600.0	4,463.6	4,431.4	4,431.1	16.9	15.3	95.15	3,476.1	2,419.0	4,245.0	4,212.8	32.15	132.028		
4,700.0	4,555.1	4,520.3	4,519.9	17.4	15.6	95.64	3,475.8	2,419.8	4,249.5	4,216.6	32.89	129.216		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
**Anticollision Report**

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Roth 33-06 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
4,800.0	4,646.7	4,601.6	4,601.2	17.8	15.9	96.10	3,475.2	2,421.1	4,254.7	4,221.1	33.60	126.638		
4,900.0	4,738.2	4,729.6	4,729.2	18.2	16.3	96.83	3,473.0	2,423.1	4,259.5	4,225.0	34.48	123.553		
5,000.0	4,829.7	4,787.8	4,787.4	18.7	16.5	97.15	3,472.2	2,424.0	4,265.1	4,230.0	35.11	121.493		
5,100.0	4,921.3	4,872.1	4,871.7	19.1	16.8	97.62	3,471.8	2,425.3	4,271.6	4,235.7	35.83	119.218		
5,200.0	5,012.8	4,996.8	4,996.4	19.5	17.3	98.30	3,471.4	2,426.5	4,278.2	4,241.5	36.70	116.572		
5,300.0	5,104.3	5,159.9	5,159.5	20.0	17.8	99.19	3,469.3	2,426.0	4,283.6	4,245.9	37.70	113.609		
5,400.0	5,195.8	5,233.5	5,233.0	20.4	18.1	99.58	3,468.6	2,425.0	4,289.0	4,250.6	38.40	111.706		
5,500.0	5,287.4	5,300.0	5,299.6	20.9	18.3	99.93	3,468.3	2,424.7	4,295.6	4,256.5	39.06	109.969		
5,600.0	5,378.9	5,430.4	5,430.0	21.3	18.8	100.63	3,466.7	2,424.2	4,302.3	4,262.3	39.95	107.681		
5,700.0	5,470.4	5,515.4	5,515.0	21.8	19.1	101.09	3,465.1	2,423.8	4,308.9	4,268.2	40.69	105.904		
5,800.0	5,562.0	5,580.8	5,580.4	22.2	19.3	101.45	3,464.1	2,423.7	4,316.2	4,274.9	41.35	104.384		
5,900.0	5,653.5	5,661.0	5,660.5	22.7	19.6	101.88	3,463.2	2,423.8	4,324.4	4,282.4	42.06	102.805		
6,000.0	5,745.0	5,732.1	5,731.6	23.1	19.8	102.26	3,462.3	2,424.1	4,333.2	4,290.4	42.75	101.371		
6,100.0	5,836.6	5,800.0	5,799.5	23.6	20.1	102.63	3,461.7	2,424.9	4,343.0	4,299.6	43.41	100.036		
6,200.0	5,928.1	5,937.8	5,937.3	24.0	20.6	103.36	3,460.3	2,425.8	4,352.7	4,308.3	44.34	98.163		
6,278.6	6,000.0	6,004.1	6,003.6	24.4	20.8	103.71	3,459.9	2,425.7	4,360.3	4,315.4	44.91	97.079		
6,290.0	6,010.4	6,030.8	6,030.3	24.4	20.9	102.20	3,459.8	2,425.5	4,361.4	4,316.3	45.06	96.788		
6,300.0	6,019.5	6,054.3	6,053.8	24.5	21.0	100.66	3,459.6	2,425.3	4,362.2	4,317.0	45.19	96.531		
6,350.0	6,065.8	6,120.0	6,119.5	24.7	21.2	90.70	3,459.2	2,424.4	4,363.5	4,317.8	45.63	95.620		
6,400.0	6,113.0	6,153.2	6,152.7	24.9	21.3	76.82	3,459.1	2,423.9	4,361.0	4,315.0	45.95	94.912		
6,450.0	6,160.7	6,186.8	6,186.3	25.1	21.4	59.70	3,459.2	2,423.4	4,354.7	4,308.4	46.25	94.160		
6,500.0	6,208.5	6,227.2	6,226.7	25.3	21.6	41.83	3,459.5	2,422.8	4,344.7	4,298.1	46.56	93.319		
6,550.0	6,255.8	6,271.5	6,270.9	25.4	21.7	26.11	3,459.6	2,422.2	4,330.9	4,284.0	46.86	92.412		
6,600.0	6,302.5	6,320.3	6,319.7	25.6	21.9	13.61	3,459.7	2,421.7	4,313.4	4,266.2	47.17	91.436		
6,650.0	6,347.9	6,377.6	6,377.1	25.7	22.1	3.85	3,459.8	2,421.0	4,292.2	4,244.7	47.50	90.364		
6,700.0	6,391.6	6,461.1	6,460.6	25.9	22.4	-4.10	3,459.8	2,419.6	4,267.5	4,219.6	47.90	89.083		
6,750.0	6,433.4	6,544.5	6,543.9	26.0	22.7	-11.05	3,458.9	2,417.7	4,239.2	4,190.9	48.29	87.782		
6,800.0	6,472.8	6,613.6	6,612.9	26.1	22.9	-17.56	3,457.6	2,415.8	4,207.7	4,159.1	48.61	86.553		
6,850.0	6,509.4	6,643.0	6,642.3	26.2	23.0	-23.91	3,457.0	2,414.9	4,173.6	4,124.8	48.79	85.539		
6,900.0	6,543.0	6,675.2	6,674.6	26.3	23.1	-30.53	3,456.3	2,414.0	4,137.3	4,088.3	48.97	84.489		
6,950.0	6,573.2	6,704.1	6,703.4	26.4	23.2	-37.65	3,455.7	2,413.1	4,099.1	4,049.9	49.12	83.443		
7,000.0	6,599.8	6,729.2	6,728.5	26.5	23.3	-45.40	3,455.2	2,412.4	4,059.4	4,010.1	49.26	82.407		
7,050.0	6,622.5	6,750.4	6,749.7	26.6	23.4	-53.80	3,454.7	2,411.8	4,018.6	3,969.2	49.38	81.387		
7,100.0	6,641.1	6,767.5	6,766.8	26.7	23.5	-62.68	3,454.4	2,411.3	3,977.2	3,927.7	49.47	80.387		
7,150.0	6,655.4	6,780.4	6,779.6	26.8	23.5	-71.69	3,454.1	2,410.9	3,935.4	3,885.8	49.55	79.416		
7,200.0	6,665.4	6,788.8	6,788.1	26.9	23.5	-80.38	3,453.9	2,410.7	3,893.8	3,844.2	49.62	78.477		
7,250.0	6,670.8	6,792.8	6,792.1	27.0	23.6	-88.32	3,453.8	2,410.6	3,852.7	3,803.0	49.66	77.578		
7,285.7	6,672.0	6,792.9	6,792.2	27.1	23.6	-93.39	3,453.8	2,410.6	3,824.0	3,774.3	49.68	76.964		
7,300.0	6,672.0	6,792.5	6,791.8	27.1	23.6	-93.38	3,453.8	2,410.6	3,812.5	3,762.8	49.69	76.723		
7,400.0	6,672.0	6,789.6	6,788.9	27.3	23.5	-93.30	3,453.9	2,410.7	3,733.4	3,683.6	49.77	75.012		
7,500.0	6,672.0	6,786.7	6,785.9	27.6	23.5	-93.23	3,454.0	2,410.8	3,655.3	3,605.4	49.88	73.280		
7,600.0	6,672.0	6,783.7	6,783.0	28.0	23.5	-93.16	3,454.0	2,410.8	3,578.2	3,528.2	50.03	71.526		
7,700.0	6,672.0	6,780.8	6,780.1	28.3	23.5	-93.09	3,454.1	2,410.9	3,502.3	3,452.1	50.21	69.752		
7,800.0	6,672.0	6,777.9	6,777.2	28.8	23.5	-93.01	3,454.1	2,411.0	3,427.6	3,377.2	50.44	67.957		
7,900.0	6,672.0	6,775.0	6,774.3	29.3	23.5	-92.94	3,454.2	2,411.1	3,354.3	3,303.6	50.71	66.144		
8,000.0	6,672.0	6,772.1	6,771.3	29.8	23.5	-92.87	3,454.3	2,411.2	3,282.3	3,231.3	51.03	64.316		
8,100.0	6,672.0	6,769.1	6,768.4	30.4	23.5	-92.80	3,454.3	2,411.3	3,211.9	3,160.4	51.41	62.476		
8,200.0	6,672.0	6,766.2	6,765.5	31.0	23.5	-92.72	3,454.4	2,411.3	3,143.0	3,091.1	51.84	60.627		
8,300.0	6,672.0	6,763.3	6,762.6	31.7	23.5	-92.65	3,454.4	2,411.4	3,075.8	3,023.5	52.33	58.775		
8,400.0	6,672.0	6,760.4	6,759.7	32.4	23.4	-92.58	3,454.5	2,411.5	3,010.5	2,957.6	52.88	56.925		
8,500.0	6,672.0	6,757.5	6,756.7	33.1	23.4	-92.51	3,454.6	2,411.6	2,947.0	2,893.5	53.50	55.083		
8,600.0	6,672.0	6,754.5	6,753.8	33.9	23.4	-92.43	3,454.6	2,411.7	2,885.7	2,831.5	54.18	53.257		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Roth 33-06 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
8,700.0	6,672.0	6,751.6	6,750.9	34.7	23.4	-92.36	3,454.7	2,411.8	2,826.5	2,771.6	54.93	51.454		
8,800.0	6,672.0	6,748.7	6,748.0	35.5	23.4	-92.29	3,454.8	2,411.9	2,769.7	2,714.0	55.75	49.682		
8,900.0	6,672.0	6,745.8	6,745.1	36.3	23.4	-92.22	3,454.8	2,411.9	2,715.4	2,658.8	56.63	47.949		
9,000.0	6,672.0	6,742.8	6,742.1	37.2	23.4	-92.14	3,454.9	2,412.0	2,663.7	2,606.1	57.58	46.264		
9,100.0	6,672.0	6,739.9	6,739.2	38.1	23.4	-92.07	3,454.9	2,412.1	2,614.8	2,556.2	58.58	44.634		
9,200.0	6,672.0	6,737.0	6,736.3	39.0	23.4	-92.00	3,455.0	2,412.2	2,568.8	2,509.2	59.65	43.067		
9,300.0	6,672.0	6,734.1	6,733.4	39.9	23.4	-91.93	3,455.1	2,412.3	2,526.0	2,465.2	60.76	41.571		
9,400.0	6,672.0	6,731.1	6,730.4	40.8	23.3	-91.85	3,455.1	2,412.4	2,486.4	2,424.5	61.92	40.153		
9,500.0	6,672.0	6,728.2	6,727.5	41.8	23.3	-91.78	3,455.2	2,412.4	2,450.3	2,387.2	63.12	38.817		
9,600.0	6,672.0	6,725.3	6,724.6	42.7	23.3	-91.71	3,455.2	2,412.5	2,417.8	2,353.4	64.35	37.570		
9,700.0	6,672.0	6,722.4	6,721.7	43.7	23.3	-91.64	3,455.3	2,412.6	2,389.0	2,323.4	65.60	36.416		
9,800.0	6,672.0	6,719.4	6,718.7	44.7	23.3	-91.56	3,455.4	2,412.7	2,364.1	2,297.2	66.86	35.358		
9,900.0	6,672.0	6,716.5	6,715.8	45.7	23.3	-91.49	3,455.4	2,412.8	2,343.1	2,275.0	68.12	34.398		
10,000.0	6,672.0	6,713.6	6,712.9	46.7	23.3	-91.42	3,455.5	2,412.9	2,326.3	2,256.9	69.36	33.539		
10,100.0	6,672.0	6,710.7	6,710.0	47.7	23.3	-91.34	3,455.5	2,413.0	2,313.7	2,243.1	70.58	32.781		
10,200.0	6,672.0	6,707.7	6,707.0	48.8	23.3	-91.27	3,455.6	2,413.0	2,305.3	2,233.5	71.76	32.124		
10,300.0	6,672.0	6,704.8	6,704.1	49.8	23.2	-91.20	3,455.7	2,413.1	2,301.2	2,228.3	72.90	31.567		
10,344.0	6,672.0	6,703.5	6,702.8	50.3	23.2	-91.17	3,455.7	2,413.2	2,300.8	2,227.4	73.38	31.353 CC, ES		
10,400.0	6,672.0	6,701.9	6,701.2	50.9	23.2	-91.13	3,455.7	2,413.2	2,301.5	2,227.5	73.98	31.109		
10,500.0	6,672.0	6,698.9	6,698.3	51.9	23.2	-91.05	3,455.8	2,413.3	2,306.1	2,231.1	75.00	30.748		
10,600.0	6,672.0	6,696.0	6,695.3	53.0	23.2	-90.98	3,455.9	2,413.4	2,315.0	2,239.0	75.95	30.481		
10,700.0	6,672.0	6,693.1	6,692.4	54.1	23.2	-90.91	3,455.9	2,413.5	2,328.1	2,251.3	76.82	30.307		
10,800.0	6,672.0	6,690.2	6,689.5	55.2	23.2	-90.83	3,456.0	2,413.5	2,345.4	2,267.8	77.61	30.220		
10,900.0	6,672.0	6,687.2	6,686.6	56.3	23.2	-90.76	3,456.0	2,413.6	2,366.9	2,288.5	78.32	30.219 SF		
11,000.0	6,672.0	6,684.3	6,683.6	57.4	23.2	-90.69	3,456.1	2,413.7	2,392.3	2,313.3	78.95	30.300		
11,100.0	6,672.0	6,681.4	6,680.7	58.5	23.2	-90.62	3,456.2	2,413.8	2,421.5	2,342.0	79.50	30.459		
11,200.0	6,672.0	6,678.4	6,677.8	59.6	23.2	-90.54	3,456.2	2,413.9	2,454.5	2,374.5	79.97	30.692		
11,300.0	6,672.0	6,675.5	6,674.8	60.7	23.1	-90.47	3,456.3	2,414.0	2,491.0	2,410.7	80.37	30.996		
11,400.0	6,672.0	6,672.6	6,671.9	61.8	23.1	-90.40	3,456.3	2,414.1	2,531.0	2,450.3	80.69	31.367		
11,500.0	6,672.0	6,669.7	6,669.0	62.9	23.1	-90.32	3,456.4	2,414.1	2,574.2	2,493.3	80.95	31.801		
11,600.0	6,672.0	6,666.7	6,666.1	64.1	23.1	-90.25	3,456.5	2,414.2	2,620.5	2,539.4	81.14	32.296		
11,700.0	6,672.0	6,663.8	6,663.1	65.2	23.1	-90.18	3,456.5	2,414.3	2,669.8	2,588.5	81.28	32.846		
11,800.0	6,672.0	6,660.9	6,660.2	66.3	23.1	-90.10	3,456.6	2,414.4	2,721.8	2,640.4	81.37	33.450		
11,900.0	6,672.0	6,657.9	6,657.3	67.5	23.1	-90.03	3,456.7	2,414.5	2,776.4	2,695.0	81.41	34.104		
12,000.0	6,672.0	6,655.0	6,654.3	68.6	23.1	-89.96	3,456.7	2,414.6	2,833.5	2,752.1	81.41	34.805		
12,100.0	6,672.0	6,652.1	6,651.4	69.8	23.1	-89.89	3,456.8	2,414.6	2,893.0	2,811.6	81.38	35.550		
12,200.0	6,672.0	6,649.1	6,648.5	70.9	23.1	-89.81	3,456.8	2,414.7	2,954.6	2,873.3	81.31	36.337		
12,300.0	6,672.0	6,646.2	6,645.6	72.1	23.0	-89.74	3,456.9	2,414.8	3,018.2	2,937.0	81.22	37.163		
12,400.0	6,672.0	6,643.3	6,642.6	73.2	23.0	-89.67	3,457.0	2,414.9	3,083.8	3,002.7	81.10	38.025		
12,500.0	6,672.0	6,640.3	6,639.7	74.4	23.0	-89.59	3,457.0	2,415.0	3,151.2	3,070.2	80.96	38.922		
12,600.0	6,672.0	6,637.4	6,636.8	75.5	23.0	-89.52	3,457.1	2,415.1	3,220.3	3,139.5	80.81	39.851		
12,700.0	6,672.0	6,634.5	6,633.8	76.7	23.0	-89.45	3,457.1	2,415.2	3,290.9	3,210.3	80.64	40.810		
12,800.0	6,672.0	6,631.5	6,630.9	77.9	23.0	-89.38	3,457.2	2,415.2	3,363.1	3,282.6	80.46	41.797		
12,900.0	6,672.0	6,628.6	6,628.0	79.0	23.0	-89.30	3,457.3	2,415.3	3,436.6	3,356.3	80.27	42.811		
13,000.0	6,672.0	6,625.7	6,625.0	80.2	23.0	-89.23	3,457.3	2,415.4	3,511.4	3,431.3	80.08	43.849		
13,100.0	6,672.0	6,622.7	6,622.1	81.4	23.0	-89.16	3,457.4	2,415.5	3,587.4	3,507.6	79.88	44.912		
13,200.0	6,672.0	6,619.8	6,619.2	82.6	22.9	-89.08	3,457.4	2,415.6	3,664.6	3,584.9	79.67	45.996		
13,300.0	6,672.0	6,616.9	6,616.2	83.7	22.9	-89.01	3,457.5	2,415.7	3,742.9	3,663.4	79.47	47.100		
13,400.0	6,672.0	6,613.9	6,613.3	84.9	22.9	-88.94	3,457.6	2,415.7	3,822.1	3,742.9	79.26	48.224		
13,500.0	6,672.0	6,611.4	6,610.8	86.1	22.9	-88.88	3,457.6	2,415.8	3,902.4	3,823.3	79.05	49.366		
13,600.0	6,672.0	6,608.3	6,607.7	87.3	22.9	-88.80	3,457.7	2,415.9	3,983.5	3,904.6	78.84	50.525		
13,700.0	6,672.0	6,605.3	6,604.6	88.4	22.9	-88.72	3,457.8	2,416.0	4,065.4	3,986.8	78.63	51.700		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Roth 33-06 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
13,800.0	6,672.0	6,602.2	6,601.6	89.6	22.9	-88.65	3,457.8	2,416.1	4,148.1	4,069.7	78.43	52.889		
13,900.0	6,672.0	6,599.2	6,598.6	90.8	22.9	-88.58	3,457.9	2,416.2	4,231.6	4,153.4	78.23	54.093		
14,000.0	6,672.0	6,596.3	6,595.6	92.0	22.9	-88.50	3,457.9	2,416.3	4,315.7	4,237.7	78.03	55.310		
14,100.0	6,672.0	6,593.3	6,592.7	93.2	22.9	-88.43	3,458.0	2,416.3	4,400.6	4,322.7	77.83	56.540		
14,200.0	6,672.0	6,590.4	6,589.8	94.4	22.8	-88.36	3,458.1	2,416.4	4,486.0	4,408.4	77.64	57.781		
14,300.0	6,672.0	6,587.6	6,587.0	95.6	22.8	-88.29	3,458.1	2,416.5	4,572.0	4,494.6	77.45	59.033		
14,400.0	6,672.0	6,584.8	6,584.1	96.8	22.8	-88.22	3,458.2	2,416.6	4,658.6	4,581.3	77.26	60.295		
14,500.0	6,672.0	6,582.0	6,581.4	98.0	22.8	-88.15	3,458.2	2,416.7	4,745.7	4,668.6	77.08	61.566		
14,600.0	6,672.0	6,579.2	6,578.6	99.2	22.8	-88.08	3,458.3	2,416.7	4,833.3	4,756.4	76.91	62.847		
14,700.0	6,672.0	6,576.5	6,575.9	100.4	22.8	-88.01	3,458.3	2,416.8	4,921.3	4,844.6	76.73	64.136		
14,800.0	6,672.0	6,573.8	6,573.2	101.6	22.8	-87.95	3,458.4	2,416.9	5,009.8	4,933.3	76.56	65.433		
14,900.0	6,672.0	6,571.1	6,570.5	102.7	22.8	-87.88	3,458.4	2,417.0	5,098.8	5,022.4	76.40	66.738		
15,000.0	6,672.0	6,568.5	6,567.9	103.9	22.8	-87.82	3,458.5	2,417.0	5,188.1	5,111.8	76.24	68.049		
15,100.0	6,672.0	6,565.9	6,565.3	105.1	22.8	-87.75	3,458.5	2,417.1	5,277.8	5,201.7	76.08	69.367		
15,200.0	6,672.0	6,563.3	6,562.7	106.3	22.8	-87.69	3,458.6	2,417.2	5,367.8	5,291.9	75.93	70.691		
15,300.0	6,672.0	6,560.7	6,560.2	107.6	22.7	-87.63	3,458.6	2,417.2	5,458.2	5,382.5	75.79	72.021		
15,400.0	6,672.0	6,558.2	6,557.6	108.8	22.7	-87.56	3,458.6	2,417.3	5,549.0	5,473.3	75.64	73.356		
15,500.0	6,672.0	6,555.7	6,555.2	110.0	22.7	-87.50	3,458.7	2,417.4	5,640.0	5,564.5	75.51	74.696		
15,600.0	6,672.0	6,553.3	6,552.7	111.2	22.7	-87.44	3,458.7	2,417.4	5,731.3	5,656.0	75.37	76.041		
15,700.0	6,672.0	6,550.8	6,550.3	112.4	22.7	-87.38	3,458.8	2,417.5	5,822.9	5,747.7	75.24	77.389		
15,800.0	6,672.0	6,548.4	6,547.8	113.6	22.7	-87.32	3,458.8	2,417.6	5,914.8	5,839.7	75.12	78.742		
15,900.0	6,672.0	6,546.0	6,545.5	114.8	22.7	-87.27	3,458.8	2,417.6	6,007.0	5,932.0	74.99	80.098		
16,000.0	6,672.0	6,543.7	6,543.1	116.0	22.7	-87.21	3,458.9	2,417.7	6,099.3	6,024.5	74.88	81.458		
16,100.0	6,672.0	6,541.4	6,540.8	117.2	22.7	-87.15	3,458.9	2,417.7	6,191.9	6,117.2	74.76	82.821		
16,200.0	6,672.0	6,539.0	6,538.5	118.4	22.7	-87.10	3,459.0	2,417.8	6,284.8	6,210.1	74.65	84.187		
16,300.0	6,672.0	6,536.8	6,536.2	119.6	22.7	-87.04	3,459.0	2,417.9	6,377.8	6,303.3	74.55	85.555		
16,400.0	6,672.0	6,534.5	6,533.9	120.8	22.7	-86.98	3,459.0	2,417.9	6,471.1	6,396.6	74.44	86.926		
16,500.0	6,672.0	6,532.3	6,531.7	122.0	22.6	-86.93	3,459.0	2,418.0	6,564.5	6,490.2	74.34	88.299		
16,600.0	6,672.0	6,530.1	6,529.5	123.2	22.6	-86.88	3,459.1	2,418.0	6,658.2	6,583.9	74.25	89.674		
16,700.0	6,672.0	6,527.9	6,527.3	124.5	22.6	-86.82	3,459.1	2,418.1	6,752.0	6,677.8	74.16	91.050		
16,800.0	6,672.0	6,525.7	6,525.1	125.7	22.6	-86.77	3,459.1	2,418.1	6,846.0	6,771.9	74.07	92.428		
16,900.0	6,672.0	6,523.6	6,523.0	126.9	22.6	-86.72	3,459.2	2,418.2	6,940.1	6,866.1	73.98	93.808		
17,000.0	6,672.0	6,521.4	6,520.9	128.1	22.6	-86.67	3,459.2	2,418.2	7,034.4	6,960.5	73.90	95.189		
17,100.0	6,672.0	6,519.3	6,518.8	129.3	22.6	-86.62	3,459.2	2,418.3	7,128.9	7,055.0	73.82	96.571		
17,200.0	6,672.0	6,517.3	6,516.7	130.5	22.6	-86.57	3,459.2	2,418.3	7,223.5	7,149.7	73.74	97.953		
17,300.0	6,672.0	6,515.2	6,514.6	131.7	22.6	-86.52	3,459.3	2,418.4	7,318.2	7,244.5	73.67	99.337		
17,400.0	6,672.0	6,513.2	6,512.6	133.0	22.6	-86.47	3,459.3	2,418.4	7,413.1	7,339.5	73.60	100.720		
17,500.0	6,672.0	6,511.1	6,510.6	134.2	22.6	-86.42	3,459.3	2,418.5	7,508.1	7,434.6	73.53	102.105		
17,600.0	6,672.0	6,509.2	6,508.6	135.4	22.6	-86.37	3,459.3	2,418.5	7,603.2	7,529.8	73.47	103.489		
17,700.0	6,672.0	6,507.2	6,506.6	136.6	22.6	-86.32	3,459.4	2,418.6	7,698.5	7,625.1	73.41	104.874		
17,800.0	6,672.0	6,505.2	6,504.6	137.8	22.5	-86.27	3,459.4	2,418.6	7,793.9	7,720.5	73.35	106.259		
17,900.0	6,672.0	6,503.3	6,502.7	139.0	22.5	-86.23	3,459.4	2,418.7	7,889.4	7,816.1	73.29	107.644		
18,000.0	6,672.0	6,501.4	6,500.8	140.3	22.5	-86.18	3,459.4	2,418.7	7,984.9	7,911.7	73.24	109.028		
18,100.0	6,672.0	6,500.0	6,499.4	141.5	22.5	-86.15	3,459.5	2,418.8	8,080.6	8,007.5	73.19	110.412		
18,200.0	6,672.0	6,500.0	6,499.4	142.7	22.5	-86.15	3,459.5	2,418.8	8,176.4	8,103.3	73.14	111.794		
18,300.0	6,672.0	6,500.0	6,499.4	143.9	22.5	-86.15	3,459.5	2,418.8	8,272.3	8,199.2	73.09	113.176		
18,342.5	6,672.0	6,495.2	6,494.6	144.4	22.5	-86.03	3,459.5	2,418.9	8,313.1	8,240.0	73.07	113.766		



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Roth 42-06 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
0.0	0.0	4.5	4.5	0.0	0.0	37.11	4,829.3	3,653.1	6,055.3					
100.0	100.0	94.6	94.6	0.1	0.2	37.11	4,829.2	3,653.3	6,055.4	6,055.1	0.29	N/A		
200.0	200.0	207.5	207.5	0.5	0.6	37.11	4,829.1	3,653.7	6,055.5	6,054.5	1.03	5,852.100		
209.2	209.2	218.0	218.0	0.5	0.6	37.11	4,829.0	3,653.7	6,055.5	6,054.4	1.10	5,481.097		
300.0	300.0	301.2	301.2	0.8	0.9	37.12	4,828.8	3,654.0	6,055.5	6,053.8	1.72	3,519.417		
400.0	400.0	431.3	431.3	1.2	1.3	37.12	4,828.2	3,654.3	6,055.3	6,052.8	2.53	2,390.298		
500.0	500.0	528.3	528.3	1.6	1.7	37.12	4,827.7	3,654.2	6,054.8	6,051.6	3.23	1,874.293		
600.0	600.0	609.9	609.9	1.9	2.0	37.12	4,827.5	3,654.2	6,054.6	6,050.8	3.87	1,563.042		
700.0	700.0	732.9	732.9	2.3	2.4	37.13	4,826.9	3,654.3	6,054.3	6,049.6	4.66	1,298.620		
800.0	800.0	832.1	832.1	2.6	2.7	37.13	4,826.5	3,654.2	6,053.8	6,048.5	5.37	1,127.926		
900.0	900.0	953.7	953.7	3.0	3.2	37.13	4,825.7	3,654.1	6,053.3	6,047.1	6.15	984.060		
1,000.0	1,000.0	1,054.2	1,054.2	3.4	3.5	37.13	4,824.9	3,653.6	6,052.4	6,045.5	6.86	882.090		
1,100.0	1,100.0	1,151.5	1,151.5	3.7	3.9	37.13	4,824.4	3,653.2	6,051.6	6,044.1	7.56	800.417		
1,200.0	1,200.0	1,279.5	1,279.5	4.1	4.3	37.14	4,823.3	3,652.5	6,050.7	6,042.3	8.37	723.131		
1,300.0	1,300.0	1,378.5	1,378.5	4.4	4.7	37.13	4,822.4	3,651.6	6,049.4	6,040.3	9.07	666.770		
1,400.0	1,400.0	1,467.4	1,467.4	4.8	5.0	37.13	4,821.8	3,650.8	6,048.3	6,038.5	9.74	620.795		
1,500.0	1,500.0	1,568.7	1,568.7	5.1	5.3	37.13	4,821.0	3,650.1	6,047.3	6,036.8	10.46	578.348		
1,600.0	1,600.0	1,691.9	1,691.8	5.5	5.7	37.13	4,819.8	3,649.2	6,046.1	6,034.8	11.25	537.625		
1,700.0	1,700.0	1,799.4	1,799.3	5.9	6.1	37.13	4,818.6	3,648.1	6,044.6	6,032.6	11.98	504.510		
1,800.0	1,800.0	1,898.4	1,898.3	6.2	6.5	37.12	4,817.7	3,646.8	6,043.0	6,030.3	12.69	476.333		
1,900.0	1,900.0	1,982.8	1,982.7	6.6	6.8	37.12	4,817.2	3,645.5	6,041.6	6,028.2	13.34	452.859		
2,000.0	2,000.0	2,067.9	2,067.8	6.9	7.1	37.11	4,817.0	3,644.0	6,040.4	6,026.4	14.00	431.526		
2,100.0	2,100.0	2,154.2	2,154.1	7.3	7.4	37.10	4,817.1	3,642.6	6,039.5	6,024.8	14.66	412.008		
2,200.0	2,200.0	2,249.7	2,249.6	7.7	7.7	37.08	4,817.4	3,641.1	6,038.8	6,023.4	15.35	393.364		
2,300.0	2,300.0	2,350.2	2,350.1	8.0	8.1	88.10	4,817.6	3,639.5	6,037.9	6,021.9	16.06	375.995		
2,400.0	2,399.8	2,441.4	2,441.3	8.4	8.4	88.15	4,817.8	3,638.2	6,037.1	6,020.3	16.73	360.852		
2,500.0	2,499.5	2,530.6	2,530.4	8.7	8.7	88.23	4,818.0	3,637.2	6,036.3	6,018.9	17.39	347.019		
2,600.0	2,598.7	2,626.5	2,626.3	9.1	9.0	88.35	4,818.4	3,636.1	6,035.5	6,017.4	18.08	333.762		
2,700.0	2,697.5	2,720.1	2,720.0	9.4	9.3	88.50	4,818.7	3,635.1	6,034.8	6,016.0	18.76	321.602		
2,800.0	2,795.6	2,814.0	2,813.9	9.8	9.7	88.67	4,819.2	3,634.2	6,034.0	6,014.6	19.45	310.268		
2,900.0	2,893.1	2,918.2	2,918.0	10.1	10.0	88.90	4,819.6	3,633.2	6,033.3	6,013.1	20.17	299.147		
3,000.0	2,989.6	3,018.7	3,018.5	10.5	10.4	89.16	4,819.7	3,632.4	6,032.4	6,011.6	20.88	288.932		
3,100.0	3,085.3	3,120.5	3,120.3	10.9	10.7	89.45	4,819.6	3,631.7	6,031.6	6,010.0	21.60	279.287		
3,200.0	3,179.8	3,201.8	3,201.6	11.2	11.0	89.71	4,819.5	3,631.4	6,030.9	6,008.6	22.25	271.087		
3,300.0	3,273.2	3,294.9	3,294.7	11.6	11.4	90.04	4,819.3	3,631.2	6,030.5	6,007.6	22.94	262.841		
3,358.1	3,326.9	3,340.6	3,340.4	11.8	11.5	90.21	4,819.2	3,631.1	6,030.4	6,007.1	23.32	258.576		
3,387.5	3,353.8	3,363.1	3,362.9	11.9	11.6	90.29	4,819.2	3,631.2	6,030.5	6,006.9	23.51	256.497		
3,400.0	3,365.2	3,372.7	3,372.5	12.0	11.6	90.33	4,819.2	3,631.2	6,030.5	6,006.9	23.59	255.622		
3,500.0	3,456.8	3,440.5	3,440.4	12.4	11.9	90.59	4,819.2	3,631.3	6,031.0	6,006.8	24.21	249.107		
3,600.0	3,548.3	3,505.2	3,505.0	12.8	12.1	90.84	4,819.5	3,631.5	6,032.2	6,007.3	24.82	243.004		
3,700.0	3,639.8	3,597.7	3,597.5	13.2	12.4	91.19	4,820.0	3,632.0	6,033.8	6,008.3	25.54	236.262		
3,800.0	3,731.4	3,676.4	3,676.2	13.6	12.7	91.49	4,820.6	3,632.5	6,035.8	6,009.6	26.21	230.282		
3,900.0	3,822.9	3,757.6	3,757.4	14.0	13.0	91.80	4,821.2	3,633.1	6,038.3	6,011.4	26.90	224.509		
4,000.0	3,914.4	3,848.4	3,848.2	14.4	13.3	92.15	4,821.8	3,634.1	6,041.1	6,013.5	27.62	218.735		
4,100.0	4,005.9	3,945.9	3,945.7	14.8	13.6	92.53	4,822.4	3,635.0	6,044.1	6,015.7	28.37	213.056		
4,200.0	4,097.5	4,041.0	4,040.8	15.2	13.9	92.89	4,822.8	3,636.0	6,047.3	6,018.2	29.11	207.714		
4,300.0	4,189.0	4,133.8	4,133.5	15.6	14.3	93.25	4,823.0	3,637.2	6,050.8	6,020.9	29.85	202.679		
4,400.0	4,280.5	4,224.6	4,224.4	16.1	14.6	93.61	4,823.1	3,638.5	6,054.5	6,023.9	30.59	197.922		
4,500.0	4,372.1	4,320.7	4,320.4	16.5	14.9	93.98	4,822.9	3,640.1	6,058.5	6,027.2	31.35	193.266		
4,600.0	4,463.6	4,420.9	4,420.6	16.9	15.3	94.38	4,822.6	3,641.6	6,062.7	6,030.6	32.12	188.736		
4,700.0	4,555.1	4,544.3	4,544.0	17.4	15.7	94.85	4,822.7	3,642.5	6,066.8	6,033.8	32.98	183.947		
4,800.0	4,646.7	4,651.6	4,651.3	17.8	16.1	95.26	4,822.7	3,642.6	6,070.8	6,037.0	33.78	179.693		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Roth 42-06 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
4,900.0	4,738.2	4,754.7	4,754.4	18.2	16.4	95.65	4,822.2	3,643.0	6,074.9	6,040.3	34.58	175.700		
5,000.0	4,829.7	4,854.4	4,854.1	18.7	16.8	96.04	4,820.7	3,644.1	6,079.0	6,043.7	35.36	171.939		
5,100.0	4,921.3	4,946.9	4,946.6	19.1	17.1	96.41	4,819.0	3,645.3	6,083.4	6,047.3	36.11	168.456		
5,200.0	5,012.8	5,045.3	5,045.0	19.5	17.4	96.80	4,817.1	3,646.7	6,088.1	6,051.2	36.89	165.025		
5,300.0	5,104.3	5,150.7	5,150.4	20.0	17.8	97.22	4,814.8	3,648.0	6,092.8	6,055.1	37.70	161.626		
5,400.0	5,195.8	5,243.6	5,243.2	20.4	18.1	97.59	4,812.8	3,649.0	6,097.7	6,059.3	38.46	158.552		
5,500.0	5,287.4	5,324.6	5,324.1	20.9	18.4	97.91	4,811.1	3,649.9	6,103.0	6,063.8	39.18	155.768		
5,600.0	5,378.9	5,394.3	5,393.9	21.3	18.7	98.19	4,809.5	3,651.0	6,108.7	6,068.9	39.86	153.249		
5,700.0	5,470.4	5,490.7	5,490.2	21.8	19.0	98.57	4,807.4	3,652.6	6,114.9	6,074.3	40.64	150.473		
5,800.0	5,562.0	5,586.7	5,586.2	22.2	19.3	98.95	4,805.4	3,654.0	6,121.3	6,079.9	41.41	147.807		
5,900.0	5,653.5	5,663.8	5,663.2	22.7	19.6	99.25	4,803.8	3,655.2	6,128.0	6,085.9	42.12	145.479		
6,000.0	5,745.0	6,000.0	5,777.0	23.1	20.8	99.70	4,801.5	3,656.7	6,134.9	6,091.2	43.74	140.255		
6,100.0	5,836.6	5,899.7	5,899.1	23.6	20.4	100.18	4,799.0	3,657.5	6,141.6	6,097.7	43.83	140.107		
6,200.0	5,928.1	6,012.1	6,011.5	24.0	20.8	100.61	4,796.8	3,657.7	6,148.3	6,103.6	44.67	137.634		
6,278.6	6,000.0	6,085.3	6,084.7	24.4	21.1	100.89	4,795.2	3,657.8	6,153.6	6,108.3	45.27	135.917		
6,290.0	6,010.4	6,096.1	6,095.5	24.4	21.1	99.32	4,794.9	3,657.9	6,154.3	6,109.0	45.36	135.668		
6,300.0	6,019.5	6,106.9	6,106.2	24.5	21.2	97.68	4,794.7	3,657.9	6,154.9	6,109.4	45.45	135.435		
6,350.0	6,065.8	6,165.5	6,164.8	24.7	21.4	87.55	4,793.3	3,658.0	6,155.2	6,109.3	45.87	134.200		
6,400.0	6,113.0	6,212.4	6,211.7	24.9	21.5	73.61	4,792.1	3,658.0	6,151.7	6,105.4	46.23	133.062		
6,450.0	6,160.7	6,242.1	6,241.5	25.1	21.6	56.35	4,791.4	3,658.0	6,144.4	6,097.9	46.52	132.080		
6,500.0	6,208.5	6,272.0	6,271.3	25.3	21.7	38.33	4,790.7	3,658.1	6,133.6	6,086.8	46.79	131.078		
6,550.0	6,255.8	6,300.0	6,299.3	25.4	21.8	22.44	4,790.2	3,658.3	6,119.3	6,072.3	47.04	130.074		
6,600.0	6,302.5	6,329.5	6,328.8	25.6	21.9	9.77	4,789.6	3,658.5	6,101.6	6,054.3	47.29	129.037		
6,650.0	6,347.9	6,356.8	6,356.1	25.7	22.0	-0.14	4,789.2	3,658.8	6,080.7	6,033.2	47.50	128.001		
6,700.0	6,391.6	6,383.2	6,382.5	25.9	22.1	-8.16	4,788.8	3,659.1	6,056.7	6,009.0	47.71	126.952		
6,750.0	6,433.4	6,410.1	6,409.4	26.0	22.2	-15.04	4,788.4	3,659.6	6,029.8	5,981.9	47.90	125.877		
6,800.0	6,472.8	6,438.6	6,437.8	26.1	22.3	-21.33	4,788.1	3,660.1	6,000.2	5,952.1	48.09	124.769		
6,850.0	6,509.4	6,465.1	6,464.4	26.2	22.4	-27.41	4,787.8	3,660.5	5,968.3	5,920.0	48.26	123.662		
6,900.0	6,543.0	6,489.6	6,488.9	26.3	22.5	-33.58	4,787.6	3,661.0	5,934.2	5,885.8	48.42	122.559		
6,950.0	6,573.2	6,516.9	6,516.2	26.4	22.6	-40.05	4,787.3	3,661.6	5,898.3	5,849.7	48.58	121.420		
7,000.0	6,599.8	6,545.0	6,544.3	26.5	22.7	-46.96	4,787.1	3,662.1	5,860.9	5,812.2	48.73	120.267		
7,050.0	6,622.5	6,569.2	6,568.4	26.6	22.8	-54.30	4,786.9	3,662.6	5,822.4	5,773.5	48.87	119.146		
7,100.0	6,641.1	6,589.2	6,588.5	26.7	22.8	-61.96	4,786.7	3,663.0	5,783.1	5,734.1	48.98	118.062		
7,150.0	6,655.4	6,605.0	6,604.2	26.8	22.9	-69.74	4,786.5	3,663.4	5,743.3	5,694.3	49.08	117.021		
7,200.0	6,665.4	6,615.8	6,615.0	26.9	22.9	-77.34	4,786.4	3,663.6	5,703.6	5,654.5	49.16	116.033		
7,250.0	6,670.8	6,622.3	6,621.5	27.0	23.0	-84.48	4,786.4	3,663.7	5,664.3	5,615.1	49.21	115.097		
7,285.7	6,672.0	6,624.2	6,623.4	27.1	23.0	-89.15	4,786.3	3,663.8	5,636.7	5,587.4	49.24	114.466		
7,300.0	6,672.0	6,624.5	6,623.7	27.1	23.0	-89.16	4,786.3	3,663.8	5,625.7	5,576.4	49.25	114.219		
7,400.0	6,672.0	6,626.6	6,625.8	27.3	23.0	-89.19	4,786.3	3,663.8	5,549.4	5,500.0	49.35	112.449		
7,500.0	6,672.0	6,628.7	6,627.9	27.6	23.0	-89.22	4,786.3	3,663.9	5,473.9	5,424.4	49.48	110.630		
7,600.0	6,672.0	6,630.8	6,630.0	28.0	23.0	-89.25	4,786.3	3,663.9	5,399.1	5,349.5	49.64	108.761		
7,700.0	6,672.0	6,632.9	6,632.1	28.3	23.0	-89.29	4,786.3	3,664.0	5,325.2	5,275.4	49.84	106.844		
7,800.0	6,672.0	6,635.0	6,634.2	28.8	23.0	-89.32	4,786.2	3,664.0	5,252.2	5,202.1	50.08	104.880		
7,900.0	6,672.0	6,637.1	6,636.3	29.3	23.0	-89.35	4,786.2	3,664.1	5,180.0	5,129.7	50.35	102.872		
8,000.0	6,672.0	6,639.2	6,638.4	29.8	23.0	-89.39	4,786.2	3,664.1	5,108.8	5,058.1	50.67	100.821		
8,100.0	6,672.0	6,641.3	6,640.5	30.4	23.0	-89.42	4,786.2	3,664.2	5,038.6	4,987.5	51.03	98.732		
8,200.0	6,672.0	6,643.4	6,642.6	31.0	23.0	-89.45	4,786.2	3,664.2	4,969.3	4,917.9	51.44	96.609		
8,300.0	6,672.0	6,645.5	6,644.7	31.7	23.0	-89.49	4,786.1	3,664.2	4,901.1	4,849.3	51.89	94.457		
8,400.0	6,672.0	6,647.6	6,646.8	32.4	23.1	-89.52	4,786.1	3,664.3	4,834.1	4,781.7	52.38	92.280		
8,500.0	6,672.0	6,649.7	6,648.9	33.1	23.1	-89.55	4,786.1	3,664.3	4,768.1	4,715.2	52.93	90.085		
8,600.0	6,672.0	6,651.8	6,651.0	33.9	23.1	-89.59	4,786.1	3,664.4	4,703.4	4,649.9	53.52	87.878		
8,700.0	6,672.0	6,653.9	6,653.1	34.7	23.1	-89.62	4,786.1	3,664.4	4,639.9	4,585.7	54.16	85.665		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Roth 42-06 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
8,800.0	6,672.0	6,656.0	6,655.2	35.5	23.1	-89.65	4,786.0	3,664.5	4,577.7	4,522.8	54.85	83.453		
8,900.0	6,672.0	6,658.1	6,657.3	36.3	23.1	-89.69	4,786.0	3,664.5	4,516.9	4,461.3	55.59	81.249		
9,000.0	6,672.0	6,660.2	6,659.4	37.2	23.1	-89.72	4,786.0	3,664.6	4,457.4	4,401.0	56.38	79.060		
9,100.0	6,672.0	6,662.3	6,661.5	38.1	23.1	-89.75	4,786.0	3,664.6	4,399.4	4,342.2	57.22	76.892		
9,200.0	6,672.0	6,664.4	6,663.6	39.0	23.1	-89.79	4,785.9	3,664.6	4,343.0	4,284.9	58.10	74.752		
9,300.0	6,672.0	6,666.5	6,665.7	39.9	23.1	-89.82	4,785.9	3,664.7	4,288.1	4,229.1	59.03	72.645		
9,400.0	6,672.0	6,668.6	6,667.8	40.8	23.1	-89.85	4,785.9	3,664.7	4,234.9	4,174.9	60.00	70.578		
9,500.0	6,672.0	6,670.7	6,669.9	41.8	23.1	-89.89	4,785.9	3,664.8	4,183.4	4,122.3	61.02	68.556		
9,600.0	6,672.0	6,672.8	6,672.0	42.7	23.1	-89.92	4,785.9	3,664.8	4,133.6	4,071.5	62.08	66.584		
9,700.0	6,672.0	6,674.9	6,674.1	43.7	23.1	-89.95	4,785.8	3,664.9	4,085.7	4,022.5	63.18	64.667		
9,800.0	6,672.0	6,677.0	6,676.2	44.7	23.2	-89.99	4,785.8	3,664.9	4,039.7	3,975.3	64.32	62.808		
9,900.0	6,672.0	6,679.1	6,678.3	45.7	23.2	-90.02	4,785.8	3,664.9	3,995.6	3,930.1	65.49	61.011		
10,000.0	6,672.0	6,681.1	6,680.4	46.7	23.2	-90.05	4,785.8	3,665.0	3,953.6	3,886.9	66.69	59.280		
10,100.0	6,672.0	6,683.2	6,682.5	47.7	23.2	-90.09	4,785.8	3,665.0	3,913.7	3,845.7	67.93	57.616		
10,200.0	6,672.0	6,685.3	6,684.5	48.8	23.2	-90.12	4,785.7	3,665.1	3,875.9	3,806.7	69.19	56.021		
10,300.0	6,672.0	6,687.4	6,686.6	49.8	23.2	-90.15	4,785.7	3,665.1	3,840.3	3,769.9	70.47	54.498		
10,400.0	6,672.0	6,689.5	6,688.7	50.9	23.2	-90.19	4,785.7	3,665.2	3,807.1	3,735.3	71.77	53.048		
10,500.0	6,672.0	6,691.6	6,690.8	51.9	23.2	-90.22	4,785.7	3,665.2	3,776.2	3,703.1	73.08	51.671		
10,600.0	6,672.0	6,693.7	6,692.9	53.0	23.2	-90.25	4,785.7	3,665.3	3,747.7	3,673.3	74.41	50.367		
10,700.0	6,672.0	6,695.8	6,695.0	54.1	23.2	-90.29	4,785.6	3,665.3	3,721.6	3,645.9	75.74	49.138		
10,800.0	6,672.0	6,697.9	6,697.1	55.2	23.2	-90.32	4,785.6	3,665.3	3,698.1	3,621.0	77.07	47.983		
10,900.0	6,672.0	6,700.0	6,699.2	56.3	23.2	-90.35	4,785.6	3,665.4	3,677.2	3,598.7	78.40	46.902		
11,000.0	6,672.0	6,702.1	6,701.3	57.4	23.2	-90.39	4,785.6	3,665.4	3,658.8	3,579.1	79.72	45.893		
11,100.0	6,672.0	6,704.2	6,703.4	58.5	23.3	-90.42	4,785.6	3,665.5	3,643.1	3,562.0	81.04	44.956		
11,200.0	6,672.0	6,706.3	6,705.5	59.6	23.3	-90.45	4,785.5	3,665.5	3,630.0	3,547.7	82.33	44.091		
11,300.0	6,672.0	6,708.4	6,707.6	60.7	23.3	-90.49	4,785.5	3,665.6	3,619.7	3,536.1	83.61	43.295		
11,400.0	6,672.0	6,710.5	6,709.7	61.8	23.3	-90.52	4,785.5	3,665.6	3,612.1	3,527.3	84.86	42.568		
11,500.0	6,672.0	6,712.6	6,711.8	62.9	23.3	-90.55	4,785.5	3,665.7	3,607.3	3,521.2	86.08	41.907		
11,600.0	6,672.0	6,714.7	6,713.9	64.1	23.3	-90.59	4,785.4	3,665.7	3,605.2	3,517.9	87.27	41.312		
11,625.6	6,672.0	6,715.2	6,714.4	64.4	23.3	-90.59	4,785.4	3,665.7	3,605.1	3,517.5	87.56	41.171 CC		
11,700.0	6,672.0	6,716.8	6,716.0	65.2	23.3	-90.62	4,785.4	3,665.7	3,605.9	3,517.4	88.42	40.781 ES		
11,800.0	6,672.0	6,718.9	6,718.1	66.3	23.3	-90.65	4,785.4	3,665.8	3,609.3	3,519.8	89.53	40.313		
11,900.0	6,672.0	6,721.0	6,720.2	67.5	23.3	-90.69	4,785.4	3,665.8	3,615.5	3,524.9	90.60	39.904		
12,000.0	6,672.0	6,723.1	6,722.3	68.6	23.3	-90.72	4,785.4	3,665.9	3,624.4	3,532.8	91.63	39.555		
12,100.0	6,672.0	6,725.2	6,724.4	69.8	23.3	-90.75	4,785.3	3,665.9	3,636.1	3,543.5	92.61	39.262		
12,200.0	6,672.0	6,727.3	6,726.5	70.9	23.3	-90.79	4,785.3	3,666.0	3,650.4	3,556.9	93.54	39.024		
12,300.0	6,672.0	6,729.4	6,728.6	72.1	23.3	-90.82	4,785.3	3,666.0	3,667.4	3,573.0	94.42	38.840		
12,400.0	6,672.0	6,731.5	6,730.6	73.2	23.3	-90.85	4,785.3	3,666.1	3,687.1	3,591.8	95.26	38.707		
12,500.0	6,672.0	6,733.5	6,732.7	74.4	23.4	-90.89	4,785.3	3,666.1	3,709.3	3,613.3	96.04	38.624		
12,600.0	6,672.0	6,735.6	6,734.8	75.5	23.4	-90.92	4,785.2	3,666.1	3,734.1	3,637.3	96.77	38.588 SF		
12,700.0	6,672.0	6,737.7	6,736.9	76.7	23.4	-90.95	4,785.2	3,666.2	3,761.3	3,663.9	97.44	38.599		
12,800.0	6,672.0	6,739.8	6,739.0	77.9	23.4	-90.99	4,785.2	3,666.2	3,791.0	3,692.9	98.07	38.655		
12,900.0	6,672.0	6,741.9	6,741.1	79.0	23.4	-91.02	4,785.2	3,666.3	3,823.1	3,724.4	98.65	38.753		
13,000.0	6,672.0	6,744.0	6,743.2	80.2	23.4	-91.05	4,785.2	3,666.3	3,857.4	3,758.3	99.18	38.893		
13,100.0	6,672.0	6,746.1	6,745.3	81.4	23.4	-91.09	4,785.1	3,666.4	3,894.1	3,794.4	99.66	39.072		
13,200.0	6,672.0	6,748.2	6,747.4	82.6	23.4	-91.12	4,785.1	3,666.4	3,932.9	3,832.8	100.10	39.289		
13,300.0	6,672.0	6,750.3	6,749.5	83.7	23.4	-91.15	4,785.1	3,666.5	3,973.9	3,873.4	100.49	39.543		
13,400.0	6,672.0	6,752.4	6,751.6	84.9	23.4	-91.19	4,785.1	3,666.5	4,016.9	3,916.0	100.84	39.833		
13,500.0	6,672.0	6,754.5	6,753.7	86.1	23.4	-91.22	4,785.1	3,666.5	4,061.9	3,960.8	101.15	40.155		
13,600.0	6,672.0	6,756.6	6,755.8	87.3	23.4	-91.25	4,785.0	3,666.6	4,108.9	4,007.4	101.43	40.511		
13,700.0	6,672.0	6,758.7	6,757.9	88.4	23.4	-91.28	4,785.0	3,666.6	4,157.7	4,056.0	101.66	40.897		
13,800.0	6,672.0	6,760.8	6,760.0	89.6	23.5	-91.32	4,785.0	3,666.7	4,208.3	4,106.5	101.86	41.313		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Roth 42-06 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
13,900.0	6,672.0	6,762.9	6,762.1	90.8	23.5	-91.35	4,785.0	3,666.7	4,260.7	4,158.7	102.03	41.758		
14,000.0	6,672.0	6,765.0	6,764.1	92.0	23.5	-91.38	4,784.9	3,666.8	4,314.7	4,212.6	102.17	42.230		
14,100.0	6,672.0	6,767.1	6,766.2	93.2	23.5	-91.42	4,784.9	3,666.8	4,370.4	4,268.1	102.28	42.729		
14,200.0	6,672.0	6,769.1	6,768.3	94.4	23.5	-91.45	4,784.9	3,666.9	4,427.6	4,325.2	102.37	43.252		
14,300.0	6,672.0	6,771.2	6,770.4	95.6	23.5	-91.48	4,784.9	3,666.9	4,486.3	4,383.9	102.43	43.800		
14,400.0	6,672.0	6,773.3	6,772.5	96.8	23.5	-91.52	4,784.9	3,666.9	4,546.4	4,444.0	102.46	44.371		
14,500.0	6,672.0	6,775.4	6,774.6	98.0	23.5	-91.55	4,784.8	3,667.0	4,607.9	4,505.5	102.48	44.964		
14,600.0	6,672.0	6,777.5	6,776.7	99.2	23.5	-91.58	4,784.8	3,667.0	4,670.8	4,568.3	102.48	45.579		
14,700.0	6,672.0	6,779.6	6,778.8	100.4	23.5	-91.62	4,784.8	3,667.1	4,734.9	4,632.4	102.46	46.214		
14,800.0	6,672.0	6,781.7	6,780.9	101.6	23.5	-91.65	4,784.8	3,667.1	4,800.2	4,697.8	102.42	46.868		
14,900.0	6,672.0	6,783.8	6,783.0	102.7	23.5	-91.68	4,784.8	3,667.2	4,866.7	4,764.4	102.37	47.541		
15,000.0	6,672.0	6,785.9	6,785.1	103.9	23.5	-91.72	4,784.7	3,667.2	4,934.3	4,832.0	102.30	48.232		
15,100.0	6,672.0	6,788.0	6,787.2	105.1	23.5	-91.75	4,784.7	3,667.3	5,003.0	4,900.8	102.23	48.941		
15,200.0	6,672.0	6,790.1	6,789.3	106.3	23.6	-91.78	4,784.7	3,667.3	5,072.8	4,970.6	102.14	49.666		
15,300.0	6,672.0	6,792.2	6,791.4	107.6	23.6	-91.81	4,784.7	3,667.3	5,143.5	5,041.5	102.04	50.406		
15,400.0	6,672.0	6,794.3	6,793.4	108.8	23.6	-91.85	4,784.7	3,667.4	5,215.2	5,113.3	101.93	51.162		
15,500.0	6,672.0	6,796.4	6,795.5	110.0	23.6	-91.88	4,784.6	3,667.4	5,287.8	5,186.0	101.82	51.933		
15,600.0	6,672.0	6,798.5	6,797.6	111.2	23.6	-91.91	4,784.6	3,667.5	5,361.3	5,259.6	101.70	52.717		
15,700.0	6,672.0	6,800.5	6,799.7	112.4	23.6	-91.95	4,784.6	3,667.5	5,435.6	5,334.0	101.57	53.515		
15,800.0	6,672.0	6,802.6	6,801.8	113.6	23.6	-91.98	4,784.6	3,667.6	5,510.7	5,409.3	101.44	54.325		
15,900.0	6,672.0	6,804.7	6,803.9	114.8	23.6	-92.01	4,784.6	3,667.6	5,586.6	5,485.3	101.30	55.148		
16,000.0	6,672.0	6,806.8	6,806.0	116.0	23.6	-92.05	4,784.5	3,667.7	5,663.2	5,562.1	101.16	55.983		
16,100.0	6,672.0	6,808.9	6,808.1	117.2	23.6	-92.08	4,784.5	3,667.7	5,740.6	5,639.6	101.02	56.829		
16,200.0	6,672.0	6,811.0	6,810.2	118.4	23.6	-92.11	4,784.5	3,667.7	5,818.6	5,717.8	100.87	57.685		
16,300.0	6,672.0	6,813.1	6,812.3	119.6	23.6	-92.14	4,784.5	3,667.8	5,897.3	5,796.6	100.72	58.552		
16,400.0	6,672.0	6,815.2	6,814.4	120.8	23.6	-92.18	4,784.4	3,667.8	5,976.6	5,876.1	100.57	59.430		
16,500.0	6,672.0	6,817.3	6,816.5	122.0	23.6	-92.21	4,784.4	3,667.9	6,056.6	5,956.2	100.41	60.316		
16,600.0	6,672.0	6,819.4	6,818.5	123.2	23.7	-92.24	4,784.4	3,667.9	6,137.1	6,036.8	100.26	61.212		
16,700.0	6,672.0	6,821.5	6,820.6	124.5	23.7	-92.28	4,784.4	3,668.0	6,218.2	6,118.1	100.10	62.117		
16,800.0	6,672.0	6,823.6	6,822.7	125.7	23.7	-92.31	4,784.4	3,668.0	6,299.8	6,199.8	99.95	63.030		
16,900.0	6,672.0	6,825.6	6,824.8	126.9	23.7	-92.34	4,784.3	3,668.1	6,381.9	6,282.1	99.79	63.951		
17,000.0	6,672.0	6,827.7	6,826.9	128.1	23.7	-92.37	4,784.3	3,668.1	6,464.6	6,364.9	99.64	64.880		
17,100.0	6,672.0	6,829.8	6,829.0	129.3	23.7	-92.41	4,784.3	3,668.1	6,547.7	6,448.2	99.48	65.816		
17,200.0	6,672.0	6,831.9	6,831.1	130.5	23.7	-92.44	4,784.3	3,668.2	6,631.2	6,531.9	99.33	66.759		
17,300.0	6,672.0	6,834.0	6,833.2	131.7	23.7	-92.47	4,784.3	3,668.2	6,715.3	6,616.1	99.18	67.709		
17,400.0	6,672.0	6,836.1	6,835.3	133.0	23.7	-92.51	4,784.2	3,668.3	6,799.7	6,700.7	99.03	68.666		
17,500.0	6,672.0	6,838.2	6,837.4	134.2	23.7	-92.54	4,784.2	3,668.3	6,884.6	6,785.7	98.87	69.629		
17,600.0	6,672.0	6,840.3	6,839.5	135.4	23.7	-92.57	4,784.2	3,668.4	6,969.8	6,871.1	98.73	70.598		
17,700.0	6,672.0	6,842.4	6,841.5	136.6	23.7	-92.60	4,784.2	3,668.4	7,055.5	6,956.9	98.58	71.573		
17,800.0	6,672.0	6,844.5	6,843.6	137.8	23.7	-92.64	4,784.2	3,668.5	7,141.5	7,043.0	98.43	72.553		
17,900.0	6,672.0	6,846.6	6,845.7	139.0	23.8	-92.67	4,784.1	3,668.5	7,227.8	7,129.5	98.29	73.538		
18,000.0	6,672.0	6,848.6	6,847.8	140.3	23.8	-92.70	4,784.1	3,668.5	7,314.5	7,216.4	98.14	74.529		
18,100.0	6,672.0	6,850.7	6,849.9	141.5	23.8	-92.74	4,784.1	3,668.6	7,401.6	7,303.6	98.00	75.524		
18,200.0	6,672.0	6,852.8	6,852.0	142.7	23.8	-92.77	4,784.1	3,668.6	7,488.9	7,391.1	97.86	76.524		
18,300.0	6,672.0	6,854.9	6,854.1	143.9	23.8	-92.80	4,784.1	3,668.7	7,576.6	7,478.9	97.73	77.528		
18,342.5	6,672.0	6,855.8	6,855.0	144.4	23.8	-92.81	4,784.0	3,668.7	7,613.9	7,516.2	97.67	77.956		



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Roth 6D - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
0.0	0.0	0.0	0.0	0.0	0.0	6.45	5,453.7	616.9	5,488.7					
100.0	100.0	53.4	53.4	0.1	0.1	6.45	5,453.7	616.9	5,488.5	5,488.2	0.22	N/A		
200.0	200.0	158.4	158.4	0.5	0.4	6.46	5,453.6	617.1	5,488.4	5,487.5	0.86	6,359.354		
300.0	300.0	261.9	261.9	0.8	0.7	6.46	5,453.4	617.4	5,488.2	5,486.6	1.58	3,466.501		
400.0	400.0	360.7	360.7	1.2	1.1	6.46	5,453.1	617.6	5,488.0	5,485.7	2.29	2,399.589		
500.0	500.0	460.0	460.0	1.6	1.4	6.46	5,453.0	617.8	5,487.8	5,484.9	2.99	1,833.685		
600.0	600.0	555.9	555.9	1.9	1.8	6.47	5,452.8	618.0	5,487.7	5,484.0	3.69	1,488.705		
680.5	680.5	631.5	631.5	2.2	2.0	6.47	5,452.7	618.2	5,487.7	5,483.4	4.24	1,294.603		
700.0	700.0	650.3	650.2	2.3	2.1	6.47	5,452.7	618.2	5,487.7	5,483.3	4.37	1,254.607		
800.0	800.0	745.2	745.2	2.6	2.4	6.47	5,452.8	618.4	5,487.7	5,482.7	5.06	1,083.809		
900.0	900.0	840.7	840.7	3.0	2.8	6.47	5,452.9	618.6	5,487.9	5,482.1	5.75	953.678		
1,000.0	1,000.0	938.1	938.1	3.4	3.1	6.47	5,453.1	618.8	5,488.1	5,481.6	6.45	850.551		
1,100.0	1,100.0	1,050.6	1,050.6	3.7	3.5	6.47	5,453.3	618.6	5,488.3	5,481.1	7.20	761.913		
1,200.0	1,200.0	1,172.4	1,172.4	4.1	3.9	6.47	5,453.1	618.0	5,488.1	5,480.1	7.99	687.098		
1,300.0	1,300.0	1,282.5	1,282.5	4.4	4.3	6.46	5,452.6	617.3	5,487.6	5,478.8	8.73	628.560		
1,400.0	1,400.0	1,373.7	1,373.7	4.8	4.6	6.46	5,452.2	616.9	5,487.0	5,477.6	9.41	583.272		
1,500.0	1,500.0	1,470.7	1,470.7	5.1	5.0	6.45	5,451.9	616.5	5,486.7	5,476.6	10.10	542.974		
1,600.0	1,600.0	1,584.0	1,584.0	5.5	5.4	6.45	5,451.5	615.9	5,486.2	5,475.4	10.86	505.220		
1,700.0	1,700.0	1,705.1	1,705.0	5.9	5.8	6.44	5,450.5	615.6	5,485.4	5,473.8	11.64	471.229		
1,800.0	1,800.0	1,809.3	1,809.3	6.2	6.1	6.45	5,449.4	615.8	5,484.4	5,472.1	12.36	443.586		
1,900.0	1,900.0	1,909.3	1,909.2	6.6	6.5	6.45	5,448.3	616.2	5,483.3	5,470.3	13.07	419.468		
2,000.0	2,000.0	1,982.0	1,982.0	6.9	6.8	6.46	5,447.7	616.6	5,482.5	5,468.8	13.69	400.614		
2,100.0	2,100.0	2,062.0	2,061.9	7.3	7.0	6.46	5,447.3	617.2	5,482.2	5,467.8	14.32	382.742		
2,200.0	2,200.0	2,152.8	2,152.7	7.7	7.3	6.47	5,447.1	618.1	5,482.1	5,467.1	15.00	365.495		
2,300.0	2,300.0	2,252.8	2,252.8	8.0	7.7	57.52	5,446.9	619.5	5,481.1	5,465.4	15.70	349.018		
2,400.0	2,399.8	2,353.7	2,353.6	8.4	8.1	57.63	5,446.7	621.1	5,478.3	5,461.9	16.41	333.830		
2,500.0	2,499.5	2,455.3	2,455.2	8.7	8.4	57.80	5,446.5	622.4	5,473.5	5,456.4	17.12	319.720		
2,600.0	2,598.7	2,551.2	2,551.1	9.1	8.7	58.03	5,446.3	623.2	5,466.9	5,449.1	17.81	306.965		
2,700.0	2,697.5	2,635.6	2,635.5	9.4	9.0	58.29	5,446.3	623.7	5,458.7	5,440.2	18.46	295.700		
2,800.0	2,795.6	2,717.9	2,717.8	9.8	9.3	58.60	5,446.6	624.2	5,449.0	5,429.9	19.10	285.227		
2,900.0	2,893.1	2,819.1	2,819.0	10.1	9.7	59.01	5,447.1	624.5	5,437.6	5,417.8	19.82	274.416		
3,000.0	2,989.6	2,904.3	2,904.2	10.5	10.0	59.44	5,447.5	624.6	5,424.6	5,404.1	20.47	264.963		
3,100.0	3,085.3	2,992.0	2,991.9	10.9	10.3	59.93	5,448.1	624.9	5,410.1	5,389.0	21.14	255.893		
3,200.0	3,179.8	3,089.8	3,089.7	11.2	10.6	60.51	5,448.9	625.5	5,394.1	5,372.2	21.85	246.865		
3,300.0	3,273.2	3,478.4	3,478.1	11.6	12.0	62.22	5,441.4	626.2	5,374.4	5,350.8	23.54	228.283		
3,387.5	3,353.8	3,560.9	3,560.5	11.9	12.3	62.92	5,437.5	625.8	5,353.3	5,329.1	24.16	221.613		
3,400.0	3,365.2	3,571.1	3,570.7	12.0	12.3	62.96	5,437.0	625.8	5,350.2	5,326.0	24.24	220.725		
3,500.0	3,456.8	3,652.3	3,651.9	12.4	12.6	63.29	5,433.2	625.6	5,325.8	5,300.9	24.90	213.861		
3,600.0	3,548.3	3,746.2	3,745.6	12.8	12.9	63.67	5,428.9	625.1	5,301.8	5,276.1	25.61	206.985		
3,700.0	3,639.8	3,838.8	3,838.2	13.2	13.3	64.04	5,424.5	624.6	5,277.8	5,251.4	26.33	200.467		
3,800.0	3,731.4	3,900.0	3,899.3	13.6	13.5	64.30	5,421.7	624.5	5,254.2	5,227.3	26.94	194.997		
3,900.0	3,822.9	3,950.3	3,949.6	14.0	13.6	64.51	5,419.7	624.5	5,231.5	5,204.0	27.53	190.010		
4,000.0	3,914.4	4,000.0	3,999.2	14.4	13.8	64.71	5,418.2	624.8	5,209.9	5,181.8	28.12	185.255		
4,100.0	4,005.9	4,041.7	4,040.9	14.8	14.0	64.89	5,417.3	625.3	5,189.4	5,160.7	28.69	180.873		
4,200.0	4,097.5	4,100.0	4,099.2	15.2	14.2	65.14	5,416.5	626.0	5,169.8	5,140.5	29.32	176.343		
4,300.0	4,189.0	4,149.7	4,148.9	15.6	14.3	65.36	5,416.1	626.8	5,151.2	5,121.2	29.92	172.181		
4,400.0	4,280.5	4,211.5	4,210.7	16.1	14.6	65.62	5,415.9	627.8	5,133.3	5,102.8	30.56	167.970		
4,500.0	4,372.1	4,287.2	4,286.4	16.5	14.8	65.95	5,416.1	629.1	5,116.2	5,084.9	31.25	163.698		
4,600.0	4,463.6	4,386.2	4,385.4	16.9	15.2	66.38	5,416.4	630.7	5,099.4	5,067.4	32.03	159.221		
4,700.0	4,555.1	4,477.2	4,476.4	17.4	15.5	66.78	5,416.6	632.2	5,082.8	5,050.0	32.78	155.073		
4,800.0	4,646.7	4,566.7	4,565.8	17.8	15.8	67.18	5,416.7	633.7	5,066.4	5,032.9	33.52	151.131		
4,900.0	4,738.2	4,661.3	4,660.4	18.2	16.1	67.60	5,416.9	635.5	5,050.4	5,016.1	34.29	147.285		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
**Anticollision Report**

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Roth 6D - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,000.0	4,829.7	4,754.9	4,754.0	18.7	16.5	68.02	5,417.0	637.1	5,034.6	4,999.5	35.06	143.620		
5,100.0	4,921.3	4,838.4	4,837.5	19.1	16.8	68.39	5,417.1	638.5	5,019.1	4,983.3	35.79	140.240		
5,200.0	5,012.8	4,921.6	4,920.7	19.5	17.0	68.76	5,417.4	639.8	5,004.1	4,967.6	36.52	137.009		
5,300.0	5,104.3	5,021.5	5,020.6	20.0	17.4	69.21	5,417.8	641.1	4,989.3	4,952.0	37.32	133.707		
5,400.0	5,195.8	5,095.8	5,094.9	20.4	17.7	69.54	5,418.2	642.0	4,974.9	4,936.9	38.02	130.834		
5,500.0	5,287.4	5,193.1	5,192.2	20.9	18.0	69.98	5,418.9	642.8	4,960.9	4,922.1	38.81	127.825		
5,600.0	5,378.9	5,322.1	5,321.2	21.3	18.4	70.55	5,419.4	643.4	4,946.7	4,907.0	39.70	124.602		
5,700.0	5,470.4	5,404.3	5,403.3	21.8	18.7	70.93	5,419.4	644.2	4,932.6	4,892.2	40.44	121.975		
5,800.0	5,562.0	5,505.9	5,504.9	22.2	19.1	71.40	5,419.2	645.5	4,918.9	4,877.6	41.24	119.264		
5,900.0	5,653.5	5,625.1	5,624.1	22.7	19.5	71.95	5,418.5	647.1	4,905.0	4,862.9	42.10	116.498		
6,000.0	5,745.0	5,731.8	5,730.9	23.1	19.9	72.46	5,417.2	648.7	4,891.0	4,848.1	42.93	113.941		
6,100.0	5,836.6	5,800.0	5,799.0	23.6	20.1	72.78	5,416.3	650.0	4,877.4	4,833.8	43.63	111.796		
6,200.0	5,928.1	5,860.6	5,859.6	24.0	20.3	73.08	5,415.8	651.2	4,864.6	4,820.3	44.31	109.796		
6,278.6	6,000.0	5,902.5	5,901.4	24.4	20.5	73.28	5,415.8	652.2	4,855.3	4,810.4	44.82	108.330		
6,290.0	6,010.4	5,912.8	5,911.8	24.4	20.5	71.88	5,415.8	652.4	4,853.9	4,808.9	44.91	108.086		
6,300.0	6,019.5	5,921.9	5,920.9	24.5	20.5	70.08	5,415.8	652.6	4,852.5	4,807.5	44.99	107.868		
6,350.0	6,065.8	5,968.1	5,967.1	24.7	20.7	59.12	5,416.0	653.3	4,844.5	4,799.2	45.37	106.785		
6,400.0	6,113.0	6,015.8	6,014.7	24.9	20.9	44.41	5,416.4	653.8	4,834.6	4,788.9	45.74	105.701		
6,450.0	6,160.7	6,064.7	6,063.6	25.1	21.0	26.44	5,416.8	654.1	4,822.8	4,776.7	46.10	104.620		
6,500.0	6,208.5	6,112.8	6,111.8	25.3	21.2	7.70	5,417.3	654.2	4,809.1	4,762.7	46.44	103.555		
6,550.0	6,255.8	6,158.3	6,157.2	25.4	21.4	-8.90	5,417.8	654.2	4,793.7	4,747.0	46.76	102.517		
6,600.0	6,302.5	6,203.0	6,201.9	25.6	21.5	-22.22	5,418.4	654.0	4,776.8	4,729.7	47.07	101.490		
6,650.0	6,347.9	6,238.7	6,237.6	25.7	21.6	-32.66	5,418.9	653.8	4,758.5	4,711.1	47.33	100.528		
6,700.0	6,391.6	6,273.6	6,272.5	25.9	21.8	-41.04	5,419.5	653.6	4,739.0	4,691.4	47.59	99.574		
6,750.0	6,433.4	6,310.3	6,309.2	26.0	21.9	-48.04	5,420.2	653.3	4,718.6	4,670.8	47.85	98.613		
6,800.0	6,472.8	6,357.0	6,355.9	26.1	22.1	-54.18	5,421.1	652.9	4,697.4	4,649.3	48.13	97.595		
6,850.0	6,509.4	6,400.1	6,399.0	26.2	22.2	-59.67	5,422.0	652.3	4,675.7	4,627.3	48.40	96.611		
6,900.0	6,543.0	6,439.4	6,438.3	26.3	22.3	-64.66	5,422.7	651.7	4,653.6	4,604.9	48.65	95.664		
6,950.0	6,573.2	6,474.5	6,473.4	26.4	22.5	-69.22	5,423.4	651.1	4,631.4	4,582.5	48.87	94.761		
7,000.0	6,599.8	6,504.9	6,503.8	26.5	22.6	-73.40	5,424.0	650.5	4,609.5	4,560.4	49.09	93.907		
7,050.0	6,622.5	6,525.6	6,524.4	26.6	22.6	-77.12	5,424.3	650.1	4,588.2	4,538.9	49.26	93.136		
7,100.0	6,641.1	6,543.2	6,542.1	26.7	22.7	-80.46	5,424.6	649.8	4,567.6	4,518.2	49.43	92.410		
7,150.0	6,655.4	6,556.8	6,555.6	26.8	22.8	-83.40	5,424.8	649.6	4,548.1	4,498.5	49.58	91.741		
7,200.0	6,665.4	6,566.1	6,565.0	26.9	22.8	-85.94	5,425.0	649.4	4,529.9	4,480.2	49.71	91.134		
7,250.0	6,670.8	6,571.1	6,570.0	27.0	22.8	-88.06	5,425.1	649.4	4,513.2	4,463.3	49.82	90.595		
7,285.7	6,672.0	6,571.9	6,570.7	27.1	22.8	-89.30	5,425.1	649.4	4,502.2	4,452.3	49.88	90.255		
7,300.0	6,672.0	6,571.7	6,570.6	27.1	22.8	-89.30	5,425.1	649.4	4,498.0	4,448.1	49.91	90.126		
7,400.0	6,672.0	6,570.6	6,569.4	27.3	22.8	-89.29	5,425.1	649.4	4,470.0	4,419.8	50.12	89.177		
7,500.0	6,672.0	6,569.4	6,568.3	27.6	22.8	-89.27	5,425.0	649.4	4,443.9	4,393.5	50.40	88.177		
7,600.0	6,672.0	6,568.2	6,567.1	28.0	22.8	-89.26	5,425.0	649.4	4,420.0	4,369.3	50.73	87.131		
7,700.0	6,672.0	6,567.0	6,565.8	28.3	22.8	-89.24	5,425.0	649.4	4,398.3	4,347.1	51.12	86.046		
7,800.0	6,672.0	6,565.7	6,564.5	28.8	22.8	-89.22	5,425.0	649.5	4,378.7	4,327.1	51.56	84.930		
7,900.0	6,672.0	6,564.3	6,563.2	29.3	22.8	-89.20	5,425.0	649.5	4,361.2	4,309.2	52.05	83.791		
8,000.0	6,672.0	6,563.0	6,561.8	29.8	22.8	-89.19	5,424.9	649.5	4,346.1	4,293.5	52.59	82.639		
8,100.0	6,672.0	6,561.6	6,560.4	30.4	22.8	-89.17	5,424.9	649.5	4,333.1	4,279.9	53.18	81.481		
8,200.0	6,672.0	6,560.1	6,559.0	31.0	22.8	-89.15	5,424.9	649.5	4,322.5	4,268.6	53.81	80.328		
8,300.0	6,672.0	6,558.6	6,557.5	31.7	22.8	-89.13	5,424.9	649.5	4,314.1	4,259.6	54.48	79.186		
8,400.0	6,672.0	6,557.1	6,555.9	32.4	22.8	-89.11	5,424.9	649.6	4,308.0	4,252.8	55.18	78.065		
8,500.0	6,672.0	6,555.4	6,554.3	33.1	22.7	-89.09	5,424.8	649.6	4,304.2	4,248.3	55.92	76.971		
8,600.0	6,672.0	6,553.8	6,552.6	33.9	22.7	-89.06	5,424.8	649.6	4,302.7	4,246.0	56.68	75.910		
8,613.4	6,672.0	6,553.5	6,552.4	34.0	22.7	-89.06	5,424.8	649.6	4,302.7	4,245.9	56.79	75.769 CC, ES		
8,700.0	6,672.0	6,552.0	6,550.9	34.7	22.7	-89.04	5,424.8	649.6	4,303.6	4,246.1	57.47	74.888		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Roth 6D - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
8,800.0	6,672.0	6,550.2	6,549.1	35.5	22.7	-89.02	5,424.7	649.7	4,306.7	4,248.5	58.27	73.909		
8,900.0	6,672.0	6,548.4	6,547.2	36.3	22.7	-88.99	5,424.7	649.7	4,312.2	4,253.1	59.09	72.978		
9,000.0	6,672.0	6,546.5	6,545.3	37.2	22.7	-88.97	5,424.7	649.7	4,320.0	4,260.1	59.92	72.098		
9,100.0	6,672.0	6,544.5	6,543.3	38.1	22.7	-88.94	5,424.6	649.7	4,330.0	4,269.3	60.76	71.270		
9,200.0	6,672.0	6,542.4	6,541.2	39.0	22.7	-88.91	5,424.6	649.8	4,342.4	4,280.8	61.60	70.498		
9,300.0	6,672.0	6,540.2	6,539.1	39.9	22.7	-88.88	5,424.6	649.8	4,357.0	4,294.5	62.44	69.781		
9,400.0	6,672.0	6,537.9	6,536.8	40.8	22.7	-88.85	5,424.5	649.8	4,373.8	4,310.5	63.28	69.121		
9,500.0	6,672.0	6,535.6	6,534.4	41.8	22.7	-88.82	5,424.5	649.9	4,392.8	4,328.7	64.11	68.517		
9,600.0	6,672.0	6,533.1	6,532.0	42.7	22.7	-88.79	5,424.5	649.9	4,414.0	4,349.1	64.94	67.971		
9,700.0	6,672.0	6,530.6	6,529.4	43.7	22.7	-88.75	5,424.4	650.0	4,437.3	4,371.6	65.76	67.480		
9,800.0	6,672.0	6,527.9	6,526.7	44.7	22.7	-88.72	5,424.4	650.0	4,462.8	4,396.2	66.56	67.045		
9,900.0	6,672.0	6,525.1	6,523.9	45.7	22.6	-88.68	5,424.3	650.1	4,490.3	4,423.0	67.36	66.665		
10,000.0	6,672.0	6,522.1	6,521.0	46.7	22.6	-88.64	5,424.3	650.1	4,519.9	4,451.7	68.13	66.338		
10,100.0	6,672.0	6,519.1	6,517.9	47.7	22.6	-88.60	5,424.2	650.2	4,551.4	4,482.5	68.89	66.064		
10,200.0	6,672.0	6,515.8	6,514.7	48.8	22.6	-88.56	5,424.2	650.2	4,585.0	4,515.3	69.64	65.840		
10,300.0	6,672.0	6,512.4	6,511.3	49.8	22.6	-88.51	5,424.1	650.3	4,620.4	4,550.0	70.36	65.665		
10,400.0	6,672.0	6,508.9	6,507.7	50.9	22.6	-88.47	5,424.0	650.4	4,657.7	4,586.6	71.07	65.538		
10,500.0	6,672.0	6,505.1	6,504.0	51.9	22.6	-88.42	5,424.0	650.5	4,696.8	4,625.1	71.75	65.457		
10,600.0	6,672.0	6,501.1	6,500.0	53.0	22.6	-88.36	5,423.9	650.5	4,737.7	4,665.3	72.42	65.422 SF		
10,700.0	6,672.0	6,498.6	6,497.5	54.1	22.5	-88.33	5,423.8	650.6	4,780.3	4,707.3	73.06	65.426		
10,800.0	6,672.0	6,496.8	6,495.7	55.2	22.5	-88.30	5,423.8	650.6	4,824.7	4,751.0	73.69	65.471		
10,900.0	6,672.0	6,495.0	6,493.8	56.3	22.5	-88.28	5,423.8	650.7	4,870.6	4,796.3	74.30	65.556		
11,000.0	6,672.0	6,493.1	6,492.0	57.4	22.5	-88.26	5,423.7	650.7	4,918.2	4,843.3	74.88	65.679		
11,100.0	6,672.0	6,491.4	6,490.2	58.5	22.5	-88.23	5,423.7	650.7	4,967.3	4,891.9	75.45	65.838		
11,200.0	6,672.0	6,489.6	6,488.5	59.6	22.5	-88.21	5,423.7	650.8	5,017.9	4,942.0	75.99	66.033		
11,300.0	6,672.0	6,487.8	6,486.7	60.7	22.5	-88.19	5,423.6	650.8	5,070.0	4,993.5	76.51	66.262		
11,400.0	6,672.0	6,486.1	6,485.0	61.8	22.5	-88.16	5,423.6	650.9	5,123.5	5,046.5	77.02	66.523		
11,500.0	6,672.0	6,484.4	6,483.3	62.9	22.5	-88.14	5,423.6	650.9	5,178.4	5,100.9	77.50	66.815		
11,600.0	6,672.0	6,482.8	6,481.6	64.1	22.5	-88.12	5,423.5	650.9	5,234.6	5,156.6	77.97	67.137		
11,700.0	6,672.0	6,481.1	6,480.0	65.2	22.5	-88.10	5,423.5	651.0	5,292.1	5,213.7	78.41	67.488		
11,800.0	6,672.0	6,479.5	6,478.3	66.3	22.5	-88.08	5,423.5	651.0	5,350.8	5,272.0	78.84	67.866		
11,900.0	6,672.0	6,477.9	6,476.7	67.5	22.5	-88.05	5,423.5	651.0	5,410.7	5,331.5	79.25	68.271		
12,000.0	6,672.0	6,476.3	6,475.1	68.6	22.5	-88.03	5,423.4	651.1	5,471.8	5,392.2	79.65	68.700		
12,100.0	6,672.0	6,474.7	6,473.6	69.8	22.5	-88.01	5,423.4	651.1	5,534.0	5,454.0	80.03	69.154		
12,200.0	6,672.0	6,473.1	6,472.0	70.9	22.5	-87.99	5,423.4	651.1	5,597.4	5,517.0	80.39	69.631		
12,300.0	6,672.0	6,471.6	6,470.5	72.1	22.5	-87.97	5,423.3	651.1	5,661.7	5,581.0	80.73	70.129		
12,400.0	6,672.0	6,470.1	6,469.0	73.2	22.4	-87.95	5,423.3	651.2	5,727.1	5,646.0	81.06	70.650		
12,500.0	6,672.0	6,468.6	6,467.5	74.4	22.4	-87.93	5,423.3	651.2	5,793.5	5,712.1	81.38	71.190		
12,600.0	6,672.0	6,467.1	6,466.0	75.5	22.4	-87.91	5,423.3	651.2	5,860.8	5,779.1	81.68	71.750		
12,700.0	6,672.0	6,465.6	6,464.5	76.7	22.4	-87.89	5,423.2	651.3	5,929.0	5,847.0	81.97	72.328		
12,800.0	6,672.0	6,464.2	6,463.1	77.9	22.4	-87.87	5,423.2	651.3	5,998.1	5,915.9	82.25	72.925		
12,900.0	6,672.0	6,462.7	6,461.6	79.0	22.4	-87.85	5,423.2	651.3	6,068.1	5,985.6	82.52	73.538		
13,000.0	6,672.0	6,461.3	6,460.2	80.2	22.4	-87.84	5,423.1	651.3	6,138.9	6,056.1	82.77	74.168		
13,100.0	6,672.0	6,459.9	6,458.8	81.4	22.4	-87.82	5,423.1	651.4	6,210.5	6,127.5	83.01	74.814		
13,200.0	6,672.0	6,458.6	6,457.4	82.6	22.4	-87.80	5,423.1	651.4	6,282.8	6,199.6	83.24	75.474		
13,300.0	6,672.0	6,457.2	6,456.1	83.7	22.4	-87.78	5,423.1	651.4	6,355.9	6,272.5	83.47	76.149		
13,400.0	6,672.0	6,455.8	6,454.7	84.9	22.4	-87.76	5,423.0	651.4	6,429.8	6,346.1	83.68	76.838		
13,500.0	6,672.0	6,454.5	6,453.4	86.1	22.4	-87.75	5,423.0	651.5	6,504.3	6,420.4	83.88	77.541		
13,600.0	6,672.0	6,453.2	6,452.1	87.3	22.4	-87.73	5,423.0	651.5	6,579.5	6,495.4	84.08	78.256		
13,700.0	6,672.0	6,451.9	6,450.8	88.4	22.4	-87.71	5,423.0	651.5	6,655.3	6,571.1	84.26	78.983		
13,800.0	6,672.0	6,450.6	6,449.5	89.6	22.4	-87.69	5,422.9	651.5	6,731.8	6,647.3	84.44	79.722		
13,900.0	6,672.0	6,449.3	6,448.2	90.8	22.4	-87.68	5,422.9	651.6	6,808.9	6,724.2	84.61	80.473		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Roth 6D - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
14,000.0	6,672.0	6,448.1	6,446.9	92.0	22.4	-87.66	5,422.9	651.6	6,886.5	6,801.7	84.77	81.234		
14,100.0	6,672.0	6,446.8	6,445.7	93.2	22.4	-87.65	5,422.9	651.6	6,964.7	6,879.8	84.93	82.005		
14,200.0	6,672.0	6,445.6	6,444.5	94.4	22.4	-87.63	5,422.8	651.6	7,043.5	6,958.4	85.08	82.787		
14,300.0	6,672.0	6,444.4	6,443.2	95.6	22.4	-87.61	5,422.8	651.6	7,122.8	7,037.6	85.22	83.578		
14,400.0	6,672.0	6,443.1	6,442.0	96.8	22.4	-87.60	5,422.8	651.7	7,202.6	7,117.2	85.36	84.378		
14,500.0	6,672.0	6,441.9	6,440.8	98.0	22.4	-87.58	5,422.8	651.7	7,282.9	7,197.4	85.49	85.187		
14,600.0	6,672.0	6,440.8	6,439.7	99.2	22.3	-87.57	5,422.8	651.7	7,363.7	7,278.0	85.62	86.005		
14,700.0	6,672.0	6,439.6	6,438.5	100.4	22.3	-87.55	5,422.7	651.7	7,444.9	7,359.2	85.74	86.831		
14,800.0	6,672.0	6,438.4	6,437.3	101.6	22.3	-87.54	5,422.7	651.7	7,526.6	7,440.7	85.86	87.664		
14,900.0	6,672.0	6,437.3	6,436.2	102.7	22.3	-87.52	5,422.7	651.8	7,608.7	7,522.7	85.97	88.505		
15,000.0	6,672.0	6,436.2	6,435.1	103.9	22.3	-87.51	5,422.7	651.8	7,691.2	7,605.2	86.08	89.353		
15,100.0	6,672.0	6,435.0	6,433.9	105.1	22.3	-87.49	5,422.6	651.8	7,774.2	7,688.0	86.18	90.209		
15,200.0	6,672.0	6,433.9	6,432.8	106.3	22.3	-87.48	5,422.6	651.8	7,857.5	7,771.2	86.28	91.070		
15,300.0	6,672.0	6,432.8	6,431.7	107.6	22.3	-87.46	5,422.6	651.8	7,941.2	7,854.9	86.38	91.939		
15,400.0	6,672.0	6,431.7	6,430.6	108.8	22.3	-87.45	5,422.6	651.9	8,025.3	7,938.8	86.47	92.813		
15,500.0	6,672.0	6,430.7	6,429.6	110.0	22.3	-87.43	5,422.6	651.9	8,109.8	8,023.2	86.56	93.693		
15,600.0	6,672.0	6,429.6	6,428.5	111.2	22.3	-87.42	5,422.5	651.9	8,194.5	8,107.9	86.64	94.579		
15,700.0	6,672.0	6,428.5	6,427.4	112.4	22.3	-87.41	5,422.5	651.9	8,279.7	8,192.9	86.73	95.470		
15,800.0	6,672.0	6,427.5	6,426.4	113.6	22.3	-87.39	5,422.5	651.9	8,365.1	8,278.3	86.81	96.367		
15,900.0	6,672.0	6,426.5	6,425.4	114.8	22.3	-87.38	5,422.5	651.9	8,450.9	8,364.0	86.88	97.268		
16,000.0	6,672.0	6,425.4	6,424.3	116.0	22.3	-87.37	5,422.5	652.0	8,536.9	8,450.0	86.96	98.174		
16,100.0	6,672.0	6,424.4	6,423.3	117.2	22.3	-87.35	5,422.4	652.0	8,623.3	8,536.3	87.03	99.085		
16,200.0	6,672.0	6,423.4	6,422.3	118.4	22.3	-87.34	5,422.4	652.0	8,710.0	8,622.9	87.10	100.001		
16,300.0	6,672.0	6,422.4	6,421.3	119.6	22.3	-87.33	5,422.4	652.0	8,796.9	8,709.7	87.17	100.920		
16,400.0	6,672.0	6,421.5	6,420.4	120.8	22.3	-87.32	5,422.4	652.0	8,884.1	8,796.9	87.23	101.844		
16,500.0	6,672.0	6,420.5	6,419.4	122.0	22.3	-87.30	5,422.4	652.0	8,971.6	8,884.3	87.30	102.772		
16,600.0	6,672.0	6,419.5	6,418.4	123.2	22.3	-87.29	5,422.4	652.1	9,059.3	8,971.9	87.36	103.703		
16,700.0	6,672.0	6,418.6	6,417.5	124.5	22.3	-87.28	5,422.3	652.1	9,147.3	9,059.8	87.42	104.638		
16,800.0	6,672.0	6,417.6	6,416.5	125.7	22.3	-87.27	5,422.3	652.1	9,235.5	9,148.0	87.48	105.576		
16,900.0	6,672.0	6,416.7	6,415.6	126.9	22.3	-87.25	5,422.3	652.1	9,323.9	9,236.4	87.53	106.518		
17,000.0	6,672.0	6,415.7	6,414.6	128.1	22.3	-87.24	5,422.3	652.1	9,412.6	9,325.0	87.59	107.463		
17,100.0	6,672.0	6,414.8	6,413.7	129.3	22.3	-87.23	5,422.3	652.1	9,501.5	9,413.8	87.64	108.410		
17,200.0	6,672.0	6,413.9	6,412.8	130.5	22.3	-87.22	5,422.2	652.1	9,590.6	9,502.9	87.70	109.361		
17,300.0	6,672.0	6,400.0	6,398.9	131.7	22.2	-87.04	5,422.0	652.3	9,679.9	9,592.2	87.72	110.345		
17,400.0	6,672.0	6,400.0	6,398.9	133.0	22.2	-87.04	5,422.0	652.3	9,769.5	9,681.7	87.78	111.300		
17,500.0	6,672.0	6,400.0	6,398.9	134.2	22.2	-87.04	5,422.0	652.3	9,859.2	9,771.4	87.83	112.256		
17,600.0	6,672.0	6,400.0	6,398.9	135.4	22.2	-87.04	5,422.0	652.3	9,949.1	9,861.2	87.88	113.216		



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Rothe 11-06 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS, 5280-2_Unknown													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
0.0	0.0	0.0	0.0	0.0	0.0	-1.60	6,100.5	-170.0	6,103.0					
100.0	100.0	64.0	64.0	0.1	0.1	-1.59	6,100.4	-169.9	6,102.8	6,102.5	0.24	N/A		
200.0	200.0	178.7	178.7	0.5	0.5	-1.59	6,100.0	-169.3	6,102.4	6,101.5	0.94	6,522.311		
300.0	300.0	274.5	274.5	0.8	0.8	-1.58	6,099.6	-168.7	6,102.0	6,100.4	1.63	3,744.974		
400.0	400.0	362.4	362.4	1.2	1.1	-1.58	6,099.4	-168.2	6,101.7	6,099.4	2.30	2,658.517		
500.0	500.0	461.8	461.8	1.6	1.4	-1.58	6,099.2	-168.1	6,101.6	6,098.6	3.00	2,033.449		
600.0	600.0	573.4	573.4	1.9	1.8	-1.58	6,098.9	-167.9	6,101.3	6,097.5	3.75	1,627.225		
700.0	700.0	680.4	680.4	2.3	2.2	-1.57	6,098.5	-167.5	6,100.9	6,096.4	4.48	1,361.037		
800.0	800.0	784.3	784.3	2.6	2.6	-1.57	6,097.9	-167.4	6,100.3	6,095.1	5.20	1,172.038		
900.0	900.0	881.4	881.4	3.0	2.9	-1.57	6,097.4	-167.3	6,099.8	6,093.9	5.90	1,033.272		
1,000.0	1,000.0	976.9	976.9	3.4	3.2	-1.57	6,097.0	-167.3	6,099.3	6,092.7	6.60	924.617		
1,100.0	1,100.0	1,074.6	1,074.5	3.7	3.6	-1.57	6,096.6	-167.3	6,098.9	6,091.6	7.30	835.789		
1,200.0	1,200.0	1,203.7	1,203.6	4.1	4.0	-1.57	6,095.9	-167.5	6,098.4	6,090.3	8.11	752.142		
1,300.0	1,300.0	1,303.6	1,303.5	4.4	4.4	-1.58	6,095.0	-167.7	6,097.5	6,088.7	8.82	691.593		
1,400.0	1,400.0	1,383.0	1,382.9	4.8	4.7	-1.58	6,094.4	-167.8	6,096.8	6,087.4	9.45	644.942		
1,500.0	1,500.0	1,505.3	1,505.3	5.1	5.1	-1.58	6,093.6	-168.3	6,096.2	6,086.0	10.24	595.316		
1,600.0	1,600.0	1,589.3	1,589.2	5.5	5.4	-1.59	6,093.0	-168.8	6,095.5	6,084.6	10.89	559.591		
1,700.0	1,700.0	1,690.3	1,690.3	5.9	5.7	-1.59	6,092.4	-169.5	6,094.8	6,083.2	11.60	525.198		
1,800.0	1,800.0	1,799.1	1,799.0	6.2	6.1	-1.60	6,091.6	-170.3	6,094.1	6,081.8	12.34	493.697		
1,900.0	1,900.0	1,884.1	1,884.0	6.6	6.4	-1.61	6,091.0	-171.0	6,093.5	6,080.5	13.00	468.737		
2,000.0	2,000.0	1,967.2	1,967.1	6.9	6.7	-1.62	6,090.6	-172.0	6,093.1	6,079.4	13.65	446.427		
2,100.0	2,100.0	2,062.3	2,062.2	7.3	7.0	-1.63	6,090.4	-173.0	6,092.9	6,078.5	14.34	424.916		
2,200.0	2,200.0	2,157.3	2,157.3	7.7	7.4	-1.64	6,090.2	-173.9	6,092.7	6,077.7	15.03	405.398		
2,300.0	2,300.0	2,267.6	2,267.5	8.0	7.8	49.39	6,090.1	-175.0	6,091.5	6,075.7	15.77	386.288		
2,400.0	2,399.8	2,378.5	2,378.4	8.4	8.1	49.47	6,089.6	-176.3	6,087.7	6,071.1	16.51	368.722		
2,500.0	2,499.5	2,493.3	2,493.2	8.7	8.6	49.63	6,088.9	-177.6	6,081.4	6,064.2	17.27	352.227		
2,600.0	2,598.7	2,580.7	2,580.6	9.1	8.9	49.83	6,088.3	-178.6	6,072.9	6,055.0	17.93	338.765		
2,700.0	2,697.5	2,707.1	2,707.0	9.4	9.3	50.12	6,087.4	-180.2	6,062.1	6,043.4	18.72	323.760		
2,800.0	2,795.6	2,802.9	2,802.8	9.8	9.6	50.45	6,086.5	-181.4	6,048.8	6,029.4	19.42	311.537		
2,900.0	2,893.1	2,902.6	2,902.5	10.1	10.0	50.85	6,085.6	-182.6	6,033.4	6,013.3	20.12	299.831		
3,000.0	2,989.6	2,989.8	2,989.7	10.5	10.3	51.28	6,084.8	-183.6	6,015.9	5,995.1	20.79	289.398		
3,100.0	3,085.3	3,070.3	3,070.1	10.9	10.6	51.76	6,084.2	-184.5	5,996.5	5,975.1	21.43	279.802		
3,200.0	3,179.8	3,164.6	3,164.4	11.2	10.9	52.34	6,083.7	-185.2	5,975.3	5,953.2	22.13	270.060		
3,300.0	3,273.2	3,260.3	3,260.1	11.6	11.2	52.98	6,083.1	-185.7	5,952.0	5,929.2	22.83	260.725		
3,387.5	3,353.8	3,337.3	3,337.1	11.9	11.5	53.58	6,082.7	-186.0	5,930.1	5,906.6	23.42	253.161		
3,400.0	3,365.2	3,347.8	3,347.7	12.0	11.5	53.62	6,082.6	-186.0	5,926.8	5,903.3	23.51	252.114		
3,500.0	3,456.8	3,428.5	3,428.3	12.4	11.8	53.88	6,082.2	-186.2	5,901.2	5,877.0	24.17	244.174		
3,600.0	3,548.3	3,503.5	3,503.3	12.8	12.1	54.12	6,082.1	-186.4	5,875.9	5,851.1	24.81	236.798		
3,700.0	3,639.8	3,588.9	3,588.7	13.2	12.4	54.40	6,082.1	-186.5	5,851.0	5,825.5	25.50	229.446		
3,800.0	3,731.4	3,701.6	3,701.4	13.6	12.8	54.78	6,081.9	-186.7	5,826.2	5,799.9	26.28	221.658		
3,900.0	3,822.9	3,783.8	3,783.6	14.0	13.1	55.05	6,081.7	-186.8	5,801.4	5,774.5	26.97	215.090		
4,000.0	3,914.4	3,846.8	3,846.6	14.4	13.3	55.26	6,081.8	-186.8	5,777.1	5,749.5	27.60	209.324		
4,100.0	4,005.9	3,908.9	3,908.8	14.8	13.5	55.47	6,082.2	-186.9	5,753.5	5,725.2	28.23	203.830		
4,200.0	4,097.5	4,010.9	4,010.8	15.2	13.9	55.82	6,082.9	-187.1	5,730.1	5,701.2	28.99	197.658		
4,300.0	4,189.0	4,117.7	4,117.5	15.6	14.2	56.18	6,083.5	-187.4	5,706.8	5,677.0	29.77	191.678		
4,400.0	4,280.5	4,203.7	4,203.5	16.1	14.5	56.48	6,083.9	-187.6	5,683.6	5,653.1	30.49	186.403		
4,500.0	4,372.1	4,287.3	4,287.1	16.5	14.8	56.77	6,084.4	-187.6	5,660.6	5,629.4	31.20	181.407		
4,600.0	4,463.6	4,371.0	4,370.9	16.9	15.1	57.06	6,085.0	-187.4	5,638.0	5,606.1	31.92	176.624		
4,700.0	4,555.1	4,438.5	4,438.4	17.4	15.3	57.31	6,085.6	-187.2	5,615.8	5,583.2	32.59	172.328		
4,800.0	4,646.7	4,500.0	4,499.8	17.8	15.6	57.52	6,086.5	-187.1	5,594.3	5,561.0	33.24	168.312		
4,900.0	4,738.2	4,648.6	4,648.4	18.2	16.1	58.06	6,088.4	-186.6	5,572.9	5,538.7	34.17	163.072		
5,000.0	4,829.7	4,803.1	4,802.9	18.7	16.6	58.63	6,088.5	-185.5	5,550.5	5,515.3	35.13	158.003		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Rothe 11-06 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS, 5280-2_Unknown													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
5,100.0	4,921.3	4,880.6	4,880.4	19.1	16.9	58.92	6,088.3	-184.8	5,527.9	5,492.1	35.84	154.239		
5,200.0	5,012.8	4,988.0	4,987.8	19.5	17.3	59.32	6,087.9	-184.1	5,505.7	5,469.0	36.65	150.231		
5,300.0	5,104.3	5,084.9	5,084.7	20.0	17.6	59.69	6,087.4	-183.6	5,483.4	5,445.9	37.42	146.517		
5,400.0	5,195.8	5,186.2	5,186.0	20.4	17.9	60.07	6,086.7	-183.0	5,461.2	5,422.9	38.22	142.899		
5,500.0	5,287.4	5,270.3	5,270.1	20.9	18.2	60.39	6,086.1	-182.8	5,439.1	5,400.2	38.96	139.615		
5,600.0	5,378.9	5,360.5	5,360.3	21.3	19.3	60.74	6,085.6	-182.8	5,417.4	5,376.9	40.44	133.950		
5,700.0	5,470.4	5,451.9	5,451.6	21.8	20.4	61.09	6,085.1	-182.8	5,395.9	5,353.9	42.03	128.376		
5,800.0	5,562.0	5,543.2	5,543.0	22.2	21.6	61.44	6,084.5	-182.8	5,374.6	5,331.0	43.62	123.208		
5,900.0	5,653.5	5,634.6	5,634.4	22.7	22.7	61.79	6,084.0	-182.8	5,353.5	5,308.3	45.21	118.406		
6,000.0	5,745.0	5,726.0	5,725.7	23.1	23.8	62.15	6,083.5	-182.8	5,332.7	5,285.9	46.81	113.931		
6,100.0	5,836.6	5,817.3	5,817.1	23.6	25.0	62.51	6,083.0	-182.8	5,312.1	5,263.7	48.40	109.752		
6,200.0	5,928.1	5,908.7	5,908.5	24.0	26.1	62.87	6,082.5	-182.8	5,291.7	5,241.7	50.00	105.842		
6,278.6	6,000.0	5,980.5	5,980.2	24.4	27.0	63.16	6,082.1	-182.8	5,275.9	5,224.7	51.25	102.943		
6,290.0	6,010.4	5,990.8	5,990.6	24.4	27.2	61.79	6,082.0	-182.8	5,273.5	5,222.1	51.43	102.532		
6,300.0	6,019.5	6,000.0	5,999.7	24.5	27.3	59.87	6,082.0	-182.8	5,271.3	5,219.7	51.59	102.170		
6,350.0	6,065.8	6,046.2	6,045.9	24.7	27.8	48.39	6,081.7	-182.8	5,259.5	5,207.1	52.39	100.392		
6,400.0	6,113.0	6,093.3	6,093.0	24.9	28.4	33.22	6,081.4	-182.8	5,246.5	5,193.4	53.18	98.653		
6,450.0	6,160.7	6,140.9	6,140.6	25.1	29.0	14.88	6,081.2	-182.8	5,232.5	5,178.6	53.96	96.963		
6,500.0	6,208.5	6,188.5	6,188.3	25.3	29.6	-4.15	6,080.9	-182.8	5,217.6	5,162.9	54.73	95.327		
6,550.0	6,255.8	6,235.8	6,235.6	25.4	30.2	-20.92	6,080.6	-182.8	5,201.8	5,146.3	55.49	93.750		
6,600.0	6,302.5	6,282.3	6,282.1	25.6	30.8	-34.30	6,080.4	-182.8	5,185.4	5,129.2	56.22	92.237		
6,650.0	6,347.9	6,327.6	6,327.4	25.7	31.4	-44.70	6,080.1	-182.8	5,168.4	5,111.5	56.93	90.791		
6,700.0	6,391.6	6,371.3	6,371.1	25.9	31.9	-52.91	6,079.9	-182.8	5,151.2	5,093.6	57.61	89.418		
6,750.0	6,433.4	6,413.0	6,412.8	26.0	32.4	-59.59	6,079.6	-182.8	5,133.8	5,075.6	58.26	88.122		
6,800.0	6,472.8	6,452.3	6,452.1	26.1	32.9	-65.17	6,079.4	-182.8	5,116.6	5,057.7	58.87	86.907		
6,850.0	6,509.4	6,488.9	6,488.7	26.2	33.4	-69.94	6,079.2	-182.8	5,099.6	5,040.1	59.45	85.778		
6,900.0	6,543.0	6,522.4	6,522.2	26.3	33.8	-74.06	6,079.0	-182.8	5,083.2	5,023.2	59.99	84.739		
6,950.0	6,573.2	6,552.5	6,552.3	26.4	34.2	-77.64	6,078.9	-182.8	5,067.5	5,007.0	60.48	83.793		
7,000.0	6,599.8	6,579.0	6,578.8	26.5	34.5	-80.74	6,078.7	-182.8	5,052.8	4,991.8	60.92	82.942		
7,050.0	6,622.5	6,601.7	6,601.4	26.6	34.8	-83.39	6,078.6	-182.8	5,039.2	4,977.9	61.31	82.190		
7,100.0	6,641.1	6,620.2	6,620.0	26.7	35.0	-85.61	6,078.5	-182.8	5,027.0	4,965.3	61.65	81.539		
7,150.0	6,655.4	6,634.5	6,634.3	26.8	35.2	-87.43	6,078.4	-182.8	5,016.3	4,954.3	61.94	80.991		
7,200.0	6,665.4	6,644.5	6,644.2	26.9	35.3	-88.84	6,078.3	-182.8	5,007.2	4,945.0	62.16	80.549		
7,250.0	6,670.8	6,649.9	6,649.7	27.0	35.4	-89.85	6,078.3	-182.8	4,999.9	4,937.6	62.33	80.215		
7,285.7	6,672.0	6,651.1	6,650.9	27.1	35.4	-90.32	6,078.3	-182.8	4,995.8	4,933.4	62.41	80.044		
7,300.0	6,672.0	6,651.1	6,650.9	27.1	35.4	-90.32	6,078.3	-182.8	4,994.4	4,932.0	62.44	79.987		
7,400.0	6,672.0	6,651.1	6,650.8	27.3	35.4	-90.32	6,078.3	-182.8	4,985.6	4,923.0	62.67	79.553		
7,500.0	6,672.0	6,651.1	6,650.8	27.6	35.4	-90.32	6,078.3	-182.8	4,978.8	4,915.9	62.96	79.082		
7,600.0	6,672.0	6,651.1	6,650.8	28.0	35.4	-90.32	6,078.3	-182.8	4,974.0	4,910.7	63.30	78.579		
7,700.0	6,672.0	6,651.0	6,650.8	28.3	35.4	-90.32	6,078.3	-182.8	4,971.2	4,907.5	63.69	78.049		
7,789.9	6,672.0	6,651.0	6,650.8	28.7	35.4	-90.32	6,078.3	-182.8	4,970.4	4,906.3	64.09	77.550 CC		
7,800.0	6,672.0	6,651.0	6,650.8	28.8	35.4	-90.32	6,078.3	-182.8	4,970.4	4,906.3	64.14	77.496 ES		
7,900.0	6,672.0	6,651.0	6,650.8	29.3	35.4	-90.32	6,078.3	-182.8	4,971.6	4,907.0	64.63	76.927		
8,000.0	6,672.0	6,651.0	6,650.8	29.8	35.4	-90.32	6,078.3	-182.8	4,974.9	4,909.7	65.16	76.347		
8,100.0	6,672.0	6,651.0	6,650.8	30.4	35.4	-90.32	6,078.3	-182.8	4,980.1	4,914.3	65.73	75.762		
8,200.0	6,672.0	6,651.0	6,650.8	31.0	35.4	-90.32	6,078.3	-182.8	4,987.3	4,920.9	66.34	75.177		
8,300.0	6,672.0	6,651.0	6,650.7	31.7	35.4	-90.32	6,078.3	-182.8	4,996.4	4,929.5	66.98	74.597		
8,400.0	6,672.0	6,651.0	6,650.7	32.4	35.4	-90.32	6,078.3	-182.8	5,007.6	4,940.0	67.64	74.028		
8,500.0	6,672.0	6,651.0	6,650.7	33.1	35.4	-90.32	6,078.3	-182.8	5,020.7	4,952.4	68.34	73.472		
8,600.0	6,672.0	6,650.9	6,650.7	33.9	35.4	-90.32	6,078.3	-182.8	5,035.8	4,966.7	69.05	72.934		
8,700.0	6,672.0	6,650.9	6,650.7	34.7	35.4	-90.32	6,078.3	-182.8	5,052.8	4,983.0	69.77	72.417		
8,800.0	6,672.0	6,650.9	6,650.7	35.5	35.4	-90.32	6,078.3	-182.8	5,071.7	5,001.1	70.51	71.924		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Rothe 11-06 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS, 5280-2_Unknown													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
8,900.0	6,672.0	6,650.9	6,650.7	36.3	35.4	-90.32	6,078.3	-182.8	5,092.4	5,021.2	71.27	71.457		
9,000.0	6,672.0	6,650.9	6,650.7	37.2	35.4	-90.32	6,078.3	-182.8	5,115.1	5,043.1	72.02	71.019		
9,100.0	6,672.0	6,650.9	6,650.6	38.1	35.4	-90.32	6,078.3	-182.8	5,139.6	5,066.8	72.79	70.610		
9,200.0	6,672.0	6,650.9	6,650.6	39.0	35.4	-90.32	6,078.3	-182.8	5,165.9	5,092.3	73.55	70.232		
9,300.0	6,672.0	6,650.9	6,650.6	39.9	35.4	-90.32	6,078.3	-182.8	5,194.0	5,119.6	74.32	69.885		
9,400.0	6,672.0	6,650.8	6,650.6	40.8	35.4	-90.32	6,078.3	-182.8	5,223.8	5,148.7	75.09	69.571		
9,500.0	6,672.0	6,650.8	6,650.6	41.8	35.4	-90.32	6,078.3	-182.8	5,255.4	5,179.5	75.85	69.290		
9,600.0	6,672.0	6,650.8	6,650.6	42.7	35.4	-90.32	6,078.3	-182.8	5,288.6	5,212.0	76.60	69.041		
9,700.0	6,672.0	6,650.8	6,650.6	43.7	35.4	-90.32	6,078.3	-182.8	5,323.6	5,246.2	77.35	68.825		
9,800.0	6,672.0	6,650.8	6,650.6	44.7	35.4	-90.32	6,078.3	-182.8	5,360.1	5,282.0	78.09	68.641		
9,900.0	6,672.0	6,650.8	6,650.5	45.7	35.4	-90.32	6,078.3	-182.8	5,398.3	5,319.4	78.82	68.489		
10,000.0	6,672.0	6,650.8	6,650.5	46.7	35.4	-90.32	6,078.3	-182.8	5,438.0	5,358.4	79.54	68.369		
10,100.0	6,672.0	6,650.8	6,650.5	47.7	35.4	-90.32	6,078.3	-182.8	5,479.2	5,399.0	80.25	68.280		
10,200.0	6,672.0	6,650.7	6,650.5	48.8	35.4	-90.32	6,078.3	-182.8	5,522.0	5,441.0	80.94	68.221		
10,300.0	6,672.0	6,650.7	6,650.5	49.8	35.4	-90.32	6,078.3	-182.8	5,566.2	5,484.6	81.62	68.193 SF		
10,400.0	6,672.0	6,650.7	6,650.5	50.9	35.4	-90.32	6,078.3	-182.8	5,611.8	5,529.5	82.29	68.193		
10,500.0	6,672.0	6,650.7	6,650.5	51.9	35.4	-90.32	6,078.3	-182.8	5,658.9	5,575.9	82.95	68.221		
10,600.0	6,672.0	6,650.7	6,650.5	53.0	35.4	-90.32	6,078.3	-182.8	5,707.2	5,623.7	83.59	68.277		
10,700.0	6,672.0	6,650.7	6,650.4	54.1	35.4	-90.32	6,078.3	-182.8	5,757.0	5,672.7	84.22	68.360		
10,800.0	6,672.0	6,650.7	6,650.4	55.2	35.4	-90.32	6,078.3	-182.8	5,808.0	5,723.1	84.83	68.469		
10,900.0	6,672.0	6,650.7	6,650.4	56.3	35.4	-90.32	6,078.3	-182.8	5,860.2	5,774.8	85.42	68.602		
11,000.0	6,672.0	6,650.6	6,650.4	57.4	35.4	-90.32	6,078.3	-182.8	5,913.7	5,827.7	86.00	68.760		
11,100.0	6,672.0	6,650.6	6,650.4	58.5	35.4	-90.32	6,078.3	-182.8	5,968.4	5,881.8	86.57	68.942		
11,200.0	6,672.0	6,650.6	6,650.4	59.6	35.4	-90.32	6,078.3	-182.8	6,024.2	5,937.1	87.12	69.146		
11,300.0	6,672.0	6,650.6	6,650.4	60.7	35.4	-90.32	6,078.3	-182.8	6,081.1	5,993.5	87.66	69.372		
11,400.0	6,672.0	6,650.6	6,650.4	61.8	35.4	-90.31	6,078.3	-182.8	6,139.2	6,051.0	88.18	69.619		
11,500.0	6,672.0	6,650.6	6,650.3	62.9	35.4	-90.31	6,078.3	-182.8	6,198.3	6,109.6	88.69	69.887		
11,600.0	6,672.0	6,650.6	6,650.3	64.1	35.4	-90.31	6,078.3	-182.8	6,258.4	6,169.3	89.18	70.174		
11,700.0	6,672.0	6,650.5	6,650.3	65.2	35.4	-90.31	6,078.3	-182.8	6,319.6	6,229.9	89.66	70.481		
11,800.0	6,672.0	6,650.5	6,650.3	66.3	35.4	-90.31	6,078.3	-182.8	6,381.7	6,291.6	90.13	70.805		
11,900.0	6,672.0	6,650.5	6,650.3	67.5	35.4	-90.31	6,078.3	-182.8	6,444.8	6,354.2	90.58	71.148		
12,000.0	6,672.0	6,650.5	6,650.3	68.6	35.4	-90.31	6,078.3	-182.8	6,508.8	6,417.8	91.02	71.508		
12,100.0	6,672.0	6,650.5	6,650.3	69.8	35.4	-90.31	6,078.3	-182.8	6,573.7	6,482.2	91.45	71.884		
12,200.0	6,672.0	6,650.5	6,650.2	70.9	35.4	-90.31	6,078.3	-182.8	6,639.4	6,547.6	91.86	72.275		
12,300.0	6,672.0	6,650.5	6,650.2	72.1	35.4	-90.31	6,078.3	-182.8	6,706.0	6,613.7	92.26	72.683		
12,400.0	6,672.0	6,650.5	6,650.2	73.2	35.4	-90.31	6,078.3	-182.8	6,773.4	6,680.8	92.65	73.104		
12,500.0	6,672.0	6,650.4	6,650.2	74.4	35.4	-90.31	6,078.3	-182.8	6,841.6	6,748.6	93.03	73.540		
12,600.0	6,672.0	6,650.4	6,650.2	75.5	35.4	-90.31	6,078.3	-182.8	6,910.6	6,817.2	93.40	73.990		
12,700.0	6,672.0	6,650.4	6,650.2	76.7	35.4	-90.31	6,078.3	-182.8	6,980.3	6,886.6	93.75	74.453		
12,800.0	6,672.0	6,650.4	6,650.2	77.9	35.4	-90.31	6,078.3	-182.8	7,050.7	6,956.6	94.10	74.928		
12,900.0	6,672.0	6,650.4	6,650.1	79.0	35.4	-90.31	6,078.3	-182.8	7,121.9	7,027.4	94.43	75.416		
13,000.0	6,672.0	6,650.4	6,650.1	80.2	35.4	-90.31	6,078.3	-182.8	7,193.7	7,098.9	94.76	75.915		
13,100.0	6,672.0	6,650.4	6,650.1	81.4	35.4	-90.31	6,078.3	-182.8	7,266.2	7,171.1	95.07	76.426		
13,200.0	6,672.0	6,650.3	6,650.1	82.6	35.4	-90.31	6,078.3	-182.8	7,339.3	7,243.9	95.38	76.948		
13,300.0	6,672.0	6,650.3	6,650.1	83.7	35.4	-90.31	6,078.3	-182.8	7,413.1	7,317.4	95.68	77.480		
13,400.0	6,672.0	6,650.3	6,650.1	84.9	35.4	-90.31	6,078.3	-182.8	7,487.4	7,391.4	95.97	78.022		
13,500.0	6,672.0	6,650.3	6,650.1	86.1	35.4	-90.31	6,078.3	-182.8	7,562.4	7,466.1	96.24	78.574		
13,600.0	6,672.0	6,650.3	6,650.0	87.3	35.4	-90.31	6,078.3	-182.8	7,637.9	7,541.3	96.52	79.136		
13,700.0	6,672.0	6,650.3	6,650.0	88.4	35.4	-90.31	6,078.3	-182.8	7,713.9	7,617.1	96.78	79.707		
13,800.0	6,672.0	6,650.3	6,650.0	89.6	35.4	-90.31	6,078.3	-182.8	7,790.5	7,693.5	97.03	80.286		
13,900.0	6,672.0	6,650.2	6,650.0	90.8	35.4	-90.31	6,078.3	-182.8	7,867.6	7,770.3	97.28	80.874		
14,000.0	6,672.0	6,650.2	6,650.0	92.0	35.4	-90.31	6,078.3	-182.8	7,945.3	7,847.7	97.52	81.470		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b>												<b>Offset Site Error:</b>	0.0 ft
BB Section 06 - Skurich-Rothe 11-06 - Original Drilling - Original Drilling - As Drilled												<b>Offset Well Error:</b>	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS, 5280-2_Unknown													
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
14,100.0	6,672.0	6,650.2	6,650.0	93.2	35.4	-90.31	6,078.3	-182.8	8,023.4	7,925.6	97.76	82.074	
14,200.0	6,672.0	6,650.2	6,650.0	94.4	35.4	-90.31	6,078.3	-182.8	8,102.0	8,004.0	97.99	82.685	
14,300.0	6,672.0	6,650.2	6,649.9	95.6	35.4	-90.31	6,078.3	-182.8	8,181.0	8,082.8	98.21	83.304	
14,400.0	6,672.0	6,650.2	6,649.9	96.8	35.4	-90.31	6,078.3	-182.8	8,260.5	8,162.1	98.42	83.930	
14,500.0	6,672.0	6,650.2	6,649.9	98.0	35.4	-90.31	6,078.3	-182.8	8,340.4	8,241.8	98.63	84.563	
14,600.0	6,672.0	6,650.1	6,649.9	99.2	35.4	-90.31	6,078.3	-182.8	8,420.8	8,322.0	98.83	85.202	
14,700.0	6,672.0	6,650.1	6,649.9	100.4	35.4	-90.31	6,078.3	-182.8	8,501.6	8,402.6	99.03	85.847	
14,800.0	6,672.0	6,650.1	6,649.9	101.6	35.4	-90.31	6,078.3	-182.8	8,582.8	8,483.5	99.22	86.499	
14,900.0	6,672.0	6,650.1	6,649.9	102.7	35.4	-90.31	6,078.3	-182.8	8,664.3	8,564.9	99.41	87.156	
15,000.0	6,672.0	6,650.1	6,649.8	103.9	35.4	-90.31	6,078.3	-182.8	8,746.3	8,646.7	99.59	87.820	
15,100.0	6,672.0	6,650.1	6,649.8	105.1	35.4	-90.31	6,078.3	-182.8	8,828.6	8,728.8	99.77	88.488	
15,200.0	6,672.0	6,650.1	6,649.8	106.3	35.4	-90.31	6,078.3	-182.8	8,911.2	8,811.3	99.94	89.162	
15,300.0	6,672.0	6,650.0	6,649.8	107.6	35.4	-90.31	6,078.3	-182.8	8,994.3	8,894.2	100.11	89.841	
15,400.0	6,672.0	6,650.0	6,649.8	108.8	35.4	-90.31	6,078.3	-182.8	9,077.6	8,977.3	100.28	90.525	
15,500.0	6,672.0	6,650.0	6,649.8	110.0	35.4	-90.31	6,078.3	-182.8	9,161.3	9,060.9	100.44	91.214	
15,600.0	6,672.0	6,650.0	6,649.8	111.2	35.4	-90.31	6,078.3	-182.8	9,245.3	9,144.7	100.59	91.908	
15,700.0	6,672.0	6,650.0	6,649.7	112.4	35.4	-90.31	6,078.3	-182.8	9,329.6	9,228.9	100.75	92.605	
15,800.0	6,672.0	6,650.0	6,649.7	113.6	35.4	-90.31	6,078.3	-182.8	9,414.2	9,313.3	100.89	93.307	
15,900.0	6,672.0	6,649.9	6,649.7	114.8	35.4	-90.31	6,078.3	-182.8	9,499.2	9,398.1	101.04	94.014	
16,000.0	6,672.0	6,649.9	6,649.7	116.0	35.4	-90.31	6,078.3	-182.8	9,584.4	9,483.2	101.18	94.724	
16,100.0	6,672.0	6,649.9	6,649.7	117.2	35.4	-90.31	6,078.3	-182.8	9,669.8	9,568.5	101.32	95.438	
16,200.0	6,672.0	6,649.9	6,649.7	118.4	35.4	-90.31	6,078.3	-182.8	9,755.6	9,654.1	101.46	96.155	
16,300.0	6,672.0	6,649.9	6,649.7	119.6	35.4	-90.31	6,078.3	-182.8	9,841.6	9,740.0	101.59	96.877	
16,400.0	6,672.0	6,649.9	6,649.6	120.8	35.4	-90.31	6,078.3	-182.8	9,927.9	9,826.2	101.72	97.601	



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Rothe 12-06 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
0.0	0.0	0.0	0.0	0.0	0.0	-0.95	4,819.1	-80.2	4,820.0					
100.0	100.0	70.8	70.8	0.1	0.1	-0.95	4,818.9	-80.2	4,819.6	4,819.4	0.25	N/A		
200.0	200.0	173.0	173.0	0.5	0.4	-0.95	4,818.5	-80.1	4,819.2	4,818.3	0.92	5,265.539		
300.0	300.0	267.2	267.2	0.8	0.8	-0.95	4,818.1	-79.9	4,818.8	4,817.2	1.60	3,005.212		
400.0	400.0	361.4	361.4	1.2	1.1	-0.94	4,817.9	-79.5	4,818.6	4,816.3	2.29	2,102.674		
500.0	500.0	458.0	457.9	1.6	1.4	-0.94	4,817.8	-78.9	4,818.5	4,815.5	2.99	1,613.062		
600.0	600.0	554.8	554.8	1.9	1.8	-0.93	4,817.8	-78.5	4,818.4	4,814.7	3.68	1,308.109		
642.5	642.5	595.5	595.5	2.1	1.9	-0.93	4,817.7	-78.3	4,818.4	4,814.4	3.98	1,211.232		
700.0	700.0	652.4	652.4	2.3	2.1	-0.93	4,817.8	-78.0	4,818.4	4,814.0	4.38	1,099.462		
800.0	800.0	756.5	756.5	2.6	2.5	-0.92	4,817.8	-77.5	4,818.4	4,813.3	5.10	944.032		
900.0	900.0	863.4	863.4	3.0	2.8	-0.92	4,817.6	-77.2	4,818.2	4,812.4	5.84	825.632		
1,000.0	1,000.0	966.7	966.7	3.4	3.2	-0.91	4,817.3	-76.9	4,818.0	4,811.4	6.56	734.954		
1,100.0	1,100.0	1,057.9	1,057.9	3.7	3.5	-0.91	4,817.1	-76.5	4,817.7	4,810.5	7.23	666.120		
1,135.1	1,135.1	1,088.1	1,088.1	3.8	3.6	-0.91	4,817.1	-76.4	4,817.7	4,810.3	7.46	645.513		
1,200.0	1,200.0	1,148.4	1,148.4	4.1	3.8	-0.91	4,817.2	-76.3	4,817.8	4,809.9	7.91	609.341		
1,300.0	1,300.0	1,254.3	1,254.3	4.4	4.2	-0.90	4,817.3	-76.1	4,817.9	4,809.2	8.63	557.995		
1,400.0	1,400.0	1,361.6	1,361.6	4.8	4.6	-0.90	4,817.1	-75.8	4,817.7	4,808.3	9.37	514.311		
1,491.7	1,491.7	1,444.7	1,444.7	5.1	4.9	-0.90	4,817.0	-75.4	4,817.6	4,807.6	9.99	482.426		
1,500.0	1,500.0	1,451.7	1,451.7	5.1	4.9	-0.90	4,817.0	-75.4	4,817.6	4,807.6	10.04	479.830		
1,600.0	1,600.0	1,551.9	1,551.9	5.5	5.3	-0.89	4,817.1	-75.0	4,817.7	4,807.0	10.75	448.229		
1,691.0	1,691.0	1,644.0	1,644.0	5.8	5.6	-0.89	4,817.1	-74.6	4,817.7	4,806.3	11.40	422.759		
1,700.0	1,700.0	1,651.7	1,651.7	5.9	5.6	-0.89	4,817.1	-74.6	4,817.7	4,806.2	11.45	420.579		
1,800.0	1,800.0	1,750.1	1,750.1	6.2	6.0	-0.88	4,817.2	-74.3	4,817.8	4,805.6	12.16	396.311		
1,900.0	1,900.0	1,856.1	1,856.1	6.6	6.3	-0.88	4,817.2	-74.0	4,817.7	4,804.8	12.89	373.901		
1,976.1	1,976.1	1,929.1	1,929.1	6.9	6.6	-0.88	4,817.1	-73.8	4,817.7	4,804.3	13.41	359.196		
2,000.0	2,000.0	1,951.1	1,951.1	6.9	6.7	-0.88	4,817.1	-73.7	4,817.7	4,804.1	13.58	354.890		
2,100.0	2,100.0	2,049.5	2,049.4	7.3	7.0	-0.88	4,817.2	-73.6	4,817.8	4,803.5	14.28	337.463		
2,200.0	2,200.0	2,150.1	2,150.1	7.7	7.3	-0.88	4,817.3	-73.8	4,817.8	4,802.8	14.99	321.490		
2,300.0	2,300.0	2,246.2	2,246.2	8.0	7.7	50.15	4,817.4	-74.3	4,816.8	4,801.1	15.68	307.258		
2,400.0	2,399.8	2,338.5	2,338.4	8.4	8.0	50.24	4,817.5	-74.7	4,813.7	4,797.3	16.35	294.376		
2,500.0	2,499.5	2,433.3	2,433.2	8.7	8.3	50.39	4,817.9	-75.1	4,808.5	4,791.4	17.04	282.234		
2,600.0	2,598.7	2,535.7	2,535.7	9.1	8.7	50.61	4,818.2	-75.7	4,801.0	4,783.3	17.75	270.480		
2,700.0	2,697.5	2,628.7	2,628.6	9.4	9.0	50.89	4,818.6	-76.3	4,791.5	4,773.0	18.43	259.975		
2,800.0	2,795.6	2,732.6	2,732.6	9.8	9.4	51.25	4,819.0	-76.9	4,779.7	4,760.6	19.15	249.587		
2,900.0	2,893.1	2,835.6	2,835.5	10.1	9.7	51.68	4,819.3	-77.5	4,765.8	4,745.9	19.87	239.870		
3,000.0	2,989.6	2,932.5	2,932.5	10.5	10.1	52.17	4,819.5	-77.9	4,749.7	4,729.1	20.57	230.939		
3,100.0	3,085.3	3,031.2	3,031.1	10.9	10.4	52.75	4,819.7	-78.2	4,731.6	4,710.3	21.27	222.418		
3,200.0	3,179.8	3,170.5	3,170.5	11.2	10.9	53.53	4,819.4	-78.4	4,711.2	4,689.1	22.12	212.963		
3,300.0	3,273.2	3,285.0	3,284.9	11.6	11.3	54.33	4,818.1	-78.0	4,688.0	4,665.1	22.89	204.828		
3,387.5	3,353.8	3,376.4	3,376.4	11.9	11.6	55.08	4,816.9	-77.4	4,666.0	4,642.5	23.53	198.292		
3,400.0	3,365.2	3,389.5	3,389.5	12.0	11.7	55.13	4,816.7	-77.3	4,662.8	4,639.2	23.62	197.376		
3,500.0	3,456.8	3,482.4	3,482.3	12.4	12.0	55.53	4,815.2	-76.6	4,636.9	4,612.6	24.32	190.629		
3,600.0	3,548.3	3,578.1	3,578.0	12.8	12.3	55.95	4,813.7	-76.0	4,611.2	4,586.2	25.04	184.152		
3,700.0	3,639.8	3,657.0	3,656.9	13.2	12.6	56.30	4,812.4	-75.5	4,585.8	4,560.1	25.71	178.388		
3,800.0	3,731.4	3,733.8	3,733.7	13.6	12.9	56.64	4,811.4	-75.0	4,560.9	4,534.5	26.37	172.944		
3,900.0	3,822.9	3,816.8	3,816.7	14.0	13.2	57.01	4,810.6	-74.6	4,536.5	4,509.4	27.06	167.627		
4,000.0	3,914.4	3,908.3	3,908.2	14.4	13.5	57.41	4,809.8	-74.4	4,512.4	4,484.6	27.79	162.396		
4,100.0	4,005.9	4,004.5	4,004.3	14.8	13.8	57.84	4,808.8	-74.4	4,488.5	4,459.9	28.53	157.329		
4,200.0	4,097.5	4,089.2	4,089.0	15.2	14.1	58.23	4,808.0	-74.3	4,464.8	4,435.6	29.24	152.701		
4,300.0	4,189.0	4,184.5	4,184.4	15.6	14.4	58.66	4,807.2	-74.2	4,441.5	4,411.5	29.99	148.113		
4,400.0	4,280.5	4,270.7	4,270.6	16.1	14.7	59.06	4,806.4	-74.3	4,418.3	4,387.6	30.71	143.877		
4,500.0	4,372.1	4,356.4	4,356.2	16.5	15.0	59.45	4,805.7	-74.4	4,395.6	4,364.1	31.43	139.840		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Rothe 12-06 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
4,600.0	4,463.6	4,450.7	4,450.6	16.9	15.4	59.89	4,805.1	-74.7	4,373.2	4,341.0	32.19	135.865		
4,700.0	4,555.1	4,532.3	4,532.2	17.4	15.7	60.27	4,804.5	-75.0	4,350.9	4,318.0	32.90	132.229		
4,800.0	4,646.7	4,600.0	4,599.9	17.8	15.9	60.59	4,804.4	-75.5	4,329.5	4,295.9	33.58	128.928		
4,900.0	4,738.2	4,664.6	4,664.5	18.2	16.1	60.88	4,804.8	-76.2	4,308.8	4,274.6	34.25	125.808		
5,000.0	4,829.7	4,739.3	4,739.2	18.7	16.4	61.23	4,805.5	-77.1	4,288.9	4,253.9	34.95	122.709		
5,100.0	4,921.3	4,821.8	4,821.7	19.1	16.7	61.61	4,806.7	-78.2	4,269.5	4,233.8	35.68	119.655		
5,200.0	5,012.8	4,914.2	4,914.0	19.5	17.0	62.04	4,808.0	-79.5	4,250.4	4,214.0	36.44	116.625		
5,300.0	5,104.3	4,997.7	4,997.5	20.0	17.3	62.43	4,809.3	-80.6	4,231.7	4,194.5	37.18	113.809		
5,400.0	5,195.8	5,116.6	5,116.3	20.4	17.7	63.00	4,810.8	-82.1	4,213.0	4,175.0	38.03	110.773		
5,500.0	5,287.4	5,213.8	5,213.6	20.9	18.0	63.47	4,811.7	-82.9	4,194.4	4,155.6	38.82	108.056		
5,600.0	5,378.9	5,339.4	5,339.1	21.3	18.5	64.10	4,811.9	-83.2	4,175.4	4,135.7	39.69	105.202		
5,700.0	5,470.4	5,429.7	5,429.5	21.8	18.8	64.56	4,811.8	-83.2	4,156.5	4,116.1	40.46	102.743		
5,800.0	5,562.0	5,526.6	5,526.4	22.2	19.1	65.05	4,811.6	-83.5	4,137.8	4,096.6	41.24	100.329		
5,900.0	5,653.5	5,615.4	5,615.2	22.7	19.4	65.51	4,811.4	-83.7	4,119.5	4,077.5	42.01	98.067		
6,000.0	5,745.0	5,717.6	5,717.4	23.1	19.8	66.05	4,811.0	-83.4	4,101.4	4,058.6	42.81	95.798		
6,100.0	5,836.6	5,816.0	5,815.7	23.6	20.1	66.57	4,810.4	-83.1	4,083.4	4,039.8	43.61	93.637		
6,200.0	5,928.1	5,904.5	5,904.3	24.0	20.4	67.04	4,809.8	-83.3	4,065.6	4,021.3	44.38	91.618		
6,278.6	6,000.0	5,967.9	5,967.6	24.4	20.7	67.37	4,809.6	-83.4	4,052.1	4,007.1	44.96	90.122		
6,290.0	6,010.4	5,977.1	5,976.8	24.4	20.7	66.00	4,809.6	-83.5	4,050.0	4,005.0	45.05	89.906		
6,300.0	6,019.5	5,985.2	5,985.0	24.5	20.7	64.14	4,809.5	-83.5	4,048.1	4,003.0	45.12	89.713		
6,350.0	6,065.8	6,026.6	6,026.3	24.7	20.9	52.87	4,809.5	-83.6	4,037.7	3,992.2	45.49	88.758		
6,400.0	6,113.0	6,069.0	6,068.7	24.9	21.0	37.89	4,809.5	-83.8	4,025.8	3,980.0	45.85	87.811		
6,450.0	6,160.7	6,112.1	6,111.8	25.1	21.2	19.69	4,809.5	-84.0	4,012.6	3,966.4	46.19	86.875		
6,500.0	6,208.5	6,155.9	6,155.6	25.3	21.3	0.77	4,809.6	-84.3	3,998.1	3,951.6	46.52	85.949		
6,550.0	6,255.8	6,199.3	6,199.1	25.4	21.5	-15.95	4,809.8	-84.5	3,982.5	3,935.6	46.83	85.038		
6,600.0	6,302.5	6,238.8	6,238.5	25.6	21.6	-29.32	4,809.9	-84.6	3,965.8	3,918.7	47.12	84.158		
6,650.0	6,347.9	6,277.2	6,277.0	25.7	21.7	-39.76	4,810.2	-84.7	3,948.4	3,901.0	47.40	83.293		
6,700.0	6,391.6	6,314.0	6,313.8	25.9	21.9	-48.07	4,810.4	-84.7	3,930.4	3,882.7	47.67	82.449		
6,750.0	6,433.4	6,348.5	6,348.3	26.0	22.0	-54.88	4,810.7	-84.7	3,912.0	3,864.0	47.92	81.628		
6,800.0	6,472.8	6,381.2	6,381.0	26.1	22.1	-60.65	4,811.1	-84.6	3,893.4	3,845.2	48.17	80.833		
6,850.0	6,509.4	6,423.7	6,423.4	26.2	22.3	-65.77	4,811.5	-84.4	3,874.8	3,826.4	48.43	80.009		
6,900.0	6,543.0	6,479.9	6,479.7	26.3	22.5	-70.51	4,811.9	-84.2	3,856.3	3,807.6	48.73	79.144		
6,950.0	6,573.2	6,516.5	6,516.2	26.4	22.6	-74.57	4,812.0	-84.1	3,838.2	3,789.3	48.96	78.395		
7,000.0	6,599.8	6,540.6	6,540.3	26.5	22.7	-78.07	4,812.0	-84.0	3,820.9	3,771.7	49.16	77.730		
7,050.0	6,622.5	6,561.3	6,561.0	26.6	22.7	-81.12	4,812.1	-84.0	3,804.6	3,755.3	49.34	77.114		
7,100.0	6,641.1	6,578.3	6,578.0	26.7	22.8	-83.74	4,812.2	-83.9	3,789.6	3,740.1	49.50	76.551		
7,150.0	6,655.4	6,609.3	6,590.4	26.8	22.9	-85.91	4,812.2	-83.8	3,776.0	3,726.3	49.72	75.949		
7,200.0	6,665.4	6,600.9	6,600.7	26.9	22.9	-87.69	4,812.2	-83.8	3,764.1	3,714.4	49.79	75.600		
7,250.0	6,670.8	6,606.7	6,606.4	27.0	22.9	-89.04	4,812.3	-83.7	3,754.1	3,704.2	49.91	75.219		
7,285.7	6,672.0	6,608.0	6,607.8	27.1	22.9	-89.73	4,812.3	-83.7	3,748.0	3,698.1	49.98	74.992		
7,300.0	6,672.0	6,608.1	6,607.9	27.1	22.9	-89.73	4,812.3	-83.7	3,745.8	3,695.8	50.01	74.908		
7,400.0	6,672.0	6,608.7	6,608.4	27.3	22.9	-89.74	4,812.3	-83.7	3,732.1	3,681.8	50.24	74.291		
7,500.0	6,672.0	6,609.2	6,609.0	27.6	22.9	-89.75	4,812.3	-83.7	3,720.9	3,670.4	50.52	73.649		
7,600.0	6,672.0	6,609.7	6,609.5	28.0	22.9	-89.76	4,812.3	-83.7	3,712.4	3,661.5	50.86	72.986		
7,700.0	6,672.0	6,610.3	6,610.0	28.3	22.9	-89.77	4,812.3	-83.7	3,706.6	3,655.3	51.26	72.308		
7,800.0	6,672.0	6,610.8	6,610.6	28.8	22.9	-89.78	4,812.3	-83.7	3,703.4	3,651.7	51.71	71.624		
7,867.0	6,672.0	6,611.2	6,610.9	29.1	22.9	-89.78	4,812.3	-83.7	3,702.8	3,650.8	52.04	71.160 CC		
7,900.0	6,672.0	6,611.4	6,611.1	29.3	22.9	-89.79	4,812.3	-83.7	3,703.0	3,650.8	52.20	70.942 ES		
8,000.0	6,672.0	6,611.9	6,611.7	29.8	22.9	-89.79	4,812.3	-83.7	3,705.2	3,652.5	52.73	70.267		
8,100.0	6,672.0	6,612.5	6,612.2	30.4	22.9	-89.80	4,812.3	-83.7	3,710.1	3,656.8	53.30	69.608		
8,200.0	6,672.0	6,613.0	6,612.8	31.0	22.9	-89.81	4,812.3	-83.7	3,717.7	3,663.8	53.90	68.972		
8,300.0	6,672.0	6,613.6	6,613.3	31.7	22.9	-89.82	4,812.3	-83.7	3,728.0	3,673.4	54.53	68.364		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Rothe 12-06 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
8,400.0	6,672.0	6,614.1	6,613.8	32.4	22.9	-89.83	4,812.3	-83.7	3,740.9	3,685.7	55.18	67.791		
8,500.0	6,672.0	6,614.6	6,614.4	33.1	22.9	-89.84	4,812.3	-83.7	3,756.4	3,700.5	55.85	67.255		
8,600.0	6,672.0	6,615.2	6,614.9	33.9	22.9	-89.84	4,812.3	-83.7	3,774.5	3,717.9	56.54	66.763		
8,700.0	6,672.0	6,615.7	6,615.5	34.7	22.9	-89.85	4,812.3	-83.7	3,795.1	3,737.9	57.23	66.316		
8,800.0	6,672.0	6,616.3	6,616.0	35.5	22.9	-89.86	4,812.3	-83.7	3,818.2	3,760.3	57.92	65.917		
8,900.0	6,672.0	6,616.8	6,616.6	36.3	22.9	-89.87	4,812.3	-83.7	3,843.8	3,785.2	58.62	65.568		
9,000.0	6,672.0	6,617.4	6,617.1	37.2	22.9	-89.88	4,812.3	-83.7	3,871.8	3,812.5	59.32	65.270		
9,100.0	6,672.0	6,617.9	6,617.7	38.1	22.9	-89.89	4,812.3	-83.7	3,902.2	3,842.1	60.01	65.023		
9,200.0	6,672.0	6,618.5	6,618.2	39.0	22.9	-89.89	4,812.3	-83.7	3,934.8	3,874.1	60.70	64.828		
9,300.0	6,672.0	6,619.0	6,618.7	39.9	22.9	-89.90	4,812.3	-83.7	3,969.7	3,908.3	61.37	64.684		
9,400.0	6,672.0	6,619.5	6,619.3	40.8	22.9	-89.91	4,812.3	-83.7	4,006.8	3,944.7	62.03	64.590		
9,500.0	6,672.0	6,620.1	6,619.8	41.8	22.9	-89.92	4,812.3	-83.7	4,046.0	3,983.3	62.68	64.546 SF		
9,600.0	6,672.0	6,620.6	6,620.4	42.7	22.9	-89.93	4,812.3	-83.7	4,087.3	4,023.9	63.32	64.551		
9,700.0	6,672.0	6,621.2	6,620.9	43.7	22.9	-89.94	4,812.3	-83.7	4,130.5	4,066.6	63.94	64.604		
9,800.0	6,672.0	6,621.7	6,621.5	44.7	22.9	-89.95	4,812.3	-83.7	4,175.7	4,111.2	64.54	64.702		
9,900.0	6,672.0	6,622.3	6,622.0	45.7	22.9	-89.95	4,812.3	-83.7	4,222.8	4,157.7	65.12	64.845		
10,000.0	6,672.0	6,622.8	6,622.6	46.7	22.9	-89.96	4,812.3	-83.7	4,271.7	4,206.0	65.69	65.032		
10,100.0	6,672.0	6,623.4	6,623.1	47.7	23.0	-89.97	4,812.3	-83.6	4,322.4	4,256.2	66.23	65.259		
10,200.0	6,672.0	6,623.9	6,623.6	48.8	23.0	-89.98	4,812.3	-83.6	4,374.7	4,308.0	66.76	65.527		
10,300.0	6,672.0	6,624.4	6,624.2	49.8	23.0	-89.99	4,812.3	-83.6	4,428.7	4,361.5	67.27	65.833		
10,400.0	6,672.0	6,625.0	6,624.7	50.9	23.0	-90.00	4,812.3	-83.6	4,484.3	4,416.5	67.76	66.175		
10,500.0	6,672.0	6,625.5	6,625.3	51.9	23.0	-90.00	4,812.3	-83.6	4,541.4	4,473.1	68.24	66.553		
10,600.0	6,672.0	6,626.1	6,625.8	53.0	23.0	-90.01	4,812.3	-83.6	4,599.9	4,531.2	68.69	66.965		
10,700.0	6,672.0	6,626.6	6,626.4	54.1	23.0	-90.02	4,812.3	-83.6	4,659.8	4,590.7	69.13	67.409		
10,800.0	6,672.0	6,627.2	6,626.9	55.2	23.0	-90.03	4,812.3	-83.6	4,721.1	4,651.6	69.55	67.884		
10,900.0	6,672.0	6,627.7	6,627.5	56.3	23.0	-90.04	4,812.3	-83.6	4,783.7	4,713.8	69.95	68.388		
11,000.0	6,672.0	6,628.3	6,628.0	57.4	23.0	-90.05	4,812.3	-83.6	4,847.6	4,777.2	70.34	68.920		
11,100.0	6,672.0	6,628.8	6,628.5	58.5	23.0	-90.05	4,812.3	-83.6	4,912.6	4,841.9	70.71	69.479		
11,200.0	6,672.0	6,629.3	6,629.1	59.6	23.0	-90.06	4,812.4	-83.6	4,978.8	4,907.7	71.06	70.064		
11,300.0	6,672.0	6,629.9	6,629.6	60.7	23.0	-90.07	4,812.4	-83.6	5,046.1	4,974.7	71.40	70.673		
11,400.0	6,672.0	6,630.4	6,630.2	61.8	23.0	-90.08	4,812.4	-83.6	5,114.5	5,042.7	71.73	71.305		
11,500.0	6,672.0	6,631.0	6,630.7	62.9	23.0	-90.09	4,812.4	-83.6	5,183.9	5,111.8	72.04	71.959		
11,600.0	6,672.0	6,631.5	6,631.3	64.1	23.0	-90.10	4,812.4	-83.6	5,254.2	5,181.9	72.34	72.635		
11,700.0	6,672.0	6,632.1	6,631.8	65.2	23.0	-90.11	4,812.4	-83.6	5,325.5	5,252.9	72.62	73.331		
11,800.0	6,672.0	6,632.6	6,632.4	66.3	23.0	-90.11	4,812.4	-83.6	5,397.8	5,324.9	72.90	74.046		
11,900.0	6,672.0	6,633.2	6,632.9	67.5	23.0	-90.12	4,812.4	-83.6	5,470.9	5,397.7	73.16	74.779		
12,000.0	6,672.0	6,633.7	6,633.5	68.6	23.0	-90.13	4,812.4	-83.6	5,544.8	5,471.4	73.41	75.530		
12,100.0	6,672.0	6,634.3	6,634.0	69.8	23.0	-90.14	4,812.4	-83.6	5,619.5	5,545.8	73.65	76.297		
12,200.0	6,672.0	6,634.8	6,634.5	70.9	23.0	-90.15	4,812.4	-83.6	5,695.0	5,621.1	73.88	77.080		
12,300.0	6,672.0	6,635.3	6,635.1	72.1	23.0	-90.16	4,812.4	-83.6	5,771.2	5,697.1	74.11	77.879		
12,400.0	6,672.0	6,635.9	6,635.6	73.2	23.0	-90.16	4,812.4	-83.6	5,848.2	5,773.9	74.32	78.692		
12,500.0	6,672.0	6,636.4	6,636.2	74.4	23.0	-90.17	4,812.4	-83.6	5,925.8	5,851.3	74.52	79.518		
12,600.0	6,672.0	6,637.0	6,636.7	75.5	23.0	-90.18	4,812.4	-83.6	6,004.1	5,929.4	74.72	80.358		
12,700.0	6,672.0	6,637.5	6,637.3	76.7	23.0	-90.19	4,812.4	-83.6	6,083.0	6,008.1	74.90	81.211		
12,800.0	6,672.0	6,638.1	6,637.8	77.9	23.0	-90.20	4,812.4	-83.6	6,162.5	6,087.5	75.08	82.075		
12,900.0	6,672.0	6,638.6	6,638.4	79.0	23.0	-90.21	4,812.4	-83.6	6,242.7	6,167.4	75.26	82.950		
13,000.0	6,672.0	6,639.2	6,638.9	80.2	23.0	-90.21	4,812.4	-83.6	6,323.3	6,247.9	75.42	83.837		
13,100.0	6,672.0	6,639.7	6,639.4	81.4	23.0	-90.22	4,812.4	-83.6	6,404.5	6,329.0	75.58	84.734		
13,200.0	6,672.0	6,640.2	6,640.0	82.6	23.0	-90.23	4,812.4	-83.6	6,486.3	6,410.5	75.74	85.641		
13,300.0	6,672.0	6,640.8	6,640.5	83.7	23.0	-90.24	4,812.4	-83.6	6,568.5	6,492.6	75.89	86.557		
13,400.0	6,672.0	6,641.3	6,641.1	84.9	23.0	-90.25	4,812.4	-83.6	6,651.2	6,575.2	76.03	87.482		
13,500.0	6,672.0	6,641.9	6,641.6	86.1	23.0	-90.26	4,812.4	-83.5	6,734.4	6,658.2	76.17	88.416		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Rothe 12-06 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
13,600.0	6,672.0	6,642.4	6,642.2	87.3	23.0	-90.26	4,812.4	-83.5	6,818.0	6,741.7	76.30	89.358		
13,700.0	6,672.0	6,643.0	6,642.7	88.4	23.0	-90.27	4,812.4	-83.5	6,902.1	6,825.7	76.43	90.308		
13,800.0	6,672.0	6,643.5	6,643.3	89.6	23.0	-90.28	4,812.4	-83.5	6,986.6	6,910.0	76.55	91.266		
13,900.0	6,672.0	6,644.1	6,643.8	90.8	23.0	-90.29	4,812.4	-83.5	7,071.5	6,994.8	76.67	92.230		
14,000.0	6,672.0	6,644.6	6,644.4	92.0	23.0	-90.30	4,812.4	-83.5	7,156.7	7,079.9	76.79	93.202		
14,100.0	6,672.0	6,645.2	6,644.9	93.2	23.0	-90.31	4,812.4	-83.5	7,242.4	7,165.5	76.90	94.180		
14,200.0	6,672.0	6,645.7	6,645.4	94.4	23.0	-90.32	4,812.4	-83.5	7,328.4	7,251.4	77.01	95.164		
14,300.0	6,672.0	6,646.2	6,646.0	95.6	23.0	-90.32	4,812.4	-83.5	7,414.7	7,337.6	77.11	96.154		
14,400.0	6,672.0	6,646.8	6,646.5	96.8	23.0	-90.33	4,812.4	-83.5	7,501.4	7,424.2	77.22	97.149		
14,500.0	6,672.0	6,647.3	6,647.1	98.0	23.0	-90.34	4,812.4	-83.5	7,588.4	7,511.1	77.31	98.150		
14,600.0	6,672.0	6,647.9	6,647.6	99.2	23.0	-90.35	4,812.4	-83.5	7,675.7	7,598.3	77.41	99.156		
14,700.0	6,672.0	6,648.4	6,648.2	100.4	23.0	-90.36	4,812.4	-83.5	7,763.3	7,685.8	77.50	100.167		
14,800.0	6,672.0	6,649.0	6,648.7	101.6	23.0	-90.37	4,812.4	-83.5	7,851.3	7,773.7	77.59	101.183		
14,900.0	6,672.0	6,649.5	6,649.3	102.7	23.0	-90.37	4,812.4	-83.5	7,939.5	7,861.8	77.68	102.203		
15,000.0	6,672.0	6,650.1	6,649.8	103.9	23.0	-90.38	4,812.4	-83.5	8,027.9	7,950.1	77.77	103.227		
15,100.0	6,672.0	6,650.6	6,650.4	105.1	23.0	-90.39	4,812.4	-83.5	8,116.7	8,038.8	77.85	104.255		
15,200.0	6,672.0	6,651.2	6,650.9	106.3	23.0	-90.40	4,812.4	-83.5	8,205.6	8,127.7	77.94	105.287		
15,300.0	6,672.0	6,651.7	6,651.5	107.6	23.0	-90.41	4,812.4	-83.5	8,294.9	8,216.9	78.02	106.323		
15,400.0	6,672.0	6,652.3	6,652.0	108.8	23.1	-90.42	4,812.4	-83.5	8,384.4	8,306.3	78.09	107.362		
15,500.0	6,672.0	6,652.8	6,652.5	110.0	23.1	-90.42	4,812.4	-83.5	8,474.1	8,395.9	78.17	108.404		
15,600.0	6,672.0	6,653.3	6,653.1	111.2	23.1	-90.43	4,812.4	-83.5	8,564.0	8,485.7	78.25	109.450		
15,700.0	6,672.0	6,653.9	6,653.6	112.4	23.1	-90.44	4,812.4	-83.5	8,654.1	8,575.8	78.32	110.498		
15,800.0	6,672.0	6,654.4	6,654.2	113.6	23.1	-90.45	4,812.4	-83.5	8,744.5	8,666.1	78.39	111.549		
15,900.0	6,672.0	6,655.0	6,654.7	114.8	23.1	-90.46	4,812.5	-83.5	8,835.1	8,756.6	78.46	112.603		
16,000.0	6,672.0	6,655.5	6,655.3	116.0	23.1	-90.47	4,812.5	-83.5	8,925.8	8,847.3	78.53	113.659		
16,100.0	6,672.0	6,656.1	6,655.8	117.2	23.1	-90.47	4,812.5	-83.5	9,016.8	8,938.2	78.60	114.718		
16,200.0	6,672.0	6,656.6	6,656.4	118.4	23.1	-90.48	4,812.5	-83.5	9,107.9	9,029.3	78.67	115.778		
16,300.0	6,672.0	6,657.2	6,656.9	119.6	23.1	-90.49	4,812.5	-83.5	9,199.3	9,120.5	78.73	116.841		
16,400.0	6,672.0	6,657.7	6,657.5	120.8	23.1	-90.50	4,812.5	-83.5	9,290.8	9,212.0	78.80	117.906		
16,500.0	6,672.0	6,658.3	6,658.0	122.0	23.1	-90.51	4,812.5	-83.5	9,382.4	9,303.6	78.86	118.973		
16,600.0	6,672.0	6,658.8	6,658.6	123.2	23.1	-90.52	4,812.5	-83.5	9,474.3	9,395.3	78.93	120.041		
16,700.0	6,672.0	6,659.4	6,659.1	124.5	23.1	-90.52	4,812.5	-83.5	9,566.3	9,487.3	78.99	121.111		
16,800.0	6,672.0	6,659.9	6,659.6	125.7	23.1	-90.53	4,812.5	-83.5	9,658.4	9,579.4	79.05	122.182		
16,900.0	6,672.0	6,660.4	6,660.2	126.9	23.1	-90.54	4,812.5	-83.4	9,750.7	9,671.6	79.11	123.255		
17,000.0	6,672.0	6,661.0	6,660.7	128.1	23.1	-90.55	4,812.5	-83.4	9,843.2	9,764.0	79.17	124.329		
17,100.0	6,672.0	6,661.5	6,661.3	129.3	23.1	-90.56	4,812.5	-83.4	9,935.8	9,856.5	79.23	125.404		



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Rothe 13-06 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS, 6100-2_Unknown													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
0.0	0.0	0.0	0.0	0.0	0.0	-2.71	3,492.0	-165.2	3,496.2					
100.0	100.0	45.0	45.0	0.1	0.1	-2.71	3,492.0	-165.3	3,496.0	3,495.7	0.21	N/A		
200.0	200.0	135.0	135.0	0.5	0.3	-2.72	3,492.5	-166.1	3,496.5	3,495.7	0.79	4,451.465		
300.0	300.0	243.4	243.4	0.8	0.7	-2.74	3,492.9	-166.9	3,496.9	3,495.4	1.52	2,296.048		
400.0	400.0	347.2	347.1	1.2	1.0	-2.74	3,493.1	-167.2	3,497.2	3,494.9	2.24	1,559.057		
500.0	500.0	440.0	439.9	1.6	1.4	-2.74	3,493.4	-167.3	3,497.5	3,494.5	2.93	1,195.416		
600.0	600.0	535.0	535.0	1.9	1.7	-2.75	3,493.9	-167.6	3,498.0	3,494.4	3.62	967.175		
700.0	700.0	644.6	644.6	2.3	2.1	-2.75	3,494.4	-168.1	3,498.5	3,494.1	4.36	802.678		
800.0	800.0	746.1	746.1	2.6	2.4	-2.76	3,494.6	-168.4	3,498.7	3,493.6	5.07	689.880		
900.0	900.0	843.9	843.8	3.0	2.8	-2.76	3,494.9	-168.7	3,499.0	3,493.2	5.77	606.245		
1,000.0	1,000.0	951.3	951.2	3.4	3.2	-2.78	3,495.1	-169.4	3,499.2	3,492.7	6.51	537.920		
1,100.0	1,100.0	1,049.5	1,049.5	3.7	3.5	-2.78	3,495.2	-169.8	3,499.3	3,492.1	7.21	485.582		
1,200.0	1,200.0	1,149.8	1,149.8	4.1	3.9	-2.79	3,495.4	-170.3	3,499.5	3,491.6	7.91	442.150		
1,300.0	1,300.0	1,247.7	1,247.7	4.4	4.2	-2.80	3,495.4	-170.7	3,499.6	3,491.0	8.62	406.221		
1,400.0	1,400.0	1,346.5	1,346.5	4.8	4.5	-2.80	3,495.7	-171.2	3,499.9	3,490.6	9.32	375.583		
1,500.0	1,500.0	1,447.8	1,447.8	5.1	4.9	-2.81	3,495.8	-171.7	3,500.1	3,490.0	10.03	348.935		
1,600.0	1,600.0	1,547.4	1,547.4	5.5	5.2	-2.82	3,496.1	-172.0	3,500.4	3,489.6	10.74	326.008		
1,700.0	1,700.0	1,654.5	1,654.5	5.9	5.6	-2.82	3,496.2	-172.1	3,500.4	3,489.0	11.47	305.203		
1,800.0	1,800.0	1,749.0	1,748.9	6.2	6.0	-2.82	3,496.2	-172.3	3,500.5	3,488.3	12.16	287.930		
1,900.0	1,900.0	1,850.7	1,850.6	6.6	6.3	-2.82	3,496.5	-172.2	3,500.7	3,487.9	12.87	271.983		
1,984.4	1,984.4	1,939.4	1,939.4	6.9	6.6	-2.82	3,496.5	-172.0	3,500.7	3,487.2	13.48	259.628		
2,000.0	2,000.0	1,954.1	1,954.1	6.9	6.7	-2.82	3,496.5	-172.0	3,500.7	3,487.1	13.59	257.583		
2,100.0	2,100.0	2,050.1	2,050.1	7.3	7.0	-2.82	3,496.6	-172.1	3,500.8	3,486.5	14.28	245.080		
2,200.0	2,200.0	2,171.9	2,171.9	7.7	7.4	-2.81	3,496.6	-171.6	3,500.8	3,485.8	15.07	232.342		
2,300.0	2,300.0	2,294.1	2,294.1	8.0	7.8	48.26	3,495.6	-171.0	3,498.8	3,482.9	15.85	220.780		
2,400.0	2,399.8	2,384.4	2,384.4	8.4	8.2	48.39	3,494.7	-170.4	3,494.3	3,477.8	16.52	211.578		
2,500.0	2,499.5	2,487.8	2,487.7	8.7	8.5	48.61	3,493.8	-169.6	3,487.7	3,470.4	17.23	202.421		
2,600.0	2,598.7	2,595.9	2,595.9	9.1	8.9	48.93	3,492.7	-168.5	3,478.5	3,460.6	17.96	193.667		
2,700.0	2,697.5	2,693.8	2,693.7	9.4	9.2	49.31	3,491.6	-167.7	3,467.0	3,448.3	18.66	185.819		
2,800.0	2,795.6	2,779.7	2,779.6	9.8	9.5	49.74	3,490.7	-167.1	3,453.5	3,434.1	19.31	178.797		
2,900.0	2,893.1	2,876.6	2,876.5	10.1	9.9	50.27	3,489.9	-166.5	3,438.0	3,418.0	20.01	171.808		
3,000.0	2,989.6	2,982.0	2,981.9	10.5	10.2	50.92	3,489.0	-165.7	3,420.3	3,399.5	20.74	164.935		
3,100.0	3,085.3	3,073.3	3,073.2	10.9	10.6	51.60	3,488.0	-165.2	3,400.4	3,379.0	21.42	158.768		
3,200.0	3,179.8	3,160.3	3,160.2	11.2	10.9	52.34	3,487.3	-164.9	3,378.8	3,356.7	22.09	152.980		
3,300.0	3,273.2	3,250.7	3,250.6	11.6	11.2	53.18	3,486.7	-164.7	3,355.5	3,332.7	22.77	147.361		
3,387.5	3,353.8	3,333.6	3,333.5	11.9	11.5	54.00	3,486.1	-164.3	3,333.6	3,310.2	23.39	142.550		
3,400.0	3,365.2	3,345.7	3,345.6	12.0	11.5	54.08	3,486.0	-164.2	3,330.4	3,306.9	23.48	141.867		
3,500.0	3,456.8	3,435.8	3,435.7	12.4	11.8	54.60	3,485.3	-164.3	3,304.7	3,280.5	24.17	136.745		
3,600.0	3,548.3	3,518.3	3,518.2	12.8	12.1	55.09	3,484.8	-164.5	3,279.5	3,254.7	24.84	132.026		
3,700.0	3,639.8	3,607.2	3,607.1	13.2	12.4	55.62	3,484.4	-164.8	3,254.9	3,229.3	25.54	127.440		
3,800.0	3,731.4	3,707.7	3,707.6	13.6	12.8	56.23	3,483.9	-164.7	3,230.4	3,204.1	26.28	122.903		
3,900.0	3,822.9	3,810.9	3,810.7	14.0	13.1	56.87	3,483.1	-164.6	3,205.9	3,178.9	27.04	118.559		
4,000.0	3,914.4	3,902.1	3,902.0	14.4	13.5	57.44	3,482.1	-164.8	3,181.7	3,153.9	27.76	114.596		
4,100.0	4,005.9	3,980.6	3,980.5	14.8	13.7	57.93	3,481.5	-165.0	3,158.0	3,129.5	28.45	110.991		
4,200.0	4,097.5	4,059.3	4,059.2	15.2	14.0	58.43	3,481.2	-165.3	3,134.9	3,105.8	29.15	107.562		
4,300.0	4,189.0	4,141.0	4,140.9	15.6	14.3	58.95	3,481.2	-165.7	3,112.6	3,082.7	29.85	104.269		
4,400.0	4,280.5	4,227.7	4,227.6	16.1	14.6	59.51	3,481.5	-166.4	3,090.8	3,060.3	30.58	101.082		
4,500.0	4,372.1	4,319.3	4,319.1	16.5	14.9	60.10	3,481.8	-167.3	3,069.5	3,038.2	31.32	97.998		
4,600.0	4,463.6	4,414.1	4,414.0	16.9	15.2	60.71	3,482.2	-168.6	3,048.5	3,016.4	32.08	95.027		
4,700.0	4,555.1	4,506.7	4,506.5	17.4	15.6	61.31	3,482.5	-169.9	3,027.8	2,994.9	32.83	92.214		
4,800.0	4,646.7	4,603.9	4,603.7	17.8	15.9	61.95	3,482.8	-171.7	3,007.3	2,973.7	33.61	89.491		
4,900.0	4,738.2	4,710.1	4,709.9	18.2	16.3	62.65	3,482.8	-173.9	2,987.0	2,952.6	34.41	86.817		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Rothe 13-06 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS, 6100-2_Unknown													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
5,000.0	4,829.7	4,807.4	4,807.2	18.7	16.6	63.31	3,482.4	-175.2	2,966.7	2,931.5	35.18	84.327		
5,100.0	4,921.3	4,895.3	4,895.1	19.1	16.9	63.93	3,481.9	-175.9	2,946.8	2,910.8	35.93	82.011		
5,200.0	5,012.8	4,985.9	4,985.7	19.5	17.2	64.57	3,481.5	-176.5	2,927.3	2,890.6	36.69	79.781		
5,300.0	5,104.3	5,077.3	5,077.1	20.0	17.6	65.23	3,481.0	-177.0	2,908.3	2,870.9	37.46	77.645		
5,400.0	5,195.8	5,173.9	5,173.6	20.4	17.9	65.94	3,480.4	-177.3	2,889.7	2,851.5	38.24	75.570		
5,500.0	5,287.4	5,270.8	5,270.6	20.9	18.2	66.66	3,479.5	-177.5	2,871.4	2,832.3	39.02	73.580		
5,600.0	5,378.9	5,354.9	5,354.7	21.3	18.5	67.31	3,478.7	-177.3	2,853.4	2,813.7	39.77	71.741		
5,700.0	5,470.4	5,436.7	5,436.5	21.8	18.8	67.94	3,478.2	-177.0	2,836.4	2,795.8	40.52	69.999		
5,800.0	5,562.0	5,523.3	5,523.1	22.2	19.1	68.61	3,477.8	-176.5	2,820.0	2,778.7	41.28	68.313		
5,900.0	5,653.5	5,610.7	5,610.5	22.7	19.4	69.30	3,477.5	-176.1	2,804.2	2,762.2	42.04	66.697		
6,000.0	5,745.0	5,690.4	5,690.2	23.1	19.7	69.93	3,477.5	-175.6	2,789.2	2,746.4	42.79	65.188		
6,100.0	5,836.6	5,769.3	5,769.0	23.6	20.0	70.56	3,477.8	-175.2	2,775.1	2,731.6	43.53	63.757		
6,200.0	5,928.1	5,873.2	5,872.9	24.0	20.3	71.38	3,478.6	-175.2	2,761.7	2,717.4	44.34	62.283		
6,278.6	6,000.0	5,947.6	5,947.4	24.4	20.6	71.97	3,478.9	-175.5	2,751.1	2,706.2	44.96	61.191		
6,290.0	6,010.4	5,957.3	5,957.0	24.4	20.6	70.61	3,479.0	-175.6	2,749.5	2,704.5	45.05	61.037		
6,300.0	6,019.5	5,965.8	5,965.5	24.5	20.7	68.82	3,479.0	-175.6	2,748.0	2,702.9	45.12	60.900		
6,350.0	6,065.8	6,009.9	6,009.7	24.7	20.8	57.89	3,479.3	-176.0	2,739.3	2,693.8	45.50	60.205		
6,400.0	6,113.0	6,059.4	6,059.1	24.9	21.0	43.21	3,479.7	-176.5	2,728.8	2,682.9	45.88	59.480		
6,450.0	6,160.7	6,109.3	6,109.0	25.1	21.2	25.23	3,480.0	-176.9	2,716.5	2,670.2	46.24	58.747		
6,500.0	6,208.5	6,156.7	6,156.5	25.3	21.6	6.45	3,480.3	-177.4	2,702.3	2,655.5	46.83	57.709		
6,550.0	6,255.8	6,204.1	6,203.9	25.4	21.9	-10.22	3,480.6	-177.8	2,686.6	2,639.2	47.36	56.727		
6,600.0	6,302.5	6,250.7	6,250.5	25.6	22.3	-23.65	3,480.9	-178.3	2,669.4	2,621.5	47.87	55.757		
6,650.0	6,347.9	6,296.1	6,295.8	25.7	22.7	-34.27	3,481.2	-178.7	2,650.9	2,602.5	48.37	54.803		
6,700.0	6,391.6	6,339.7	6,339.5	25.9	23.0	-42.87	3,481.5	-179.2	2,631.3	2,582.4	48.85	53.869		
6,750.0	6,433.4	6,381.4	6,381.1	26.0	23.3	-50.10	3,481.7	-179.6	2,610.9	2,561.6	49.30	52.961		
6,800.0	6,472.8	6,420.6	6,420.3	26.1	23.6	-56.39	3,482.0	-179.9	2,589.9	2,540.2	49.73	52.083		
6,850.0	6,509.4	6,457.0	6,456.7	26.2	23.9	-62.00	3,482.2	-180.3	2,568.7	2,518.5	50.13	51.243		
6,900.0	6,543.0	6,490.3	6,490.0	26.3	24.2	-67.05	3,482.4	-180.6	2,547.5	2,497.0	50.50	50.445		
6,950.0	6,573.2	6,520.2	6,519.9	26.4	24.4	-71.62	3,482.6	-180.9	2,526.7	2,475.8	50.84	49.695		
7,000.0	6,599.8	6,546.4	6,546.1	26.5	24.6	-75.72	3,482.8	-181.1	2,506.6	2,455.4	51.16	48.998		
7,050.0	6,622.5	6,568.7	6,568.4	26.6	24.8	-79.35	3,482.9	-181.4	2,487.5	2,436.0	51.44	48.361		
7,100.0	6,641.1	6,586.9	6,586.6	26.7	25.0	-82.49	3,483.1	-181.5	2,469.7	2,418.0	51.68	47.787		
7,150.0	6,655.4	6,600.8	6,600.5	26.8	25.1	-85.13	3,483.1	-181.7	2,453.6	2,401.7	51.89	47.282		
7,200.0	6,665.4	6,610.3	6,610.0	26.9	25.1	-87.27	3,483.2	-181.8	2,439.3	2,387.2	52.07	46.849		
7,250.0	6,670.8	6,615.3	6,615.1	27.0	25.2	-88.89	3,483.2	-181.8	2,427.0	2,374.8	52.20	46.494		
7,285.7	6,672.0	6,616.2	6,615.9	27.1	25.2	-89.73	3,483.2	-181.8	2,419.7	2,367.4	52.27	46.289		
7,300.0	6,672.0	6,616.0	6,615.7	27.1	25.2	-89.73	3,483.2	-181.8	2,417.0	2,364.7	52.30	46.216		
7,400.0	6,672.0	6,615.1	6,614.8	27.3	25.2	-89.71	3,483.2	-181.8	2,400.6	2,348.1	52.52	45.713		
7,500.0	6,672.0	6,614.1	6,613.8	27.6	25.2	-89.68	3,483.2	-181.8	2,388.3	2,335.5	52.79	45.241		
7,600.0	6,672.0	6,613.2	6,612.9	28.0	25.2	-89.66	3,483.2	-181.8	2,380.1	2,327.0	53.12	44.805		
7,700.0	6,672.0	6,612.2	6,611.9	28.3	25.2	-89.64	3,483.2	-181.8	2,376.1	2,322.6	53.50	44.410		
7,745.4	6,672.0	6,611.8	6,611.5	28.5	25.2	-89.63	3,483.2	-181.8	2,375.7	2,322.0	53.70	44.241 CC, ES		
7,800.0	6,672.0	6,611.3	6,611.0	28.8	25.1	-89.61	3,483.2	-181.8	2,376.3	2,322.4	53.93	44.062		
7,900.0	6,672.0	6,610.3	6,610.0	29.3	25.1	-89.59	3,483.2	-181.8	2,380.7	2,326.3	54.40	43.765		
8,000.0	6,672.0	6,609.4	6,609.1	29.8	25.1	-89.57	3,483.2	-181.7	2,389.3	2,334.4	54.89	43.524		
8,100.0	6,672.0	6,608.4	6,608.1	30.4	25.1	-89.55	3,483.2	-181.7	2,401.9	2,346.5	55.42	43.343		
8,200.0	6,672.0	6,607.5	6,607.2	31.0	25.1	-89.52	3,483.2	-181.7	2,418.7	2,362.7	55.96	43.225		
8,300.0	6,672.0	6,606.5	6,606.2	31.7	25.1	-89.50	3,483.2	-181.7	2,439.4	2,382.9	56.50	43.173 SF		
8,400.0	6,672.0	6,605.6	6,605.3	32.4	25.1	-89.48	3,483.2	-181.7	2,464.0	2,407.0	57.06	43.187		
8,500.0	6,672.0	6,604.6	6,604.3	33.1	25.1	-89.45	3,483.2	-181.7	2,492.4	2,434.8	57.60	43.268		
8,600.0	6,672.0	6,603.7	6,603.4	33.9	25.1	-89.43	3,483.2	-181.7	2,524.4	2,466.3	58.14	43.417		
8,700.0	6,672.0	6,602.7	6,602.4	34.7	25.1	-89.41	3,483.2	-181.7	2,560.0	2,501.3	58.67	43.633		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Rothe 13-06 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWGS, 6100-2_Unknown													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
8,800.0	6,672.0	6,601.8	6,601.5	35.5	25.1	-89.39	3,483.2	-181.7	2,598.8	2,539.6	59.18	43.913		
8,900.0	6,672.0	6,600.8	6,600.6	36.3	25.1	-89.36	3,483.1	-181.7	2,640.9	2,581.2	59.67	44.257		
9,000.0	6,672.0	6,599.9	6,599.6	37.2	25.1	-89.34	3,483.1	-181.7	2,686.1	2,625.9	60.14	44.662		
9,100.0	6,672.0	6,598.9	6,598.7	38.1	25.0	-89.32	3,483.1	-181.6	2,734.1	2,673.5	60.59	45.125		
9,200.0	6,672.0	6,598.0	6,597.7	39.0	25.0	-89.29	3,483.1	-181.6	2,784.9	2,723.9	61.01	45.644		
9,300.0	6,672.0	6,597.0	6,596.8	39.9	25.0	-89.27	3,483.1	-181.6	2,838.3	2,776.9	61.41	46.217		
9,400.0	6,672.0	6,596.1	6,595.8	40.8	25.0	-89.25	3,483.1	-181.6	2,894.2	2,832.4	61.79	46.840		
9,500.0	6,672.0	6,595.1	6,594.9	41.8	25.0	-89.23	3,483.1	-181.6	2,952.4	2,890.3	62.14	47.511		
9,600.0	6,672.0	6,594.2	6,593.9	42.7	25.0	-89.20	3,483.1	-181.6	3,012.8	2,950.3	62.47	48.227		
9,700.0	6,672.0	6,593.2	6,593.0	43.7	25.0	-89.18	3,483.1	-181.6	3,075.2	3,012.5	62.78	48.985		
9,800.0	6,672.0	6,592.3	6,592.0	44.7	25.0	-89.16	3,483.1	-181.6	3,139.6	3,076.6	63.07	49.783		
9,900.0	6,672.0	6,591.3	6,591.1	45.7	25.0	-89.13	3,483.1	-181.6	3,205.8	3,142.5	63.33	50.619		
10,000.0	6,672.0	6,590.4	6,590.1	46.7	25.0	-89.11	3,483.1	-181.6	3,273.7	3,210.2	63.58	51.489		
10,100.0	6,672.0	6,589.4	6,589.2	47.7	25.0	-89.09	3,483.1	-181.6	3,343.3	3,279.5	63.81	52.393		
10,200.0	6,672.0	6,588.5	6,588.2	48.8	25.0	-89.07	3,483.1	-181.5	3,414.3	3,350.3	64.03	53.328		
10,300.0	6,672.0	6,587.5	6,587.3	49.8	25.0	-89.04	3,483.1	-181.5	3,486.8	3,422.5	64.22	54.291		
10,400.0	6,672.0	6,586.6	6,586.3	50.9	25.0	-89.02	3,483.1	-181.5	3,560.5	3,496.1	64.41	55.281		
10,500.0	6,672.0	6,585.7	6,585.4	51.9	24.9	-89.00	3,483.0	-181.5	3,635.6	3,571.0	64.58	56.297		
10,600.0	6,672.0	6,584.7	6,584.4	53.0	24.9	-88.97	3,483.0	-181.5	3,711.8	3,647.0	64.74	57.336		
10,700.0	6,672.0	6,583.8	6,583.5	54.1	24.9	-88.95	3,483.0	-181.5	3,789.1	3,724.2	64.88	58.397		
10,800.0	6,672.0	6,582.8	6,582.5	55.2	24.9	-88.93	3,483.0	-181.5	3,867.4	3,802.4	65.02	59.479		
10,900.0	6,672.0	6,581.9	6,581.6	56.3	24.9	-88.91	3,483.0	-181.5	3,946.7	3,881.6	65.15	60.581		
11,000.0	6,672.0	6,580.9	6,580.6	57.4	24.9	-88.88	3,483.0	-181.5	4,026.9	3,961.7	65.27	61.700		
11,100.0	6,672.0	6,580.0	6,579.7	58.5	24.9	-88.86	3,483.0	-181.5	4,108.0	4,042.7	65.38	62.837		
11,200.0	6,672.0	6,579.0	6,578.7	59.6	24.9	-88.84	3,483.0	-181.5	4,189.9	4,124.5	65.48	63.989		
11,300.0	6,672.0	6,578.1	6,577.8	60.7	24.9	-88.82	3,483.0	-181.4	4,272.6	4,207.0	65.57	65.156		
11,400.0	6,672.0	6,577.1	6,576.8	61.8	24.9	-88.79	3,483.0	-181.4	4,356.0	4,290.3	65.66	66.337		
11,500.0	6,672.0	6,576.2	6,575.9	62.9	24.9	-88.77	3,483.0	-181.4	4,440.1	4,374.3	65.75	67.532		
11,600.0	6,672.0	6,575.2	6,574.9	64.1	24.9	-88.75	3,483.0	-181.4	4,524.8	4,459.0	65.83	68.738		
11,700.0	6,672.0	6,574.3	6,574.0	65.2	24.9	-88.72	3,483.0	-181.4	4,610.1	4,544.2	65.90	69.956		
11,800.0	6,672.0	6,573.3	6,573.0	66.3	24.8	-88.70	3,483.0	-181.4	4,696.0	4,630.0	65.97	71.185		
11,900.0	6,672.0	6,572.4	6,572.1	67.5	24.8	-88.68	3,483.0	-181.4	4,782.5	4,716.4	66.03	72.423		
12,000.0	6,672.0	6,571.4	6,571.2	68.6	24.8	-88.66	3,483.0	-181.4	4,869.4	4,803.3	66.10	73.671		
12,100.0	6,672.0	6,570.5	6,570.2	69.8	24.8	-88.63	3,483.0	-181.4	4,956.9	4,890.7	66.15	74.928		
12,200.0	6,672.0	6,569.5	6,569.3	70.9	24.8	-88.61	3,482.9	-181.4	5,044.8	4,978.6	66.21	76.193		
12,300.0	6,672.0	6,568.6	6,568.3	72.1	24.8	-88.59	3,482.9	-181.4	5,133.1	5,066.9	66.26	77.466		
12,400.0	6,672.0	6,567.6	6,567.4	73.2	24.8	-88.57	3,482.9	-181.3	5,221.9	5,155.6	66.31	78.746		
12,500.0	6,672.0	6,566.7	6,566.4	74.4	24.8	-88.54	3,482.9	-181.3	5,311.1	5,244.7	66.36	80.033		
12,600.0	6,672.0	6,565.7	6,565.5	75.5	24.8	-88.52	3,482.9	-181.3	5,400.6	5,334.2	66.41	81.326		
12,700.0	6,672.0	6,564.8	6,564.5	76.7	24.8	-88.50	3,482.9	-181.3	5,490.5	5,424.1	66.45	82.625		
12,800.0	6,672.0	6,563.9	6,563.6	77.9	24.8	-88.48	3,482.9	-181.3	5,580.7	5,514.2	66.49	83.930		
12,900.0	6,672.0	6,562.9	6,562.6	79.0	24.8	-88.45	3,482.9	-181.3	5,671.3	5,604.8	66.53	85.240		
13,000.0	6,672.0	6,562.0	6,561.7	80.2	24.8	-88.43	3,482.9	-181.3	5,762.2	5,695.6	66.57	86.554		
13,100.0	6,672.0	6,561.0	6,560.7	81.4	24.8	-88.41	3,482.9	-181.3	5,853.3	5,786.7	66.61	87.873		
13,200.0	6,672.0	6,560.1	6,559.8	82.6	24.7	-88.39	3,482.9	-181.3	5,944.8	5,878.1	66.65	89.196		
13,300.0	6,672.0	6,559.1	6,558.8	83.7	24.7	-88.36	3,482.9	-181.3	6,036.5	5,969.8	66.68	90.523		
13,400.0	6,672.0	6,558.2	6,557.9	84.9	24.7	-88.34	3,482.9	-181.3	6,128.5	6,061.7	66.72	91.854		
13,500.0	6,672.0	6,557.2	6,556.9	86.1	24.7	-88.32	3,482.9	-181.2	6,220.7	6,153.9	66.75	93.188		
13,600.0	6,672.0	6,556.3	6,556.0	87.3	24.7	-88.30	3,482.9	-181.2	6,313.1	6,246.3	66.79	94.525		
13,700.0	6,672.0	6,555.3	6,555.1	88.4	24.7	-88.27	3,482.9	-181.2	6,405.8	6,339.0	66.82	95.864		
13,800.0	6,672.0	6,554.4	6,554.1	89.6	24.7	-88.25	3,482.8	-181.2	6,498.7	6,431.8	66.85	97.207		
13,900.0	6,672.0	6,553.4	6,553.2	90.8	24.7	-88.23	3,482.8	-181.2	6,591.8	6,524.9	66.89	98.551		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Rothe 13-06 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS, 6100-2_Unknown													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
14,000.0	6,672.0	6,552.5	6,552.2	92.0	24.7	-88.21	3,482.8	-181.2	6,685.1	6,618.2	66.92	99.898		
14,100.0	6,672.0	6,551.5	6,551.3	93.2	24.7	-88.19	3,482.8	-181.2	6,778.5	6,711.6	66.95	101.247		
14,200.0	6,672.0	6,550.6	6,550.3	94.4	24.7	-88.16	3,482.8	-181.2	6,872.2	6,805.2	66.98	102.598		
14,300.0	6,672.0	6,549.7	6,549.4	95.6	24.7	-88.14	3,482.8	-181.2	6,966.0	6,899.0	67.01	103.950		
14,400.0	6,672.0	6,548.7	6,548.4	96.8	24.7	-88.12	3,482.8	-181.2	7,060.0	6,993.0	67.04	105.303		
14,500.0	6,672.0	6,547.8	6,547.5	98.0	24.6	-88.10	3,482.8	-181.2	7,154.2	7,087.1	67.08	106.658		
14,600.0	6,672.0	6,546.8	6,546.5	99.2	24.6	-88.07	3,482.8	-181.1	7,248.5	7,181.4	67.11	108.014		
14,700.0	6,672.0	6,545.9	6,545.6	100.4	24.6	-88.05	3,482.8	-181.1	7,343.0	7,275.8	67.14	109.371		
14,800.0	6,672.0	6,544.9	6,544.6	101.6	24.6	-88.03	3,482.8	-181.1	7,437.6	7,370.4	67.17	110.728		
14,900.0	6,672.0	6,544.0	6,543.7	102.7	24.6	-88.01	3,482.8	-181.1	7,532.3	7,465.1	67.20	112.087		
15,000.0	6,672.0	6,543.0	6,542.8	103.9	24.6	-87.99	3,482.8	-181.1	7,627.2	7,560.0	67.23	113.446		
15,100.0	6,672.0	6,542.1	6,541.8	105.1	24.6	-87.96	3,482.8	-181.1	7,722.2	7,654.9	67.26	114.805		
15,200.0	6,672.0	6,541.1	6,540.9	106.3	24.6	-87.94	3,482.8	-181.1	7,817.3	7,750.0	67.30	116.164		
15,300.0	6,672.0	6,540.2	6,539.9	107.6	24.6	-87.92	3,482.8	-181.1	7,912.5	7,845.2	67.33	117.524		
15,400.0	6,672.0	6,539.2	6,539.0	108.8	24.6	-87.90	3,482.8	-181.1	8,007.9	7,940.5	67.36	118.883		
15,500.0	6,672.0	6,538.3	6,538.0	110.0	24.6	-87.87	3,482.7	-181.1	8,103.4	8,036.0	67.39	120.243		
15,600.0	6,672.0	6,537.4	6,537.1	111.2	24.6	-87.85	3,482.7	-181.1	8,198.9	8,131.5	67.42	121.602		
15,700.0	6,672.0	6,536.4	6,536.1	112.4	24.6	-87.83	3,482.7	-181.0	8,294.6	8,227.1	67.46	122.962		
15,800.0	6,672.0	6,535.5	6,535.2	113.6	24.6	-87.81	3,482.7	-181.0	8,390.4	8,322.9	67.49	124.320		
15,900.0	6,672.0	6,534.5	6,534.2	114.8	24.5	-87.79	3,482.7	-181.0	8,486.2	8,418.7	67.52	125.679		
16,000.0	6,672.0	6,533.6	6,533.3	116.0	24.5	-87.76	3,482.7	-181.0	8,582.2	8,514.6	67.56	127.036		
16,100.0	6,672.0	6,532.6	6,532.3	117.2	24.5	-87.74	3,482.7	-181.0	8,678.2	8,610.6	67.59	128.393		
16,200.0	6,672.0	6,531.7	6,531.4	118.4	24.5	-87.72	3,482.7	-181.0	8,774.4	8,706.7	67.63	129.749		
16,300.0	6,672.0	6,530.7	6,530.5	119.6	24.5	-87.70	3,482.7	-181.0	8,870.6	8,802.9	67.66	131.105		
16,400.0	6,672.0	6,529.8	6,529.5	120.8	24.5	-87.68	3,482.7	-181.0	8,966.9	8,899.2	67.70	132.460		
16,500.0	6,672.0	6,528.8	6,528.6	122.0	24.5	-87.66	3,482.7	-181.0	9,063.3	8,995.5	67.73	133.813		
16,600.0	6,672.0	6,527.9	6,527.6	123.2	24.5	-87.63	3,482.7	-181.0	9,159.7	9,091.9	67.77	135.166		
16,700.0	6,672.0	6,527.0	6,526.7	124.5	24.5	-87.61	3,482.7	-181.0	9,256.2	9,188.4	67.80	136.517		
16,800.0	6,672.0	6,526.0	6,525.7	125.7	24.5	-87.59	3,482.7	-180.9	9,352.8	9,285.0	67.84	137.867		
16,900.0	6,672.0	6,525.1	6,524.8	126.9	24.5	-87.57	3,482.7	-180.9	9,449.5	9,381.6	67.88	139.216		
17,000.0	6,672.0	6,524.1	6,523.8	128.1	24.5	-87.55	3,482.7	-180.9	9,546.2	9,478.3	67.91	140.564		
17,100.0	6,672.0	6,523.2	6,522.9	129.3	24.5	-87.52	3,482.7	-180.9	9,643.0	9,575.1	67.95	141.910		
17,200.0	6,672.0	6,522.2	6,522.0	130.5	24.4	-87.50	3,482.6	-180.9	9,739.9	9,671.9	67.99	143.255		
17,300.0	6,672.0	6,521.3	6,521.0	131.7	24.4	-87.48	3,482.6	-180.9	9,836.8	9,768.8	68.03	144.598		
17,400.0	6,672.0	6,520.3	6,520.1	133.0	24.4	-87.46	3,482.6	-180.9	9,933.8	9,865.7	68.07	145.939		



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Rothe 14-06 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
0.0	0.0	0.0	0.0	0.0	0.0	-3.29	2,177.2	-125.1	2,181.1					
100.0	100.0	61.4	61.4	0.1	0.1	-3.29	2,177.2	-125.2	2,180.8	2,180.6	0.23	9,356.362		
200.0	200.0	159.0	159.0	0.5	0.4	-3.30	2,177.3	-125.5	2,180.9	2,180.0	0.87	2,521.003		
300.0	300.0	256.3	256.3	0.8	0.7	-3.30	2,177.5	-125.6	2,181.1	2,179.5	1.56	1,394.807		
400.0	400.0	357.6	357.6	1.2	1.1	-3.31	2,177.7	-125.9	2,181.4	2,179.1	2.28	958.178		
500.0	500.0	460.6	460.6	1.6	1.4	-3.32	2,177.8	-126.2	2,181.5	2,178.5	2.99	728.412		
600.0	600.0	563.8	563.8	1.9	1.8	-3.31	2,177.8	-125.9	2,181.5	2,177.8	3.71	587.451		
675.8	675.8	637.8	637.8	2.2	2.1	-3.29	2,177.8	-125.3	2,181.4	2,177.2	4.24	514.093		
700.0	700.0	660.1	660.1	2.3	2.1	-3.29	2,177.8	-125.2	2,181.4	2,177.0	4.41	494.839		
800.0	800.0	762.4	762.4	2.6	2.5	-3.28	2,178.0	-124.6	2,181.6	2,176.4	5.12	425.767		
879.5	879.5	841.5	841.5	2.9	2.8	-3.26	2,177.9	-124.2	2,181.5	2,175.8	5.69	383.726		
900.0	900.0	860.3	860.3	3.0	2.8	-3.26	2,178.0	-124.1	2,181.5	2,175.7	5.82	374.552		
1,000.0	1,000.0	965.0	965.0	3.4	3.2	-3.26	2,178.1	-124.0	2,181.6	2,175.0	6.55	333.159		
1,100.0	1,100.0	1,063.5	1,063.5	3.7	3.5	-3.27	2,177.8	-124.5	2,181.4	2,174.1	7.25	300.865		
1,118.0	1,118.0	1,080.0	1,080.0	3.8	3.6	-3.27	2,177.8	-124.5	2,181.4	2,174.0	7.37	295.880		
1,200.0	1,200.0	1,159.5	1,159.4	4.1	3.9	-3.28	2,177.9	-124.8	2,181.4	2,173.5	7.94	274.616		
1,300.0	1,300.0	1,256.5	1,256.5	4.4	4.2	-3.29	2,178.0	-125.1	2,181.6	2,173.0	8.64	252.469		
1,400.0	1,400.0	1,353.1	1,353.1	4.8	4.6	-3.31	2,178.3	-125.9	2,181.9	2,172.6	9.34	233.686		
1,500.0	1,500.0	1,451.3	1,451.2	5.1	4.9	-3.32	2,178.7	-126.5	2,182.4	2,172.4	10.04	217.399		
1,600.0	1,600.0	1,557.8	1,557.8	5.5	5.3	-3.34	2,179.1	-127.3	2,182.8	2,172.1	10.77	202.684		
1,700.0	1,700.0	1,664.6	1,664.6	5.9	5.6	-3.37	2,179.0	-128.2	2,182.8	2,171.3	11.50	189.795		
1,800.0	1,800.0	1,764.0	1,764.0	6.2	6.0	-3.39	2,178.9	-129.0	2,182.7	2,170.5	12.21	178.814		
1,900.0	1,900.0	1,863.3	1,863.2	6.6	6.3	-3.41	2,178.8	-129.9	2,182.6	2,169.7	12.91	169.046		
2,000.0	2,000.0	1,962.6	1,962.5	6.9	6.7	-3.43	2,178.7	-130.5	2,182.6	2,169.0	13.62	160.290		
2,044.6	2,044.6	2,006.6	2,006.6	7.1	6.8	-3.43	2,178.6	-130.8	2,182.6	2,168.6	13.93	156.684		
2,100.0	2,100.0	2,060.3	2,060.2	7.3	7.0	-3.44	2,178.7	-131.1	2,182.6	2,168.3	14.32	152.459		
2,200.0	2,200.0	2,157.7	2,157.7	7.7	7.4	-3.46	2,178.8	-131.7	2,182.7	2,167.7	15.01	145.374		
2,300.0	2,300.0	2,259.4	2,259.4	8.0	7.7	47.57	2,178.9	-132.4	2,181.8	2,166.0	15.73	138.742		
2,400.0	2,399.8	2,357.0	2,357.0	8.4	8.1	47.70	2,179.0	-133.0	2,178.3	2,161.9	16.42	132.667		
2,500.0	2,499.5	2,452.6	2,452.6	8.7	8.4	47.93	2,179.3	-133.8	2,172.8	2,155.7	17.11	127.007		
2,600.0	2,598.7	2,552.0	2,551.9	9.1	8.7	48.27	2,179.7	-134.3	2,165.1	2,147.3	17.81	121.563		
2,700.0	2,697.5	2,649.4	2,649.4	9.4	9.1	48.71	2,180.0	-134.8	2,155.0	2,136.5	18.51	116.446		
2,800.0	2,795.6	2,746.7	2,746.7	9.8	9.4	49.26	2,180.5	-135.3	2,142.9	2,123.7	19.20	111.588		
2,900.0	2,893.1	2,845.4	2,845.3	10.1	9.8	49.94	2,181.0	-135.5	2,128.6	2,108.7	19.91	106.926		
3,000.0	2,989.6	2,941.6	2,941.6	10.5	10.1	50.72	2,181.4	-135.4	2,112.2	2,091.6	20.60	102.516		
3,100.0	3,085.3	3,046.3	3,046.2	10.9	10.5	51.68	2,181.8	-135.1	2,093.8	2,072.4	21.33	98.157		
3,200.0	3,179.8	3,164.1	3,164.1	11.2	10.9	52.94	2,181.3	-133.1	2,072.7	2,050.6	22.10	93.769		
3,300.0	3,273.2	3,268.9	3,268.7	11.6	11.2	54.28	2,179.7	-129.8	2,049.0	2,026.2	22.84	89.726		
3,387.5	3,353.8	3,361.6	3,361.4	11.9	11.6	55.60	2,177.9	-126.8	2,026.7	2,003.2	23.48	86.305		
3,400.0	3,365.2	3,375.3	3,375.1	12.0	11.6	55.75	2,177.6	-126.4	2,023.4	1,999.8	23.58	85.819		
3,500.0	3,456.8	3,469.8	3,469.5	12.4	11.9	56.76	2,175.1	-123.5	1,997.0	1,972.8	24.28	82.238		
3,600.0	3,548.3	3,555.5	3,555.1	12.8	12.3	57.70	2,172.8	-121.0	1,971.4	1,946.4	24.97	78.946		
3,700.0	3,639.8	3,644.1	3,643.7	13.2	12.6	58.70	2,170.7	-118.3	1,946.5	1,920.9	25.67	75.818		
3,800.0	3,731.4	3,734.4	3,733.9	13.6	12.9	59.74	2,168.5	-115.6	1,922.3	1,895.9	26.39	72.848		
3,900.0	3,822.9	3,818.5	3,817.9	14.0	13.2	60.72	2,166.6	-113.3	1,899.0	1,871.9	27.09	70.099		
4,000.0	3,914.4	3,901.8	3,901.2	14.4	13.5	61.70	2,165.0	-111.3	1,876.6	1,848.8	27.79	67.517		
4,100.0	4,005.9	3,993.9	3,993.3	14.8	13.8	62.79	2,163.5	-109.5	1,855.1	1,826.6	28.53	65.025		
4,200.0	4,097.5	4,081.5	4,080.9	15.2	14.1	63.83	2,162.2	-108.4	1,834.4	1,805.2	29.26	62.703		
4,300.0	4,189.0	4,171.2	4,170.6	15.6	14.4	64.89	2,161.1	-108.0	1,814.5	1,784.5	29.99	60.501		
4,400.0	4,280.5	4,261.3	4,260.6	16.1	14.7	65.96	2,160.1	-108.0	1,795.4	1,764.7	30.73	58.420		
4,500.0	4,372.1	4,348.6	4,348.0	16.5	15.0	67.01	2,159.3	-108.2	1,777.2	1,745.7	31.47	56.472		
4,600.0	4,463.6	4,434.4	4,433.7	16.9	15.3	68.06	2,158.8	-108.3	1,759.9	1,727.7	32.21	54.646		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Rothe 14-06 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
4,700.0	4,555.1	4,521.4	4,520.8	17.4	15.6	69.14	2,158.6	-108.5	1,743.7	1,710.8	32.95	52.923		
4,800.0	4,646.7	4,609.7	4,609.1	17.8	15.9	70.25	2,158.5	-108.7	1,728.5	1,694.8	33.70	51.295		
4,900.0	4,738.2	4,694.7	4,694.1	18.2	16.2	71.33	2,158.7	-108.8	1,714.4	1,679.9	34.44	49.781		
5,000.0	4,829.7	4,781.5	4,780.9	18.7	16.5	72.45	2,159.1	-108.7	1,701.3	1,666.2	35.19	48.352		
5,100.0	4,921.3	4,869.4	4,868.7	19.1	16.8	73.61	2,159.7	-108.2	1,689.4	1,653.5	35.94	47.008		
5,200.0	5,012.8	4,963.2	4,962.5	19.5	17.2	74.87	2,160.3	-107.6	1,678.5	1,641.8	36.71	45.721		
5,300.0	5,104.3	5,057.2	5,056.5	20.0	17.5	76.13	2,160.8	-107.4	1,668.2	1,630.7	37.48	44.503		
5,400.0	5,195.8	5,151.2	5,150.6	20.4	17.8	77.42	2,161.1	-106.9	1,658.8	1,620.5	38.26	43.355		
5,500.0	5,287.4	5,245.2	5,244.5	20.9	18.2	78.73	2,161.1	-106.1	1,650.1	1,611.0	39.03	42.272		
5,600.0	5,378.9	5,336.3	5,335.6	21.3	18.5	80.01	2,161.1	-105.4	1,642.3	1,602.5	39.80	41.263		
5,700.0	5,470.4	5,426.9	5,426.3	21.8	18.8	81.29	2,161.1	-104.8	1,635.6	1,595.0	40.57	40.319		
5,800.0	5,562.0	5,520.4	5,519.7	22.2	19.1	82.62	2,160.9	-103.9	1,629.8	1,588.4	41.34	39.424		
5,900.0	5,653.5	5,614.7	5,614.0	22.7	19.4	83.98	2,160.6	-103.1	1,624.9	1,582.7	42.12	38.581		
6,000.0	5,745.0	5,717.8	5,717.1	23.1	19.8	85.48	2,159.8	-102.3	1,620.5	1,577.6	42.92	37.760		
6,100.0	5,836.6	5,806.1	5,805.4	23.6	20.1	86.77	2,158.8	-101.6	1,617.1	1,573.4	43.67	37.027		
6,200.0	5,928.1	5,897.6	5,896.8	24.0	20.4	88.12	2,157.7	-100.6	1,614.6	1,570.2	44.44	36.336		
6,278.6	6,000.0	5,963.8	5,963.1	24.4	20.7	89.10	2,156.9	-99.9	1,613.6	1,568.6	45.02	35.845		
6,290.0	6,010.4	5,973.3	5,972.6	24.4	20.7	87.72	2,156.8	-99.8	1,613.4	1,568.3	45.10	35.775		
6,300.0	6,019.5	5,981.7	5,981.0	24.5	20.7	86.12	2,156.7	-99.7	1,613.2	1,568.0	45.17	35.711		
6,350.0	6,065.8	6,024.2	6,023.5	24.7	20.9	76.11	2,156.2	-99.0	1,610.3	1,564.8	45.54	35.363		
6,400.0	6,113.0	6,067.6	6,066.9	24.9	21.0	62.28	2,155.7	-98.1	1,604.5	1,558.6	45.89	34.966		
6,450.0	6,160.7	6,111.8	6,111.0	25.1	21.2	45.14	2,155.1	-97.0	1,595.7	1,549.5	46.23	34.521		
6,500.0	6,208.5	6,157.0	6,156.2	25.3	21.3	27.14	2,154.5	-95.7	1,584.0	1,537.5	46.55	34.027		
6,550.0	6,255.8	6,202.0	6,201.2	25.4	21.5	11.16	2,153.9	-94.3	1,569.4	1,522.5	46.87	33.487		
6,600.0	6,302.5	6,245.8	6,245.0	25.6	21.6	-1.70	2,153.4	-92.9	1,551.9	1,504.8	47.16	32.907		
6,650.0	6,347.9	6,288.7	6,287.8	25.7	21.8	-11.92	2,152.8	-91.3	1,531.8	1,484.3	47.44	32.286		
6,700.0	6,391.6	6,331.1	6,330.2	25.9	21.9	-20.36	2,152.3	-89.7	1,509.1	1,461.4	47.72	31.627		
6,750.0	6,433.4	6,372.0	6,371.1	26.0	22.1	-27.76	2,151.8	-88.2	1,484.1	1,436.1	47.97	30.935		
6,800.0	6,472.8	6,411.0	6,410.0	26.1	22.2	-34.63	2,151.6	-86.9	1,457.1	1,408.8	48.22	30.216		
6,850.0	6,509.4	6,448.1	6,447.1	26.2	22.4	-41.29	2,151.3	-85.5	1,428.3	1,379.9	48.46	29.477		
6,900.0	6,543.0	6,482.4	6,481.4	26.3	22.5	-47.89	2,151.0	-84.3	1,398.3	1,349.6	48.68	28.725		
6,950.0	6,573.2	6,512.3	6,511.2	26.4	22.6	-54.45	2,150.8	-83.1	1,367.3	1,318.4	48.88	27.971		
7,000.0	6,599.8	6,537.5	6,536.4	26.5	22.7	-60.86	2,150.6	-82.1	1,335.9	1,286.8	49.07	27.223		
7,050.0	6,622.5	6,559.5	6,558.4	26.6	22.7	-67.07	2,150.4	-81.1	1,304.5	1,255.3	49.25	26.488		
7,100.0	6,641.1	6,578.1	6,577.1	26.7	22.8	-72.90	2,150.3	-80.3	1,273.7	1,224.3	49.42	25.774		
7,150.0	6,655.4	6,593.2	6,592.1	26.8	22.9	-78.18	2,150.2	-79.6	1,244.0	1,194.4	49.58	25.093		
7,200.0	6,665.4	6,604.9	6,603.8	26.9	22.9	-82.82	2,150.1	-79.0	1,215.8	1,166.1	49.72	24.452		
7,250.0	6,670.8	6,613.0	6,611.8	27.0	22.9	-86.69	2,150.1	-78.6	1,189.7	1,139.9	49.86	23.863		
7,285.7	6,672.0	6,615.9	6,614.8	27.1	22.9	-88.94	2,150.1	-78.4	1,172.6	1,122.7	49.94	23.480		
7,300.0	6,672.0	6,616.6	6,615.5	27.1	22.9	-88.98	2,150.0	-78.4	1,166.1	1,116.1	49.97	23.334		
7,400.0	6,672.0	6,621.7	6,620.5	27.3	23.0	-89.26	2,150.0	-78.2	1,124.6	1,074.3	50.24	22.384		
7,500.0	6,672.0	6,626.7	6,625.5	27.6	23.0	-89.53	2,150.0	-77.9	1,090.7	1,040.1	50.57	21.569		
7,600.0	6,672.0	6,631.7	6,630.6	28.0	23.0	-89.81	2,150.0	-77.7	1,065.1	1,014.1	50.94	20.908		
7,700.0	6,672.0	6,636.8	6,635.6	28.3	23.0	-90.09	2,149.9	-77.4	1,048.4	997.0	51.35	20.417		
7,800.0	6,672.0	6,641.8	6,640.6	28.8	23.0	-90.37	2,149.9	-77.2	1,041.0	989.3	51.77	20.107		
7,826.9	6,672.0	6,643.2	6,642.0	28.9	23.0	-90.44	2,149.9	-77.1	1,040.7	988.8	51.89	20.055 CC, ES		
7,900.0	6,672.0	6,646.9	6,645.7	29.3	23.1	-90.64	2,149.9	-76.9	1,043.3	991.1	52.19	19.989 SF		
8,000.0	6,672.0	6,651.9	6,650.7	29.8	23.1	-90.92	2,149.8	-76.7	1,055.0	1,002.4	52.58	20.063		
8,100.0	6,672.0	6,657.0	6,655.8	30.4	23.1	-91.20	2,149.8	-76.4	1,075.8	1,022.9	52.93	20.327		
8,200.0	6,672.0	6,662.1	6,660.9	31.0	23.1	-91.48	2,149.7	-76.2	1,105.4	1,052.1	53.22	20.771		
8,300.0	6,672.0	6,667.2	6,666.0	31.7	23.1	-91.76	2,149.7	-75.9	1,142.9	1,089.4	53.45	21.383		
8,400.0	6,672.0	6,672.3	6,671.1	32.4	23.1	-92.04	2,149.7	-75.7	1,187.6	1,134.0	53.62	22.149		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Rothe 14-06 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
8,500.0	6,672.0	6,677.4	6,676.2	33.1	23.2	-92.32	2,149.6	-75.4	1,238.8	1,185.1	53.74	23.050		
8,600.0	6,672.0	6,682.5	6,681.3	33.9	23.2	-92.60	2,149.6	-75.2	1,295.7	1,241.9	53.82	24.073		
8,700.0	6,672.0	6,687.6	6,686.4	34.7	23.2	-92.88	2,149.6	-74.9	1,357.5	1,303.7	53.87	25.200		
8,800.0	6,672.0	6,692.8	6,691.5	35.5	23.2	-93.17	2,149.5	-74.6	1,423.7	1,369.8	53.89	26.419		
8,900.0	6,672.0	6,697.9	6,696.7	36.3	23.2	-93.45	2,149.5	-74.4	1,493.6	1,439.7	53.89	27.717		
9,000.0	6,672.0	6,703.1	6,701.8	37.2	23.2	-93.73	2,149.4	-74.1	1,566.8	1,512.9	53.87	29.083		
9,100.0	6,672.0	6,708.2	6,707.0	38.1	23.3	-94.01	2,149.4	-73.9	1,642.7	1,588.9	53.85	30.508		
9,200.0	6,672.0	6,712.9	6,711.7	39.0	23.3	-94.27	2,149.3	-73.6	1,721.1	1,667.3	53.81	31.983		
9,300.0	6,672.0	6,717.9	6,716.6	39.9	23.3	-94.54	2,149.3	-73.4	1,801.7	1,747.9	53.78	33.502		
9,400.0	6,672.0	6,722.9	6,721.6	40.8	23.3	-94.81	2,149.3	-73.1	1,884.0	1,830.3	53.74	35.058		
9,500.0	6,672.0	6,727.9	6,726.6	41.8	23.3	-95.08	2,149.2	-72.9	1,968.0	1,914.3	53.70	36.647		
9,600.0	6,672.0	6,732.8	6,731.6	42.7	23.4	-95.35	2,149.2	-72.6	2,053.5	1,999.8	53.66	38.264		
9,700.0	6,672.0	6,737.8	6,736.5	43.7	23.4	-95.62	2,149.1	-72.4	2,140.1	2,086.5	53.63	39.906		
9,800.0	6,672.0	6,742.8	6,741.5	44.7	23.4	-95.89	2,149.1	-72.1	2,227.9	2,174.3	53.59	41.569		
9,900.0	6,672.0	6,747.8	6,746.5	45.7	23.4	-96.16	2,149.1	-71.9	2,316.6	2,263.1	53.56	43.251		
10,000.0	6,672.0	6,752.7	6,751.4	46.7	23.4	-96.43	2,149.0	-71.6	2,406.2	2,352.7	53.53	44.948		
10,100.0	6,672.0	6,757.7	6,756.4	47.7	23.4	-96.70	2,149.0	-71.4	2,496.6	2,443.1	53.51	46.660		
10,200.0	6,672.0	6,762.7	6,761.4	48.8	23.5	-96.97	2,148.9	-71.2	2,587.7	2,534.2	53.48	48.384		
10,300.0	6,672.0	6,767.7	6,766.3	49.8	23.5	-97.24	2,148.9	-70.9	2,679.4	2,626.0	53.46	50.118		
10,400.0	6,672.0	6,772.6	6,771.3	50.9	23.5	-97.51	2,148.9	-70.7	2,771.7	2,718.2	53.44	51.862		
10,500.0	6,672.0	6,777.6	6,776.3	51.9	23.5	-97.77	2,148.8	-70.4	2,864.5	2,811.0	53.43	53.613		
10,600.0	6,672.0	6,782.6	6,781.3	53.0	23.5	-98.04	2,148.8	-70.2	2,957.7	2,904.3	53.42	55.371		
10,700.0	6,672.0	6,787.6	6,786.2	54.1	23.5	-98.31	2,148.7	-69.9	3,051.4	2,997.9	53.41	57.135		
10,800.0	6,672.0	6,792.6	6,791.2	55.2	23.6	-98.57	2,148.7	-69.7	3,145.4	3,092.0	53.40	58.904		
10,900.0	6,672.0	6,797.5	6,796.2	56.3	23.6	-98.84	2,148.7	-69.4	3,239.8	3,186.4	53.39	60.677		
11,000.0	6,672.0	6,802.5	6,801.1	57.4	23.6	-99.10	2,148.6	-69.2	3,334.5	3,281.1	53.39	62.453		
11,100.0	6,672.0	6,807.5	6,806.1	58.5	23.6	-99.37	2,148.6	-68.9	3,429.5	3,376.1	53.39	64.232		
11,200.0	6,672.0	6,812.5	6,811.1	59.6	23.6	-99.63	2,148.5	-68.7	3,524.7	3,471.3	53.39	66.014		
11,300.0	6,672.0	6,817.4	6,816.0	60.7	23.7	-99.89	2,148.5	-68.4	3,620.2	3,566.8	53.40	67.797		
11,400.0	6,672.0	6,822.4	6,821.0	61.8	23.7	-100.16	2,148.5	-68.2	3,716.0	3,662.6	53.40	69.581		
11,500.0	6,672.0	6,827.4	6,826.0	62.9	23.7	-100.42	2,148.4	-67.9	3,811.9	3,758.5	53.41	71.366		
11,600.0	6,672.0	6,832.4	6,830.9	64.1	23.7	-100.68	2,148.4	-67.7	3,908.0	3,854.6	53.42	73.151		
11,700.0	6,672.0	6,837.3	6,835.9	65.2	23.7	-100.94	2,148.3	-67.4	4,004.4	3,950.9	53.44	74.937		
11,800.0	6,672.0	6,842.3	6,840.9	66.3	23.7	-101.20	2,148.3	-67.2	4,100.8	4,047.4	53.45	76.722		
11,900.0	6,672.0	6,847.3	6,845.9	67.5	23.8	-101.46	2,148.2	-66.9	4,197.5	4,144.0	53.47	78.506		
12,000.0	6,672.0	6,852.3	6,850.8	68.6	23.8	-101.72	2,148.2	-66.7	4,294.3	4,240.8	53.49	80.289		
12,100.0	6,672.0	6,857.2	6,855.8	69.8	23.8	-101.98	2,148.2	-66.4	4,391.2	4,337.7	53.50	82.071		
12,200.0	6,672.0	6,862.2	6,860.8	70.9	23.8	-102.23	2,148.1	-66.2	4,488.3	4,434.7	53.53	83.852		
12,300.0	6,672.0	6,867.2	6,865.7	72.1	23.8	-102.49	2,148.1	-65.9	4,585.4	4,531.9	53.55	85.630		
12,400.0	6,672.0	6,872.2	6,870.7	73.2	23.8	-102.75	2,148.0	-65.7	4,682.7	4,629.2	53.57	87.407		
12,500.0	6,672.0	6,877.1	6,875.7	74.4	23.9	-103.00	2,148.0	-65.4	4,780.1	4,726.5	53.60	89.181		
12,600.0	6,672.0	6,885.0	6,883.5	75.5	23.8	-102.36	2,148.1	-66.0	4,877.6	4,824.0	53.62	90.962		
12,700.0	6,672.0	6,885.0	6,883.5	76.7	23.8	-102.36	2,148.1	-66.0	4,975.2	4,921.6	53.65	92.737		
12,800.0	6,672.0	6,885.0	6,883.5	77.9	23.8	-102.36	2,148.1	-66.0	5,072.9	5,019.3	53.68	94.509		
12,900.0	6,672.0	6,885.0	6,883.5	79.0	23.8	-102.35	2,148.1	-66.0	5,170.7	5,117.0	53.71	96.279		
13,000.0	6,672.0	6,885.0	6,883.5	80.2	23.8	-102.35	2,148.1	-66.0	5,268.6	5,214.8	53.74	98.047		
13,100.0	6,672.0	6,885.0	6,883.5	81.4	23.8	-102.34	2,148.1	-66.0	5,366.5	5,312.8	53.77	99.813		
13,200.0	6,672.0	6,885.0	6,883.5	82.6	23.8	-102.34	2,148.1	-66.0	5,464.5	5,410.7	53.80	101.576		
13,300.0	6,672.0	6,885.0	6,883.5	83.7	23.8	-102.33	2,148.1	-66.0	5,562.6	5,508.8	53.83	103.337		
13,400.0	6,672.0	6,885.0	6,883.5	84.9	23.8	-102.33	2,148.1	-66.0	5,660.8	5,606.9	53.86	105.095		
13,500.0	6,672.0	6,885.0	6,883.5	86.1	23.8	-102.32	2,148.1	-66.0	5,759.0	5,705.1	53.90	106.850		
13,600.0	6,672.0	6,885.0	6,883.5	87.3	23.8	-102.32	2,148.1	-66.0	5,857.2	5,803.3	53.93	108.602		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Rothe 14-06 - Original Drilling - Original Drilling - As Drilled												Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
13,700.0	6,672.0	6,865.0	6,863.5	88.4	23.8	-102.31	2,148.1	-66.0	5,955.6	5,901.6	53.97	110.351	
13,800.0	6,672.0	6,865.0	6,863.5	89.6	23.8	-102.31	2,148.1	-66.0	6,053.9	5,999.9	54.01	112.097	
13,900.0	6,672.0	6,865.0	6,863.5	90.8	23.8	-102.30	2,148.1	-66.0	6,152.4	6,098.3	54.04	113.839	
14,000.0	6,672.0	6,865.0	6,863.5	92.0	23.8	-102.30	2,148.1	-66.0	6,250.9	6,196.8	54.08	115.578	
14,100.0	6,672.0	6,865.0	6,863.5	93.2	23.8	-102.29	2,148.1	-66.0	6,349.4	6,295.3	54.12	117.313	
14,200.0	6,672.0	6,865.0	6,863.5	94.4	23.8	-102.29	2,148.1	-66.0	6,448.0	6,393.8	54.16	119.045	
14,300.0	6,672.0	6,865.0	6,863.5	95.6	23.8	-102.28	2,148.1	-66.0	6,546.6	6,492.4	54.21	120.773	
14,400.0	6,672.0	6,865.0	6,863.5	96.8	23.8	-102.28	2,148.1	-66.0	6,645.2	6,591.0	54.25	122.497	
14,500.0	6,672.0	6,865.0	6,863.5	98.0	23.8	-102.27	2,148.1	-66.0	6,743.9	6,689.6	54.29	124.217	
14,600.0	6,672.0	6,865.0	6,863.5	99.2	23.8	-102.27	2,148.1	-66.0	6,842.6	6,788.3	54.34	125.933	
14,700.0	6,672.0	6,865.0	6,863.5	100.4	23.8	-102.26	2,148.1	-66.0	6,941.4	6,887.0	54.38	127.645	
14,800.0	6,672.0	6,865.0	6,863.5	101.6	23.8	-102.25	2,148.1	-66.0	7,040.2	6,985.8	54.43	129.353	
14,900.0	6,672.0	6,865.0	6,863.5	102.7	23.8	-102.25	2,148.1	-66.0	7,139.0	7,084.6	54.47	131.057	
15,000.0	6,672.0	6,865.0	6,863.5	103.9	23.8	-102.24	2,148.1	-66.0	7,237.9	7,183.4	54.52	132.757	
15,100.0	6,672.0	6,865.0	6,863.5	105.1	23.8	-102.24	2,148.1	-66.0	7,336.8	7,282.2	54.57	134.452	
15,200.0	6,672.0	6,865.0	6,863.5	106.3	23.8	-102.23	2,148.1	-66.0	7,435.7	7,381.1	54.62	136.142	
15,300.0	6,672.0	6,865.0	6,863.5	107.6	23.8	-102.22	2,148.1	-66.0	7,534.6	7,480.0	54.67	137.829	
15,400.0	6,672.0	6,865.0	6,863.5	108.8	23.8	-102.22	2,148.1	-66.0	7,633.6	7,578.9	54.72	139.510	
15,500.0	6,672.0	6,865.0	6,863.5	110.0	23.8	-102.21	2,148.1	-66.0	7,732.6	7,677.8	54.77	141.188	
15,600.0	6,672.0	6,865.0	6,863.5	111.2	23.8	-102.20	2,148.1	-66.0	7,831.6	7,776.8	54.82	142.860	
15,700.0	6,672.0	6,865.0	6,863.5	112.4	23.8	-102.20	2,148.1	-66.0	7,930.7	7,875.8	54.87	144.528	
15,800.0	6,672.0	6,865.0	6,863.5	113.6	23.8	-102.19	2,148.1	-66.0	8,029.7	7,974.8	54.93	146.191	
15,900.0	6,672.0	6,865.0	6,863.5	114.8	23.8	-102.18	2,148.1	-66.0	8,128.8	8,073.9	54.98	147.849	
16,000.0	6,672.0	6,865.0	6,863.5	116.0	23.8	-102.18	2,148.1	-66.0	8,227.9	8,172.9	55.04	149.502	
16,100.0	6,672.0	6,865.0	6,863.5	117.2	23.8	-102.17	2,148.1	-66.0	8,327.1	8,272.0	55.09	151.151	
16,200.0	6,672.0	6,865.0	6,863.5	118.4	23.8	-102.16	2,148.1	-66.0	8,426.2	8,371.1	55.15	152.794	
16,300.0	6,672.0	6,865.0	6,863.5	119.6	23.8	-102.16	2,148.1	-66.0	8,525.4	8,470.2	55.20	154.433	
16,400.0	6,672.0	6,865.0	6,863.5	120.8	23.8	-102.15	2,148.1	-66.0	8,624.6	8,569.3	55.26	156.066	
16,500.0	6,672.0	6,865.0	6,863.5	122.0	23.8	-102.14	2,148.1	-66.0	8,723.8	8,668.5	55.32	157.695	
16,600.0	6,672.0	6,865.0	6,863.5	123.2	23.8	-102.14	2,148.1	-66.0	8,823.0	8,767.6	55.38	159.318	
16,700.0	6,672.0	6,865.0	6,863.5	124.5	23.8	-102.13	2,148.1	-66.0	8,922.3	8,866.8	55.44	160.936	
16,800.0	6,672.0	6,865.0	6,863.5	125.7	23.8	-102.12	2,148.1	-66.0	9,021.5	8,966.0	55.50	162.549	
16,900.0	6,672.0	6,865.0	6,863.5	126.9	23.8	-102.11	2,148.1	-66.0	9,120.8	9,065.2	55.56	164.157	
17,000.0	6,672.0	6,865.0	6,863.5	128.1	23.8	-102.11	2,148.1	-66.0	9,220.1	9,164.4	55.62	165.759	
17,100.0	6,672.0	6,865.0	6,863.5	129.3	23.8	-102.10	2,148.1	-66.0	9,319.4	9,263.7	55.69	167.356	
17,200.0	6,672.0	6,865.0	6,863.5	130.5	23.8	-102.09	2,148.1	-66.0	9,418.7	9,362.9	55.75	168.948	
17,300.0	6,672.0	6,865.0	6,863.5	131.7	23.8	-102.08	2,148.1	-66.0	9,518.0	9,462.2	55.81	170.535	
17,400.0	6,672.0	6,865.0	6,863.5	133.0	23.8	-102.08	2,148.1	-66.0	9,617.3	9,561.5	55.88	172.116	
17,500.0	6,672.0	6,865.0	6,863.5	134.2	23.8	-102.07	2,148.1	-66.0	9,716.7	9,660.8	55.94	173.692	
17,600.0	6,672.0	6,865.0	6,863.5	135.4	23.8	-102.06	2,148.1	-66.0	9,816.1	9,760.1	56.01	175.262	
17,700.0	6,672.0	6,865.0	6,863.5	136.6	23.8	-102.05	2,148.1	-66.0	9,915.4	9,859.4	56.07	176.827	



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Rothe 22-06 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
0.0	0.0	0.0	0.0	0.0	0.0	13.32	4,610.3	1,091.5	4,737.8					
100.0	100.0	74.1	74.1	0.1	0.1	13.32	4,610.3	1,091.6	4,737.8	4,737.5	0.26	N/A		
200.0	200.0	181.9	181.9	0.5	0.5	13.32	4,610.3	1,092.0	4,737.9	4,736.9	0.95	5,013.336		
263.6	263.6	243.6	243.6	0.7	0.7	13.33	4,610.2	1,092.2	4,737.8	4,736.4	1.39	3,412.260		
300.0	300.0	276.9	276.9	0.8	0.8	13.33	4,610.2	1,092.3	4,737.8	4,736.2	1.64	2,897.112		
400.0	400.0	404.0	404.0	1.2	1.2	13.33	4,610.0	1,092.5	4,737.7	4,735.3	2.44	1,943.726		
500.0	500.0	503.3	503.3	1.6	1.6	13.34	4,609.4	1,092.6	4,737.2	4,734.1	3.14	1,507.510		
600.0	600.0	604.7	604.7	1.9	1.9	13.34	4,608.9	1,092.6	4,736.7	4,732.9	3.86	1,228.540		
700.0	700.0	705.8	705.8	2.3	2.3	13.34	4,608.3	1,092.8	4,736.2	4,731.6	4.57	1,036.866		
800.0	800.0	796.5	796.5	2.6	2.6	13.34	4,607.9	1,092.9	4,735.7	4,730.5	5.24	903.125		
900.0	900.0	892.1	892.1	3.0	2.9	13.35	4,607.5	1,093.1	4,735.4	4,729.5	5.94	797.708		
1,000.0	1,000.0	990.3	990.3	3.4	3.3	13.35	4,607.2	1,093.4	4,735.2	4,728.6	6.64	713.318		
1,100.0	1,100.0	1,098.4	1,098.4	3.7	3.7	13.35	4,606.8	1,093.7	4,734.9	4,727.5	7.38	642.014		
1,200.0	1,200.0	1,190.9	1,190.9	4.1	4.0	13.36	4,606.5	1,093.8	4,734.6	4,726.5	8.06	587.632		
1,300.0	1,300.0	1,308.8	1,308.8	4.4	4.4	13.36	4,606.0	1,093.8	4,734.2	4,725.4	8.83	536.254		
1,400.0	1,400.0	1,406.8	1,406.8	4.8	4.8	13.36	4,605.5	1,093.9	4,733.6	4,724.1	9.53	496.707		
1,500.0	1,500.0	1,513.1	1,513.1	5.1	5.1	13.36	4,604.8	1,093.7	4,733.0	4,722.8	10.26	461.273		
1,600.0	1,600.0	1,617.8	1,617.8	5.5	5.5	13.36	4,604.0	1,093.6	4,732.3	4,721.3	10.99	430.746		
1,700.0	1,700.0	1,727.6	1,727.6	5.9	5.9	13.36	4,603.0	1,093.5	4,731.4	4,719.7	11.73	403.382		
1,800.0	1,800.0	1,837.7	1,837.6	6.2	6.3	13.36	4,601.8	1,093.2	4,730.2	4,717.7	12.47	379.229		
1,900.0	1,900.0	1,937.2	1,937.2	6.6	6.6	13.37	4,600.6	1,093.1	4,729.0	4,715.9	13.18	358.784		
2,000.0	2,000.0	2,038.2	2,038.1	6.9	7.0	13.37	4,599.4	1,092.8	4,727.8	4,713.9	13.89	340.298		
2,100.0	2,100.0	2,133.2	2,133.2	7.3	7.3	13.37	4,598.3	1,092.5	4,726.6	4,712.1	14.58	324.081		
2,200.0	2,200.0	2,235.3	2,235.2	7.7	7.7	13.37	4,597.1	1,092.5	4,725.4	4,710.1	15.30	308.834		
2,300.0	2,300.0	2,323.4	2,323.3	8.0	8.0	64.42	4,596.1	1,092.5	4,723.6	4,707.7	15.97	295.866		
2,400.0	2,399.8	2,421.5	2,421.4	8.4	8.3	64.54	4,595.3	1,092.6	4,720.5	4,703.9	16.66	283.300		
2,500.0	2,499.5	2,535.0	2,535.0	8.7	8.7	64.74	4,594.0	1,092.7	4,715.7	4,698.3	17.41	270.793		
2,600.0	2,598.7	2,628.5	2,628.4	9.1	9.0	64.98	4,592.9	1,092.7	4,709.3	4,691.2	18.10	260.228		
2,700.0	2,697.5	2,720.2	2,720.1	9.4	9.4	65.28	4,592.0	1,092.8	4,701.7	4,683.0	18.77	250.434		
2,800.0	2,795.6	2,825.6	2,825.5	9.8	9.7	65.68	4,590.8	1,093.0	4,692.7	4,673.2	19.50	240.646		
2,900.0	2,893.1	2,927.4	2,927.3	10.1	10.1	66.13	4,589.6	1,093.2	4,682.2	4,662.0	20.22	231.615		
3,000.0	2,989.6	3,031.9	3,031.8	10.5	10.4	66.66	4,588.3	1,093.0	4,670.2	4,649.3	20.94	223.008		
3,100.0	3,085.3	3,130.2	3,130.1	10.9	10.8	67.24	4,587.0	1,092.7	4,656.9	4,635.3	21.65	215.103		
3,200.0	3,179.8	3,219.7	3,219.5	11.2	11.1	67.84	4,585.9	1,092.2	4,642.5	4,620.2	22.33	207.898		
3,300.0	3,273.2	3,307.5	3,307.4	11.6	11.4	68.49	4,584.9	1,091.8	4,627.1	4,604.0	23.01	201.081		
3,387.5	3,353.8	3,375.3	3,375.2	11.9	11.6	69.07	4,584.2	1,091.7	4,612.9	4,589.3	23.58	195.633		
3,400.0	3,365.2	3,384.9	3,384.8	12.0	11.7	69.12	4,584.1	1,091.7	4,610.8	4,587.2	23.66	194.872		
3,500.0	3,456.8	3,477.0	3,476.9	12.4	12.0	69.56	4,583.2	1,091.8	4,594.6	4,570.2	24.37	188.560		
3,600.0	3,548.3	3,559.5	3,559.3	12.8	12.3	69.96	4,582.4	1,092.2	4,578.7	4,553.6	25.05	182.812		
3,700.0	3,639.8	3,656.1	3,656.0	13.2	12.6	70.43	4,581.6	1,092.6	4,563.2	4,537.5	25.78	177.014		
3,800.0	3,731.4	3,763.0	3,762.9	13.6	13.0	70.96	4,580.3	1,093.3	4,547.8	4,521.2	26.55	171.281		
3,900.0	3,822.9	3,852.3	3,852.2	14.0	13.3	71.41	4,579.0	1,094.0	4,532.5	4,505.2	27.27	166.209		
4,000.0	3,914.4	3,932.8	3,932.6	14.4	13.6	71.81	4,577.9	1,094.6	4,517.7	4,489.8	27.96	161.561		
4,100.0	4,005.9	4,012.6	4,012.4	14.8	13.9	72.22	4,577.1	1,095.4	4,503.5	4,474.8	28.66	157.149		
4,200.0	4,097.5	4,107.0	4,106.8	15.2	14.2	72.70	4,576.2	1,096.2	4,489.7	4,460.3	29.40	152.685		
4,300.0	4,189.0	4,196.8	4,196.6	15.6	14.5	73.15	4,575.4	1,096.6	4,476.2	4,446.1	30.14	148.510		
4,400.0	4,280.5	4,298.9	4,298.7	16.1	14.9	73.66	4,574.7	1,096.3	4,462.9	4,432.0	30.92	144.336		
4,500.0	4,372.1	4,384.1	4,383.9	16.5	15.2	74.08	4,574.2	1,095.9	4,450.0	4,418.3	31.65	140.609		
4,600.0	4,463.6	4,462.1	4,461.9	16.9	15.5	74.48	4,573.8	1,095.6	4,437.5	4,405.1	32.35	137.157		
4,700.0	4,555.1	4,546.0	4,545.8	17.4	15.8	74.90	4,573.6	1,095.5	4,425.6	4,392.6	33.08	133.781		
4,800.0	4,646.7	4,641.5	4,641.3	17.8	16.1	75.39	4,573.2	1,095.7	4,414.2	4,380.3	33.85	130.405		
4,900.0	4,738.2	4,746.0	4,745.8	18.2	16.5	75.94	4,572.4	1,096.5	4,402.8	4,368.2	34.65	127.069		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Rothe 22-06 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,000.0	4,829.7	4,849.1	4,848.8	18.7	16.8	76.48	4,571.1	1,097.4	4,391.5	4,356.1	35.45	123.895		
5,100.0	4,921.3	4,951.1	4,950.8	19.1	17.2	77.02	4,569.6	1,098.3	4,380.4	4,344.2	36.24	120.871		
5,200.0	5,012.8	5,063.3	5,063.0	19.5	17.6	77.63	4,567.4	1,099.4	4,369.4	4,332.3	37.07	117.868		
5,300.0	5,104.3	5,171.8	5,171.4	20.0	17.9	78.22	4,564.6	1,100.6	4,358.2	4,320.3	37.89	115.027		
5,400.0	5,195.8	5,250.2	5,249.8	20.4	18.2	78.65	4,562.5	1,101.4	4,347.4	4,308.8	38.61	112.589		
5,500.0	5,287.4	5,321.1	5,320.7	20.9	18.5	79.04	4,561.0	1,102.3	4,337.3	4,298.0	39.31	110.325		
5,600.0	5,378.9	5,397.9	5,397.5	21.3	18.7	79.46	4,559.5	1,103.4	4,328.0	4,287.9	40.03	108.107		
5,700.0	5,470.4	5,477.7	5,477.3	21.8	19.0	79.90	4,558.2	1,104.5	4,319.3	4,278.5	40.77	105.956		
5,800.0	5,562.0	5,579.5	5,579.1	22.2	19.4	80.46	4,556.8	1,105.8	4,311.1	4,269.5	41.57	103.710		
5,900.0	5,653.5	5,674.6	5,674.1	22.7	19.7	80.98	4,555.5	1,106.3	4,303.0	4,260.6	42.35	101.604		
6,000.0	5,745.0	5,764.2	5,763.8	23.1	20.0	81.46	4,554.5	1,106.3	4,295.3	4,252.2	43.12	99.620		
6,100.0	5,836.6	5,850.6	5,850.1	23.6	20.3	81.93	4,553.6	1,106.4	4,288.0	4,244.1	43.87	97.738		
6,200.0	5,928.1	5,932.2	5,931.7	24.0	20.6	82.37	4,553.0	1,106.4	4,281.3	4,236.7	44.61	95.964		
6,278.6	6,000.0	5,992.8	5,992.4	24.4	20.8	82.70	4,552.7	1,106.4	4,276.4	4,231.2	45.18	94.644		
6,290.0	6,010.4	6,002.1	6,001.6	24.4	20.9	81.27	4,552.6	1,106.4	4,275.7	4,230.4	45.27	94.451		
6,300.0	6,019.5	6,012.1	6,011.6	24.5	20.9	79.54	4,552.6	1,106.4	4,274.9	4,229.5	45.35	94.265		
6,350.0	6,065.8	6,062.5	6,062.1	24.7	21.1	68.93	4,552.5	1,106.3	4,269.4	4,223.6	45.74	93.331		
6,400.0	6,113.0	6,114.0	6,113.5	24.9	21.2	54.52	4,552.3	1,106.1	4,261.1	4,215.0	46.13	92.376		
6,450.0	6,160.7	6,159.3	6,158.8	25.1	21.4	36.78	4,552.2	1,106.0	4,250.2	4,203.8	46.48	91.452		
6,500.0	6,208.5	6,206.1	6,205.6	25.3	21.6	18.24	4,552.0	1,105.8	4,236.8	4,190.0	46.81	90.508		
6,550.0	6,255.8	6,241.8	6,241.3	25.4	21.7	1.78	4,552.0	1,105.6	4,221.0	4,173.9	47.10	89.624		
6,600.0	6,302.5	6,278.1	6,277.7	25.6	21.8	-11.46	4,552.2	1,105.5	4,203.0	4,155.7	47.37	88.723		
6,650.0	6,347.9	6,315.3	6,314.9	25.7	21.9	-21.94	4,552.4	1,105.2	4,183.0	4,135.4	47.64	87.804		
6,700.0	6,391.6	6,353.8	6,353.3	25.9	22.1	-30.49	4,552.7	1,105.0	4,161.1	4,113.2	47.90	86.865		
6,750.0	6,433.4	6,390.5	6,390.1	26.0	22.2	-37.78	4,553.0	1,104.8	4,137.4	4,089.3	48.15	85.926		
6,800.0	6,472.8	6,426.4	6,425.9	26.1	22.3	-44.30	4,553.4	1,104.6	4,112.4	4,064.0	48.39	84.984		
6,850.0	6,509.4	6,460.1	6,459.6	26.2	22.4	-50.32	4,553.8	1,104.4	4,086.1	4,037.5	48.62	84.049		
6,900.0	6,543.0	6,490.9	6,490.4	26.3	22.6	-56.01	4,554.2	1,104.2	4,059.0	4,010.2	48.83	83.131		
6,950.0	6,573.2	6,519.7	6,519.3	26.4	22.7	-61.44	4,554.6	1,104.0	4,031.2	3,982.2	49.03	82.226		
7,000.0	6,599.8	6,545.5	6,545.1	26.5	22.7	-66.63	4,555.0	1,103.8	4,003.2	3,954.0	49.21	81.347		
7,050.0	6,622.5	6,567.5	6,567.0	26.6	22.8	-71.53	4,555.3	1,103.6	3,975.2	3,925.8	49.38	80.501		
7,100.0	6,641.1	6,585.4	6,584.9	26.7	22.9	-76.11	4,555.5	1,103.5	3,947.6	3,898.0	49.53	79.694		
7,150.0	6,655.4	6,599.1	6,598.6	26.8	22.9	-80.29	4,555.7	1,103.4	3,920.6	3,870.9	49.67	78.932		
7,200.0	6,665.4	6,608.5	6,608.1	26.9	23.0	-84.05	4,555.9	1,103.3	3,894.6	3,844.8	49.79	78.222		
7,250.0	6,670.8	6,610.4	6,609.9	27.0	23.0	-87.27	4,555.9	1,103.3	3,869.8	3,819.9	49.88	77.582		
7,285.7	6,672.0	6,611.1	6,610.6	27.1	23.0	-89.31	4,555.9	1,103.3	3,853.1	3,803.2	49.94	77.156		
7,300.0	6,672.0	6,611.0	6,610.5	27.1	23.0	-89.31	4,555.9	1,103.3	3,846.6	3,796.6	49.96	76.991		
7,400.0	6,672.0	6,610.4	6,610.0	27.3	23.0	-89.30	4,555.9	1,103.3	3,802.2	3,752.0	50.16	75.804		
7,500.0	6,672.0	6,609.9	6,609.4	27.6	23.0	-89.29	4,555.9	1,103.3	3,759.9	3,709.5	50.41	74.586		
7,600.0	6,672.0	6,609.3	6,608.8	28.0	23.0	-89.28	4,555.9	1,103.3	3,719.8	3,669.1	50.72	73.340		
7,700.0	6,672.0	6,608.8	6,608.3	28.3	23.0	-89.27	4,555.9	1,103.3	3,682.0	3,630.9	51.09	72.073		
7,800.0	6,672.0	6,608.2	6,607.7	28.8	23.0	-89.26	4,555.9	1,103.3	3,646.6	3,595.1	51.51	70.790		
7,900.0	6,672.0	6,607.6	6,607.2	29.3	23.0	-89.25	4,555.9	1,103.3	3,613.5	3,561.5	51.99	69.498		
8,000.0	6,672.0	6,607.1	6,606.6	29.8	23.0	-89.24	4,555.9	1,103.3	3,583.0	3,530.5	52.53	68.206		
8,100.0	6,672.0	6,606.5	6,606.0	30.4	23.0	-89.23	4,555.9	1,103.3	3,555.0	3,501.8	53.12	66.921		
8,200.0	6,672.0	6,607.8	6,607.3	31.0	23.0	-89.25	4,555.9	1,103.3	3,529.6	3,475.8	53.77	65.646		
8,300.0	6,672.0	6,607.0	6,606.6	31.7	23.0	-89.24	4,555.9	1,103.3	3,506.8	3,452.4	54.45	64.401		
8,400.0	6,672.0	6,606.3	6,605.8	32.4	23.0	-89.23	4,555.9	1,103.3	3,486.8	3,431.6	55.18	63.187		
8,500.0	6,672.0	6,605.6	6,605.1	33.1	22.9	-89.22	4,555.8	1,103.3	3,469.5	3,413.6	55.95	62.012		
8,600.0	6,672.0	6,604.9	6,604.4	33.9	22.9	-89.20	4,555.8	1,103.3	3,455.0	3,398.3	56.75	60.882		
8,700.0	6,672.0	6,604.2	6,603.7	34.7	22.9	-89.19	4,555.8	1,103.3	3,443.4	3,385.8	57.58	59.803		
8,800.0	6,672.0	6,603.4	6,602.9	35.5	22.9	-89.18	4,555.8	1,103.3	3,434.6	3,376.2	58.43	58.780		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Rothe 22-06 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
8,900.0	6,672.0	6,602.7	6,602.2	36.3	22.9	-89.17	4,555.8	1,103.4	3,428.7	3,369.4	59.30	57.817	CC	
9,000.0	6,672.0	6,602.0	6,601.5	37.2	22.9	-89.16	4,555.8	1,103.4	3,425.8	3,365.6	60.19	56.918		
9,052.4	6,672.0	6,601.6	6,601.1	37.6	22.9	-89.15	4,555.8	1,103.4	3,425.4	3,364.7	60.66	56.471		
9,100.0	6,672.0	6,601.3	6,600.8	38.1	22.9	-89.14	4,555.8	1,103.4	3,425.7	3,364.6	61.08	56.086	ES	
9,200.0	6,672.0	6,600.6	6,600.1	39.0	22.9	-89.13	4,555.8	1,103.4	3,428.5	3,366.5	61.97	55.322		
9,300.0	6,672.0	6,599.8	6,599.4	39.9	22.9	-89.12	4,555.8	1,103.4	3,434.3	3,371.4	62.87	54.627		
9,400.0	6,672.0	6,599.1	6,598.7	40.8	22.9	-89.11	4,555.7	1,103.4	3,442.9	3,379.1	63.76	54.002		
9,500.0	6,672.0	6,598.4	6,597.9	41.8	22.9	-89.10	4,555.7	1,103.4	3,454.4	3,389.8	64.63	53.447		
9,600.0	6,672.0	6,597.7	6,597.2	42.7	22.9	-89.08	4,555.7	1,103.4	3,468.7	3,403.2	65.50	52.961		
9,700.0	6,672.0	6,597.0	6,596.5	43.7	22.9	-89.07	4,555.7	1,103.4	3,485.9	3,419.5	66.34	52.544		
9,800.0	6,672.0	6,596.3	6,595.8	44.7	22.9	-89.06	4,555.7	1,103.4	3,505.8	3,438.6	67.17	52.194		
9,900.0	6,672.0	6,595.6	6,595.1	45.7	22.9	-89.05	4,555.7	1,103.4	3,528.4	3,460.4	67.97	51.910		
10,000.0	6,672.0	6,594.9	6,594.4	46.7	22.9	-89.04	4,555.7	1,103.4	3,553.7	3,484.9	68.75	51.690		
10,100.0	6,672.0	6,594.2	6,593.7	47.7	22.9	-89.02	4,555.7	1,103.4	3,581.6	3,512.1	69.50	51.532		
10,200.0	6,672.0	6,593.5	6,593.0	48.8	22.9	-89.01	4,555.7	1,103.4	3,612.0	3,541.8	70.23	51.435	SF	
10,300.0	6,672.0	6,592.8	6,592.3	49.8	22.9	-89.00	4,555.7	1,103.4	3,644.9	3,574.0	70.92	51.395		
10,400.0	6,672.0	6,592.1	6,591.6	50.9	22.9	-88.99	4,555.6	1,103.4	3,680.2	3,608.7	71.58	51.412		
10,500.0	6,672.0	6,591.4	6,590.9	51.9	22.9	-88.98	4,555.6	1,103.4	3,717.9	3,645.7	72.22	51.482		
10,600.0	6,672.0	6,590.7	6,590.2	53.0	22.9	-88.97	4,555.6	1,103.4	3,757.9	3,685.1	72.82	51.605		
10,700.0	6,672.0	6,590.0	6,589.5	54.1	22.9	-88.95	4,555.6	1,103.4	3,800.1	3,726.7	73.39	51.776		
10,800.0	6,672.0	6,589.3	6,588.8	55.2	22.9	-88.94	4,555.6	1,103.5	3,844.3	3,770.4	73.94	51.995		
10,900.0	6,672.0	6,588.6	6,588.1	56.3	22.9	-88.93	4,555.6	1,103.5	3,890.7	3,816.3	74.45	52.260		
11,000.0	6,672.0	6,587.9	6,587.4	57.4	22.9	-88.92	4,555.6	1,103.5	3,939.0	3,864.1	74.93	52.567		
11,100.0	6,672.0	6,587.2	6,586.7	58.5	22.9	-88.91	4,555.6	1,103.5	3,989.3	3,913.9	75.39	52.916		
11,200.0	6,672.0	6,586.5	6,586.0	59.6	22.9	-88.90	4,555.6	1,103.5	4,041.4	3,965.6	75.82	53.304		
11,300.0	6,672.0	6,585.8	6,585.3	60.7	22.9	-88.88	4,555.6	1,103.5	4,095.3	4,019.1	76.22	53.730		
11,400.0	6,672.0	6,585.1	6,584.6	61.8	22.9	-88.87	4,555.5	1,103.5	4,150.9	4,074.3	76.60	54.192		
11,500.0	6,672.0	6,584.4	6,583.9	62.9	22.9	-88.86	4,555.5	1,103.5	4,208.1	4,131.1	76.95	54.687		
11,600.0	6,672.0	6,583.7	6,583.2	64.1	22.9	-88.85	4,555.5	1,103.5	4,266.9	4,189.6	77.28	55.215		
11,700.0	6,672.0	6,583.0	6,582.5	65.2	22.9	-88.84	4,555.5	1,103.5	4,327.2	4,249.6	77.58	55.774		
11,800.0	6,672.0	6,582.3	6,581.8	66.3	22.9	-88.83	4,555.5	1,103.5	4,388.9	4,311.0	77.87	56.362		
11,900.0	6,672.0	6,581.6	6,581.1	67.5	22.9	-88.82	4,555.5	1,103.5	4,452.0	4,373.9	78.14	56.977		
12,000.0	6,672.0	6,580.9	6,580.4	68.6	22.9	-88.80	4,555.5	1,103.5	4,516.5	4,438.1	78.38	57.620		
12,100.0	6,672.0	6,580.2	6,579.8	69.8	22.9	-88.79	4,555.5	1,103.5	4,582.2	4,503.6	78.61	58.287		
12,200.0	6,672.0	6,579.6	6,579.1	70.9	22.9	-88.78	4,555.5	1,103.5	4,649.1	4,570.3	78.83	58.979		
12,300.0	6,672.0	6,578.9	6,578.4	72.1	22.9	-88.77	4,555.4	1,103.5	4,717.2	4,638.2	79.02	59.694		
12,400.0	6,672.0	6,578.2	6,577.7	73.2	22.9	-88.76	4,555.4	1,103.5	4,786.4	4,707.2	79.21	60.430		
12,500.0	6,672.0	6,577.5	6,577.0	74.4	22.9	-88.75	4,555.4	1,103.5	4,856.7	4,777.3	79.37	61.187		
12,600.0	6,672.0	6,576.8	6,576.3	75.5	22.8	-88.74	4,555.4	1,103.5	4,928.0	4,848.5	79.53	61.964		
12,700.0	6,672.0	6,576.1	6,575.7	76.7	22.8	-88.72	4,555.4	1,103.6	5,000.3	4,920.6	79.67	62.759		
12,800.0	6,672.0	6,575.5	6,575.0	77.9	22.8	-88.71	4,555.4	1,103.6	5,073.5	4,993.7	79.81	63.572		
12,900.0	6,672.0	6,574.8	6,574.3	79.0	22.8	-88.70	4,555.4	1,103.6	5,147.6	5,067.7	79.93	64.402		
13,000.0	6,672.0	6,574.1	6,573.6	80.2	22.8	-88.69	4,555.4	1,103.6	5,222.6	5,142.5	80.04	65.249		
13,100.0	6,672.0	6,573.4	6,572.9	81.4	22.8	-88.68	4,555.4	1,103.6	5,298.4	5,218.2	80.14	66.111		
13,200.0	6,672.0	6,572.7	6,572.3	82.6	22.8	-88.67	4,555.4	1,103.6	5,375.0	5,294.7	80.24	66.987		
13,300.0	6,672.0	6,572.1	6,571.6	83.7	22.8	-88.66	4,555.4	1,103.6	5,452.3	5,372.0	80.33	67.877		
13,400.0	6,672.0	6,571.4	6,570.9	84.9	22.8	-88.65	4,555.3	1,103.6	5,530.3	5,449.9	80.41	68.781		
13,500.0	6,672.0	6,570.7	6,570.2	86.1	22.8	-88.64	4,555.3	1,103.6	5,609.1	5,528.6	80.48	69.697		
13,600.0	6,672.0	6,570.0	6,569.6	87.3	22.8	-88.62	4,555.3	1,103.6	5,688.5	5,608.0	80.54	70.626		
13,700.0	6,672.0	6,569.4	6,568.9	88.4	22.8	-88.61	4,555.3	1,103.6	5,768.6	5,687.9	80.61	71.565		
13,800.0	6,672.0	6,568.7	6,568.2	89.6	22.8	-88.60	4,555.3	1,103.6	5,849.2	5,768.5	80.66	72.516		
13,900.0	6,672.0	6,568.0	6,567.5	90.8	22.8	-88.59	4,555.3	1,103.6	5,930.5	5,849.7	80.71	73.477		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Rothe 22-06 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
14,000.0	6,672.0	6,567.4	6,566.9	92.0	22.8	-88.58	4,555.3	1,103.6	6,012.3	5,931.5	80.76	74.449		
14,100.0	6,672.0	6,566.7	6,566.2	93.2	22.8	-88.57	4,555.3	1,103.6	6,094.6	6,013.8	80.80	75.429		
14,200.0	6,672.0	6,566.0	6,565.5	94.4	22.8	-88.56	4,555.3	1,103.6	6,177.5	6,096.6	80.84	76.419		
14,300.0	6,672.0	6,565.3	6,564.9	95.6	22.8	-88.55	4,555.3	1,103.6	6,260.8	6,179.9	80.87	77.417		
14,400.0	6,672.0	6,564.7	6,564.2	96.8	22.8	-88.54	4,555.2	1,103.6	6,344.6	6,263.7	80.90	78.424		
14,500.0	6,672.0	6,564.0	6,563.5	98.0	22.8	-88.52	4,555.2	1,103.6	6,428.9	6,348.0	80.93	79.438		
14,600.0	6,672.0	6,563.3	6,562.9	99.2	22.8	-88.51	4,555.2	1,103.7	6,513.7	6,432.7	80.96	80.460		
14,700.0	6,672.0	6,562.7	6,562.2	100.4	22.8	-88.50	4,555.2	1,103.7	6,598.8	6,517.8	80.98	81.489		
14,800.0	6,672.0	6,562.0	6,561.5	101.6	22.8	-88.49	4,555.2	1,103.7	6,684.4	6,603.4	81.00	82.524		
14,900.0	6,672.0	6,561.4	6,560.9	102.7	22.8	-88.48	4,555.2	1,103.7	6,770.3	6,689.3	81.02	83.566		
15,000.0	6,672.0	6,560.7	6,560.2	103.9	22.8	-88.47	4,555.2	1,103.7	6,856.7	6,775.6	81.03	84.614		
15,100.0	6,672.0	6,560.0	6,559.6	105.1	22.8	-88.46	4,555.2	1,103.7	6,943.4	6,862.3	81.05	85.668		
15,200.0	6,672.0	6,559.4	6,558.9	106.3	22.8	-88.45	4,555.2	1,103.7	7,030.4	6,949.3	81.06	86.728		
15,300.0	6,672.0	6,558.7	6,558.2	107.6	22.8	-88.44	4,555.2	1,103.7	7,117.8	7,036.7	81.07	87.793		
15,400.0	6,672.0	6,558.1	6,557.6	108.8	22.8	-88.43	4,555.2	1,103.7	7,205.5	7,124.4	81.09	88.863		
15,500.0	6,672.0	6,557.4	6,556.9	110.0	22.8	-88.42	4,555.1	1,103.7	7,293.5	7,212.4	81.10	89.937		
15,600.0	6,672.0	6,556.7	6,556.3	111.2	22.8	-88.41	4,555.1	1,103.7	7,381.8	7,300.7	81.10	91.017		
15,700.0	6,672.0	6,556.1	6,555.6	112.4	22.8	-88.40	4,555.1	1,103.7	7,470.4	7,389.3	81.11	92.100		
15,800.0	6,672.0	6,555.4	6,555.0	113.6	22.8	-88.38	4,555.1	1,103.7	7,559.3	7,478.2	81.12	93.188		
15,900.0	6,672.0	6,554.8	6,554.3	114.8	22.8	-88.37	4,555.1	1,103.7	7,648.5	7,567.3	81.13	94.280		
16,000.0	6,672.0	6,554.1	6,553.7	116.0	22.8	-88.36	4,555.1	1,103.7	7,737.9	7,656.8	81.13	95.375		
16,100.0	6,672.0	6,553.5	6,553.0	117.2	22.8	-88.35	4,555.1	1,103.7	7,827.6	7,746.4	81.14	96.474		
16,200.0	6,672.0	6,552.8	6,552.4	118.4	22.8	-88.34	4,555.1	1,103.7	7,917.5	7,836.3	81.14	97.576		
16,300.0	6,672.0	6,552.2	6,551.7	119.6	22.8	-88.33	4,555.1	1,103.7	8,007.6	7,926.5	81.15	98.681		
16,400.0	6,672.0	6,551.5	6,551.1	120.8	22.8	-88.32	4,555.1	1,103.7	8,098.0	8,016.9	81.15	99.789		
16,500.0	6,672.0	6,550.9	6,550.4	122.0	22.8	-88.31	4,555.0	1,103.7	8,188.6	8,107.5	81.16	100.901		
16,600.0	6,672.0	6,550.2	6,549.8	123.2	22.8	-88.30	4,555.0	1,103.7	8,279.4	8,198.3	81.16	102.014		
16,700.0	6,672.0	6,549.6	6,549.1	124.5	22.8	-88.29	4,555.0	1,103.8	8,370.5	8,289.3	81.16	103.131		
16,800.0	6,672.0	6,548.9	6,548.5	125.7	22.8	-88.28	4,555.0	1,103.8	8,461.7	8,380.5	81.17	104.249		
16,900.0	6,672.0	6,548.3	6,547.8	126.9	22.8	-88.27	4,555.0	1,103.8	8,553.1	8,471.9	81.17	105.370		
17,000.0	6,672.0	6,547.7	6,547.2	128.1	22.7	-88.26	4,555.0	1,103.8	8,644.7	8,563.5	81.18	106.493		
17,100.0	6,672.0	6,547.0	6,546.5	129.3	22.7	-88.25	4,555.0	1,103.8	8,736.5	8,655.3	81.18	107.618		
17,200.0	6,672.0	6,546.4	6,545.9	130.5	22.7	-88.24	4,555.0	1,103.8	8,828.5	8,747.3	81.19	108.744		
17,300.0	6,672.0	6,545.7	6,545.2	131.7	22.7	-88.23	4,555.0	1,103.8	8,920.6	8,839.4	81.19	109.873		
17,400.0	6,672.0	6,545.1	6,544.6	133.0	22.7	-88.22	4,555.0	1,103.8	9,012.9	8,931.7	81.20	111.003		
17,500.0	6,672.0	6,544.4	6,544.0	134.2	22.7	-88.21	4,555.0	1,103.8	9,105.3	9,024.1	81.20	112.134		
17,600.0	6,672.0	6,543.8	6,543.3	135.4	22.7	-88.20	4,554.9	1,103.8	9,197.9	9,116.7	81.21	113.267		
17,700.0	6,672.0	6,543.2	6,542.7	136.6	22.7	-88.19	4,554.9	1,103.8	9,290.7	9,209.5	81.21	114.401		
17,800.0	6,672.0	6,542.5	6,542.1	137.8	22.7	-88.18	4,554.9	1,103.8	9,383.6	9,302.4	81.22	115.536		
17,900.0	6,672.0	6,541.9	6,541.4	139.0	22.7	-88.17	4,554.9	1,103.8	9,476.7	9,395.4	81.22	116.672		
18,000.0	6,672.0	6,541.3	6,540.8	140.3	22.7	-88.16	4,554.9	1,103.8	9,569.8	9,488.6	81.23	117.809		
18,100.0	6,672.0	6,540.6	6,540.1	141.5	22.7	-88.15	4,554.9	1,103.8	9,663.2	9,581.9	81.24	118.947		
18,200.0	6,672.0	6,540.0	6,539.5	142.7	22.7	-88.14	4,554.9	1,103.8	9,756.6	9,675.4	81.25	120.086		
18,300.0	6,672.0	6,539.4	6,538.9	143.9	22.7	-88.13	4,554.9	1,103.8	9,850.2	9,768.9	81.25	121.226		
18,342.5	6,672.0	6,539.1	6,538.6	144.4	22.7	-88.12	4,554.9	1,103.8	9,890.0	9,808.7	81.26	121.710		



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Rothe 31-06 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
0.0	0.0	0.0	0.0	0.0	0.0	20.99	6,122.1	2,349.2	6,557.4					
100.0	100.0	92.1	92.1	0.1	0.2	20.99	6,122.0	2,349.2	6,557.3	6,557.0	0.29	N/A		
200.0	200.0	198.7	198.7	0.5	0.5	20.99	6,121.9	2,348.8	6,557.1	6,556.1	1.00	6,524.827		
271.2	271.2	252.2	252.2	0.7	0.7	20.99	6,122.0	2,348.5	6,557.0	6,555.5	1.45	4,531.095		
300.0	300.0	273.7	273.7	0.8	0.8	20.99	6,122.0	2,348.4	6,557.0	6,555.4	1.63	4,034.033		
400.0	400.0	388.1	388.1	1.2	1.2	20.98	6,122.4	2,347.7	6,557.1	6,554.7	2.38	2,750.797		
500.0	500.0	489.3	489.3	1.6	1.5	20.97	6,122.5	2,346.9	6,557.0	6,553.9	3.10	2,117.926		
600.0	600.0	591.9	591.9	1.9	1.9	20.97	6,122.7	2,346.1	6,556.8	6,553.0	3.81	1,719.497		
690.3	690.3	671.3	671.3	2.2	2.2	20.96	6,123.0	2,345.2	6,556.7	6,552.3	4.41	1,485.154		
700.0	700.0	679.7	679.7	2.3	2.2	20.96	6,123.0	2,345.1	6,556.7	6,552.3	4.48	1,463.847		
800.0	800.0	774.7	774.7	2.6	2.5	20.95	6,123.5	2,344.0	6,556.8	6,551.6	5.17	1,268.167		
900.0	900.0	874.4	874.4	3.0	2.9	20.93	6,124.2	2,342.5	6,556.9	6,551.0	5.88	1,115.391		
1,000.0	1,000.0	1,017.9	1,017.8	3.4	3.4	20.91	6,124.8	2,340.0	6,556.7	6,549.9	6.74	972.737		
1,100.0	1,100.0	1,109.3	1,109.2	3.7	3.7	20.89	6,125.1	2,338.1	6,556.2	6,548.8	7.42	883.544		
1,200.0	1,200.0	1,211.1	1,211.0	4.1	4.1	20.87	6,125.5	2,335.7	6,555.7	6,547.6	8.14	805.694		
1,300.0	1,300.0	1,300.7	1,300.6	4.4	4.4	20.85	6,125.9	2,333.6	6,555.4	6,546.6	8.81	744.043		
1,400.0	1,400.0	1,421.9	1,421.7	4.8	4.8	20.83	6,126.4	2,330.4	6,554.8	6,545.2	9.59	683.153		
1,500.0	1,500.0	1,500.0	1,499.8	5.1	5.1	20.81	6,126.8	2,328.4	6,554.4	6,544.1	10.23	640.823		
1,600.0	1,600.0	1,637.0	1,636.8	5.5	5.6	20.78	6,127.3	2,324.8	6,553.7	6,542.7	11.07	592.155		
1,700.0	1,700.0	1,747.1	1,746.8	5.9	6.0	20.75	6,127.4	2,321.7	6,552.8	6,541.0	11.81	554.748		
1,800.0	1,800.0	1,862.4	1,862.0	6.2	6.4	20.73	6,127.3	2,318.4	6,551.7	6,539.1	12.58	521.002		
1,900.0	1,900.0	1,983.9	1,983.5	6.6	6.8	20.70	6,126.9	2,314.7	6,550.3	6,537.0	13.36	490.306		
2,000.0	2,000.0	2,084.5	2,084.0	6.9	7.1	20.67	6,126.4	2,311.5	6,548.7	6,534.7	14.07	465.405		
2,100.0	2,100.0	2,232.8	2,232.2	7.3	7.7	20.64	6,125.2	2,306.6	6,546.8	6,531.9	14.95	437.968		
2,200.0	2,200.0	2,339.9	2,339.3	7.7	8.0	20.62	6,123.5	2,303.6	6,544.3	6,528.6	15.68	417.334		
2,300.0	2,300.0	2,411.4	2,410.7	8.0	8.3	71.67	6,122.5	2,301.7	6,541.6	6,525.3	16.29	401.631		
2,400.0	2,399.8	2,485.6	2,485.0	8.4	8.5	71.75	6,121.7	2,300.0	6,538.1	6,521.2	16.90	386.853		
2,500.0	2,499.5	2,597.9	2,597.2	8.7	8.9	71.90	6,120.8	2,297.3	6,533.8	6,516.1	17.65	370.256		
2,600.0	2,598.7	2,702.5	2,701.8	9.1	9.3	72.09	6,119.7	2,294.6	6,528.1	6,509.8	18.37	355.428		
2,700.0	2,697.5	2,820.8	2,820.0	9.4	9.7	72.36	6,118.4	2,291.4	6,521.3	6,502.1	19.14	340.797		
2,800.0	2,795.6	2,923.1	2,922.3	9.8	10.1	72.66	6,116.8	2,289.1	6,513.2	6,493.3	19.85	328.128		
2,900.0	2,893.1	3,000.0	2,999.2	10.1	10.3	72.97	6,115.6	2,287.5	6,504.1	6,483.7	20.48	317.628		
3,000.0	2,989.6	3,070.8	3,069.9	10.5	10.6	73.30	6,114.7	2,286.2	6,494.5	6,473.4	21.09	308.001		
3,100.0	3,085.3	3,131.9	3,131.1	10.9	10.8	73.64	6,114.2	2,285.3	6,484.6	6,462.9	21.66	299.319		
3,200.0	3,179.8	3,200.0	3,199.1	11.2	11.0	74.02	6,114.0	2,284.6	6,474.2	6,451.9	22.27	290.712		
3,300.0	3,273.2	3,271.3	3,270.4	11.6	11.3	74.45	6,114.0	2,283.9	6,463.4	6,440.6	22.89	282.345		
3,387.5	3,353.8	3,334.7	3,333.8	11.9	11.5	74.85	6,114.1	2,283.5	6,453.6	6,430.2	23.44	275.280		
3,400.0	3,365.2	3,343.2	3,342.3	12.0	11.6	74.88	6,114.1	2,283.4	6,452.2	6,428.7	23.52	274.314		
3,500.0	3,456.8	3,457.1	3,456.2	12.4	11.9	75.27	6,114.6	2,282.6	6,441.1	6,416.8	24.30	265.040		
3,600.0	3,548.3	3,580.5	3,579.6	12.8	12.4	75.69	6,114.4	2,281.0	6,429.3	6,404.2	25.12	255.920		
3,700.0	3,639.8	3,665.7	3,664.8	13.2	12.7	75.97	6,114.3	2,279.6	6,417.8	6,392.0	25.82	248.587		
3,800.0	3,731.4	3,811.7	3,810.7	13.6	13.2	76.47	6,114.0	2,276.6	6,406.4	6,379.7	26.72	239.717		
3,900.0	3,822.9	3,876.7	3,875.7	14.0	13.4	76.69	6,113.6	2,275.6	6,394.8	6,367.5	27.36	233.723		
4,000.0	3,914.4	3,935.6	3,934.7	14.4	13.6	76.90	6,113.2	2,275.2	6,383.9	6,355.9	27.98	228.160		
4,100.0	4,005.9	4,000.0	3,999.0	14.8	13.8	77.12	6,113.0	2,275.1	6,373.7	6,345.1	28.62	222.695		
4,200.0	4,097.5	4,055.5	4,054.6	15.2	14.0	77.32	6,113.0	2,275.4	6,364.2	6,335.0	29.23	217.696		
4,300.0	4,189.0	4,128.3	4,127.3	15.6	14.3	77.59	6,113.0	2,276.4	6,355.3	6,325.3	29.91	212.478		
4,400.0	4,280.5	4,204.6	4,203.6	16.1	14.6	77.87	6,113.0	2,277.9	6,346.8	6,316.2	30.60	207.403		
4,500.0	4,372.1	4,295.4	4,294.4	16.5	14.9	78.21	6,112.8	2,280.0	6,338.7	6,307.4	31.35	202.221		
4,600.0	4,463.6	4,368.3	4,367.2	16.9	15.1	78.49	6,112.8	2,281.8	6,331.0	6,299.0	32.03	197.657		
4,700.0	4,555.1	4,458.4	4,457.4	17.4	15.4	78.83	6,112.9	2,284.2	6,323.8	6,291.0	32.78	192.931		
4,800.0	4,646.7	4,544.5	4,543.4	17.8	15.7	79.15	6,113.0	2,286.4	6,316.8	6,283.3	33.51	188.491		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Rothe 31-06 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
4,900.0	4,738.2	4,623.2	4,622.1	18.2	16.0	79.44	6,113.5	2,287.8	6,310.2	6,276.0	34.22	184.384		
5,000.0	4,829.7	4,700.0	4,698.9	18.7	16.3	79.73	6,114.4	2,288.8	6,304.0	6,269.1	34.93	180.480		
5,100.0	4,921.3	4,758.4	4,757.3	19.1	16.5	79.94	6,115.4	2,289.3	6,298.4	6,262.8	35.57	177.059		
5,200.0	5,012.8	4,813.0	4,811.8	19.5	16.7	80.13	6,116.8	2,289.7	6,293.7	6,257.4	36.20	173.843		
5,300.0	5,104.3	4,888.5	4,887.3	20.0	16.9	80.40	6,119.2	2,290.1	6,289.5	6,252.6	36.91	170.410		
5,400.0	5,195.8	5,002.8	5,001.5	20.4	17.3	80.80	6,123.0	2,290.3	6,285.6	6,247.9	37.75	166.499		
5,500.0	5,287.4	5,146.3	5,145.0	20.9	17.8	81.31	6,126.7	2,290.8	6,281.5	6,242.8	38.70	162.320		
5,600.0	5,378.9	5,327.3	5,326.0	21.3	18.5	81.96	6,128.8	2,291.4	6,276.3	6,236.5	39.77	157.808		
5,700.0	5,470.4	5,400.0	5,398.7	21.8	18.7	82.23	6,129.1	2,291.7	6,270.9	6,230.4	40.47	154.934		
5,800.0	5,562.0	5,464.0	5,462.7	22.2	18.9	82.46	6,129.5	2,292.2	6,266.1	6,225.0	41.15	152.282		
5,900.0	5,653.5	5,523.7	5,522.4	22.7	19.1	82.68	6,130.2	2,292.9	6,262.1	6,220.3	41.81	149.786		
6,000.0	5,745.0	5,589.9	5,588.6	23.1	19.4	82.93	6,131.1	2,293.9	6,258.8	6,216.3	42.49	147.306		
6,100.0	5,836.6	5,687.8	5,686.5	23.6	19.7	83.30	6,132.3	2,296.0	6,255.9	6,212.6	43.28	144.540		
6,200.0	5,928.1	5,816.1	5,814.6	24.0	20.2	83.79	6,133.0	2,299.3	6,253.0	6,208.8	44.18	141.531		
6,278.6	6,000.0	5,906.3	5,904.9	24.4	20.5	84.14	6,132.8	2,301.9	6,250.5	6,205.7	44.85	139.360		
6,290.0	6,010.4	5,919.6	5,918.1	24.4	20.5	82.69	6,132.7	2,302.4	6,250.1	6,205.1	44.95	139.046		
6,300.0	6,019.5	5,925.3	5,923.9	24.5	20.5	80.95	6,132.7	2,302.5	6,249.6	6,204.5	45.02	138.831		
6,350.0	6,065.8	6,554.7	6,551.9	24.7	22.7	72.42	6,100.8	2,313.7	6,244.3	6,197.0	47.26	132.119		
6,400.0	6,113.0	6,600.0	6,597.0	24.9	22.9	57.70	6,097.0	2,313.5	6,233.3	6,185.7	47.63	130.881		
6,450.0	6,160.7	6,600.0	6,597.0	25.1	22.9	39.58	6,097.0	2,313.5	6,219.4	6,171.5	47.84	130.006		
6,500.0	6,208.5	6,600.0	6,597.0	25.3	22.9	20.70	6,097.0	2,313.5	6,203.1	6,155.1	48.03	129.140		
6,550.0	6,255.8	6,600.0	6,597.0	25.4	22.9	3.97	6,097.0	2,313.5	6,184.6	6,136.4	48.21	128.280		
6,600.0	6,302.5	6,635.1	6,632.0	25.6	23.0	-9.53	6,094.5	2,313.4	6,163.8	6,115.3	48.48	127.136		
6,650.0	6,347.9	6,652.0	6,648.9	25.7	23.1	-20.25	6,093.5	2,313.3	6,141.0	6,092.4	48.69	126.138		
6,700.0	6,391.6	6,668.4	6,665.2	25.9	23.1	-29.04	6,092.5	2,313.2	6,116.5	6,067.6	48.88	125.144		
6,750.0	6,433.4	6,700.0	6,696.8	26.0	23.3	-36.62	6,091.0	2,313.0	6,090.3	6,041.2	49.10	124.032		
6,800.0	6,472.8	6,700.0	6,696.8	26.1	23.3	-43.30	6,091.0	2,313.0	6,062.7	6,013.4	49.22	123.162		
6,850.0	6,509.4	6,732.7	6,729.5	26.2	23.4	-49.66	6,089.6	2,312.8	6,033.9	5,984.4	49.44	122.046		
6,900.0	6,543.0	6,765.5	6,762.3	26.3	23.5	-55.75	6,088.2	2,312.6	6,004.1	5,954.5	49.65	120.937		
6,950.0	6,573.2	6,795.0	6,791.7	26.4	23.6	-61.62	6,086.9	2,312.4	5,973.7	5,923.9	49.84	119.864		
7,000.0	6,599.8	6,820.9	6,817.6	26.5	23.7	-67.27	6,085.8	2,312.2	5,942.9	5,892.9	50.01	118.833		
7,050.0	6,622.5	6,842.9	6,839.6	26.6	23.8	-72.66	6,084.8	2,312.1	5,912.1	5,861.9	50.17	117.849		
7,100.0	6,641.1	6,860.9	6,857.6	26.7	23.8	-77.73	6,084.1	2,312.0	5,881.6	5,831.3	50.31	116.917		
7,150.0	6,655.4	6,874.7	6,871.3	26.8	23.9	-82.40	6,083.5	2,311.9	5,851.6	5,801.2	50.43	116.044		
7,200.0	6,665.4	6,884.2	6,880.8	26.9	23.9	-86.63	6,083.1	2,311.8	5,822.6	5,772.1	50.53	115.234		
7,250.0	6,670.8	6,889.2	6,885.8	27.0	23.9	-90.37	6,082.8	2,311.8	5,794.9	5,744.2	50.61	114.494		
7,285.7	6,672.0	6,890.1	6,886.7	27.1	23.9	-92.71	6,082.8	2,311.8	5,775.9	5,725.3	50.66	114.013		
7,300.0	6,672.0	6,890.0	6,886.6	27.1	23.9	-92.71	6,082.8	2,311.8	5,768.5	5,717.8	50.68	113.827		
7,400.0	6,672.0	6,889.3	6,885.9	27.3	23.9	-92.70	6,082.8	2,311.8	5,717.5	5,666.6	50.84	112.465		
7,500.0	6,672.0	6,888.6	6,885.2	27.6	23.9	-92.70	6,082.9	2,311.8	5,667.7	5,616.6	51.05	111.030		
7,600.0	6,672.0	6,887.9	6,884.5	28.0	23.9	-92.69	6,082.9	2,311.8	5,619.3	5,568.0	51.31	109.524		
7,700.0	6,672.0	6,887.2	6,883.8	28.3	23.9	-92.68	6,082.9	2,311.8	5,572.2	5,520.6	51.62	107.954		
7,800.0	6,672.0	6,886.5	6,883.1	28.8	23.9	-92.67	6,083.0	2,311.8	5,526.5	5,474.6	51.98	106.323		
7,900.0	6,672.0	6,885.8	6,882.4	29.3	23.9	-92.66	6,083.0	2,311.8	5,482.3	5,429.9	52.39	104.639		
8,000.0	6,672.0	6,885.1	6,881.7	29.8	23.9	-92.66	6,083.0	2,311.8	5,439.5	5,386.7	52.86	102.910		
8,100.0	6,672.0	6,884.4	6,881.0	30.4	23.9	-92.65	6,083.1	2,311.8	5,398.3	5,344.9	53.37	101.144		
8,200.0	6,672.0	6,883.7	6,880.3	31.0	23.9	-92.64	6,083.1	2,311.8	5,358.6	5,304.7	53.94	99.348		
8,300.0	6,672.0	6,883.0	6,879.6	31.7	23.9	-92.63	6,083.1	2,311.8	5,320.5	5,265.9	54.55	97.533		
8,400.0	6,672.0	6,882.2	6,878.9	32.4	23.9	-92.62	6,083.1	2,311.8	5,284.0	5,228.7	55.21	95.707		
8,500.0	6,672.0	6,881.5	6,878.2	33.1	23.9	-92.61	6,083.2	2,311.8	5,249.1	5,193.2	55.91	93.879		
8,600.0	6,672.0	6,880.8	6,877.5	33.9	23.9	-92.61	6,083.2	2,311.8	5,215.9	5,159.2	56.66	92.056		
8,700.0	6,672.0	6,880.1	6,876.8	34.7	23.9	-92.60	6,083.2	2,311.8	5,184.4	5,127.0	57.45	90.248		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Rothe 31-06 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
8,800.0	6,672.0	6,879.4	6,876.0	35.5	23.9	-92.59	6,083.3	2,311.8	5,154.7	5,096.4	58.27	88.461		
8,900.0	6,672.0	6,878.7	6,875.3	36.3	23.9	-92.58	6,083.3	2,311.8	5,126.7	5,067.5	59.13	86.702		
9,000.0	6,672.0	6,878.0	6,874.6	37.2	23.9	-92.57	6,083.3	2,311.8	5,100.5	5,040.5	60.02	84.977		
9,100.0	6,672.0	6,877.3	6,873.9	38.1	23.9	-92.57	6,083.4	2,311.8	5,076.2	5,015.2	60.94	83.292		
9,200.0	6,672.0	6,876.6	6,873.2	39.0	23.9	-92.56	6,083.4	2,311.9	5,053.7	4,991.8	61.89	81.652		
9,300.0	6,672.0	6,875.9	6,872.5	39.9	23.9	-92.55	6,083.4	2,311.9	5,033.0	4,970.2	62.87	80.061		
9,400.0	6,672.0	6,875.2	6,871.8	40.8	23.9	-92.54	6,083.5	2,311.9	5,014.3	4,950.5	63.86	78.521		
9,500.0	6,672.0	6,874.5	6,871.1	41.8	23.9	-92.53	6,083.5	2,311.9	4,997.5	4,932.7	64.87	77.037		
9,600.0	6,672.0	6,873.7	6,870.4	42.7	23.9	-92.52	6,083.5	2,311.9	4,982.7	4,916.8	65.90	75.610		
9,700.0	6,672.0	6,873.0	6,869.7	43.7	23.9	-92.52	6,083.5	2,311.9	4,969.8	4,902.9	66.94	74.241		
9,800.0	6,672.0	6,872.3	6,869.0	44.7	23.9	-92.51	6,083.6	2,311.9	4,958.9	4,890.9	67.99	72.933		
9,900.0	6,672.0	6,871.6	6,868.2	45.7	23.9	-92.50	6,083.6	2,311.9	4,950.0	4,880.9	69.05	71.686		
10,000.0	6,672.0	6,870.9	6,867.5	46.7	23.9	-92.49	6,083.6	2,311.9	4,943.1	4,873.0	70.11	70.501		
10,100.0	6,672.0	6,870.2	6,866.8	47.7	23.9	-92.48	6,083.7	2,311.9	4,938.2	4,867.0	71.18	69.377		
10,200.0	6,672.0	6,869.5	6,866.1	48.8	23.9	-92.48	6,083.7	2,311.9	4,935.3	4,863.0	72.24	68.314		
10,293.5	6,672.0	6,868.8	6,865.4	49.8	23.9	-92.47	6,083.7	2,311.9	4,934.4	4,861.2	73.24	67.375 CC		
10,300.0	6,672.0	6,868.8	6,865.4	49.8	23.9	-92.47	6,083.7	2,311.9	4,934.4	4,861.1	73.31	67.313 ES		
10,400.0	6,672.0	6,868.0	6,864.7	50.9	23.8	-92.46	6,083.8	2,311.9	4,935.5	4,861.2	74.36	66.371		
10,500.0	6,672.0	6,867.3	6,864.0	51.9	23.8	-92.45	6,083.8	2,311.9	4,938.7	4,863.3	75.41	65.490		
10,600.0	6,672.0	6,866.6	6,863.3	53.0	23.8	-92.44	6,083.8	2,311.9	4,943.9	4,867.4	76.45	64.666		
10,700.0	6,672.0	6,865.9	6,862.5	54.1	23.8	-92.43	6,083.9	2,311.9	4,951.0	4,873.6	77.48	63.900		
10,800.0	6,672.0	6,865.2	6,861.8	55.2	23.8	-92.43	6,083.9	2,311.9	4,960.2	4,881.7	78.50	63.191		
10,900.0	6,672.0	6,864.5	6,861.1	56.3	23.8	-92.42	6,083.9	2,311.9	4,971.4	4,891.9	79.50	62.536		
11,000.0	6,672.0	6,863.8	6,860.4	57.4	23.8	-92.41	6,083.9	2,311.9	4,984.5	4,904.0	80.48	61.934		
11,100.0	6,672.0	6,863.0	6,859.7	58.5	23.8	-92.40	6,084.0	2,311.9	4,999.6	4,918.2	81.45	61.385		
11,200.0	6,672.0	6,862.3	6,859.0	59.6	23.8	-92.39	6,084.0	2,311.9	5,016.7	4,934.3	82.39	60.886		
11,300.0	6,672.0	6,861.6	6,858.3	60.7	23.8	-92.38	6,084.0	2,311.9	5,035.6	4,952.3	83.32	60.436		
11,400.0	6,672.0	6,860.9	6,857.5	61.8	23.8	-92.38	6,084.1	2,312.0	5,056.5	4,972.2	84.23	60.035		
11,500.0	6,672.0	6,860.2	6,856.8	62.9	23.8	-92.37	6,084.1	2,312.0	5,079.2	4,994.1	85.11	59.679		
11,600.0	6,672.0	6,859.5	6,856.1	64.1	23.8	-92.36	6,084.1	2,312.0	5,103.8	5,017.8	85.97	59.368		
11,700.0	6,672.0	6,858.7	6,855.4	65.2	23.8	-92.35	6,084.2	2,312.0	5,130.2	5,043.4	86.80	59.100		
11,800.0	6,672.0	6,858.0	6,854.7	66.3	23.8	-92.34	6,084.2	2,312.0	5,158.4	5,070.8	87.62	58.875		
11,900.0	6,672.0	6,857.3	6,854.0	67.5	23.8	-92.33	6,084.2	2,312.0	5,188.4	5,100.0	88.40	58.690		
12,000.0	6,672.0	6,856.6	6,853.2	68.6	23.8	-92.33	6,084.3	2,312.0	5,220.1	5,130.9	89.17	58.543		
12,100.0	6,672.0	6,855.9	6,852.5	69.8	23.8	-92.32	6,084.3	2,312.0	5,253.5	5,163.6	89.90	58.435		
12,200.0	6,672.0	6,855.2	6,851.8	70.9	23.8	-92.31	6,084.3	2,312.0	5,288.6	5,198.0	90.62	58.363		
12,300.0	6,672.0	6,854.4	6,851.1	72.1	23.8	-92.30	6,084.3	2,312.0	5,325.3	5,234.0	91.30	58.326		
12,400.0	6,672.0	6,853.7	6,850.4	73.2	23.8	-92.29	6,084.4	2,312.0	5,363.7	5,271.7	91.96	58.323 SF		
12,500.0	6,672.0	6,853.0	6,849.7	74.4	23.8	-92.28	6,084.4	2,312.0	5,403.6	5,311.0	92.60	58.353		
12,600.0	6,672.0	6,852.3	6,848.9	75.5	23.8	-92.27	6,084.4	2,312.0	5,445.0	5,351.8	93.21	58.414		
12,700.0	6,672.0	6,851.6	6,848.2	76.7	23.8	-92.27	6,084.5	2,312.0	5,487.9	5,394.1	93.80	58.506		
12,800.0	6,672.0	6,850.8	6,847.5	77.9	23.8	-92.26	6,084.5	2,312.0	5,532.4	5,438.0	94.37	58.626		
12,900.0	6,672.0	6,850.1	6,846.8	79.0	23.8	-92.25	6,084.5	2,312.0	5,578.2	5,483.3	94.91	58.775		
13,000.0	6,672.0	6,849.4	6,846.1	80.2	23.8	-92.24	6,084.6	2,312.0	5,625.5	5,530.0	95.42	58.952		
13,100.0	6,672.0	6,848.7	6,845.3	81.4	23.8	-92.23	6,084.6	2,312.0	5,674.1	5,578.1	95.92	59.154		
13,200.0	6,672.0	6,847.9	6,844.6	82.6	23.8	-92.22	6,084.6	2,312.0	5,724.0	5,627.6	96.39	59.382		
13,300.0	6,672.0	6,847.2	6,843.9	83.7	23.8	-92.22	6,084.7	2,312.0	5,775.2	5,678.4	96.85	59.633		
13,400.0	6,672.0	6,846.5	6,843.2	84.9	23.8	-92.21	6,084.7	2,312.0	5,827.7	5,730.4	97.28	59.909		
13,500.0	6,672.0	6,845.8	6,842.4	86.1	23.8	-92.20	6,084.7	2,312.0	5,881.4	5,783.7	97.69	60.207		
13,600.0	6,672.0	6,845.1	6,841.7	87.3	23.8	-92.19	6,084.8	2,312.1	5,936.3	5,838.2	98.08	60.526		
13,700.0	6,672.0	6,844.3	6,841.0	88.4	23.8	-92.18	6,084.8	2,312.1	5,992.4	5,893.9	98.45	60.867		
13,800.0	6,672.0	6,843.6	6,840.3	89.6	23.8	-92.17	6,084.8	2,312.1	6,049.6	5,950.8	98.81	61.227		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Rothe 31-06 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
13,900.0	6,672.0	6,842.9	6,839.5	90.8	23.8	-92.16	6,084.8	2,312.1	6,107.9	6,008.7	99.14	61.607		
14,000.0	6,672.0	6,842.2	6,838.8	92.0	23.8	-92.16	6,084.9	2,312.1	6,167.2	6,067.8	99.46	62.006		
14,100.0	6,672.0	6,841.4	6,838.1	93.2	23.8	-92.15	6,084.9	2,312.1	6,227.6	6,127.8	99.76	62.423		
14,200.0	6,672.0	6,840.7	6,837.4	94.4	23.8	-92.14	6,084.9	2,312.1	6,289.0	6,188.9	100.05	62.857		
14,300.0	6,672.0	6,840.0	6,836.7	95.6	23.7	-92.13	6,085.0	2,312.1	6,351.4	6,251.0	100.32	63.308		
14,400.0	6,672.0	6,839.3	6,835.9	96.8	23.7	-92.12	6,085.0	2,312.1	6,414.7	6,314.1	100.58	63.775		
14,500.0	6,672.0	6,838.5	6,835.2	98.0	23.7	-92.11	6,085.0	2,312.1	6,478.9	6,378.1	100.83	64.258		
14,600.0	6,672.0	6,837.8	6,834.5	99.2	23.7	-92.10	6,085.1	2,312.1	6,544.0	6,443.0	101.06	64.756		
14,700.0	6,672.0	6,837.1	6,833.7	100.4	23.7	-92.10	6,085.1	2,312.1	6,610.0	6,508.7	101.27	65.268		
14,800.0	6,672.0	6,836.3	6,833.0	101.6	23.7	-92.09	6,085.1	2,312.1	6,676.8	6,575.4	101.48	65.794		
14,900.0	6,672.0	6,835.6	6,832.3	102.7	23.7	-92.08	6,085.2	2,312.1	6,744.5	6,642.8	101.67	66.334		
15,000.0	6,672.0	6,834.9	6,831.6	103.9	23.7	-92.07	6,085.2	2,312.1	6,812.9	6,711.1	101.86	66.887		
15,100.0	6,672.0	6,834.2	6,830.8	105.1	23.7	-92.06	6,085.2	2,312.1	6,882.1	6,780.1	102.03	67.452		
15,200.0	6,672.0	6,833.4	6,830.1	106.3	23.7	-92.05	6,085.3	2,312.1	6,952.1	6,849.9	102.19	68.030		
15,300.0	6,672.0	6,832.7	6,829.4	107.6	23.7	-92.04	6,085.3	2,312.1	7,022.7	6,920.4	102.34	68.619		
15,400.0	6,672.0	6,832.0	6,828.7	108.8	23.7	-92.04	6,085.3	2,312.1	7,094.1	6,991.6	102.49	69.219		
15,500.0	6,672.0	6,831.2	6,827.9	110.0	23.7	-92.03	6,085.3	2,312.1	7,166.2	7,063.5	102.62	69.830		
15,600.0	6,672.0	6,830.5	6,827.2	111.2	23.7	-92.02	6,085.4	2,312.1	7,238.9	7,136.1	102.75	70.452		
15,700.0	6,672.0	6,829.8	6,826.5	112.4	23.7	-92.01	6,085.4	2,312.1	7,312.2	7,209.3	102.87	71.084		
15,800.0	6,672.0	6,829.1	6,825.7	113.6	23.7	-92.00	6,085.4	2,312.2	7,386.2	7,283.2	102.98	71.725		
15,900.0	6,672.0	6,828.3	6,825.0	114.8	23.7	-91.99	6,085.5	2,312.2	7,460.7	7,357.7	103.08	72.377		
16,000.0	6,672.0	6,827.6	6,824.3	116.0	23.7	-91.98	6,085.5	2,312.2	7,535.9	7,432.7	103.18	73.037		
16,100.0	6,672.0	6,826.9	6,823.5	117.2	23.7	-91.98	6,085.5	2,312.2	7,611.6	7,508.4	103.27	73.706		
16,200.0	6,672.0	6,826.1	6,822.8	118.4	23.7	-91.97	6,085.6	2,312.2	7,687.9	7,584.5	103.35	74.383		
16,300.0	6,672.0	6,825.4	6,822.1	119.6	23.7	-91.96	6,085.6	2,312.2	7,764.7	7,661.3	103.43	75.069		
16,400.0	6,672.0	6,824.7	6,821.3	120.8	23.7	-91.95	6,085.6	2,312.2	7,842.0	7,738.5	103.51	75.763		
16,500.0	6,672.0	6,823.9	6,820.6	122.0	23.7	-91.94	6,085.7	2,312.2	7,919.8	7,816.3	103.58	76.464		
16,600.0	6,672.0	6,823.2	6,819.9	123.2	23.7	-91.93	6,085.7	2,312.2	7,998.2	7,894.5	103.64	77.173		
16,700.0	6,672.0	6,822.5	6,819.2	124.5	23.7	-91.92	6,085.7	2,312.2	8,076.9	7,973.2	103.70	77.889		
16,800.0	6,672.0	6,821.7	6,818.4	125.7	23.7	-91.91	6,085.8	2,312.2	8,156.2	8,052.4	103.75	78.612		
16,900.0	6,672.0	6,821.0	6,817.7	126.9	23.7	-91.91	6,085.8	2,312.2	8,235.9	8,132.1	103.80	79.342		
17,000.0	6,672.0	6,820.3	6,816.9	128.1	23.7	-91.90	6,085.8	2,312.2	8,316.0	8,212.2	103.85	80.078		
17,100.0	6,672.0	6,819.5	6,816.2	129.3	23.7	-91.89	6,085.9	2,312.2	8,396.6	8,292.7	103.89	80.820		
17,200.0	6,672.0	6,818.8	6,815.5	130.5	23.7	-91.88	6,085.9	2,312.2	8,477.5	8,373.6	103.93	81.569		
17,300.0	6,672.0	6,818.1	6,814.7	131.7	23.7	-91.87	6,085.9	2,312.2	8,558.9	8,454.9	103.97	82.323		
17,400.0	6,672.0	6,817.3	6,814.0	133.0	23.7	-91.86	6,086.0	2,312.2	8,640.6	8,536.6	104.00	83.083		
17,500.0	6,672.0	6,816.6	6,813.3	134.2	23.7	-91.85	6,086.0	2,312.2	8,722.8	8,618.7	104.03	83.848		
17,600.0	6,672.0	6,815.8	6,812.5	135.4	23.7	-91.85	6,086.0	2,312.2	8,805.2	8,701.2	104.06	84.619		
17,700.0	6,672.0	6,815.1	6,811.8	136.6	23.7	-91.84	6,086.0	2,312.2	8,888.1	8,784.0	104.08	85.394		
17,800.0	6,672.0	6,814.4	6,811.1	137.8	23.7	-91.83	6,086.1	2,312.2	8,971.3	8,867.2	104.11	86.175		
17,900.0	6,672.0	6,813.6	6,810.3	139.0	23.7	-91.82	6,086.1	2,312.2	9,054.8	8,950.7	104.13	86.960		
18,000.0	6,672.0	6,812.9	6,809.6	140.3	23.7	-91.81	6,086.1	2,312.3	9,138.6	9,034.5	104.14	87.750		
18,100.0	6,672.0	6,812.2	6,808.9	141.5	23.7	-91.80	6,086.2	2,312.3	9,222.8	9,118.7	104.16	88.545		
18,200.0	6,672.0	6,811.4	6,808.1	142.7	23.6	-91.79	6,086.2	2,312.3	9,307.3	9,203.1	104.17	89.343		
18,300.0	6,672.0	6,810.7	6,807.4	143.9	23.6	-91.78	6,086.2	2,312.3	9,392.1	9,287.9	104.19	90.146		
18,342.5	6,672.0	6,810.4	6,807.1	144.4	23.6	-91.78	6,086.3	2,312.3	9,428.2	9,324.0	104.19	90.488		



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Rothe 34-06 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	47.42	2,235.7	2,433.0	3,304.3					
100.0	100.0	95.0	95.0	0.1	0.2	47.42	2,235.6	2,433.1	3,304.2	3,303.9	0.29	N/A		
129.3	129.3	121.3	121.3	0.2	0.2	47.42	2,235.5	2,433.1	3,304.2	3,303.7	0.48	6,885.049		
200.0	200.0	183.0	183.0	0.5	0.5	47.43	2,235.4	2,433.3	3,304.3	3,303.3	0.95	3,482.746		
300.0	300.0	291.4	291.4	0.8	0.8	47.43	2,235.4	2,433.6	3,304.5	3,302.8	1.69	1,960.408		
400.0	400.0	384.0	384.0	1.2	1.2	47.43	2,235.4	2,433.8	3,304.6	3,302.2	2.37	1,395.906		
500.0	500.0	482.8	482.8	1.6	1.5	47.44	2,235.5	2,434.1	3,304.9	3,301.8	3.07	1,076.136		
600.0	600.0	591.4	591.4	1.9	1.9	47.44	2,235.6	2,434.3	3,305.0	3,301.2	3.81	867.719		
700.0	700.0	681.4	681.4	2.3	2.2	47.44	2,235.5	2,434.5	3,305.2	3,300.7	4.48	737.477		
800.0	800.0	791.7	791.7	2.6	2.6	47.44	2,235.7	2,434.6	3,305.4	3,300.2	5.23	632.554		
886.6	886.6	878.6	878.6	2.9	2.9	47.44	2,235.7	2,434.6	3,305.4	3,299.6	5.84	566.066		
900.0	900.0	891.9	891.9	3.0	2.9	47.44	2,235.7	2,434.6	3,305.4	3,299.5	5.93	557.096		
1,000.0	1,000.0	982.6	982.6	3.4	3.3	47.44	2,235.7	2,434.8	3,305.5	3,298.9	6.61	500.166		
1,100.0	1,100.0	1,101.5	1,101.5	3.7	3.7	47.44	2,235.8	2,434.8	3,305.6	3,298.2	7.38	447.790		
1,168.1	1,168.1	1,160.1	1,160.1	4.0	3.9	47.44	2,235.8	2,434.7	3,305.5	3,297.7	7.83	422.124		
1,200.0	1,200.0	1,187.8	1,187.8	4.1	4.0	47.44	2,235.8	2,434.8	3,305.6	3,297.5	8.04	411.055		
1,300.0	1,300.0	1,301.0	1,301.0	4.4	4.4	47.44	2,235.8	2,434.7	3,305.5	3,296.7	8.80	375.835		
1,400.0	1,400.0	1,395.5	1,395.5	4.8	4.7	47.44	2,235.6	2,434.6	3,305.4	3,295.9	9.48	348.546		
1,500.0	1,500.0	1,493.8	1,493.8	5.1	5.0	47.44	2,235.5	2,434.6	3,305.3	3,295.1	10.18	324.540		
1,600.0	1,600.0	1,601.8	1,601.8	5.5	5.4	47.44	2,235.6	2,434.3	3,305.1	3,294.2	10.92	302.675		
1,700.0	1,700.0	1,699.7	1,699.7	5.9	5.8	47.44	2,235.4	2,434.2	3,304.8	3,293.2	11.62	284.416		
1,783.2	1,783.2	1,775.2	1,775.2	6.2	6.0	47.44	2,235.2	2,434.2	3,304.8	3,292.6	12.18	271.297		
1,800.0	1,800.0	1,790.4	1,790.4	6.2	6.1	47.44	2,235.2	2,434.2	3,304.8	3,292.5	12.29	268.791		
1,900.0	1,900.0	1,893.7	1,893.7	6.6	6.4	47.44	2,235.2	2,434.2	3,304.8	3,291.8	13.01	253.943		
2,000.0	2,000.0	2,003.9	2,003.9	6.9	6.8	47.44	2,235.1	2,434.0	3,304.6	3,290.8	13.76	240.215		
2,100.0	2,100.0	2,092.8	2,092.7	7.3	7.1	47.44	2,235.0	2,433.9	3,304.4	3,290.0	14.43	229.065		
2,200.0	2,200.0	2,194.1	2,194.1	7.7	7.5	47.43	2,235.2	2,433.6	3,304.4	3,289.2	15.14	218.283		
2,300.0	2,300.0	2,312.8	2,312.8	8.0	7.9	98.45	2,235.9	2,432.5	3,304.3	3,288.4	15.91	207.720		
2,306.4	2,306.4	2,320.5	2,320.5	8.0	7.9	98.45	2,235.9	2,432.4	3,304.3	3,288.3	15.96	207.077		
2,400.0	2,399.8	2,400.0	2,400.0	8.4	8.2	98.50	2,236.4	2,431.6	3,304.7	3,288.1	16.56	199.500		
2,500.0	2,499.5	2,500.1	2,500.1	8.7	8.6	98.61	2,237.1	2,430.6	3,305.7	3,288.5	17.27	191.449		
2,600.0	2,598.7	2,611.4	2,611.3	9.1	8.9	98.79	2,237.8	2,429.3	3,307.1	3,289.1	18.01	183.645		
2,700.0	2,697.5	2,697.8	2,697.8	9.4	9.2	98.97	2,238.4	2,428.3	3,309.2	3,290.5	18.66	177.305		
2,800.0	2,795.6	2,814.8	2,814.7	9.8	9.7	99.27	2,239.1	2,426.9	3,311.7	3,292.3	19.43	170.479		
2,900.0	2,893.1	2,897.3	2,897.3	10.1	9.9	99.51	2,239.4	2,426.0	3,314.9	3,294.9	20.07	165.172		
3,000.0	2,989.6	2,988.4	2,988.4	10.5	10.3	99.82	2,239.8	2,425.3	3,319.1	3,298.4	20.74	160.001		
3,100.0	3,085.3	3,088.1	3,088.1	10.9	10.6	100.21	2,240.0	2,424.8	3,324.2	3,302.7	21.45	154.961		
3,200.0	3,179.8	3,169.5	3,169.4	11.2	10.9	100.54	2,239.8	2,424.8	3,330.2	3,308.1	22.10	150.702		
3,300.0	3,273.2	3,249.2	3,249.2	11.6	11.2	100.89	2,239.4	2,425.5	3,337.6	3,314.9	22.74	146.758		
3,387.5	3,353.8	3,323.0	3,322.9	11.9	11.4	101.24	2,238.7	2,426.6	3,345.3	3,322.0	23.32	143.426		
3,400.0	3,365.2	3,334.9	3,334.8	12.0	11.5	101.33	2,238.6	2,426.8	3,346.5	3,323.0	23.41	142.935		
3,500.0	3,456.8	3,424.9	3,424.8	12.4	11.8	101.97	2,237.3	2,428.5	3,356.0	3,331.9	24.10	139.230		
3,600.0	3,548.3	3,504.4	3,504.3	12.8	12.1	102.54	2,236.0	2,430.4	3,366.3	3,341.5	24.76	135.939		
3,700.0	3,639.8	3,598.8	3,598.6	13.2	12.4	103.21	2,234.6	2,432.7	3,377.2	3,351.7	25.48	132.537		
3,800.0	3,731.4	3,703.6	3,703.4	13.6	12.8	103.96	2,232.7	2,435.1	3,388.3	3,362.0	26.24	129.125		
3,900.0	3,822.9	3,782.3	3,782.0	14.0	13.0	104.52	2,231.1	2,437.0	3,399.9	3,373.0	26.91	126.349		
4,000.0	3,914.4	3,888.3	3,888.0	14.4	13.4	105.26	2,229.2	2,439.4	3,412.0	3,384.3	27.68	123.267		
4,100.0	4,005.9	4,030.9	4,030.6	14.8	13.9	106.24	2,226.4	2,440.7	3,423.5	3,394.9	28.58	119.768		
4,200.0	4,097.5	4,138.6	4,138.2	15.2	14.3	106.97	2,224.3	2,440.7	3,434.8	3,405.4	29.37	116.967		
4,300.0	4,189.0	4,260.4	4,260.0	15.6	14.7	107.77	2,221.9	2,439.4	3,445.8	3,415.6	30.20	114.104		
4,400.0	4,280.5	4,367.4	4,367.0	16.1	15.1	108.47	2,219.8	2,437.6	3,456.6	3,425.6	30.98	111.570		
4,500.0	4,372.1	4,474.7	4,474.3	16.5	15.5	109.16	2,218.0	2,435.0	3,467.5	3,435.7	31.77	109.153		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Rothe 34-06 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
4,600.0	4,463.6	4,567.4	4,566.8	16.9	15.8	109.74	2,216.2	2,432.5	3,478.5	3,446.0	32.50	107.017		
4,700.0	4,555.1	4,642.4	4,641.8	17.4	16.0	110.22	2,214.7	2,430.8	3,490.2	3,457.0	33.18	105.184		
4,800.0	4,646.7	4,700.0	4,699.4	17.8	16.2	110.58	2,213.8	2,429.7	3,502.8	3,469.1	33.80	103.646		
4,900.0	4,738.2	4,766.8	4,766.2	18.2	16.5	111.01	2,212.7	2,429.1	3,516.7	3,482.2	34.44	102.105		
5,000.0	4,829.7	4,833.6	4,833.0	18.7	16.7	111.44	2,211.5	2,429.3	3,531.8	3,496.7	35.09	100.660		
5,100.0	4,921.3	4,914.3	4,913.6	19.1	17.0	111.96	2,210.0	2,430.0	3,547.7	3,511.9	35.78	99.148		
5,200.0	5,012.8	5,006.9	5,006.2	19.5	17.3	112.54	2,208.8	2,430.6	3,564.1	3,527.6	36.52	97.585		
5,300.0	5,104.3	5,123.4	5,122.7	20.0	17.7	113.25	2,208.3	2,430.2	3,580.5	3,543.1	37.36	95.845		
5,400.0	5,195.8	5,208.4	5,207.7	20.4	18.0	113.75	2,208.6	2,429.4	3,597.0	3,559.0	38.07	94.482		
5,500.0	5,287.4	5,277.5	5,276.9	20.9	18.3	114.15	2,209.2	2,428.9	3,614.4	3,575.6	38.72	93.337		
5,600.0	5,378.9	5,364.7	5,364.1	21.3	18.6	114.65	2,210.3	2,428.7	3,632.4	3,593.0	39.45	92.086		
5,700.0	5,470.4	5,439.2	5,438.6	21.8	18.8	115.07	2,211.2	2,428.5	3,651.0	3,610.9	40.12	91.006		
5,800.0	5,562.0	5,501.1	5,500.4	22.2	19.0	115.42	2,211.8	2,428.9	3,670.5	3,629.8	40.74	90.105		
5,900.0	5,653.5	5,585.5	5,584.8	22.7	19.3	115.92	2,211.9	2,430.3	3,690.9	3,649.5	41.44	89.055		
6,000.0	5,745.0	5,672.8	5,672.1	23.1	19.6	116.44	2,211.2	2,432.2	3,711.7	3,669.6	42.17	88.028		
6,100.0	5,836.6	5,805.5	5,804.8	23.6	20.1	117.24	2,208.5	2,435.2	3,732.6	3,689.6	43.08	86.654		
6,200.0	5,928.1	5,923.9	5,923.1	24.0	20.5	117.95	2,205.3	2,436.7	3,752.8	3,708.9	43.93	85.437		
6,278.6	6,000.0	5,995.7	5,994.9	24.4	20.8	118.38	2,203.5	2,437.3	3,768.7	3,724.2	44.51	84.679		
6,290.0	6,010.4	6,006.4	6,005.5	24.4	20.8	116.64	2,203.3	2,437.4	3,771.1	3,726.5	44.59	84.568		
6,300.0	6,019.5	6,015.9	6,015.1	24.5	20.8	115.06	2,203.1	2,437.5	3,773.0	3,728.3	44.67	84.469		
6,350.0	6,065.8	6,064.3	6,063.4	24.7	21.0	105.22	2,202.0	2,437.8	3,780.0	3,735.0	45.04	83.922		
6,400.0	6,113.0	6,116.2	6,115.3	24.9	21.2	91.70	2,200.9	2,438.1	3,782.6	3,737.2	45.42	83.281		
6,450.0	6,160.7	6,175.5	6,174.6	25.1	21.4	75.06	2,199.6	2,438.3	3,780.7	3,734.9	45.82	82.518		
6,500.0	6,208.5	6,221.9	6,221.0	25.3	21.6	57.68	2,198.5	2,438.3	3,774.2	3,728.0	46.14	81.791		
6,550.0	6,255.8	6,258.9	6,258.0	25.4	21.7	42.51	2,197.7	2,438.5	3,763.4	3,717.0	46.42	81.078		
6,600.0	6,302.5	6,295.3	6,294.4	25.6	21.8	30.70	2,197.0	2,438.7	3,748.4	3,701.7	46.67	80.316		
6,650.0	6,347.9	6,345.9	6,344.9	25.7	22.0	21.84	2,196.0	2,439.0	3,729.3	3,682.3	46.97	79.402		
6,700.0	6,391.6	6,396.7	6,395.8	25.9	22.2	15.02	2,195.1	2,439.2	3,706.0	3,658.7	47.25	78.436		
6,750.0	6,433.4	6,436.6	6,435.7	26.0	22.3	9.46	2,194.4	2,439.3	3,678.8	3,631.4	47.47	77.497		
6,800.0	6,472.8	6,473.7	6,472.7	26.1	22.4	4.65	2,193.7	2,439.4	3,648.1	3,600.5	47.67	76.531		
6,850.0	6,509.4	6,508.9	6,508.0	26.2	22.6	0.15	2,193.1	2,439.5	3,614.1	3,566.2	47.85	75.536		
6,900.0	6,543.0	6,543.2	6,542.3	26.3	22.7	-4.41	2,192.6	2,439.6	3,577.0	3,529.0	48.01	74.507		
6,950.0	6,573.2	6,574.1	6,573.1	26.4	22.8	-9.42	2,192.2	2,439.7	3,537.2	3,489.1	48.15	73.464		
7,000.0	6,599.8	6,601.2	6,600.2	26.5	22.9	-15.33	2,191.9	2,439.7	3,495.1	3,446.8	48.27	72.412		
7,050.0	6,622.5	6,624.4	6,623.5	26.6	23.0	-22.77	2,191.6	2,439.8	3,451.0	3,402.7	48.36	71.357		
7,100.0	6,641.1	6,643.5	6,642.5	26.7	23.0	-32.52	2,191.4	2,439.8	3,405.4	3,357.0	48.44	70.304		
7,150.0	6,655.4	6,658.2	6,657.2	26.8	23.1	-45.38	2,191.3	2,439.8	3,358.7	3,310.2	48.49	69.258		
7,200.0	6,665.4	6,668.4	6,667.4	26.9	23.1	-61.45	2,191.2	2,439.8	3,311.2	3,262.7	48.53	68.226		
7,250.0	6,670.8	6,674.0	6,673.0	27.0	23.1	-78.93	2,191.1	2,439.8	3,263.6	3,215.0	48.56	67.212		
7,285.7	6,672.0	6,675.2	6,674.2	27.1	23.1	-90.56	2,191.1	2,439.8	3,229.7	3,181.1	48.56	66.505		
7,300.0	6,672.0	6,675.2	6,674.2	27.1	23.1	-90.56	2,191.1	2,439.8	3,216.1	3,167.6	48.56	66.224		
7,400.0	6,672.0	6,675.2	6,674.2	27.3	23.1	-90.57	2,191.1	2,439.8	3,121.7	3,073.1	48.58	64.252		
7,500.0	6,672.0	6,675.2	6,674.3	27.6	23.1	-90.57	2,191.1	2,439.8	3,027.5	2,978.9	48.62	62.275		
7,600.0	6,672.0	6,675.3	6,674.3	28.0	23.1	-90.57	2,191.1	2,439.8	2,933.8	2,885.2	48.66	60.291		
7,700.0	6,672.0	6,675.3	6,674.4	28.3	23.1	-90.57	2,191.1	2,439.8	2,840.5	2,791.8	48.72	58.300		
7,800.0	6,672.0	6,675.4	6,674.4	28.8	23.1	-90.57	2,191.1	2,439.8	2,747.7	2,698.9	48.80	56.303		
7,900.0	6,672.0	6,675.4	6,674.4	29.3	23.1	-90.58	2,191.1	2,439.8	2,655.3	2,606.4	48.90	54.298		
8,000.0	6,672.0	6,675.4	6,674.5	29.8	23.1	-90.58	2,191.1	2,439.8	2,563.6	2,514.6	49.03	52.287		
8,100.0	6,672.0	6,675.5	6,674.5	30.4	23.1	-90.58	2,191.1	2,439.8	2,472.5	2,423.3	49.18	50.269		
8,200.0	6,672.0	6,675.5	6,674.5	31.0	23.1	-90.58	2,191.1	2,439.8	2,382.1	2,332.7	49.37	48.245		
8,300.0	6,672.0	6,675.5	6,674.6	31.7	23.1	-90.58	2,191.1	2,439.8	2,292.5	2,242.9	49.60	46.215		
8,400.0	6,672.0	6,675.6	6,674.6	32.4	23.1	-90.59	2,191.1	2,439.8	2,203.7	2,153.9	49.88	44.181		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Rothe 34-06 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
8,500.0	6,672.0	6,675.6	6,674.6	33.1	23.1	-90.59	2,191.1	2,439.8	2,116.0	2,065.8	50.21	42.143		
8,600.0	6,672.0	6,675.6	6,674.7	33.9	23.1	-90.59	2,191.1	2,439.8	2,029.4	1,978.8	50.60	40.106		
8,700.0	6,672.0	6,675.7	6,674.7	34.7	23.1	-90.59	2,191.1	2,439.8	1,944.1	1,893.1	51.07	38.071		
8,800.0	6,672.0	6,675.7	6,674.7	35.5	23.1	-90.59	2,191.1	2,439.8	1,860.3	1,808.7	51.61	36.043		
8,900.0	6,672.0	6,675.7	6,674.8	36.3	23.1	-90.60	2,191.1	2,439.8	1,778.1	1,725.9	52.26	34.027		
9,000.0	6,672.0	6,675.8	6,674.8	37.2	23.1	-90.60	2,191.1	2,439.8	1,697.9	1,644.8	53.01	32.032		
9,100.0	6,672.0	6,675.8	6,674.8	38.1	23.1	-90.60	2,191.1	2,439.8	1,619.8	1,565.9	53.88	30.065		
9,200.0	6,672.0	6,675.8	6,674.9	39.0	23.1	-90.60	2,191.1	2,439.8	1,544.2	1,489.4	54.88	28.138		
9,300.0	6,672.0	6,675.9	6,674.9	39.9	23.1	-90.60	2,191.1	2,439.8	1,471.6	1,415.6	56.03	26.265		
9,400.0	6,672.0	6,675.9	6,674.9	40.8	23.1	-90.61	2,191.1	2,439.8	1,402.3	1,345.0	57.33	24.459		
9,500.0	6,672.0	6,675.9	6,675.0	41.8	23.1	-90.61	2,191.1	2,439.8	1,337.0	1,278.2	58.79	22.740		
9,600.0	6,672.0	6,676.0	6,675.0	42.7	23.1	-90.61	2,191.1	2,439.8	1,276.1	1,215.7	60.41	21.124		
9,700.0	6,672.0	6,676.0	6,675.0	43.7	23.1	-90.61	2,191.1	2,439.8	1,220.4	1,158.2	62.16	19.631		
9,800.0	6,672.0	6,676.0	6,675.1	44.7	23.1	-90.61	2,191.1	2,439.8	1,170.5	1,106.5	64.03	18.282		
9,900.0	6,672.0	6,676.1	6,675.1	45.7	23.1	-90.61	2,191.1	2,439.8	1,127.4	1,061.4	65.95	17.094		
10,000.0	6,672.0	6,676.1	6,675.1	46.7	23.1	-90.62	2,191.1	2,439.8	1,091.7	1,023.9	67.87	16.084		
10,100.0	6,672.0	6,676.1	6,675.2	47.7	23.1	-90.62	2,191.1	2,439.8	1,064.3	994.6	69.72	15.266		
10,200.0	6,672.0	6,676.2	6,675.2	48.8	23.1	-90.62	2,191.1	2,439.8	1,045.7	974.3	71.39	14.647		
10,300.0	6,672.0	6,676.2	6,675.2	49.8	23.1	-90.62	2,191.1	2,439.8	1,036.5	963.7	72.82	14.233		
10,346.1	6,672.0	6,676.2	6,675.2	50.3	23.1	-90.62	2,191.1	2,439.8	1,035.5	962.1	73.38	14.111 CC, ES		
10,400.0	6,672.0	6,676.2	6,675.3	50.9	23.1	-90.62	2,191.1	2,439.8	1,036.9	962.9	73.94	14.024		
10,500.0	6,672.0	6,676.3	6,675.3	51.9	23.1	-90.63	2,191.1	2,439.8	1,046.8	972.1	74.70	14.014 SF		
10,600.0	6,672.0	6,676.3	6,675.3	53.0	23.1	-90.63	2,191.1	2,439.8	1,066.1	991.0	75.11	14.195		
10,700.0	6,672.0	6,676.3	6,675.4	54.1	23.1	-90.63	2,191.1	2,439.8	1,094.2	1,019.1	75.18	14.555		
10,800.0	6,672.0	6,676.4	6,675.4	55.2	23.1	-90.63	2,191.1	2,439.8	1,130.5	1,055.6	74.96	15.081		
10,900.0	6,672.0	6,676.4	6,675.4	56.3	23.1	-90.63	2,191.1	2,439.8	1,174.2	1,099.7	74.52	15.757		
11,000.0	6,672.0	6,676.4	6,675.5	57.4	23.1	-90.63	2,191.1	2,439.8	1,224.5	1,150.6	73.91	16.569		
11,100.0	6,672.0	6,676.5	6,675.5	58.5	23.1	-90.64	2,191.1	2,439.8	1,280.7	1,207.5	73.18	17.502		
11,200.0	6,672.0	6,676.5	6,675.5	59.6	23.1	-90.64	2,191.1	2,439.8	1,341.9	1,269.6	72.38	18.541		
11,300.0	6,672.0	6,676.5	6,675.5	60.7	23.1	-90.64	2,191.1	2,439.8	1,407.6	1,336.1	71.54	19.675		
11,400.0	6,672.0	6,676.5	6,675.6	61.8	23.1	-90.64	2,191.1	2,439.8	1,477.2	1,406.5	70.71	20.892		
11,500.0	6,672.0	6,676.6	6,675.6	62.9	23.2	-90.64	2,191.1	2,439.8	1,550.1	1,480.2	69.88	22.182		
11,600.0	6,672.0	6,676.6	6,675.6	64.1	23.2	-90.64	2,191.1	2,439.8	1,625.8	1,556.7	69.08	23.534		
11,700.0	6,672.0	6,676.6	6,675.7	65.2	23.2	-90.65	2,191.1	2,439.8	1,704.1	1,635.8	68.32	24.942		
11,800.0	6,672.0	6,676.7	6,675.7	66.3	23.2	-90.65	2,191.1	2,439.8	1,784.5	1,716.9	67.60	26.399		
11,900.0	6,672.0	6,676.7	6,675.7	67.5	23.2	-90.65	2,191.1	2,439.8	1,866.8	1,799.9	66.92	27.897		
12,000.0	6,672.0	6,676.7	6,675.8	68.6	23.2	-90.65	2,191.1	2,439.8	1,950.8	1,884.5	66.28	29.432		
12,100.0	6,672.0	6,676.8	6,675.8	69.8	23.2	-90.65	2,191.1	2,439.8	2,036.2	1,970.5	65.68	31.000		
12,200.0	6,672.0	6,676.8	6,675.8	70.9	23.2	-90.65	2,191.1	2,439.8	2,122.9	2,057.7	65.13	32.596		
12,300.0	6,672.0	6,676.8	6,675.9	72.1	23.2	-90.65	2,191.1	2,439.8	2,210.7	2,146.1	64.61	34.216		
12,400.0	6,672.0	6,676.8	6,675.9	73.2	23.2	-90.66	2,191.1	2,439.8	2,299.5	2,235.3	64.13	35.857		
12,500.0	6,672.0	6,676.9	6,675.9	74.4	23.2	-90.66	2,191.1	2,439.8	2,389.1	2,325.5	63.68	37.518		
12,600.0	6,672.0	6,676.9	6,675.9	75.5	23.2	-90.66	2,191.1	2,439.8	2,479.6	2,416.3	63.26	39.194		
12,700.0	6,672.0	6,676.9	6,676.0	76.7	23.2	-90.66	2,191.1	2,439.8	2,570.8	2,507.9	62.88	40.885		
12,800.0	6,672.0	6,677.0	6,676.0	77.9	23.2	-90.66	2,191.1	2,439.8	2,662.6	2,600.0	62.52	42.589		
12,900.0	6,672.0	6,677.0	6,676.0	79.0	23.2	-90.66	2,191.1	2,439.8	2,754.9	2,692.7	62.18	44.303		
13,000.0	6,672.0	6,677.0	6,676.1	80.2	23.2	-90.67	2,191.1	2,439.8	2,847.8	2,785.9	61.87	46.027		
13,100.0	6,672.0	6,677.1	6,676.1	81.4	23.2	-90.67	2,191.1	2,439.8	2,941.2	2,879.6	61.58	47.758		
13,200.0	6,672.0	6,677.1	6,676.1	82.6	23.2	-90.67	2,191.1	2,439.8	3,034.9	2,973.6	61.32	49.497		
13,300.0	6,672.0	6,677.1	6,676.1	83.7	23.2	-90.67	2,191.1	2,439.8	3,129.1	3,068.0	61.07	51.241		
13,400.0	6,672.0	6,677.1	6,676.2	84.9	23.2	-90.67	2,191.1	2,439.8	3,223.6	3,162.7	60.83	52.991		
13,500.0	6,672.0	6,677.2	6,676.2	86.1	23.2	-90.67	2,191.1	2,439.8	3,318.4	3,257.8	60.62	54.745		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Rothe 34-06 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
13,600.0	6,672.0	6,677.2	6,676.2	87.3	23.2	-90.67	2,191.1	2,439.8	3,413.5	3,353.1	60.41	56.502		
13,700.0	6,672.0	6,677.2	6,676.3	88.4	23.2	-90.68	2,191.1	2,439.8	3,508.9	3,448.7	60.23	58.263		
13,800.0	6,672.0	6,677.3	6,676.3	89.6	23.2	-90.68	2,191.1	2,439.8	3,604.5	3,544.5	60.05	60.025		
13,900.0	6,672.0	6,677.3	6,676.3	90.8	23.2	-90.68	2,191.1	2,439.8	3,700.4	3,640.5	59.89	61.789		
14,000.0	6,672.0	6,677.3	6,676.3	92.0	23.2	-90.68	2,191.1	2,439.8	3,796.4	3,736.7	59.74	63.554		
14,100.0	6,672.0	6,677.3	6,676.4	93.2	23.2	-90.68	2,191.1	2,439.8	3,892.7	3,833.1	59.59	65.320		
14,200.0	6,672.0	6,677.4	6,676.4	94.4	23.2	-90.68	2,191.1	2,439.8	3,989.2	3,929.7	59.46	67.087		
14,300.0	6,672.0	6,677.4	6,676.4	95.6	23.2	-90.68	2,191.1	2,439.8	4,085.8	4,026.4	59.34	68.853		
14,400.0	6,672.0	6,677.4	6,676.5	96.8	23.2	-90.69	2,191.1	2,439.8	4,182.5	4,123.3	59.23	70.619		
14,500.0	6,672.0	6,677.4	6,676.5	98.0	23.2	-90.69	2,191.1	2,439.8	4,279.5	4,220.3	59.12	72.384		
14,600.0	6,672.0	6,677.5	6,676.5	99.2	23.2	-90.69	2,191.1	2,439.8	4,376.5	4,317.5	59.02	74.148		
14,700.0	6,672.0	6,677.5	6,676.5	100.4	23.2	-90.69	2,191.1	2,439.8	4,473.7	4,414.8	58.93	75.911		
14,800.0	6,672.0	6,677.5	6,676.6	101.6	23.2	-90.69	2,191.1	2,439.8	4,571.0	4,512.2	58.85	77.673		
14,900.0	6,672.0	6,677.6	6,676.6	102.7	23.2	-90.69	2,191.1	2,439.8	4,668.4	4,609.7	58.77	79.432		
15,000.0	6,672.0	6,677.6	6,676.6	103.9	23.2	-90.69	2,191.1	2,439.8	4,766.0	4,707.3	58.70	81.190		
15,100.0	6,672.0	6,677.6	6,676.6	105.1	23.2	-90.69	2,191.1	2,439.8	4,863.6	4,804.9	58.64	82.945		
15,200.0	6,672.0	6,677.6	6,676.7	106.3	23.2	-90.70	2,191.1	2,439.8	4,961.3	4,902.7	58.58	84.698		
15,300.0	6,672.0	6,677.7	6,676.7	107.6	23.2	-90.70	2,191.1	2,439.8	5,059.1	5,000.6	58.52	86.449		
15,400.0	6,672.0	6,677.7	6,676.7	108.8	23.2	-90.70	2,191.1	2,439.8	5,157.0	5,098.5	58.47	88.196		
15,500.0	6,672.0	6,677.7	6,676.7	110.0	23.2	-90.70	2,191.1	2,439.8	5,254.9	5,196.5	58.43	89.941		
15,600.0	6,672.0	6,677.7	6,676.8	111.2	23.2	-90.70	2,191.1	2,439.8	5,353.0	5,294.6	58.39	91.683		
15,700.0	6,672.0	6,677.8	6,676.8	112.4	23.2	-90.70	2,191.1	2,439.8	5,451.1	5,392.7	58.35	93.422		
15,800.0	6,672.0	6,677.8	6,676.8	113.6	23.2	-90.70	2,191.1	2,439.8	5,549.3	5,490.9	58.32	95.157		
15,900.0	6,672.0	6,677.8	6,676.9	114.8	23.2	-90.70	2,191.1	2,439.8	5,647.5	5,589.2	58.29	96.889		
16,000.0	6,672.0	6,677.8	6,676.9	116.0	23.2	-90.70	2,191.1	2,439.8	5,745.8	5,687.5	58.26	98.617		
16,100.0	6,672.0	6,677.9	6,676.9	117.2	23.2	-90.71	2,191.1	2,439.8	5,844.1	5,785.9	58.24	100.342		
16,200.0	6,672.0	6,677.9	6,676.9	118.4	23.2	-90.71	2,191.1	2,439.8	5,942.6	5,884.3	58.22	102.063		
16,300.0	6,672.0	6,677.9	6,677.0	119.6	23.2	-90.71	2,191.1	2,439.8	6,041.0	5,982.8	58.21	103.780		
16,400.0	6,672.0	6,677.9	6,677.0	120.8	23.2	-90.71	2,191.1	2,439.8	6,139.5	6,081.3	58.20	105.493		
16,500.0	6,672.0	6,678.0	6,677.0	122.0	23.2	-90.71	2,191.1	2,439.8	6,238.1	6,179.9	58.19	107.202		
16,600.0	6,672.0	6,678.0	6,677.0	123.2	23.2	-90.71	2,191.1	2,439.8	6,336.7	6,278.5	58.18	108.907		
16,700.0	6,672.0	6,678.0	6,677.1	124.5	23.2	-90.71	2,191.1	2,439.8	6,435.3	6,377.1	58.18	110.608		
16,800.0	6,672.0	6,678.0	6,677.1	125.7	23.2	-90.71	2,191.0	2,439.8	6,534.0	6,475.8	58.18	112.304		
16,900.0	6,672.0	6,678.1	6,677.1	126.9	23.2	-90.71	2,191.0	2,439.8	6,632.7	6,574.5	58.18	113.996		
17,000.0	6,672.0	6,678.1	6,677.1	128.1	23.2	-90.72	2,191.0	2,439.8	6,731.4	6,673.3	58.19	115.684		
17,100.0	6,672.0	6,678.1	6,677.2	129.3	23.2	-90.72	2,191.0	2,439.8	6,830.2	6,772.0	58.20	117.367		
17,200.0	6,672.0	6,678.1	6,677.2	130.5	23.2	-90.72	2,191.0	2,439.8	6,929.1	6,870.9	58.21	119.046		
17,300.0	6,672.0	6,678.2	6,677.2	131.7	23.2	-90.72	2,191.0	2,439.8	7,027.9	6,969.7	58.22	120.720		
17,400.0	6,672.0	6,678.2	6,677.2	133.0	23.2	-90.72	2,191.0	2,439.8	7,126.8	7,068.6	58.23	122.389		
17,500.0	6,672.0	6,678.2	6,677.3	134.2	23.2	-90.72	2,191.0	2,439.8	7,225.7	7,167.5	58.25	124.054		
17,600.0	6,672.0	6,678.2	6,677.3	135.4	23.2	-90.72	2,191.0	2,439.8	7,324.7	7,266.4	58.26	125.713		
17,700.0	6,672.0	6,678.3	6,677.3	136.6	23.2	-90.72	2,191.0	2,439.8	7,423.6	7,365.3	58.28	127.368		
17,800.0	6,672.0	6,678.3	6,677.3	137.8	23.2	-90.72	2,191.0	2,439.8	7,522.6	7,464.3	58.31	129.018		
17,900.0	6,672.0	6,678.3	6,677.3	139.0	23.2	-90.72	2,191.0	2,439.8	7,621.6	7,563.3	58.33	130.663		
18,000.0	6,672.0	6,678.3	6,677.4	140.3	23.2	-90.72	2,191.0	2,439.8	7,720.7	7,662.3	58.36	132.304		
18,100.0	6,672.0	6,678.4	6,677.4	141.5	23.2	-90.73	2,191.0	2,439.8	7,819.8	7,761.4	58.38	133.939		
18,200.0	6,672.0	6,678.4	6,677.4	142.7	23.2	-90.73	2,191.0	2,439.8	7,918.8	7,860.4	58.41	135.569		
18,300.0	6,672.0	6,678.4	6,677.4	143.9	23.2	-90.73	2,191.0	2,439.8	8,018.0	7,959.5	58.44	137.194		
18,342.5	6,672.0	6,678.4	6,677.4	144.4	23.2	-90.73	2,191.0	2,439.8	8,060.1	8,001.6	58.46	137.882		



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Rothe 41-06 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWGS, 6720-2_Unknown													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis		Distance								Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
0.0	0.0	0.0	0.0	0.0	0.0	30.89	6,137.4	3,671.4	7,151.7					
100.0	100.0	111.5	111.5	0.1	0.2	30.89	6,137.4	3,671.1	7,151.6	7,151.3	0.32	N/A		
177.7	177.7	174.7	174.7	0.4	0.4	30.88	6,137.4	3,671.0	7,151.5	7,150.7	0.84	8,516.833		
200.0	200.0	193.7	193.7	0.5	0.5	30.88	6,137.5	3,671.0	7,151.5	7,150.6	0.99	7,252.899		
300.0	300.0	294.5	294.5	0.8	0.9	30.88	6,137.7	3,670.7	7,151.6	7,149.9	1.70	4,215.709		
400.0	400.0	384.3	384.3	1.2	1.2	30.88	6,137.9	3,670.5	7,151.7	7,149.3	2.37	3,019.383		
500.0	500.0	473.3	473.3	1.6	1.5	30.88	6,138.2	3,670.4	7,151.9	7,148.9	3.04	2,354.114		
600.0	600.0	561.5	561.5	1.9	1.8	30.88	6,138.6	3,670.5	7,152.4	7,148.7	3.70	1,930.632		
700.0	700.0	665.7	665.7	2.3	2.2	30.87	6,139.3	3,670.4	7,152.9	7,148.4	4.43	1,615.417		
800.0	800.0	773.0	773.0	2.6	2.5	30.87	6,139.9	3,670.1	7,153.2	7,148.1	5.16	1,385.908		
900.0	900.0	859.6	859.6	3.0	2.8	30.87	6,140.3	3,670.1	7,153.6	7,147.8	5.82	1,228.515		
1,000.0	1,000.0	956.0	956.0	3.4	3.2	30.86	6,141.0	3,670.2	7,154.2	7,147.7	6.52	1,097.449		
1,100.0	1,100.0	1,057.7	1,057.7	3.7	3.5	30.86	6,141.5	3,670.3	7,154.8	7,147.5	7.23	989.149		
1,200.0	1,200.0	1,144.6	1,144.6	4.1	3.8	30.86	6,141.9	3,670.7	7,155.4	7,147.5	7.90	906.202		
1,300.0	1,300.0	1,243.2	1,243.2	4.4	4.2	30.87	6,142.5	3,671.3	7,156.2	7,147.6	8.60	832.114		
1,400.0	1,400.0	1,357.9	1,357.9	4.8	4.6	30.87	6,142.9	3,671.9	7,156.8	7,147.4	9.36	764.603		
1,500.0	1,500.0	1,456.1	1,456.1	5.1	4.9	30.87	6,143.2	3,672.5	7,157.4	7,147.3	10.06	711.289		
1,600.0	1,600.0	1,566.3	1,566.3	5.5	5.3	30.88	6,143.4	3,673.2	7,157.9	7,147.1	10.81	662.362		
1,700.0	1,700.0	1,667.3	1,667.3	5.9	5.7	30.88	6,143.5	3,673.9	7,158.3	7,146.8	11.52	621.470		
1,800.0	1,800.0	1,771.5	1,771.4	6.2	6.0	30.89	6,143.4	3,674.9	7,158.7	7,146.5	12.24	584.823		
1,900.0	1,900.0	1,914.7	1,914.6	6.6	6.5	30.89	6,143.1	3,675.7	7,158.8	7,145.7	13.10	546.531		
2,000.0	2,000.0	2,022.7	2,022.7	6.9	6.9	30.90	6,142.5	3,676.1	7,158.5	7,144.7	13.83	517.506		
2,100.0	2,100.0	2,135.7	2,135.6	7.3	7.3	30.90	6,141.7	3,676.3	7,158.1	7,143.5	14.58	490.824		
2,200.0	2,200.0	2,231.9	2,231.8	7.7	7.6	30.91	6,141.0	3,676.5	7,157.5	7,142.2	15.28	468.521		
2,300.0	2,300.0	2,324.1	2,324.0	8.0	7.9	81.94	6,140.5	3,676.7	7,156.9	7,141.0	15.95	448.624		
2,400.0	2,399.8	2,450.2	2,450.2	8.4	8.4	82.02	6,139.7	3,676.7	7,155.6	7,138.8	16.74	427.341		
2,500.0	2,499.5	2,552.3	2,552.3	8.7	8.7	82.13	6,138.9	3,676.3	7,153.6	7,136.1	17.45	409.875		
2,600.0	2,598.7	2,651.9	2,651.8	9.1	9.1	82.27	6,138.3	3,675.9	7,151.1	7,133.0	18.15	393.920		
2,700.0	2,697.5	2,760.9	2,760.9	9.4	9.5	82.46	6,137.8	3,675.0	7,148.2	7,129.3	18.89	378.445		
2,800.0	2,795.6	2,853.6	2,853.6	9.8	9.8	82.67	6,137.4	3,673.9	7,144.7	7,125.1	19.57	365.127		
2,900.0	2,893.1	2,941.0	2,941.0	10.1	10.1	82.89	6,137.2	3,672.9	7,141.0	7,120.8	20.23	352.982		
3,000.0	2,989.6	3,024.7	3,024.6	10.5	10.4	83.14	6,137.1	3,672.0	7,137.1	7,116.2	20.88	341.770		
3,100.0	3,085.3	3,090.8	3,090.7	10.9	10.6	83.36	6,137.3	3,671.3	7,133.2	7,111.7	21.48	332.129		
3,200.0	3,179.8	3,183.8	3,183.7	11.2	10.9	83.68	6,137.8	3,670.4	7,129.2	7,107.0	22.17	321.584		
3,300.0	3,273.2	3,271.8	3,271.7	11.6	11.2	84.00	6,138.3	3,669.5	7,125.0	7,102.1	22.85	311.835		
3,387.5	3,353.8	3,354.1	3,354.0	11.9	11.5	84.33	6,138.9	3,668.6	7,121.2	7,097.8	23.47	303.465		
3,400.0	3,365.2	3,366.4	3,366.3	12.0	11.6	84.37	6,139.0	3,668.4	7,120.7	7,097.1	23.56	302.274		
3,500.0	3,456.8	3,435.9	3,435.8	12.4	11.8	84.58	6,139.6	3,667.4	7,116.5	7,092.3	24.19	294.247		
3,600.0	3,548.3	3,500.0	3,499.9	12.8	12.0	84.78	6,140.6	3,666.6	7,113.0	7,088.2	24.80	286.804		
3,700.0	3,639.8	3,583.2	3,583.1	13.2	12.3	85.04	6,142.1	3,665.6	7,109.9	7,084.4	25.49	278.946		
3,800.0	3,731.4	3,671.5	3,671.4	13.6	12.6	85.31	6,143.6	3,664.6	7,107.1	7,080.9	26.20	271.271		
3,900.0	3,822.9	3,808.7	3,808.5	14.0	13.1	85.73	6,145.7	3,662.8	7,104.3	7,077.2	27.08	262.298		
4,000.0	3,914.4	3,927.9	3,927.7	14.4	13.5	86.10	6,146.9	3,661.0	7,101.1	7,073.2	27.91	254.420		
4,100.0	4,005.9	4,081.3	4,081.1	14.8	14.1	86.58	6,147.8	3,658.1	7,097.7	7,068.9	28.86	245.953		
4,200.0	4,097.5	4,206.5	4,206.2	15.2	14.5	86.97	6,148.2	3,654.6	7,093.7	7,064.0	29.71	238.758		
4,300.0	4,189.0	4,318.4	4,318.0	15.6	14.9	87.30	6,148.6	3,650.7	7,089.6	7,059.1	30.52	232.282		
4,400.0	4,280.5	4,410.3	4,409.9	16.1	15.2	87.58	6,148.6	3,647.7	7,085.6	7,054.4	31.27	226.617		
4,500.0	4,372.1	4,485.1	4,484.6	16.5	15.5	87.82	6,148.4	3,645.8	7,082.0	7,050.0	31.96	221.617		
4,600.0	4,463.6	4,565.0	4,564.5	16.9	15.8	88.07	6,148.0	3,644.3	7,078.7	7,046.0	32.66	216.711		
4,700.0	4,555.1	4,655.8	4,655.3	17.4	16.1	88.36	6,147.3	3,643.1	7,075.7	7,042.3	33.41	211.773		
4,800.0	4,646.7	4,758.7	4,758.2	17.8	16.4	88.69	6,146.4	3,641.6	7,072.9	7,038.7	34.20	206.793		
4,900.0	4,738.2	4,841.6	4,841.1	18.2	16.7	88.96	6,145.6	3,640.5	7,070.3	7,035.4	34.93	202.425		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Rothe 41-06 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWGS, 6720-2_Unknown													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre +N/-S	Offset Wellbore Centre +E/-W	Between Centres	Between Ellipses	Minimum Separation	Separation Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)			
5,000.0	4,829.7	4,912.1	4,911.6	18.7	17.0	89.19	6,145.0	3,639.7	7,068.1	7,032.5	35.61	198.476		
5,100.0	4,921.3	4,997.4	4,996.9	19.1	17.3	89.47	6,144.3	3,639.0	7,066.3	7,030.0	36.35	194.405		
5,200.0	5,012.8	5,067.6	5,067.1	19.5	17.5	89.70	6,143.8	3,638.6	7,065.0	7,027.9	37.03	190.768		
5,300.0	5,104.3	5,146.5	5,146.0	20.0	17.8	89.96	6,143.3	3,638.3	7,064.1	7,026.3	37.75	187.121		
5,400.0	5,195.8	5,232.5	5,232.0	20.4	18.1	90.24	6,142.7	3,638.2	7,063.5	7,025.0	38.49	183.495		
5,500.0	5,287.4	5,317.4	5,316.9	20.9	18.4	90.52	6,142.1	3,638.2	7,063.2	7,024.0	39.23	180.028		
5,535.2	5,319.6	5,347.8	5,347.3	21.0	18.5	90.62	6,141.9	3,638.3	7,063.2	7,023.7	39.50	178.831		
5,600.0	5,378.9	5,404.6	5,404.0	21.3	18.7	90.81	6,141.6	3,638.3	7,063.3	7,023.3	39.98	176.658		
5,700.0	5,470.4	5,507.6	5,507.1	21.8	19.1	91.15	6,140.9	3,638.3	7,063.5	7,022.7	40.79	173.178		
5,800.0	5,562.0	5,599.2	5,598.7	22.2	19.4	91.45	6,140.3	3,638.3	7,063.9	7,022.3	41.55	169.995		
5,900.0	5,653.5	5,711.5	5,711.0	22.7	19.8	91.82	6,139.5	3,638.0	7,064.4	7,022.0	42.39	166.643		
6,000.0	5,745.0	5,767.4	5,766.9	23.1	20.0	92.00	6,139.2	3,637.9	7,065.2	7,022.2	43.04	164.170		
6,100.0	5,836.6	5,823.1	5,822.6	23.6	20.2	92.18	6,138.9	3,638.1	7,066.7	7,023.0	43.68	161.790		
6,200.0	5,928.1	5,872.5	5,872.0	24.0	20.3	92.35	6,138.7	3,638.7	7,068.9	7,024.6	44.30	159.578		
6,278.6	6,000.0	5,913.7	5,913.2	24.4	20.5	92.49	6,138.6	3,639.4	7,071.2	7,026.4	44.79	157.869		
6,290.0	6,010.4	5,920.5	5,920.0	24.4	20.5	90.94	6,138.6	3,639.5	7,071.5	7,026.7	44.87	157.612		
6,300.0	6,019.5	5,926.5	5,926.0	24.5	20.5	89.26	6,138.6	3,639.6	7,071.7	7,026.7	44.93	157.384		
6,350.0	6,065.8	5,957.0	5,956.5	24.7	20.6	78.90	6,138.5	3,640.3	7,070.5	7,025.2	45.25	156.237		
6,400.0	6,113.0	5,988.1	5,987.6	24.9	20.7	64.78	6,138.5	3,641.1	7,066.1	7,020.5	45.56	155.077		
6,450.0	6,160.7	6,019.0	6,018.5	25.1	20.8	47.38	6,138.4	3,642.0	7,058.4	7,012.6	45.86	153.918		
6,500.0	6,208.5	6,049.7	6,049.2	25.3	21.0	29.21	6,138.4	3,643.0	7,047.7	7,001.6	46.14	152.760		
6,550.0	6,255.8	6,080.3	6,079.7	25.4	21.1	13.16	6,138.3	3,644.2	7,033.9	6,987.5	46.40	151.600		
6,600.0	6,302.5	6,115.4	6,114.7	25.6	21.2	0.33	6,138.3	3,645.6	7,017.1	6,970.5	46.66	150.381		
6,650.0	6,347.9	6,158.4	6,157.7	25.7	21.3	-9.75	6,138.1	3,647.4	6,997.5	6,950.6	46.94	149.059		
6,700.0	6,391.6	6,200.1	6,199.4	25.9	21.5	-17.94	6,137.9	3,649.3	6,975.2	6,927.9	47.21	147.743		
6,750.0	6,433.4	6,238.7	6,237.9	26.0	21.6	-24.96	6,137.7	3,651.0	6,950.3	6,902.8	47.46	146.454		
6,800.0	6,472.8	6,275.3	6,274.5	26.1	21.7	-31.32	6,137.5	3,652.8	6,923.2	6,875.5	47.69	145.178		
6,850.0	6,509.4	6,318.5	6,317.6	26.2	21.9	-37.39	6,137.3	3,654.8	6,894.0	6,846.1	47.93	143.824		
6,900.0	6,543.0	6,379.0	6,378.1	26.3	22.1	-43.49	6,136.8	3,657.7	6,863.0	6,814.8	48.23	142.285		
6,950.0	6,573.2	6,448.3	6,447.3	26.4	22.4	-49.77	6,136.0	3,660.7	6,830.4	6,781.9	48.56	140.668		
7,000.0	6,599.8	6,516.8	6,515.8	26.5	22.6	-56.25	6,135.1	3,663.3	6,796.6	6,747.7	48.87	139.077		
7,050.0	6,622.5	6,532.2	6,531.2	26.6	22.6	-62.42	6,134.8	3,663.9	6,761.9	6,712.9	48.99	138.023		
7,100.0	6,641.1	6,553.2	6,552.1	26.7	22.7	-68.63	6,134.5	3,664.7	6,726.8	6,677.7	49.13	136.925		
7,150.0	6,655.4	6,569.9	6,568.8	26.8	22.8	-74.67	6,134.2	3,665.3	6,691.7	6,642.5	49.25	135.886		
7,200.0	6,665.4	6,582.1	6,581.1	26.9	22.8	-80.39	6,134.0	3,665.8	6,656.9	6,607.6	49.34	134.910		
7,250.0	6,670.8	6,589.8	6,588.7	27.0	22.8	-85.67	6,133.9	3,666.1	6,622.7	6,573.3	49.42	134.004		
7,285.7	6,672.0	6,592.5	6,591.3	27.1	22.9	-89.10	6,133.8	3,666.2	6,598.9	6,549.4	49.47	133.405		
7,300.0	6,672.0	6,593.0	6,591.9	27.1	22.9	-89.11	6,133.8	3,666.2	6,589.5	6,540.0	49.48	133.172		
7,400.0	6,672.0	6,597.1	6,596.0	27.3	22.9	-89.16	6,133.8	3,666.3	6,524.1	6,474.5	49.62	131.480		
7,500.0	6,672.0	6,601.1	6,600.0	27.6	22.9	-89.20	6,133.7	3,666.5	6,459.6	6,409.8	49.80	129.710		
7,600.0	6,672.0	6,605.2	6,604.1	28.0	22.9	-89.25	6,133.6	3,666.7	6,396.0	6,345.9	50.02	127.865		
7,700.0	6,672.0	6,609.3	6,608.2	28.3	22.9	-89.30	6,133.5	3,666.8	6,333.3	6,283.0	50.29	125.947		
7,800.0	6,672.0	6,613.5	6,612.4	28.8	22.9	-89.35	6,133.5	3,667.0	6,271.6	6,221.0	50.59	123.961		
7,900.0	6,672.0	6,611.7	6,610.6	29.3	22.9	-89.32	6,133.5	3,666.9	6,210.8	6,159.9	50.93	121.958		
8,000.0	6,672.0	6,614.5	6,613.4	29.8	22.9	-89.36	6,133.4	3,667.0	6,151.1	6,099.8	51.32	119.860		
8,100.0	6,672.0	6,617.4	6,616.3	30.4	22.9	-89.39	6,133.4	3,667.1	6,092.5	6,040.7	51.76	117.710		
8,200.0	6,672.0	6,620.3	6,619.2	31.0	23.0	-89.42	6,133.3	3,667.3	6,034.9	5,982.6	52.24	115.514		
8,300.0	6,672.0	6,623.2	6,622.1	31.7	23.0	-89.46	6,133.3	3,667.4	5,978.4	5,925.6	52.77	113.282		
8,400.0	6,672.0	6,626.2	6,625.1	32.4	23.0	-89.49	6,133.2	3,667.5	5,923.1	5,869.7	53.35	111.020		
8,500.0	6,672.0	6,629.3	6,628.1	33.1	23.0	-89.53	6,133.2	3,667.6	5,868.9	5,815.0	53.97	108.738		
8,600.0	6,672.0	6,632.3	6,631.2	33.9	23.0	-89.56	6,133.1	3,667.8	5,816.0	5,761.3	54.64	106.442		
8,700.0	6,672.0	6,635.4	6,634.3	34.7	23.0	-89.60	6,133.1	3,667.9	5,764.3	5,708.9	55.35	104.142		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Rothe 41-06 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS, 6720-2_Unknown													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
8,800.0	6,672.0	6,638.6	6,637.4	35.5	23.0	-89.63	6,133.0	3,668.0	5,713.8	5,657.7	56.10	101.845		
8,900.0	6,672.0	6,641.7	6,640.6	36.3	23.0	-89.67	6,133.0	3,668.2	5,664.7	5,607.8	56.90	99.559		
9,000.0	6,672.0	6,645.0	6,643.8	37.2	23.0	-89.71	6,132.9	3,668.3	5,616.9	5,559.2	57.73	97.291		
9,100.0	6,672.0	6,648.3	6,647.1	38.1	23.1	-89.75	6,132.9	3,668.4	5,570.5	5,511.9	58.61	95.048		
9,200.0	6,672.0	6,651.6	6,650.4	39.0	23.1	-89.79	6,132.8	3,668.6	5,525.5	5,466.0	59.52	92.837		
9,300.0	6,672.0	6,654.9	6,653.8	39.9	23.1	-89.82	6,132.8	3,668.7	5,482.0	5,421.5	60.47	90.662		
9,400.0	6,672.0	6,658.4	6,657.2	40.8	23.1	-89.86	6,132.7	3,668.9	5,439.9	5,378.4	61.45	88.530		
9,500.0	6,672.0	6,661.8	6,660.7	41.8	23.1	-89.90	6,132.6	3,669.0	5,399.3	5,336.9	62.46	86.445		
9,600.0	6,672.0	6,665.3	6,664.2	42.7	23.1	-89.94	6,132.6	3,669.2	5,360.3	5,296.8	63.50	84.410		
9,700.0	6,672.0	6,668.9	6,667.7	43.7	23.1	-89.99	6,132.5	3,669.4	5,322.9	5,258.3	64.58	82.429		
9,800.0	6,672.0	6,672.5	6,671.3	44.7	23.1	-90.03	6,132.5	3,669.5	5,287.1	5,221.4	65.67	80.506		
9,900.0	6,672.0	6,676.2	6,675.0	45.7	23.2	-90.07	6,132.4	3,669.7	5,252.9	5,186.1	66.79	78.643		
10,000.0	6,672.0	6,679.9	6,678.7	46.7	23.2	-90.11	6,132.3	3,669.9	5,220.4	5,152.5	67.94	76.841		
10,100.0	6,672.0	6,683.7	6,682.5	47.7	23.2	-90.16	6,132.3	3,670.0	5,189.7	5,120.6	69.10	75.102		
10,200.0	6,672.0	6,687.6	6,686.4	48.8	23.2	-90.20	6,132.2	3,670.2	5,160.7	5,090.4	70.28	73.427		
10,300.0	6,672.0	6,691.5	6,690.2	49.8	23.2	-90.25	6,132.2	3,670.4	5,133.4	5,061.9	71.48	71.817		
10,400.0	6,672.0	6,695.4	6,694.2	50.9	23.2	-90.29	6,132.1	3,670.6	5,108.0	5,035.3	72.69	70.273		
10,500.0	6,672.0	6,699.4	6,698.2	51.9	23.2	-90.34	6,132.0	3,670.8	5,084.3	5,010.4	73.91	68.794		
10,600.0	6,672.0	6,707.2	6,706.0	53.0	23.3	-90.43	6,131.9	3,671.2	5,062.6	4,987.4	75.14	67.373		
10,700.0	6,672.0	6,715.3	6,714.0	54.1	23.3	-90.52	6,131.8	3,671.5	5,042.7	4,966.3	76.38	66.018		
10,800.0	6,672.0	6,722.9	6,721.7	55.2	23.3	-90.61	6,131.6	3,671.9	5,024.7	4,947.1	77.63	64.729		
10,900.0	6,672.0	6,726.3	6,725.0	56.3	23.3	-90.65	6,131.6	3,672.0	5,008.6	4,929.7	78.88	63.494		
11,000.0	6,672.0	6,730.8	6,729.5	57.4	23.4	-90.70	6,131.5	3,672.2	4,994.5	4,914.4	80.13	62.327		
11,100.0	6,672.0	6,735.3	6,734.0	58.5	23.4	-90.75	6,131.4	3,672.4	4,982.3	4,900.9	81.38	61.222		
11,200.0	6,672.0	6,739.8	6,738.5	59.6	23.4	-90.80	6,131.3	3,672.6	4,972.1	4,889.5	82.62	60.179		
11,300.0	6,672.0	6,744.3	6,743.1	60.7	23.5	-90.86	6,131.3	3,672.8	4,963.9	4,880.0	83.85	59.196		
11,400.0	6,672.0	6,748.8	6,747.6	61.8	23.5	-90.91	6,131.2	3,673.1	4,957.6	4,872.6	85.08	58.273		
11,500.0	6,672.0	6,753.4	6,752.1	62.9	23.5	-90.96	6,131.1	3,673.3	4,953.4	4,867.1	86.29	57.407		
11,600.0	6,672.0	6,757.9	6,756.6	64.1	23.6	-91.01	6,131.0	3,673.5	4,951.2	4,863.7	87.48	56.598		
11,661.0	6,672.0	6,760.6	6,759.3	64.8	23.6	-91.05	6,131.0	3,673.6	4,950.8	4,862.6	88.20	56.132 CC		
11,700.0	6,672.0	6,762.4	6,761.1	65.2	23.6	-91.07	6,130.9	3,673.7	4,951.0	4,862.3	88.66	55.844 ES		
11,800.0	6,672.0	6,766.9	6,765.6	66.3	23.6	-91.12	6,130.9	3,673.9	4,952.8	4,862.9	89.82	55.143		
11,900.0	6,672.0	6,771.4	6,770.1	67.5	23.7	-91.17	6,130.8	3,674.1	4,956.5	4,865.6	90.96	54.494		
12,000.0	6,672.0	6,775.9	6,774.6	68.6	23.7	-91.22	6,130.7	3,674.3	4,962.3	4,870.3	92.07	53.896		
12,100.0	6,672.0	6,780.4	6,779.1	69.8	23.7	-91.27	6,130.6	3,674.5	4,970.1	4,877.0	93.17	53.347		
12,200.0	6,672.0	6,784.9	6,783.6	70.9	23.8	-91.33	6,130.6	3,674.7	4,979.9	4,885.7	94.23	52.846		
12,300.0	6,672.0	6,789.4	6,788.1	72.1	23.8	-91.38	6,130.5	3,674.9	4,991.7	4,896.4	95.28	52.391		
12,400.0	6,672.0	6,794.0	6,792.6	73.2	23.8	-91.43	6,130.4	3,675.1	5,005.4	4,909.1	96.29	51.980		
12,500.0	6,672.0	6,798.5	6,797.1	74.4	23.9	-91.48	6,130.3	3,675.3	5,021.0	4,923.7	97.28	51.613		
12,600.0	6,672.0	6,803.0	6,801.6	75.5	23.9	-91.53	6,130.2	3,675.5	5,038.6	4,940.3	98.24	51.288		
12,700.0	6,672.0	6,807.5	6,806.1	76.7	23.9	-91.59	6,130.2	3,675.7	5,058.1	4,958.9	99.17	51.004		
12,800.0	6,672.0	6,812.0	6,810.6	77.9	23.9	-91.64	6,130.1	3,675.9	5,079.4	4,979.4	100.07	50.759		
12,900.0	6,672.0	6,816.5	6,815.1	79.0	24.0	-91.69	6,130.0	3,676.1	5,102.6	5,001.7	100.94	50.552		
13,000.0	6,672.0	6,821.0	6,819.7	80.2	24.0	-91.74	6,129.9	3,676.3	5,127.7	5,025.9	101.78	50.382		
13,100.0	6,672.0	6,825.5	6,824.2	81.4	24.0	-91.80	6,129.9	3,676.5	5,154.6	5,052.0	102.58	50.248		
13,200.0	6,672.0	6,830.0	6,828.7	82.6	24.1	-91.85	6,129.8	3,676.7	5,183.2	5,079.8	103.36	50.148		
13,300.0	6,672.0	6,834.5	6,833.2	83.7	24.1	-91.90	6,129.7	3,677.0	5,213.6	5,109.5	104.10	50.081		
13,400.0	6,672.0	6,839.1	6,837.7	84.9	24.1	-91.95	6,129.6	3,677.2	5,245.7	5,140.9	104.82	50.047		
13,500.0	6,672.0	6,843.6	6,842.2	86.1	24.2	-92.00	6,129.5	3,677.4	5,279.5	5,174.0	105.50	50.043 SF		
13,600.0	6,672.0	6,848.1	6,846.7	87.3	24.2	-92.06	6,129.5	3,677.6	5,315.0	5,208.8	106.15	50.069		
13,700.0	6,672.0	6,852.6	6,851.2	88.4	24.2	-92.11	6,129.4	3,677.8	5,352.0	5,245.3	106.78	50.124		
13,800.0	6,672.0	6,857.1	6,855.7	89.6	24.3	-92.16	6,129.3	3,678.0	5,390.7	5,283.3	107.37	50.207		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Rothe 41-06 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS, 6720-2_Unknown													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
13,900.0	6,672.0	6,861.6	6,860.2	90.8	24.3	-92.21	6,129.2	3,678.2	5,430.9	5,323.0	107.93	50.317		
14,000.0	6,672.0	6,866.1	6,864.7	92.0	24.3	-92.26	6,129.2	3,678.4	5,472.7	5,364.2	108.47	50.453		
14,100.0	6,672.0	6,870.6	6,869.2	93.2	24.4	-92.32	6,129.1	3,678.6	5,515.9	5,406.9	108.98	50.614		
14,200.0	6,672.0	6,875.1	6,873.7	94.4	24.4	-92.37	6,129.0	3,678.8	5,560.6	5,451.1	109.46	50.799		
14,300.0	6,672.0	6,879.6	6,878.2	95.6	24.4	-92.42	6,128.9	3,679.0	5,606.7	5,496.8	109.92	51.008		
14,400.0	6,672.0	6,884.1	6,882.7	96.8	24.4	-92.47	6,128.8	3,679.2	5,654.2	5,543.8	110.35	51.239		
14,500.0	6,672.0	6,888.6	6,887.2	98.0	24.5	-92.52	6,128.8	3,679.4	5,703.0	5,592.3	110.76	51.492		
14,600.0	6,672.0	6,893.2	6,891.7	99.2	24.5	-92.58	6,128.7	3,679.6	5,753.2	5,642.0	111.14	51.766		
14,700.0	6,672.0	6,897.7	6,896.2	100.4	24.5	-92.63	6,128.6	3,679.8	5,804.6	5,693.1	111.50	52.060		
14,800.0	6,672.0	6,902.2	6,900.7	101.6	24.6	-92.68	6,128.5	3,680.0	5,857.3	5,745.4	111.84	52.374		
14,900.0	6,672.0	6,906.7	6,905.2	102.7	24.6	-92.73	6,128.5	3,680.2	5,911.1	5,799.0	112.15	52.707		
15,000.0	6,672.0	6,911.2	6,909.7	103.9	24.6	-92.78	6,128.4	3,680.4	5,966.2	5,853.8	112.45	53.057		
15,100.0	6,672.0	6,915.7	6,914.2	105.1	24.7	-92.84	6,128.3	3,680.6	6,022.4	5,909.7	112.72	53.426		
15,200.0	6,672.0	6,920.2	6,918.7	106.3	24.7	-92.89	6,128.2	3,680.8	6,079.8	5,966.8	112.98	53.811		
15,300.0	6,672.0	6,924.7	6,923.2	107.6	24.7	-92.94	6,128.1	3,681.1	6,138.2	6,024.9	113.22	54.213		
15,400.0	6,672.0	6,929.2	6,927.7	108.8	24.8	-92.99	6,128.1	3,681.3	6,197.6	6,084.2	113.45	54.631		
15,500.0	6,672.0	6,933.7	6,932.2	110.0	24.8	-93.04	6,128.0	3,681.5	6,258.1	6,144.5	113.65	55.064		
15,600.0	6,672.0	6,938.2	6,936.7	111.2	24.8	-93.09	6,127.9	3,681.7	6,319.6	6,205.8	113.84	55.511		
15,700.0	6,672.0	6,942.7	6,941.2	112.4	24.9	-93.15	6,127.8	3,681.9	6,382.1	6,268.0	114.02	55.973		
15,800.0	6,672.0	6,947.2	6,945.7	113.6	24.9	-93.20	6,127.7	3,682.1	6,445.4	6,331.3	114.18	56.448		
15,900.0	6,672.0	6,951.7	6,950.2	114.8	24.9	-93.25	6,127.7	3,682.3	6,509.7	6,395.4	114.33	56.937		
16,000.0	6,672.0	6,956.2	6,954.7	116.0	25.0	-93.30	6,127.6	3,682.5	6,574.9	6,460.5	114.47	57.439		
16,100.0	6,672.0	6,960.8	6,959.2	117.2	25.0	-93.35	6,127.5	3,682.7	6,641.0	6,526.4	114.59	57.953		
16,200.0	6,672.0	6,965.3	6,963.7	118.4	25.0	-93.40	6,127.4	3,682.9	6,707.8	6,593.1	114.71	58.478		
16,300.0	6,672.0	6,969.8	6,968.2	119.6	25.0	-93.46	6,127.4	3,683.1	6,775.5	6,660.7	114.81	59.016		
16,400.0	6,672.0	6,974.3	6,972.7	120.8	25.1	-93.51	6,127.3	3,683.3	6,844.0	6,729.1	114.90	59.564		
16,500.0	6,672.0	6,978.8	6,977.2	122.0	25.1	-93.56	6,127.2	3,683.5	6,913.2	6,798.2	114.98	60.123		
16,600.0	6,672.0	6,983.3	6,981.7	123.2	25.1	-93.61	6,127.1	3,683.7	6,983.2	6,868.1	115.06	60.693		
16,700.0	6,672.0	6,987.8	6,986.2	124.5	25.2	-93.66	6,127.0	3,683.9	7,053.8	6,938.7	115.12	61.272		
16,800.0	6,672.0	6,992.3	6,990.7	125.7	25.2	-93.71	6,127.0	3,684.1	7,125.2	7,010.0	115.18	61.861		
16,900.0	6,672.0	6,996.8	6,995.2	126.9	25.2	-93.77	6,126.9	3,684.3	7,197.2	7,082.0	115.23	62.460		
17,000.0	6,672.0	7,001.3	6,999.7	128.1	25.3	-93.82	6,126.8	3,684.5	7,269.9	7,154.7	115.27	63.067		
17,100.0	6,672.0	7,005.8	7,004.2	129.3	25.3	-93.87	6,126.7	3,684.7	7,343.3	7,228.0	115.31	63.683		
17,200.0	6,672.0	7,010.3	7,008.7	130.5	25.3	-93.92	6,126.7	3,684.9	7,417.2	7,301.9	115.34	64.308		
17,300.0	6,672.0	7,014.8	7,013.2	131.7	25.4	-93.97	6,126.6	3,685.1	7,491.8	7,376.4	115.36	64.941		
17,400.0	6,672.0	7,019.3	7,017.7	133.0	25.4	-94.02	6,126.5	3,685.4	7,566.9	7,451.5	115.38	65.581		
17,500.0	6,672.0	7,023.8	7,022.2	134.2	25.4	-94.07	6,126.4	3,685.6	7,642.6	7,527.2	115.40	66.229		
17,600.0	6,672.0	7,028.3	7,026.7	135.4	25.5	-94.13	6,126.3	3,685.8	7,718.8	7,603.4	115.41	66.884		
17,700.0	6,672.0	7,032.8	7,031.2	136.6	25.5	-94.18	6,126.3	3,686.0	7,795.6	7,680.2	115.41	67.547		
17,800.0	6,672.0	7,037.3	7,035.7	137.8	25.5	-94.23	6,126.2	3,686.2	7,872.9	7,757.4	115.41	68.216		
17,900.0	6,672.0	7,041.8	7,040.2	139.0	25.5	-94.28	6,126.1	3,686.4	7,950.6	7,835.2	115.41	68.892		
18,000.0	6,672.0	7,046.3	7,044.7	140.3	25.6	-94.33	6,126.0	3,686.6	8,028.9	7,913.5	115.40	69.574		
18,100.0	6,672.0	7,050.8	7,049.2	141.5	25.6	-94.38	6,126.0	3,686.8	8,107.6	7,992.2	115.39	70.262		
18,200.0	6,672.0	7,055.3	7,053.7	142.7	25.6	-94.43	6,125.9	3,687.0	8,186.8	8,071.4	115.38	70.956		
18,300.0	6,672.0	7,059.8	7,058.2	143.9	25.7	-94.49	6,125.8	3,687.2	8,266.4	8,151.1	115.36	71.656		
18,342.5	6,672.0	7,061.8	7,060.1	144.4	25.7	-94.51	6,125.8	3,687.3	8,300.4	8,185.0	115.35	71.955		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Rothe 43-06 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	2.7	2.7	0.0	0.0	44.46	3,637.0	3,569.5	5,095.9					
100.0	100.0	91.4	91.4	0.1	0.2	44.47	3,636.9	3,569.7	5,096.1	5,095.8	0.29	N/A		
200.0	200.0	185.4	185.4	0.5	0.5	44.47	3,636.8	3,570.2	5,096.4	5,095.4	0.96	5,315.336		
300.0	300.0	280.1	280.1	0.8	0.8	44.48	3,636.7	3,570.8	5,096.8	5,095.1	1.65	3,091.897		
400.0	400.0	377.2	377.2	1.2	1.1	44.48	3,636.6	3,571.6	5,097.2	5,094.9	2.35	2,171.838		
500.0	500.0	486.8	486.8	1.6	1.5	44.49	3,636.4	3,572.5	5,097.7	5,094.6	3.09	1,650.269		
600.0	600.0	595.8	595.8	1.9	1.9	44.50	3,636.1	3,573.2	5,097.9	5,094.1	3.83	1,331.762		
700.0	700.0	698.8	698.8	2.3	2.3	44.51	3,635.8	3,573.6	5,098.0	5,093.5	4.55	1,121.490		
800.0	800.0	792.5	792.4	2.6	2.6	44.51	3,635.6	3,574.0	5,098.2	5,092.9	5.23	974.560		
900.0	900.0	902.4	902.4	3.0	3.0	44.52	3,635.3	3,574.5	5,098.3	5,092.3	5.97	853.481		
1,000.0	1,000.0	1,016.5	1,016.5	3.4	3.4	44.52	3,634.8	3,574.8	5,098.1	5,091.4	6.73	757.565		
1,100.0	1,100.0	1,112.6	1,112.6	3.7	3.7	44.53	3,634.3	3,575.1	5,097.9	5,090.5	7.42	686.775		
1,200.0	1,200.0	1,211.7	1,211.7	4.1	4.1	44.54	3,633.7	3,575.4	5,097.8	5,089.7	8.13	627.249		
1,300.0	1,300.0	1,323.9	1,323.9	4.4	4.5	44.54	3,633.3	3,575.4	5,097.5	5,088.6	8.88	574.258		
1,400.0	1,400.0	1,420.9	1,420.9	4.8	4.8	44.54	3,632.9	3,575.2	5,097.1	5,087.5	9.57	532.430		
1,500.0	1,500.0	1,513.8	1,513.8	5.1	5.1	44.54	3,632.5	3,575.2	5,096.8	5,086.5	10.26	496.965		
1,600.0	1,600.0	1,614.4	1,614.3	5.5	5.5	44.55	3,632.2	3,575.2	5,096.6	5,085.6	10.97	464.800		
1,700.0	1,700.0	1,708.2	1,708.1	5.9	5.8	44.55	3,631.9	3,575.3	5,096.4	5,084.8	11.65	437.423		
1,755.4	1,755.4	1,758.5	1,758.4	6.1	6.0	44.55	3,631.8	3,575.3	5,096.4	5,084.4	12.03	423.807		
1,800.0	1,800.0	1,798.9	1,798.9	6.2	6.1	44.55	3,631.8	3,575.4	5,096.4	5,084.1	12.33	413.465		
1,900.0	1,900.0	1,908.6	1,908.6	6.6	6.5	44.55	3,631.7	3,575.4	5,096.4	5,083.3	13.07	390.006		
2,000.0	2,000.0	2,005.0	2,005.0	6.9	6.8	44.56	3,631.5	3,575.6	5,096.3	5,082.6	13.76	370.304		
2,100.0	2,100.0	2,110.6	2,110.5	7.3	7.2	44.57	3,630.7	3,576.2	5,096.2	5,081.7	14.49	351.715		
2,200.0	2,200.0	2,221.1	2,221.1	7.7	7.6	44.59	3,629.1	3,577.4	5,096.0	5,080.7	15.24	334.484		
2,300.0	2,300.0	2,324.2	2,324.2	8.0	8.0	95.64	3,627.2	3,578.8	5,095.7	5,079.8	15.95	319.444		
2,319.6	2,319.5	2,343.6	2,343.5	8.1	8.0	95.65	3,626.8	3,579.1	5,095.7	5,079.7	16.09	316.727		
2,400.0	2,399.8	2,421.2	2,421.1	8.4	8.3	95.72	3,625.4	3,580.1	5,095.9	5,079.2	16.64	306.168		
2,500.0	2,499.5	2,512.9	2,512.8	8.7	8.6	95.82	3,624.0	3,581.2	5,096.5	5,079.2	17.32	294.292		
2,600.0	2,598.7	2,609.8	2,609.7	9.1	9.0	95.94	3,622.7	3,582.2	5,097.6	5,079.5	18.01	283.045		
2,700.0	2,697.5	2,709.8	2,709.6	9.4	9.3	96.10	3,621.6	3,583.0	5,099.0	5,080.3	18.71	272.498		
2,800.0	2,795.6	2,805.3	2,805.1	9.8	9.6	96.28	3,620.7	3,583.7	5,101.0	5,081.6	19.40	262.938		
2,900.0	2,893.1	2,910.8	2,910.7	10.1	10.0	96.51	3,619.8	3,584.3	5,103.4	5,083.2	20.12	253.596		
3,000.0	2,989.6	3,007.7	3,007.5	10.5	10.4	96.74	3,619.3	3,584.5	5,106.2	5,085.3	20.82	245.258		
3,100.0	3,085.3	3,109.5	3,109.4	10.9	10.7	97.01	3,618.9	3,584.3	5,109.4	5,087.9	21.53	237.263		
3,200.0	3,179.8	3,209.5	3,209.3	11.2	11.1	97.30	3,618.6	3,583.9	5,113.2	5,091.0	22.25	229.833		
3,300.0	3,273.2	3,313.1	3,313.0	11.6	11.4	97.62	3,618.1	3,583.5	5,117.6	5,094.6	22.98	222.718		
3,387.5	3,353.8	3,385.3	3,385.2	11.9	11.7	97.85	3,617.7	3,583.3	5,121.9	5,098.4	23.56	217.431		
3,400.0	3,365.2	3,395.9	3,395.7	12.0	11.7	97.90	3,617.6	3,583.3	5,122.6	5,099.0	23.64	216.690		
3,500.0	3,456.8	3,481.1	3,480.9	12.4	12.0	98.28	3,617.2	3,583.2	5,128.3	5,104.0	24.32	210.885		
3,600.0	3,548.3	3,572.2	3,572.0	12.8	12.3	98.69	3,616.8	3,583.0	5,134.3	5,109.3	25.02	205.194		
3,700.0	3,639.8	3,671.4	3,671.3	13.2	12.7	99.13	3,616.5	3,582.7	5,140.6	5,114.9	25.76	199.563		
3,800.0	3,731.4	3,769.7	3,769.5	13.6	13.0	99.57	3,616.1	3,582.3	5,147.1	5,120.6	26.50	194.242		
3,900.0	3,822.9	3,862.1	3,861.9	14.0	13.3	99.97	3,615.7	3,581.7	5,153.8	5,126.5	27.22	189.332		
4,000.0	3,914.4	3,947.0	3,946.8	14.4	13.6	100.34	3,615.8	3,580.9	5,160.8	5,132.9	27.92	184.839		
4,100.0	4,005.9	4,039.5	4,039.4	14.8	14.0	100.74	3,616.2	3,579.9	5,168.2	5,139.6	28.65	180.389		
4,200.0	4,097.5	4,142.3	4,142.1	15.2	14.3	101.18	3,617.0	3,578.3	5,175.8	5,146.3	29.42	175.928		
4,300.0	4,189.0	4,237.9	4,237.7	15.6	14.6	101.58	3,617.6	3,576.8	5,183.5	5,153.4	30.17	171.827		
4,400.0	4,280.5	4,354.6	4,354.4	16.1	15.1	102.07	3,618.5	3,574.5	5,191.3	5,160.4	30.99	167.511		
4,500.0	4,372.1	4,479.2	4,478.9	16.5	15.5	102.59	3,619.2	3,571.3	5,198.9	5,167.0	31.84	163.257		
4,600.0	4,463.6	4,565.4	4,565.1	16.9	15.8	102.94	3,619.4	3,569.0	5,206.4	5,173.8	32.57	159.871		
4,700.0	4,555.1	4,647.8	4,647.5	17.4	16.1	103.28	3,619.7	3,566.9	5,214.4	5,181.1	33.28	156.698		
4,800.0	4,646.7	4,727.3	4,726.9	17.8	16.4	103.62	3,619.8	3,565.2	5,222.8	5,188.8	33.98	153.713		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
**Anticollision Report**

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Rothe 43-06 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
4,900.0	4,738.2	4,800.0	4,799.6	18.2	16.6	103.92	3,620.1	3,563.8	5,231.8	5,197.2	34.66	150.965		
5,000.0	4,829.7	4,887.3	4,886.9	18.7	16.9	104.28	3,620.5	3,562.4	5,241.4	5,206.0	35.39	148.116		
5,100.0	4,921.3	4,954.1	4,953.7	19.1	17.1	104.56	3,620.8	3,561.5	5,251.4	5,215.3	36.04	145.689		
5,200.0	5,012.8	5,024.7	5,024.3	19.5	17.4	104.85	3,621.3	3,560.9	5,262.1	5,225.4	36.72	143.317		
5,300.0	5,104.3	5,115.5	5,115.1	20.0	17.7	105.23	3,622.1	3,560.2	5,273.3	5,235.8	37.46	140.762		
5,400.0	5,195.8	5,202.6	5,202.2	20.4	18.0	105.59	3,622.8	3,559.6	5,284.8	5,246.6	38.20	138.361		
5,500.0	5,287.4	5,275.1	5,274.7	20.9	18.3	105.89	3,623.6	3,559.2	5,296.8	5,257.9	38.88	136.250		
5,600.0	5,378.9	5,341.2	5,340.8	21.3	18.5	106.16	3,624.6	3,558.9	5,309.4	5,269.8	39.53	134.309		
5,700.0	5,470.4	5,400.0	5,399.6	21.8	18.7	106.40	3,625.4	3,559.1	5,322.8	5,282.6	40.16	132.545		
5,800.0	5,562.0	5,468.0	5,467.6	22.2	18.9	106.68	3,626.1	3,559.9	5,336.9	5,296.1	40.82	130.747		
5,900.0	5,653.5	5,529.4	5,529.0	22.7	19.1	106.94	3,626.3	3,561.3	5,351.7	5,310.3	41.45	129.106		
6,000.0	5,745.0	5,588.2	5,587.7	23.1	19.4	107.20	3,626.3	3,563.1	5,367.4	5,325.4	42.07	127.570		
6,100.0	5,836.6	5,665.0	5,664.5	23.6	19.6	107.53	3,626.2	3,566.0	5,383.8	5,341.1	42.77	125.889		
6,200.0	5,928.1	5,741.4	5,740.8	24.0	19.9	107.87	3,625.6	3,569.4	5,400.7	5,357.2	43.46	124.278		
6,278.6	6,000.0	5,798.4	5,797.8	24.4	20.1	108.12	3,625.1	3,572.1	5,414.4	5,370.4	43.99	123.092		
6,290.0	6,010.4	5,817.5	5,816.7	24.4	20.2	106.46	3,624.9	3,573.1	5,416.3	5,372.2	44.11	122.802		
6,300.0	6,019.5	5,836.4	5,835.7	24.5	20.2	104.92	3,624.7	3,573.9	5,417.9	5,373.7	44.22	122.521		
6,350.0	6,065.8	6,031.0	6,030.1	24.7	20.9	95.63	3,622.3	3,579.9	5,422.7	5,377.5	45.17	120.047		
6,400.0	6,113.0	6,067.8	6,067.0	24.9	21.0	81.91	3,621.7	3,580.6	5,422.9	5,377.4	45.50	119.197		
6,450.0	6,160.7	6,107.0	6,106.2	25.1	21.2	64.97	3,621.0	3,581.4	5,419.0	5,373.2	45.81	118.284		
6,500.0	6,208.5	6,158.2	6,157.3	25.3	21.3	47.34	3,620.2	3,582.5	5,411.0	5,364.9	46.16	117.217		
6,550.0	6,255.8	6,210.6	6,209.7	25.4	21.5	31.87	3,619.4	3,583.5	5,399.0	5,352.5	46.50	116.106		
6,600.0	6,302.5	6,268.8	6,267.8	25.6	21.7	19.68	3,618.5	3,584.6	5,382.8	5,336.0	46.84	114.909		
6,650.0	6,347.9	6,321.3	6,320.4	25.7	21.9	10.26	3,617.6	3,585.4	5,362.8	5,315.6	47.15	113.734		
6,700.0	6,391.6	6,367.3	6,366.3	25.9	22.1	2.75	3,616.8	3,586.2	5,339.0	5,291.6	47.42	112.591		
6,750.0	6,433.4	6,411.1	6,410.2	26.0	22.2	-3.60	3,616.0	3,586.9	5,311.8	5,264.1	47.67	111.436		
6,800.0	6,472.8	6,449.2	6,448.3	26.1	22.4	-9.35	3,615.2	3,587.5	5,281.3	5,233.5	47.88	110.305		
6,850.0	6,509.4	6,485.5	6,484.5	26.2	22.5	-14.94	3,614.5	3,588.2	5,248.0	5,199.9	48.07	109.164		
6,900.0	6,543.0	6,518.4	6,517.4	26.3	22.6	-20.72	3,613.8	3,588.8	5,212.0	5,163.7	48.25	108.029		
6,950.0	6,573.2	6,547.9	6,546.9	26.4	22.7	-27.01	3,613.2	3,589.3	5,173.7	5,125.3	48.40	106.902		
7,000.0	6,599.8	6,574.0	6,573.0	26.5	22.8	-34.10	3,612.7	3,589.7	5,133.5	5,084.9	48.53	105.786		
7,050.0	6,622.5	6,596.4	6,595.4	26.6	22.9	-42.22	3,612.3	3,590.1	5,091.7	5,043.0	48.64	104.687		
7,100.0	6,641.1	6,616.2	6,615.2	26.7	23.0	-51.48	3,611.9	3,590.5	5,048.7	5,000.0	48.73	103.601		
7,150.0	6,655.4	6,631.9	6,630.8	26.8	23.0	-61.68	3,611.7	3,590.7	5,005.0	4,956.2	48.81	102.543		
7,200.0	6,665.4	6,643.0	6,641.9	26.9	23.0	-72.31	3,611.5	3,590.9	4,961.0	4,912.1	48.87	101.520		
7,250.0	6,670.8	6,649.4	6,648.4	27.0	23.1	-82.63	3,611.4	3,591.0	4,917.0	4,868.1	48.91	100.538		
7,285.7	6,672.0	6,651.2	6,650.2	27.1	23.1	-89.42	3,611.3	3,591.0	4,885.9	4,837.0	48.92	99.866		
7,300.0	6,672.0	6,651.4	6,650.4	27.1	23.1	-89.42	3,611.3	3,591.0	4,873.5	4,824.6	48.93	99.602		
7,400.0	6,672.0	6,653.0	6,652.0	27.3	23.1	-89.46	3,611.3	3,591.0	4,787.2	4,738.2	48.99	97.726		
7,500.0	6,672.0	6,654.6	6,653.6	27.6	23.1	-89.50	3,611.3	3,591.1	4,701.4	4,652.4	49.06	95.824		
7,600.0	6,672.0	6,656.2	6,655.1	28.0	23.1	-89.53	3,611.3	3,591.1	4,616.2	4,567.0	49.16	93.894		
7,700.0	6,672.0	6,657.8	6,656.7	28.3	23.1	-89.57	3,611.2	3,591.1	4,531.6	4,482.3	49.29	91.936		
7,800.0	6,672.0	6,659.3	6,658.3	28.8	23.1	-89.61	3,611.2	3,591.1	4,447.6	4,398.2	49.45	89.950		
7,900.0	6,672.0	6,660.9	6,659.8	29.3	23.1	-89.64	3,611.2	3,591.2	4,364.3	4,314.7	49.63	87.936		
8,000.0	6,672.0	6,662.4	6,661.4	29.8	23.1	-89.68	3,611.2	3,591.2	4,281.7	4,231.9	49.85	85.895		
8,100.0	6,672.0	6,663.9	6,662.9	30.4	23.1	-89.72	3,611.1	3,591.2	4,199.9	4,149.8	50.10	83.828		
8,200.0	6,672.0	6,665.5	6,664.4	31.0	23.1	-89.75	3,611.1	3,591.2	4,118.9	4,068.5	50.39	81.737		
8,300.0	6,672.0	6,667.0	6,666.0	31.7	23.1	-89.79	3,611.1	3,591.3	4,038.7	3,987.9	50.72	79.623		
8,400.0	6,672.0	6,668.5	6,667.5	32.4	23.1	-89.82	3,611.1	3,591.3	3,959.4	3,908.3	51.10	77.489		
8,500.0	6,672.0	6,670.0	6,669.0	33.1	23.1	-89.86	3,611.0	3,591.3	3,881.0	3,829.5	51.51	75.338		
8,600.0	6,672.0	6,671.5	6,670.5	33.9	23.1	-89.89	3,611.0	3,591.3	3,803.7	3,751.7	51.98	73.174		
8,700.0	6,672.0	6,673.0	6,672.0	34.7	23.1	-89.93	3,611.0	3,591.4	3,727.4	3,674.9	52.50	71.000		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Rothe 43-06 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
8,800.0	6,672.0	6,674.5	6,673.4	35.5	23.2	-89.96	3,611.0	3,591.4	3,652.3	3,599.2	53.07	68.821		
8,900.0	6,672.0	6,676.0	6,674.9	36.3	23.2	-90.00	3,610.9	3,591.4	3,578.4	3,524.7	53.69	66.643		
9,000.0	6,672.0	6,677.4	6,676.4	37.2	23.2	-90.03	3,610.9	3,591.4	3,505.7	3,451.4	54.38	64.471		
9,100.0	6,672.0	6,678.9	6,677.8	38.1	23.2	-90.07	3,610.9	3,591.4	3,434.5	3,379.4	55.12	62.312		
9,200.0	6,672.0	6,680.3	6,679.3	39.0	23.2	-90.10	3,610.9	3,591.5	3,364.7	3,308.8	55.92	60.170		
9,300.0	6,672.0	6,681.8	6,680.7	39.9	23.2	-90.13	3,610.9	3,591.5	3,296.4	3,239.7	56.78	58.053		
9,400.0	6,672.0	6,683.2	6,682.2	40.8	23.2	-90.17	3,610.8	3,591.5	3,229.8	3,172.1	57.71	55.967		
9,500.0	6,672.0	6,684.6	6,683.6	41.8	23.2	-90.20	3,610.8	3,591.5	3,165.0	3,106.3	58.70	53.918		
9,600.0	6,672.0	6,686.1	6,685.0	42.7	23.2	-90.24	3,610.8	3,591.6	3,102.0	3,042.3	59.75	51.915		
9,700.0	6,672.0	6,687.5	6,686.4	43.7	23.2	-90.27	3,610.8	3,591.6	3,041.0	2,980.1	60.87	49.961		
9,800.0	6,672.0	6,688.9	6,687.8	44.7	23.2	-90.30	3,610.7	3,591.6	2,982.1	2,920.0	62.04	48.065		
9,900.0	6,672.0	6,690.3	6,689.3	45.7	23.2	-90.34	3,610.7	3,591.6	2,925.4	2,862.1	63.28	46.231		
10,000.0	6,672.0	6,691.7	6,690.6	46.7	23.2	-90.37	3,610.7	3,591.6	2,871.1	2,806.5	64.57	44.466		
10,100.0	6,672.0	6,693.1	6,692.0	47.7	23.2	-90.40	3,610.7	3,591.7	2,819.2	2,753.3	65.91	42.773		
10,200.0	6,672.0	6,694.5	6,693.4	48.8	23.2	-90.43	3,610.7	3,591.7	2,770.0	2,702.7	67.30	41.158		
10,300.0	6,672.0	6,695.8	6,694.8	49.8	23.2	-90.47	3,610.6	3,591.7	2,723.6	2,654.9	68.74	39.624		
10,400.0	6,672.0	6,697.2	6,696.2	50.9	23.2	-90.50	3,610.6	3,591.7	2,680.1	2,609.9	70.21	38.175		
10,500.0	6,672.0	6,698.6	6,697.5	51.9	23.2	-90.53	3,610.6	3,591.7	2,639.7	2,568.0	71.71	36.813		
10,600.0	6,672.0	6,699.9	6,698.9	53.0	23.2	-90.56	3,610.6	3,591.8	2,602.5	2,529.2	73.22	35.541		
10,700.0	6,672.0	6,701.3	6,700.2	54.1	23.2	-90.59	3,610.6	3,591.8	2,568.6	2,493.8	74.75	34.361		
10,800.0	6,672.0	6,702.6	6,701.6	55.2	23.3	-90.63	3,610.5	3,591.8	2,538.2	2,461.9	76.28	33.273		
10,900.0	6,672.0	6,703.9	6,702.9	56.3	23.3	-90.66	3,610.5	3,591.8	2,511.4	2,433.6	77.80	32.279		
11,000.0	6,672.0	6,705.3	6,704.2	57.4	23.3	-90.69	3,610.5	3,591.8	2,488.3	2,409.0	79.30	31.378		
11,100.0	6,672.0	6,706.6	6,705.5	58.5	23.3	-90.72	3,610.5	3,591.8	2,469.1	2,388.3	80.77	30.570		
11,200.0	6,672.0	6,707.6	6,706.5	59.6	23.3	-90.74	3,610.5	3,591.9	2,453.8	2,371.6	82.19	29.854		
11,300.0	6,672.0	6,708.8	6,707.7	60.7	23.3	-90.77	3,610.5	3,591.9	2,442.5	2,358.9	83.56	29.230		
11,400.0	6,672.0	6,710.0	6,708.9	61.8	23.3	-90.80	3,610.4	3,591.9	2,435.2	2,350.3	84.86	28.695		
11,500.0	6,672.0	6,711.2	6,710.1	62.9	23.3	-90.83	3,610.4	3,591.9	2,432.0	2,345.9	86.10	28.248		
11,527.7	6,672.0	6,711.5	6,710.5	63.3	23.3	-90.84	3,610.4	3,591.9	2,431.9	2,345.4	86.42	28.140 CC, ES		
11,600.0	6,672.0	6,712.4	6,711.3	64.1	23.3	-90.86	3,610.4	3,591.9	2,432.9	2,345.7	87.24	27.887		
11,700.0	6,672.0	6,738.2	6,710.8	65.2	23.4	-90.84	3,610.4	3,591.9	2,437.9	2,349.6	88.39	27.580		
11,800.0	6,672.0	6,737.0	6,712.0	66.3	23.4	-90.87	3,610.4	3,591.9	2,447.0	2,357.7	89.35	27.386		
11,900.0	6,672.0	6,735.7	6,713.2	67.5	23.4	-90.90	3,610.4	3,592.0	2,460.1	2,369.9	90.21	27.271		
12,000.0	6,672.0	6,734.5	6,714.4	68.6	23.4	-90.93	3,610.4	3,592.0	2,477.2	2,386.2	90.97	27.230 SF		
12,100.0	6,672.0	6,733.3	6,715.7	69.8	23.4	-90.96	3,610.3	3,592.0	2,498.2	2,406.5	91.63	27.262		
12,200.0	6,672.0	6,732.0	6,716.9	70.9	23.4	-90.99	3,610.3	3,592.0	2,522.9	2,430.7	92.20	27.364		
12,300.0	6,672.0	6,730.8	6,718.1	72.1	23.4	-91.02	3,610.3	3,592.0	2,551.3	2,458.7	92.67	27.533		
12,400.0	6,672.0	6,729.6	6,719.4	73.2	23.3	-91.04	3,610.3	3,592.0	2,583.3	2,490.3	93.04	27.765		
12,500.0	6,672.0	6,728.4	6,720.6	74.4	23.3	-91.07	3,610.3	3,592.1	2,618.7	2,525.4	93.33	28.058		
12,600.0	6,672.0	6,727.1	6,721.8	75.5	23.3	-91.10	3,610.3	3,592.1	2,657.4	2,563.8	93.54	28.409		
12,700.0	6,672.0	6,725.9	6,723.0	76.7	23.3	-91.13	3,610.2	3,592.1	2,699.2	2,605.5	93.67	28.816		
12,800.0	6,672.0	6,725.3	6,724.3	77.9	23.3	-91.16	3,610.2	3,592.1	2,744.0	2,650.3	93.73	29.274		
12,900.0	6,672.0	6,726.5	6,725.5	79.0	23.3	-91.19	3,610.2	3,592.1	2,791.7	2,698.0	93.74	29.781		
13,000.0	6,672.0	6,727.8	6,726.7	80.2	23.3	-91.22	3,610.2	3,592.1	2,842.1	2,748.4	93.69	30.334		
13,100.0	6,672.0	6,729.0	6,727.9	81.4	23.3	-91.25	3,610.2	3,592.1	2,895.1	2,801.5	93.59	30.933		
13,200.0	6,672.0	6,730.2	6,729.2	82.6	23.3	-91.28	3,610.2	3,592.2	2,950.5	2,857.0	93.45	31.574		
13,300.0	6,672.0	6,731.5	6,730.4	83.7	23.4	-91.30	3,610.1	3,592.2	3,008.1	2,914.9	93.26	32.255		
13,400.0	6,672.0	6,732.7	6,731.6	84.9	23.4	-91.33	3,610.1	3,592.2	3,068.0	2,975.0	93.04	32.974		
13,500.0	6,672.0	6,733.9	6,732.8	86.1	23.4	-91.36	3,610.1	3,592.2	3,129.9	3,037.1	92.80	33.729		
13,600.0	6,672.0	6,735.1	6,734.1	87.3	23.4	-91.39	3,610.1	3,592.2	3,193.8	3,101.2	92.52	34.518		
13,700.0	6,672.0	6,736.4	6,735.3	88.4	23.4	-91.42	3,610.1	3,592.2	3,259.4	3,167.2	92.23	35.339		
13,800.0	6,672.0	6,737.6	6,736.5	89.6	23.4	-91.45	3,610.1	3,592.3	3,326.8	3,234.8	91.92	36.190		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Rothe 43-06 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre +N/-S	Offset Wellbore Centre +E/-W	Between Centres	Between Ellipses	Minimum Separation	Separation Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)			
13,900.0	6,672.0	6,738.8	6,737.7	90.8	23.4	-91.48	3,610.0	3,592.3	3,395.7	3,304.1	91.60	37.070		
14,000.0	6,672.0	6,740.0	6,739.0	92.0	23.4	-91.51	3,610.0	3,592.3	3,466.2	3,374.9	91.27	37.977		
14,100.0	6,672.0	6,741.3	6,740.2	93.2	23.4	-91.53	3,610.0	3,592.3	3,538.1	3,447.1	90.93	38.910		
14,200.0	6,672.0	6,742.5	6,741.4	94.4	23.4	-91.56	3,610.0	3,592.3	3,611.3	3,520.7	90.58	39.867		
14,300.0	6,672.0	6,743.7	6,742.6	95.6	23.4	-91.59	3,610.0	3,592.3	3,685.7	3,595.5	90.24	40.846		
14,400.0	6,672.0	6,744.9	6,743.9	96.8	23.4	-91.62	3,610.0	3,592.3	3,761.4	3,671.5	89.88	41.847		
14,500.0	6,672.0	6,746.2	6,745.1	98.0	23.4	-91.65	3,609.9	3,592.4	3,838.1	3,748.6	89.53	42.868		
14,600.0	6,672.0	6,747.4	6,746.3	99.2	23.4	-91.68	3,609.9	3,592.4	3,915.9	3,826.8	89.18	43.909		
14,700.0	6,672.0	6,748.6	6,747.5	100.4	23.4	-91.71	3,609.9	3,592.4	3,994.7	3,905.9	88.84	44.967		
14,800.0	6,672.0	6,749.8	6,748.8	101.6	23.4	-91.74	3,609.9	3,592.4	4,074.4	3,985.9	88.49	46.043		
14,900.0	6,672.0	6,751.1	6,750.0	102.7	23.4	-91.76	3,609.9	3,592.4	4,155.0	4,066.9	88.15	47.134		
15,000.0	6,672.0	6,752.3	6,751.2	103.9	23.4	-91.79	3,609.9	3,592.4	4,236.4	4,148.6	87.82	48.241		
15,100.0	6,672.0	6,753.5	6,752.4	105.1	23.4	-91.82	3,609.8	3,592.5	4,318.6	4,231.1	87.49	49.362		
15,200.0	6,672.0	6,754.7	6,753.7	106.3	23.4	-91.85	3,609.8	3,592.5	4,401.5	4,314.4	87.16	50.497		
15,300.0	6,672.0	6,756.0	6,754.9	107.6	23.4	-91.88	3,609.8	3,592.5	4,485.1	4,398.3	86.85	51.645		
15,400.0	6,672.0	6,757.2	6,756.1	108.8	23.4	-91.91	3,609.8	3,592.5	4,569.4	4,482.9	86.53	52.805		
15,500.0	6,672.0	6,758.4	6,757.3	110.0	23.4	-91.94	3,609.8	3,592.5	4,654.3	4,568.1	86.23	53.976		
15,600.0	6,672.0	6,759.6	6,758.6	111.2	23.5	-91.96	3,609.8	3,592.5	4,739.7	4,653.8	85.93	55.158		
15,700.0	6,672.0	6,760.8	6,759.8	112.4	23.5	-91.99	3,609.7	3,592.5	4,825.8	4,740.1	85.64	56.349		
15,800.0	6,672.0	6,762.1	6,761.0	113.6	23.5	-92.02	3,609.7	3,592.6	4,912.3	4,827.0	85.36	57.551		
15,900.0	6,672.0	6,763.3	6,762.2	114.8	23.5	-92.05	3,609.7	3,592.6	4,999.4	4,914.3	85.08	58.762		
16,000.0	6,672.0	6,764.5	6,763.5	116.0	23.5	-92.08	3,609.7	3,592.6	5,086.9	5,002.1	84.81	59.981		
16,100.0	6,672.0	6,765.7	6,764.7	117.2	23.5	-92.11	3,609.7	3,592.6	5,174.8	5,090.3	84.55	61.208		
16,200.0	6,672.0	6,767.0	6,765.9	118.4	23.5	-92.13	3,609.7	3,592.6	5,263.2	5,178.9	84.29	62.442		
16,300.0	6,672.0	6,768.2	6,767.1	119.6	23.5	-92.16	3,609.6	3,592.6	5,352.0	5,268.0	84.04	63.684		
16,400.0	6,672.0	6,769.4	6,768.3	120.8	23.5	-92.19	3,609.6	3,592.6	5,441.2	5,357.4	83.80	64.932		
16,500.0	6,672.0	6,770.6	6,769.6	122.0	23.5	-92.22	3,609.6	3,592.7	5,530.8	5,447.2	83.56	66.187		
16,600.0	6,672.0	6,771.9	6,770.8	123.2	23.5	-92.25	3,609.6	3,592.7	5,620.7	5,537.3	83.33	67.447		
16,700.0	6,672.0	6,773.1	6,772.0	124.5	23.5	-92.28	3,609.6	3,592.7	5,710.9	5,627.8	83.11	68.713		
16,800.0	6,672.0	6,774.3	6,773.2	125.7	23.5	-92.30	3,609.6	3,592.7	5,801.4	5,718.5	82.90	69.984		
16,900.0	6,672.0	6,775.5	6,774.5	126.9	23.5	-92.33	3,609.5	3,592.7	5,892.3	5,809.6	82.69	71.260		
17,000.0	6,672.0	6,776.7	6,775.7	128.1	23.5	-92.36	3,609.5	3,592.7	5,983.4	5,900.9	82.48	72.540		
17,100.0	6,672.0	6,778.0	6,776.9	129.3	23.5	-92.39	3,609.5	3,592.8	6,074.8	5,992.5	82.29	73.825		
17,200.0	6,672.0	6,779.2	6,778.1	130.5	23.5	-92.42	3,609.5	3,592.8	6,166.5	6,084.4	82.10	75.113		
17,300.0	6,672.0	6,780.4	6,779.3	131.7	23.5	-92.45	3,609.5	3,592.8	6,258.4	6,176.5	81.91	76.405		
17,400.0	6,672.0	6,781.6	6,780.6	133.0	23.5	-92.47	3,609.5	3,592.8	6,350.6	6,268.9	81.73	77.700		
17,500.0	6,672.0	6,782.9	6,781.8	134.2	23.5	-92.50	3,609.4	3,592.8	6,443.0	6,361.5	81.56	78.999		
17,600.0	6,672.0	6,784.1	6,783.0	135.4	23.5	-92.53	3,609.4	3,592.8	6,535.6	6,454.2	81.39	80.301		
17,700.0	6,672.0	6,785.3	6,784.2	136.6	23.5	-92.56	3,609.4	3,592.8	6,628.5	6,547.2	81.23	81.605		
17,800.0	6,672.0	6,786.5	6,785.5	137.8	23.5	-92.59	3,609.4	3,592.9	6,721.5	6,640.4	81.07	82.911		
17,900.0	6,672.0	6,787.7	6,786.7	139.0	23.6	-92.61	3,609.4	3,592.9	6,814.7	6,733.8	80.92	84.220		
18,000.0	6,672.0	6,789.0	6,787.9	140.3	23.6	-92.64	3,609.4	3,592.9	6,908.1	6,827.4	80.77	85.531		
18,100.0	6,672.0	6,790.2	6,789.1	141.5	23.6	-92.67	3,609.3	3,592.9	7,001.7	6,921.1	80.63	86.843		
18,200.0	6,672.0	6,791.4	6,790.3	142.7	23.6	-92.70	3,609.3	3,592.9	7,095.5	7,015.0	80.49	88.157		
18,300.0	6,672.0	6,792.6	6,791.6	143.9	23.6	-92.73	3,609.3	3,592.9	7,189.4	7,109.1	80.35	89.473		
18,342.5	6,672.0	6,793.1	6,792.1	144.4	23.6	-92.74	3,609.3	3,592.9	7,229.4	7,149.1	80.30	90.032		



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Rothe 44-06 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS, 6700-2_Unknown													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
0.0	0.0	6.5	6.5	0.0	0.0	58.39	2,301.9	3,740.9	4,392.4					
100.0	100.0	87.8	87.8	0.1	0.2	58.40	2,301.7	3,741.2	4,392.6	4,392.3	0.28	N/A		
200.0	200.0	199.5	199.5	0.5	0.5	58.41	2,301.1	3,742.1	4,393.0	4,392.0	1.01	4,345.382		
300.0	300.0	294.0	293.9	0.8	0.9	58.42	2,300.6	3,742.7	4,393.2	4,391.5	1.70	2,585.446		
400.0	400.0	416.5	416.4	1.2	1.3	58.44	2,299.6	3,743.3	4,393.3	4,390.8	2.49	1,767.050		
500.0	500.0	515.7	515.7	1.6	1.6	58.45	2,298.5	3,743.8	4,393.1	4,389.9	3.19	1,376.179		
600.0	600.0	626.9	626.8	1.9	2.0	58.47	2,297.3	3,744.2	4,392.8	4,388.8	3.94	1,115.170		
700.0	700.0	725.5	725.4	2.3	2.4	58.48	2,296.2	3,744.3	4,392.3	4,387.7	4.64	946.278		
800.0	800.0	814.9	814.9	2.6	2.7	58.49	2,295.4	3,744.5	4,392.1	4,386.8	5.31	826.782		
900.0	900.0	912.3	912.3	3.0	3.0	58.50	2,294.5	3,744.9	4,391.9	4,385.9	6.01	730.666		
1,000.0	1,000.0	1,014.8	1,014.8	3.4	3.4	58.52	2,293.6	3,745.3	4,391.8	4,385.1	6.73	652.853		
1,100.0	1,100.0	1,121.2	1,121.1	3.7	3.8	58.53	2,292.7	3,745.6	4,391.6	4,384.1	7.46	588.956		
1,200.0	1,200.0	1,221.0	1,220.9	4.1	4.1	58.54	2,291.8	3,745.8	4,391.3	4,383.1	8.16	537.926		
1,300.0	1,300.0	1,323.6	1,323.6	4.4	4.5	58.55	2,291.2	3,745.8	4,391.0	4,382.1	8.88	494.488		
1,400.0	1,400.0	1,435.6	1,435.5	4.8	4.9	58.55	2,290.7	3,745.4	4,390.5	4,380.8	9.63	455.969		
1,500.0	1,500.0	1,537.1	1,537.0	5.1	5.2	58.55	2,290.3	3,744.9	4,389.8	4,379.5	10.34	424.468		
1,600.0	1,600.0	1,635.9	1,635.8	5.5	5.6	58.55	2,290.0	3,744.3	4,389.2	4,378.1	11.05	397.371		
1,700.0	1,700.0	1,738.6	1,738.5	5.9	5.9	58.54	2,290.1	3,743.5	4,388.5	4,376.8	11.76	373.071		
1,800.0	1,800.0	1,852.1	1,852.0	6.2	6.3	58.53	2,290.6	3,742.1	4,387.7	4,375.2	12.52	350.514		
1,900.0	1,900.0	1,958.5	1,958.4	6.6	6.7	58.51	2,291.0	3,740.4	4,386.6	4,373.3	13.25	331.103		
2,000.0	2,000.0	2,052.3	2,052.2	6.9	7.0	58.50	2,291.4	3,739.0	4,385.5	4,371.5	13.94	314.703		
2,100.0	2,100.0	2,140.1	2,140.0	7.3	7.3	58.49	2,291.6	3,737.9	4,384.6	4,370.0	14.60	300.292		
2,200.0	2,200.0	2,227.8	2,227.7	7.7	7.6	58.48	2,292.1	3,737.0	4,384.0	4,368.7	15.27	287.171		
2,231.8	2,231.8	2,256.2	2,256.1	7.8	7.7	109.48	2,292.3	3,736.8	4,383.9	4,368.5	15.48	283.231		
2,300.0	2,300.0	2,319.4	2,319.3	8.0	7.9	109.48	2,292.8	3,736.3	4,384.3	4,368.3	15.94	275.025		
2,400.0	2,399.8	2,418.9	2,418.7	8.4	8.3	109.50	2,293.6	3,735.5	4,385.7	4,369.1	16.64	263.559		
2,500.0	2,499.5	2,508.4	2,508.3	8.7	8.6	109.53	2,294.6	3,734.7	4,388.5	4,371.2	17.30	253.600		
2,600.0	2,598.7	2,597.1	2,596.9	9.1	8.9	109.57	2,295.8	3,734.1	4,392.7	4,374.8	17.97	244.501		
2,700.0	2,697.5	2,717.7	2,717.6	9.4	9.3	109.67	2,297.3	3,733.2	4,398.0	4,379.3	18.74	234.694		
2,800.0	2,795.6	2,794.4	2,794.2	9.8	9.6	109.72	2,298.2	3,732.6	4,404.6	4,385.2	19.36	227.523		
2,900.0	2,893.1	2,901.2	2,901.0	10.1	10.0	109.85	2,299.3	3,732.1	4,412.5	4,392.4	20.08	219.695		
3,000.0	2,989.6	2,979.5	2,979.3	10.5	10.2	109.91	2,299.8	3,732.0	4,421.8	4,401.1	20.71	213.500		
3,100.0	3,085.3	3,063.9	3,063.7	10.9	10.5	110.01	2,300.3	3,732.3	4,432.8	4,411.4	21.36	207.523		
3,200.0	3,179.8	3,144.1	3,143.9	11.2	10.8	110.09	2,300.6	3,732.9	4,445.3	4,423.3	22.00	202.087		
3,300.0	3,273.2	3,218.9	3,218.7	11.6	11.1	110.14	2,301.1	3,733.6	4,459.7	4,437.1	22.62	197.177		
3,387.5	3,353.8	3,282.5	3,282.3	11.9	11.3	110.17	2,301.8	3,734.4	4,473.8	4,450.6	23.16	193.194		
3,400.0	3,365.2	3,291.5	3,291.3	12.0	11.3	110.22	2,301.9	3,734.5	4,475.9	4,452.6	23.23	192.643		
3,500.0	3,456.8	3,370.8	3,370.6	12.4	11.6	110.60	2,302.9	3,735.8	4,493.1	4,469.3	23.88	188.163		
3,600.0	3,548.3	3,458.2	3,457.9	12.8	11.9	111.02	2,304.0	3,737.3	4,510.9	4,486.3	24.56	183.684		
3,700.0	3,639.8	3,556.5	3,556.3	13.2	12.2	111.49	2,305.4	3,739.0	4,528.9	4,503.6	25.28	179.135		
3,800.0	3,731.4	3,669.1	3,668.8	13.6	12.6	112.03	2,306.9	3,740.5	4,546.9	4,520.9	26.06	174.460		
3,900.0	3,822.9	3,776.0	3,775.7	14.0	13.0	112.53	2,307.9	3,741.6	4,564.8	4,538.0	26.83	170.156		
4,000.0	3,914.4	3,872.2	3,871.9	14.4	13.3	112.98	2,308.5	3,742.5	4,582.8	4,555.3	27.56	166.310		
4,100.0	4,005.9	3,991.5	3,991.2	14.8	13.8	113.54	2,309.1	3,743.4	4,600.9	4,572.5	28.37	162.157		
4,200.0	4,097.5	4,102.6	4,102.3	15.2	14.2	114.06	2,309.1	3,743.7	4,618.6	4,589.5	29.16	158.376		
4,300.0	4,189.0	4,217.9	4,217.6	15.6	14.6	114.60	2,308.5	3,743.7	4,636.2	4,606.3	29.97	154.696		
4,400.0	4,280.5	4,311.2	4,310.9	16.1	14.9	115.03	2,308.0	3,743.5	4,653.9	4,623.2	30.70	151.595		
4,500.0	4,372.1	4,390.2	4,389.9	16.5	15.2	115.39	2,307.5	3,743.3	4,671.9	4,640.6	31.38	148.888		
4,600.0	4,463.6	4,472.9	4,472.6	16.9	15.4	115.78	2,307.0	3,743.5	4,690.5	4,658.4	32.07	146.241		
4,700.0	4,555.1	4,552.6	4,552.3	17.4	15.7	116.14	2,306.3	3,743.9	4,709.5	4,676.7	32.76	143.765		
4,800.0	4,646.7	4,640.1	4,639.8	17.8	16.0	116.55	2,305.5	3,744.5	4,729.0	4,695.5	33.47	141.278		
4,900.0	4,738.2	4,739.8	4,739.5	18.2	16.4	117.00	2,304.6	3,745.1	4,748.7	4,714.4	34.24	138.707		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Rothe 44-06 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS, 6700-2_Unknown													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,000.0	4,829.7	4,830.7	4,830.4	18.7	16.7	117.41	2,303.9	3,745.5	4,768.5	4,733.6	34.97	136.378		
5,100.0	4,921.3	4,916.8	4,916.5	19.1	17.0	117.79	2,303.5	3,745.9	4,788.8	4,753.1	35.68	134.220		
5,200.0	5,012.8	5,024.2	5,023.8	19.5	17.4	118.26	2,303.3	3,746.0	4,809.1	4,772.6	36.47	131.851		
5,300.0	5,104.3	5,112.3	5,111.9	20.0	17.7	118.64	2,303.5	3,745.9	4,829.5	4,792.4	37.20	129.840		
5,400.0	5,195.8	5,200.6	5,200.3	20.4	18.0	119.01	2,303.9	3,745.8	4,850.3	4,812.4	37.92	127.908		
5,500.0	5,287.4	5,267.8	5,267.4	20.9	18.2	119.29	2,304.2	3,745.9	4,871.6	4,833.1	38.56	126.329		
5,600.0	5,378.9	5,344.3	5,344.0	21.3	18.5	119.61	2,304.7	3,746.4	4,893.6	4,854.3	39.24	124.703		
5,700.0	5,470.4	5,432.5	5,432.2	21.8	18.8	119.97	2,305.4	3,747.0	4,915.9	4,875.9	39.97	123.000		
5,800.0	5,562.0	5,525.7	5,525.4	22.2	19.1	120.35	2,306.4	3,747.6	4,938.4	4,897.7	40.71	121.302		
5,900.0	5,653.5	5,621.5	5,621.1	22.7	19.5	120.74	2,307.6	3,748.1	4,961.2	4,919.7	41.47	119.639		
6,000.0	5,745.0	5,726.9	5,726.5	23.1	19.8	121.15	2,308.9	3,748.4	4,983.9	4,941.7	42.26	117.925		
6,100.0	5,836.6	5,819.5	5,819.1	23.6	20.1	121.52	2,309.5	3,748.7	5,006.8	4,963.8	43.01	116.416		
6,200.0	5,928.1	5,929.0	5,928.6	24.0	20.5	121.96	2,310.4	3,748.9	5,029.7	4,985.9	43.82	114.780		
6,278.6	6,000.0	6,016.4	6,016.1	24.4	20.8	122.30	2,310.9	3,748.6	5,047.5	5,003.1	44.46	113.518		
6,290.0	6,010.4	6,024.5	6,024.1	24.4	20.9	120.50	2,311.0	3,748.6	5,050.1	5,005.6	44.54	113.385		
6,300.0	6,019.5	6,031.6	6,031.2	24.5	20.9	118.88	2,311.0	3,748.6	5,052.3	5,007.7	44.61	113.266		
6,350.0	6,065.8	6,067.5	6,067.1	24.7	21.0	108.89	2,311.2	3,748.5	5,060.6	5,015.7	44.93	112.631		
6,400.0	6,113.0	6,105.1	6,104.7	24.9	21.1	95.26	2,311.4	3,748.6	5,064.5	5,019.3	45.25	111.918		
6,450.0	6,160.7	6,151.5	6,151.1	25.1	21.3	78.53	2,311.8	3,748.6	5,063.9	5,018.3	45.60	111.059		
6,500.0	6,208.5	6,198.0	6,197.6	25.3	21.5	61.16	2,312.4	3,748.6	5,058.8	5,012.9	45.93	110.149		
6,550.0	6,255.8	6,242.2	6,241.8	25.4	21.6	46.07	2,313.0	3,748.6	5,049.2	5,002.9	46.23	109.216		
6,600.0	6,302.5	6,285.6	6,285.2	25.6	21.8	34.37	2,313.6	3,748.7	5,035.1	4,988.6	46.52	108.247		
6,650.0	6,347.9	6,328.6	6,328.2	25.7	21.9	25.61	2,314.1	3,748.8	5,016.8	4,970.0	46.78	107.241		
6,700.0	6,391.6	6,370.4	6,370.0	25.9	22.1	18.94	2,314.6	3,748.9	4,994.3	4,947.3	47.03	106.205		
6,750.0	6,433.4	6,411.1	6,410.7	26.0	22.2	13.64	2,315.0	3,749.1	4,967.9	4,920.7	47.25	105.140		
6,800.0	6,472.8	6,451.5	6,451.1	26.1	22.4	9.17	2,315.4	3,749.2	4,937.8	4,890.3	47.46	104.041		
6,850.0	6,509.4	6,489.0	6,488.6	26.2	22.5	5.11	2,315.7	3,749.4	4,904.2	4,856.5	47.65	102.931		
6,900.0	6,543.0	6,525.0	6,524.6	26.3	22.6	1.12	2,316.0	3,749.5	4,867.3	4,819.5	47.81	101.802		
6,950.0	6,573.2	6,558.1	6,557.6	26.4	22.7	-3.15	2,316.2	3,749.6	4,827.7	4,779.7	47.96	100.667		
7,000.0	6,599.8	6,587.1	6,586.7	26.5	22.8	-8.13	2,316.4	3,749.7	4,785.5	4,737.4	48.08	99.538		
7,050.0	6,622.5	6,612.7	6,612.3	26.6	22.9	-14.42	2,316.6	3,749.8	4,741.3	4,693.1	48.18	98.411		
7,100.0	6,641.1	6,634.5	6,634.1	26.7	23.0	-23.00	2,316.7	3,749.8	4,695.3	4,647.0	48.26	97.294		
7,150.0	6,655.4	6,651.3	6,650.9	26.8	23.0	-35.28	2,316.8	3,749.8	4,648.0	4,599.7	48.32	96.198		
7,200.0	6,665.4	6,662.9	6,662.5	26.9	23.1	-52.70	2,316.9	3,749.8	4,599.9	4,551.6	48.35	95.129		
7,250.0	6,670.8	6,669.3	6,668.9	27.0	23.1	-74.32	2,317.0	3,749.8	4,551.5	4,503.1	48.37	94.090		
7,285.7	6,672.0	6,670.7	6,670.3	27.1	23.1	-89.51	2,317.0	3,749.8	4,516.9	4,468.5	48.38	93.369		
7,300.0	6,672.0	6,670.7	6,670.3	27.1	23.1	-89.51	2,317.0	3,749.8	4,503.0	4,454.6	48.38	93.084		
7,400.0	6,672.0	6,670.7	6,670.3	27.3	23.1	-89.51	2,317.0	3,749.8	4,406.4	4,358.0	48.38	91.083		
7,500.0	6,672.0	6,670.7	6,670.3	27.6	23.1	-89.51	2,317.0	3,749.8	4,309.9	4,261.5	48.39	89.074		
7,600.0	6,672.0	6,670.8	6,670.3	28.0	23.1	-89.52	2,317.0	3,749.8	4,213.5	4,165.1	48.40	87.056		
7,700.0	6,672.0	6,670.8	6,670.4	28.3	23.1	-89.52	2,317.0	3,749.8	4,117.3	4,068.9	48.42	85.029		
7,800.0	6,672.0	6,670.8	6,670.4	28.8	23.1	-89.52	2,317.0	3,749.8	4,021.4	3,972.9	48.45	82.992		
7,900.0	6,672.0	6,670.8	6,670.4	29.3	23.1	-89.52	2,317.0	3,749.8	3,925.6	3,877.1	48.50	80.945		
8,000.0	6,672.0	6,670.9	6,670.5	29.8	23.1	-89.52	2,317.0	3,749.8	3,830.0	3,781.4	48.55	78.887		
8,100.0	6,672.0	6,670.9	6,670.5	30.4	23.1	-89.52	2,317.0	3,749.8	3,734.6	3,686.0	48.62	76.820		
8,200.0	6,672.0	6,670.9	6,670.5	31.0	23.1	-89.52	2,317.0	3,749.8	3,639.5	3,590.8	48.70	74.741		
8,300.0	6,672.0	6,670.9	6,670.5	31.7	23.1	-89.52	2,317.0	3,749.8	3,544.7	3,495.9	48.79	72.651		
8,400.0	6,672.0	6,671.0	6,670.5	32.4	23.1	-89.52	2,317.0	3,749.8	3,450.2	3,401.3	48.90	70.549		
8,500.0	6,672.0	6,671.0	6,670.6	33.1	23.1	-89.53	2,317.0	3,749.8	3,355.9	3,306.9	49.04	68.436		
8,600.0	6,672.0	6,671.0	6,670.6	33.9	23.1	-89.53	2,317.0	3,749.8	3,262.0	3,212.9	49.19	66.311		
8,700.0	6,672.0	6,671.0	6,670.6	34.7	23.1	-89.53	2,317.0	3,749.8	3,168.5	3,119.2	49.37	64.174		
8,800.0	6,672.0	6,671.1	6,670.6	35.5	23.1	-89.53	2,317.0	3,749.8	3,075.4	3,025.8	49.58	62.026		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Rothe 44-06 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS, 6700-2_Unknown													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
8,900.0	6,672.0	6,671.1	6,670.7	36.3	23.1	-89.53	2,317.0	3,749.8	2,982.7	2,932.9	49.82	59.866		
9,000.0	6,672.0	6,671.1	6,670.7	37.2	23.1	-89.53	2,317.0	3,749.8	2,890.6	2,840.5	50.10	57.695		
9,100.0	6,672.0	6,671.1	6,670.7	38.1	23.1	-89.53	2,317.0	3,749.8	2,798.9	2,748.5	50.42	55.514		
9,200.0	6,672.0	6,671.1	6,670.7	39.0	23.1	-89.53	2,317.0	3,749.8	2,707.8	2,657.1	50.78	53.324		
9,300.0	6,672.0	6,671.2	6,670.8	39.9	23.1	-89.53	2,317.0	3,749.8	2,617.4	2,566.2	51.20	51.126		
9,400.0	6,672.0	6,671.2	6,670.8	40.8	23.1	-89.54	2,317.0	3,749.8	2,527.7	2,476.1	51.67	48.924		
9,500.0	6,672.0	6,671.2	6,670.8	41.8	23.1	-89.54	2,317.0	3,749.8	2,438.8	2,386.6	52.20	46.719		
9,600.0	6,672.0	6,671.2	6,670.8	42.7	23.1	-89.54	2,317.0	3,749.8	2,350.8	2,298.0	52.81	44.514		
9,700.0	6,672.0	6,671.3	6,670.9	43.7	23.1	-89.54	2,317.0	3,749.8	2,263.8	2,210.3	53.50	42.315		
9,800.0	6,672.0	6,671.3	6,670.9	44.7	23.1	-89.54	2,317.0	3,749.8	2,177.9	2,123.6	54.28	40.125		
9,900.0	6,672.0	6,671.3	6,670.9	45.7	23.1	-89.54	2,317.0	3,749.8	2,093.3	2,038.1	55.16	37.952		
10,000.0	6,672.0	6,671.3	6,670.9	46.7	23.1	-89.54	2,317.0	3,749.8	2,010.0	1,953.9	56.14	35.801		
10,100.0	6,672.0	6,671.4	6,671.0	47.7	23.1	-89.54	2,317.0	3,749.8	1,928.4	1,871.1	57.25	33.681		
10,200.0	6,672.0	6,671.4	6,671.0	48.8	23.1	-89.54	2,317.0	3,749.8	1,848.5	1,790.0	58.49	31.602		
10,300.0	6,672.0	6,671.4	6,671.0	49.8	23.1	-89.55	2,317.0	3,749.8	1,770.7	1,710.8	59.88	29.572		
10,400.0	6,672.0	6,671.4	6,671.0	50.9	23.1	-89.55	2,317.0	3,749.8	1,695.2	1,633.8	61.41	27.604		
10,500.0	6,672.0	6,671.4	6,671.0	51.9	23.1	-89.55	2,317.0	3,749.8	1,622.3	1,559.2	63.10	25.709		
10,600.0	6,672.0	6,671.5	6,671.1	53.0	23.1	-89.55	2,317.0	3,749.8	1,552.5	1,487.5	64.96	23.900		
10,700.0	6,672.0	6,671.5	6,671.1	54.1	23.1	-89.55	2,317.0	3,749.8	1,486.1	1,419.1	66.98	22.188		
10,800.0	6,672.0	6,671.5	6,671.1	55.2	23.1	-89.55	2,317.0	3,749.8	1,423.7	1,354.5	69.15	20.588		
10,900.0	6,672.0	6,671.5	6,671.1	56.3	23.1	-89.55	2,317.0	3,749.8	1,365.7	1,294.2	71.46	19.112		
11,000.0	6,672.0	6,671.6	6,671.1	57.4	23.1	-89.55	2,317.0	3,749.8	1,312.7	1,238.9	73.87	17.772		
11,100.0	6,672.0	6,728.4	6,671.2	58.5	23.4	-89.55	2,317.0	3,749.8	1,265.5	1,188.9	76.64	16.512		
11,200.0	6,672.0	6,728.5	6,671.1	59.6	23.4	-89.55	2,317.0	3,749.8	1,224.6	1,145.5	79.12	15.479		
11,300.0	6,672.0	6,728.6	6,671.0	60.7	23.4	-89.55	2,317.0	3,749.8	1,190.8	1,109.2	81.51	14.608		
11,400.0	6,672.0	6,728.7	6,670.9	61.8	23.4	-89.54	2,317.0	3,749.8	1,164.5	1,080.8	83.75	13.904		
11,500.0	6,672.0	6,728.7	6,670.9	62.9	23.4	-89.54	2,317.0	3,749.8	1,146.4	1,060.7	85.74	13.370		
11,600.0	6,672.0	6,728.8	6,670.8	64.1	23.4	-89.53	2,317.0	3,749.8	1,136.8	1,049.4	87.40	13.007		
11,659.4	6,672.0	6,728.9	6,670.7	64.7	23.4	-89.53	2,317.0	3,749.8	1,135.3	1,047.1	88.21	12.870 CC, ES		
11,700.0	6,672.0	6,728.9	6,670.7	65.2	23.4	-89.53	2,317.0	3,749.8	1,136.0	1,047.3	88.67	12.811		
11,800.0	6,672.0	6,729.0	6,670.6	66.3	23.4	-89.53	2,317.0	3,749.8	1,143.9	1,054.4	89.52	12.779 SF		
11,900.0	6,672.0	6,729.1	6,670.5	67.5	23.4	-89.52	2,317.0	3,749.8	1,160.5	1,070.5	89.93	12.904		
12,000.0	6,672.0	6,729.1	6,670.5	68.6	23.4	-89.52	2,317.0	3,749.8	1,185.2	1,095.3	89.94	13.178		
12,100.0	6,672.0	6,729.2	6,670.4	69.8	23.4	-89.51	2,317.0	3,749.8	1,217.7	1,128.1	89.59	13.591		
12,200.0	6,672.0	6,729.3	6,670.3	70.9	23.4	-89.51	2,317.0	3,749.8	1,257.3	1,168.3	88.95	14.135		
12,300.0	6,672.0	6,729.4	6,670.2	72.1	23.4	-89.51	2,317.0	3,749.8	1,303.4	1,215.3	88.08	14.798		
12,400.0	6,672.0	6,729.4	6,670.2	73.2	23.4	-89.50	2,317.0	3,749.8	1,355.3	1,268.2	87.04	15.571		
12,500.0	6,672.0	6,729.5	6,670.1	74.4	23.4	-89.50	2,317.0	3,749.8	1,412.4	1,326.5	85.90	16.443		
12,600.0	6,672.0	6,729.6	6,670.0	75.5	23.4	-89.50	2,317.0	3,749.8	1,474.0	1,389.3	84.69	17.405		
12,700.0	6,672.0	6,729.7	6,669.9	76.7	23.4	-89.49	2,317.0	3,749.8	1,539.7	1,456.2	83.46	18.448		
12,800.0	6,672.0	6,729.8	6,669.8	77.9	23.4	-89.49	2,317.0	3,749.8	1,608.9	1,526.7	82.24	19.564		
12,900.0	6,672.0	6,729.8	6,669.8	79.0	23.4	-89.48	2,317.0	3,749.8	1,681.2	1,600.2	81.04	20.746		
13,000.0	6,672.0	6,729.9	6,669.7	80.2	23.4	-89.48	2,317.0	3,749.8	1,756.2	1,676.4	79.88	21.986		
13,100.0	6,672.0	6,730.0	6,669.6	81.4	23.4	-89.48	2,317.0	3,749.8	1,833.7	1,754.9	78.77	23.279		
13,200.0	6,672.0	6,730.1	6,669.5	82.6	23.4	-89.47	2,317.0	3,749.8	1,913.1	1,835.4	77.71	24.619		
13,300.0	6,672.0	6,730.1	6,669.5	83.7	23.4	-89.47	2,317.0	3,749.8	1,994.5	1,917.8	76.71	26.001		
13,400.0	6,672.0	6,730.2	6,669.4	84.9	23.4	-89.46	2,317.0	3,749.8	2,077.4	2,001.7	75.76	27.421		
13,500.0	6,672.0	6,730.3	6,669.3	86.1	23.4	-89.46	2,317.0	3,749.8	2,161.9	2,087.0	74.87	28.873		
13,600.0	6,672.0	6,730.4	6,669.2	87.3	23.4	-89.46	2,317.0	3,749.8	2,247.5	2,173.5	74.04	30.356		
13,700.0	6,672.0	6,730.4	6,669.1	88.4	23.4	-89.45	2,317.0	3,749.8	2,334.3	2,261.1	73.26	31.865		
13,800.0	6,672.0	6,730.5	6,669.1	89.6	23.4	-89.45	2,317.0	3,749.8	2,422.2	2,349.6	72.52	33.399		
13,900.0	6,672.0	6,730.6	6,669.0	90.8	23.4	-89.45	2,317.0	3,749.8	2,510.9	2,439.1	71.84	34.953		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Rothe 44-06 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS, 6700-2_Unknown													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
14,000.0	6,672.0	6,730.7	6,668.9	92.0	23.4	-89.44	2,317.0	3,749.8	2,600.5	2,529.3	71.19	36.526		
14,100.0	6,672.0	6,730.8	6,668.8	93.2	23.4	-89.44	2,317.0	3,749.8	2,690.7	2,620.1	70.59	38.116		
14,200.0	6,672.0	6,730.8	6,668.8	94.4	23.4	-89.43	2,317.0	3,749.8	2,781.7	2,711.7	70.03	39.722		
14,300.0	6,672.0	6,730.9	6,668.7	95.6	23.4	-89.43	2,317.0	3,749.8	2,873.2	2,803.7	69.50	41.340		
14,400.0	6,672.0	6,731.0	6,668.6	96.8	23.4	-89.43	2,317.0	3,749.8	2,965.3	2,896.3	69.01	42.970		
14,500.0	6,672.0	6,731.1	6,668.5	98.0	23.4	-89.42	2,317.0	3,749.8	3,057.9	2,989.4	68.55	44.611		
14,600.0	6,672.0	6,731.1	6,668.5	99.2	23.4	-89.42	2,317.0	3,749.8	3,150.9	3,082.8	68.11	46.260		
14,700.0	6,672.0	6,731.2	6,668.4	100.4	23.4	-89.42	2,317.0	3,749.8	3,244.4	3,176.7	67.71	47.918		
14,800.0	6,672.0	6,731.3	6,668.3	101.6	23.4	-89.41	2,317.0	3,749.8	3,338.2	3,270.9	67.33	49.583		
14,900.0	6,672.0	6,731.4	6,668.2	102.7	23.4	-89.41	2,317.0	3,749.8	3,432.4	3,365.4	66.97	51.254		
15,000.0	6,672.0	6,731.4	6,668.2	103.9	23.4	-89.40	2,317.0	3,749.8	3,526.8	3,460.2	66.63	52.930		
15,100.0	6,672.0	6,731.5	6,668.1	105.1	23.4	-89.40	2,317.0	3,749.9	3,621.6	3,555.3	66.32	54.611		
15,200.0	6,672.0	6,731.6	6,668.0	106.3	23.4	-89.40	2,317.0	3,749.9	3,716.7	3,650.7	66.02	56.296		
15,300.0	6,672.0	6,731.7	6,667.9	107.6	23.4	-89.39	2,317.0	3,749.9	3,812.0	3,746.2	65.74	57.984		
15,400.0	6,672.0	6,731.7	6,667.8	108.8	23.4	-89.39	2,317.0	3,749.9	3,907.5	3,842.0	65.48	59.674		
15,500.0	6,672.0	6,731.8	6,667.8	110.0	23.4	-89.39	2,317.0	3,749.9	4,003.3	3,938.0	65.24	61.367		
15,600.0	6,672.0	6,731.9	6,667.7	111.2	23.4	-89.38	2,317.0	3,749.9	4,099.2	4,034.2	65.00	63.061		
15,700.0	6,672.0	6,732.0	6,667.6	112.4	23.4	-89.38	2,316.9	3,749.9	4,195.4	4,130.6	64.79	64.756		
15,800.0	6,672.0	6,732.0	6,667.5	113.6	23.4	-89.37	2,316.9	3,749.9	4,291.7	4,227.1	64.58	66.452		
15,900.0	6,672.0	6,732.1	6,667.5	114.8	23.4	-89.37	2,316.9	3,749.9	4,388.1	4,323.8	64.39	68.149		
16,000.0	6,672.0	6,732.2	6,667.4	116.0	23.5	-89.37	2,316.9	3,749.9	4,484.8	4,420.6	64.21	69.845		
16,100.0	6,672.0	6,732.3	6,667.3	117.2	23.5	-89.36	2,316.9	3,749.9	4,581.5	4,517.5	64.04	71.541		
16,200.0	6,672.0	6,732.4	6,667.2	118.4	23.5	-89.36	2,316.9	3,749.9	4,678.5	4,614.6	63.88	73.236		
16,300.0	6,672.0	6,732.4	6,667.2	119.6	23.5	-89.36	2,316.9	3,749.9	4,775.5	4,711.8	63.73	74.930		
16,400.0	6,672.0	6,732.5	6,667.1	120.8	23.5	-89.35	2,316.9	3,749.9	4,872.6	4,809.0	63.59	76.624		
16,500.0	6,672.0	6,732.6	6,667.0	122.0	23.5	-89.35	2,316.9	3,749.9	4,969.9	4,906.4	63.46	78.315		
16,600.0	6,672.0	6,732.7	6,666.9	123.2	23.5	-89.35	2,316.9	3,749.9	5,067.3	5,003.9	63.34	80.005		
16,700.0	6,672.0	6,732.7	6,666.9	124.5	23.5	-89.34	2,316.9	3,749.9	5,164.7	5,101.5	63.22	81.693		
16,800.0	6,672.0	6,732.8	6,666.8	125.7	23.5	-89.34	2,316.9	3,749.9	5,262.3	5,199.2	63.11	83.379		
16,900.0	6,672.0	6,732.9	6,666.7	126.9	23.5	-89.34	2,316.9	3,749.9	5,359.9	5,296.9	63.01	85.063		
17,000.0	6,672.0	6,733.0	6,666.6	128.1	23.5	-89.33	2,316.9	3,749.9	5,457.7	5,394.7	62.92	86.744		
17,100.0	6,672.0	6,733.0	6,666.6	129.3	23.5	-89.33	2,316.9	3,749.9	5,555.5	5,492.6	62.83	88.423		
17,200.0	6,672.0	6,733.1	6,666.5	130.5	23.5	-89.33	2,316.9	3,749.9	5,653.4	5,590.6	62.75	90.099		
17,300.0	6,672.0	6,733.2	6,666.4	131.7	23.5	-89.32	2,316.9	3,749.9	5,751.3	5,688.6	62.67	91.771		
17,400.0	6,672.0	6,733.3	6,666.3	133.0	23.5	-89.32	2,316.9	3,749.9	5,849.3	5,786.7	62.60	93.441		
17,500.0	6,672.0	6,733.3	6,666.3	134.2	23.5	-89.31	2,316.9	3,749.9	5,947.4	5,884.9	62.53	95.108		
17,600.0	6,672.0	6,733.4	6,666.2	135.4	23.5	-89.31	2,316.9	3,749.9	6,045.6	5,983.1	62.47	96.771		
17,700.0	6,672.0	6,733.5	6,666.1	136.6	23.5	-89.31	2,316.9	3,749.9	6,143.8	6,081.4	62.42	98.431		
17,800.0	6,672.0	6,733.6	6,666.0	137.8	23.5	-89.30	2,316.9	3,749.9	6,242.0	6,179.7	62.37	100.087		
17,900.0	6,672.0	6,733.6	6,666.0	139.0	23.5	-89.30	2,316.9	3,749.9	6,340.4	6,278.0	62.32	101.740		
18,000.0	6,672.0	6,733.7	6,665.9	140.3	23.5	-89.30	2,316.9	3,749.9	6,438.7	6,376.4	62.28	103.388		
18,100.0	6,672.0	6,733.8	6,665.8	141.5	23.5	-89.29	2,316.9	3,749.9	6,537.1	6,474.9	62.24	105.033		
18,200.0	6,672.0	6,733.8	6,665.7	142.7	23.5	-89.29	2,316.9	3,749.9	6,635.6	6,573.4	62.20	106.674		
18,300.0	6,672.0	6,733.9	6,665.7	143.9	23.5	-89.29	2,316.9	3,749.9	6,734.1	6,671.9	62.17	108.311		
18,342.5	6,672.0	6,734.0	6,665.6	144.4	23.5	-89.29	2,316.9	3,749.9	6,775.9	6,713.8	62.16	109.005		



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Rothe 6A - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	47.17	2,881.1	3,107.7	4,237.8					
100.0	100.0	89.5	89.5	0.1	0.2	47.17	2,881.1	3,107.8	4,237.9	4,237.6	0.28	N/A		
200.0	200.0	191.1	191.1	0.5	0.5	47.17	2,881.2	3,108.0	4,238.0	4,237.1	0.98	4,332.106		
300.0	300.0	304.3	304.3	0.8	0.9	47.17	2,881.2	3,108.0	4,238.1	4,236.3	1.73	2,447.640		
329.3	329.3	327.3	327.3	0.9	1.0	47.17	2,881.2	3,108.0	4,238.0	4,236.1	1.92	2,211.354		
400.0	400.0	385.6	385.6	1.2	1.2	47.17	2,881.3	3,108.0	4,238.1	4,235.8	2.37	1,785.585		
500.0	500.0	482.5	482.5	1.6	1.5	47.17	2,881.6	3,108.3	4,238.5	4,235.4	3.07	1,380.139		
600.0	600.0	582.2	582.2	1.9	1.9	47.17	2,881.8	3,108.6	4,238.9	4,235.1	3.78	1,121.792		
700.0	700.0	667.9	667.9	2.3	2.2	47.17	2,882.0	3,109.0	4,239.4	4,235.0	4.44	955.312		
800.0	800.0	760.4	760.4	2.6	2.5	47.17	2,882.5	3,109.6	4,240.2	4,235.1	5.12	828.140		
900.0	900.0	868.8	868.8	3.0	2.9	47.17	2,883.2	3,110.2	4,241.1	4,235.2	5.86	723.926		
1,000.0	1,000.0	971.1	971.1	3.4	3.2	47.17	2,883.7	3,110.5	4,241.7	4,235.1	6.58	645.064		
1,100.0	1,100.0	1,063.5	1,063.5	3.7	3.5	47.17	2,884.1	3,111.1	4,242.4	4,235.1	7.26	584.526		
1,200.0	1,200.0	1,161.1	1,161.1	4.1	3.9	47.17	2,884.7	3,111.6	4,243.3	4,235.3	7.96	533.174		
1,300.0	1,300.0	1,267.1	1,267.1	4.4	4.3	47.16	2,885.6	3,112.0	4,244.1	4,235.4	8.69	488.471		
1,400.0	1,400.0	1,366.5	1,366.5	4.8	4.6	47.16	2,886.2	3,112.4	4,244.8	4,235.4	9.40	451.803		
1,500.0	1,500.0	1,462.6	1,462.6	5.1	4.9	47.15	2,887.2	3,112.5	4,245.6	4,235.5	10.09	420.760		
1,600.0	1,600.0	1,566.9	1,566.8	5.5	5.3	47.15	2,888.0	3,112.9	4,246.4	4,235.6	10.81	392.671		
1,700.0	1,700.0	1,663.6	1,663.5	5.9	5.7	47.14	2,888.8	3,113.2	4,247.1	4,235.6	11.51	368.949		
1,800.0	1,800.0	1,763.7	1,763.6	6.2	6.0	47.13	2,889.8	3,113.4	4,248.0	4,235.8	12.22	347.609		
1,900.0	1,900.0	1,857.1	1,857.0	6.6	6.3	47.13	2,890.6	3,113.7	4,248.8	4,235.9	12.91	329.209		
2,000.0	2,000.0	1,943.3	1,943.2	6.9	6.6	47.13	2,891.4	3,114.3	4,249.9	4,236.4	13.57	313.267		
2,100.0	2,100.0	2,035.6	2,035.5	7.3	7.0	47.13	2,891.8	3,115.7	4,251.4	4,237.1	14.25	298.379		
2,200.0	2,200.0	2,136.1	2,136.0	7.7	7.3	47.15	2,892.0	3,117.5	4,252.8	4,237.8	14.96	284.300		
2,300.0	2,300.0	2,225.3	2,225.2	8.0	7.6	98.14	2,892.4	3,119.0	4,254.6	4,239.0	15.63	272.269		
2,400.0	2,399.8	2,309.4	2,309.3	8.4	7.9	98.16	2,892.9	3,120.7	4,257.3	4,241.0	16.27	261.620		
2,500.0	2,499.5	2,421.0	2,420.9	8.7	8.3	98.24	2,893.8	3,122.8	4,260.4	4,243.4	17.02	250.364		
2,600.0	2,598.7	2,521.7	2,521.5	9.1	8.7	98.34	2,894.4	3,124.7	4,264.0	4,246.3	17.72	240.594		
2,700.0	2,697.5	2,618.7	2,618.6	9.4	9.0	98.47	2,895.2	3,126.3	4,268.1	4,249.7	18.42	231.763		
2,800.0	2,795.6	2,727.0	2,726.8	9.8	9.4	98.65	2,896.2	3,127.8	4,272.7	4,253.5	19.15	223.120		
2,900.0	2,893.1	2,816.6	2,816.4	10.1	9.7	98.82	2,897.1	3,129.0	4,277.9	4,258.1	19.82	215.856		
3,000.0	2,989.6	2,934.3	2,934.1	10.5	10.1	99.11	2,898.1	3,130.4	4,283.5	4,263.0	20.59	208.052		
3,100.0	3,085.3	3,034.6	3,034.4	10.9	10.5	99.38	2,899.0	3,131.3	4,289.8	4,268.5	21.30	201.397		
3,200.0	3,179.8	3,149.2	3,149.0	11.2	10.9	99.73	2,900.1	3,131.7	4,296.4	4,274.3	22.06	194.722		
3,300.0	3,273.2	3,260.4	3,260.1	11.6	11.2	100.10	2,901.4	3,131.3	4,303.5	4,280.7	22.82	188.587		
3,387.5	3,353.8	3,359.0	3,358.8	11.9	11.6	100.46	2,902.2	3,130.7	4,310.1	4,286.6	23.49	183.505		
3,400.0	3,365.2	3,373.1	3,372.8	12.0	11.6	100.53	2,902.3	3,130.6	4,311.1	4,287.5	23.58	182.803		
3,500.0	3,456.8	3,508.4	3,508.2	12.4	12.1	101.25	2,901.6	3,129.9	4,318.6	4,294.2	24.43	176.790		
3,600.0	3,548.3	3,600.8	3,600.6	12.8	12.4	101.73	2,900.7	3,129.2	4,326.0	4,300.9	25.13	172.136		
3,700.0	3,639.8	3,675.1	3,674.8	13.2	12.7	102.13	2,899.9	3,128.8	4,334.0	4,308.2	25.78	168.126		
3,800.0	3,731.4	3,761.3	3,761.0	13.6	13.0	102.58	2,899.1	3,128.7	4,342.5	4,316.1	26.47	164.052		
3,900.0	3,822.9	3,841.7	3,841.4	14.0	13.3	103.01	2,898.3	3,128.6	4,351.5	4,324.4	27.15	160.298		
4,000.0	3,914.4	3,915.0	3,914.7	14.4	13.5	103.39	2,898.0	3,128.6	4,361.2	4,333.4	27.80	156.872		
4,100.0	4,005.9	3,994.6	3,994.3	14.8	13.8	103.81	2,897.7	3,128.9	4,371.6	4,343.1	28.48	153.488		
4,200.0	4,097.5	4,084.7	4,084.4	15.2	14.1	104.28	2,897.6	3,129.3	4,382.5	4,353.3	29.20	150.069		
4,300.0	4,189.0	4,182.4	4,182.1	15.6	14.4	104.78	2,897.6	3,129.5	4,393.7	4,363.7	29.95	146.679		
4,400.0	4,280.5	4,306.6	4,306.3	16.1	14.9	105.40	2,898.0	3,128.9	4,404.8	4,374.0	30.80	143.007		
4,500.0	4,372.1	4,373.7	4,373.4	16.5	15.1	105.74	2,898.2	3,128.5	4,416.2	4,384.8	31.45	140.433		
4,600.0	4,463.6	4,431.8	4,431.5	16.9	15.3	106.03	2,898.3	3,128.6	4,428.4	4,396.4	32.06	138.125		
4,700.0	4,555.1	4,482.6	4,482.4	17.4	15.5	106.29	2,898.4	3,129.2	4,441.8	4,409.2	32.65	136.054		
4,800.0	4,646.7	4,552.2	4,551.9	17.8	15.7	106.65	2,898.5	3,130.7	4,456.2	4,422.9	33.30	133.809		
4,900.0	4,738.2	4,656.4	4,656.1	18.2	16.1	107.18	2,898.8	3,133.1	4,471.2	4,437.1	34.09	131.157		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Rothe 6A - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,000.0	4,829.7	4,743.2	4,742.9	18.7	16.4	107.61	2,899.7	3,134.2	4,486.0	4,451.2	34.81	128.860		
5,100.0	4,921.3	4,807.2	4,806.9	19.1	16.6	107.92	2,901.1	3,135.0	4,501.7	4,466.2	35.45	126.989		
5,200.0	5,012.8	4,886.7	4,886.3	19.5	16.9	108.29	2,903.4	3,136.1	4,518.1	4,481.9	36.15	124.997		
5,300.0	5,104.3	4,969.8	4,969.4	20.0	17.2	108.69	2,905.6	3,137.5	4,534.9	4,498.1	36.86	123.045		
5,400.0	5,195.8	5,146.1	5,145.6	20.4	17.8	109.53	2,908.9	3,139.9	4,551.5	4,513.6	37.93	120.005		
5,500.0	5,287.4	5,267.7	5,267.2	20.9	18.2	110.12	2,909.0	3,140.7	4,566.9	4,528.1	38.79	117.746		
5,600.0	5,378.9	5,365.2	5,364.7	21.3	18.6	110.59	2,908.4	3,141.4	4,582.4	4,542.8	39.55	115.851		
5,700.0	5,470.4	5,461.2	5,460.7	21.8	18.9	111.06	2,907.9	3,141.9	4,598.1	4,557.8	40.32	114.049		
5,800.0	5,562.0	5,556.9	5,556.4	22.2	19.3	111.52	2,907.5	3,142.3	4,614.0	4,572.9	41.08	112.320		
5,900.0	5,653.5	5,648.5	5,648.0	22.7	19.6	111.95	2,907.1	3,142.5	4,630.1	4,588.3	41.83	110.702		
6,000.0	5,745.0	5,733.4	5,732.9	23.1	19.9	112.35	2,906.8	3,142.8	4,646.6	4,604.1	42.55	109.212		
6,100.0	5,836.6	5,815.6	5,815.1	23.6	20.2	112.74	2,906.6	3,143.3	4,663.6	4,620.4	43.26	107.810		
6,200.0	5,928.1	5,914.3	5,913.8	24.0	20.5	113.20	2,906.3	3,143.8	4,680.9	4,636.9	44.03	106.304		
6,278.6	6,000.0	5,969.0	5,968.5	24.4	20.7	113.45	2,906.2	3,144.1	4,694.8	4,650.2	44.55	105.374		
6,290.0	6,010.4	5,977.4	5,976.9	24.4	20.7	111.74	2,906.2	3,144.2	4,696.8	4,652.2	44.63	105.237		
6,300.0	6,019.5	5,984.8	5,984.3	24.5	20.7	110.13	2,906.2	3,144.2	4,698.5	4,653.8	44.70	105.115		
6,350.0	6,065.8	6,030.7	6,030.2	24.7	20.9	100.23	2,906.2	3,144.6	4,704.4	4,659.3	45.07	104.385		
6,400.0	6,113.0	6,083.5	6,083.0	24.9	21.1	86.64	2,906.2	3,145.0	4,705.9	4,660.4	45.45	103.537		
6,450.0	6,160.7	6,131.4	6,130.9	25.1	21.3	69.82	2,906.2	3,145.3	4,703.1	4,657.3	45.80	102.681		
6,500.0	6,208.5	6,176.9	6,176.4	25.3	21.4	52.29	2,906.2	3,145.6	4,696.0	4,649.8	46.13	101.801		
6,550.0	6,255.8	6,233.9	6,233.4	25.4	21.6	37.00	2,906.0	3,146.1	4,684.6	4,638.1	46.48	100.778		
6,600.0	6,302.5	6,302.1	6,301.6	25.6	21.9	25.03	2,905.7	3,146.3	4,668.9	4,622.0	46.87	99.620		
6,650.0	6,347.9	6,355.1	6,354.6	25.7	22.0	15.85	2,905.5	3,146.4	4,649.0	4,601.8	47.17	98.552		
6,700.0	6,391.6	6,406.6	6,406.0	25.9	22.2	8.63	2,905.3	3,146.3	4,625.2	4,577.7	47.46	97.457		
6,750.0	6,433.4	6,445.1	6,444.6	26.0	22.4	2.60	2,905.2	3,146.3	4,597.7	4,550.0	47.68	96.429		
6,800.0	6,472.8	6,482.6	6,482.1	26.1	22.5	-2.77	2,904.9	3,146.3	4,566.8	4,518.9	47.88	95.372		
6,850.0	6,509.4	6,520.5	6,520.0	26.2	22.6	-7.95	2,904.6	3,146.3	4,532.8	4,484.8	48.08	94.280		
6,900.0	6,543.0	6,558.0	6,557.5	26.3	22.7	-13.31	2,904.4	3,146.3	4,496.0	4,447.7	48.26	93.162		
6,950.0	6,573.2	6,591.6	6,591.1	26.4	22.9	-19.25	2,904.2	3,146.2	4,456.6	4,408.2	48.42	92.047		
7,000.0	6,599.8	6,616.0	6,615.4	26.5	22.9	-26.12	2,904.1	3,146.1	4,415.2	4,366.6	48.53	90.975		
7,050.0	6,622.5	6,635.0	6,634.5	26.6	23.0	-34.33	2,904.0	3,146.1	4,372.0	4,323.4	48.62	89.921		
7,100.0	6,641.1	6,650.7	6,650.2	26.7	23.1	-44.25	2,903.9	3,146.1	4,327.5	4,278.8	48.69	88.877		
7,150.0	6,655.4	6,662.9	6,662.4	26.8	23.1	-55.92	2,903.8	3,146.1	4,282.1	4,233.3	48.75	87.846		
7,200.0	6,665.4	6,671.4	6,670.9	26.9	23.1	-68.81	2,903.7	3,146.1	4,236.2	4,187.4	48.79	86.834		
7,250.0	6,670.8	6,676.1	6,675.6	27.0	23.2	-81.72	2,903.7	3,146.1	4,190.3	4,141.5	48.81	85.847		
7,285.7	6,672.0	6,677.1	6,676.6	27.1	23.2	-90.22	2,903.7	3,146.1	4,157.7	4,108.9	48.82	85.162		
7,300.0	6,672.0	6,677.2	6,676.6	27.1	23.2	-90.22	2,903.7	3,146.1	4,144.7	4,095.9	48.82	84.891		
7,400.0	6,672.0	6,677.3	6,676.8	27.3	23.2	-90.22	2,903.7	3,146.1	4,054.2	4,005.3	48.86	82.979		
7,500.0	6,672.0	6,677.4	6,676.9	27.6	23.2	-90.23	2,903.7	3,146.1	3,964.1	3,915.2	48.91	81.050		
7,600.0	6,672.0	6,677.6	6,677.0	28.0	23.2	-90.23	2,903.7	3,146.1	3,874.5	3,825.5	48.98	79.105		
7,700.0	6,672.0	6,677.7	6,677.2	28.3	23.2	-90.24	2,903.7	3,146.1	3,785.4	3,736.3	49.07	77.144		
7,800.0	6,672.0	6,725.3	6,674.2	28.8	23.3	-90.14	2,903.7	3,146.1	3,696.8	3,647.5	49.35	74.915		
7,900.0	6,672.0	6,725.0	6,674.5	29.3	23.3	-90.15	2,903.7	3,146.1	3,608.8	3,559.4	49.48	72.928		
8,000.0	6,672.0	6,724.7	6,674.8	29.8	23.3	-90.16	2,903.7	3,146.1	3,521.5	3,471.9	49.65	70.925		
8,100.0	6,672.0	6,724.4	6,675.0	30.4	23.3	-90.17	2,903.7	3,146.1	3,434.9	3,385.1	49.85	68.904		
8,200.0	6,672.0	6,724.2	6,675.3	31.0	23.3	-90.18	2,903.7	3,146.1	3,349.0	3,298.9	50.08	66.868		
8,300.0	6,672.0	6,723.9	6,675.6	31.7	23.3	-90.18	2,903.7	3,146.1	3,263.9	3,213.6	50.36	64.816		
8,400.0	6,672.0	6,723.6	6,675.9	32.4	23.3	-90.19	2,903.7	3,146.1	3,179.7	3,129.0	50.67	62.751		
8,500.0	6,672.0	6,723.3	6,676.2	33.1	23.3	-90.20	2,903.7	3,146.1	3,096.4	3,045.4	51.03	60.674		
8,600.0	6,672.0	6,723.0	6,676.4	33.9	23.3	-90.21	2,903.7	3,146.1	3,014.1	2,962.7	51.45	58.588		
8,700.0	6,672.0	6,722.7	6,676.7	34.7	23.3	-90.22	2,903.7	3,146.1	2,933.0	2,881.1	51.91	56.496		
8,800.0	6,672.0	6,722.5	6,677.0	35.5	23.3	-90.23	2,903.7	3,146.1	2,853.0	2,800.5	52.44	54.402		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Rothe 6A - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
8,900.0	6,672.0	6,722.2	6,677.3	36.3	23.3	-90.24	2,903.7	3,146.1	2,774.3	2,721.3	53.04	52.310		
9,000.0	6,672.0	6,721.9	6,677.6	37.2	23.3	-90.25	2,903.7	3,146.1	2,697.0	2,643.3	53.70	50.226		
9,100.0	6,672.0	6,721.6	6,677.9	38.1	23.3	-90.26	2,903.7	3,146.1	2,621.2	2,566.8	54.43	48.156		
9,200.0	6,672.0	6,721.3	6,678.1	39.0	23.3	-90.27	2,903.7	3,146.1	2,547.2	2,491.9	55.25	46.106		
9,300.0	6,672.0	6,721.1	6,678.4	39.9	23.3	-90.28	2,903.7	3,146.1	2,474.9	2,418.8	56.14	44.084		
9,400.0	6,672.0	6,720.8	6,678.7	40.8	23.3	-90.29	2,903.7	3,146.1	2,404.6	2,347.5	57.12	42.098		
9,500.0	6,672.0	6,720.5	6,679.0	41.8	23.3	-90.30	2,903.7	3,146.1	2,336.5	2,278.3	58.19	40.156		
9,600.0	6,672.0	6,720.2	6,679.3	42.7	23.3	-90.31	2,903.7	3,146.1	2,270.7	2,211.4	59.34	38.266		
9,700.0	6,672.0	6,719.9	6,679.5	43.7	23.3	-90.32	2,903.7	3,146.1	2,207.5	2,146.9	60.58	36.438		
9,800.0	6,672.0	6,719.7	6,679.8	44.7	23.3	-90.32	2,903.7	3,146.1	2,147.1	2,085.2	61.91	34.680		
9,900.0	6,672.0	6,719.4	6,680.1	45.7	23.3	-90.33	2,903.7	3,146.1	2,089.7	2,026.4	63.32	33.001		
10,000.0	6,672.0	6,719.1	6,680.4	46.7	23.3	-90.34	2,903.7	3,146.1	2,035.6	1,970.8	64.81	31.410		
10,100.0	6,672.0	6,718.8	6,680.7	47.7	23.3	-90.35	2,903.7	3,146.1	1,985.1	1,918.8	66.36	29.913		
10,200.0	6,672.0	6,718.5	6,680.9	48.8	23.3	-90.36	2,903.7	3,146.1	1,938.4	1,870.5	67.97	28.517		
10,300.0	6,672.0	6,681.7	6,681.2	49.8	23.2	-90.37	2,903.7	3,146.1	1,895.9	1,826.4	69.50	27.280		
10,400.0	6,672.0	6,681.9	6,681.3	50.9	23.2	-90.37	2,903.7	3,146.1	1,857.7	1,786.5	71.17	26.102		
10,500.0	6,672.0	6,682.0	6,681.5	51.9	23.2	-90.38	2,903.7	3,146.1	1,824.2	1,751.4	72.85	25.042		
10,600.0	6,672.0	6,682.2	6,681.7	53.0	23.2	-90.39	2,903.7	3,146.1	1,795.7	1,721.2	74.50	24.104		
10,700.0	6,672.0	6,682.4	6,681.9	54.1	23.2	-90.39	2,903.6	3,146.1	1,772.4	1,696.3	76.11	23.288		
10,800.0	6,672.0	6,682.6	6,682.1	55.2	23.2	-90.40	2,903.6	3,146.1	1,754.4	1,676.8	77.64	22.596		
10,900.0	6,672.0	6,682.8	6,682.2	56.3	23.2	-90.40	2,903.6	3,146.1	1,742.0	1,662.9	79.08	22.028		
11,000.0	6,672.0	6,683.0	6,682.4	57.4	23.2	-90.41	2,903.6	3,146.1	1,735.3	1,654.9	80.40	21.582		
11,067.0	6,672.0	6,683.1	6,682.6	58.1	23.2	-90.41	2,903.6	3,146.1	1,734.0	1,652.8	81.21	21.351 CC		
11,100.0	6,672.0	6,683.1	6,682.6	58.5	23.2	-90.42	2,903.6	3,146.1	1,734.3	1,652.7	81.59	21.257 ES		
11,200.0	6,672.0	6,683.3	6,682.8	59.6	23.2	-90.42	2,903.6	3,146.1	1,739.1	1,656.5	82.62	21.050		
11,300.0	6,672.0	6,683.5	6,683.0	60.7	23.2	-90.43	2,903.6	3,146.1	1,749.6	1,666.1	83.49	20.956 SF		
11,400.0	6,672.0	6,683.7	6,683.2	61.8	23.2	-90.44	2,903.6	3,146.1	1,765.6	1,681.4	84.19	20.972		
11,500.0	6,672.0	6,683.9	6,683.4	62.9	23.2	-90.44	2,903.6	3,146.1	1,787.2	1,702.4	84.73	21.093		
11,600.0	6,672.0	6,684.1	6,683.6	64.1	23.2	-90.45	2,903.6	3,146.1	1,813.9	1,728.8	85.11	21.314		
11,700.0	6,672.0	6,684.3	6,683.8	65.2	23.2	-90.46	2,903.6	3,146.1	1,845.8	1,760.4	85.33	21.630		
11,800.0	6,672.0	6,684.6	6,684.0	66.3	23.2	-90.46	2,903.6	3,146.1	1,882.4	1,796.9	85.43	22.035		
11,900.0	6,672.0	6,684.8	6,684.2	67.5	23.2	-90.47	2,903.6	3,146.1	1,923.4	1,838.1	85.39	22.524		
12,000.0	6,672.0	6,685.0	6,684.5	68.6	23.2	-90.48	2,903.6	3,146.1	1,968.8	1,883.5	85.26	23.092		
12,100.0	6,672.0	6,685.2	6,684.7	69.8	23.2	-90.48	2,903.6	3,146.1	2,018.0	1,933.0	85.03	23.734		
12,200.0	6,672.0	6,685.4	6,684.9	70.9	23.2	-90.49	2,903.6	3,146.1	2,070.9	1,986.2	84.72	24.444		
12,300.0	6,672.0	6,685.6	6,685.1	72.1	23.2	-90.50	2,903.6	3,146.1	2,127.2	2,042.8	84.35	25.219		
12,400.0	6,672.0	6,685.9	6,685.3	73.2	23.2	-90.51	2,903.6	3,146.1	2,186.6	2,102.7	83.93	26.052		
12,500.0	6,672.0	6,686.1	6,685.6	74.4	23.2	-90.51	2,903.6	3,146.1	2,248.9	2,165.4	83.48	26.941		
12,600.0	6,672.0	6,686.3	6,685.8	75.5	23.2	-90.52	2,903.6	3,146.1	2,313.8	2,230.8	82.99	27.880		
12,700.0	6,672.0	6,686.6	6,686.0	76.7	23.2	-90.53	2,903.6	3,146.1	2,381.1	2,298.6	82.49	28.867		
12,800.0	6,672.0	6,686.8	6,686.3	77.9	23.2	-90.54	2,903.6	3,146.1	2,450.7	2,368.7	81.97	29.897		
12,900.0	6,672.0	6,687.0	6,686.5	79.0	23.2	-90.54	2,903.6	3,146.1	2,522.3	2,440.9	81.45	30.968		
13,000.0	6,672.0	6,687.3	6,686.7	80.2	23.2	-90.55	2,903.6	3,146.1	2,595.8	2,514.9	80.93	32.076		
13,100.0	6,672.0	6,687.5	6,687.0	81.4	23.2	-90.56	2,903.6	3,146.1	2,671.0	2,590.6	80.41	33.219		
13,200.0	6,672.0	6,687.8	6,687.2	82.6	23.2	-90.57	2,903.6	3,146.2	2,747.8	2,667.9	79.89	34.394		
13,300.0	6,672.0	6,688.0	6,687.5	83.7	23.2	-90.58	2,903.6	3,146.2	2,826.0	2,746.6	79.39	35.598		
13,400.0	6,672.0	6,688.3	6,687.8	84.9	23.2	-90.59	2,903.6	3,146.2	2,905.6	2,826.7	78.89	36.829		
13,500.0	6,672.0	6,688.5	6,688.0	86.1	23.2	-90.59	2,903.6	3,146.2	2,986.3	2,907.9	78.41	38.086		
13,600.0	6,672.0	6,688.8	6,688.3	87.3	23.2	-90.60	2,903.6	3,146.2	3,068.3	2,990.3	77.94	39.365		
13,700.0	6,672.0	6,689.1	6,688.5	88.4	23.2	-90.61	2,903.6	3,146.2	3,151.2	3,073.7	77.49	40.667		
13,800.0	6,672.0	6,689.3	6,688.8	89.6	23.2	-90.62	2,903.6	3,146.2	3,235.1	3,158.1	77.05	41.988		
13,900.0	6,672.0	6,689.6	6,689.1	90.8	23.2	-90.63	2,903.6	3,146.2	3,319.9	3,243.3	76.62	43.327		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurich-Rothe 6A - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
14,000.0	6,672.0	6,689.9	6,689.4	92.0	23.2	-90.64	2,903.6	3,146.2	3,405.5	3,329.3	76.22	44.683		
14,100.0	6,672.0	6,690.2	6,689.7	93.2	23.2	-90.65	2,903.6	3,146.2	3,491.9	3,416.1	75.82	46.055		
14,200.0	6,672.0	6,690.5	6,689.9	94.4	23.2	-90.66	2,903.6	3,146.2	3,579.0	3,503.6	75.44	47.442		
14,300.0	6,672.0	6,690.8	6,690.2	95.6	23.2	-90.67	2,903.6	3,146.2	3,666.8	3,591.7	75.07	48.841		
14,400.0	6,672.0	6,691.1	6,690.5	96.8	23.2	-90.68	2,903.6	3,146.2	3,755.1	3,680.4	74.72	50.253		
14,500.0	6,672.0	6,691.4	6,690.8	98.0	23.2	-90.69	2,903.6	3,146.2	3,844.0	3,769.6	74.39	51.677		
14,600.0	6,672.0	6,691.7	6,691.1	99.2	23.2	-90.70	2,903.6	3,146.2	3,933.5	3,859.4	74.06	53.110		
14,700.0	6,672.0	6,692.0	6,691.4	100.4	23.2	-90.71	2,903.6	3,146.2	4,023.4	3,949.7	73.75	54.554		
14,800.0	6,672.0	6,692.3	6,691.8	101.6	23.2	-90.72	2,903.6	3,146.2	4,113.8	4,040.4	73.45	56.006		
14,900.0	6,672.0	6,692.6	6,692.1	102.7	23.2	-90.73	2,903.6	3,146.2	4,204.7	4,131.5	73.17	57.466		
15,000.0	6,672.0	6,692.9	6,692.4	103.9	23.2	-90.74	2,903.6	3,146.2	4,295.9	4,223.0	72.89	58.934		
15,100.0	6,672.0	6,693.3	6,692.7	105.1	23.2	-90.75	2,903.6	3,146.2	4,387.5	4,314.9	72.63	60.408		
15,200.0	6,672.0	6,693.6	6,693.1	106.3	23.2	-90.76	2,903.6	3,146.2	4,479.5	4,407.1	72.38	61.889		
15,300.0	6,672.0	6,693.9	6,693.4	107.6	23.2	-90.77	2,903.6	3,146.2	4,571.8	4,499.6	72.14	63.376		
15,400.0	6,672.0	6,694.3	6,693.7	108.8	23.2	-90.78	2,903.6	3,146.2	4,664.4	4,592.5	71.91	64.867		
15,500.0	6,672.0	6,694.6	6,694.1	110.0	23.2	-90.79	2,903.6	3,146.2	4,757.3	4,685.6	71.69	66.363		
15,600.0	6,672.0	6,695.0	6,694.5	111.2	23.2	-90.80	2,903.6	3,146.2	4,850.5	4,779.0	71.47	67.864		
15,700.0	6,672.0	6,695.3	6,694.8	112.4	23.2	-90.82	2,903.6	3,146.2	4,944.0	4,872.7	71.27	69.368		
15,800.0	6,672.0	6,695.7	6,695.2	113.6	23.2	-90.83	2,903.6	3,146.2	5,037.7	4,966.6	71.08	70.876		
15,900.0	6,672.0	6,696.1	6,695.6	114.8	23.2	-90.84	2,903.5	3,146.2	5,131.6	5,060.7	70.89	72.386		
16,000.0	6,672.0	6,696.5	6,695.9	116.0	23.2	-90.85	2,903.5	3,146.2	5,225.8	5,155.1	70.71	73.900		
16,100.0	6,672.0	6,696.9	6,696.3	117.2	23.2	-90.87	2,903.5	3,146.2	5,320.2	5,249.6	70.54	75.415		
16,200.0	6,672.0	6,697.2	6,696.7	118.4	23.2	-90.88	2,903.5	3,146.2	5,414.7	5,344.4	70.38	76.933		
16,300.0	6,672.0	6,697.6	6,697.1	119.6	23.2	-90.89	2,903.5	3,146.2	5,509.5	5,439.3	70.23	78.452		
16,400.0	6,672.0	6,698.1	6,697.5	120.8	23.2	-90.90	2,903.5	3,146.2	5,604.5	5,534.4	70.08	79.973		
16,500.0	6,672.0	6,698.5	6,697.9	122.0	23.2	-90.92	2,903.5	3,146.2	5,699.6	5,629.6	69.94	81.495		
16,600.0	6,672.0	6,698.9	6,698.4	123.2	23.2	-90.93	2,903.5	3,146.2	5,794.8	5,725.0	69.80	83.018		
16,700.0	6,672.0	6,699.3	6,698.8	124.5	23.2	-90.95	2,903.5	3,146.2	5,890.3	5,820.6	69.67	84.542		
16,800.0	6,672.0	6,699.8	6,699.2	125.7	23.2	-90.96	2,903.5	3,146.2	5,985.9	5,916.3	69.55	86.066		
16,900.0	6,672.0	6,700.2	6,699.7	126.9	23.2	-90.97	2,903.5	3,146.2	6,081.6	6,012.1	69.43	87.590		
17,000.0	6,672.0	6,700.7	6,700.1	128.1	23.2	-90.99	2,903.5	3,146.2	6,177.4	6,108.1	69.32	89.114		
17,100.0	6,672.0	6,701.1	6,700.6	129.3	23.2	-91.00	2,903.5	3,146.2	6,273.4	6,204.2	69.21	90.638		
17,200.0	6,672.0	6,701.6	6,701.1	130.5	23.2	-91.02	2,903.5	3,146.2	6,369.5	6,300.4	69.11	92.162		
17,300.0	6,672.0	6,702.1	6,701.6	131.7	23.2	-91.03	2,903.5	3,146.2	6,465.7	6,396.7	69.02	93.685		
17,400.0	6,672.0	6,702.6	6,702.0	133.0	23.3	-91.05	2,903.5	3,146.2	6,562.1	6,493.1	68.92	95.208		
17,500.0	6,672.0	6,703.1	6,702.5	134.2	23.3	-91.07	2,903.5	3,146.2	6,658.5	6,589.7	68.84	96.729		
17,600.0	6,672.0	6,703.6	6,703.0	135.4	23.3	-91.08	2,903.5	3,146.2	6,755.0	6,686.3	68.75	98.250		
17,700.0	6,672.0	6,704.1	6,703.6	136.6	23.3	-91.10	2,903.5	3,146.2	6,851.7	6,783.0	68.67	99.769		
17,800.0	6,672.0	6,704.6	6,704.1	137.8	23.3	-91.12	2,903.5	3,146.2	6,948.4	6,879.8	68.60	101.288		
17,900.0	6,672.0	6,705.2	6,704.6	139.0	23.3	-91.13	2,903.5	3,146.2	7,045.2	6,976.7	68.53	102.804		
18,000.0	6,672.0	6,705.7	6,705.2	140.3	23.3	-91.15	2,903.5	3,146.2	7,142.1	7,073.6	68.46	104.319		
18,100.0	6,672.0	6,706.3	6,705.8	141.5	23.3	-91.17	2,903.5	3,146.2	7,239.1	7,170.7	68.40	105.833		
18,200.0	6,672.0	6,706.9	6,706.3	142.7	23.3	-91.19	2,903.5	3,146.2	7,336.2	7,267.8	68.34	107.344		
18,300.0	6,672.0	6,707.4	6,706.9	143.9	23.3	-91.21	2,903.5	3,146.2	7,433.3	7,365.0	68.29	108.854		
18,342.5	6,672.0	6,707.7	6,707.2	144.4	23.3	-91.21	2,903.5	3,146.2	7,474.6	7,406.3	68.26	109.494		



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurick-Rothe 32-06 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 6862-2_Unknown													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	12.0	-12.0	0.0	0.2	26.09	4,838.1	2,368.7	5,386.8					
100.0	100.0	88.0	88.0	0.1	1.8	26.09	4,838.1	2,368.7	5,386.8	5,385.0	1.89	2,856.739		
200.0	200.0	188.0	188.0	0.5	3.8	26.09	4,838.1	2,368.7	5,386.8	5,382.6	4.24	1,269.246		
300.0	300.0	288.0	288.0	0.8	5.8	26.09	4,838.1	2,368.7	5,386.8	5,380.2	6.60	815.867		
400.0	400.0	388.0	388.0	1.2	7.8	26.09	4,838.1	2,368.7	5,386.8	5,377.9	8.96	601.139		
500.0	500.0	488.0	488.0	1.6	9.8	26.09	4,838.1	2,368.7	5,386.8	5,375.5	11.32	475.889		
600.0	600.0	588.0	588.0	1.9	11.8	26.09	4,838.1	2,368.7	5,386.8	5,373.2	13.68	393.833		
700.0	700.0	688.0	688.0	2.3	13.8	26.09	4,838.1	2,368.7	5,386.8	5,370.8	16.04	335.912		
800.0	800.0	788.0	788.0	2.6	15.8	26.09	4,838.1	2,368.7	5,386.8	5,368.5	18.39	292.844		
900.0	900.0	888.0	888.0	3.0	17.8	26.09	4,838.1	2,368.7	5,386.8	5,366.1	20.75	259.564		
1,000.0	1,000.0	988.0	988.0	3.4	19.8	26.09	4,838.1	2,368.7	5,386.8	5,363.7	23.11	233.077		
1,100.0	1,100.0	1,088.0	1,088.0	3.7	21.8	26.09	4,838.1	2,368.7	5,386.8	5,361.4	25.47	211.495		
1,200.0	1,200.0	1,188.0	1,188.0	4.1	23.8	26.09	4,838.1	2,368.7	5,386.8	5,359.0	27.83	193.571		
1,300.0	1,300.0	1,288.0	1,288.0	4.4	25.8	26.09	4,838.1	2,368.7	5,386.8	5,356.7	30.19	178.447		
1,400.0	1,400.0	1,388.0	1,388.0	4.8	27.8	26.09	4,838.1	2,368.7	5,386.8	5,354.3	32.55	165.516		
1,500.0	1,500.0	1,488.0	1,488.0	5.1	29.8	26.09	4,838.1	2,368.7	5,386.8	5,351.9	34.90	154.332		
1,600.0	1,600.0	1,588.0	1,588.0	5.5	31.8	26.09	4,838.1	2,368.7	5,386.8	5,349.6	37.26	144.564		
1,700.0	1,700.0	1,688.0	1,688.0	5.9	33.8	26.09	4,838.1	2,368.7	5,386.8	5,347.2	39.62	135.959		
1,800.0	1,800.0	1,788.0	1,788.0	6.2	35.8	26.09	4,838.1	2,368.7	5,386.8	5,344.9	41.98	128.320		
1,900.0	1,900.0	1,888.0	1,888.0	6.6	37.8	26.09	4,838.1	2,368.7	5,386.8	5,342.5	44.34	121.495		
2,000.0	2,000.0	1,988.0	1,988.0	6.9	39.8	26.09	4,838.1	2,368.7	5,386.8	5,340.1	46.70	115.358		
2,100.0	2,100.0	2,088.0	2,088.0	7.3	41.8	26.09	4,838.1	2,368.7	5,386.8	5,337.8	49.06	109.812		
2,200.0	2,200.0	2,188.0	2,188.0	7.7	43.8	26.09	4,838.1	2,368.7	5,386.8	5,335.4	51.41	104.775		
2,300.0	2,300.0	2,288.0	2,288.0	8.0	45.8	77.11	4,838.1	2,368.7	5,386.5	5,332.7	53.77	100.179		
2,400.0	2,399.8	2,387.8	2,387.8	8.4	47.8	77.19	4,838.1	2,368.7	5,385.3	5,329.2	56.12	95.963		
2,500.0	2,499.5	2,487.5	2,487.5	8.7	49.7	77.32	4,838.1	2,368.7	5,383.4	5,324.9	58.46	92.079		
2,600.0	2,598.7	2,586.7	2,586.7	9.1	51.7	77.49	4,838.1	2,368.7	5,380.7	5,319.9	60.80	88.492		
2,700.0	2,697.5	2,685.5	2,685.5	9.4	53.7	77.72	4,838.1	2,368.7	5,377.3	5,314.2	63.13	85.172		
2,800.0	2,795.6	2,783.6	2,783.6	9.8	55.7	78.00	4,838.1	2,368.7	5,373.2	5,307.7	65.45	82.091		
2,900.0	2,893.1	2,881.1	2,881.1	10.1	57.6	78.32	4,838.1	2,368.7	5,368.5	5,300.7	67.76	79.226		
3,000.0	2,989.6	2,977.6	2,977.6	10.5	59.6	78.69	4,838.1	2,368.7	5,363.1	5,293.1	70.05	76.558		
3,100.0	3,085.3	3,073.3	3,073.3	10.9	61.5	79.09	4,838.1	2,368.7	5,357.3	5,284.9	72.33	74.067		
3,200.0	3,179.8	3,167.8	3,167.8	11.2	63.4	79.54	4,838.1	2,368.7	5,350.9	5,276.3	74.59	71.739		
3,300.0	3,273.2	3,261.2	3,261.2	11.6	65.2	80.03	4,838.1	2,368.7	5,344.1	5,267.3	76.83	69.560		
3,387.5	3,353.8	3,341.8	3,341.8	11.9	66.8	80.49	4,838.1	2,368.7	5,337.9	5,259.1	78.77	67.765		
3,400.0	3,365.2	3,353.2	3,353.2	12.0	67.1	80.54	4,838.1	2,368.7	5,337.0	5,257.9	79.05	67.516		
3,500.0	3,456.8	3,444.8	3,444.8	12.4	68.9	80.93	4,838.1	2,368.7	5,329.9	5,248.6	81.26	65.588		
3,600.0	3,548.3	3,536.3	3,536.3	12.8	70.7	81.32	4,838.1	2,368.7	5,323.1	5,239.6	83.49	63.761		
3,700.0	3,639.8	3,627.8	3,627.8	13.2	72.6	81.71	4,838.1	2,368.7	5,316.6	5,230.9	85.71	62.029		
3,800.0	3,731.4	3,719.4	3,719.4	13.6	74.4	82.11	4,838.1	2,368.7	5,310.5	5,222.5	87.95	60.384		
3,900.0	3,822.9	3,810.9	3,810.9	14.0	76.2	82.50	4,838.1	2,368.7	5,304.6	5,214.4	90.18	58.821		
4,000.0	3,914.4	3,902.4	3,902.4	14.4	78.0	82.90	4,838.1	2,368.7	5,299.0	5,206.6	92.42	57.334		
4,100.0	4,005.9	3,993.9	3,993.9	14.8	79.9	83.30	4,838.1	2,368.7	5,293.7	5,199.1	94.67	55.918		
4,200.0	4,097.5	4,085.5	4,085.5	15.2	81.7	83.69	4,838.1	2,368.7	5,288.7	5,191.8	96.92	54.570		
4,300.0	4,189.0	4,177.0	4,177.0	15.6	83.5	84.09	4,838.1	2,368.7	5,284.1	5,184.9	99.17	53.283		
4,400.0	4,280.5	4,268.5	4,268.5	16.1	85.4	84.49	4,838.1	2,368.7	5,279.7	5,178.3	101.42	52.056		
4,500.0	4,372.1	4,360.1	4,360.1	16.5	87.2	84.89	4,838.1	2,368.7	5,275.6	5,171.9	103.68	50.883		
4,600.0	4,463.6	4,451.6	4,451.6	16.9	89.0	85.29	4,838.1	2,368.7	5,271.9	5,165.9	105.94	49.762		
4,700.0	4,555.1	4,543.1	4,543.1	17.4	90.9	85.69	4,838.1	2,368.7	5,268.4	5,160.2	108.20	48.690		
4,800.0	4,646.7	4,634.7	4,634.7	17.8	92.7	86.09	4,838.1	2,368.7	5,265.2	5,154.8	110.47	47.664		
4,900.0	4,738.2	4,726.2	4,726.2	18.2	94.5	86.49	4,838.1	2,368.7	5,262.4	5,149.7	112.73	46.680		
5,000.0	4,829.7	4,817.7	4,817.7	18.7	96.4	86.89	4,838.1	2,368.7	5,259.9	5,144.9	115.00	45.738		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurick-Rothe 32-06 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 6862-2_Unknown													Offset Well Error:	0.0 ft
Reference	Offset	Semi Major Axis		Distance										Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,100.0	4,921.3	4,909.3	4,909.3	19.1	98.2	87.29	4,838.1	2,368.7	5,257.6	5,140.4	117.27	44.834		
5,200.0	5,012.8	5,000.8	5,000.8	19.5	100.0	87.69	4,838.1	2,368.7	5,255.7	5,136.2	119.54	43.966		
5,300.0	5,104.3	5,092.3	5,092.3	20.0	101.8	88.09	4,838.1	2,368.7	5,254.1	5,132.3	121.81	43.133		
5,400.0	5,195.8	5,183.8	5,183.8	20.4	103.7	88.49	4,838.1	2,368.7	5,252.8	5,128.7	124.08	42.332		
5,500.0	5,287.4	5,275.4	5,275.4	20.9	105.5	88.90	4,838.1	2,368.7	5,251.8	5,125.4	126.36	41.563		
5,600.0	5,378.9	5,366.9	5,366.9	21.3	107.3	89.30	4,838.1	2,368.7	5,251.1	5,122.4	128.63	40.822		
5,700.0	5,470.4	5,458.4	5,458.4	21.8	109.2	89.70	4,838.1	2,368.7	5,250.7	5,119.8	130.91	40.110		
5,774.2	5,538.4	5,526.4	5,526.4	22.1	110.5	90.00	4,838.1	2,368.7	5,250.6	5,118.0	132.60	39.598		
5,800.0	5,562.0	5,550.0	5,550.0	22.2	111.0	90.10	4,838.1	2,368.7	5,250.6	5,117.4	133.18	39.424		
5,900.0	5,653.5	5,641.5	5,641.5	22.7	112.8	90.51	4,838.1	2,368.7	5,250.8	5,115.4	135.46	38.763		
6,000.0	5,745.0	5,733.0	5,733.0	23.1	114.7	90.91	4,838.1	2,368.7	5,251.4	5,113.7	137.74	38.126		
6,100.0	5,836.6	5,824.6	5,824.6	23.6	116.5	91.31	4,838.1	2,368.7	5,252.2	5,112.2	140.02	37.511		
6,200.0	5,928.1	5,916.1	5,916.1	24.0	118.3	91.71	4,838.1	2,368.7	5,253.4	5,111.1	142.30	36.919		
6,278.6	6,000.0	5,988.0	5,988.0	24.4	119.8	92.03	4,838.1	2,368.7	5,254.5	5,110.4	144.09	36.468		
6,290.0	6,010.4	5,998.4	5,998.4	24.4	120.0	90.52	4,838.1	2,368.7	5,254.6	5,110.3	144.35	36.403		
6,300.0	6,019.5	6,007.5	6,007.5	24.5	120.2	88.85	4,838.1	2,368.7	5,254.6	5,110.0	144.57	36.346		
6,350.0	6,065.8	6,053.8	6,053.8	24.7	121.1	78.51	4,838.1	2,368.7	5,252.5	5,106.8	145.72	36.046		
6,400.0	6,113.0	6,101.0	6,101.0	24.9	122.0	64.39	4,838.1	2,368.7	5,247.2	5,100.3	146.86	35.728		
6,450.0	6,160.7	6,148.7	6,148.7	25.1	123.0	46.97	4,838.1	2,368.7	5,238.5	5,090.5	148.00	35.394		
6,500.0	6,208.5	6,196.5	6,196.5	25.3	123.9	28.74	4,838.1	2,368.7	5,226.7	5,077.5	149.13	35.047		
6,550.0	6,255.8	6,243.8	6,243.8	25.4	124.9	12.60	4,838.1	2,368.7	5,211.7	5,061.4	150.24	34.690		
6,600.0	6,302.5	6,290.5	6,290.5	25.6	125.8	-0.37	4,838.1	2,368.7	5,193.7	5,042.4	151.31	34.325		
6,650.0	6,347.9	6,335.9	6,335.9	25.7	126.7	-10.62	4,838.1	2,368.7	5,172.9	5,020.5	152.35	33.954		
6,700.0	6,391.6	6,379.6	6,379.6	25.9	127.6	-19.02	4,838.1	2,368.7	5,149.4	4,996.1	153.35	33.580		
6,750.0	6,433.4	6,421.4	6,421.4	26.0	128.4	-26.27	4,838.1	2,368.7	5,123.5	4,969.2	154.29	33.207		
6,800.0	6,472.8	6,460.8	6,460.8	26.1	129.2	-32.90	4,838.1	2,368.7	5,095.4	4,940.2	155.18	32.836		
6,850.0	6,509.4	6,497.4	6,497.4	26.2	129.9	-39.23	4,838.1	2,368.7	5,065.5	4,909.4	156.01	32.469		
6,900.0	6,543.0	6,531.0	6,531.0	26.3	130.6	-45.47	4,838.1	2,368.7	5,033.9	4,877.1	156.76	32.111		
6,950.0	6,573.2	6,561.2	6,561.2	26.4	131.2	-51.72	4,838.1	2,368.7	5,001.0	4,843.6	157.45	31.763		
7,000.0	6,599.8	6,587.8	6,587.8	26.5	131.8	-58.00	4,838.1	2,368.7	4,967.2	4,809.2	158.06	31.427		
7,050.0	6,622.5	6,610.5	6,610.5	26.6	132.2	-64.27	4,838.1	2,368.7	4,932.9	4,774.3	158.58	31.106		
7,100.0	6,641.1	6,629.1	6,629.1	26.7	132.6	-70.42	4,838.1	2,368.7	4,898.2	4,739.2	159.02	30.803		
7,150.0	6,655.4	6,643.4	6,643.4	26.8	132.9	-76.30	4,838.1	2,368.7	4,863.8	4,704.4	159.37	30.519		
7,200.0	6,665.4	6,653.4	6,653.4	26.9	133.1	-81.80	4,838.1	2,368.7	4,829.7	4,670.1	159.63	30.256		
7,250.0	6,670.8	6,658.8	6,658.8	27.0	133.2	-86.79	4,838.1	2,368.7	4,796.5	4,636.7	159.80	30.017		
7,285.7	6,672.0	6,660.0	6,660.0	27.1	133.2	-90.00	4,838.1	2,368.7	4,773.5	4,613.7	159.86	29.861		
7,300.0	6,672.0	6,660.0	6,660.0	27.1	133.2	-90.00	4,838.1	2,368.7	4,764.5	4,604.6	159.87	29.801		
7,400.0	6,672.0	6,660.0	6,660.0	27.3	133.2	-90.00	4,838.1	2,368.7	4,701.8	4,541.7	160.02	29.383		
7,500.0	6,672.0	6,660.0	6,660.0	27.6	133.2	-90.00	4,838.1	2,368.7	4,640.3	4,480.1	160.20	28.965		
7,600.0	6,672.0	6,660.0	6,660.0	28.0	133.2	-90.00	4,838.1	2,368.7	4,580.3	4,419.9	160.44	28.549		
7,700.0	6,672.0	6,660.0	6,660.0	28.3	133.2	-90.00	4,838.1	2,368.7	4,521.6	4,360.9	160.72	28.134		
7,800.0	6,672.0	6,660.0	6,660.0	28.8	133.2	-90.00	4,838.1	2,368.7	4,464.5	4,303.4	161.05	27.720		
7,900.0	6,672.0	6,660.0	6,660.0	29.3	133.2	-90.00	4,838.1	2,368.7	4,408.8	4,247.4	161.44	27.309		
8,000.0	6,672.0	6,660.0	6,660.0	29.8	133.2	-90.00	4,838.1	2,368.7	4,354.7	4,192.8	161.88	26.901		
8,100.0	6,672.0	6,660.0	6,660.0	30.4	133.2	-90.00	4,838.1	2,368.7	4,302.3	4,139.9	162.37	26.497		
8,200.0	6,672.0	6,660.0	6,660.0	31.0	133.2	-90.00	4,838.1	2,368.7	4,251.5	4,088.6	162.91	26.097		
8,300.0	6,672.0	6,660.0	6,660.0	31.7	133.2	-90.00	4,838.1	2,368.7	4,202.6	4,039.0	163.51	25.702		
8,400.0	6,672.0	6,660.0	6,660.0	32.4	133.2	-90.00	4,838.1	2,368.7	4,155.4	3,991.2	164.16	25.313		
8,500.0	6,672.0	6,660.0	6,660.0	33.1	133.2	-90.00	4,838.1	2,368.7	4,110.1	3,945.3	164.86	24.930		
8,600.0	6,672.0	6,660.0	6,660.0	33.9	133.2	-90.00	4,838.1	2,368.7	4,066.8	3,901.2	165.61	24.556		
8,700.0	6,672.0	6,660.0	6,660.0	34.7	133.2	-90.00	4,838.1	2,368.7	4,025.5	3,859.1	166.41	24.189		
8,800.0	6,672.0	6,660.0	6,660.0	35.5	133.2	-90.00	4,838.1	2,368.7	3,986.2	3,819.0	167.26	23.833		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurick-Rothe 32-06 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 6862-2_Unknown													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
8,900.0	6,672.0	6,660.0	6,660.0	36.3	133.2	-90.00	4,838.1	2,368.7	3,949.1	3,781.0	168.15	23.486		
9,000.0	6,672.0	6,660.0	6,660.0	37.2	133.2	-90.00	4,838.1	2,368.7	3,914.2	3,745.1	169.07	23.151		
9,100.0	6,672.0	6,660.0	6,660.0	38.1	133.2	-90.00	4,838.1	2,368.7	3,881.6	3,711.5	170.04	22.828		
9,200.0	6,672.0	6,660.0	6,660.0	39.0	133.2	-90.00	4,838.1	2,368.7	3,851.2	3,680.2	171.03	22.517		
9,300.0	6,672.0	6,660.0	6,660.0	39.9	133.2	-90.00	4,838.1	2,368.7	3,823.2	3,651.2	172.06	22.220		
9,400.0	6,672.0	6,660.0	6,660.0	40.8	133.2	-90.00	4,838.1	2,368.7	3,797.7	3,624.6	173.11	21.938		
9,500.0	6,672.0	6,660.0	6,660.0	41.8	133.2	-90.00	4,838.1	2,368.7	3,774.6	3,600.4	174.19	21.670		
9,600.0	6,672.0	6,660.0	6,660.0	42.7	133.2	-90.00	4,838.1	2,368.7	3,754.1	3,578.8	175.28	21.418		
9,700.0	6,672.0	6,660.0	6,660.0	43.7	133.2	-90.00	4,838.1	2,368.7	3,736.0	3,559.7	176.38	21.182		
9,800.0	6,672.0	6,660.0	6,660.0	44.7	133.2	-90.00	4,838.1	2,368.7	3,720.6	3,543.1	177.49	20.963		
9,900.0	6,672.0	6,660.0	6,660.0	45.7	133.2	-90.00	4,838.1	2,368.7	3,707.8	3,529.2	178.60	20.760		
10,000.0	6,672.0	6,660.0	6,660.0	46.7	133.2	-90.00	4,838.1	2,368.7	3,697.7	3,518.0	179.72	20.575		
10,100.0	6,672.0	6,660.0	6,660.0	47.7	133.2	-90.00	4,838.1	2,368.7	3,690.2	3,509.4	180.83	20.408		
10,200.0	6,672.0	6,660.0	6,660.0	48.8	133.2	-90.00	4,838.1	2,368.7	3,685.5	3,503.5	181.93	20.258		
10,300.0	6,672.0	6,660.0	6,660.0	49.8	133.2	-90.00	4,838.1	2,368.7	3,683.4	3,500.4	183.01	20.126		
10,326.3	6,672.0	6,660.0	6,660.0	50.1	133.2	-90.00	4,838.1	2,368.7	3,683.3	3,500.0	183.30	20.095 CC		
10,400.0	6,672.0	6,660.0	6,660.0	50.9	133.2	-90.00	4,838.1	2,368.7	3,684.0	3,500.0	184.09	20.013 ES		
10,500.0	6,672.0	6,660.0	6,660.0	51.9	133.2	-90.00	4,838.1	2,368.7	3,687.4	3,502.3	185.14	19.917		
10,600.0	6,672.0	6,660.0	6,660.0	53.0	133.2	-90.00	4,838.1	2,368.7	3,693.4	3,507.3	186.17	19.840		
10,700.0	6,672.0	6,660.0	6,660.0	54.1	133.2	-90.00	4,838.1	2,368.7	3,702.2	3,515.0	187.17	19.780		
10,800.0	6,672.0	6,660.0	6,660.0	55.2	133.2	-90.00	4,838.1	2,368.7	3,713.6	3,525.4	188.14	19.738		
10,900.0	6,672.0	6,660.0	6,660.0	56.3	133.2	-90.00	4,838.1	2,368.7	3,727.6	3,538.5	189.08	19.714		
11,000.0	6,672.0	6,660.0	6,660.0	57.4	133.2	-90.00	4,838.1	2,368.7	3,744.2	3,554.3	189.99	19.708 SF		
11,100.0	6,672.0	6,660.0	6,660.0	58.5	133.2	-90.00	4,838.1	2,368.7	3,763.5	3,572.6	190.86	19.718		
11,200.0	6,672.0	6,660.0	6,660.0	59.6	133.2	-90.00	4,838.1	2,368.7	3,785.2	3,593.5	191.70	19.745		
11,300.0	6,672.0	6,660.0	6,660.0	60.7	133.2	-90.00	4,838.1	2,368.7	3,809.5	3,617.0	192.50	19.789		
11,400.0	6,672.0	6,660.0	6,660.0	61.8	133.2	-90.00	4,838.1	2,368.7	3,836.2	3,642.9	193.26	19.850		
11,500.0	6,672.0	6,660.0	6,660.0	62.9	133.2	-90.00	4,838.1	2,368.7	3,865.3	3,671.3	193.99	19.925		
11,600.0	6,672.0	6,660.0	6,660.0	64.1	133.2	-90.00	4,838.1	2,368.7	3,896.7	3,702.1	194.67	20.017		
11,700.0	6,672.0	6,660.0	6,660.0	65.2	133.2	-90.00	4,838.1	2,368.7	3,930.5	3,735.1	195.32	20.123		
11,800.0	6,672.0	6,660.0	6,660.0	66.3	133.2	-90.00	4,838.1	2,368.7	3,966.4	3,770.5	195.93	20.244		
11,900.0	6,672.0	6,660.0	6,660.0	67.5	133.2	-90.00	4,838.1	2,368.7	4,004.5	3,808.0	196.50	20.379		
12,000.0	6,672.0	6,660.0	6,660.0	68.6	133.2	-90.00	4,838.1	2,368.7	4,044.8	3,847.7	197.04	20.528		
12,100.0	6,672.0	6,660.0	6,660.0	69.8	133.2	-90.00	4,838.1	2,368.7	4,087.1	3,889.5	197.54	20.690		
12,200.0	6,672.0	6,660.0	6,660.0	70.9	133.2	-90.00	4,838.1	2,368.7	4,131.3	3,933.3	198.00	20.865		
12,300.0	6,672.0	6,660.0	6,660.0	72.1	133.2	-90.00	4,838.1	2,368.7	4,177.5	3,979.1	198.43	21.053		
12,400.0	6,672.0	6,660.0	6,660.0	73.2	133.2	-90.00	4,838.1	2,368.7	4,225.5	4,026.7	198.83	21.252		
12,500.0	6,672.0	6,660.0	6,660.0	74.4	133.2	-90.00	4,838.1	2,368.7	4,275.3	4,076.2	199.20	21.463		
12,600.0	6,672.0	6,660.0	6,660.0	75.5	133.2	-90.00	4,838.1	2,368.7	4,326.9	4,127.4	199.54	21.685		
12,700.0	6,672.0	6,660.0	6,660.0	76.7	133.2	-90.00	4,838.1	2,368.7	4,380.1	4,180.3	199.85	21.918		
12,800.0	6,672.0	6,660.0	6,660.0	77.9	133.2	-90.00	4,838.1	2,368.7	4,435.0	4,234.8	200.13	22.161		
12,900.0	6,672.0	6,660.0	6,660.0	79.0	133.2	-90.00	4,838.1	2,368.7	4,491.4	4,291.0	200.39	22.414		
13,000.0	6,672.0	6,660.0	6,660.0	80.2	133.2	-90.00	4,838.1	2,368.7	4,549.2	4,348.6	200.62	22.676		
13,100.0	6,672.0	6,660.0	6,660.0	81.4	133.2	-90.00	4,838.1	2,368.7	4,608.6	4,407.7	200.83	22.948		
13,200.0	6,672.0	6,660.0	6,660.0	82.6	133.2	-90.00	4,838.1	2,368.7	4,669.3	4,468.2	201.02	23.228		
13,300.0	6,672.0	6,660.0	6,660.0	83.7	133.2	-90.00	4,838.1	2,368.7	4,731.3	4,530.1	201.19	23.517		
13,400.0	6,672.0	6,660.0	6,660.0	84.9	133.2	-90.00	4,838.1	2,368.7	4,794.6	4,593.3	201.34	23.814		
13,500.0	6,672.0	6,660.0	6,660.0	86.1	133.2	-90.00	4,838.1	2,368.7	4,859.1	4,657.7	201.47	24.118		
13,600.0	6,672.0	6,660.0	6,660.0	87.3	133.2	-90.00	4,838.1	2,368.7	4,924.8	4,723.3	201.59	24.430		
13,700.0	6,672.0	6,660.0	6,660.0	88.4	133.2	-90.00	4,838.1	2,368.7	4,991.7	4,790.0	201.69	24.749		
13,800.0	6,672.0	6,660.0	6,660.0	89.6	133.2	-90.00	4,838.1	2,368.7	5,059.6	4,857.9	201.78	25.075		
13,900.0	6,672.0	6,660.0	6,660.0	90.8	133.2	-90.00	4,838.1	2,368.7	5,128.6	4,926.8	201.85	25.408		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - Skurick-Rothe 32-06 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 6862-2_Unknown													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
14,000.0	6,672.0	6,660.0	6,660.0	92.0	133.2	-90.00	4,838.1	2,368.7	5,198.6	4,996.7	201.91	25.747		
14,100.0	6,672.0	6,660.0	6,660.0	93.2	133.2	-90.00	4,838.1	2,368.7	5,269.5	5,067.6	201.96	26.092		
14,200.0	6,672.0	6,660.0	6,660.0	94.4	133.2	-90.00	4,838.1	2,368.7	5,341.4	5,139.4	202.00	26.442		
14,300.0	6,672.0	6,660.0	6,660.0	95.6	133.2	-90.00	4,838.1	2,368.7	5,414.2	5,212.1	202.03	26.799		
14,400.0	6,672.0	6,660.0	6,660.0	96.8	133.2	-90.00	4,838.1	2,368.7	5,487.8	5,285.7	202.05	27.160		
14,500.0	6,672.0	6,660.0	6,660.0	98.0	133.2	-90.00	4,838.1	2,368.7	5,562.2	5,360.1	202.07	27.527		
14,600.0	6,672.0	6,660.0	6,660.0	99.2	133.2	-90.00	4,838.1	2,368.7	5,637.4	5,435.4	202.07	27.898		
14,700.0	6,672.0	6,660.0	6,660.0	100.4	133.2	-90.00	4,838.1	2,368.7	5,713.4	5,511.3	202.07	28.274		
14,800.0	6,672.0	6,660.0	6,660.0	101.6	133.2	-90.00	4,838.1	2,368.7	5,790.1	5,588.0	202.06	28.655		
14,900.0	6,672.0	6,660.0	6,660.0	102.7	133.2	-90.00	4,838.1	2,368.7	5,867.5	5,665.4	202.05	29.040		
15,000.0	6,672.0	6,660.0	6,660.0	103.9	133.2	-90.00	4,838.1	2,368.7	5,945.6	5,743.5	202.03	29.429		
15,100.0	6,672.0	6,660.0	6,660.0	105.1	133.2	-90.00	4,838.1	2,368.7	6,024.3	5,822.3	202.01	29.822		
15,200.0	6,672.0	6,660.0	6,660.0	106.3	133.2	-90.00	4,838.1	2,368.7	6,103.6	5,901.6	201.98	30.219		
15,300.0	6,672.0	6,660.0	6,660.0	107.6	133.2	-90.00	4,838.1	2,368.7	6,183.5	5,981.6	201.95	30.619		
15,400.0	6,672.0	6,660.0	6,660.0	108.8	133.2	-90.00	4,838.1	2,368.7	6,264.0	6,062.1	201.91	31.023		
15,500.0	6,672.0	6,660.0	6,660.0	110.0	133.2	-90.00	4,838.1	2,368.7	6,345.1	6,143.2	201.88	31.430		
15,600.0	6,672.0	6,660.0	6,660.0	111.2	133.2	-90.00	4,838.1	2,368.7	6,426.6	6,224.8	201.84	31.841		
15,700.0	6,672.0	6,660.0	6,660.0	112.4	133.2	-90.00	4,838.1	2,368.7	6,508.7	6,306.9	201.79	32.254		
15,800.0	6,672.0	6,660.0	6,660.0	113.6	133.2	-90.00	4,838.1	2,368.7	6,591.3	6,389.5	201.75	32.671		
15,900.0	6,672.0	6,660.0	6,660.0	114.8	133.2	-90.00	4,838.1	2,368.7	6,674.3	6,472.6	201.70	33.090		
16,000.0	6,672.0	6,660.0	6,660.0	116.0	133.2	-90.00	4,838.1	2,368.7	6,757.8	6,556.2	201.65	33.512		
16,100.0	6,672.0	6,660.0	6,660.0	117.2	133.2	-90.00	4,838.1	2,368.7	6,841.8	6,640.2	201.60	33.937		
16,200.0	6,672.0	6,660.0	6,660.0	118.4	133.2	-90.00	4,838.1	2,368.7	6,926.1	6,724.6	201.55	34.364		
16,300.0	6,672.0	6,660.0	6,660.0	119.6	133.2	-90.00	4,838.1	2,368.7	7,010.9	6,809.4	201.50	34.794		
16,400.0	6,672.0	6,660.0	6,660.0	120.8	133.2	-90.00	4,838.1	2,368.7	7,096.1	6,894.6	201.45	35.226		
16,500.0	6,672.0	6,660.0	6,660.0	122.0	133.2	-90.00	4,838.1	2,368.7	7,181.6	6,980.2	201.39	35.660		
16,600.0	6,672.0	6,660.0	6,660.0	123.2	133.2	-90.00	4,838.1	2,368.7	7,267.5	7,066.2	201.34	36.096		
16,700.0	6,672.0	6,660.0	6,660.0	124.5	133.2	-90.00	4,838.1	2,368.7	7,353.8	7,152.5	201.29	36.534		
16,800.0	6,672.0	6,660.0	6,660.0	125.7	133.2	-90.00	4,838.1	2,368.7	7,440.4	7,239.2	201.23	36.974		
16,900.0	6,672.0	6,660.0	6,660.0	126.9	133.2	-90.00	4,838.1	2,368.7	7,527.3	7,326.1	201.18	37.417		
17,000.0	6,672.0	6,660.0	6,660.0	128.1	133.2	-90.00	4,838.1	2,368.7	7,614.6	7,413.4	201.12	37.860		
17,100.0	6,672.0	6,660.0	6,660.0	129.3	133.2	-90.00	4,838.1	2,368.7	7,702.1	7,501.0	201.07	38.306		
17,200.0	6,672.0	6,660.0	6,660.0	130.5	133.2	-90.00	4,838.1	2,368.7	7,790.0	7,588.9	201.01	38.754		
17,300.0	6,672.0	6,660.0	6,660.0	131.7	133.2	-90.00	4,838.1	2,368.7	7,878.1	7,677.1	200.96	39.202		
17,400.0	6,672.0	6,660.0	6,660.0	133.0	133.2	-90.00	4,838.1	2,368.7	7,966.5	7,765.6	200.91	39.653		
17,500.0	6,672.0	6,660.0	6,660.0	134.2	133.2	-90.00	4,838.1	2,368.7	8,055.2	7,854.3	200.85	40.105		
17,600.0	6,672.0	6,660.0	6,660.0	135.4	133.2	-90.00	4,838.1	2,368.7	8,144.1	7,943.3	200.80	40.558		
17,700.0	6,672.0	6,660.0	6,660.0	136.6	133.2	-90.00	4,838.1	2,368.7	8,233.3	8,032.6	200.75	41.013		
17,800.0	6,672.0	6,660.0	6,660.0	137.8	133.2	-90.00	4,838.1	2,368.7	8,322.7	8,122.0	200.70	41.469		
17,900.0	6,672.0	6,660.0	6,660.0	139.0	133.2	-90.00	4,838.1	2,368.7	8,412.4	8,211.8	200.65	41.926		
18,000.0	6,672.0	6,660.0	6,660.0	140.3	133.2	-90.00	4,838.1	2,368.7	8,502.3	8,301.7	200.60	42.385		
18,100.0	6,672.0	6,660.0	6,660.0	141.5	133.2	-90.00	4,838.1	2,368.7	8,592.4	8,391.9	200.55	42.845		
18,200.0	6,672.0	6,660.0	6,660.0	142.7	133.2	-90.00	4,838.1	2,368.7	8,682.7	8,482.2	200.50	43.305		
18,300.0	6,672.0	6,660.0	6,660.0	143.9	133.2	-90.00	4,838.1	2,368.7	8,773.3	8,572.8	200.45	43.767		
18,342.5	6,672.0	6,660.0	6,660.0	144.4	133.2	-90.00	4,838.1	2,368.7	8,811.8	8,611.3	200.43	43.964		



**Noble Energy, Inc.**  
**Anticollision Report**

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - SLW Ranch State BB06-619 - Original Drilling - Prelim - Rev 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-7.93	4,223.1	-588.4	4,263.9					
100.0	100.0	77.0	77.0	0.1	0.1	-7.93	4,223.1	-588.4	4,263.9	4,263.6	0.22	N/A		
200.0	200.0	177.0	177.0	0.5	0.4	-7.93	4,223.1	-588.4	4,263.9	4,263.0	0.89	4,815.615		
300.0	300.0	277.0	277.0	0.8	0.8	-7.93	4,223.1	-588.4	4,263.9	4,262.3	1.60	2,660.978		
400.0	400.0	377.0	377.0	1.2	1.1	-7.93	4,223.1	-588.4	4,263.9	4,261.5	2.32	1,838.419		
500.0	500.0	477.0	477.0	1.6	1.5	-7.93	4,223.1	-588.4	4,263.9	4,260.8	3.04	1,404.318		
600.0	600.0	577.0	577.0	1.9	1.8	-7.93	4,223.1	-588.4	4,263.9	4,260.1	3.75	1,136.062		
700.0	700.0	677.0	677.0	2.3	2.2	-7.93	4,223.1	-588.4	4,263.9	4,259.4	4.47	953.855		
800.0	800.0	777.0	777.0	2.6	2.6	-7.93	4,223.1	-588.4	4,263.9	4,258.7	5.19	822.016		
900.0	900.0	877.0	877.0	3.0	2.9	-7.93	4,223.1	-588.4	4,263.9	4,258.0	5.90	722.196		
1,000.0	1,000.0	977.0	977.0	3.4	3.3	-7.93	4,223.1	-588.4	4,263.9	4,257.2	6.62	643.994		
1,100.0	1,100.0	1,077.0	1,077.0	3.7	3.6	-7.93	4,223.1	-588.4	4,263.9	4,256.5	7.34	581.073		
1,200.0	1,200.0	1,177.0	1,177.0	4.1	4.0	-7.93	4,223.1	-588.4	4,263.9	4,255.8	8.05	529.353		
1,300.0	1,300.0	1,277.0	1,277.0	4.4	4.3	-7.93	4,223.1	-588.4	4,263.9	4,255.1	8.77	486.088		
1,400.0	1,400.0	1,377.0	1,377.0	4.8	4.7	-7.93	4,223.1	-588.4	4,263.9	4,254.4	9.49	449.361		
1,500.0	1,500.0	1,477.0	1,477.0	5.1	5.1	-7.93	4,223.1	-588.4	4,263.9	4,253.7	10.21	417.793		
1,600.0	1,600.0	1,577.0	1,577.0	5.5	5.4	-7.93	4,223.1	-588.4	4,263.9	4,252.9	10.92	390.370		
1,700.0	1,700.0	1,677.0	1,677.0	5.9	5.8	-7.93	4,223.1	-588.4	4,263.9	4,252.2	11.64	366.325		
1,800.0	1,800.0	3,769.9	3,668.6	6.2	13.3	-10.96	3,726.3	-721.5	4,240.8	4,222.6	18.21	232.912		
1,900.0	1,900.0	3,857.3	3,745.1	6.6	13.6	-11.24	3,685.4	-732.5	4,196.2	4,177.3	18.90	222.070		
2,000.0	2,000.0	3,944.8	3,821.6	6.9	14.0	-11.53	3,644.4	-743.5	4,151.8	4,132.2	19.59	211.935		
2,100.0	2,100.0	4,032.3	3,898.1	7.3	14.4	-11.82	3,603.5	-754.4	4,107.4	4,087.1	20.29	202.448		
2,200.0	2,200.0	4,119.7	3,974.6	7.7	14.8	-12.13	3,562.5	-765.4	4,063.1	4,042.1	20.99	193.553		
2,300.0	2,300.0	4,206.8	4,050.8	8.0	15.1	39.23	3,521.7	-776.3	4,017.7	3,996.0	21.70	185.169		
2,400.0	2,399.8	4,306.9	4,126.3	8.4	15.6	39.65	3,481.3	-787.2	3,970.0	3,947.5	22.46	176.753		
2,500.0	2,499.5	4,378.5	4,201.0	8.7	15.9	40.16	3,441.3	-797.9	3,919.9	3,896.9	23.10	169.707		
2,600.0	2,598.7	4,462.9	4,274.8	9.1	16.3	40.75	3,401.8	-808.5	3,867.7	3,843.9	23.79	162.574		
2,700.0	2,697.5	4,546.2	4,347.7	9.4	16.7	41.43	3,362.8	-818.9	3,813.2	3,788.8	24.48	155.799		
2,800.0	2,795.6	4,628.3	4,419.5	9.8	17.0	42.21	3,324.3	-829.2	3,756.6	3,731.5	25.15	149.353		
2,900.0	2,893.1	4,709.1	4,490.1	10.1	17.4	43.09	3,286.5	-839.4	3,697.9	3,672.1	25.82	143.210		
3,000.0	2,989.6	4,788.5	4,559.5	10.5	17.8	44.10	3,249.3	-849.3	3,637.1	3,610.7	26.48	137.345		
3,100.0	3,085.3	4,866.3	4,627.6	10.9	18.1	45.23	3,212.9	-859.1	3,574.4	3,547.3	27.13	131.739		
3,200.0	3,179.8	4,942.6	4,694.4	11.2	18.5	46.49	3,177.1	-868.7	3,509.8	3,482.0	27.77	126.371		
3,300.0	3,273.2	5,017.2	4,759.6	11.6	18.8	47.90	3,142.2	-878.0	3,443.3	3,414.9	28.40	121.226		
3,387.5	3,353.8	5,081.0	4,815.4	11.9	19.1	49.26	3,112.3	-886.0	3,383.8	3,354.8	28.95	116.892		
3,400.0	3,365.2	5,090.0	4,823.3	12.0	19.2	49.28	3,108.1	-887.2	3,375.2	3,346.2	29.03	116.279		
3,500.0	3,456.8	5,162.1	4,886.3	12.4	19.5	49.48	3,074.3	-896.2	3,306.4	3,276.8	29.64	111.549		
3,600.0	3,548.3	5,234.2	4,949.4	12.8	19.9	49.69	3,040.6	-905.3	3,237.7	3,207.4	30.26	106.993		
3,700.0	3,639.8	5,306.4	5,012.5	13.2	20.2	49.90	3,006.8	-914.3	3,169.0	3,138.1	30.89	102.604		
3,800.0	3,731.4	5,378.5	5,075.6	13.6	20.6	50.13	2,973.0	-923.4	3,100.3	3,068.8	31.52	98.374		
3,900.0	3,822.9	5,450.6	5,138.6	14.0	20.9	50.36	2,939.3	-932.4	3,031.6	2,999.5	32.15	94.298		
4,000.0	3,914.4	5,522.7	5,201.7	14.4	21.2	50.61	2,905.5	-941.5	2,963.0	2,930.2	32.79	90.369		
4,100.0	4,005.9	5,605.2	5,264.8	14.8	21.6	50.86	2,871.7	-950.5	2,894.4	2,860.9	33.48	86.454		
4,200.0	4,097.5	5,666.9	5,327.8	15.2	21.9	51.13	2,838.0	-959.6	2,825.8	2,791.7	34.08	82.926		
4,300.0	4,189.0	5,739.0	5,390.9	15.6	22.3	51.41	2,804.2	-968.6	2,757.2	2,722.5	34.73	79.400		
4,400.0	4,280.5	5,811.1	5,454.0	16.1	22.6	51.71	2,770.4	-977.6	2,688.7	2,653.4	35.38	75.998		
4,500.0	4,372.1	5,883.3	5,517.1	16.5	23.0	52.02	2,736.6	-986.7	2,620.3	2,584.2	36.04	72.713		
4,600.0	4,463.6	5,955.4	5,580.1	16.9	23.3	52.35	2,702.9	-995.7	2,551.9	2,515.2	36.70	69.541		
4,700.0	4,555.1	6,027.5	5,643.2	17.4	23.7	52.69	2,669.1	-1,004.8	2,483.5	2,446.1	37.36	66.477		
4,800.0	4,646.7	6,100.4	5,706.3	17.8	24.0	53.05	2,635.3	-1,013.8	2,415.2	2,377.1	38.03	63.510		
4,900.0	4,738.2	6,171.7	5,769.3	18.2	24.4	53.44	2,601.6	-1,022.9	2,346.9	2,308.2	38.69	60.654		
5,000.0	4,829.7	6,243.8	5,832.4	18.7	24.7	53.85	2,567.8	-1,031.9	2,278.7	2,239.3	39.36	57.887		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - SLW Ranch State BB06-619 - Original Drilling - Prelim - Rev 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,100.0	4,921.3	6,579.5	6,116.0	19.1	26.4	56.43	2,393.2	-1,062.5	2,204.7	2,165.0	39.66	55.589		
5,200.0	5,012.8	6,675.8	6,195.6	19.5	26.8	58.28	2,341.4	-1,046.8	2,128.2	2,088.0	40.18	52.963		
5,300.0	5,104.3	6,753.8	6,258.2	20.0	27.2	60.28	2,300.9	-1,024.0	2,051.4	2,010.7	40.76	50.331		
5,400.0	5,195.8	6,816.6	6,306.7	20.4	27.4	62.23	2,269.7	-999.4	1,975.0	1,933.6	41.41	47.699		
5,500.0	5,287.4	6,867.3	6,344.4	20.9	27.6	64.00	2,245.6	-975.6	1,899.5	1,857.4	42.13	45.088		
5,600.0	5,378.9	6,908.7	6,374.0	21.3	27.7	65.58	2,226.8	-953.6	1,825.4	1,782.4	42.92	42.525		
5,700.0	5,470.4	6,942.9	6,397.6	21.8	27.8	66.96	2,211.8	-933.8	1,753.0	1,709.2	43.79	40.037		
5,800.0	5,562.0	6,971.5	6,416.6	22.2	27.9	68.16	2,199.9	-916.2	1,682.9	1,638.2	44.70	37.647		
5,900.0	5,653.5	6,995.6	6,432.1	22.7	27.9	69.21	2,190.1	-900.5	1,615.5	1,569.8	45.67	35.376		
6,000.0	5,745.0	7,016.2	6,445.0	23.1	28.0	70.13	2,182.0	-886.7	1,551.2	1,504.5	46.66	33.242		
6,100.0	5,836.6	7,033.9	6,455.9	23.6	28.0	70.93	2,175.2	-874.3	1,490.5	1,442.8	47.67	31.263		
6,200.0	5,928.1	7,050.0	6,465.4	24.0	28.1	71.66	2,169.3	-862.9	1,433.9	1,385.2	48.68	29.454		
6,278.6	6,000.0	7,060.2	6,471.3	24.4	28.1	72.13	2,165.6	-855.5	1,392.8	1,343.3	49.45	28.163		
6,290.0	6,010.4	7,061.6	6,472.2	24.4	28.1	71.10	2,165.1	-854.4	1,387.0	1,337.4	49.56	27.983		
6,300.0	6,019.5	7,062.8	6,472.9	24.5	28.1	68.86	2,164.6	-853.5	1,381.8	1,332.1	49.66	27.825		
6,350.0	6,065.8	7,070.2	6,477.1	24.7	28.1	55.81	2,162.0	-848.1	1,355.8	1,305.7	50.11	27.055		
6,400.0	6,113.0	7,079.4	6,482.3	24.9	28.1	39.24	2,158.8	-841.2	1,329.6	1,279.1	50.54	26.310		
6,450.0	6,160.7	7,090.3	6,488.4	25.1	28.1	19.67	2,155.0	-832.9	1,303.3	1,252.3	50.92	25.596		
6,500.0	6,208.5	7,100.0	6,493.6	25.3	28.2	-0.50	2,151.8	-825.5	1,276.9	1,225.7	51.25	24.918		
6,550.0	6,255.8	7,116.8	6,502.6	25.4	28.2	-17.98	2,146.3	-812.4	1,250.8	1,199.2	51.55	24.263		
6,600.0	6,302.5	7,132.1	6,510.5	25.6	28.2	-32.00	2,141.4	-800.2	1,225.0	1,173.2	51.80	23.647		
6,650.0	6,347.9	7,150.0	6,519.4	25.7	28.2	-42.79	2,135.9	-785.7	1,199.6	1,147.6	52.02	23.061		
6,700.0	6,391.6	7,166.5	6,527.4	25.9	28.3	-51.31	2,131.1	-772.1	1,175.0	1,122.8	52.19	22.513		
6,750.0	6,433.4	7,185.4	6,536.1	26.0	28.3	-58.09	2,125.8	-756.2	1,151.1	1,098.7	52.33	21.996		
6,800.0	6,472.8	7,200.0	6,542.7	26.1	28.3	-63.79	2,121.9	-743.7	1,128.1	1,075.7	52.41	21.524		
6,850.0	6,509.4	7,226.4	6,553.8	26.2	28.3	-68.29	2,115.2	-720.8	1,106.3	1,053.7	52.53	21.060		
6,900.0	6,543.0	7,250.0	6,563.2	26.3	28.4	-72.19	2,109.6	-699.8	1,085.7	1,033.0	52.61	20.636		
6,950.0	6,573.2	7,271.1	6,571.0	26.4	28.4	-75.59	2,105.0	-680.8	1,066.4	1,013.8	52.66	20.250		
7,000.0	6,599.8	7,300.0	6,580.9	26.5	28.4	-78.40	2,099.3	-654.2	1,048.8	996.1	52.76	19.881		
7,050.0	6,622.5	7,318.8	6,586.8	26.6	28.4	-80.94	2,095.9	-636.7	1,032.9	980.1	52.80	19.563		
7,100.0	6,641.1	7,350.0	6,595.6	26.7	28.5	-83.01	2,090.9	-607.2	1,018.8	965.9	52.91	19.254		
7,150.0	6,655.4	7,369.0	6,600.4	26.8	28.5	-84.80	2,088.2	-589.0	1,006.6	953.6	52.99	18.998		
7,200.0	6,665.4	7,400.0	6,607.3	26.9	28.5	-86.25	2,084.5	-559.0	996.7	943.5	53.13	18.759		
7,250.0	6,670.8	7,420.8	6,611.3	27.0	28.5	-87.37	2,082.5	-538.8	988.9	935.6	53.25	18.571		
7,285.7	6,672.0	7,439.4	6,614.4	27.1	28.5	-87.98	2,080.9	-520.4	984.8	931.4	53.37	18.452		
7,300.0	6,672.0	7,450.0	6,616.0	27.1	28.5	-88.07	2,080.2	-510.0	983.4	930.0	53.43	18.405		
7,400.0	6,672.0	7,500.0	6,621.5	27.3	28.5	-88.39	2,078.0	-460.4	976.7	922.9	53.79	18.157		
7,492.1	6,672.0	7,550.0	6,623.9	27.6	28.6	-88.52	2,077.8	-410.4	974.7	920.6	54.17	17.995 CC		
7,500.0	6,672.0	7,554.8	6,624.0	27.6	28.6	-88.53	2,077.9	-405.7	974.7	920.5	54.20	17.984		
7,600.0	6,672.0	7,647.6	6,624.0	28.0	28.6	-88.53	2,080.5	-313.0	975.7	920.9	54.81	17.802		
7,700.0	6,672.0	7,747.6	6,624.0	28.3	28.8	-88.53	2,083.3	-213.0	976.8	921.3	55.55	17.585		
7,800.0	6,672.0	7,847.5	6,624.0	28.8	29.0	-88.53	2,086.0	-113.1	977.8	921.5	56.38	17.343		
7,900.0	6,672.0	7,947.5	6,624.0	29.3	29.3	-88.54	2,088.8	-13.1	978.9	921.6	57.31	17.080		
8,000.0	6,672.0	8,047.5	6,624.0	29.8	29.6	-88.54	2,091.6	86.8	979.9	921.6	58.33	16.798		
8,100.0	6,672.0	8,147.5	6,624.0	30.4	30.1	-88.54	2,094.4	186.8	981.0	921.5	59.44	16.503		
8,200.0	6,672.0	8,247.5	6,624.0	31.0	30.6	-88.54	2,097.2	286.7	982.0	921.3	60.63	16.196		
8,300.0	6,672.0	8,347.5	6,624.0	31.7	31.2	-88.54	2,100.0	386.7	983.0	921.1	61.90	15.881		
8,400.0	6,672.0	8,447.5	6,624.0	32.4	31.8	-88.54	2,102.8	486.6	984.0	920.8	63.24	15.561		
8,500.0	6,672.0	8,547.5	6,624.0	33.1	32.5	-88.55	2,105.6	586.6	985.0	920.4	64.64	15.238		
8,600.0	6,672.0	8,647.5	6,624.0	33.9	33.2	-88.55	2,108.4	686.5	986.0	919.9	66.11	14.914		
8,700.0	6,672.0	8,747.5	6,624.0	34.7	33.9	-88.55	2,111.2	786.5	987.0	919.3	67.64	14.592		
8,800.0	6,672.0	8,847.4	6,624.0	35.5	34.6	-88.55	2,114.0	886.4	988.0	918.7	69.22	14.272		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - SLW Ranch State BB06-619 - Original Drilling - Prelim - Rev 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
8,900.0	6,672.0	8,947.4	6,624.0	36.3	35.4	-88.55	2,116.8	986.4	988.9	918.1	70.86	13.956		
9,000.0	6,672.0	9,047.4	6,624.0	37.2	36.2	-88.55	2,119.6	1,086.3	989.9	917.3	72.54	13.646		
9,100.0	6,672.0	9,147.4	6,624.0	38.1	37.1	-88.55	2,122.4	1,186.3	990.8	916.6	74.27	13.341		
9,200.0	6,672.0	9,247.4	6,624.0	39.0	37.9	-88.56	2,125.2	1,286.2	991.8	915.8	76.04	13.043		
9,300.0	6,672.0	9,347.4	6,624.0	39.9	38.8	-88.56	2,128.0	1,386.2	992.7	914.9	77.85	12.752		
9,400.0	6,672.0	9,447.4	6,624.0	40.8	39.7	-88.56	2,130.8	1,486.1	993.7	914.0	79.69	12.469		
9,500.0	6,672.0	9,547.4	6,624.0	41.8	40.6	-88.56	2,133.6	1,586.1	994.6	913.0	81.57	12.193		
9,600.0	6,672.0	9,647.4	6,624.0	42.7	41.5	-88.56	2,136.4	1,686.0	995.5	912.1	83.48	11.925		
9,700.0	6,672.0	9,747.3	6,624.0	43.7	42.5	-88.56	2,139.2	1,786.0	996.5	911.0	85.42	11.665		
9,800.0	6,672.0	9,847.3	6,624.0	44.7	43.4	-88.56	2,142.0	1,885.9	997.4	910.0	87.39	11.413		
9,900.0	6,672.0	9,947.3	6,624.0	45.7	44.4	-88.56	2,144.8	1,985.9	998.3	908.9	89.38	11.168		
10,000.0	6,672.0	10,047.3	6,624.0	46.7	45.4	-88.57	2,147.6	2,085.8	999.2	907.8	91.40	10.932		
10,100.0	6,672.0	10,147.3	6,624.0	47.7	46.4	-88.57	2,150.5	2,185.8	1,000.1	906.6	93.44	10.703		
10,200.0	6,672.0	10,247.3	6,624.0	48.8	47.4	-88.57	2,153.3	2,285.7	1,000.9	905.4	95.50	10.481		
10,300.0	6,672.0	10,347.3	6,624.0	49.8	48.4	-88.57	2,156.1	2,385.7	1,001.8	904.2	97.58	10.266		
10,400.0	6,672.0	10,447.3	6,624.0	50.9	49.5	-88.57	2,158.9	2,485.6	1,002.7	903.0	99.68	10.059		
10,500.0	6,672.0	10,547.3	6,624.0	51.9	50.5	-88.57	2,161.7	2,585.6	1,003.5	901.7	101.79	9.858		
10,600.0	6,672.0	10,647.3	6,624.0	53.0	51.6	-88.57	2,164.5	2,685.5	1,004.4	900.5	103.93	9.664		
10,700.0	6,672.0	10,747.3	6,624.0	54.1	52.6	-88.57	2,167.3	2,785.5	1,005.2	899.2	106.07	9.477		
10,800.0	6,672.0	10,847.2	6,624.0	55.2	53.7	-88.58	2,170.1	2,885.4	1,006.1	897.8	108.23	9.295		
10,900.0	6,672.0	10,947.2	6,624.0	56.3	54.8	-88.58	2,172.9	2,985.4	1,006.9	896.5	110.41	9.120		
11,000.0	6,672.0	11,047.2	6,624.0	57.4	55.8	-88.58	2,175.7	3,085.3	1,007.7	895.1	112.60	8.950		
11,100.0	6,672.0	11,147.2	6,624.0	58.5	56.9	-88.58	2,178.6	3,185.3	1,008.6	893.8	114.80	8.786		
11,200.0	6,672.0	11,247.2	6,624.0	59.6	58.0	-88.58	2,181.4	3,285.3	1,009.4	892.4	117.01	8.627		
11,300.0	6,672.0	11,347.2	6,624.0	60.7	59.1	-88.58	2,184.2	3,385.2	1,010.2	891.0	119.23	8.473		
11,400.0	6,672.0	11,447.2	6,624.0	61.8	60.2	-88.58	2,187.0	3,485.2	1,011.0	889.5	121.46	8.324		
11,500.0	6,672.0	11,547.2	6,624.0	62.9	61.3	-88.58	2,189.8	3,585.1	1,011.8	888.1	123.70	8.179		
11,600.0	6,672.0	11,647.2	6,624.0	64.1	62.5	-88.59	2,192.6	3,685.1	1,012.6	886.6	125.95	8.039		
11,700.0	6,672.0	11,747.2	6,624.0	65.2	63.6	-88.59	2,195.4	3,785.0	1,013.3	885.1	128.21	7.904		
11,800.0	6,672.0	11,847.1	6,624.0	66.3	64.7	-88.59	2,198.3	3,885.0	1,014.1	883.6	130.48	7.772		
11,900.0	6,672.0	11,947.1	6,624.0	67.5	65.8	-88.59	2,201.1	3,984.9	1,014.9	882.1	132.75	7.645		
12,000.0	6,672.0	12,047.1	6,624.0	68.6	67.0	-88.59	2,203.9	4,084.9	1,015.6	880.6	135.03	7.521		
12,100.0	6,672.0	12,147.1	6,624.0	69.8	68.1	-88.59	2,206.7	4,184.8	1,016.4	879.1	137.32	7.402		
12,200.0	6,672.0	12,247.1	6,624.0	70.9	69.2	-88.59	2,209.5	4,284.8	1,017.1	877.5	139.61	7.285		
12,300.0	6,672.0	12,347.1	6,624.0	72.1	70.4	-88.59	2,212.3	4,384.7	1,017.9	875.9	141.92	7.172		
12,400.0	6,672.0	12,447.1	6,624.0	73.2	71.5	-88.59	2,215.2	4,484.7	1,018.6	874.4	144.22	7.063		
12,500.0	6,672.0	12,547.1	6,624.0	74.4	72.7	-88.59	2,218.0	4,584.6	1,019.3	872.8	146.54	6.956		
12,600.0	6,672.0	12,647.1	6,624.0	75.5	73.8	-88.60	2,220.8	4,684.6	1,020.0	871.2	148.85	6.853 ES		
12,700.0	6,672.0	12,703.9	6,624.0	76.7	74.5	-88.60	2,222.4	4,741.4	1,021.7	871.4	150.30	6.797 SF		
12,800.0	6,672.0	12,703.9	6,624.0	77.9	74.5	-88.60	2,222.4	4,741.4	1,031.4	881.7	149.72	6.889		
12,900.0	6,672.0	12,703.9	6,624.0	79.0	74.5	-88.60	2,222.4	4,741.4	1,050.7	902.7	148.00	7.099		
13,000.0	6,672.0	12,703.9	6,624.0	80.2	74.5	-88.60	2,222.4	4,741.4	1,078.9	933.6	145.31	7.425		
13,100.0	6,672.0	12,703.9	6,624.0	81.4	74.5	-88.60	2,222.4	4,741.4	1,115.3	973.5	141.86	7.862		
13,200.0	6,672.0	12,703.9	6,624.0	82.6	74.5	-88.60	2,222.4	4,741.4	1,159.3	1,021.4	137.90	8.407		
13,300.0	6,672.0	12,703.9	6,624.0	83.7	74.5	-88.60	2,222.4	4,741.4	1,209.9	1,076.3	133.65	9.053		
13,400.0	6,672.0	12,703.9	6,624.0	84.9	74.5	-88.60	2,222.4	4,741.4	1,266.5	1,137.2	129.28	9.796		
13,500.0	6,672.0	12,703.9	6,624.0	86.1	74.5	-88.60	2,222.4	4,741.4	1,328.1	1,203.2	124.94	10.630		
13,600.0	6,672.0	12,703.9	6,624.0	87.3	74.5	-88.60	2,222.4	4,741.4	1,394.2	1,273.5	120.72	11.549		
13,700.0	6,672.0	12,703.9	6,624.0	88.4	74.5	-88.60	2,222.4	4,741.4	1,464.2	1,347.5	116.69	12.547		
13,800.0	6,672.0	12,703.9	6,624.0	89.6	74.5	-88.60	2,222.4	4,741.4	1,537.4	1,424.5	112.90	13.618		
13,900.0	6,672.0	12,703.9	6,624.0	90.8	74.5	-88.60	2,222.4	4,741.4	1,613.6	1,504.2	109.35	14.755		
14,000.0	6,672.0	12,703.9	6,624.0	92.0	74.5	-88.60	2,222.4	4,741.4	1,692.2	1,586.1	106.07	15.954		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - SLW Ranch State BB06-619 - Original Drilling - Prelim - Rev 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
14,100.0	6,672.0	12,703.9	6,624.0	93.2	74.5	-88.60	2,222.4	4,741.4	1,772.9	1,669.9	103.03	17.208		
14,200.0	6,672.0	12,703.9	6,624.0	94.4	74.5	-88.60	2,222.4	4,741.4	1,855.6	1,755.3	100.24	18.512		
14,300.0	6,672.0	12,703.9	6,624.0	95.6	74.5	-88.60	2,222.4	4,741.4	1,939.8	1,842.2	97.67	19.862		
14,400.0	6,672.0	12,703.9	6,624.0	96.8	74.5	-88.60	2,222.4	4,741.4	2,025.5	1,930.2	95.31	21.252		
14,500.0	6,672.0	12,703.9	6,624.0	98.0	74.5	-88.60	2,222.4	4,741.4	2,112.5	2,019.3	93.15	22.678		
14,600.0	6,672.0	12,703.9	6,624.0	99.2	74.5	-88.60	2,222.4	4,741.4	2,200.6	2,109.4	91.18	24.135		
14,700.0	6,672.0	12,703.9	6,624.0	100.4	74.5	-88.60	2,222.4	4,741.4	2,289.6	2,200.2	89.36	25.622		
14,800.0	6,672.0	12,703.9	6,624.0	101.6	74.5	-88.60	2,222.4	4,741.4	2,379.5	2,291.8	87.70	27.133		
14,900.0	6,672.0	12,703.9	6,624.0	102.7	74.5	-88.60	2,222.4	4,741.4	2,470.2	2,384.0	86.17	28.666		
15,000.0	6,672.0	12,703.9	6,624.0	103.9	74.5	-88.60	2,222.4	4,741.4	2,561.5	2,476.8	84.77	30.217		
15,100.0	6,672.0	12,703.9	6,624.0	105.1	74.5	-88.60	2,222.4	4,741.4	2,653.5	2,570.0	83.48	31.786		
15,200.0	6,672.0	12,703.9	6,624.0	106.3	74.5	-88.60	2,222.4	4,741.4	2,746.1	2,663.8	82.30	33.368		
15,300.0	6,672.0	12,703.9	6,624.0	107.6	74.5	-88.60	2,222.4	4,741.4	2,839.1	2,757.9	81.20	34.963		
15,400.0	6,672.0	12,703.9	6,624.0	108.8	74.5	-88.60	2,222.4	4,741.4	2,932.6	2,852.4	80.20	36.567		
15,500.0	6,672.0	12,703.9	6,624.0	110.0	74.5	-88.60	2,222.4	4,741.4	3,026.5	2,947.3	79.27	38.180		
15,600.0	6,672.0	12,703.9	6,624.0	111.2	74.5	-88.60	2,222.4	4,741.4	3,120.8	3,042.4	78.41	39.801		
15,700.0	6,672.0	12,703.9	6,624.0	112.4	74.5	-88.60	2,222.4	4,741.4	3,215.4	3,137.8	77.62	41.427		
15,800.0	6,672.0	12,703.9	6,624.0	113.6	74.5	-88.60	2,222.4	4,741.4	3,310.4	3,233.5	76.88	43.057		
15,900.0	6,672.0	12,703.9	6,624.0	114.8	74.5	-88.60	2,222.4	4,741.4	3,405.6	3,329.4	76.20	44.692		
16,000.0	6,672.0	12,703.9	6,624.0	116.0	74.5	-88.60	2,222.4	4,741.4	3,501.1	3,425.6	75.57	46.328		
16,100.0	6,672.0	12,703.9	6,624.0	117.2	74.5	-88.60	2,222.4	4,741.4	3,596.9	3,521.9	74.99	47.967		
16,200.0	6,672.0	12,703.9	6,624.0	118.4	74.5	-88.60	2,222.4	4,741.4	3,692.8	3,618.4	74.44	49.607		
16,300.0	6,672.0	12,703.9	6,624.0	119.6	74.5	-88.60	2,222.4	4,741.4	3,789.0	3,715.1	73.94	51.247		
16,400.0	6,672.0	12,703.9	6,624.0	120.8	74.5	-88.60	2,222.4	4,741.4	3,885.4	3,811.9	73.47	52.886		
16,500.0	6,672.0	12,703.9	6,624.0	122.0	74.5	-88.60	2,222.4	4,741.4	3,981.9	3,908.9	73.03	54.525		
16,600.0	6,672.0	12,703.9	6,624.0	123.2	74.5	-88.60	2,222.4	4,741.4	4,078.6	4,006.0	72.62	56.163		
16,700.0	6,672.0	12,703.9	6,624.0	124.5	74.5	-88.60	2,222.4	4,741.4	4,175.5	4,103.2	72.24	57.799		
16,800.0	6,672.0	12,703.9	6,624.0	125.7	74.5	-88.60	2,222.4	4,741.4	4,272.5	4,200.6	71.89	59.433		
16,900.0	6,672.0	12,703.9	6,624.0	126.9	74.5	-88.61	2,222.4	4,741.4	4,369.6	4,298.0	71.56	61.065		
17,000.0	6,672.0	12,703.9	6,624.0	128.1	74.5	-88.61	2,222.4	4,741.4	4,466.9	4,395.6	71.25	62.694		
17,100.0	6,672.0	12,703.9	6,624.0	129.3	74.5	-88.61	2,222.4	4,741.4	4,564.2	4,493.3	70.96	64.320		
17,200.0	6,672.0	12,703.9	6,624.0	130.5	74.5	-88.61	2,222.4	4,741.4	4,661.7	4,591.0	70.69	65.943		
17,300.0	6,672.0	12,703.9	6,624.0	131.7	74.5	-88.61	2,222.4	4,741.4	4,759.3	4,688.9	70.44	67.562		
17,400.0	6,672.0	12,703.9	6,624.0	133.0	74.5	-88.61	2,222.4	4,741.4	4,857.0	4,786.8	70.21	69.178		
17,500.0	6,672.0	12,703.9	6,624.0	134.2	74.5	-88.61	2,222.4	4,741.4	4,954.8	4,884.8	69.99	70.790		
17,600.0	6,672.0	12,703.9	6,624.0	135.4	74.5	-88.61	2,222.4	4,741.4	5,052.6	4,982.8	69.79	72.399		
17,700.0	6,672.0	12,703.9	6,624.0	136.6	74.5	-88.61	2,222.4	4,741.4	5,150.6	5,081.0	69.60	74.003		
17,800.0	6,672.0	12,703.9	6,624.0	137.8	74.5	-88.61	2,222.4	4,741.4	5,248.6	5,179.2	69.42	75.603		
17,900.0	6,672.0	12,703.9	6,624.0	139.0	74.5	-88.61	2,222.4	4,741.4	5,346.7	5,277.4	69.26	77.199		
18,000.0	6,672.0	12,703.9	6,624.0	140.3	74.5	-88.61	2,222.4	4,741.4	5,444.8	5,375.7	69.10	78.791		
18,100.0	6,672.0	12,703.9	6,624.0	141.5	74.5	-88.61	2,222.4	4,741.4	5,543.1	5,474.1	68.96	80.378		
18,200.0	6,672.0	12,703.9	6,624.0	142.7	74.5	-88.61	2,222.4	4,741.4	5,641.3	5,572.5	68.83	81.961		
18,300.0	6,672.0	12,703.9	6,624.0	143.9	74.5	-88.61	2,222.4	4,741.4	5,739.7	5,671.0	68.71	83.539		
18,342.5	6,672.0	12,703.9	6,624.0	144.4	74.5	-88.61	2,222.4	4,741.4	5,781.5	5,712.8	68.66	84.208		



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - SLW Ranch State BB06-631 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-7.89	4,248.6	-588.7	4,289.2					
100.0	100.0	77.0	77.0	0.1	0.1	-7.89	4,248.6	-588.7	4,289.2	4,288.9	0.22	N/A		
200.0	200.0	177.0	177.0	0.5	0.4	-7.89	4,248.6	-588.7	4,289.2	4,288.3	0.89	4,844.185		
300.0	300.0	277.0	277.0	0.8	0.8	-7.89	4,248.6	-588.7	4,289.2	4,287.6	1.60	2,676.765		
400.0	400.0	377.0	377.0	1.2	1.1	-7.89	4,248.6	-588.7	4,289.2	4,286.8	2.32	1,849.326		
500.0	500.0	477.0	477.0	1.6	1.5	-7.89	4,248.6	-588.7	4,289.2	4,286.1	3.04	1,412.649		
600.0	600.0	577.0	577.0	1.9	1.8	-7.89	4,248.6	-588.7	4,289.2	4,285.4	3.75	1,142.802		
700.0	700.0	677.0	677.0	2.3	2.2	-7.89	4,248.6	-588.7	4,289.2	4,284.7	4.47	959.514		
800.0	800.0	777.0	777.0	2.6	2.6	-7.89	4,248.6	-588.7	4,289.2	4,284.0	5.19	826.893		
900.0	900.0	877.0	877.0	3.0	2.9	-7.89	4,248.6	-588.7	4,289.2	4,283.3	5.90	726.481		
1,000.0	1,000.0	977.0	977.0	3.4	3.3	-7.89	4,248.6	-588.7	4,289.2	4,282.5	6.62	647.815		
1,100.0	1,100.0	1,077.0	1,077.0	3.7	3.6	-7.89	4,248.6	-588.7	4,289.2	4,281.8	7.34	584.521		
1,200.0	1,200.0	1,177.0	1,177.0	4.1	4.0	-7.89	4,248.6	-588.7	4,289.2	4,281.1	8.05	532.494		
1,300.0	1,300.0	1,277.0	1,277.0	4.4	4.3	-7.89	4,248.6	-588.7	4,289.2	4,280.4	8.77	488.972		
1,400.0	1,400.0	1,377.0	1,377.0	4.8	4.7	-7.89	4,248.6	-588.7	4,289.2	4,279.7	9.49	452.026		
1,500.0	1,500.0	1,477.0	1,477.0	5.1	5.1	-7.89	4,248.6	-588.7	4,289.2	4,279.0	10.21	420.272		
1,600.0	1,600.0	1,577.0	1,577.0	5.5	5.4	-7.89	4,248.6	-588.7	4,289.2	4,278.2	10.92	392.686		
1,700.0	1,700.0	1,677.0	1,677.0	5.9	5.8	-7.89	4,248.6	-588.7	4,289.2	4,277.5	11.64	368.498		
1,800.0	1,800.0	1,777.0	1,777.0	6.2	6.1	-7.89	4,248.6	-588.7	4,289.2	4,276.8	12.36	347.118		
1,900.0	1,900.0	1,877.0	1,877.0	6.6	6.5	-7.89	4,248.6	-588.7	4,289.2	4,276.1	13.07	328.082		
2,000.0	2,000.0	1,977.0	1,977.0	6.9	6.9	-7.89	4,248.6	-588.7	4,289.2	4,275.4	13.79	311.025		
2,100.0	2,100.0	3,413.6	3,379.4	7.3	11.8	-9.74	4,021.2	-689.9	4,282.8	4,264.3	18.45	232.145		
2,200.0	2,200.0	3,507.0	3,466.6	7.7	12.1	-10.00	3,990.6	-703.6	4,252.4	4,233.3	19.14	222.202		
2,300.0	2,300.0	3,600.2	3,553.6	8.0	12.5	41.19	3,960.1	-717.1	4,220.9	4,201.0	19.83	212.865		
2,400.0	2,399.8	3,707.1	3,640.1	8.4	12.9	41.44	3,929.7	-730.7	4,186.9	4,166.3	20.57	203.505		
2,500.0	2,499.5	3,785.1	3,726.2	8.7	13.2	41.76	3,899.6	-744.1	4,150.6	4,129.4	21.21	195.682		
2,600.0	2,598.7	3,876.6	3,811.7	9.1	13.5	42.16	3,869.6	-757.4	4,111.8	4,089.9	21.90	187.761		
2,700.0	2,697.5	3,967.4	3,896.4	9.4	13.9	42.63	3,839.9	-770.7	4,070.8	4,048.2	22.59	180.240		
2,800.0	2,795.6	4,057.2	3,980.3	9.8	14.2	43.19	3,810.5	-783.8	4,027.4	4,004.1	23.27	173.090		
2,900.0	2,893.1	4,146.1	4,063.2	10.1	14.6	43.83	3,781.4	-796.7	3,981.7	3,957.8	23.95	166.281		
3,000.0	2,989.6	4,233.9	4,145.2	10.5	14.9	44.57	3,752.6	-809.5	3,933.8	3,909.2	24.62	159.786		
3,100.0	3,085.3	4,320.5	4,226.0	10.9	15.3	45.40	3,724.3	-822.1	3,883.8	3,858.5	25.29	153.581		
3,200.0	3,179.8	4,405.7	4,305.6	11.2	15.6	46.34	3,696.4	-834.6	3,831.6	3,805.7	25.95	147.646		
3,300.0	3,273.2	4,489.5	4,383.8	11.6	16.0	47.39	3,668.9	-846.8	3,777.4	3,750.8	26.61	141.958		
3,387.5	3,353.8	4,561.6	4,451.2	11.9	16.3	48.40	3,645.3	-857.3	3,728.4	3,701.2	27.18	137.169		
3,400.0	3,365.2	4,571.9	4,460.7	12.0	16.3	48.42	3,642.0	-858.8	3,721.3	3,694.0	27.26	136.492		
3,500.0	3,456.8	4,653.6	4,537.0	12.4	16.7	48.60	3,615.2	-870.7	3,664.5	3,636.5	27.91	131.280		
3,600.0	3,548.3	4,735.3	4,613.3	12.8	17.0	48.78	3,588.5	-882.6	3,607.6	3,579.1	28.57	126.280		
3,700.0	3,639.8	4,817.0	4,689.6	13.2	17.3	48.97	3,561.7	-894.5	3,550.8	3,521.6	29.23	121.480		
3,800.0	3,731.4	4,901.3	4,765.9	13.6	17.7	49.17	3,535.0	-906.4	3,494.1	3,464.2	29.91	116.832		
3,900.0	3,822.9	4,980.4	4,842.1	14.0	18.0	49.37	3,508.2	-918.3	3,437.3	3,406.8	30.57	112.449		
4,000.0	3,914.4	5,062.1	4,918.4	14.4	18.4	49.58	3,481.5	-930.2	3,380.6	3,349.4	31.24	108.200		
4,100.0	4,005.9	5,143.9	4,994.7	14.8	18.7	49.80	3,454.7	-942.1	3,324.0	3,292.0	31.93	104.117		
4,200.0	4,097.5	5,225.6	5,071.0	15.2	19.0	50.02	3,428.0	-954.1	3,267.3	3,234.7	32.61	100.194		
4,300.0	4,189.0	5,307.3	5,147.3	15.6	19.4	50.25	3,401.2	-966.0	3,210.7	3,177.4	33.30	96.421		
4,400.0	4,280.5	5,389.0	5,223.6	16.1	19.7	50.49	3,374.5	-977.9	3,154.1	3,120.1	33.99	92.793		
4,500.0	4,372.1	5,470.7	5,299.9	16.5	20.1	50.74	3,347.7	-989.8	3,097.6	3,062.9	34.69	89.301		
4,600.0	4,463.6	5,552.4	5,376.2	16.9	20.4	51.00	3,321.0	-1,001.7	3,041.1	3,005.7	35.39	85.939		
4,700.0	4,555.1	5,634.2	5,452.5	17.4	20.8	51.26	3,294.2	-1,013.6	2,984.7	2,948.6	36.09	82.702		
4,800.0	4,646.7	5,715.9	5,528.7	17.8	21.1	51.54	3,267.5	-1,025.5	2,928.3	2,891.5	36.79	79.584		
4,900.0	4,738.2	5,802.4	5,605.0	18.2	21.5	51.83	3,240.7	-1,037.4	2,871.9	2,834.4	37.52	76.536		
5,000.0	4,829.7	5,879.3	5,681.3	18.7	21.8	52.13	3,213.9	-1,049.3	2,815.6	2,777.4	38.21	73.679		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - SLW Ranch State BB06-631 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,100.0	4,921.3	5,961.0	5,757.6	19.1	22.2	52.44	3,187.2	-1,061.3	2,759.4	2,720.5	38.93	70.883		
5,200.0	5,012.8	6,042.7	5,833.9	19.5	22.5	52.76	3,160.4	-1,073.2	2,703.2	2,663.6	39.65	68.184		
5,300.0	5,104.3	6,193.2	5,974.2	20.0	23.2	53.49	3,109.6	-1,091.0	2,646.0	2,605.6	40.38	65.520		
5,400.0	5,195.8	6,314.6	6,087.8	20.4	23.7	54.75	3,068.5	-1,081.3	2,587.3	2,546.2	41.07	63.004		
5,500.0	5,287.4	6,412.8	6,177.2	20.9	24.0	56.26	3,036.6	-1,056.4	2,528.1	2,486.3	41.74	60.563		
5,600.0	5,378.9	6,490.2	6,244.4	21.3	24.2	57.74	3,012.7	-1,026.5	2,469.2	2,426.8	42.45	58.174		
5,700.0	5,470.4	6,551.1	6,294.5	21.8	24.4	59.07	2,995.1	-996.9	2,411.5	2,368.3	43.18	55.847		
5,800.0	5,562.0	6,599.3	6,332.2	22.2	24.5	60.23	2,981.9	-969.8	2,355.5	2,311.5	43.94	53.607		
5,900.0	5,653.5	6,638.1	6,361.0	22.7	24.5	61.21	2,971.9	-945.9	2,301.6	2,256.9	44.72	51.472		
6,000.0	5,745.0	6,669.7	6,383.4	23.1	24.6	62.04	2,964.1	-925.0	2,250.2	2,204.7	45.50	49.460		
6,100.0	5,836.6	6,695.8	6,401.2	23.6	24.7	62.74	2,958.0	-906.9	2,201.7	2,155.5	46.27	47.583		
6,200.0	5,928.1	6,717.7	6,415.5	24.0	24.7	63.35	2,953.1	-891.1	2,156.4	2,109.4	47.03	45.852		
6,278.6	6,000.0	6,732.5	6,424.9	24.4	24.7	63.76	2,949.9	-880.1	2,123.3	2,075.6	47.61	44.598		
6,290.0	6,010.4	6,734.5	6,426.2	24.4	24.7	62.55	2,949.5	-878.6	2,118.5	2,070.8	47.69	44.422		
6,300.0	6,019.5	6,736.2	6,427.2	24.5	24.7	60.40	2,949.1	-877.3	2,114.3	2,066.5	47.76	44.266		
6,350.0	6,065.8	6,750.0	6,435.7	24.7	24.7	47.96	2,946.2	-866.8	2,093.0	2,044.9	48.12	43.500		
6,400.0	6,113.0	6,750.0	6,435.7	24.9	24.7	31.58	2,946.2	-866.8	2,071.6	2,023.2	48.42	42.786		
6,450.0	6,160.7	6,769.8	6,447.5	25.1	24.8	12.71	2,942.3	-851.4	2,050.1	2,001.4	48.73	42.071		
6,500.0	6,208.5	6,783.9	6,455.6	25.3	24.8	-6.84	2,939.5	-840.2	2,028.8	1,979.8	49.00	41.400		
6,550.0	6,255.8	6,800.0	6,464.6	25.4	24.8	-23.92	2,936.5	-827.2	2,007.6	1,958.4	49.26	40.759		
6,600.0	6,302.5	6,815.5	6,472.9	25.6	24.8	-37.46	2,933.7	-814.4	1,986.9	1,937.4	49.48	40.152		
6,650.0	6,347.9	6,832.8	6,481.9	25.7	24.8	-47.81	2,930.7	-799.9	1,966.6	1,916.9	49.69	39.575		
6,700.0	6,391.6	6,850.0	6,490.4	25.9	24.8	-55.82	2,927.9	-785.2	1,946.9	1,897.1	49.88	39.032		
6,750.0	6,433.4	6,870.1	6,499.8	26.0	24.9	-62.12	2,924.8	-767.8	1,928.1	1,878.0	50.06	38.514		
6,800.0	6,472.8	6,900.0	6,512.9	26.1	24.9	-67.07	2,920.6	-741.2	1,910.2	1,859.9	50.26	38.007		
6,850.0	6,509.4	6,900.0	6,512.9	26.2	24.9	-71.55	2,920.6	-741.2	1,893.3	1,842.9	50.35	37.599		
6,900.0	6,543.0	6,931.4	6,525.4	26.3	24.9	-74.92	2,916.6	-712.7	1,877.4	1,826.9	50.54	37.150		
6,950.0	6,573.2	6,950.0	6,532.1	26.4	24.9	-77.89	2,914.5	-695.5	1,862.9	1,812.3	50.67	36.763		
7,000.0	6,599.8	6,975.0	6,540.4	26.5	24.9	-80.33	2,911.9	-672.0	1,849.8	1,799.0	50.83	36.391		
7,050.0	6,622.5	7,000.0	6,547.8	26.6	24.9	-82.36	2,909.6	-648.2	1,838.2	1,787.3	50.99	36.052		
7,100.0	6,641.1	7,020.3	6,553.1	26.7	24.9	-84.06	2,908.1	-628.8	1,828.2	1,777.1	51.13	35.755		
7,150.0	6,655.4	7,050.0	6,559.9	26.8	24.9	-85.40	2,906.2	-599.9	1,820.0	1,768.6	51.31	35.470		
7,200.0	6,665.4	7,066.6	6,563.1	26.9	24.9	-86.43	2,905.3	-583.6	1,813.4	1,761.9	51.45	35.246		
7,250.0	6,670.8	7,100.0	6,568.3	27.0	24.9	-87.16	2,904.0	-550.6	1,808.7	1,757.1	51.64	35.024		
7,285.7	6,672.0	7,100.0	6,568.3	27.1	24.9	-87.44	2,904.0	-550.6	1,806.5	1,754.8	51.71	34.935		
7,300.0	6,672.0	7,113.4	6,569.9	27.1	24.9	-87.49	2,903.7	-537.4	1,805.8	1,754.0	51.78	34.877		
7,400.0	6,672.0	7,160.7	6,573.5	27.3	25.0	-87.60	2,903.3	-490.2	1,802.9	1,750.8	52.14	34.576		
7,453.0	6,672.0	7,187.2	6,574.0	27.5	25.0	-87.62	2,903.6	-463.7	1,802.5	1,750.2	52.37	34.420		
7,500.0	6,672.0	7,231.6	6,574.0	27.6	25.2	-87.62	2,904.4	-419.4	1,802.6	1,750.0	52.64	34.244		
7,600.0	6,672.0	7,331.5	6,574.0	28.0	25.5	-87.62	2,906.3	-319.4	1,802.7	1,749.4	53.32	33.812		
7,700.0	6,672.0	7,431.5	6,574.0	28.3	25.9	-87.62	2,908.1	-219.4	1,802.9	1,748.8	54.10	33.325		
7,800.0	6,672.0	7,531.5	6,574.0	28.8	26.4	-87.62	2,910.0	-119.5	1,803.0	1,748.0	54.98	32.792		
7,900.0	6,672.0	7,631.5	6,574.0	29.3	26.9	-87.62	2,911.9	-19.5	1,803.1	1,747.1	55.96	32.219		
8,000.0	6,672.0	7,731.5	6,574.0	29.8	27.4	-87.62	2,913.7	80.5	1,803.2	1,746.2	57.04	31.616		
8,100.0	6,672.0	7,831.4	6,574.0	30.4	28.0	-87.62	2,915.6	180.4	1,803.3	1,745.1	58.19	30.988		
8,200.0	6,672.0	7,931.4	6,574.0	31.0	28.6	-87.62	2,917.5	280.4	1,803.4	1,744.0	59.43	30.343		
8,300.0	6,672.0	8,031.4	6,574.0	31.7	29.3	-87.62	2,919.4	380.4	1,803.5	1,742.8	60.75	29.687		
8,400.0	6,672.0	8,131.4	6,574.0	32.4	30.0	-87.62	2,921.2	480.3	1,803.6	1,741.5	62.14	29.026		
8,500.0	6,672.0	8,231.4	6,574.0	33.1	30.7	-87.62	2,923.1	580.3	1,803.7	1,740.1	63.59	28.363		
8,600.0	6,672.0	8,331.4	6,574.0	33.9	31.5	-87.62	2,925.0	680.3	1,803.8	1,738.6	65.11	27.703		
8,700.0	6,672.0	8,431.3	6,574.0	34.7	32.3	-87.62	2,926.9	780.2	1,803.8	1,737.1	66.68	27.050		
8,800.0	6,672.0	8,531.3	6,574.0	35.5	33.1	-87.62	2,928.8	880.2	1,803.9	1,735.6	68.31	26.406		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - SLW Ranch State BB06-631 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
8,900.0	6,672.0	8,631.3	6,574.0	36.3	33.9	-87.62	2,930.6	980.2	1,803.9	1,733.9	69.99	25.773		
9,000.0	6,672.0	8,731.3	6,574.0	37.2	34.8	-87.62	2,932.5	1,080.1	1,804.0	1,732.3	71.72	25.154		
9,100.0	6,672.0	8,831.3	6,574.0	38.1	35.7	-87.62	2,934.4	1,180.1	1,804.0	1,730.5	73.49	24.549		
9,200.0	6,672.0	8,931.3	6,574.0	39.0	36.6	-87.62	2,936.3	1,280.0	1,804.1	1,728.8	75.30	23.959		
9,300.0	6,672.0	9,031.2	6,574.0	39.9	37.5	-87.62	2,938.2	1,380.0	1,804.1	1,726.9	77.14	23.386		
9,400.0	6,672.0	9,131.2	6,574.0	40.8	38.5	-87.62	2,940.1	1,480.0	1,804.1	1,725.1	79.03	22.829		
9,500.0	6,672.0	9,231.2	6,574.0	41.8	39.4	-87.62	2,941.9	1,579.9	1,804.1	1,723.2	80.94	22.290		
9,600.0	6,672.0	9,331.2	6,574.0	42.7	40.4	-87.62	2,943.8	1,679.9	1,804.1	1,721.2	82.88	21.767		
9,700.0	6,672.0	9,431.2	6,574.0	43.7	41.4	-87.62	2,945.7	1,779.9	1,804.1	1,719.3	84.86	21.261		
9,800.0	6,672.0	9,531.1	6,574.0	44.7	42.4	-87.62	2,947.6	1,879.8	1,804.1	1,717.3	86.85	20.772		
9,900.0	6,672.0	9,631.1	6,574.0	45.7	43.4	-87.62	2,949.5	1,979.8	1,804.1	1,715.2	88.88	20.299		
10,000.0	6,672.0	9,731.1	6,574.0	46.7	44.4	-87.62	2,951.4	2,079.8	1,804.1	1,713.2	90.92	19.842		
10,100.0	6,672.0	9,831.1	6,574.0	47.7	45.5	-87.62	2,953.3	2,179.7	1,804.1	1,711.1	92.99	19.401		
10,200.0	6,672.0	9,931.1	6,574.0	48.8	46.5	-87.62	2,955.2	2,279.7	1,804.0	1,709.0	95.08	18.974		
10,300.0	6,672.0	10,031.1	6,574.0	49.8	47.6	-87.62	2,957.1	2,379.7	1,804.0	1,706.8	97.18	18.563		
10,400.0	6,672.0	10,131.0	6,574.0	50.9	48.6	-87.62	2,959.0	2,479.6	1,803.9	1,704.6	99.30	18.166		
10,500.0	6,672.0	10,231.0	6,574.0	51.9	49.7	-87.62	2,960.9	2,579.6	1,803.9	1,702.5	101.44	17.782		
10,600.0	6,672.0	10,331.0	6,574.0	53.0	50.8	-87.62	2,962.8	2,679.5	1,803.8	1,700.2	103.60	17.412		
10,700.0	6,672.0	10,431.0	6,574.0	54.1	51.9	-87.62	2,964.7	2,779.5	1,803.8	1,698.0	105.77	17.054		
10,800.0	6,672.0	10,531.0	6,574.0	55.2	53.0	-87.62	2,966.6	2,879.5	1,803.7	1,695.8	107.95	16.709		
10,900.0	6,672.0	10,631.0	6,574.0	56.3	54.1	-87.62	2,968.5	2,979.4	1,803.6	1,693.5	110.14	16.375		
11,000.0	6,672.0	10,730.9	6,574.0	57.4	55.2	-87.62	2,970.4	3,079.4	1,803.5	1,691.2	112.35	16.053		
11,100.0	6,672.0	10,830.9	6,574.0	58.5	56.3	-87.62	2,972.3	3,179.4	1,803.5	1,688.9	114.57	15.741		
11,200.0	6,672.0	10,930.9	6,574.0	59.6	57.4	-87.62	2,974.2	3,279.3	1,803.4	1,686.6	116.80	15.440		
11,300.0	6,672.0	11,030.9	6,574.0	60.7	58.5	-87.62	2,976.1	3,379.3	1,803.3	1,684.2	119.04	15.149		
11,400.0	6,672.0	11,130.9	6,574.0	61.8	59.7	-87.62	2,978.0	3,479.3	1,803.1	1,681.9	121.28	14.867		
11,500.0	6,672.0	11,230.8	6,574.0	62.9	60.8	-87.62	2,979.9	3,579.2	1,803.0	1,679.5	123.54	14.595		
11,600.0	6,672.0	11,330.8	6,574.0	64.1	61.9	-87.62	2,981.8	3,679.2	1,802.9	1,677.1	125.81	14.331		
11,700.0	6,672.0	11,430.8	6,574.0	65.2	63.1	-87.62	2,983.7	3,779.2	1,802.8	1,674.7	128.08	14.076		
11,800.0	6,672.0	11,530.8	6,574.0	66.3	64.2	-87.62	2,985.6	3,879.1	1,802.6	1,672.3	130.36	13.828		
11,900.0	6,672.0	11,630.8	6,574.0	67.5	65.4	-87.62	2,987.5	3,979.1	1,802.5	1,669.9	132.65	13.589		
12,000.0	6,672.0	11,730.8	6,574.0	68.6	66.5	-87.62	2,989.4	4,079.0	1,802.3	1,667.4	134.94	13.356		
12,100.0	6,672.0	11,830.7	6,574.0	69.8	67.7	-87.61	2,991.3	4,179.0	1,802.2	1,665.0	137.24	13.131		
12,200.0	6,672.0	11,930.7	6,574.0	70.9	68.8	-87.61	2,993.3	4,279.0	1,802.0	1,662.5	139.55	12.913		
12,300.0	6,672.0	12,030.7	6,574.0	72.1	70.0	-87.61	2,995.2	4,378.9	1,801.9	1,660.0	141.87	12.701		
12,400.0	6,672.0	12,130.7	6,574.0	73.2	71.2	-87.61	2,997.1	4,478.9	1,801.7	1,657.5	144.18	12.496		
12,500.0	6,672.0	12,230.7	6,574.0	74.4	72.3	-87.61	2,999.0	4,578.9	1,801.5	1,655.0	146.51	12.296		
12,600.0	6,672.0	12,330.6	6,574.0	75.5	73.5	-87.61	3,000.9	4,678.8	1,801.3	1,652.5	148.84	12.103		
12,664.6	6,672.0	12,395.3	6,574.0	76.3	74.2	-87.61	3,002.2	4,743.4	1,801.2	1,650.8	150.35	11.980 CC, ES		
12,700.0	6,672.0	12,386.9	6,574.0	76.7	74.1	-87.61	3,002.0	4,735.1	1,801.7	1,651.1	150.57	11.966		
12,800.0	6,672.0	12,386.9	6,574.0	77.9	74.1	-87.61	3,002.0	4,735.1	1,806.6	1,655.4	151.22	11.947 SF		
12,900.0	6,672.0	12,386.9	6,574.0	79.0	74.1	-87.61	3,002.0	4,735.1	1,817.1	1,665.7	151.47	11.997		
13,000.0	6,672.0	12,386.9	6,574.0	80.2	74.1	-87.61	3,002.0	4,735.1	1,833.0	1,681.7	151.32	12.114		
13,100.0	6,672.0	12,386.9	6,574.0	81.4	74.1	-87.61	3,002.0	4,735.1	1,854.1	1,703.3	150.80	12.295		
13,200.0	6,672.0	12,386.9	6,574.0	82.6	74.1	-87.61	3,002.0	4,735.1	1,880.4	1,730.4	149.94	12.541		
13,300.0	6,672.0	12,386.9	6,574.0	83.7	74.1	-87.61	3,002.0	4,735.1	1,911.5	1,762.7	148.77	12.849		
13,400.0	6,672.0	12,386.9	6,574.0	84.9	74.1	-87.61	3,002.0	4,735.1	1,947.2	1,799.8	147.33	13.216		
13,500.0	6,672.0	12,386.9	6,574.0	86.1	74.1	-87.61	3,002.0	4,735.1	1,987.3	1,841.6	145.67	13.642		
13,600.0	6,672.0	12,386.9	6,574.0	87.3	74.1	-87.61	3,002.0	4,735.1	2,031.5	1,887.7	143.83	14.125		
13,700.0	6,672.0	12,386.9	6,574.0	88.4	74.1	-87.61	3,002.0	4,735.1	2,079.6	1,937.8	141.85	14.661		
13,800.0	6,672.0	12,386.9	6,574.0	89.6	74.1	-87.61	3,002.0	4,735.1	2,131.4	1,991.6	139.76	15.251		
13,900.0	6,672.0	12,386.9	6,574.0	90.8	74.1	-87.61	3,002.0	4,735.1	2,186.4	2,048.8	137.59	15.890		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - SLW Ranch State BB06-631 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
14,000.0	6,672.0	12,386.9	6,574.0	92.0	74.1	-87.61	3,002.0	4,735.1	2,244.6	2,109.2	135.39	16.579		
14,100.0	6,672.0	12,386.9	6,574.0	93.2	74.1	-87.61	3,002.0	4,735.1	2,305.6	2,172.4	133.16	17.314		
14,200.0	6,672.0	12,386.9	6,574.0	94.4	74.1	-87.61	3,002.0	4,735.1	2,369.3	2,238.3	130.94	18.094		
14,300.0	6,672.0	12,386.9	6,574.0	95.6	74.1	-87.61	3,002.0	4,735.1	2,435.4	2,306.6	128.75	18.916		
14,400.0	6,672.0	12,386.9	6,574.0	96.8	74.1	-87.62	3,002.0	4,735.1	2,503.7	2,377.1	126.58	19.780		
14,500.0	6,672.0	12,386.9	6,574.0	98.0	74.1	-87.62	3,002.0	4,735.1	2,574.1	2,449.7	124.46	20.682		
14,600.0	6,672.0	12,386.9	6,574.0	99.2	74.1	-87.62	3,002.0	4,735.1	2,646.4	2,524.0	122.40	21.622		
14,700.0	6,672.0	12,386.9	6,574.0	100.4	74.1	-87.62	3,002.0	4,735.1	2,720.5	2,600.1	120.39	22.597		
14,800.0	6,672.0	12,386.9	6,574.0	101.6	74.1	-87.62	3,002.0	4,735.1	2,796.2	2,677.7	118.45	23.607		
14,900.0	6,672.0	12,386.9	6,574.0	102.7	74.1	-87.62	3,002.0	4,735.1	2,873.3	2,756.8	116.58	24.648		
15,000.0	6,672.0	12,386.9	6,574.0	103.9	74.1	-87.62	3,002.0	4,735.1	2,951.9	2,837.1	114.77	25.719		
15,100.0	6,672.0	12,386.9	6,574.0	105.1	74.1	-87.62	3,002.0	4,735.1	3,031.6	2,918.6	113.04	26.820		
15,200.0	6,672.0	12,386.9	6,574.0	106.3	74.1	-87.62	3,002.0	4,735.1	3,112.6	3,001.2	111.37	27.947		
15,300.0	6,672.0	12,386.9	6,574.0	107.6	74.1	-87.62	3,002.0	4,735.1	3,194.6	3,084.8	109.78	29.101		
15,400.0	6,672.0	12,386.9	6,574.0	108.8	74.1	-87.62	3,002.0	4,735.1	3,277.6	3,169.4	108.25	30.279		
15,500.0	6,672.0	12,386.9	6,574.0	110.0	74.1	-87.62	3,002.0	4,735.1	3,361.6	3,254.8	106.79	31.480		
15,600.0	6,672.0	12,386.9	6,574.0	111.2	74.1	-87.62	3,002.0	4,735.1	3,446.4	3,341.0	105.39	32.702		
15,700.0	6,672.0	12,386.9	6,574.0	112.4	74.1	-87.62	3,002.0	4,735.1	3,532.0	3,427.9	104.05	33.945		
15,800.0	6,672.0	12,386.9	6,574.0	113.6	74.1	-87.62	3,002.0	4,735.1	3,618.3	3,515.5	102.77	35.207		
15,900.0	6,672.0	12,386.9	6,574.0	114.8	74.1	-87.62	3,002.0	4,735.1	3,705.3	3,603.7	101.55	36.487		
16,000.0	6,672.0	12,386.9	6,574.0	116.0	74.1	-87.62	3,002.0	4,735.1	3,792.9	3,692.5	100.38	37.784		
16,100.0	6,672.0	12,386.9	6,574.0	117.2	74.1	-87.62	3,002.0	4,735.1	3,881.2	3,781.9	99.27	39.097		
16,200.0	6,672.0	12,386.9	6,574.0	118.4	74.1	-87.62	3,002.0	4,735.1	3,969.9	3,871.7	98.21	40.425		
16,300.0	6,672.0	12,386.9	6,574.0	119.6	74.1	-87.62	3,002.0	4,735.1	4,059.3	3,962.1	97.19	41.766		
16,400.0	6,672.0	12,386.9	6,574.0	120.8	74.1	-87.62	3,002.0	4,735.1	4,149.0	4,052.8	96.22	43.120		
16,500.0	6,672.0	12,386.9	6,574.0	122.0	74.1	-87.62	3,002.0	4,735.1	4,239.3	4,144.0	95.29	44.487		
16,600.0	6,672.0	12,386.9	6,574.0	123.2	74.1	-87.62	3,002.0	4,735.1	4,330.0	4,235.6	94.41	45.864		
16,700.0	6,672.0	12,386.9	6,574.0	124.5	74.1	-87.62	3,002.0	4,735.1	4,421.0	4,327.5	93.56	47.252		
16,800.0	6,672.0	12,386.9	6,574.0	125.7	74.1	-87.62	3,002.0	4,735.1	4,512.5	4,419.7	92.76	48.649		
16,900.0	6,672.0	12,386.9	6,574.0	126.9	74.1	-87.62	3,002.0	4,735.1	4,604.3	4,512.3	91.98	50.056		
17,000.0	6,672.0	12,386.9	6,574.0	128.1	74.1	-87.62	3,002.0	4,735.1	4,696.4	4,605.2	91.25	51.470		
17,100.0	6,672.0	12,386.9	6,574.0	129.3	74.1	-87.62	3,002.0	4,735.1	4,788.9	4,698.3	90.54	52.892		
17,200.0	6,672.0	12,386.9	6,574.0	130.5	74.1	-87.62	3,002.0	4,735.1	4,881.6	4,791.7	89.87	54.321		
17,300.0	6,672.0	12,386.9	6,574.0	131.7	74.1	-87.62	3,002.0	4,735.1	4,974.6	4,885.4	89.22	55.756		
17,400.0	6,672.0	12,386.9	6,574.0	133.0	74.1	-87.62	3,002.0	4,735.1	5,067.9	4,979.3	88.60	57.197		
17,500.0	6,672.0	12,386.9	6,574.0	134.2	74.1	-87.63	3,002.0	4,735.1	5,161.4	5,073.4	88.01	58.643		
17,600.0	6,672.0	12,386.9	6,574.0	135.4	74.1	-87.63	3,002.0	4,735.1	5,255.2	5,167.7	87.45	60.094		
17,700.0	6,672.0	12,386.9	6,574.0	136.6	74.1	-87.63	3,002.0	4,735.1	5,349.2	5,262.3	86.91	61.550		
17,800.0	6,672.0	12,386.9	6,574.0	137.8	74.1	-87.63	3,002.0	4,735.1	5,443.4	5,357.0	86.39	63.009		
17,900.0	6,672.0	12,386.9	6,574.0	139.0	74.1	-87.63	3,002.0	4,735.1	5,537.8	5,451.9	85.90	64.471		
18,000.0	6,672.0	12,386.9	6,574.0	140.3	74.1	-87.63	3,002.0	4,735.1	5,632.4	5,546.9	85.42	65.937		
18,100.0	6,672.0	12,386.9	6,574.0	141.5	74.1	-87.63	3,002.0	4,735.1	5,727.1	5,642.2	84.97	67.405		
18,200.0	6,672.0	12,386.9	6,574.0	142.7	74.1	-87.63	3,002.0	4,735.1	5,822.1	5,737.6	84.53	68.875		
18,300.0	6,672.0	12,386.9	6,574.0	143.9	74.1	-87.63	3,002.0	4,735.1	5,917.2	5,833.1	84.11	70.348		
18,342.5	6,672.0	12,386.9	6,574.0	144.4	74.1	-87.63	3,002.0	4,735.1	5,957.6	5,873.7	83.94	70.973		



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - SLW Ranch State BB06-642 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-7.85	4,270.4	-589.0	4,310.9					
100.0	100.0	77.0	77.0	0.1	0.1	-7.85	4,270.4	-589.0	4,310.8	4,310.6	0.22	N/A		
200.0	200.0	177.0	177.0	0.5	0.4	-7.85	4,270.4	-589.0	4,310.8	4,310.0	0.89	4,868.676		
300.0	300.0	277.0	277.0	0.8	0.8	-7.85	4,270.4	-589.0	4,310.8	4,309.2	1.60	2,690.298		
400.0	400.0	377.0	377.0	1.2	1.1	-7.85	4,270.4	-589.0	4,310.8	4,308.5	2.32	1,858.676		
500.0	500.0	477.0	477.0	1.6	1.5	-7.85	4,270.4	-589.0	4,310.8	4,307.8	3.04	1,419.791		
600.0	600.0	577.0	577.0	1.9	1.8	-7.85	4,270.4	-589.0	4,310.8	4,307.1	3.75	1,148.580		
700.0	700.0	677.0	677.0	2.3	2.2	-7.85	4,270.4	-589.0	4,310.8	4,306.4	4.47	964.365		
800.0	800.0	777.0	777.0	2.6	2.6	-7.85	4,270.4	-589.0	4,310.8	4,305.7	5.19	831.073		
900.0	900.0	877.0	877.0	3.0	2.9	-7.85	4,270.4	-589.0	4,310.8	4,304.9	5.90	730.154		
1,000.0	1,000.0	977.0	977.0	3.4	3.3	-7.85	4,270.4	-589.0	4,310.8	4,304.2	6.62	651.090		
1,100.0	1,100.0	1,077.0	1,077.0	3.7	3.6	-7.85	4,270.4	-589.0	4,310.8	4,303.5	7.34	587.476		
1,200.0	1,200.0	1,177.0	1,177.0	4.1	4.0	-7.85	4,270.4	-589.0	4,310.8	4,302.8	8.05	535.186		
1,300.0	1,300.0	1,277.0	1,277.0	4.4	4.3	-7.85	4,270.4	-589.0	4,310.8	4,302.1	8.77	491.444		
1,400.0	1,400.0	1,377.0	1,377.0	4.8	4.7	-7.85	4,270.4	-589.0	4,310.8	4,301.4	9.49	454.312		
1,500.0	1,500.0	1,477.0	1,477.0	5.1	5.1	-7.85	4,270.4	-589.0	4,310.8	4,300.6	10.21	422.397		
1,600.0	1,600.0	1,577.0	1,577.0	5.5	5.4	-7.85	4,270.4	-589.0	4,310.8	4,299.9	10.92	394.671		
1,700.0	1,700.0	1,677.0	1,677.0	5.9	5.8	-7.85	4,270.4	-589.0	4,310.8	4,299.2	11.64	370.361		
1,800.0	1,800.0	1,777.0	1,777.0	6.2	6.1	-7.85	4,270.4	-589.0	4,310.8	4,298.5	12.36	348.872		
1,900.0	1,900.0	1,877.0	1,877.0	6.6	6.5	-7.85	4,270.4	-589.0	4,310.8	4,297.8	13.07	329.740		
2,000.0	2,000.0	1,977.0	1,977.0	6.9	6.9	-7.85	4,270.4	-589.0	4,310.8	4,297.1	13.79	312.598		
2,100.0	2,100.0	2,077.0	2,077.0	7.3	7.2	-7.85	4,270.4	-589.0	4,310.8	4,296.3	14.51	297.149		
2,200.0	2,200.0	2,177.0	2,177.0	7.7	7.6	-7.85	4,270.4	-589.0	4,310.8	4,295.6	15.22	283.156		
2,300.0	2,300.0	2,277.0	2,277.0	8.0	7.9	43.18	4,270.4	-589.0	4,309.6	4,293.6	15.94	270.393		
2,400.0	2,399.8	2,376.8	2,376.8	8.4	8.3	43.28	4,270.4	-589.0	4,305.8	4,289.1	16.65	258.609		
2,500.0	2,499.5	3,118.3	3,111.1	8.7	10.8	43.18	4,202.7	-645.8	4,287.6	4,268.3	19.33	221.777		
2,600.0	2,598.7	3,215.2	3,205.5	9.1	11.1	43.40	4,186.3	-659.6	4,264.0	4,244.0	20.02	213.024		
2,700.0	2,697.5	3,311.5	3,299.5	9.4	11.4	43.70	4,170.0	-673.2	4,238.0	4,217.3	20.70	204.727		
2,800.0	2,795.6	3,407.4	3,393.0	9.8	11.8	44.06	4,153.8	-686.8	4,209.5	4,188.2	21.38	196.851		
2,900.0	2,893.1	3,502.5	3,485.8	10.1	12.1	44.51	4,137.7	-700.3	4,178.7	4,156.6	22.07	189.360		
3,000.0	2,989.6	3,603.2	3,577.7	10.5	12.5	45.03	4,121.8	-713.7	4,145.5	4,122.7	22.77	182.040		
3,100.0	3,085.3	3,709.8	3,668.8	10.9	12.9	45.63	4,106.0	-726.9	4,110.0	4,086.5	23.50	174.887		
3,200.0	3,179.8	3,782.5	3,758.9	11.2	13.1	46.32	4,090.4	-740.0	4,072.2	4,048.1	24.11	168.907		
3,300.0	3,273.2	3,873.7	3,847.8	11.6	13.5	47.09	4,074.9	-753.0	4,032.2	4,007.4	24.79	162.677		
3,387.5	3,353.8	3,952.4	3,924.6	11.9	13.7	47.85	4,061.6	-764.2	3,995.5	3,970.1	25.38	157.437		
3,400.0	3,365.2	3,963.6	3,935.5	12.0	13.8	47.87	4,059.7	-765.7	3,990.1	3,964.7	25.46	156.697		
3,500.0	3,456.8	4,053.1	4,022.8	12.4	14.1	48.08	4,044.6	-778.4	3,947.2	3,921.1	26.14	151.007		
3,600.0	3,548.3	4,142.5	4,110.0	12.8	14.4	48.28	4,029.5	-791.1	3,904.4	3,877.6	26.82	145.570		
3,700.0	3,639.8	4,231.9	4,197.2	13.2	14.8	48.49	4,014.4	-803.8	3,861.6	3,834.1	27.51	140.372		
3,800.0	3,731.4	4,321.3	4,284.4	13.6	15.1	48.71	3,999.3	-816.5	3,818.8	3,790.6	28.20	135.402		
3,900.0	3,822.9	4,410.8	4,371.7	14.0	15.4	48.93	3,984.1	-829.2	3,776.1	3,747.2	28.90	130.648		
4,000.0	3,914.4	4,500.2	4,458.9	14.4	15.8	49.15	3,969.0	-841.9	3,733.5	3,703.9	29.61	126.100		
4,100.0	4,005.9	4,589.6	4,546.1	14.8	16.1	49.39	3,953.9	-854.5	3,690.9	3,660.5	30.32	121.746		
4,200.0	4,097.5	4,679.1	4,633.3	15.2	16.4	49.62	3,938.8	-867.2	3,648.3	3,617.3	31.03	117.576		
4,300.0	4,189.0	4,768.5	4,720.6	15.6	16.8	49.86	3,923.7	-879.9	3,605.8	3,574.0	31.75	113.581		
4,400.0	4,280.5	4,857.9	4,807.8	16.1	17.1	50.11	3,908.5	-892.6	3,563.3	3,530.9	32.47	109.751		
4,500.0	4,372.1	4,947.3	4,895.0	16.5	17.4	50.36	3,893.4	-905.3	3,520.9	3,487.7	33.19	106.078		
4,600.0	4,463.6	5,036.8	4,982.2	16.9	17.8	50.62	3,878.3	-918.0	3,478.6	3,444.7	33.92	102.553		
4,700.0	4,555.1	5,126.2	5,069.5	17.4	18.1	50.88	3,863.2	-930.7	3,436.3	3,401.7	34.65	99.169		
4,800.0	4,646.7	5,215.6	5,156.7	17.8	18.5	51.16	3,848.1	-943.4	3,394.1	3,358.7	35.39	95.919		
4,900.0	4,738.2	5,305.1	5,243.9	18.2	18.8	51.43	3,833.0	-956.0	3,352.0	3,315.8	36.12	92.795		
5,000.0	4,829.7	5,405.5	5,331.1	18.7	19.2	51.72	3,817.8	-968.7	3,309.9	3,273.0	36.90	89.690		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - SLW Ranch State BB06-642 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,100.0	4,921.3	5,483.9	5,418.3	19.1	19.5	52.01	3,802.7	-981.4	3,267.9	3,230.3	37.60	86.901		
5,200.0	5,012.8	5,573.3	5,505.6	19.5	19.8	52.31	3,787.6	-994.1	3,225.9	3,187.6	38.35	84.120		
5,300.0	5,104.3	5,662.8	5,592.8	20.0	20.2	52.62	3,772.5	-1,006.8	3,184.1	3,145.0	39.10	81.441		
5,400.0	5,195.8	5,752.2	5,680.0	20.4	20.5	52.93	3,757.4	-1,019.5	3,142.3	3,102.5	39.85	78.861		
5,500.0	5,287.4	5,841.6	5,767.2	20.9	20.9	53.25	3,742.2	-1,032.2	3,100.6	3,060.0	40.60	76.374		
5,600.0	5,378.9	5,931.1	5,854.5	21.3	21.2	53.58	3,727.1	-1,044.8	3,059.0	3,017.7	41.35	73.975		
5,700.0	5,470.4	6,020.5	5,941.7	21.8	21.5	53.92	3,712.0	-1,057.5	3,017.5	2,975.4	42.11	71.661		
5,800.0	5,562.0	6,098.2	6,017.4	22.2	21.8	54.22	3,698.9	-1,068.8	2,976.1	2,933.3	42.85	69.455		
5,900.0	5,653.5	6,189.9	6,107.4	22.7	22.2	54.67	3,683.9	-1,077.7	2,935.2	2,891.6	43.61	67.311		
6,000.0	5,745.0	6,279.2	6,195.3	23.1	22.5	55.39	3,669.4	-1,073.5	2,894.4	2,850.0	44.35	65.267		
6,100.0	5,836.6	6,357.6	6,271.4	23.6	22.7	56.25	3,657.1	-1,059.4	2,854.0	2,808.9	45.07	63.322		
6,200.0	5,928.1	6,424.9	6,334.9	24.0	22.9	57.13	3,647.0	-1,039.8	2,814.6	2,768.8	45.79	61.472		
6,278.6	6,000.0	6,470.6	6,376.7	24.4	23.1	57.82	3,640.4	-1,022.5	2,784.7	2,738.4	46.35	60.086		
6,290.0	6,010.4	6,476.7	6,382.2	24.4	23.1	56.57	3,639.6	-1,020.0	2,780.4	2,733.9	46.43	59.887		
6,300.0	6,019.5	6,481.9	6,386.9	24.5	23.1	54.49	3,638.8	-1,017.8	2,776.4	2,729.9	46.50	59.710		
6,350.0	6,065.8	6,508.4	6,410.3	24.7	23.2	42.23	3,635.2	-1,006.0	2,756.7	2,709.8	46.84	58.850		
6,400.0	6,113.0	6,535.3	6,433.5	24.9	23.2	26.40	3,631.6	-993.0	2,736.7	2,689.5	47.17	58.017		
6,450.0	6,160.7	6,562.4	6,456.5	25.1	23.3	7.54	3,628.0	-978.8	2,716.6	2,669.1	47.48	57.212		
6,500.0	6,208.5	6,589.9	6,479.0	25.3	23.4	-11.85	3,624.6	-963.5	2,696.6	2,648.8	47.78	56.437		
6,550.0	6,255.8	6,617.7	6,501.1	25.4	23.4	-28.83	3,621.2	-947.0	2,676.7	2,628.6	48.06	55.693		
6,600.0	6,302.5	6,650.0	6,525.9	25.6	23.5	-42.21	3,617.5	-926.6	2,657.1	2,608.8	48.34	54.973		
6,650.0	6,347.9	6,674.4	6,543.9	25.7	23.6	-52.54	3,614.9	-910.4	2,638.0	2,589.4	48.58	54.297		
6,700.0	6,391.6	6,700.0	6,562.1	25.9	23.6	-60.52	3,612.2	-892.6	2,619.5	2,570.7	48.82	53.652		
6,750.0	6,433.4	6,732.3	6,584.0	26.0	23.7	-66.78	3,609.0	-869.0	2,601.7	2,552.7	49.07	53.026		
6,800.0	6,472.8	6,761.8	6,603.0	26.1	23.7	-71.87	3,606.3	-846.6	2,584.9	2,535.6	49.29	52.440		
6,850.0	6,509.4	6,791.6	6,621.1	26.2	23.8	-76.06	3,603.7	-823.1	2,569.0	2,519.5	49.51	51.886		
6,900.0	6,543.0	6,821.7	6,638.2	26.3	23.9	-79.55	3,601.3	-798.4	2,554.3	2,504.5	49.73	51.367		
6,950.0	6,573.2	6,850.0	6,653.2	26.4	23.9	-82.48	3,599.3	-774.6	2,540.8	2,490.9	49.93	50.889		
7,000.0	6,599.8	6,882.9	6,669.3	26.5	24.0	-84.93	3,597.2	-746.0	2,528.8	2,478.6	50.14	50.436		
7,050.0	6,622.5	6,913.8	6,683.1	26.6	24.0	-86.96	3,595.4	-718.3	2,518.2	2,467.9	50.34	50.025		
7,100.0	6,641.1	6,950.0	6,697.5	26.7	24.1	-88.63	3,593.6	-685.2	2,509.3	2,458.8	50.55	49.641		
7,150.0	6,655.4	6,976.5	6,706.8	26.8	24.2	-89.93	3,592.5	-660.4	2,502.1	2,451.4	50.73	49.320		
7,200.0	6,665.4	7,008.1	6,716.6	26.9	24.3	-90.91	3,591.5	-630.4	2,496.7	2,445.8	50.92	49.029		
7,250.0	6,670.8	7,039.9	6,724.9	27.0	24.3	-91.58	3,590.7	-599.7	2,493.1	2,442.0	51.11	48.782		
7,285.7	6,672.0	7,062.7	6,729.9	27.1	24.4	-91.86	3,590.2	-577.4	2,491.7	2,440.4	51.23	48.634		
7,300.0	6,672.0	7,071.9	6,731.7	27.1	24.4	-91.90	3,590.1	-568.4	2,491.3	2,440.0	51.28	48.579		
7,400.0	6,672.0	7,137.3	6,740.6	27.3	24.6	-92.11	3,589.8	-503.7	2,489.6	2,437.9	51.68	48.170		
7,474.3	6,672.0	7,186.7	6,743.0	27.5	24.7	-92.16	3,590.3	-454.3	2,489.2	2,437.2	52.03	47.841		
7,500.0	6,672.0	7,209.7	6,743.0	27.6	24.8	-92.16	3,590.7	-431.3	2,489.3	2,437.1	52.18	47.710		
7,600.0	6,672.0	7,309.7	6,743.0	28.0	25.1	-92.16	3,592.6	-331.3	2,489.4	2,436.5	52.85	47.107		
7,700.0	6,672.0	7,409.7	6,743.0	28.3	25.4	-92.16	3,594.4	-231.4	2,489.5	2,435.8	53.63	46.422		
7,800.0	6,672.0	7,509.7	6,743.0	28.8	25.9	-92.16	3,596.3	-131.4	2,489.6	2,435.0	54.51	45.670		
7,900.0	6,672.0	7,609.7	6,743.0	29.3	26.4	-92.16	3,598.1	-31.5	2,489.6	2,434.1	55.49	44.864		
8,000.0	6,672.0	7,709.6	6,743.0	29.8	26.9	-92.16	3,599.9	68.5	2,489.7	2,433.1	56.57	44.014		
8,100.0	6,672.0	7,809.6	6,743.0	30.4	27.5	-92.16	3,601.8	168.4	2,489.8	2,432.1	57.73	43.131		
8,200.0	6,672.0	7,909.6	6,743.0	31.0	28.1	-92.16	3,603.6	268.4	2,489.8	2,430.9	58.97	42.224		
8,300.0	6,672.0	8,009.5	6,743.0	31.7	28.8	-92.16	3,605.4	368.4	2,489.9	2,429.6	60.29	41.301		
8,400.0	6,672.0	8,109.5	6,743.0	32.4	29.5	-92.16	3,607.3	468.3	2,490.0	2,428.3	61.68	40.371		
8,500.0	6,672.0	8,209.5	6,743.0	33.1	30.2	-92.16	3,609.1	568.3	2,490.0	2,426.9	63.13	39.440		
8,600.0	6,672.0	8,309.5	6,743.0	33.9	31.0	-92.16	3,611.0	668.2	2,490.0	2,425.4	64.65	38.514		
8,700.0	6,672.0	8,409.4	6,743.0	34.7	31.7	-92.16	3,612.8	768.2	2,490.1	2,423.8	66.23	37.597		
8,800.0	6,672.0	8,509.4	6,743.0	35.5	32.6	-92.16	3,614.7	868.1	2,490.1	2,422.2	67.86	36.694		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - SLW Ranch State BB06-642 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
8,900.0	6,672.0	8,609.4	6,743.0	36.3	33.4	-92.16	3,616.5	968.1	2,490.1	2,420.6	69.54	35.806		
9,000.0	6,672.0	8,709.4	6,743.0	37.2	34.3	-92.16	3,618.4	1,068.0	2,490.1	2,418.9	71.27	34.938		
9,100.0	6,672.0	8,809.3	6,743.0	38.1	35.2	-92.16	3,620.2	1,168.0	2,490.1	2,417.1	73.04	34.091		
9,200.0	6,672.0	8,909.3	6,743.0	39.0	36.1	-92.16	3,622.1	1,267.9	2,490.1	2,415.3	74.86	33.266		
9,300.0	6,672.0	9,009.3	6,743.0	39.9	37.0	-92.16	3,623.9	1,367.9	2,490.1	2,413.4	76.71	32.463		
9,400.0	6,672.0	9,109.2	6,743.0	40.8	38.0	-92.16	3,625.8	1,467.9	2,490.1	2,411.5	78.59	31.685		
9,500.0	6,672.0	9,209.2	6,743.0	41.8	38.9	-92.16	3,627.6	1,567.8	2,490.1	2,409.6	80.51	30.931		
9,600.0	6,672.0	9,309.2	6,743.0	42.7	39.9	-92.16	3,629.5	1,667.8	2,490.1	2,407.6	82.45	30.200		
9,700.0	6,672.0	9,409.2	6,743.0	43.7	40.9	-92.16	3,631.3	1,767.7	2,490.1	2,405.6	84.43	29.493		
9,800.0	6,672.0	9,509.1	6,743.0	44.7	41.9	-92.16	3,633.2	1,867.7	2,490.0	2,403.6	86.43	28.810		
9,900.0	6,672.0	9,609.1	6,743.0	45.7	43.0	-92.16	3,635.1	1,967.6	2,490.0	2,401.5	88.45	28.150		
10,000.0	6,672.0	9,709.1	6,743.0	46.7	44.0	-92.16	3,636.9	2,067.6	2,489.9	2,399.4	90.50	27.513		
10,100.0	6,672.0	9,809.0	6,743.0	47.7	45.0	-92.16	3,638.8	2,167.5	2,489.9	2,397.3	92.57	26.897		
10,200.0	6,672.0	9,909.0	6,743.0	48.8	46.1	-92.16	3,640.6	2,267.5	2,489.8	2,395.2	94.66	26.303		
10,300.0	6,672.0	10,009.0	6,743.0	49.8	47.1	-92.16	3,642.5	2,367.4	2,489.7	2,393.0	96.76	25.730		
10,400.0	6,672.0	10,109.0	6,743.0	50.9	48.2	-92.16	3,644.4	2,467.4	2,489.7	2,390.8	98.89	25.176		
10,500.0	6,672.0	10,208.9	6,743.0	51.9	49.3	-92.16	3,646.2	2,567.4	2,489.6	2,388.6	101.03	24.642		
10,600.0	6,672.0	10,308.9	6,743.0	53.0	50.4	-92.16	3,648.1	2,667.3	2,489.5	2,386.3	103.18	24.127		
10,700.0	6,672.0	10,408.9	6,743.0	54.1	51.5	-92.16	3,650.0	2,767.3	2,489.4	2,384.1	105.35	23.629		
10,800.0	6,672.0	10,508.8	6,743.0	55.2	52.6	-92.16	3,651.8	2,867.2	2,489.3	2,381.8	107.54	23.148		
10,900.0	6,672.0	10,608.8	6,743.0	56.3	53.7	-92.16	3,653.7	2,967.2	2,489.2	2,379.5	109.73	22.684		
11,000.0	6,672.0	10,708.8	6,743.0	57.4	54.8	-92.16	3,655.6	3,067.1	2,489.1	2,377.1	111.94	22.236		
11,100.0	6,672.0	10,808.8	6,743.0	58.5	55.9	-92.16	3,657.5	3,167.1	2,489.0	2,374.8	114.16	21.802		
11,200.0	6,672.0	10,908.7	6,743.0	59.6	57.0	-92.16	3,659.3	3,267.0	2,488.8	2,372.5	116.39	21.384		
11,300.0	6,672.0	11,008.7	6,743.0	60.7	58.2	-92.16	3,661.2	3,367.0	2,488.7	2,370.1	118.63	20.979		
11,400.0	6,672.0	11,108.7	6,743.0	61.8	59.3	-92.16	3,663.1	3,466.9	2,488.6	2,367.7	120.88	20.588		
11,500.0	6,672.0	11,208.6	6,743.0	62.9	60.4	-92.16	3,665.0	3,566.9	2,488.4	2,365.3	123.13	20.209		
11,600.0	6,672.0	11,308.6	6,743.0	64.1	61.6	-92.16	3,666.8	3,666.8	2,488.3	2,362.9	125.40	19.843		
11,700.0	6,672.0	11,408.6	6,743.0	65.2	62.7	-92.17	3,668.7	3,766.8	2,488.1	2,360.4	127.67	19.488		
11,800.0	6,672.0	11,508.6	6,743.0	66.3	63.9	-92.17	3,670.6	3,866.7	2,488.0	2,358.0	129.96	19.145		
11,900.0	6,672.0	11,608.5	6,743.0	67.5	65.0	-92.17	3,672.5	3,966.7	2,487.8	2,355.5	132.24	18.812		
12,000.0	6,672.0	11,708.5	6,743.0	68.6	66.2	-92.17	3,674.4	4,066.7	2,487.6	2,353.1	134.54	18.490		
12,100.0	6,672.0	11,808.5	6,743.0	69.8	67.3	-92.17	3,676.2	4,166.6	2,487.4	2,350.6	136.84	18.177		
12,200.0	6,672.0	11,908.4	6,743.0	70.9	68.5	-92.17	3,678.1	4,266.6	2,487.2	2,348.1	139.15	17.875		
12,300.0	6,672.0	12,008.4	6,743.0	72.1	69.6	-92.17	3,680.0	4,366.5	2,487.0	2,345.6	141.46	17.581		
12,400.0	6,672.0	12,108.4	6,743.0	73.2	70.8	-92.17	3,681.9	4,466.5	2,486.8	2,343.1	143.78	17.296		
12,500.0	6,672.0	12,208.3	6,743.0	74.4	72.0	-92.17	3,683.8	4,566.4	2,486.6	2,340.5	146.11	17.019		
12,600.0	6,672.0	12,308.3	6,743.0	75.5	73.1	-92.17	3,685.7	4,666.4	2,486.4	2,338.0	148.44	16.751		
12,667.7	6,672.0	12,376.0	6,743.0	76.3	73.9	-92.17	3,687.0	4,734.0	2,486.3	2,336.2	150.01	16.573 CC		
12,700.0	6,672.0	12,369.1	6,743.0	76.7	73.9	-92.17	3,686.8	4,727.1	2,486.5	2,336.2	150.28	16.546 ES		
12,800.0	6,672.0	12,369.1	6,743.0	77.9	73.9	-92.17	3,686.8	4,727.1	2,489.9	2,338.6	151.22	16.465		
12,900.0	6,672.0	12,369.1	6,743.0	79.0	73.9	-92.17	3,686.8	4,727.1	2,497.2	2,345.3	151.95	16.435 SF		
13,000.0	6,672.0	12,369.1	6,743.0	80.2	73.9	-92.17	3,686.8	4,727.1	2,508.5	2,356.1	152.45	16.454		
13,100.0	6,672.0	12,369.1	6,743.0	81.4	73.9	-92.17	3,686.8	4,727.1	2,523.7	2,371.0	152.75	16.522		
13,200.0	6,672.0	12,369.1	6,743.0	82.6	73.9	-92.17	3,686.8	4,727.1	2,542.8	2,390.0	152.84	16.638		
13,300.0	6,672.0	12,369.1	6,743.0	83.7	73.9	-92.17	3,686.8	4,727.1	2,565.6	2,412.9	152.72	16.799		
13,400.0	6,672.0	12,369.1	6,743.0	84.9	73.9	-92.17	3,686.8	4,727.1	2,592.1	2,439.6	152.43	17.005		
13,500.0	6,672.0	12,369.1	6,743.0	86.1	73.9	-92.17	3,686.8	4,727.1	2,622.1	2,470.1	151.96	17.256		
13,600.0	6,672.0	12,369.1	6,743.0	87.3	73.9	-92.17	3,686.8	4,727.1	2,655.5	2,504.2	151.32	17.549		
13,700.0	6,672.0	12,369.1	6,743.0	88.4	73.9	-92.17	3,686.8	4,727.1	2,692.2	2,541.7	150.55	17.883		
13,800.0	6,672.0	12,369.1	6,743.0	89.6	73.9	-92.17	3,686.8	4,727.1	2,732.1	2,582.5	149.64	18.258		
13,900.0	6,672.0	12,369.1	6,743.0	90.8	73.9	-92.17	3,686.8	4,727.1	2,775.0	2,626.4	148.62	18.672		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - SLW Ranch State BB06-642 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
14,000.0	6,672.0	12,369.1	6,743.0	92.0	73.9	-92.17	3,686.8	4,727.1	2,820.8	2,673.3	147.50	19.124		
14,100.0	6,672.0	12,369.1	6,743.0	93.2	73.9	-92.17	3,686.8	4,727.1	2,869.3	2,723.0	146.30	19.613		
14,200.0	6,672.0	12,369.1	6,743.0	94.4	73.9	-92.17	3,686.8	4,727.1	2,920.5	2,775.5	145.03	20.138		
14,300.0	6,672.0	12,369.1	6,743.0	95.6	73.9	-92.17	3,686.8	4,727.1	2,974.1	2,830.4	143.70	20.697		
14,400.0	6,672.0	12,369.1	6,743.0	96.8	73.9	-92.17	3,686.8	4,727.1	3,030.1	2,887.8	142.33	21.290		
14,500.0	6,672.0	12,369.1	6,743.0	98.0	73.9	-92.17	3,686.8	4,727.1	3,088.3	2,947.4	140.92	21.915		
14,600.0	6,672.0	12,369.1	6,743.0	99.2	73.9	-92.17	3,686.8	4,727.1	3,148.6	3,009.1	139.49	22.572		
14,700.0	6,672.0	12,369.1	6,743.0	100.4	73.9	-92.17	3,686.8	4,727.1	3,210.9	3,072.8	138.05	23.259		
14,800.0	6,672.0	12,369.1	6,743.0	101.6	73.9	-92.17	3,686.8	4,727.1	3,275.0	3,138.4	136.60	23.975		
14,900.0	6,672.0	12,369.1	6,743.0	102.7	73.9	-92.17	3,686.8	4,727.1	3,340.9	3,205.7	135.15	24.719		
15,000.0	6,672.0	12,369.1	6,743.0	103.9	73.9	-92.16	3,686.8	4,727.1	3,408.4	3,274.7	133.71	25.491		
15,100.0	6,672.0	12,369.1	6,743.0	105.1	73.9	-92.16	3,686.8	4,727.1	3,477.5	3,345.3	132.28	26.289		
15,200.0	6,672.0	12,369.1	6,743.0	106.3	73.9	-92.16	3,686.8	4,727.1	3,548.1	3,417.2	130.87	27.112		
15,300.0	6,672.0	12,369.1	6,743.0	107.6	73.9	-92.16	3,686.8	4,727.1	3,620.1	3,490.6	129.47	27.960		
15,400.0	6,672.0	12,369.1	6,743.0	108.8	73.9	-92.16	3,686.8	4,727.1	3,693.3	3,565.2	128.10	28.831		
15,500.0	6,672.0	12,369.1	6,743.0	110.0	73.9	-92.16	3,686.8	4,727.1	3,767.8	3,641.0	126.76	29.725		
15,600.0	6,672.0	12,369.1	6,743.0	111.2	73.9	-92.16	3,686.8	4,727.1	3,843.4	3,718.0	125.44	30.640		
15,700.0	6,672.0	12,369.1	6,743.0	112.4	73.9	-92.16	3,686.8	4,727.1	3,920.2	3,796.0	124.15	31.577		
15,800.0	6,672.0	12,369.1	6,743.0	113.6	73.9	-92.16	3,686.8	4,727.1	3,997.9	3,875.0	122.89	32.533		
15,900.0	6,672.0	12,369.1	6,743.0	114.8	73.9	-92.16	3,686.8	4,727.1	4,076.6	3,954.9	121.66	33.509		
16,000.0	6,672.0	12,369.1	6,743.0	116.0	73.9	-92.16	3,686.8	4,727.1	4,156.2	4,035.8	120.46	34.503		
16,100.0	6,672.0	12,369.1	6,743.0	117.2	73.9	-92.16	3,686.8	4,727.1	4,236.7	4,117.4	119.29	35.515		
16,200.0	6,672.0	12,369.1	6,743.0	118.4	73.9	-92.16	3,686.8	4,727.1	4,318.0	4,199.8	118.16	36.544		
16,300.0	6,672.0	12,369.1	6,743.0	119.6	73.9	-92.16	3,686.8	4,727.1	4,400.1	4,283.0	117.06	37.589		
16,400.0	6,672.0	12,369.1	6,743.0	120.8	73.9	-92.16	3,686.8	4,727.1	4,482.8	4,366.9	115.99	38.650		
16,500.0	6,672.0	12,369.1	6,743.0	122.0	73.9	-92.16	3,686.8	4,727.1	4,566.3	4,451.4	114.95	39.726		
16,600.0	6,672.0	12,369.1	6,743.0	123.2	73.9	-92.16	3,686.8	4,727.1	4,650.4	4,536.5	113.94	40.816		
16,700.0	6,672.0	12,369.1	6,743.0	124.5	73.9	-92.16	3,686.8	4,727.1	4,735.2	4,622.2	112.96	41.920		
16,800.0	6,672.0	12,369.1	6,743.0	125.7	73.9	-92.16	3,686.8	4,727.1	4,820.5	4,708.5	112.01	43.037		
16,900.0	6,672.0	12,369.1	6,743.0	126.9	73.9	-92.16	3,686.8	4,727.1	4,906.3	4,795.2	111.09	44.166		
17,000.0	6,672.0	12,369.1	6,743.0	128.1	73.9	-92.16	3,686.8	4,727.1	4,992.7	4,882.5	110.20	45.308		
17,100.0	6,672.0	12,369.1	6,743.0	129.3	73.9	-92.16	3,686.8	4,727.1	5,079.6	4,970.3	109.33	46.460		
17,200.0	6,672.0	12,369.1	6,743.0	130.5	73.9	-92.16	3,686.8	4,727.1	5,167.0	5,058.5	108.50	47.624		
17,300.0	6,672.0	12,369.1	6,743.0	131.7	73.9	-92.16	3,686.8	4,727.1	5,254.8	5,147.1	107.68	48.798		
17,400.0	6,672.0	12,369.1	6,743.0	133.0	73.9	-92.16	3,686.8	4,727.1	5,343.0	5,236.1	106.90	49.982		
17,500.0	6,672.0	12,369.1	6,743.0	134.2	73.9	-92.16	3,686.8	4,727.1	5,431.6	5,325.5	106.14	51.175		
17,600.0	6,672.0	12,369.1	6,743.0	135.4	73.9	-92.16	3,686.8	4,727.1	5,520.6	5,415.2	105.40	52.377		
17,700.0	6,672.0	12,369.1	6,743.0	136.6	73.9	-92.16	3,686.8	4,727.1	5,610.0	5,505.3	104.69	53.587		
17,800.0	6,672.0	12,369.1	6,743.0	137.8	73.9	-92.16	3,686.8	4,727.1	5,699.7	5,595.7	104.00	54.806		
17,900.0	6,672.0	12,369.1	6,743.0	139.0	73.9	-92.16	3,686.8	4,727.1	5,789.8	5,686.5	103.33	56.032		
18,000.0	6,672.0	12,369.1	6,743.0	140.3	73.9	-92.16	3,686.8	4,727.1	5,880.2	5,777.5	102.68	57.265		
18,100.0	6,672.0	12,369.1	6,743.0	141.5	73.9	-92.16	3,686.8	4,727.1	5,970.9	5,868.8	102.06	58.506		
18,200.0	6,672.0	12,369.1	6,743.0	142.7	73.9	-92.16	3,686.8	4,727.1	6,061.8	5,960.4	101.45	59.752		
18,300.0	6,672.0	12,369.1	6,743.0	143.9	73.9	-92.16	3,686.8	4,727.1	6,153.1	6,052.2	100.86	61.005		
18,342.5	6,672.0	12,369.1	6,743.0	144.4	73.9	-92.16	3,686.8	4,727.1	6,191.9	6,091.3	100.62	61.539		



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - SLW Ranch State BB06-652 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-7.82	4,292.3	-589.2	4,332.6					
100.0	100.0	77.0	77.0	0.1	0.1	-7.82	4,292.3	-589.2	4,332.5	4,332.3	0.22	N/A		
200.0	200.0	177.0	177.0	0.5	0.4	-7.82	4,292.3	-589.2	4,332.5	4,331.6	0.89	4,893.169		
300.0	300.0	277.0	277.0	0.8	0.8	-7.82	4,292.3	-589.2	4,332.5	4,330.9	1.60	2,703.832		
400.0	400.0	377.0	377.0	1.2	1.1	-7.82	4,292.3	-589.2	4,332.5	4,330.2	2.32	1,868.026		
500.0	500.0	477.0	477.0	1.6	1.5	-7.82	4,292.3	-589.2	4,332.5	4,329.5	3.04	1,426.934		
600.0	600.0	577.0	577.0	1.9	1.8	-7.82	4,292.3	-589.2	4,332.5	4,328.8	3.75	1,154.358		
700.0	700.0	677.0	677.0	2.3	2.2	-7.82	4,292.3	-589.2	4,332.5	4,328.1	4.47	969.217		
800.0	800.0	777.0	777.0	2.6	2.6	-7.82	4,292.3	-589.2	4,332.5	4,327.3	5.19	835.254		
900.0	900.0	877.0	877.0	3.0	2.9	-7.82	4,292.3	-589.2	4,332.5	4,326.6	5.90	733.827		
1,000.0	1,000.0	977.0	977.0	3.4	3.3	-7.82	4,292.3	-589.2	4,332.5	4,325.9	6.62	654.366		
1,100.0	1,100.0	1,077.0	1,077.0	3.7	3.6	-7.82	4,292.3	-589.2	4,332.5	4,325.2	7.34	590.431		
1,200.0	1,200.0	1,177.0	1,177.0	4.1	4.0	-7.82	4,292.3	-589.2	4,332.5	4,324.5	8.05	537.879		
1,300.0	1,300.0	1,277.0	1,277.0	4.4	4.3	-7.82	4,292.3	-589.2	4,332.5	4,323.8	8.77	493.916		
1,400.0	1,400.0	1,377.0	1,377.0	4.8	4.7	-7.82	4,292.3	-589.2	4,332.5	4,323.0	9.49	456.597		
1,500.0	1,500.0	1,477.0	1,477.0	5.1	5.1	-7.82	4,292.3	-589.2	4,332.5	4,322.3	10.21	424.522		
1,600.0	1,600.0	1,577.0	1,577.0	5.5	5.4	-7.82	4,292.3	-589.2	4,332.5	4,321.6	10.92	396.657		
1,700.0	1,700.0	1,677.0	1,677.0	5.9	5.8	-7.82	4,292.3	-589.2	4,332.5	4,320.9	11.64	372.225		
1,800.0	1,800.0	1,777.0	1,777.0	6.2	6.1	-7.82	4,292.3	-589.2	4,332.5	4,320.2	12.36	350.628		
1,900.0	1,900.0	1,877.0	1,877.0	6.6	6.5	-7.82	4,292.3	-589.2	4,332.5	4,319.5	13.07	331.399		
2,000.0	2,000.0	1,977.0	1,977.0	6.9	6.9	-7.82	4,292.3	-589.2	4,332.5	4,318.7	13.79	314.170		
2,100.0	2,100.0	2,077.0	2,077.0	7.3	7.2	-7.82	4,292.3	-589.2	4,332.5	4,318.0	14.51	298.644		
2,200.0	2,200.0	2,177.0	2,177.0	7.7	7.6	-7.82	4,292.3	-589.2	4,332.5	4,317.3	15.22	284.580		
2,300.0	2,300.0	2,277.0	2,277.0	8.0	7.9	43.22	4,292.3	-589.2	4,331.3	4,315.3	15.94	271.753		
2,400.0	2,399.8	2,376.8	2,376.8	8.4	8.3	43.32	4,292.3	-589.2	4,327.4	4,310.8	16.65	259.912		
2,500.0	2,499.5	2,476.5	2,476.5	8.7	8.6	43.48	4,292.3	-589.2	4,321.1	4,303.7	17.36	248.895		
2,600.0	2,598.7	2,575.7	2,575.7	9.1	9.0	43.72	4,292.3	-589.2	4,312.2	4,294.2	18.07	238.614		
2,700.0	2,697.5	2,673.6	2,673.6	9.4	9.3	44.00	4,292.2	-590.1	4,300.9	4,282.1	18.77	229.115		
2,800.0	2,795.6	2,771.3	2,771.2	9.8	9.7	44.32	4,291.7	-594.3	4,287.1	4,267.7	19.46	220.266		
2,900.0	2,893.1	2,869.0	2,868.6	10.1	10.0	44.66	4,290.7	-601.7	4,270.9	4,250.8	20.16	211.899		
3,000.0	2,989.6	2,966.6	2,965.6	10.5	10.4	45.02	4,289.4	-612.5	4,252.3	4,231.4	20.85	203.941		
3,100.0	3,085.3	3,064.0	3,062.0	10.9	10.7	45.42	4,287.7	-626.2	4,231.2	4,209.7	21.55	196.358		
3,200.0	3,179.8	3,160.9	3,157.8	11.2	11.0	45.88	4,286.0	-640.4	4,207.8	4,185.6	22.25	189.123		
3,300.0	3,273.2	3,256.9	3,252.8	11.6	11.4	46.41	4,284.3	-654.5	4,182.1	4,159.1	22.95	182.217		
3,387.5	3,353.8	3,340.1	3,335.1	11.9	11.7	46.95	4,282.8	-666.7	4,157.7	4,134.1	23.57	176.421		
3,400.0	3,365.2	3,351.9	3,346.8	12.0	11.7	46.97	4,282.6	-668.4	4,154.1	4,130.4	23.66	175.606		
3,500.0	3,456.8	3,446.6	3,440.4	12.4	12.0	47.18	4,280.9	-682.3	4,125.2	4,100.9	24.36	169.334		
3,600.0	3,548.3	3,541.3	3,534.0	12.8	12.4	47.39	4,279.1	-696.2	4,096.4	4,071.4	25.07	163.371		
3,700.0	3,639.8	3,635.9	3,627.7	13.2	12.7	47.60	4,277.4	-710.1	4,067.7	4,041.9	25.79	157.702		
3,800.0	3,731.4	3,730.6	3,721.3	13.6	13.0	47.81	4,275.7	-723.9	4,039.0	4,012.5	26.52	152.308		
3,900.0	3,822.9	3,825.2	3,814.9	14.0	13.4	48.03	4,274.0	-737.8	4,010.4	3,983.1	27.25	147.175		
4,000.0	3,914.4	3,919.9	3,908.5	14.4	13.7	48.25	4,272.3	-751.7	3,981.8	3,953.8	27.98	142.285		
4,100.0	4,005.9	4,014.6	4,002.1	14.8	14.1	48.48	4,270.6	-765.6	3,953.3	3,924.6	28.72	137.627		
4,200.0	4,097.5	4,109.2	4,095.8	15.2	14.4	48.70	4,268.9	-779.5	3,924.8	3,895.4	29.47	133.184		
4,300.0	4,189.0	4,203.9	4,189.4	15.6	14.7	48.93	4,267.2	-793.4	3,896.4	3,866.2	30.22	128.946		
4,400.0	4,280.5	4,301.5	4,283.0	16.1	15.1	49.17	4,265.5	-807.3	3,868.1	3,837.1	30.98	124.856		
4,500.0	4,372.1	4,406.8	4,376.6	16.5	15.5	49.40	4,263.8	-821.2	3,839.8	3,808.0	31.77	120.845		
4,600.0	4,463.6	4,487.9	4,470.2	16.9	15.8	49.64	4,262.1	-835.0	3,811.6	3,779.1	32.48	117.336		
4,700.0	4,555.1	4,582.5	4,563.9	17.4	16.1	49.89	4,260.4	-848.9	3,783.4	3,750.2	33.25	113.801		
4,800.0	4,646.7	4,677.2	4,657.5	17.8	16.5	50.13	4,258.7	-862.8	3,755.3	3,721.3	34.01	110.416		
4,900.0	4,738.2	4,771.9	4,751.1	18.2	16.8	50.38	4,257.0	-876.7	3,727.3	3,692.5	34.78	107.173		
5,000.0	4,829.7	4,866.5	4,844.7	18.7	17.1	50.64	4,255.3	-890.6	3,699.4	3,663.8	35.55	104.066		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - SLW Ranch State BB06-652 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,100.0	4,921.3	4,961.2	4,938.3	19.1	17.5	50.90	4,253.6	-904.5	3,671.5	3,635.2	36.32	101.085		
5,200.0	5,012.8	5,055.8	5,032.0	19.5	17.8	51.16	4,251.9	-918.4	3,643.7	3,606.6	37.10	98.225		
5,300.0	5,104.3	5,150.5	5,125.6	20.0	18.2	51.43	4,250.2	-932.3	3,615.9	3,578.1	37.87	95.478		
5,400.0	5,195.8	5,245.2	5,219.2	20.4	18.5	51.70	4,248.5	-946.1	3,588.3	3,549.6	38.65	92.838		
5,500.0	5,287.4	5,339.8	5,312.8	20.9	18.9	51.97	4,246.8	-960.0	3,560.7	3,521.2	39.43	90.300		
5,600.0	5,378.9	5,434.5	5,406.5	21.3	19.2	52.25	4,245.0	-973.9	3,533.2	3,493.0	40.21	87.859		
5,700.0	5,470.4	5,529.1	5,500.1	21.8	19.6	52.53	4,243.3	-987.8	3,505.7	3,464.7	41.00	85.510		
5,800.0	5,562.0	5,623.8	5,593.7	22.2	19.9	52.82	4,241.6	-1,001.7	3,478.4	3,436.6	41.78	83.247		
5,900.0	5,653.5	5,718.5	5,687.3	22.7	20.3	53.11	4,239.9	-1,015.6	3,451.1	3,408.6	42.57	81.066		
6,000.0	5,745.0	5,813.1	5,780.9	23.1	20.6	53.40	4,238.2	-1,029.5	3,424.0	3,380.6	43.36	78.964		
6,100.0	5,836.6	5,907.8	5,874.6	23.6	21.0	53.70	4,236.5	-1,043.4	3,396.9	3,352.7	44.15	76.937		
6,200.0	5,928.1	5,976.4	5,942.4	24.0	21.2	53.93	4,235.6	-1,053.3	3,370.3	3,325.4	44.87	75.105		
6,278.6	6,000.0	6,041.5	6,007.4	24.4	21.5	54.25	4,235.0	-1,056.6	3,349.9	3,304.4	45.46	73.683		
6,290.0	6,010.4	6,050.5	6,016.4	24.4	21.5	52.87	4,234.9	-1,056.5	3,346.8	3,301.3	45.55	73.480		
6,300.0	6,019.5	6,058.4	6,024.3	24.5	21.5	50.90	4,234.8	-1,056.2	3,344.0	3,298.4	45.62	73.301		
6,350.0	6,065.8	6,097.3	6,063.1	24.7	21.6	39.17	4,234.5	-1,053.7	3,329.9	3,283.9	45.97	72.434		
6,400.0	6,113.0	6,135.7	6,101.2	24.9	21.8	23.88	4,234.2	-1,048.6	3,315.5	3,269.2	46.31	71.599		
6,450.0	6,160.7	6,173.7	6,138.5	25.1	21.9	5.54	4,234.0	-1,041.1	3,300.9	3,254.3	46.63	70.796		
6,500.0	6,208.5	6,211.5	6,174.9	25.3	22.0	-13.32	4,233.8	-1,031.3	3,286.3	3,239.3	46.93	70.026		
6,550.0	6,255.8	6,250.0	6,211.4	25.4	22.1	-29.79	4,233.6	-1,019.0	3,271.7	3,224.5	47.22	69.283		
6,600.0	6,302.5	6,286.4	6,245.0	25.6	22.2	-42.72	4,233.5	-1,005.1	3,257.3	3,209.8	47.50	68.579		
6,650.0	6,347.9	6,323.7	6,278.6	25.7	22.3	-52.54	4,233.4	-988.8	3,243.2	3,195.4	47.76	67.900		
6,700.0	6,391.6	6,361.0	6,311.0	25.9	22.4	-60.04	4,233.3	-970.3	3,229.5	3,181.5	48.02	67.250		
6,750.0	6,433.4	6,400.0	6,343.6	26.0	22.5	-65.90	4,233.3	-948.9	3,216.3	3,168.1	48.28	66.623		
6,800.0	6,472.8	6,435.9	6,372.2	26.1	22.6	-70.60	4,233.3	-927.3	3,203.9	3,155.3	48.52	66.037		
6,850.0	6,509.4	6,473.6	6,400.8	26.2	22.7	-74.44	4,233.4	-902.8	3,192.1	3,143.4	48.75	65.475		
6,900.0	6,543.0	6,511.4	6,427.9	26.3	22.8	-77.61	4,233.5	-876.4	3,181.3	3,132.3	48.99	64.942		
6,950.0	6,573.2	6,550.0	6,453.7	26.4	22.9	-80.25	4,233.6	-847.7	3,171.4	3,122.2	49.22	64.437		
7,000.0	6,599.8	6,587.9	6,477.2	26.5	23.0	-82.45	4,233.8	-818.0	3,162.6	3,113.2	49.44	63.966		
7,050.0	6,622.5	6,626.7	6,499.2	26.6	23.1	-84.27	4,234.0	-786.1	3,155.0	3,105.3	49.67	63.523		
7,100.0	6,641.1	6,665.7	6,519.2	26.7	23.2	-85.75	4,234.2	-752.5	3,148.5	3,098.6	49.89	63.112		
7,150.0	6,665.4	6,705.2	6,537.0	26.8	23.3	-86.92	4,234.5	-717.3	3,143.4	3,093.3	50.11	62.733		
7,200.0	6,665.4	6,745.1	6,552.6	26.9	23.4	-87.79	4,234.9	-680.6	3,139.7	3,089.3	50.32	62.388		
7,250.0	6,670.8	6,785.5	6,565.9	27.0	23.6	-88.38	4,235.3	-642.5	3,137.3	3,086.8	50.54	62.078		
7,285.7	6,672.0	6,814.5	6,573.7	27.1	23.6	-88.63	4,235.5	-614.5	3,136.5	3,085.8	50.69	61.881		
7,300.0	6,672.0	6,826.3	6,576.5	27.1	23.7	-88.68	4,235.7	-603.0	3,136.3	3,085.6	50.75	61.805		
7,400.0	6,672.0	6,911.3	6,589.9	27.3	23.9	-88.92	4,236.6	-519.2	3,135.4	3,084.2	51.21	61.223		
7,500.0	6,672.0	7,003.8	6,592.0	27.6	24.1	-88.96	4,237.8	-426.7	3,134.9	3,083.2	51.77	60.551		
7,600.0	6,672.0	7,103.8	6,592.0	28.0	24.5	-88.96	4,239.1	-326.8	3,134.5	3,082.1	52.46	59.746		
7,700.0	6,672.0	7,203.8	6,592.0	28.3	24.9	-88.96	4,240.5	-226.8	3,134.1	3,080.8	53.26	58.843		
7,800.0	6,672.0	7,303.8	6,592.0	28.8	25.3	-88.96	4,241.8	-126.8	3,133.7	3,079.5	54.16	57.857		
7,900.0	6,672.0	7,403.7	6,592.0	29.3	25.8	-88.96	4,243.1	-26.9	3,133.2	3,078.1	55.16	56.802		
8,000.0	6,672.0	7,503.7	6,592.0	29.8	26.3	-88.96	4,244.4	73.1	3,132.8	3,076.5	56.25	55.692		
8,100.0	6,672.0	7,603.7	6,592.0	30.4	26.9	-88.96	4,245.7	173.1	3,132.3	3,074.9	57.43	54.542		
8,200.0	6,672.0	7,703.7	6,592.0	31.0	27.6	-88.96	4,247.0	273.1	3,131.9	3,073.2	58.69	53.364		
8,300.0	6,672.0	7,803.7	6,592.0	31.7	28.2	-88.96	4,248.3	373.0	3,131.4	3,071.4	60.02	52.168		
8,400.0	6,672.0	7,903.6	6,592.0	32.4	28.9	-88.96	4,249.6	473.0	3,130.9	3,069.5	61.43	50.965		
8,500.0	6,672.0	8,003.6	6,592.0	33.1	29.7	-88.96	4,251.0	573.0	3,130.4	3,067.5	62.91	49.763		
8,600.0	6,672.0	8,103.6	6,592.0	33.9	30.5	-88.96	4,252.3	672.9	3,129.9	3,065.5	64.44	48.569		
8,700.0	6,672.0	8,203.6	6,592.0	34.7	31.3	-88.96	4,253.6	772.9	3,129.4	3,063.4	66.04	47.389		
8,800.0	6,672.0	8,303.5	6,592.0	35.5	32.1	-88.96	4,254.9	872.9	3,128.9	3,061.3	67.69	46.228		
8,900.0	6,672.0	8,403.5	6,592.0	36.3	33.0	-88.96	4,256.2	972.8	3,128.4	3,059.0	69.38	45.089		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - SLW Ranch State BB06-652 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
9,000.0	6,672.0	8,503.5	6,592.0	37.2	33.8	-88.96	4,257.5	1,072.8	3,127.9	3,056.8	71.13	43.977		
9,100.0	6,672.0	8,603.5	6,592.0	38.1	34.8	-88.96	4,258.9	1,172.8	3,127.4	3,054.5	72.91	42.892		
9,200.0	6,672.0	8,703.5	6,592.0	39.0	35.7	-88.96	4,260.2	1,272.7	3,126.9	3,052.1	74.74	41.837		
9,300.0	6,672.0	8,803.4	6,592.0	39.9	36.6	-88.96	4,261.5	1,372.7	3,126.3	3,049.7	76.60	40.812		
9,400.0	6,672.0	8,903.4	6,592.0	40.8	37.6	-88.96	4,262.8	1,472.7	3,125.8	3,047.3	78.50	39.818		
9,500.0	6,672.0	9,003.4	6,592.0	41.8	38.6	-88.95	4,264.1	1,572.7	3,125.2	3,044.8	80.43	38.856		
9,600.0	6,672.0	9,103.4	6,592.0	42.7	39.6	-88.95	4,265.5	1,672.6	3,124.7	3,042.3	82.39	37.925		
9,700.0	6,672.0	9,203.3	6,592.0	43.7	40.6	-88.95	4,266.8	1,772.6	3,124.1	3,039.7	84.38	37.026		
9,800.0	6,672.0	9,303.3	6,592.0	44.7	41.6	-88.95	4,268.1	1,872.6	3,123.5	3,037.1	86.39	36.157		
9,900.0	6,672.0	9,403.3	6,592.0	45.7	42.6	-88.95	4,269.4	1,972.5	3,123.0	3,034.5	88.43	35.317		
10,000.0	6,672.0	9,503.3	6,592.0	46.7	43.7	-88.95	4,270.8	2,072.5	3,122.4	3,031.9	90.48	34.507		
10,100.0	6,672.0	9,603.3	6,592.0	47.7	44.7	-88.95	4,272.1	2,172.5	3,121.8	3,029.2	92.56	33.726		
10,200.0	6,672.0	9,703.2	6,592.0	48.8	45.8	-88.95	4,273.4	2,272.4	3,121.2	3,026.5	94.66	32.972		
10,300.0	6,672.0	9,803.2	6,592.0	49.8	46.8	-88.95	4,274.7	2,372.4	3,120.6	3,023.8	96.78	32.244		
10,400.0	6,672.0	9,903.2	6,592.0	50.9	47.9	-88.95	4,276.1	2,472.4	3,120.0	3,021.1	98.91	31.543		
10,500.0	6,672.0	10,003.2	6,592.0	51.9	49.0	-88.95	4,277.4	2,572.3	3,119.3	3,018.3	101.06	30.865		
10,600.0	6,672.0	10,103.1	6,592.0	53.0	50.1	-88.95	4,278.7	2,672.3	3,118.7	3,015.5	103.23	30.212		
10,700.0	6,672.0	10,203.1	6,592.0	54.1	51.2	-88.95	4,280.1	2,772.3	3,118.1	3,012.7	105.41	29.582		
10,800.0	6,672.0	10,303.1	6,592.0	55.2	52.3	-88.95	4,281.4	2,872.2	3,117.4	3,009.9	107.60	28.973		
10,900.0	6,672.0	10,403.1	6,592.0	56.3	53.4	-88.95	4,282.7	2,972.2	3,116.8	3,007.0	109.80	28.386		
11,000.0	6,672.0	10,503.1	6,592.0	57.4	54.5	-88.95	4,284.1	3,072.2	3,116.2	3,004.1	112.02	27.818		
11,100.0	6,672.0	10,603.0	6,592.0	58.5	55.7	-88.95	4,285.4	3,172.2	3,115.5	3,001.2	114.25	27.270		
11,200.0	6,672.0	10,703.0	6,592.0	59.6	56.8	-88.95	4,286.7	3,272.1	3,114.8	2,998.3	116.48	26.741		
11,300.0	6,672.0	10,803.0	6,592.0	60.7	57.9	-88.95	4,288.1	3,372.1	3,114.1	2,995.4	118.73	26.229		
11,400.0	6,672.0	10,903.0	6,592.0	61.8	59.1	-88.95	4,289.4	3,472.1	3,113.5	2,992.5	120.99	25.734		
11,500.0	6,672.0	11,002.9	6,592.0	62.9	60.2	-88.95	4,290.7	3,572.0	3,112.8	2,989.5	123.25	25.256		
11,600.0	6,672.0	11,102.9	6,592.0	64.1	61.4	-88.95	4,292.1	3,672.0	3,112.1	2,986.6	125.52	24.793		
11,700.0	6,672.0	11,202.9	6,592.0	65.2	62.5	-88.95	4,293.4	3,772.0	3,111.4	2,983.6	127.80	24.345		
11,800.0	6,672.0	11,302.9	6,592.0	66.3	63.7	-88.95	4,294.7	3,871.9	3,110.7	2,980.6	130.09	23.911		
11,900.0	6,672.0	11,402.8	6,592.0	67.5	64.8	-88.95	4,296.1	3,971.9	3,110.0	2,977.6	132.39	23.491		
12,000.0	6,672.0	11,502.8	6,592.0	68.6	66.0	-88.95	4,297.4	4,071.9	3,109.2	2,974.6	134.69	23.085		
12,100.0	6,672.0	11,602.8	6,592.0	69.8	67.1	-88.95	4,298.7	4,171.8	3,108.5	2,971.5	137.00	22.690		
12,200.0	6,672.0	11,702.8	6,592.0	70.9	68.3	-88.95	4,300.1	4,271.8	3,107.8	2,968.5	139.31	22.308		
12,300.0	6,672.0	11,802.8	6,592.0	72.1	69.5	-88.95	4,301.4	4,371.8	3,107.0	2,965.4	141.63	21.938		
12,400.0	6,672.0	11,902.7	6,592.0	73.2	70.6	-88.95	4,302.8	4,471.7	3,106.3	2,962.3	143.96	21.578		
12,500.0	6,672.0	12,002.7	6,592.0	74.4	71.8	-88.95	4,304.1	4,571.7	3,105.5	2,959.2	146.29	21.229		
12,600.0	6,672.0	12,102.7	6,592.0	75.5	73.0	-88.95	4,305.5	4,671.7	3,104.8	2,956.1	148.62	20.890		
12,672.2	6,672.0	12,150.9	6,592.0	76.4	73.6	-88.95	4,306.1	4,719.9	3,104.3	2,954.3	150.04	20.690 CC		
12,700.0	6,672.0	12,150.9	6,592.0	76.7	73.6	-88.95	4,306.1	4,719.9	3,104.4	2,954.1	150.36	20.646 ES		
12,800.0	6,672.0	12,150.9	6,592.0	77.9	73.6	-88.95	4,306.1	4,719.9	3,106.9	2,955.5	151.44	20.516		
12,900.0	6,672.0	12,150.9	6,592.0	79.0	73.6	-88.95	4,306.1	4,719.9	3,112.6	2,960.2	152.38	20.427		
13,000.0	6,672.0	12,150.9	6,592.0	80.2	73.6	-88.95	4,306.1	4,719.9	3,121.5	2,968.3	153.18	20.378		
13,100.0	6,672.0	12,150.9	6,592.0	81.4	73.6	-88.95	4,306.1	4,719.9	3,133.6	2,979.7	153.84	20.369 SF		
13,200.0	6,672.0	12,150.9	6,592.0	82.6	73.6	-88.95	4,306.1	4,719.9	3,148.7	2,994.4	154.35	20.399		
13,300.0	6,672.0	12,150.9	6,592.0	83.7	73.6	-88.95	4,306.1	4,719.9	3,167.0	3,012.3	154.73	20.468		
13,400.0	6,672.0	12,150.9	6,592.0	84.9	73.6	-88.95	4,306.1	4,719.9	3,188.3	3,033.3	154.98	20.573		
13,500.0	6,672.0	12,150.9	6,592.0	86.1	73.6	-88.95	4,306.1	4,719.9	3,212.5	3,057.4	155.09	20.714		
13,600.0	6,672.0	12,150.9	6,592.0	87.3	73.6	-88.95	4,306.1	4,719.9	3,239.7	3,084.6	155.08	20.890		
13,700.0	6,672.0	12,150.9	6,592.0	88.4	73.6	-88.95	4,306.1	4,719.9	3,269.6	3,114.7	154.95	21.101		
13,800.0	6,672.0	12,150.9	6,592.0	89.6	73.6	-88.95	4,306.1	4,719.9	3,302.4	3,147.7	154.71	21.345		
13,900.0	6,672.0	12,150.9	6,592.0	90.8	73.6	-88.95	4,306.1	4,719.9	3,337.8	3,183.4	154.37	21.622		
14,000.0	6,672.0	12,150.9	6,592.0	92.0	73.6	-88.95	4,306.1	4,719.9	3,375.7	3,221.8	153.93	21.931		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - SLW Ranch State BB06-652 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
14,100.0	6,672.0	12,150.9	6,592.0	93.2	73.6	-88.95	4,306.1	4,719.9	3,416.2	3,262.8	153.40	22.270		
14,200.0	6,672.0	12,150.9	6,592.0	94.4	73.6	-88.95	4,306.1	4,719.9	3,459.1	3,306.3	152.79	22.640		
14,300.0	6,672.0	12,150.9	6,592.0	95.6	73.6	-88.95	4,306.1	4,719.9	3,504.3	3,352.2	152.10	23.039		
14,400.0	6,672.0	12,150.9	6,592.0	96.8	73.6	-88.95	4,306.1	4,719.9	3,551.8	3,400.4	151.36	23.466		
14,500.0	6,672.0	12,150.9	6,592.0	98.0	73.6	-88.95	4,306.1	4,719.9	3,601.3	3,450.8	150.55	23.921		
14,600.0	6,672.0	12,150.9	6,592.0	99.2	73.6	-88.95	4,306.1	4,719.9	3,653.0	3,503.3	149.70	24.403		
14,700.0	6,672.0	12,150.9	6,592.0	100.4	73.6	-88.95	4,306.1	4,719.9	3,706.6	3,557.8	148.80	24.911		
14,800.0	6,672.0	12,150.9	6,592.0	101.6	73.6	-88.95	4,306.1	4,719.9	3,762.1	3,614.3	147.86	25.444		
14,900.0	6,672.0	12,150.9	6,592.0	102.7	73.6	-88.95	4,306.1	4,719.9	3,819.4	3,672.5	146.89	26.002		
15,000.0	6,672.0	12,150.9	6,592.0	103.9	73.6	-88.95	4,306.1	4,719.9	3,878.5	3,732.6	145.90	26.583		
15,100.0	6,672.0	12,150.9	6,592.0	105.1	73.6	-88.95	4,306.1	4,719.9	3,939.2	3,794.3	144.89	27.188		
15,200.0	6,672.0	12,150.9	6,592.0	106.3	73.6	-88.95	4,306.1	4,719.9	4,001.4	3,857.6	143.86	27.815		
15,300.0	6,672.0	12,150.9	6,592.0	107.6	73.6	-88.95	4,306.1	4,719.9	4,065.2	3,922.4	142.82	28.464		
15,400.0	6,672.0	12,150.9	6,592.0	108.8	73.6	-88.95	4,306.1	4,719.9	4,130.4	3,988.6	141.77	29.134		
15,500.0	6,672.0	12,150.9	6,592.0	110.0	73.6	-88.95	4,306.1	4,719.9	4,196.9	4,056.2	140.72	29.825		
15,600.0	6,672.0	12,150.9	6,592.0	111.2	73.6	-88.95	4,306.1	4,719.9	4,264.8	4,125.1	139.67	30.536		
15,700.0	6,672.0	12,150.9	6,592.0	112.4	73.6	-88.95	4,306.1	4,719.9	4,333.9	4,195.3	138.62	31.265		
15,800.0	6,672.0	12,150.9	6,592.0	113.6	73.6	-88.95	4,306.1	4,719.9	4,404.2	4,266.6	137.57	32.014		
15,900.0	6,672.0	12,150.9	6,592.0	114.8	73.6	-88.95	4,306.1	4,719.9	4,475.6	4,339.1	136.53	32.780		
16,000.0	6,672.0	12,150.9	6,592.0	116.0	73.6	-88.95	4,306.1	4,719.9	4,548.1	4,412.6	135.51	33.564		
16,100.0	6,672.0	12,150.9	6,592.0	117.2	73.6	-88.95	4,306.1	4,719.9	4,621.6	4,487.1	134.49	34.364		
16,200.0	6,672.0	12,150.9	6,592.0	118.4	73.6	-88.95	4,306.1	4,719.9	4,696.0	4,562.6	133.48	35.181		
16,300.0	6,672.0	12,150.9	6,592.0	119.6	73.6	-88.95	4,306.1	4,719.9	4,771.5	4,639.0	132.49	36.014		
16,400.0	6,672.0	12,150.9	6,592.0	120.8	73.6	-88.95	4,306.1	4,719.9	4,847.7	4,716.2	131.51	36.862		
16,500.0	6,672.0	12,150.9	6,592.0	122.0	73.6	-88.95	4,306.1	4,719.9	4,924.9	4,794.3	130.55	37.725		
16,600.0	6,672.0	12,150.9	6,592.0	123.2	73.6	-88.95	4,306.1	4,719.9	5,002.8	4,873.2	129.60	38.603		
16,700.0	6,672.0	12,150.9	6,592.0	124.5	73.6	-88.95	4,306.1	4,719.9	5,081.5	4,952.9	128.67	39.494		
16,800.0	6,672.0	12,150.9	6,592.0	125.7	73.6	-88.95	4,306.1	4,719.9	5,161.0	5,033.2	127.75	40.398		
16,900.0	6,672.0	12,150.9	6,592.0	126.9	73.6	-88.95	4,306.1	4,719.9	5,241.1	5,114.2	126.86	41.315		
17,000.0	6,672.0	12,150.9	6,592.0	128.1	73.6	-88.95	4,306.1	4,719.9	5,321.9	5,195.9	125.98	42.245		
17,100.0	6,672.0	12,150.9	6,592.0	129.3	73.6	-88.95	4,306.1	4,719.9	5,403.3	5,278.2	125.12	43.187		
17,200.0	6,672.0	12,150.9	6,592.0	130.5	73.6	-88.95	4,306.1	4,719.9	5,485.4	5,361.1	124.27	44.140		
17,300.0	6,672.0	12,150.9	6,592.0	131.7	73.6	-88.95	4,306.1	4,719.9	5,568.0	5,444.6	123.45	45.104		
17,400.0	6,672.0	12,150.9	6,592.0	133.0	73.6	-88.95	4,306.1	4,719.9	5,651.2	5,528.6	122.64	46.080		
17,500.0	6,672.0	12,150.9	6,592.0	134.2	73.6	-88.95	4,306.1	4,719.9	5,735.0	5,613.1	121.85	47.065		
17,600.0	6,672.0	12,150.9	6,592.0	135.4	73.6	-88.95	4,306.1	4,719.9	5,819.2	5,698.1	121.08	48.061		
17,700.0	6,672.0	12,150.9	6,592.0	136.6	73.6	-88.95	4,306.1	4,719.9	5,903.9	5,783.6	120.32	49.066		
17,800.0	6,672.0	12,150.9	6,592.0	137.8	73.6	-88.95	4,306.1	4,719.9	5,989.1	5,869.5	119.59	50.081		
17,900.0	6,672.0	12,150.9	6,592.0	139.0	73.6	-88.95	4,306.1	4,719.9	6,074.8	5,955.9	118.87	51.105		
18,000.0	6,672.0	12,150.9	6,592.0	140.3	73.6	-88.95	4,306.1	4,719.9	6,160.8	6,042.7	118.17	52.137		
18,100.0	6,672.0	12,150.9	6,592.0	141.5	73.6	-88.95	4,306.1	4,719.9	6,247.3	6,129.8	117.48	53.178		
18,200.0	6,672.0	12,150.9	6,592.0	142.7	73.6	-88.95	4,306.1	4,719.9	6,334.2	6,217.4	116.81	54.226		
18,300.0	6,672.0	12,150.9	6,592.0	143.9	73.6	-88.95	4,306.1	4,719.9	6,421.4	6,305.3	116.16	55.283		
18,342.5	6,672.0	12,150.9	6,592.0	144.4	73.6	-88.95	4,306.1	4,719.9	6,458.6	6,342.7	115.88	55.733		



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - SLW Ranch State BB06-662 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-7.78	4,314.1	-589.5	4,354.3					
100.0	100.0	77.0	77.0	0.1	0.1	-7.78	4,314.1	-589.5	4,354.2	4,354.0	0.22	N/A		
200.0	200.0	177.0	177.0	0.5	0.4	-7.78	4,314.1	-589.5	4,354.2	4,353.3	0.89	4,917.663		
300.0	300.0	277.0	277.0	0.8	0.8	-7.78	4,314.1	-589.5	4,354.2	4,352.6	1.60	2,717.367		
400.0	400.0	377.0	377.0	1.2	1.1	-7.78	4,314.1	-589.5	4,354.2	4,351.9	2.32	1,877.377		
500.0	500.0	477.0	477.0	1.6	1.5	-7.78	4,314.1	-589.5	4,354.2	4,351.2	3.04	1,434.077		
600.0	600.0	577.0	577.0	1.9	1.8	-7.78	4,314.1	-589.5	4,354.2	4,350.5	3.75	1,160.137		
700.0	700.0	677.0	677.0	2.3	2.2	-7.78	4,314.1	-589.5	4,354.2	4,349.8	4.47	974.068		
800.0	800.0	777.0	777.0	2.6	2.6	-7.78	4,314.1	-589.5	4,354.2	4,349.0	5.19	839.436		
900.0	900.0	877.0	877.0	3.0	2.9	-7.78	4,314.1	-589.5	4,354.2	4,348.3	5.90	737.500		
1,000.0	1,000.0	977.0	977.0	3.4	3.3	-7.78	4,314.1	-589.5	4,354.2	4,347.6	6.62	657.641		
1,100.0	1,100.0	1,077.0	1,077.0	3.7	3.6	-7.78	4,314.1	-589.5	4,354.2	4,346.9	7.34	593.387		
1,200.0	1,200.0	1,177.0	1,177.0	4.1	4.0	-7.78	4,314.1	-589.5	4,354.2	4,346.2	8.05	540.571		
1,300.0	1,300.0	1,277.0	1,277.0	4.4	4.3	-7.78	4,314.1	-589.5	4,354.2	4,345.5	8.77	496.389		
1,400.0	1,400.0	1,377.0	1,377.0	4.8	4.7	-7.78	4,314.1	-589.5	4,354.2	4,344.7	9.49	458.883		
1,500.0	1,500.0	1,477.0	1,477.0	5.1	5.1	-7.78	4,314.1	-589.5	4,354.2	4,344.0	10.21	426.647		
1,600.0	1,600.0	1,577.0	1,577.0	5.5	5.4	-7.78	4,314.1	-589.5	4,354.2	4,343.3	10.92	398.642		
1,700.0	1,700.0	1,677.0	1,677.0	5.9	5.8	-7.78	4,314.1	-589.5	4,354.2	4,342.6	11.64	374.088		
1,800.0	1,800.0	1,777.0	1,777.0	6.2	6.1	-7.78	4,314.1	-589.5	4,354.2	4,341.9	12.36	352.383		
1,900.0	1,900.0	1,877.0	1,877.0	6.6	6.5	-7.78	4,314.1	-589.5	4,354.2	4,341.1	13.07	333.058		
2,000.0	2,000.0	1,977.0	1,977.0	6.9	6.9	-7.78	4,314.1	-589.5	4,354.2	4,340.4	13.79	315.743		
2,100.0	2,100.0	2,077.0	2,077.0	7.3	7.2	-7.78	4,314.1	-589.5	4,354.2	4,339.7	14.51	300.139		
2,200.0	2,200.0	2,177.0	2,177.0	7.7	7.6	-7.78	4,314.1	-589.5	4,354.2	4,339.0	15.22	286.005		
2,300.0	2,300.0	2,277.0	2,277.0	8.0	7.9	43.25	4,314.1	-589.5	4,353.0	4,337.0	15.94	273.114		
2,400.0	2,399.8	2,376.8	2,376.8	8.4	8.3	43.35	4,314.1	-589.5	4,349.1	4,332.5	16.65	261.215		
2,500.0	2,499.5	2,435.1	2,435.1	8.7	8.5	43.48	4,314.3	-589.6	4,343.2	4,326.0	17.21	252.344		
2,600.0	2,598.7	2,500.0	2,500.0	9.1	8.7	43.64	4,315.3	-590.7	4,336.0	4,318.2	17.80	243.646		
2,700.0	2,697.5	2,526.4	2,526.3	9.4	8.8	43.79	4,316.1	-591.5	4,327.3	4,309.1	18.24	237.246		
2,800.0	2,795.6	2,572.0	2,571.9	9.8	9.0	43.99	4,317.7	-593.2	4,317.5	4,298.7	18.75	230.243		
2,900.0	2,893.1	2,600.0	2,599.8	10.1	9.1	44.19	4,318.9	-594.5	4,306.5	4,287.3	19.20	224.322		
3,000.0	2,989.6	2,663.2	2,662.8	10.5	9.3	44.47	4,322.5	-598.2	4,294.1	4,274.3	19.78	217.137		
3,100.0	3,085.3	2,700.0	2,699.5	10.9	9.4	44.73	4,324.9	-600.8	4,280.6	4,260.3	20.26	211.328		
3,200.0	3,179.8	2,754.2	2,753.3	11.2	9.6	45.05	4,329.2	-605.3	4,265.8	4,245.0	20.80	205.051		
3,300.0	3,273.2	2,800.0	2,798.7	11.6	9.8	45.39	4,333.3	-609.7	4,249.9	4,228.5	21.32	199.313		
3,387.5	3,353.8	2,839.4	2,837.7	11.9	9.9	45.71	4,337.3	-613.9	4,235.0	4,213.2	21.78	194.468		
3,400.0	3,365.2	2,845.1	2,843.3	12.0	10.0	45.72	4,337.9	-614.5	4,232.8	4,210.9	21.84	193.781		
3,500.0	3,456.8	2,900.0	2,897.5	12.4	10.1	45.86	4,344.1	-621.0	4,216.1	4,193.7	22.41	188.173		
3,600.0	3,548.3	2,936.8	2,933.7	12.8	10.3	45.95	4,348.7	-625.8	4,200.5	4,177.6	22.90	183.428		
3,700.0	3,639.8	3,000.0	2,995.6	13.2	10.5	46.10	4,357.2	-634.9	4,186.4	4,162.9	23.51	178.096		
3,800.0	3,731.4	3,048.9	3,043.4	13.6	10.7	46.20	4,364.3	-642.4	4,173.3	4,149.2	24.06	173.462		
3,900.0	3,822.9	3,146.8	3,139.1	14.0	11.0	46.42	4,378.7	-657.4	4,160.5	4,135.7	24.82	167.633		
4,000.0	3,914.4	3,244.8	3,234.8	14.4	11.4	46.63	4,393.0	-672.5	4,147.8	4,122.2	25.59	162.114		
4,100.0	4,005.9	3,342.8	3,330.6	14.8	11.7	46.84	4,407.3	-687.6	4,135.1	4,108.8	26.36	156.885		
4,200.0	4,097.5	3,440.7	3,426.3	15.2	12.1	47.06	4,421.6	-702.7	4,122.5	4,095.4	27.14	151.926		
4,300.0	4,189.0	3,538.7	3,522.1	15.6	12.4	47.28	4,435.9	-717.8	4,110.0	4,082.1	27.92	147.221		
4,400.0	4,280.5	3,636.7	3,617.8	16.1	12.8	47.49	4,450.2	-732.8	4,097.5	4,068.8	28.70	142.753		
4,500.0	4,372.1	3,734.6	3,713.5	16.5	13.2	47.71	4,464.5	-747.9	4,085.1	4,055.6	29.49	138.506		
4,600.0	4,463.6	3,832.6	3,809.3	16.9	13.5	47.93	4,478.8	-763.0	4,072.8	4,042.5	30.29	134.466		
4,700.0	4,555.1	3,930.6	3,905.0	17.4	13.9	48.16	4,493.1	-778.1	4,060.5	4,029.4	31.09	130.619		
4,800.0	4,646.7	4,028.5	4,000.7	17.8	14.3	48.38	4,507.4	-793.1	4,048.3	4,016.4	31.89	126.955		
4,900.0	4,738.2	4,126.5	4,096.5	18.2	14.6	48.61	4,521.7	-808.2	4,036.1	4,003.4	32.69	123.460		
5,000.0	4,829.7	4,224.5	4,192.2	18.7	15.0	48.83	4,536.0	-823.3	4,024.0	3,990.5	33.50	120.125		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - SLW Ranch State BB06-662 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,100.0	4,921.3	4,322.4	4,287.9	19.1	15.3	49.06	4,550.4	-838.4	4,012.0	3,977.7	34.31	116.940		
5,200.0	5,012.8	4,420.4	4,383.7	19.5	15.7	49.29	4,564.7	-853.5	4,000.0	3,964.9	35.12	113.896		
5,300.0	5,104.3	4,518.4	4,479.4	20.0	16.1	49.52	4,579.0	-868.5	3,988.1	3,952.1	35.93	110.984		
5,400.0	5,195.8	4,616.3	4,575.1	20.4	16.4	49.75	4,593.3	-883.6	3,976.2	3,939.5	36.75	108.196		
5,500.0	5,287.4	4,714.3	4,670.9	20.9	16.8	49.98	4,607.6	-898.7	3,964.5	3,926.9	37.57	105.526		
5,600.0	5,378.9	4,812.2	4,766.6	21.3	17.2	50.22	4,621.9	-913.8	3,952.8	3,914.4	38.39	102.966		
5,700.0	5,470.4	4,910.2	4,862.4	21.8	17.6	50.45	4,636.2	-928.8	3,941.1	3,901.9	39.21	100.510		
5,800.0	5,562.0	5,008.2	4,958.1	22.2	17.9	50.69	4,650.5	-943.9	3,929.5	3,889.5	40.03	98.153		
5,900.0	5,653.5	5,106.1	5,053.8	22.7	18.3	50.93	4,664.8	-959.0	3,918.0	3,877.2	40.86	95.889		
6,000.0	5,745.0	5,204.1	5,149.6	23.1	18.7	51.17	4,679.1	-974.1	3,906.6	3,864.9	41.69	93.713		
6,100.0	5,836.6	5,302.1	5,245.3	23.6	19.0	51.41	4,693.4	-989.2	3,895.2	3,852.7	42.52	91.620		
6,200.0	5,928.1	5,400.0	5,341.0	24.0	19.4	51.65	4,707.7	-1,004.2	3,883.9	3,840.6	43.34	89.606		
6,278.6	6,000.0	5,477.0	5,416.2	24.4	19.7	51.84	4,719.0	-1,016.1	3,875.1	3,831.1	44.00	88.076		
6,290.0	6,010.4	5,488.2	5,427.1	24.4	19.7	50.38	4,720.6	-1,017.8	3,873.7	3,829.6	44.09	87.855		
6,300.0	6,019.5	5,502.0	5,436.7	24.5	19.8	48.54	4,722.1	-1,019.3	3,872.4	3,828.2	44.19	87.627		
6,350.0	6,065.8	5,547.2	5,484.8	24.7	20.0	37.50	4,729.2	-1,026.9	3,865.5	3,820.9	44.58	86.701		
6,400.0	6,113.0	5,603.4	5,533.2	24.9	20.2	22.85	4,736.5	-1,034.5	3,858.3	3,813.3	45.00	85.731		
6,450.0	6,160.7	5,645.9	5,581.3	25.1	20.3	5.10	4,743.7	-1,042.1	3,850.8	3,805.5	45.36	84.898		
6,500.0	6,208.5	5,694.5	5,628.8	25.3	20.5	-13.24	4,750.8	-1,049.5	3,843.2	3,797.5	45.72	84.054		
6,550.0	6,255.8	5,742.0	5,675.2	25.4	20.7	-29.23	4,757.7	-1,056.9	3,835.5	3,789.4	46.07	83.249		
6,600.0	6,302.5	5,788.0	5,720.2	25.6	20.9	-41.75	4,764.4	-1,063.9	3,827.8	3,781.4	46.41	82.483		
6,650.0	6,347.9	5,832.1	5,763.2	25.7	21.0	-51.19	4,770.8	-1,070.7	3,820.3	3,773.6	46.73	81.755		
6,700.0	6,391.6	5,873.8	5,804.0	25.9	21.2	-58.35	4,776.9	-1,077.1	3,813.1	3,766.1	47.03	81.070		
6,750.0	6,433.4	5,869.7	5,800.0	26.0	21.2	-63.46	4,776.3	-1,076.5	3,806.6	3,759.4	47.15	80.728		
6,800.0	6,472.8	5,889.4	5,819.2	26.1	21.3	-67.61	4,779.5	-1,079.7	3,801.0	3,753.6	47.36	80.250		
6,850.0	6,509.4	5,889.4	5,819.2	26.2	21.3	-70.66	4,779.5	-1,079.7	3,796.2	3,748.8	47.49	79.937		
6,900.0	6,543.0	5,906.6	5,835.9	26.3	21.3	-73.23	4,782.5	-1,082.4	3,792.6	3,744.9	47.69	79.530		
6,950.0	6,573.2	5,939.1	5,867.7	26.4	21.5	-75.47	4,788.1	-1,086.2	3,789.8	3,741.9	47.95	79.042		
7,000.0	6,599.8	5,972.3	5,900.3	26.5	21.6	-77.28	4,794.0	-1,088.3	3,788.0	3,739.8	48.21	78.579		
7,050.0	6,622.5	6,006.4	5,933.8	26.6	21.7	-78.74	4,800.0	-1,088.6	3,787.2	3,738.8	48.47	78.138		
7,061.7	6,627.2	6,014.6	5,941.9	26.7	21.7	-79.03	4,801.5	-1,088.4	3,787.2	3,738.7	48.53	78.041		
7,100.0	6,641.1	6,041.8	5,968.6	26.7	21.8	-79.88	4,806.3	-1,086.9	3,787.5	3,738.8	48.73	77.727		
7,150.0	6,655.4	6,079.0	6,005.1	26.8	22.0	-80.74	4,812.9	-1,082.9	3,788.9	3,739.9	48.99	77.341		
7,200.0	6,665.4	6,119.2	6,044.0	26.9	22.1	-81.36	4,820.0	-1,076.2	3,791.5	3,742.2	49.25	76.979		
7,250.0	6,670.8	6,159.0	6,062.6	27.0	22.2	-81.41	4,823.4	-1,071.6	3,795.2	3,742.0	53.21	71.326		
7,285.7	6,672.0	6,201.5	6,122.0	27.1	22.4	-81.98	4,834.3	-1,054.3	3,798.6	3,748.9	49.72	76.402		
7,300.0	6,672.0	7,300.0	6,108.3	27.1	25.9	-81.77	4,831.8	-1,058.6	3,800.1	3,746.7	53.38	71.187		
7,400.0	6,672.0	6,496.1	6,362.7	27.3	23.2	-85.67	4,879.5	-895.6	3,810.5	3,759.8	50.75	75.077		
7,500.0	6,672.0	7,004.0	6,527.0	27.6	24.6	-88.17	4,914.7	-431.0	3,813.2	3,760.8	52.39	72.785		
7,600.0	6,672.0	7,104.0	6,527.0	28.0	25.0	-88.17	4,915.8	-331.0	3,812.7	3,759.6	53.09	71.811		
7,700.0	6,672.0	7,204.0	6,527.0	28.3	25.4	-88.17	4,917.0	-231.0	3,812.1	3,758.2	53.90	70.720		
7,800.0	6,672.0	7,303.9	6,527.0	28.8	25.8	-88.17	4,918.2	-131.0	3,811.5	3,756.7	54.82	69.533		
7,900.0	6,672.0	7,403.9	6,527.0	29.3	26.3	-88.17	4,919.4	-31.0	3,811.0	3,755.2	55.82	68.267		
8,000.0	6,672.0	7,503.9	6,527.0	29.8	26.9	-88.17	4,920.6	68.9	3,810.4	3,753.5	56.92	66.939		
8,100.0	6,672.0	7,603.9	6,527.0	30.4	27.5	-88.16	4,921.8	168.9	3,809.8	3,751.7	58.11	65.564		
8,200.0	6,672.0	7,703.9	6,527.0	31.0	28.1	-88.16	4,923.0	268.9	3,809.2	3,749.9	59.37	64.158		
8,300.0	6,672.0	7,803.8	6,527.0	31.7	28.8	-88.16	4,924.2	368.8	3,808.7	3,747.9	60.71	62.731		
8,400.0	6,672.0	7,903.8	6,527.0	32.4	29.5	-88.16	4,925.4	468.8	3,808.1	3,745.9	62.12	61.297		
8,500.0	6,672.0	8,003.8	6,527.0	33.1	30.2	-88.16	4,926.5	568.8	3,807.5	3,743.8	63.60	59.864		
8,600.0	6,672.0	8,103.8	6,527.0	33.9	31.0	-88.16	4,927.7	668.8	3,806.8	3,741.7	65.14	58.441		
8,700.0	6,672.0	8,203.8	6,527.0	34.7	31.8	-88.16	4,928.9	768.7	3,806.2	3,739.5	66.73	57.035		
8,800.0	6,672.0	8,303.7	6,527.0	35.5	32.6	-88.16	4,930.1	868.7	3,805.6	3,737.2	68.38	55.651		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - SLW Ranch State BB06-662 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
8,900.0	6,672.0	8,403.7	6,527.0	36.3	33.5	-88.16	4,931.3	968.7	3,805.0	3,734.9	70.08	54.295		
9,000.0	6,672.0	8,503.7	6,527.0	37.2	34.4	-88.16	4,932.5	1,068.6	3,804.3	3,732.5	71.82	52.968		
9,100.0	6,672.0	8,603.7	6,527.0	38.1	35.3	-88.16	4,933.7	1,168.6	3,803.7	3,730.1	73.61	51.674		
9,200.0	6,672.0	8,703.6	6,527.0	39.0	36.2	-88.16	4,934.9	1,268.6	3,803.0	3,727.6	75.43	50.415		
9,300.0	6,672.0	8,803.6	6,527.0	39.9	37.2	-88.16	4,936.1	1,368.6	3,802.4	3,725.1	77.30	49.193		
9,400.0	6,672.0	8,903.6	6,527.0	40.8	38.1	-88.16	4,937.3	1,468.5	3,801.7	3,722.5	79.19	48.006		
9,500.0	6,672.0	9,003.6	6,527.0	41.8	39.1	-88.16	4,938.5	1,568.5	3,801.0	3,719.9	81.12	46.857		
9,600.0	6,672.0	9,103.6	6,527.0	42.7	40.1	-88.16	4,939.7	1,668.5	3,800.3	3,717.3	83.08	45.745		
9,700.0	6,672.0	9,203.5	6,527.0	43.7	41.1	-88.16	4,940.9	1,768.4	3,799.6	3,714.6	85.06	44.670		
9,800.0	6,672.0	9,303.5	6,527.0	44.7	42.1	-88.16	4,942.1	1,868.4	3,798.9	3,711.9	87.07	43.631		
9,900.0	6,672.0	9,403.5	6,527.0	45.7	43.1	-88.16	4,943.3	1,968.4	3,798.2	3,709.1	89.10	42.627		
10,000.0	6,672.0	9,503.5	6,527.0	46.7	44.2	-88.16	4,944.5	2,068.4	3,797.5	3,706.4	91.16	41.658		
10,100.0	6,672.0	9,603.5	6,527.0	47.7	45.2	-88.16	4,945.7	2,168.3	3,796.8	3,703.6	93.24	40.723		
10,200.0	6,672.0	9,703.4	6,527.0	48.8	46.3	-88.16	4,946.9	2,268.3	3,796.1	3,700.8	95.33	39.820		
10,300.0	6,672.0	9,803.4	6,527.0	49.8	47.4	-88.16	4,948.1	2,368.3	3,795.4	3,697.9	97.45	38.948		
10,400.0	6,672.0	9,903.4	6,527.0	50.9	48.4	-88.16	4,949.3	2,468.2	3,794.6	3,695.0	99.58	38.107		
10,500.0	6,672.0	10,003.4	6,527.0	51.9	49.5	-88.16	4,950.5	2,568.2	3,793.9	3,692.1	101.72	37.295		
10,600.0	6,672.0	10,103.3	6,527.0	53.0	50.6	-88.16	4,951.7	2,668.2	3,793.1	3,689.2	103.89	36.512		
10,700.0	6,672.0	10,203.3	6,527.0	54.1	51.7	-88.16	4,952.9	2,768.2	3,792.4	3,686.3	106.06	35.756		
10,800.0	6,672.0	10,303.3	6,527.0	55.2	52.8	-88.16	4,954.1	2,868.1	3,791.6	3,683.3	108.25	35.025		
10,900.0	6,672.0	10,403.3	6,527.0	56.3	53.9	-88.16	4,955.3	2,968.1	3,790.8	3,680.4	110.45	34.320		
11,000.0	6,672.0	10,503.3	6,527.0	57.4	55.0	-88.16	4,956.5	3,068.1	3,790.0	3,677.4	112.67	33.639		
11,100.0	6,672.0	10,603.2	6,527.0	58.5	56.2	-88.15	4,957.7	3,168.0	3,789.2	3,674.4	114.89	32.981		
11,200.0	6,672.0	10,703.2	6,527.0	59.6	57.3	-88.15	4,958.9	3,268.0	3,788.4	3,671.3	117.13	32.345		
11,300.0	6,672.0	10,803.2	6,527.0	60.7	58.4	-88.15	4,960.1	3,368.0	3,787.6	3,668.3	119.37	31.730		
11,400.0	6,672.0	10,903.2	6,527.0	61.8	59.5	-88.15	4,961.3	3,468.0	3,786.8	3,665.2	121.62	31.135		
11,500.0	6,672.0	11,003.2	6,527.0	62.9	60.7	-88.15	4,962.5	3,567.9	3,786.0	3,662.1	123.89	30.560		
11,600.0	6,672.0	11,103.1	6,527.0	64.1	61.8	-88.15	4,963.7	3,667.9	3,785.2	3,659.0	126.16	30.004		
11,700.0	6,672.0	11,203.1	6,527.0	65.2	63.0	-88.15	4,964.9	3,767.9	3,784.4	3,655.9	128.44	29.465		
11,800.0	6,672.0	11,303.1	6,527.0	66.3	64.1	-88.15	4,966.1	3,867.8	3,783.5	3,652.8	130.72	28.943		
11,900.0	6,672.0	11,403.1	6,527.0	67.5	65.3	-88.15	4,967.4	3,967.8	3,782.7	3,649.7	133.02	28.438		
12,000.0	6,672.0	11,503.0	6,527.0	68.6	66.4	-88.15	4,968.6	4,067.8	3,781.8	3,646.5	135.32	27.948		
12,100.0	6,672.0	11,603.0	6,527.0	69.8	67.6	-88.15	4,969.8	4,167.7	3,781.0	3,643.4	137.62	27.474		
12,200.0	6,672.0	11,703.0	6,527.0	70.9	68.8	-88.15	4,971.0	4,267.7	3,780.1	3,640.2	139.93	27.014		
12,300.0	6,672.0	11,803.0	6,527.0	72.1	69.9	-88.15	4,972.2	4,367.7	3,779.2	3,637.0	142.25	26.567		
12,400.0	6,672.0	11,902.9	6,527.0	73.2	71.1	-88.15	4,973.4	4,467.7	3,778.4	3,633.8	144.57	26.134		
12,500.0	6,672.0	12,002.9	6,527.0	74.4	72.3	-88.15	4,974.6	4,567.6	3,777.5	3,630.6	146.90	25.714		
12,600.0	6,672.0	12,102.9	6,527.0	75.5	73.4	-88.15	4,975.8	4,667.6	3,776.6	3,627.3	149.24	25.306		
12,681.4	6,672.0	12,150.2	6,527.0	76.5	74.0	-88.15	4,976.4	4,714.9	3,776.0	3,625.2	150.77	25.046 CC		
12,700.0	6,672.0	12,150.2	6,527.0	76.7	74.0	-88.15	4,976.4	4,714.9	3,776.1	3,625.1	150.99	25.008 ES		
12,800.0	6,672.0	12,150.2	6,527.0	77.9	74.0	-88.15	4,976.4	4,714.9	3,777.9	3,625.7	152.16	24.829		
12,900.0	6,672.0	12,150.2	6,527.0	79.0	74.0	-88.15	4,976.4	4,714.9	3,782.3	3,629.1	153.23	24.684		
13,000.0	6,672.0	12,150.2	6,527.0	80.2	74.0	-88.15	4,976.4	4,714.9	3,789.4	3,635.2	154.20	24.574		
13,100.0	6,672.0	12,150.2	6,527.0	81.4	74.0	-88.15	4,976.4	4,714.9	3,799.1	3,644.0	155.08	24.497		
13,200.0	6,672.0	12,150.2	6,527.0	82.6	74.0	-88.15	4,976.4	4,714.9	3,811.4	3,655.5	155.86	24.453		
13,300.0	6,672.0	12,150.2	6,527.0	83.7	74.0	-88.15	4,976.4	4,714.9	3,826.2	3,669.7	156.55	24.441 SF		
13,400.0	6,672.0	12,150.2	6,527.0	84.9	74.0	-88.15	4,976.4	4,714.9	3,843.6	3,686.5	157.13	24.461		
13,500.0	6,672.0	12,150.2	6,527.0	86.1	74.0	-88.15	4,976.4	4,714.9	3,863.5	3,705.8	157.62	24.511		
13,600.0	6,672.0	12,150.2	6,527.0	87.3	74.0	-88.15	4,976.4	4,714.9	3,885.8	3,727.8	158.02	24.591		
13,700.0	6,672.0	12,150.2	6,527.0	88.4	74.0	-88.15	4,976.4	4,714.9	3,910.6	3,752.3	158.32	24.700		
13,800.0	6,672.0	12,150.2	6,527.0	89.6	74.0	-88.15	4,976.4	4,714.9	3,937.8	3,779.2	158.54	24.838		
13,900.0	6,672.0	12,150.2	6,527.0	90.8	74.0	-88.15	4,976.4	4,714.9	3,967.2	3,808.6	158.67	25.003		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - SLW Ranch State BB06-662 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
14,000.0	6,672.0	12,150.2	6,527.0	92.0	74.0	-88.15	4,976.4	4,714.9	3,999.0	3,840.3	158.72	25.195		
14,100.0	6,672.0	12,150.2	6,527.0	93.2	74.0	-88.15	4,976.4	4,714.9	4,033.0	3,874.3	158.69	25.414		
14,200.0	6,672.0	12,150.2	6,527.0	94.4	74.0	-88.15	4,976.4	4,714.9	4,069.1	3,910.5	158.59	25.658		
14,300.0	6,672.0	12,150.2	6,527.0	95.6	74.0	-88.15	4,976.4	4,714.9	4,107.4	3,949.0	158.42	25.928		
14,400.0	6,672.0	12,150.2	6,527.0	96.8	74.0	-88.15	4,976.4	4,714.9	4,147.7	3,989.5	158.18	26.222		
14,500.0	6,672.0	12,150.2	6,527.0	98.0	74.0	-88.15	4,976.4	4,714.9	4,190.0	4,032.1	157.88	26.540		
14,600.0	6,672.0	12,150.2	6,527.0	99.2	74.0	-88.15	4,976.4	4,714.9	4,234.2	4,076.7	157.52	26.881		
14,700.0	6,672.0	12,150.2	6,527.0	100.4	74.0	-88.15	4,976.4	4,714.9	4,280.3	4,123.2	157.11	27.244		
14,800.0	6,672.0	12,150.2	6,527.0	101.6	74.0	-88.15	4,976.4	4,714.9	4,328.3	4,171.6	156.65	27.630		
14,900.0	6,672.0	12,150.2	6,527.0	102.7	74.0	-88.15	4,976.4	4,714.9	4,377.9	4,221.8	156.15	28.037		
15,000.0	6,672.0	12,150.2	6,527.0	103.9	74.0	-88.15	4,976.4	4,714.9	4,429.3	4,273.7	155.61	28.465		
15,100.0	6,672.0	12,150.2	6,527.0	105.1	74.0	-88.15	4,976.4	4,714.9	4,482.3	4,327.3	155.03	28.913		
15,200.0	6,672.0	12,150.2	6,527.0	106.3	74.0	-88.15	4,976.4	4,714.9	4,536.9	4,382.5	154.41	29.381		
15,300.0	6,672.0	12,150.2	6,527.0	107.6	74.0	-88.15	4,976.4	4,714.9	4,593.0	4,439.2	153.77	29.869		
15,400.0	6,672.0	12,150.2	6,527.0	108.8	74.0	-88.15	4,976.4	4,714.9	4,650.6	4,497.5	153.11	30.375		
15,500.0	6,672.0	12,150.2	6,527.0	110.0	74.0	-88.15	4,976.4	4,714.9	4,709.6	4,557.2	152.42	30.899		
15,600.0	6,672.0	12,150.2	6,527.0	111.2	74.0	-88.15	4,976.4	4,714.9	4,769.9	4,618.2	151.71	31.441		
15,700.0	6,672.0	12,150.2	6,527.0	112.4	74.0	-88.15	4,976.4	4,714.9	4,831.6	4,680.6	150.99	32.000		
15,800.0	6,672.0	12,150.2	6,527.0	113.6	74.0	-88.15	4,976.4	4,714.9	4,894.5	4,744.3	150.25	32.576		
15,900.0	6,672.0	12,150.2	6,527.0	114.8	74.0	-88.15	4,976.4	4,714.9	4,958.6	4,809.1	149.50	33.168		
16,000.0	6,672.0	12,150.2	6,527.0	116.0	74.0	-88.15	4,976.4	4,714.9	5,023.9	4,875.2	148.74	33.776		
16,100.0	6,672.0	12,150.2	6,527.0	117.2	74.0	-88.15	4,976.4	4,714.9	5,090.4	4,942.4	147.98	34.400		
16,200.0	6,672.0	12,150.2	6,527.0	118.4	74.0	-88.15	4,976.4	4,714.9	5,157.9	5,010.7	147.21	35.038		
16,300.0	6,672.0	12,150.2	6,527.0	119.6	74.0	-88.15	4,976.4	4,714.9	5,226.4	5,080.0	146.43	35.691		
16,400.0	6,672.0	12,150.2	6,527.0	120.8	74.0	-88.15	4,976.4	4,714.9	5,295.9	5,150.3	145.66	36.358		
16,500.0	6,672.0	12,150.2	6,527.0	122.0	74.0	-88.15	4,976.4	4,714.9	5,366.4	5,221.5	144.88	37.039		
16,600.0	6,672.0	12,150.2	6,527.0	123.2	74.0	-88.15	4,976.4	4,714.9	5,437.8	5,293.7	144.11	37.734		
16,700.0	6,672.0	12,150.2	6,527.0	124.5	74.0	-88.15	4,976.4	4,714.9	5,510.1	5,366.8	143.34	38.441		
16,800.0	6,672.0	12,150.2	6,527.0	125.7	74.0	-88.15	4,976.4	4,714.9	5,583.3	5,440.7	142.57	39.161		
16,900.0	6,672.0	12,150.2	6,527.0	126.9	74.0	-88.15	4,976.4	4,714.9	5,657.2	5,515.4	141.81	39.893		
17,000.0	6,672.0	12,150.2	6,527.0	128.1	74.0	-88.15	4,976.4	4,714.9	5,732.0	5,590.9	141.05	40.637		
17,100.0	6,672.0	12,150.2	6,527.0	129.3	74.0	-88.15	4,976.4	4,714.9	5,807.5	5,667.2	140.30	41.393		
17,200.0	6,672.0	12,150.2	6,527.0	130.5	74.0	-88.15	4,976.4	4,714.9	5,883.7	5,744.1	139.56	42.160		
17,300.0	6,672.0	12,150.2	6,527.0	131.7	74.0	-88.15	4,976.4	4,714.9	5,960.6	5,821.8	138.82	42.938		
17,400.0	6,672.0	12,150.2	6,527.0	133.0	74.0	-88.15	4,976.4	4,714.9	6,038.2	5,900.1	138.09	43.726		
17,500.0	6,672.0	12,150.2	6,527.0	134.2	74.0	-88.15	4,976.4	4,714.9	6,116.5	5,979.1	137.37	44.525		
17,600.0	6,672.0	12,150.2	6,527.0	135.4	74.0	-88.15	4,976.4	4,714.9	6,195.3	6,058.7	136.66	45.333		
17,700.0	6,672.0	12,150.2	6,527.0	136.6	74.0	-88.15	4,976.4	4,714.9	6,274.8	6,138.8	135.96	46.152		
17,800.0	6,672.0	12,150.2	6,527.0	137.8	74.0	-88.15	4,976.4	4,714.9	6,354.8	6,219.6	135.27	46.979		
17,900.0	6,672.0	12,150.2	6,527.0	139.0	74.0	-88.15	4,976.4	4,714.9	6,435.4	6,300.8	134.59	47.816		
18,000.0	6,672.0	12,150.2	6,527.0	140.3	74.0	-88.15	4,976.4	4,714.9	6,516.5	6,382.6	133.92	48.662		
18,100.0	6,672.0	12,150.2	6,527.0	141.5	74.0	-88.15	4,976.4	4,714.9	6,598.2	6,464.9	133.25	49.516		
18,200.0	6,672.0	12,150.2	6,527.0	142.7	74.0	-88.15	4,976.4	4,714.9	6,680.3	6,547.7	132.60	50.378		
18,300.0	6,672.0	12,150.2	6,527.0	143.9	74.0	-88.15	4,976.4	4,714.9	6,762.9	6,631.0	131.96	51.249		
18,342.5	6,672.0	12,150.2	6,527.0	144.4	74.0	-88.15	4,976.4	4,714.9	6,798.2	6,666.5	131.69	51.621		



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - SLW Ranch State BB06-672 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-7.74	4,336.0	-589.7	4,376.0					
100.0	100.0	78.0	78.0	0.1	0.1	-7.74	4,336.0	-589.7	4,375.9	4,375.7	0.22	N/A		
200.0	200.0	178.0	178.0	0.5	0.4	-7.74	4,336.0	-589.7	4,375.9	4,375.0	0.89	4,922.232		
300.0	300.0	278.0	278.0	0.8	0.8	-7.74	4,336.0	-589.7	4,375.9	4,374.3	1.61	2,724.808		
400.0	400.0	378.0	378.0	1.2	1.1	-7.74	4,336.0	-589.7	4,375.9	4,373.6	2.32	1,883.818		
500.0	500.0	478.0	478.0	1.6	1.5	-7.74	4,336.0	-589.7	4,375.9	4,372.9	3.04	1,439.521		
600.0	600.0	578.0	578.0	1.9	1.8	-7.74	4,336.0	-589.7	4,375.9	4,372.2	3.76	1,164.803		
700.0	700.0	678.0	678.0	2.3	2.2	-7.74	4,336.0	-589.7	4,375.9	4,371.4	4.47	978.136		
800.0	800.0	778.0	778.0	2.6	2.6	-7.74	4,336.0	-589.7	4,375.9	4,370.7	5.19	843.035		
900.0	900.0	878.0	878.0	3.0	2.9	-7.74	4,336.0	-589.7	4,375.9	4,370.0	5.91	740.724		
1,000.0	1,000.0	978.0	978.0	3.4	3.3	-7.74	4,336.0	-589.7	4,375.9	4,369.3	6.62	660.560		
1,100.0	1,100.0	1,078.0	1,078.0	3.7	3.6	-7.74	4,336.0	-589.7	4,375.9	4,368.6	7.34	596.052		
1,200.0	1,200.0	1,178.0	1,178.0	4.1	4.0	-7.74	4,336.0	-589.7	4,375.9	4,367.9	8.06	543.022		
1,300.0	1,300.0	1,278.0	1,278.0	4.4	4.3	-7.74	4,336.0	-589.7	4,375.9	4,367.1	8.78	498.658		
1,400.0	1,400.0	1,378.0	1,378.0	4.8	4.7	-7.74	4,336.0	-589.7	4,375.9	4,366.4	9.49	460.995		
1,500.0	1,500.0	1,478.0	1,478.0	5.1	5.1	-7.74	4,336.0	-589.7	4,375.9	4,365.7	10.21	428.621		
1,600.0	1,600.0	1,578.0	1,578.0	5.5	5.4	-7.74	4,336.0	-589.7	4,375.9	4,365.0	10.93	400.497		
1,700.0	1,700.0	1,678.0	1,678.0	5.9	5.8	-7.74	4,336.0	-589.7	4,375.9	4,364.3	11.64	375.836		
1,800.0	1,800.0	1,778.0	1,778.0	6.2	6.1	-7.74	4,336.0	-589.7	4,375.9	4,363.6	12.36	354.035		
1,900.0	1,900.0	1,878.0	1,878.0	6.6	6.5	-7.74	4,336.0	-589.7	4,375.9	4,362.8	13.08	334.626		
2,000.0	2,000.0	1,978.0	1,978.0	6.9	6.9	-7.74	4,336.0	-589.7	4,375.9	4,362.1	13.79	317.233		
2,100.0	2,100.0	2,078.0	2,078.0	7.3	7.2	-7.74	4,336.0	-589.7	4,375.9	4,361.4	14.51	301.560		
2,200.0	2,200.0	2,178.0	2,178.0	7.7	7.6	-7.74	4,336.0	-589.7	4,375.9	4,360.7	15.23	287.362		
2,300.0	2,300.0	2,231.9	2,231.9	8.0	7.8	43.27	4,336.2	-589.8	4,375.1	4,359.3	15.78	277.328		
2,400.0	2,399.8	2,272.9	2,272.9	8.4	7.9	43.32	4,336.8	-590.1	4,373.0	4,356.7	16.27	268.736		
2,500.0	2,499.5	2,300.0	2,300.0	8.7	8.0	43.38	4,337.6	-590.5	4,369.7	4,353.0	16.72	261.406		
2,600.0	2,598.7	2,354.7	2,354.6	9.1	8.2	43.49	4,339.7	-591.6	4,365.2	4,348.0	17.26	252.906		
2,700.0	2,697.5	2,400.0	2,399.8	9.4	8.4	43.62	4,342.2	-592.9	4,359.6	4,341.8	17.77	245.355		
2,800.0	2,795.6	2,436.3	2,436.0	9.8	8.5	43.76	4,344.7	-594.1	4,352.8	4,334.6	18.24	238.616		
2,900.0	2,893.1	2,500.0	2,499.5	10.1	8.7	43.98	4,350.0	-596.8	4,345.0	4,326.2	18.82	230.874		
3,000.0	2,989.6	2,500.0	2,499.5	10.5	8.7	44.11	4,350.0	-596.8	4,335.8	4,316.7	19.15	226.404		
3,100.0	3,085.3	2,558.2	2,557.3	10.9	8.9	44.38	4,355.9	-599.9	4,325.5	4,305.8	19.71	219.471		
3,200.0	3,179.8	2,600.0	2,598.7	11.2	9.1	44.64	4,360.8	-602.4	4,314.2	4,294.0	20.21	213.518		
3,300.0	3,273.2	2,639.0	2,637.3	11.6	9.2	44.93	4,365.9	-604.9	4,301.7	4,281.1	20.69	207.890		
3,387.5	3,353.8	2,674.2	2,672.1	11.9	9.3	45.20	4,370.9	-607.5	4,290.0	4,268.9	21.13	203.067		
3,400.0	3,365.2	2,700.0	2,697.5	12.0	9.4	45.28	4,374.8	-609.5	4,288.4	4,267.1	21.27	201.584		
3,500.0	3,456.8	2,700.0	2,697.5	12.4	9.4	45.28	4,374.8	-609.5	4,275.3	4,253.7	21.61	197.876		
3,600.0	3,548.3	2,760.2	2,756.6	12.8	9.7	45.46	4,384.6	-614.5	4,263.6	4,241.4	22.19	192.124		
3,700.0	3,639.8	2,800.0	2,795.6	13.2	9.8	45.58	4,391.8	-618.1	4,253.3	4,230.6	22.70	187.401		
3,800.0	3,731.4	2,842.0	2,836.6	13.6	9.9	45.70	4,399.8	-622.2	4,244.5	4,221.2	23.21	182.850		
3,900.0	3,822.9	2,900.0	2,893.1	14.0	10.2	45.87	4,411.8	-628.3	4,237.1	4,213.3	23.80	178.014		
4,000.0	3,914.4	2,900.0	2,893.1	14.4	10.2	45.87	4,411.8	-628.3	4,231.1	4,207.0	24.14	175.294		
4,100.0	4,005.9	2,966.0	2,956.9	14.8	10.4	46.04	4,426.7	-635.9	4,226.3	4,201.5	24.77	170.648		
4,200.0	4,097.5	3,000.0	2,989.6	15.2	10.5	46.13	4,434.9	-640.1	4,223.0	4,197.8	25.25	167.233		
4,300.0	4,189.0	3,049.4	3,037.0	15.6	10.7	46.26	4,447.4	-646.5	4,221.1	4,195.3	25.81	163.549		
4,399.3	4,279.9	3,100.0	3,085.3	16.1	10.9	46.38	4,460.9	-653.4	4,220.7	4,194.3	26.37	160.050 CC		
4,400.0	4,280.5	3,100.0	3,085.3	16.1	10.9	46.38	4,460.9	-653.4	4,220.7	4,194.3	26.37	160.036 ES		
4,500.0	4,372.1	3,133.2	3,116.8	16.5	11.0	46.46	4,470.2	-658.1	4,221.6	4,194.7	26.85	157.200		
4,600.0	4,463.6	3,175.3	3,156.5	16.9	11.1	46.56	4,482.5	-664.3	4,223.9	4,196.5	27.38	154.285		
4,700.0	4,555.1	3,217.4	3,196.1	17.4	11.3	46.65	4,495.3	-670.9	4,227.6	4,199.7	27.90	151.535		
4,800.0	4,646.7	3,305.7	3,278.9	17.8	11.6	46.84	4,522.8	-684.9	4,232.2	4,203.5	28.65	147.705		
4,900.0	4,738.2	3,404.3	3,371.2	18.2	12.0	47.05	4,553.6	-700.6	4,236.9	4,207.4	29.47	143.791		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - SLW Ranch State BB06-672 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,000.0	4,829.7	3,503.0	3,463.6	18.7	12.3	47.27	4,584.4	-716.3	4,241.7	4,211.4	30.28	140.062		
5,100.0	4,921.3	3,601.6	3,556.0	19.1	12.7	47.48	4,615.1	-731.9	4,246.5	4,215.4	31.11	136.507		
5,200.0	5,012.8	3,700.2	3,648.4	19.5	13.1	47.69	4,645.9	-747.6	4,251.4	4,219.4	31.94	133.115		
5,300.0	5,104.3	3,801.2	3,740.7	20.0	13.5	47.90	4,676.7	-763.3	4,256.3	4,223.5	32.78	129.842		
5,400.0	5,195.8	3,897.4	3,833.1	20.4	13.8	48.11	4,707.5	-779.0	4,261.3	4,227.7	33.61	126.789		
5,500.0	5,287.4	4,003.9	3,925.5	20.9	14.2	48.32	4,738.2	-794.7	4,266.4	4,231.9	34.48	123.724		
5,600.0	5,378.9	4,094.7	4,017.9	21.3	14.6	48.53	4,769.0	-810.3	4,271.5	4,236.2	35.30	121.015		
5,700.0	5,470.4	4,206.7	4,110.2	21.8	15.0	48.74	4,799.8	-826.0	4,276.7	4,240.5	36.20	118.139		
5,800.0	5,562.0	4,308.1	4,202.6	22.2	15.4	48.94	4,830.6	-841.7	4,281.9	4,244.8	37.06	115.527		
5,900.0	5,653.5	4,409.5	4,295.0	22.7	15.8	49.15	4,861.3	-857.4	4,287.2	4,249.3	37.93	113.027		
6,000.0	5,745.0	4,489.2	4,387.4	23.1	16.2	49.36	4,892.1	-873.1	4,292.5	4,253.8	38.71	110.884		
6,100.0	5,836.6	4,587.8	4,479.7	23.6	16.6	49.56	4,922.9	-888.7	4,297.9	4,258.4	39.57	108.610		
6,200.0	5,928.1	4,686.4	4,572.1	24.0	17.0	49.77	4,953.7	-904.4	4,303.4	4,263.0	40.44	106.428		
6,278.6	6,000.0	4,763.9	4,644.7	24.4	17.3	49.93	4,977.8	-916.7	4,307.7	4,266.6	41.11	104.775		
6,290.0	6,010.4	4,775.1	4,655.2	24.4	17.3	48.40	4,981.3	-918.5	4,308.2	4,267.0	41.21	104.536		
6,300.0	6,019.5	4,785.0	4,664.5	24.5	17.4	46.75	4,984.4	-920.1	4,308.6	4,267.3	41.30	104.324		
6,350.0	6,065.8	4,834.8	4,711.1	24.7	17.6	36.61	4,999.9	-928.0	4,310.2	4,268.4	41.73	103.293		
6,400.0	6,113.0	4,884.7	4,757.9	24.9	17.8	22.88	5,015.5	-935.9	4,311.5	4,269.3	42.14	102.310		
6,450.0	6,160.7	4,934.5	4,804.5	25.1	18.0	6.07	5,031.1	-943.9	4,312.5	4,270.0	42.54	101.373		
6,500.0	6,208.5	4,983.6	4,850.5	25.3	18.2	-11.34	5,046.4	-951.7	4,313.3	4,270.4	42.93	100.482		
6,550.0	6,255.8	5,031.6	4,895.4	25.4	18.4	-26.41	5,061.4	-959.3	4,313.8	4,270.5	43.30	99.634		
6,600.0	6,302.5	5,078.0	4,938.9	25.6	18.5	-38.01	5,075.9	-966.7	4,314.2	4,270.5	43.65	98.827		
6,650.0	6,347.9	5,122.5	4,980.6	25.7	18.7	-46.57	5,089.7	-973.8	4,314.4	4,270.4	44.00	98.060		
6,700.0	6,391.6	5,164.7	5,020.1	25.9	18.9	-52.89	5,102.9	-980.5	4,314.5	4,270.2	44.33	97.335		
6,750.0	6,433.4	5,204.1	5,057.1	26.0	19.1	-57.64	5,115.2	-986.7	4,314.6	4,269.9	44.64	96.651		
6,800.0	6,472.8	5,240.5	5,091.1	26.1	19.2	-61.28	5,126.5	-992.5	4,314.8	4,269.8	44.94	96.012		
6,850.0	6,509.4	5,273.4	5,122.0	26.2	19.3	-64.11	5,136.8	-997.7	4,315.1	4,269.9	45.22	95.417		
6,900.0	6,543.0	5,302.6	5,149.3	26.3	19.5	-66.32	5,145.9	-1,002.4	4,315.6	4,270.2	45.49	94.870		
6,950.0	6,573.2	5,327.9	5,173.0	26.4	19.6	-68.04	5,153.8	-1,006.4	4,316.5	4,270.8	45.74	94.370		
7,000.0	6,599.8	5,349.0	5,192.7	26.5	19.7	-69.34	5,160.4	-1,009.8	4,317.7	4,271.8	45.97	93.920		
7,050.0	6,622.5	5,365.6	5,208.3	26.6	19.7	-70.29	5,165.6	-1,012.4	4,319.4	4,273.2	46.19	93.520		
7,100.0	6,641.1	5,377.8	5,219.7	26.7	19.8	-70.91	5,169.4	-1,014.3	4,321.5	4,275.1	46.38	93.172		
7,150.0	6,655.4	5,385.3	5,226.7	26.8	19.8	-71.22	5,171.7	-1,015.5	4,324.0	4,277.5	46.56	92.876		
7,200.0	6,665.4	5,388.0	5,229.3	26.9	19.8	-71.26	5,172.6	-1,016.0	4,327.0	4,280.3	46.71	92.634		
7,250.0	6,670.8	5,386.1	5,227.5	27.0	19.8	-71.03	5,172.0	-1,015.7	4,330.5	4,283.7	46.84	92.445		
7,285.7	6,672.0	5,381.8	5,223.5	27.1	19.8	-70.72	5,170.6	-1,015.0	4,333.3	4,286.4	46.93	92.344		
7,300.0	6,672.0	5,379.6	5,221.4	27.1	19.8	-70.69	5,170.0	-1,014.6	4,334.4	4,287.5	46.96	92.308		
7,400.0	6,672.0	5,364.2	5,207.0	27.3	19.7	-70.49	5,165.2	-1,012.2	4,343.8	4,296.6	47.20	92.021		
7,500.0	6,672.0	5,348.9	5,192.7	27.6	19.6	-70.29	5,160.4	-1,009.7	4,355.5	4,308.0	47.50	91.687		
7,600.0	6,672.0	5,333.5	5,178.3	28.0	19.6	-70.08	5,155.6	-1,007.3	4,369.3	4,321.4	47.85	91.316		
7,700.0	6,672.0	5,318.2	5,163.9	28.3	19.5	-69.88	5,150.8	-1,004.9	4,385.3	4,337.0	48.23	90.916		
7,800.0	6,672.0	5,302.8	5,149.5	28.8	19.5	-69.68	5,146.0	-1,002.4	4,403.4	4,354.7	48.66	90.497		
7,900.0	6,672.0	5,287.5	5,135.1	29.3	19.4	-69.48	5,141.2	-1,000.0	4,423.7	4,374.6	49.11	90.068		
8,000.0	6,672.0	5,272.1	5,120.8	29.8	19.3	-69.28	5,136.4	-997.5	4,446.0	4,396.4	49.60	89.637		
8,100.0	6,672.0	5,256.8	5,106.4	30.4	19.3	-69.08	5,131.6	-995.1	4,470.5	4,420.4	50.11	89.213		
8,200.0	6,672.0	5,241.4	5,092.0	31.0	19.2	-68.88	5,126.8	-992.7	4,496.9	4,446.3	50.64	88.801		
8,300.0	6,672.0	5,226.1	5,077.6	31.7	19.1	-68.68	5,122.1	-990.2	4,525.4	4,474.2	51.19	88.408		
8,400.0	6,672.0	8,334.9	6,658.0	32.4	31.9	-90.10	5,657.7	549.8	4,538.3	4,474.2	64.12	70.781		
8,500.0	6,672.0	8,434.8	6,658.0	33.1	32.6	-90.10	5,656.9	649.8	4,535.7	4,470.1	65.60	69.142		
8,600.0	6,672.0	8,534.8	6,658.0	33.9	33.4	-90.10	5,656.1	749.7	4,533.1	4,466.0	67.14	67.517		
8,700.0	6,672.0	8,634.8	6,658.0	34.7	34.2	-90.10	5,655.3	849.7	4,530.5	4,461.8	68.74	65.911		
8,800.0	6,672.0	8,734.7	6,658.0	35.5	35.1	-90.10	5,654.5	949.6	4,527.9	4,457.5	70.39	64.330		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - SLW Ranch State BB06-672 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
8,900.0	6,672.0	8,834.7	6,658.0	36.3	35.9	-90.10	5,653.8	1,049.6	4,525.3	4,453.2	72.08	62.781		
9,000.0	6,672.0	8,934.7	6,658.0	37.2	36.8	-90.10	5,653.0	1,149.6	4,522.7	4,448.9	73.82	61.265		
9,100.0	6,672.0	9,034.6	6,658.0	38.1	37.7	-90.10	5,652.2	1,249.5	4,520.1	4,444.5	75.60	59.786		
9,200.0	6,672.0	9,134.6	6,658.0	39.0	38.6	-90.10	5,651.4	1,349.5	4,517.4	4,440.0	77.42	58.346		
9,300.0	6,672.0	9,234.6	6,658.0	39.9	39.6	-90.10	5,650.6	1,449.5	4,514.8	4,435.5	79.28	56.946		
9,400.0	6,672.0	9,334.5	6,658.0	40.8	40.5	-90.10	5,649.8	1,549.4	4,512.1	4,431.0	81.17	55.588		
9,500.0	6,672.0	9,434.5	6,658.0	41.8	41.5	-90.10	5,649.0	1,649.4	4,509.5	4,426.4	83.09	54.270		
9,600.0	6,672.0	9,534.5	6,658.0	42.7	42.5	-90.10	5,648.3	1,749.3	4,506.8	4,421.8	85.04	52.994		
9,700.0	6,672.0	9,634.4	6,658.0	43.7	43.5	-90.10	5,647.5	1,849.3	4,504.1	4,417.1	87.02	51.759		
9,800.0	6,672.0	9,734.4	6,658.0	44.7	44.5	-90.10	5,646.7	1,949.3	4,501.5	4,412.4	89.02	50.564		
9,900.0	6,672.0	9,834.4	6,658.0	45.7	45.5	-90.10	5,645.9	2,049.2	4,498.8	4,407.7	91.05	49.409		
10,000.0	6,672.0	9,934.3	6,658.0	46.7	46.6	-90.10	5,645.1	2,149.2	4,496.1	4,403.0	93.10	48.293		
10,100.0	6,672.0	10,034.3	6,658.0	47.7	47.6	-90.10	5,644.3	2,249.1	4,493.4	4,398.2	95.17	47.214		
10,200.0	6,672.0	10,134.3	6,658.0	48.8	48.7	-90.10	5,643.5	2,349.1	4,490.7	4,393.4	97.26	46.172		
10,300.0	6,672.0	10,234.2	6,658.0	49.8	49.7	-90.10	5,642.8	2,449.1	4,487.9	4,388.6	99.37	45.166		
10,400.0	6,672.0	10,334.2	6,658.0	50.9	50.8	-90.10	5,642.0	2,549.0	4,485.2	4,383.7	101.49	44.194		
10,500.0	6,672.0	10,434.1	6,658.0	51.9	51.9	-90.10	5,641.2	2,649.0	4,482.5	4,378.9	103.63	43.254		
10,600.0	6,672.0	10,534.1	6,658.0	53.0	52.9	-90.10	5,640.4	2,748.9	4,479.7	4,374.0	105.79	42.347		
10,700.0	6,672.0	10,634.1	6,658.0	54.1	54.0	-90.10	5,639.6	2,848.9	4,477.0	4,369.0	107.96	41.471		
10,800.0	6,672.0	10,734.0	6,658.0	55.2	55.1	-90.10	5,638.8	2,948.9	4,474.2	4,364.1	110.14	40.624		
10,900.0	6,672.0	10,834.0	6,658.0	56.3	56.2	-90.10	5,638.1	3,048.8	4,471.5	4,359.1	112.33	39.806		
11,000.0	6,672.0	10,934.0	6,658.0	57.4	57.3	-90.10	5,637.3	3,148.8	4,468.7	4,354.2	114.54	39.015		
11,100.0	6,672.0	11,033.9	6,658.0	58.5	58.5	-90.10	5,636.5	3,248.7	4,465.9	4,349.2	116.76	38.250		
11,200.0	6,672.0	11,133.9	6,658.0	59.6	59.6	-90.10	5,635.7	3,348.7	4,463.1	4,344.2	118.99	37.510		
11,300.0	6,672.0	11,233.8	6,658.0	60.7	60.7	-90.10	5,634.9	3,448.7	4,460.3	4,339.1	121.22	36.794		
11,400.0	6,672.0	11,333.8	6,658.0	61.8	61.8	-90.10	5,634.1	3,548.6	4,457.5	4,334.1	123.47	36.102		
11,500.0	6,672.0	11,433.8	6,658.0	62.9	63.0	-90.10	5,633.3	3,648.6	4,454.7	4,329.0	125.73	35.431		
11,600.0	6,672.0	11,533.7	6,658.0	64.1	64.1	-90.10	5,632.6	3,748.5	4,451.9	4,323.9	127.99	34.782		
11,700.0	6,672.0	11,633.7	6,658.0	65.2	65.2	-90.10	5,631.8	3,848.5	4,449.1	4,318.8	130.27	34.154		
11,800.0	6,672.0	11,733.6	6,658.0	66.3	66.4	-90.10	5,631.0	3,948.4	4,446.3	4,313.7	132.55	33.545		
11,900.0	6,672.0	11,833.6	6,658.0	67.5	67.5	-90.10	5,630.2	4,048.4	4,443.4	4,308.6	134.83	32.955		
12,000.0	6,672.0	11,933.6	6,658.0	68.6	68.7	-90.10	5,629.4	4,148.4	4,440.6	4,303.5	137.13	32.382		
12,100.0	6,672.0	12,033.5	6,658.0	69.8	69.8	-90.10	5,628.6	4,248.3	4,437.7	4,298.3	139.43	31.828		
12,200.0	6,672.0	12,133.5	6,658.0	70.9	71.0	-90.10	5,627.8	4,348.3	4,434.9	4,293.1	141.74	31.289		
12,300.0	6,672.0	12,233.4	6,658.0	72.1	72.2	-90.10	5,627.1	4,448.2	4,432.0	4,288.0	144.05	30.767		
12,400.0	6,672.0	12,333.4	6,658.0	73.2	73.3	-90.10	5,626.3	4,548.2	4,429.1	4,282.8	146.37	30.260		
12,500.0	6,672.0	12,443.5	6,658.0	74.4	74.6	-90.10	5,625.3	4,658.3	4,426.2	4,277.4	148.80	29.746		
12,600.0	6,672.0	12,492.6	6,658.0	75.5	75.2	-90.10	5,624.8	4,707.4	4,423.3	4,272.7	150.60	29.372		
12,687.6	6,672.0	12,492.6	6,658.0	76.6	75.2	-90.10	5,624.8	4,707.4	4,422.5	4,270.8	151.69	29.154		
12,700.0	6,672.0	12,492.6	6,658.0	76.7	75.2	-90.10	5,624.8	4,707.4	4,422.5	4,270.6	151.84	29.125		
12,800.0	6,672.0	12,492.6	6,658.0	77.9	75.2	-90.10	5,624.8	4,707.4	4,423.9	4,270.9	153.02	28.910		
12,900.0	6,672.0	12,492.6	6,658.0	79.0	75.2	-90.10	5,624.8	4,707.4	4,427.5	4,273.4	154.14	28.725		
13,000.0	6,672.0	12,492.6	6,658.0	80.2	75.2	-90.10	5,624.8	4,707.4	4,433.5	4,278.3	155.18	28.570		
13,100.0	6,672.0	12,492.6	6,658.0	81.4	75.2	-90.10	5,624.8	4,707.4	4,441.6	4,285.4	156.15	28.444		
13,200.0	6,672.0	12,492.6	6,658.0	82.6	75.2	-90.10	5,624.8	4,707.4	4,452.0	4,294.9	157.05	28.347		
13,300.0	6,672.0	12,492.6	6,658.0	83.7	75.2	-90.10	5,624.8	4,707.4	4,464.5	4,306.6	157.88	28.278		
13,400.0	6,672.0	12,492.6	6,658.0	84.9	75.2	-90.10	5,624.8	4,707.4	4,479.3	4,320.7	158.63	28.237		
13,500.0	6,672.0	12,492.6	6,658.0	86.1	75.2	-90.10	5,624.8	4,707.4	4,496.2	4,336.9	159.32	28.222 SF		
13,600.0	6,672.0	12,492.6	6,658.0	87.3	75.2	-90.10	5,624.8	4,707.4	4,515.3	4,355.4	159.93	28.233		
13,700.0	6,672.0	12,492.6	6,658.0	88.4	75.2	-90.10	5,624.8	4,707.4	4,536.5	4,376.0	160.47	28.270		
13,800.0	6,672.0	12,492.6	6,658.0	89.6	75.2	-90.10	5,624.8	4,707.4	4,559.8	4,398.8	160.94	28.331		
13,900.0	6,672.0	12,492.6	6,658.0	90.8	75.2	-90.10	5,624.8	4,707.4	4,585.1	4,423.8	161.35	28.418		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - SLW Ranch State BB06-672 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
14,000.0	6,672.0	12,492.6	6,658.0	92.0	75.2	-90.10	5,624.8	4,707.4	4,612.5	4,450.8	161.68	28.528		
14,100.0	6,672.0	12,492.6	6,658.0	93.2	75.2	-90.10	5,624.8	4,707.4	4,641.8	4,479.9	161.96	28.661		
14,200.0	6,672.0	12,492.6	6,658.0	94.4	75.2	-90.10	5,624.8	4,707.4	4,673.1	4,510.9	162.16	28.817		
14,300.0	6,672.0	12,492.6	6,658.0	95.6	75.2	-90.10	5,624.8	4,707.4	4,706.3	4,544.0	162.31	28.995		
14,400.0	6,672.0	12,492.6	6,658.0	96.8	75.2	-90.10	5,624.8	4,707.4	4,741.4	4,579.0	162.40	29.195		
14,500.0	6,672.0	12,492.6	6,658.0	98.0	75.2	-90.10	5,624.8	4,707.4	4,778.3	4,615.9	162.44	29.416		
14,600.0	6,672.0	12,492.6	6,658.0	99.2	75.2	-90.10	5,624.8	4,707.4	4,817.0	4,654.6	162.42	29.658		
14,700.0	6,672.0	12,492.6	6,658.0	100.4	75.2	-90.10	5,624.8	4,707.4	4,857.4	4,695.1	162.35	29.920		
14,800.0	6,672.0	12,492.6	6,658.0	101.6	75.2	-90.10	5,624.8	4,707.4	4,899.5	4,737.3	162.23	30.201		
14,900.0	6,672.0	12,492.6	6,658.0	102.7	75.2	-90.10	5,624.8	4,707.4	4,943.3	4,781.3	162.07	30.502		
15,000.0	6,672.0	12,492.6	6,658.0	103.9	75.2	-90.10	5,624.8	4,707.4	4,988.7	4,826.9	161.86	30.821		
15,100.0	6,672.0	12,492.6	6,658.0	105.1	75.2	-90.10	5,624.8	4,707.4	5,035.7	4,874.1	161.62	31.159		
15,200.0	6,672.0	12,492.6	6,658.0	106.3	75.2	-90.10	5,624.8	4,707.4	5,084.2	4,922.9	161.33	31.514		
15,300.0	6,672.0	12,492.6	6,658.0	107.6	75.2	-90.10	5,624.8	4,707.4	5,134.2	4,973.2	161.02	31.886		
15,400.0	6,672.0	12,492.6	6,658.0	108.8	75.2	-90.10	5,624.8	4,707.4	5,185.6	5,025.0	160.67	32.276		
15,500.0	6,672.0	12,492.6	6,658.0	110.0	75.2	-90.10	5,624.8	4,707.4	5,238.5	5,078.2	160.29	32.682		
15,600.0	6,672.0	12,492.6	6,658.0	111.2	75.2	-90.10	5,624.8	4,707.4	5,292.6	5,132.8	159.88	33.104		
15,700.0	6,672.0	12,492.6	6,658.0	112.4	75.2	-90.10	5,624.8	4,707.4	5,348.1	5,188.7	159.45	33.542		
15,800.0	6,672.0	12,492.6	6,658.0	113.6	75.2	-90.10	5,624.8	4,707.4	5,404.9	5,245.9	158.99	33.995		
15,900.0	6,672.0	12,492.6	6,658.0	114.8	75.2	-90.10	5,624.8	4,707.4	5,462.9	5,304.4	158.52	34.463		
16,000.0	6,672.0	12,492.6	6,658.0	116.0	75.2	-90.10	5,624.8	4,707.4	5,522.1	5,364.1	158.02	34.945		
16,100.0	6,672.0	12,492.6	6,658.0	117.2	75.2	-90.10	5,624.8	4,707.4	5,582.5	5,425.0	157.51	35.442		
16,200.0	6,672.0	12,492.6	6,658.0	118.4	75.2	-90.10	5,624.8	4,707.4	5,643.9	5,487.0	156.98	35.952		
16,300.0	6,672.0	12,492.6	6,658.0	119.6	75.2	-90.10	5,624.8	4,707.4	5,706.5	5,550.1	156.45	36.476		
16,400.0	6,672.0	12,492.6	6,658.0	120.8	75.2	-90.10	5,624.8	4,707.4	5,770.1	5,614.2	155.90	37.013		
16,500.0	6,672.0	12,492.6	6,658.0	122.0	75.2	-90.10	5,624.8	4,707.4	5,834.7	5,679.4	155.33	37.562		
16,600.0	6,672.0	12,492.6	6,658.0	123.2	75.2	-90.10	5,624.8	4,707.4	5,900.4	5,745.6	154.77	38.124		
16,700.0	6,672.0	12,492.6	6,658.0	124.5	75.2	-90.10	5,624.8	4,707.4	5,966.9	5,812.7	154.19	38.699		
16,800.0	6,672.0	12,492.6	6,658.0	125.7	75.2	-90.10	5,624.8	4,707.4	6,034.4	5,880.8	153.61	39.285		
16,900.0	6,672.0	12,492.6	6,658.0	126.9	75.2	-90.10	5,624.8	4,707.4	6,102.7	5,949.7	153.02	39.882		
17,000.0	6,672.0	12,492.6	6,658.0	128.1	75.2	-90.10	5,624.8	4,707.4	6,172.0	6,019.5	152.43	40.491		
17,100.0	6,672.0	12,492.6	6,658.0	129.3	75.2	-90.10	5,624.8	4,707.4	6,242.0	6,090.2	151.84	41.110		
17,200.0	6,672.0	12,492.6	6,658.0	130.5	75.2	-90.10	5,624.8	4,707.4	6,312.9	6,161.6	151.24	41.740		
17,300.0	6,672.0	12,492.6	6,658.0	131.7	75.2	-90.10	5,624.8	4,707.4	6,384.5	6,233.8	150.65	42.381		
17,400.0	6,672.0	12,492.6	6,658.0	133.0	75.2	-90.10	5,624.8	4,707.4	6,456.9	6,306.8	150.05	43.031		
17,500.0	6,672.0	12,492.6	6,658.0	134.2	75.2	-90.10	5,624.8	4,707.4	6,530.0	6,380.5	149.46	43.691		
17,600.0	6,672.0	12,492.6	6,658.0	135.4	75.2	-90.10	5,624.8	4,707.4	6,603.8	6,454.9	148.86	44.361		
17,700.0	6,672.0	12,492.6	6,658.0	136.6	75.2	-90.10	5,624.8	4,707.4	6,678.2	6,530.0	148.27	45.040		
17,800.0	6,672.0	12,492.6	6,658.0	137.8	75.2	-90.10	5,624.8	4,707.4	6,753.4	6,605.7	147.68	45.728		
17,900.0	6,672.0	12,492.6	6,658.0	139.0	75.2	-90.10	5,624.8	4,707.4	6,829.1	6,682.0	147.10	46.425		
18,000.0	6,672.0	12,492.6	6,658.0	140.3	75.2	-90.10	5,624.8	4,707.4	6,905.5	6,759.0	146.52	47.131		
18,100.0	6,672.0	12,492.6	6,658.0	141.5	75.2	-90.10	5,624.8	4,707.4	6,982.5	6,836.5	145.94	47.845		
18,200.0	6,672.0	12,492.6	6,658.0	142.7	75.2	-90.10	5,624.8	4,707.4	7,060.0	6,914.6	145.37	48.567		
18,300.0	6,672.0	12,492.6	6,658.0	143.9	75.2	-90.10	5,624.8	4,707.4	7,138.1	6,993.3	144.80	49.296		
18,342.5	6,672.0	12,492.6	6,658.0	144.4	75.2	-90.10	5,624.8	4,707.4	7,171.4	7,026.9	144.56	49.609		



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - SLW Ranch State BB06-682 - SLW Ranch State BB06-682 - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-7.70	4,361.5	-590.0	4,401.3					
100.0	100.0	77.0	77.0	0.1	0.1	-7.70	4,361.5	-590.0	4,401.2	4,401.0	0.22	N/A		
200.0	200.0	177.0	177.0	0.5	0.4	-7.70	4,361.5	-590.0	4,401.2	4,400.3	0.89	4,970.742		
300.0	300.0	277.0	277.0	0.8	0.8	-7.70	4,361.5	-590.0	4,401.2	4,399.6	1.60	2,746.697		
400.0	400.0	377.0	377.0	1.2	1.1	-7.70	4,361.5	-590.0	4,401.2	4,398.9	2.32	1,897.641		
500.0	500.0	477.0	477.0	1.6	1.5	-7.70	4,361.5	-590.0	4,401.2	4,398.2	3.04	1,449.556		
600.0	600.0	577.0	577.0	1.9	1.8	-7.70	4,361.5	-590.0	4,401.2	4,397.5	3.75	1,172.659		
700.0	700.0	677.0	677.0	2.3	2.2	-7.70	4,361.5	-590.0	4,401.2	4,396.7	4.47	984.582		
800.0	800.0	777.0	777.0	2.6	2.6	-7.70	4,361.5	-590.0	4,401.2	4,396.0	5.19	848.496		
900.0	900.0	877.0	877.0	3.0	2.9	-7.70	4,361.5	-590.0	4,401.2	4,395.3	5.90	745.461		
1,000.0	1,000.0	977.0	977.0	3.4	3.3	-7.70	4,361.5	-590.0	4,401.2	4,394.6	6.62	664.739		
1,100.0	1,100.0	1,077.0	1,077.0	3.7	3.6	-7.70	4,361.5	-590.0	4,401.2	4,393.9	7.34	599.792		
1,200.0	1,200.0	1,177.0	1,177.0	4.1	4.0	-7.70	4,361.5	-590.0	4,401.2	4,393.2	8.05	546.406		
1,300.0	1,300.0	1,277.0	1,277.0	4.4	4.3	-7.70	4,361.5	-590.0	4,401.2	4,392.4	8.77	501.747		
1,400.0	1,400.0	1,377.0	1,377.0	4.8	4.7	-7.70	4,361.5	-590.0	4,401.2	4,391.7	9.49	463.836		
1,500.0	1,500.0	1,477.0	1,477.0	5.1	5.1	-7.70	4,361.5	-590.0	4,401.2	4,391.0	10.21	431.252		
1,600.0	1,600.0	1,577.0	1,577.0	5.5	5.4	-7.70	4,361.5	-590.0	4,401.2	4,390.3	10.92	402.945		
1,700.0	1,700.0	1,677.0	1,677.0	5.9	5.8	-7.70	4,361.5	-590.0	4,401.2	4,389.6	11.64	378.126		
1,800.0	1,800.0	1,777.0	1,777.0	6.2	6.1	-7.70	4,361.5	-590.0	4,401.2	4,388.9	12.36	356.186		
1,900.0	1,900.0	1,877.0	1,877.0	6.6	6.5	-7.70	4,361.5	-590.0	4,401.2	4,388.1	13.07	336.653		
2,000.0	2,000.0	1,977.0	1,977.0	6.9	6.9	-7.70	4,361.5	-590.0	4,401.2	4,387.4	13.79	319.151		
2,100.0	2,100.0	2,030.8	2,030.8	7.3	7.0	-7.70	4,361.7	-590.0	4,401.6	4,387.3	14.34	306.928		
2,200.0	2,200.0	2,070.8	2,070.7	7.7	7.2	-7.71	4,362.3	-590.3	4,403.4	4,388.5	14.84	296.730		
2,300.0	2,300.0	2,100.0	2,100.0	8.0	7.3	43.27	4,363.1	-590.6	4,405.2	4,389.9	15.29	288.053		
2,400.0	2,399.8	2,150.7	2,150.6	8.4	7.5	43.28	4,365.2	-591.3	4,405.8	4,390.0	15.82	278.488		
2,500.0	2,499.5	2,200.0	2,199.8	8.7	7.7	43.32	4,368.1	-592.4	4,405.3	4,389.0	16.34	269.565		
2,600.0	2,598.7	2,230.5	2,230.2	9.1	7.8	43.37	4,370.2	-593.2	4,403.6	4,386.8	16.79	262.251		
2,700.0	2,697.5	2,270.3	2,269.9	9.4	7.9	43.45	4,373.5	-594.3	4,400.7	4,383.4	17.27	254.751		
2,800.0	2,795.6	2,300.0	2,299.5	9.8	8.0	43.55	4,376.2	-595.4	4,396.7	4,379.0	17.72	248.163		
2,900.0	2,893.1	2,349.7	2,348.8	10.1	8.2	43.70	4,381.5	-597.3	4,391.5	4,373.2	18.24	240.802		
3,000.0	2,898.6	2,400.0	2,398.7	10.5	8.4	43.89	4,387.7	-599.5	4,385.2	4,366.4	18.76	233.747		
3,100.0	3,085.3	2,428.7	2,427.1	10.9	8.5	44.06	4,391.6	-600.9	4,377.7	4,358.5	19.20	228.026		
3,200.0	3,179.8	2,468.1	2,466.0	11.2	8.6	44.28	4,397.3	-603.0	4,369.1	4,349.4	19.68	222.005		
3,300.0	3,273.2	2,500.0	2,497.5	11.6	8.7	44.51	4,402.4	-604.9	4,359.5	4,339.3	20.13	216.520		
3,387.5	3,353.8	2,541.5	2,538.2	11.9	8.9	44.77	4,409.4	-607.4	4,350.1	4,329.5	20.59	211.269		
3,400.0	3,365.2	2,546.3	2,543.0	12.0	8.9	44.78	4,410.3	-607.8	4,348.7	4,328.1	20.65	210.575		
3,500.0	3,456.8	2,600.0	2,595.6	12.4	9.1	44.96	4,420.3	-611.4	4,338.5	4,317.3	21.20	204.607		
3,600.0	3,548.3	2,600.0	2,595.6	12.8	9.1	44.96	4,420.3	-611.4	4,329.8	4,308.3	21.53	201.094		
3,700.0	3,639.8	2,664.1	2,658.2	13.2	9.3	45.16	4,433.5	-616.2	4,322.2	4,300.1	22.14	195.249		
3,800.0	3,731.4	2,700.0	2,693.1	13.6	9.4	45.27	4,441.5	-619.1	4,316.2	4,293.6	22.62	190.786		
3,900.0	3,822.9	2,743.4	2,735.0	14.0	9.6	45.40	4,451.6	-622.8	4,311.6	4,288.4	23.14	186.288		
4,000.0	3,914.4	2,800.0	2,789.6	14.4	9.8	45.57	4,465.8	-627.9	4,308.5	4,284.8	23.73	181.574		
4,100.0	4,005.9	2,800.0	2,789.6	14.8	9.8	45.57	4,465.8	-627.9	4,306.8	4,282.7	24.05	179.045		
4,174.4	4,074.0	2,852.8	2,840.2	15.1	10.0	45.72	4,479.9	-633.1	4,306.2	4,281.7	24.54	175.475 CC		
4,200.0	4,097.5	2,863.0	2,850.0	15.2	10.0	45.75	4,482.7	-634.1	4,306.3	4,281.6	24.67	174.550 ES		
4,300.0	4,189.0	2,900.0	2,885.3	15.6	10.2	45.86	4,493.3	-637.9	4,307.4	4,282.2	25.17	171.154		
4,400.0	4,280.5	2,943.2	2,926.2	16.1	10.3	45.98	4,506.1	-642.6	4,309.8	4,284.2	25.69	167.751		
4,500.0	4,372.1	3,000.0	2,979.8	16.5	10.5	46.13	4,523.8	-649.1	4,313.8	4,287.5	26.28	164.122		
4,600.0	4,463.6	3,000.0	2,979.8	16.9	10.5	46.13	4,523.8	-649.1	4,319.2	4,292.6	26.59	162.416		
4,700.0	4,555.1	3,063.6	3,039.3	17.4	10.7	46.30	4,544.9	-656.7	4,325.7	4,298.5	27.22	158.919		
4,800.0	4,646.7	3,100.0	3,073.2	17.8	10.9	46.39	4,557.5	-661.3	4,333.8	4,306.1	27.71	156.417		
4,900.0	4,738.2	3,143.9	3,113.7	18.2	11.0	46.50	4,573.2	-667.1	4,343.3	4,315.0	28.23	153.844		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
**Anticollision Report**

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - SLW Ranch State BB06-682 - SLW Ranch State BB06-682 - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,000.0	4,829.7	3,200.0	3,165.2	18.7	11.2	46.64	4,594.2	-674.7	4,354.2	4,325.3	28.82	151.077		
5,100.0	4,921.3	3,200.0	3,165.2	19.1	11.2	46.64	4,594.2	-674.7	4,366.5	4,337.4	29.10	150.035		
5,200.0	5,012.8	3,263.9	3,223.3	19.5	11.5	46.79	4,619.3	-683.8	4,379.9	4,350.1	29.73	147.306		
5,300.0	5,104.3	3,309.1	3,264.0	20.0	11.6	46.89	4,637.7	-690.5	4,394.8	4,364.5	30.26	145.240		
5,400.0	5,195.8	3,406.5	3,351.6	20.4	12.0	47.10	4,677.8	-705.1	4,410.3	4,379.2	31.09	141.876		
5,500.0	5,287.4	3,503.9	3,439.1	20.9	12.4	47.31	4,717.9	-719.7	4,425.8	4,393.9	31.92	138.656		
5,600.0	5,378.9	3,601.3	3,526.7	21.3	12.8	47.53	4,758.1	-734.3	4,441.5	4,408.7	32.76	135.575		
5,700.0	5,470.4	3,701.3	3,614.2	21.8	13.2	47.74	4,798.2	-748.9	4,457.1	4,423.5	33.62	132.584		
5,800.0	5,562.0	3,803.9	3,701.8	22.2	13.6	47.94	4,838.3	-763.5	4,472.9	4,438.4	34.49	129.681		
5,900.0	5,653.5	3,906.5	3,789.3	22.7	14.0	48.15	4,878.4	-778.1	4,488.7	4,453.3	35.37	126.903		
6,000.0	5,745.0	4,009.1	3,876.8	23.1	14.4	48.36	4,918.6	-792.7	4,504.5	4,468.3	36.26	124.245		
6,100.0	5,836.6	4,088.3	3,964.4	23.6	14.7	48.56	4,958.7	-807.3	4,520.5	4,483.4	37.05	122.026		
6,200.0	5,928.1	4,185.7	4,051.9	24.0	15.1	48.77	4,998.8	-822.0	4,536.4	4,498.5	37.92	119.647		
6,278.6	6,000.0	4,262.2	4,120.7	24.4	15.5	48.92	5,030.3	-833.4	4,549.0	4,510.4	38.60	117.846		
6,290.0	6,010.4	4,273.4	4,130.7	24.4	15.5	47.36	5,034.9	-835.1	4,550.7	4,512.0	38.70	117.587		
6,300.0	6,019.5	4,283.2	4,139.5	24.5	15.5	45.82	5,038.9	-836.6	4,552.1	4,513.3	38.79	117.356		
6,350.0	6,065.8	4,332.4	4,183.8	24.7	15.7	36.27	5,059.2	-843.9	4,559.0	4,519.8	39.22	116.235		
6,400.0	6,113.0	4,382.0	4,228.3	24.9	16.0	23.13	5,079.6	-851.4	4,565.6	4,526.0	39.64	115.168		
6,450.0	6,160.7	4,431.3	4,272.7	25.1	16.2	6.90	5,100.0	-858.8	4,572.0	4,532.0	40.05	114.153		
6,500.0	6,208.5	4,480.1	4,316.5	25.3	16.4	-9.92	5,120.1	-866.1	4,578.0	4,537.6	40.45	113.190		
6,550.0	6,255.8	4,527.8	4,359.4	25.4	16.6	-24.42	5,139.7	-873.2	4,583.7	4,542.9	40.83	112.272		
6,600.0	6,302.5	4,574.1	4,401.0	25.6	16.8	-35.47	5,158.8	-880.2	4,589.0	4,547.8	41.19	111.398		
6,650.0	6,347.9	4,618.4	4,440.8	25.7	17.0	-43.49	5,177.0	-886.8	4,594.0	4,552.4	41.55	110.565		
6,700.0	6,391.6	4,660.5	4,478.6	25.9	17.1	-49.30	5,194.4	-893.1	4,598.6	4,556.7	41.89	109.772		
6,750.0	6,433.4	4,699.9	4,514.0	26.0	17.3	-53.58	5,210.6	-899.0	4,602.9	4,560.7	42.22	109.021		
6,800.0	6,472.8	4,736.2	4,546.7	26.1	17.5	-56.78	5,225.6	-904.5	4,606.9	4,564.3	42.53	108.311		
6,850.0	6,509.4	4,769.2	4,576.4	26.2	17.6	-59.22	5,239.2	-909.4	4,610.6	4,567.8	42.83	107.645		
6,900.0	6,543.0	4,798.6	4,602.8	26.3	17.7	-61.09	5,251.3	-913.8	4,614.2	4,571.1	43.11	107.024		
6,950.0	6,573.2	4,824.1	4,625.7	26.4	17.8	-62.51	5,261.8	-917.7	4,617.6	4,574.2	43.38	106.448		
7,000.0	6,599.8	4,845.4	4,644.8	26.5	17.9	-63.58	5,270.5	-920.9	4,620.9	4,577.3	43.63	105.918		
7,050.0	6,622.5	4,862.4	4,660.1	26.6	18.0	-64.35	5,277.5	-923.4	4,624.1	4,580.2	43.86	105.437		
7,100.0	6,641.1	4,874.9	4,671.3	26.7	18.1	-64.85	5,282.7	-925.3	4,627.2	4,583.1	44.07	105.004		
7,150.0	6,655.4	4,882.8	4,678.4	26.8	18.1	-65.12	5,285.9	-926.5	4,630.2	4,586.0	44.26	104.621		
7,200.0	6,665.4	4,886.0	4,681.3	26.9	18.1	-65.17	5,287.3	-926.9	4,633.2	4,588.8	44.43	104.290		
7,250.0	6,670.8	4,884.5	4,680.0	27.0	18.1	-65.02	5,286.7	-926.7	4,636.1	4,591.5	44.57	104.011		
7,285.7	6,672.0	4,880.6	4,676.5	27.1	18.1	-64.79	5,285.1	-926.1	4,638.1	4,593.4	44.66	103.844		
7,300.0	6,672.0	4,878.6	4,674.7	27.1	18.1	-64.77	5,284.2	-925.8	4,638.9	4,594.2	44.70	103.783		
7,400.0	6,672.0	4,864.3	4,661.8	27.3	18.0	-64.59	5,278.3	-923.7	4,645.7	4,600.8	44.97	103.301		
7,500.0	6,672.0	4,850.0	4,649.0	27.6	18.0	-64.42	5,272.5	-921.6	4,654.7	4,609.4	45.30	102.760		
7,600.0	6,672.0	4,835.7	4,636.2	28.0	17.9	-64.24	5,266.6	-919.4	4,665.7	4,620.0	45.67	102.170		
7,700.0	6,672.0	4,821.5	4,623.3	28.3	17.8	-64.07	5,260.7	-917.3	4,678.7	4,632.6	46.08	101.542		
7,800.0	6,672.0	4,807.2	4,610.5	28.8	17.8	-63.89	5,254.8	-915.1	4,693.8	4,647.3	46.52	100.889		
7,900.0	6,672.0	4,807.1	4,597.7	29.3	17.8	-63.72	5,248.9	-913.0	4,711.0	4,663.9	47.07	100.088		
8,000.0	6,672.0	4,778.7	4,584.9	29.8	17.7	-63.54	5,243.1	-910.9	4,730.1	4,682.6	47.52	99.547		
8,100.0	6,672.0	4,764.4	4,572.0	30.4	17.6	-63.37	5,237.2	-908.7	4,751.2	4,703.1	48.05	98.877		
8,200.0	6,672.0	4,750.1	4,559.2	31.0	17.5	-63.20	5,231.3	-906.6	4,774.3	4,725.7	48.61	98.220		
8,300.0	6,672.0	4,735.9	4,546.4	31.7	17.5	-63.02	5,225.4	-904.4	4,799.3	4,750.1	49.18	97.583		
8,400.0	6,672.0	4,721.6	4,533.6	32.4	17.4	-62.85	5,219.6	-902.3	4,826.1	4,776.4	49.77	96.971		
8,500.0	6,672.0	4,707.4	4,520.8	33.1	17.3	-62.68	5,213.7	-900.2	4,854.9	4,804.5	50.37	96.391		
8,600.0	6,672.0	4,706.9	4,508.0	33.9	17.3	-62.50	5,207.8	-898.0	4,885.5	4,834.4	51.03	95.732		
8,700.0	6,672.0	4,678.9	4,495.2	34.7	17.2	-62.33	5,202.0	-895.9	4,917.8	4,866.3	51.58	95.338		
8,800.0	6,672.0	4,664.6	4,482.4	35.5	17.2	-62.16	5,196.1	-893.8	4,952.0	4,899.8	52.20	94.872		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - SLW Ranch State BB06-682 - SLW Ranch State BB06-682 - Plan 1													Offset Site Error: 0.0 ft	
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
8,900.0	6,672.0	4,650.4	4,469.6	36.3	17.1	-61.98	5,190.2	-891.6	4,987.8	4,935.0	52.81	94.450		
9,000.0	6,672.0	4,636.2	4,456.8	37.2	17.0	-61.81	5,184.4	-889.5	5,025.4	4,972.0	53.42	94.073		
9,100.0	6,672.0	4,621.9	4,444.0	38.1	17.0	-61.64	5,178.5	-887.4	5,064.6	5,010.5	54.03	93.741		
9,200.0	6,672.0	9,141.0	6,602.0	39.0	38.4	-89.47	6,225.2	1,255.4	5,091.6	5,014.4	77.24	65.918		
9,300.0	6,672.0	9,240.6	6,602.0	39.9	39.3	-89.47	6,226.4	1,355.0	5,090.9	5,011.9	79.07	64.389		
9,400.0	6,672.0	9,340.2	6,602.0	40.8	40.2	-89.47	6,227.5	1,454.6	5,090.2	5,009.3	80.92	62.901		
9,500.0	6,672.0	9,439.8	6,602.0	41.8	41.1	-89.47	6,228.7	1,554.2	5,089.5	5,006.7	82.82	61.456		
9,600.0	6,672.0	9,539.4	6,602.0	42.7	42.1	-89.47	6,229.9	1,653.8	5,088.8	5,004.1	84.74	60.054		
9,700.0	6,672.0	9,639.0	6,602.0	43.7	43.0	-89.47	6,231.0	1,753.4	5,088.1	5,001.4	86.69	58.695		
9,800.0	6,672.0	9,738.6	6,602.0	44.7	44.0	-89.47	6,232.2	1,853.0	5,087.4	4,998.8	88.66	57.379		
9,900.0	6,672.0	9,838.2	6,602.0	45.7	45.0	-89.47	6,233.4	1,952.6	5,086.7	4,996.1	90.66	56.105		
10,000.0	6,672.0	9,937.7	6,602.0	46.7	46.0	-89.47	6,234.6	2,052.1	5,086.0	4,993.3	92.69	54.872		
10,100.0	6,672.0	10,037.3	6,602.0	47.7	47.0	-89.47	6,235.8	2,151.7	5,085.3	4,990.6	94.73	53.680		
10,200.0	6,672.0	10,136.9	6,602.0	48.8	48.1	-89.47	6,237.1	2,251.3	5,084.6	4,987.8	96.80	52.527		
10,300.0	6,672.0	10,236.5	6,602.0	49.8	49.1	-89.47	6,238.3	2,350.9	5,083.9	4,985.0	98.88	51.413		
10,400.0	6,672.0	10,336.1	6,602.0	50.9	50.2	-89.47	6,239.5	2,450.5	5,083.2	4,982.2	100.99	50.335		
10,500.0	6,672.0	10,435.7	6,602.0	51.9	51.2	-89.47	6,240.8	2,550.1	5,082.5	4,979.4	103.11	49.294		
10,600.0	6,672.0	10,535.3	6,602.0	53.0	52.3	-89.47	6,242.0	2,649.7	5,081.8	4,976.6	105.24	48.287		
10,700.0	6,672.0	10,634.9	6,602.0	54.1	53.3	-89.47	6,243.3	2,749.2	5,081.1	4,973.7	107.39	47.314		
10,800.0	6,672.0	10,734.5	6,602.0	55.2	54.4	-89.47	6,244.6	2,848.8	5,080.4	4,970.9	109.56	46.373		
10,900.0	6,672.0	10,834.1	6,602.0	56.3	55.5	-89.47	6,245.8	2,948.4	5,079.7	4,968.0	111.73	45.464		
11,000.0	6,672.0	10,933.7	6,602.0	57.4	56.6	-89.47	6,247.1	3,048.0	5,079.1	4,965.1	113.92	44.584		
11,100.0	6,672.0	11,033.3	6,602.0	58.5	57.7	-89.47	6,248.4	3,147.6	5,078.4	4,962.2	116.12	43.733		
11,200.0	6,672.0	11,132.9	6,602.0	59.6	58.8	-89.47	6,249.7	3,247.2	5,077.7	4,959.3	118.33	42.910		
11,300.0	6,672.0	11,232.5	6,602.0	60.7	59.9	-89.47	6,251.0	3,346.8	5,077.0	4,956.4	120.56	42.113		
11,400.0	6,672.0	11,332.1	6,602.0	61.8	61.0	-89.47	6,252.3	3,446.3	5,076.3	4,953.5	122.79	41.342		
11,500.0	6,672.0	11,431.7	6,602.0	62.9	62.1	-89.47	6,253.7	3,545.9	5,075.6	4,950.5	125.03	40.595		
11,600.0	6,672.0	11,531.2	6,602.0	64.1	63.2	-89.47	6,255.0	3,645.5	5,074.9	4,947.6	127.28	39.872		
11,700.0	6,672.0	11,630.8	6,602.0	65.2	64.4	-89.47	6,256.3	3,745.1	5,074.2	4,944.7	129.54	39.172		
11,800.0	6,672.0	11,730.4	6,602.0	66.3	65.5	-89.47	6,257.7	3,844.7	5,073.5	4,941.7	131.80	38.493		
11,900.0	6,672.0	11,830.0	6,602.0	67.5	66.6	-89.47	6,259.0	3,944.3	5,072.8	4,938.7	134.08	37.835		
12,000.0	6,672.0	11,929.6	6,602.0	68.6	67.8	-89.47	6,260.4	4,043.9	5,072.1	4,935.8	136.36	37.197		
12,100.0	6,672.0	12,029.2	6,602.0	69.8	68.9	-89.47	6,261.8	4,143.4	5,071.4	4,932.8	138.65	36.578		
12,200.0	6,672.0	12,128.8	6,602.0	70.9	70.0	-89.47	6,263.1	4,243.0	5,070.7	4,929.8	140.94	35.978		
12,300.0	6,672.0	12,228.4	6,602.0	72.1	71.2	-89.47	6,264.5	4,342.6	5,070.0	4,926.8	143.24	35.396		
12,400.0	6,672.0	12,328.0	6,602.0	73.2	72.3	-89.47	6,265.9	4,442.2	5,069.4	4,923.8	145.55	34.830		
12,500.0	6,672.0	12,427.6	6,602.0	74.4	73.5	-89.47	6,267.3	4,541.8	5,068.7	4,920.8	147.86	34.281		
12,600.0	6,672.0	12,527.2	6,602.0	75.5	74.6	-89.47	6,268.7	4,641.4	5,068.0	4,917.8	150.17	33.747		
12,696.6	6,672.0	12,588.5	6,602.0	76.7	75.4	-89.47	6,269.6	4,702.7	5,067.4	4,915.4	152.05	33.328		
12,700.0	6,672.0	12,588.5	6,602.0	76.7	75.4	-89.47	6,269.6	4,702.7	5,067.4	4,915.3	152.09	33.318		
12,800.0	6,672.0	12,588.5	6,602.0	77.9	75.4	-89.47	6,269.6	4,702.7	5,068.5	4,915.2	153.33	33.056		
12,900.0	6,672.0	12,588.5	6,602.0	79.0	75.4	-89.47	6,269.6	4,702.7	5,071.5	4,917.0	154.52	32.821		
13,000.0	6,672.0	12,588.5	6,602.0	80.2	75.4	-89.47	6,269.6	4,702.7	5,076.5	4,920.8	155.66	32.613		
13,100.0	6,672.0	12,588.5	6,602.0	81.4	75.4	-89.47	6,269.6	4,702.7	5,083.4	4,926.7	156.74	32.432		
13,200.0	6,672.0	12,588.5	6,602.0	82.6	75.4	-89.47	6,269.6	4,702.7	5,092.3	4,934.5	157.77	32.277		
13,300.0	6,672.0	12,588.5	6,602.0	83.7	75.4	-89.47	6,269.6	4,702.7	5,103.1	4,944.4	158.74	32.147		
13,400.0	6,672.0	12,588.5	6,602.0	84.9	75.4	-89.47	6,269.6	4,702.7	5,115.8	4,956.2	159.66	32.042		
13,500.0	6,672.0	12,588.5	6,602.0	86.1	75.4	-89.47	6,269.6	4,702.7	5,130.5	4,970.0	160.52	31.962		
13,600.0	6,672.0	12,588.5	6,602.0	87.3	75.4	-89.47	6,269.6	4,702.7	5,147.0	4,985.7	161.32	31.905		
13,700.0	6,672.0	12,588.5	6,602.0	88.4	75.4	-89.47	6,269.6	4,702.7	5,165.5	5,003.4	162.07	31.871		
13,800.0	6,672.0	12,588.5	6,602.0	89.6	75.4	-89.47	6,269.6	4,702.7	5,185.7	5,023.0	162.77	31.860 SF		
13,900.0	6,672.0	12,588.5	6,602.0	90.8	75.4	-89.47	6,269.6	4,702.7	5,207.8	5,044.4	163.40	31.871		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 06 - SLW Ranch State BB06-682 - SLW Ranch State BB06-682 - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
14,000.0	6,672.0	12,588.5	6,602.0	92.0	75.4	-89.47	6,269.6	4,702.7	5,231.8	5,067.8	163.99	31.904		
14,100.0	6,672.0	12,588.5	6,602.0	93.2	75.4	-89.47	6,269.6	4,702.7	5,257.5	5,093.0	164.51	31.958		
14,200.0	6,672.0	12,588.5	6,602.0	94.4	75.4	-89.47	6,269.6	4,702.7	5,284.9	5,119.9	164.99	32.032		
14,300.0	6,672.0	12,588.5	6,602.0	95.6	75.4	-89.47	6,269.6	4,702.7	5,314.1	5,148.7	165.41	32.127		
14,400.0	6,672.0	12,588.5	6,602.0	96.8	75.4	-89.47	6,269.6	4,702.7	5,345.0	5,179.3	165.78	32.241		
14,500.0	6,672.0	12,588.5	6,602.0	98.0	75.4	-89.47	6,269.6	4,702.7	5,377.6	5,211.5	166.11	32.375		
14,600.0	6,672.0	12,588.5	6,602.0	99.2	75.4	-89.47	6,269.6	4,702.7	5,411.8	5,245.5	166.38	32.527		
14,700.0	6,672.0	12,588.5	6,602.0	100.4	75.4	-89.47	6,269.6	4,702.7	5,447.7	5,281.1	166.61	32.698		
14,800.0	6,672.0	12,588.5	6,602.0	101.6	75.4	-89.47	6,269.6	4,702.7	5,485.1	5,318.3	166.79	32.886		
14,900.0	6,672.0	12,588.5	6,602.0	102.7	75.4	-89.47	6,269.6	4,702.7	5,524.1	5,357.1	166.93	33.092		
15,000.0	6,672.0	12,588.5	6,602.0	103.9	75.4	-89.47	6,269.6	4,702.7	5,564.6	5,397.5	167.03	33.315		
15,100.0	6,672.0	12,588.5	6,602.0	105.1	75.4	-89.47	6,269.6	4,702.7	5,606.5	5,439.5	167.09	33.555		
15,200.0	6,672.0	12,588.5	6,602.0	106.3	75.4	-89.47	6,269.6	4,702.7	5,650.0	5,482.9	167.11	33.811		
15,300.0	6,672.0	12,588.5	6,602.0	107.6	75.4	-89.47	6,269.6	4,702.7	5,694.8	5,527.7	167.09	34.083		
15,400.0	6,672.0	12,588.5	6,602.0	108.8	75.4	-89.47	6,269.6	4,702.7	5,741.0	5,574.0	167.04	34.370		
15,500.0	6,672.0	12,588.5	6,602.0	110.0	75.4	-89.47	6,269.6	4,702.7	5,788.6	5,621.7	166.95	34.672		
15,600.0	6,672.0	12,588.5	6,602.0	111.2	75.4	-89.47	6,269.6	4,702.7	5,837.5	5,670.7	166.84	34.990		
15,700.0	6,672.0	12,588.5	6,602.0	112.4	75.4	-89.47	6,269.6	4,702.7	5,887.7	5,721.0	166.69	35.321		
15,800.0	6,672.0	12,588.5	6,602.0	113.6	75.4	-89.47	6,269.6	4,702.7	5,939.1	5,772.6	166.52	35.667		
15,900.0	6,672.0	12,588.5	6,602.0	114.8	75.4	-89.47	6,269.6	4,702.7	5,991.8	5,825.5	166.32	36.026		
16,000.0	6,672.0	12,588.5	6,602.0	116.0	75.4	-89.47	6,269.6	4,702.7	6,045.7	5,879.6	166.09	36.399		
16,100.0	6,672.0	12,588.5	6,602.0	117.2	75.4	-89.47	6,269.6	4,702.7	6,100.7	5,934.8	165.85	36.785		
16,200.0	6,672.0	12,588.5	6,602.0	118.4	75.4	-89.47	6,269.6	4,702.7	6,156.8	5,991.2	165.58	37.183		
16,300.0	6,672.0	12,588.5	6,602.0	119.6	75.4	-89.47	6,269.6	4,702.7	6,214.0	6,048.7	165.29	37.594		
16,400.0	6,672.0	12,588.5	6,602.0	120.8	75.4	-89.47	6,269.6	4,702.7	6,272.3	6,107.3	164.99	38.017		
16,500.0	6,672.0	12,588.5	6,602.0	122.0	75.4	-89.47	6,269.6	4,702.7	6,331.7	6,167.0	164.66	38.452		
16,600.0	6,672.0	12,588.5	6,602.0	123.2	75.4	-89.47	6,269.6	4,702.7	6,392.0	6,227.7	164.32	38.899		
16,700.0	6,672.0	12,588.5	6,602.0	124.5	75.4	-89.47	6,269.6	4,702.7	6,453.3	6,289.3	163.97	39.357		
16,800.0	6,672.0	12,588.5	6,602.0	125.7	75.4	-89.47	6,269.6	4,702.7	6,515.6	6,352.0	163.60	39.825		
16,900.0	6,672.0	12,588.5	6,602.0	126.9	75.4	-89.47	6,269.6	4,702.7	6,578.8	6,415.6	163.23	40.305		
17,000.0	6,672.0	12,588.5	6,602.0	128.1	75.4	-89.47	6,269.6	4,702.7	6,642.9	6,480.0	162.84	40.795		
17,100.0	6,672.0	12,588.5	6,602.0	129.3	75.4	-89.47	6,269.6	4,702.7	6,707.8	6,545.4	162.44	41.295		
17,200.0	6,672.0	12,588.5	6,602.0	130.5	75.4	-89.47	6,269.6	4,702.7	6,773.7	6,611.6	162.03	41.805		
17,300.0	6,672.0	12,588.5	6,602.0	131.7	75.4	-89.47	6,269.6	4,702.7	6,840.3	6,678.7	161.61	42.325		
17,400.0	6,672.0	12,588.5	6,602.0	133.0	75.4	-89.47	6,269.6	4,702.7	6,907.7	6,746.5	161.19	42.855		
17,500.0	6,672.0	12,588.5	6,602.0	134.2	75.4	-89.47	6,269.6	4,702.7	6,976.0	6,815.2	160.76	43.393		
17,600.0	6,672.0	12,588.5	6,602.0	135.4	75.4	-89.47	6,269.6	4,702.7	7,044.9	6,884.6	160.33	43.941		
17,700.0	6,672.0	12,588.5	6,602.0	136.6	75.4	-89.47	6,269.6	4,702.7	7,114.6	6,954.7	159.89	44.498		
17,800.0	6,672.0	12,588.5	6,602.0	137.8	75.4	-89.47	6,269.6	4,702.7	7,185.0	7,025.6	159.45	45.063		
17,900.0	6,672.0	12,588.5	6,602.0	139.0	75.4	-89.47	6,269.6	4,702.7	7,256.1	7,097.1	159.00	45.636		
18,000.0	6,672.0	12,588.5	6,602.0	140.3	75.4	-89.47	6,269.6	4,702.7	7,327.9	7,169.3	158.55	46.218		
18,100.0	6,672.0	12,588.5	6,602.0	141.5	75.4	-89.47	6,269.6	4,702.7	7,400.3	7,242.2	158.10	46.808		
18,200.0	6,672.0	12,588.5	6,602.0	142.7	75.4	-89.47	6,269.6	4,702.7	7,473.4	7,315.7	157.65	47.405		
18,300.0	6,672.0	12,588.5	6,602.0	143.9	75.4	-89.47	6,269.6	4,702.7	7,547.0	7,389.8	157.20	48.010		
18,342.5	6,672.0	12,588.5	6,602.0	144.4	75.4	-89.47	6,269.6	4,702.7	7,578.5	7,421.5	157.00	48.269		



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - Skurich 11-07 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-10.60	839.8	-157.2	855.9					
100.0	100.0	51.3	51.3	0.1	0.1	-10.60	839.7	-157.2	854.3	854.1	0.22	3,961.569		
200.0	200.0	152.0	152.0	0.5	0.4	-10.60	839.3	-157.0	853.9	853.0	0.84	1,014.932		
269.3	269.3	218.3	218.3	0.7	0.6	-10.58	839.2	-156.7	853.7	852.4	1.32	645.962		
300.0	300.0	246.5	246.5	0.8	0.7	-10.57	839.3	-156.6	853.8	852.2	1.53	558.018		
400.0	400.0	348.7	348.7	1.2	1.0	-10.57	839.8	-156.8	854.3	852.0	2.24	380.565		
500.0	500.0	455.8	455.8	1.6	1.4	-10.62	839.0	-157.3	853.7	850.7	2.98	286.720		
600.0	600.0	555.9	555.9	1.9	1.8	-10.61	838.3	-157.0	852.9	849.2	3.69	231.378		
700.0	700.0	654.8	654.7	2.3	2.1	-10.59	837.6	-156.6	852.1	847.7	4.39	194.080		
800.0	800.0	752.0	751.9	2.6	2.5	-10.56	837.1	-156.0	851.6	846.5	5.09	167.338		
900.0	900.0	849.5	849.5	3.0	2.8	-10.53	837.1	-155.5	851.4	845.6	5.79	147.089		
1,000.0	1,000.0	949.8	949.8	3.4	3.1	-10.49	837.1	-155.0	851.4	844.9	6.50	131.050		
1,100.0	1,100.0	1,050.2	1,050.2	3.7	3.5	-10.45	837.1	-154.4	851.2	844.0	7.21	118.130		
1,159.8	1,159.8	1,109.1	1,109.1	3.9	3.7	-10.43	837.1	-154.0	851.1	843.5	7.63	111.618		
1,200.0	1,200.0	1,147.5	1,147.4	4.1	3.8	-10.42	837.2	-153.9	851.2	843.3	7.90	107.702		
1,300.0	1,300.0	1,246.5	1,246.4	4.4	4.2	-10.42	837.5	-154.0	851.5	842.9	8.61	98.940		
1,400.0	1,400.0	1,346.9	1,346.9	4.8	4.5	-10.45	837.6	-154.5	851.7	842.4	9.31	91.436		
1,500.0	1,500.0	1,445.0	1,445.0	5.1	4.9	-10.48	837.9	-155.0	852.1	842.1	10.02	85.079		
1,600.0	1,600.0	1,545.0	1,545.0	5.5	5.2	-10.51	838.3	-155.5	852.6	841.9	10.72	79.516		
1,700.0	1,700.0	1,646.3	1,646.2	5.9	5.6	-10.56	838.5	-156.3	853.0	841.6	11.43	74.597		
1,800.0	1,800.0	1,744.7	1,744.6	6.2	5.9	-10.62	838.7	-157.2	853.3	841.2	12.14	70.312		
1,900.0	1,900.0	1,840.2	1,840.2	6.6	6.3	-10.70	839.2	-158.5	854.1	841.3	12.83	66.577		
2,000.0	2,000.0	1,936.3	1,936.2	6.9	6.6	-10.80	840.2	-160.3	855.4	841.9	13.52	63.258		
2,100.0	2,100.0	2,035.4	2,035.3	7.3	6.9	-10.90	841.4	-162.1	857.0	842.7	14.23	60.234		
2,200.0	2,200.0	2,135.7	2,135.6	7.7	7.3	-11.00	842.7	-163.8	858.6	843.7	14.94	57.481		
2,300.0	2,300.0	2,237.5	2,237.3	8.0	7.6	-39.97	843.9	-165.6	858.7	843.1	15.65	54.873		
2,400.0	2,399.8	2,338.8	2,338.6	8.4	8.0	40.11	844.8	-167.6	856.0	839.6	16.36	52.330		
2,500.0	2,499.5	2,437.7	2,437.5	8.7	8.3	40.47	845.7	-169.2	850.5	833.4	17.06	49.859		
2,600.0	2,598.7	2,533.4	2,533.2	9.1	8.7	41.03	846.9	-170.2	842.7	825.0	17.75	47.488		
2,700.0	2,697.5	2,629.2	2,629.0	9.4	9.0	41.80	848.6	-171.2	832.8	814.4	18.44	45.174		
2,800.0	2,795.6	2,726.1	2,725.8	9.8	9.4	42.75	850.6	-172.7	820.8	801.7	19.13	42.904		
2,900.0	2,893.1	2,825.8	2,825.5	10.1	9.7	43.93	852.5	-174.6	806.5	786.7	19.84	40.649		
3,000.0	2,989.6	2,928.0	2,927.7	10.5	10.1	45.36	854.0	-177.2	789.5	769.0	20.56	38.402		
3,100.0	3,085.3	3,031.3	3,030.9	10.9	10.4	47.09	854.7	-179.9	769.7	748.4	21.28	36.165		
3,200.0	3,179.8	3,128.9	3,128.5	11.2	10.8	49.13	854.7	-181.7	747.4	725.5	21.99	33.992		
3,300.0	3,273.2	3,220.5	3,220.1	11.6	11.1	51.48	854.8	-182.3	723.8	701.1	22.68	31.914		
3,387.5	3,353.8	3,299.2	3,298.8	11.9	11.4	53.89	855.1	-181.7	702.5	679.2	23.28	30.170		
3,400.0	3,365.2	3,310.5	3,310.1	12.0	11.4	54.22	855.2	-181.5	699.4	676.1	23.37	29.926		
3,500.0	3,456.8	3,400.7	3,400.3	12.4	11.7	56.91	855.7	-179.9	676.0	651.9	24.07	28.084		
3,600.0	3,548.3	3,493.7	3,493.2	12.8	12.0	59.87	856.2	-178.2	654.3	629.5	24.79	26.396		
3,700.0	3,639.8	3,588.9	3,588.5	13.2	12.4	63.03	856.4	-176.9	634.0	608.5	25.51	24.850		
3,800.0	3,731.4	3,681.1	3,680.7	13.6	12.7	66.25	856.2	-175.9	615.5	589.2	26.24	23.455		
3,900.0	3,822.9	3,772.4	3,772.0	14.0	13.0	69.64	855.8	-174.6	599.1	572.2	26.97	22.214		
4,000.0	3,914.4	3,861.8	3,861.3	14.4	13.3	73.13	855.3	-172.8	585.4	557.7	27.70	21.131		
4,100.0	4,005.9	3,948.9	3,948.5	14.8	13.6	76.68	855.1	-170.7	574.7	546.3	28.43	20.219		
4,200.0	4,097.5	4,036.8	4,036.3	15.2	13.9	80.33	855.5	-168.5	567.7	538.5	29.15	19.474		
4,300.0	4,189.0	4,128.6	4,128.1	15.6	14.3	84.13	856.5	-166.9	563.7	533.8	29.88	18.864		
4,400.0	4,280.5	4,222.9	4,222.4	16.1	14.6	88.02	857.5	-165.8	562.4	531.7	30.62	18.365		
4,405.2	4,285.3	4,227.8	4,227.2	16.1	14.6	88.22	857.5	-165.7	562.4	531.7	30.66	18.342		
4,500.0	4,372.1	4,316.4	4,315.8	16.5	14.9	91.91	857.8	-164.7	563.5	532.1	31.35	17.972		
4,600.0	4,463.6	4,406.2	4,405.6	16.9	15.2	95.68	857.7	-163.2	567.6	535.5	32.06	17.701		
4,700.0	4,555.1	4,493.3	4,492.7	17.4	15.5	99.29	857.8	-161.3	575.1	542.3	32.75	17.558		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - Skurich 11-07 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
4,800.0	4,646.7	4,580.4	4,579.8	17.8	15.8	102.80	858.3	-159.1	586.0	552.6	33.43	17.529		
4,900.0	4,738.2	4,666.0	4,665.3	18.2	16.1	106.13	859.2	-156.5	600.4	566.3	34.09	17.611		
5,000.0	4,829.7	4,753.8	4,753.0	18.7	16.4	109.41	860.4	-153.1	617.9	583.2	34.75	17.780		
5,100.0	4,921.3	4,847.1	4,846.3	19.1	16.8	112.71	861.9	-149.6	637.9	602.4	35.45	17.992		
5,200.0	5,012.8	4,945.8	4,944.9	19.5	17.1	115.98	863.2	-146.7	659.1	622.9	36.19	18.213		
5,300.0	5,104.3	5,045.8	5,044.9	20.0	17.5	119.10	863.9	-144.9	681.0	644.1	36.93	18.441		
5,400.0	5,195.8	5,146.9	5,146.0	20.4	17.8	122.07	864.2	-144.4	703.5	665.8	37.68	18.671		
5,500.0	5,287.4	5,245.7	5,244.8	20.9	18.2	124.82	863.8	-145.1	726.2	687.8	38.41	18.907		
5,600.0	5,378.9	5,339.1	5,338.2	21.3	18.5	127.31	862.7	-146.2	750.0	710.9	39.11	19.176		
5,700.0	5,470.4	5,430.7	5,429.8	21.8	18.8	129.61	861.8	-147.3	775.0	735.2	39.80	19.471		
5,800.0	5,562.0	5,521.3	5,520.3	22.2	19.1	131.79	860.3	-148.2	801.3	760.8	40.49	19.792		
5,900.0	5,653.5	5,613.1	5,612.1	22.7	19.4	133.89	858.6	-149.1	828.8	787.6	41.18	20.126		
6,000.0	5,745.0	5,707.2	5,706.2	23.1	19.8	135.91	856.8	-150.2	857.2	815.3	41.89	20.461		
6,100.0	5,836.6	5,798.7	5,797.7	23.6	20.1	137.76	855.0	-151.4	886.4	843.8	42.59	20.812		
6,200.0	5,928.1	5,884.5	5,883.5	24.0	20.4	139.41	852.9	-152.3	916.7	873.4	43.25	21.196		
6,278.6	6,000.0	5,955.3	5,954.3	24.4	20.6	140.73	850.8	-152.7	941.4	897.6	43.79	21.497		
6,290.0	6,010.4	5,965.7	5,964.6	24.4	20.7	138.98	850.5	-152.8	945.0	901.1	43.87	21.541		
6,300.0	6,019.5	5,974.9	5,973.8	24.5	20.7	137.43	850.3	-152.9	948.2	904.2	43.94	21.579		
6,350.0	6,065.8	6,021.3	6,020.2	24.7	20.9	127.84	848.8	-153.2	961.3	917.0	44.29	21.707		
6,400.0	6,113.0	6,068.8	6,067.7	24.9	21.0	114.77	847.4	-153.6	970.0	925.4	44.63	21.735		
6,450.0	6,160.7	6,116.5	6,115.4	25.1	21.2	98.75	846.0	-154.0	974.3	929.3	44.96	21.669		
6,500.0	6,208.5	6,163.6	6,162.5	25.3	21.4	82.28	844.6	-154.4	974.1	928.8	45.28	21.513		
6,550.0	6,255.8	6,211.3	6,210.1	25.4	21.5	68.35	843.1	-154.8	969.5	923.9	45.59	21.268		
6,600.0	6,302.5	6,261.2	6,260.0	25.6	21.7	58.15	841.4	-155.3	960.4	914.5	45.90	20.926		
6,650.0	6,347.9	6,310.2	6,308.9	25.7	21.9	51.24	839.8	-156.1	946.9	900.7	46.19	20.502		
6,700.0	6,391.6	6,359.2	6,357.9	25.9	22.0	46.88	838.4	-157.1	929.1	882.6	46.47	19.994		
6,750.0	6,433.4	6,405.5	6,404.2	26.0	22.2	44.41	837.1	-158.4	907.1	860.4	46.72	19.415		
6,800.0	6,472.8	6,445.7	6,444.4	26.1	22.3	43.31	836.0	-159.6	881.3	834.4	46.92	18.783		
6,850.0	6,509.4	6,483.1	6,481.7	26.2	22.5	43.47	835.1	-160.9	852.1	805.0	47.10	18.091		
6,900.0	6,543.0	6,516.4	6,515.0	26.3	22.6	44.76	834.3	-162.1	819.8	772.6	47.26	17.348		
6,950.0	6,573.2	6,545.4	6,544.0	26.4	22.7	47.19	833.5	-163.1	784.8	737.4	47.39	16.562		
7,000.0	6,599.8	6,570.5	6,569.0	26.5	22.8	50.83	832.8	-164.1	747.4	699.9	47.50	15.736		
7,050.0	6,622.5	6,591.5	6,589.9	26.6	22.9	55.76	832.1	-164.9	708.1	660.5	47.59	14.878		
7,100.0	6,641.1	6,608.1	6,606.6	26.7	22.9	62.01	831.6	-165.6	667.3	619.6	47.68	13.994		
7,150.0	6,655.4	6,617.8	6,616.2	26.8	22.9	69.03	831.3	-165.9	625.5	577.7	47.74	13.101		
7,200.0	6,665.4	6,624.9	6,623.3	26.9	23.0	77.07	831.0	-166.2	583.1	535.3	47.82	12.193		
7,250.0	6,670.8	6,674.5	6,673.9	27.0	23.1	84.87	831.0	-166.3	540.5	492.5	48.05	11.249		
7,285.7	6,672.0	6,674.4	6,674.0	27.1	23.1	90.62	831.0	-166.3	510.4	462.2	48.13	10.604		
7,300.0	6,672.0	6,674.9	6,673.6	27.1	23.1	90.53	831.1	-166.3	498.4	450.2	48.17	10.346		
7,400.0	6,672.0	6,624.4	6,622.9	27.3	23.0	90.39	831.1	-166.2	418.9	370.5	48.40	8.656		
7,500.0	6,672.0	6,621.1	6,619.5	27.6	23.0	89.70	831.2	-166.0	350.0	301.0	49.04	7.137		
7,600.0	6,672.0	6,617.6	6,616.1	28.0	22.9	88.98	831.3	-165.9	299.2	249.2	50.02	5.982		
7,700.0	6,672.0	6,614.0	6,612.5	28.3	22.9	88.23	831.4	-165.8	276.6	225.6	51.00	5.424		
7,715.2	6,672.0	6,613.5	6,611.9	28.4	22.9	88.12	831.4	-165.8	276.2	225.1	51.10	5.404 CC, ES, SF		
7,800.0	6,672.0	6,610.3	6,608.7	28.8	22.9	87.45	831.5	-165.6	288.9	237.6	51.31	5.630		
7,900.0	6,672.0	6,606.3	6,604.8	29.3	22.9	86.64	831.7	-165.5	332.3	281.3	50.94	6.523		
8,000.0	6,672.0	6,602.2	6,600.7	29.8	22.9	85.79	831.8	-165.3	396.6	346.3	50.36	7.875		
8,100.0	6,672.0	6,598.2	6,596.6	30.4	22.9	84.95	831.9	-165.2	473.5	423.6	49.86	9.496		
8,200.0	6,672.0	6,594.3	6,592.8	31.0	22.9	84.14	832.1	-165.0	557.7	508.2	49.48	11.272		
8,300.0	6,672.0	6,590.4	6,588.9	31.7	22.8	83.35	832.2	-164.9	646.4	597.2	49.19	13.140		
8,400.0	6,672.0	6,586.6	6,585.1	32.4	22.8	82.56	832.3	-164.7	738.0	689.0	48.98	15.066		
8,500.0	6,672.0	6,582.8	6,581.3	33.1	22.8	81.79	832.4	-164.6	831.5	782.7	48.82	17.031		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - Skurich 11-07 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
8,600.0	6,672.0	6,579.1	6,577.6	33.9	22.8	81.02	832.5	-164.4	926.4	877.7	48.70	19.021		
8,700.0	6,672.0	6,575.4	6,573.9	34.7	22.8	80.26	832.6	-164.3	1,022.2	973.6	48.61	21.029		
8,800.0	6,672.0	6,571.7	6,570.2	35.5	22.8	79.51	832.8	-164.1	1,118.7	1,070.2	48.53	23.051		
8,900.0	6,672.0	6,568.1	6,566.6	36.3	22.8	78.77	832.9	-164.0	1,215.8	1,167.4	48.47	25.082		
9,000.0	6,672.0	6,564.4	6,563.0	37.2	22.8	78.04	833.0	-163.8	1,313.3	1,264.9	48.43	27.121		
9,100.0	6,672.0	6,560.9	6,559.4	38.1	22.7	77.31	833.1	-163.7	1,411.2	1,362.8	48.39	29.165		
9,200.0	6,672.0	6,557.3	6,555.8	39.0	22.7	76.60	833.2	-163.6	1,509.3	1,461.0	48.36	31.213		
9,300.0	6,672.0	6,553.8	6,552.3	39.9	22.7	75.90	833.3	-163.4	1,607.7	1,559.4	48.33	33.263		
9,400.0	6,672.0	6,550.3	6,548.9	40.8	22.7	75.20	833.4	-163.3	1,706.2	1,657.9	48.31	35.316		
9,500.0	6,672.0	6,546.9	6,545.4	41.8	22.7	74.51	833.5	-163.2	1,804.9	1,756.6	48.30	37.370		
9,600.0	6,672.0	6,543.4	6,542.0	42.7	22.7	73.84	833.6	-163.0	1,903.7	1,855.5	48.29	39.425		
9,700.0	6,672.0	6,540.0	6,538.6	43.7	22.7	73.17	833.7	-162.9	2,002.7	1,954.4	48.28	41.480		
9,800.0	6,672.0	6,536.7	6,535.2	44.7	22.7	72.51	833.8	-162.8	2,101.7	2,053.4	48.28	43.535		
9,900.0	6,672.0	6,533.3	6,531.9	45.7	22.6	71.85	833.8	-162.7	2,200.8	2,152.5	48.27	45.590		
10,000.0	6,672.0	6,530.0	6,528.6	46.7	22.6	71.21	833.9	-162.5	2,300.0	2,251.7	48.28	47.644		
10,100.0	6,672.0	6,526.7	6,525.3	47.7	22.6	70.58	834.0	-162.4	2,399.3	2,351.0	48.28	49.696		
10,200.0	6,672.0	6,523.5	6,522.1	48.8	22.6	69.95	834.1	-162.3	2,498.6	2,450.3	48.28	51.747		
10,300.0	6,672.0	6,520.3	6,518.8	49.8	22.6	69.33	834.2	-162.2	2,597.9	2,549.6	48.29	53.797		
10,400.0	6,672.0	6,517.1	6,515.7	50.9	22.6	68.73	834.3	-162.1	2,697.3	2,649.0	48.30	55.845		
10,500.0	6,672.0	6,513.9	6,512.5	51.9	22.6	68.12	834.4	-162.0	2,796.8	2,748.4	48.31	57.891		
10,600.0	6,672.0	6,510.8	6,509.3	53.0	22.6	67.53	834.4	-161.8	2,896.2	2,847.9	48.32	59.934		
10,700.0	6,672.0	6,507.6	6,506.2	54.1	22.6	66.95	834.5	-161.7	2,995.7	2,947.4	48.34	61.976		
10,800.0	6,672.0	6,504.6	6,503.1	55.2	22.5	66.37	834.6	-161.6	3,095.3	3,046.9	48.35	64.014		
10,900.0	6,672.0	6,501.5	6,500.1	56.3	22.5	65.80	834.7	-161.5	3,194.8	3,146.5	48.37	66.051		
11,000.0	6,672.0	6,498.5	6,497.1	57.4	22.5	65.24	834.7	-161.4	3,294.4	3,246.0	48.39	68.084		
11,100.0	6,672.0	6,495.5	6,494.1	58.5	22.5	64.70	834.8	-161.3	3,394.0	3,345.6	48.41	70.114		
11,200.0	6,672.0	6,492.6	6,491.2	59.6	22.5	64.16	834.9	-161.2	3,493.6	3,445.2	48.43	72.142		
11,300.0	6,672.0	6,489.6	6,488.2	60.7	22.5	63.63	835.0	-161.1	3,593.3	3,544.8	48.45	74.166		
11,400.0	6,672.0	6,486.8	6,485.4	61.8	22.5	63.11	835.0	-161.0	3,692.9	3,644.5	48.47	76.187		
11,500.0	6,672.0	6,483.9	6,482.5	62.9	22.5	62.59	835.1	-160.9	3,792.6	3,744.1	48.50	78.204		
11,600.0	6,672.0	6,481.1	6,479.7	64.1	22.5	62.09	835.2	-160.8	3,892.3	3,843.8	48.52	80.218		
11,700.0	6,672.0	6,478.3	6,476.9	65.2	22.5	61.59	835.2	-160.7	3,992.0	3,943.5	48.55	82.228		
11,800.0	6,672.0	6,475.5	6,474.1	66.3	22.4	61.10	835.3	-160.6	4,091.7	4,043.2	48.58	84.234		
11,900.0	6,672.0	6,472.8	6,471.4	67.5	22.4	60.61	835.4	-160.5	4,191.5	4,142.9	48.60	86.236		
12,000.0	6,672.0	6,470.1	6,468.7	68.6	22.4	60.13	835.4	-160.4	4,291.2	4,242.6	48.63	88.235		
12,100.0	6,672.0	6,467.4	6,466.0	69.8	22.4	59.66	835.5	-160.3	4,391.0	4,342.3	48.66	90.229		
12,200.0	6,672.0	6,464.7	6,463.3	70.9	22.4	59.20	835.6	-160.3	4,490.7	4,442.0	48.70	92.219		
12,300.0	6,672.0	6,462.1	6,460.7	72.1	22.4	58.74	835.6	-160.2	4,590.5	4,541.8	48.73	94.205		
12,400.0	6,672.0	6,459.5	6,458.1	73.2	22.4	58.29	835.7	-160.1	4,690.3	4,641.5	48.76	96.186		
12,500.0	6,672.0	6,456.9	6,455.5	74.4	22.4	57.84	835.8	-160.0	4,790.1	4,741.3	48.80	98.163		
12,600.0	6,672.0	6,454.3	6,453.0	75.5	22.4	57.40	835.8	-159.9	4,889.8	4,841.0	48.83	100.136		
12,700.0	6,672.0	6,451.8	6,450.4	76.7	22.4	56.97	835.9	-159.8	4,989.6	4,940.8	48.87	102.103		
12,800.0	6,672.0	6,449.3	6,447.9	77.9	22.4	56.54	836.0	-159.7	5,089.5	5,040.5	48.91	104.066		
12,900.0	6,672.0	6,446.8	6,445.4	79.0	22.3	56.12	836.0	-159.7	5,189.3	5,140.3	48.94	106.024		
13,000.0	6,672.0	6,444.3	6,443.0	80.2	22.3	55.70	836.1	-159.6	5,289.1	5,240.1	48.98	107.977		
13,100.0	6,672.0	6,441.9	6,440.5	81.4	22.3	55.29	836.1	-159.5	5,388.9	5,339.9	49.02	109.926		
13,200.0	6,672.0	6,439.5	6,438.1	82.6	22.3	54.89	836.2	-159.4	5,488.7	5,439.7	49.06	111.869		
13,300.0	6,672.0	6,437.1	6,435.7	83.7	22.3	54.49	836.3	-159.4	5,588.6	5,539.5	49.11	113.807		
13,400.0	6,672.0	6,434.7	6,433.3	84.9	22.3	54.09	836.3	-159.3	5,688.4	5,639.3	49.15	115.739		
13,500.0	6,672.0	6,432.3	6,431.0	86.1	22.3	53.70	836.4	-159.2	5,788.3	5,739.1	49.19	117.667		
13,600.0	6,672.0	6,430.0	6,428.7	87.3	22.3	53.31	836.4	-159.1	5,888.1	5,838.9	49.24	119.589		
13,700.0	6,672.0	6,427.7	6,426.3	88.4	22.3	52.93	836.5	-159.1	5,988.0	5,938.7	49.28	121.506		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - Skurich 11-07 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
13,800.0	6,672.0	6,425.4	6,424.1	89.6	22.3	52.55	836.6	-159.0	6,087.8	6,038.5	49.33	123.417		
13,900.0	6,672.0	6,423.1	6,421.8	90.8	22.3	52.18	836.6	-158.9	6,187.7	6,138.3	49.37	125.322		
14,000.0	6,672.0	6,420.9	6,419.5	92.0	22.3	51.81	836.7	-158.9	6,287.5	6,238.1	49.42	127.222		
14,100.0	6,672.0	6,418.6	6,417.3	93.2	22.2	51.45	836.7	-158.8	6,387.4	6,337.9	49.47	129.117		
14,200.0	6,672.0	6,416.4	6,415.1	94.4	22.2	51.08	836.8	-158.7	6,487.3	6,437.8	49.52	131.005		
14,300.0	6,672.0	6,414.2	6,412.9	95.6	22.2	50.73	836.9	-158.7	6,587.2	6,537.6	49.57	132.888		
14,400.0	6,672.0	6,412.1	6,410.7	96.8	22.2	50.38	836.9	-158.6	6,687.0	6,637.4	49.62	134.765		
14,500.0	6,672.0	6,409.9	6,408.6	98.0	22.2	50.03	837.0	-158.5	6,786.9	6,737.2	49.67	136.636		
14,600.0	6,672.0	6,400.0	6,398.7	99.2	22.2	48.65	837.2	-158.2	6,886.8	6,837.1	49.72	138.507		
14,700.0	6,672.0	6,400.0	6,398.7	100.4	22.2	48.59	837.2	-158.2	6,986.7	6,936.9	49.78	140.365		
14,800.0	6,672.0	6,400.0	6,398.7	101.6	22.2	48.53	837.2	-158.2	7,086.6	7,036.7	49.83	142.216		
14,900.0	6,672.0	6,400.0	6,398.7	102.7	22.2	48.47	837.2	-158.2	7,186.5	7,136.6	49.88	144.062		
15,000.0	6,672.0	6,400.0	6,398.7	103.9	22.2	48.41	837.2	-158.2	7,286.3	7,236.4	49.94	145.901		
15,100.0	6,672.0	6,400.0	6,398.7	105.1	22.2	48.35	837.2	-158.2	7,386.2	7,336.2	50.00	147.734		
15,200.0	6,672.0	6,400.0	6,398.7	106.3	22.2	48.28	837.2	-158.2	7,486.1	7,436.1	50.05	149.560		
15,300.0	6,672.0	6,400.0	6,398.7	107.6	22.2	48.22	837.2	-158.2	7,586.0	7,535.9	50.11	151.380		
15,400.0	6,672.0	6,400.0	6,398.7	108.8	22.2	48.15	837.2	-158.2	7,685.9	7,635.8	50.17	153.194		
15,500.0	6,672.0	6,400.0	6,398.7	110.0	22.2	48.09	837.2	-158.2	7,785.9	7,735.6	50.23	155.001		
15,600.0	6,672.0	6,400.0	6,398.7	111.2	22.2	48.02	837.2	-158.2	7,885.8	7,835.5	50.29	156.802		
15,700.0	6,672.0	6,400.0	6,398.7	112.4	22.2	47.95	837.2	-158.2	7,985.7	7,935.3	50.35	158.596		
15,800.0	6,672.0	6,400.0	6,398.7	113.6	22.2	47.88	837.2	-158.2	8,085.6	8,035.2	50.41	160.383		
15,900.0	6,672.0	6,400.0	6,398.7	114.8	22.2	47.81	837.2	-158.2	8,185.5	8,135.0	50.48	162.164		
16,000.0	6,672.0	6,400.0	6,398.7	116.0	22.2	47.74	837.2	-158.2	8,285.4	8,234.9	50.54	163.938		
16,100.0	6,672.0	6,400.0	6,398.7	117.2	22.2	47.66	837.2	-158.2	8,385.3	8,334.7	50.60	165.706		
16,200.0	6,672.0	6,400.0	6,398.7	118.4	22.2	47.59	837.2	-158.2	8,485.3	8,434.6	50.67	167.467		
16,300.0	6,672.0	6,400.0	6,398.7	119.6	22.2	47.51	837.2	-158.2	8,585.2	8,534.5	50.73	169.220		
16,400.0	6,672.0	6,379.1	6,377.8	120.8	22.1	44.81	837.8	-157.7	8,685.1	8,634.3	50.79	170.996		
16,500.0	6,672.0	6,377.8	6,376.5	122.0	22.1	44.57	837.8	-157.6	8,785.0	8,734.1	50.86	172.739		
16,600.0	6,672.0	6,376.5	6,375.2	123.2	22.1	44.33	837.9	-157.6	8,884.9	8,834.0	50.92	174.476		
16,700.0	6,672.0	6,375.2	6,373.9	124.5	22.1	44.10	837.9	-157.5	8,984.8	8,933.9	50.99	176.205		
16,800.0	6,672.0	6,373.9	6,372.6	125.7	22.1	43.86	837.9	-157.5	9,084.8	9,033.7	51.06	177.928		
16,900.0	6,672.0	6,372.6	6,371.3	126.9	22.1	43.63	838.0	-157.5	9,184.7	9,133.6	51.13	179.644		
17,000.0	6,672.0	6,371.4	6,370.1	128.1	22.1	43.40	838.0	-157.4	9,284.6	9,233.4	51.20	181.353		
17,100.0	6,672.0	6,370.1	6,368.8	129.3	22.1	43.17	838.0	-157.4	9,384.6	9,333.3	51.27	183.056		
17,200.0	6,672.0	6,368.9	6,367.6	130.5	22.1	42.94	838.1	-157.4	9,484.5	9,433.2	51.34	184.751		
17,300.0	6,672.0	6,367.7	6,366.4	131.7	22.1	42.71	838.1	-157.4	9,584.4	9,533.0	51.41	186.440		
17,400.0	6,672.0	6,366.5	6,365.2	133.0	22.1	42.49	838.1	-157.3	9,684.4	9,632.9	51.48	188.122		
17,500.0	6,672.0	6,365.3	6,364.0	134.2	22.1	42.26	838.2	-157.3	9,784.3	9,732.8	51.55	189.797		
17,600.0	6,672.0	6,364.1	6,362.8	135.4	22.1	42.04	838.2	-157.3	9,884.2	9,832.6	51.62	191.465		
17,700.0	6,672.0	6,363.0	6,361.7	136.6	22.1	41.82	838.2	-157.2	9,984.2	9,932.5	51.70	193.126		



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - Skurich 13-07 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWGS, 6350-2_Unknown													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis		Distance								Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-174.26	-2,013.4	-202.5	2,024.2					
100.0	100.0	50.9	50.9	0.1	0.1	-174.26	-2,013.3	-202.5	2,023.5	2,023.3	0.21	9,415.139		
200.0	200.0	157.4	157.4	0.5	0.4	-174.26	-2,012.9	-202.5	2,023.1	2,022.3	0.86	2,350.759		
300.0	300.0	263.6	263.6	0.8	0.7	-174.26	-2,012.2	-202.4	2,022.5	2,020.9	1.59	1,270.686		
400.0	400.0	362.5	362.5	1.2	1.1	-174.26	-2,011.4	-202.3	2,021.6	2,019.3	2.30	880.223		
500.0	500.0	463.5	463.5	1.6	1.5	-174.26	-2,010.7	-202.0	2,020.9	2,017.9	3.01	671.536		
600.0	600.0	562.1	562.1	1.9	1.8	-174.26	-2,009.9	-201.9	2,020.0	2,016.3	3.71	543.968		
700.0	700.0	660.7	660.6	2.3	2.1	-174.27	-2,009.2	-201.6	2,019.4	2,014.9	4.42	457.149		
800.0	800.0	762.2	762.1	2.6	2.5	-174.28	-2,008.6	-201.0	2,018.6	2,013.5	5.13	393.395		
900.0	900.0	866.0	866.0	3.0	2.9	-174.30	-2,007.8	-200.2	2,017.8	2,012.0	5.85	344.713		
1,000.0	1,000.0	971.3	971.3	3.4	3.2	-174.32	-2,006.7	-199.4	2,016.8	2,010.2	6.58	306.445		
1,100.0	1,100.0	1,070.0	1,070.0	3.7	3.6	-174.34	-2,005.6	-198.9	2,015.5	2,008.3	7.29	276.647		
1,200.0	1,200.0	1,167.0	1,167.0	4.1	3.9	-174.33	-2,004.5	-198.9	2,014.5	2,006.5	7.98	252.310		
1,300.0	1,300.0	1,263.1	1,263.1	4.4	4.3	-174.33	-2,003.6	-199.1	2,013.6	2,004.9	8.68	231.991		
1,400.0	1,400.0	1,357.6	1,357.5	4.8	4.6	-174.32	-2,003.0	-199.3	2,012.9	2,003.5	9.37	214.852		
1,500.0	1,500.0	1,451.3	1,451.3	5.1	4.9	-174.31	-2,002.6	-199.5	2,012.5	2,002.5	10.06	200.144		
1,580.5	1,580.5	1,527.5	1,527.5	5.4	5.2	-174.31	-2,002.5	-199.6	2,012.5	2,001.9	10.61	189.675 CC		
1,600.0	1,600.0	1,546.3	1,546.3	5.5	5.2	-174.31	-2,002.5	-199.5	2,012.5	2,001.7	10.75	187.284		
1,700.0	1,700.0	1,644.9	1,644.8	5.9	5.6	-174.32	-2,002.7	-199.3	2,012.6	2,001.1	11.45	175.821		
1,800.0	1,800.0	1,744.4	1,744.4	6.2	5.9	-174.33	-2,002.8	-198.7	2,012.7	2,000.5	12.15	165.637		
1,900.0	1,900.0	1,840.3	1,840.2	6.6	6.3	-174.36	-2,003.1	-198.0	2,012.9	2,000.0	12.84	156.732		
2,000.0	2,000.0	1,934.5	1,934.5	6.9	6.6	-174.38	-2,003.7	-197.0	2,013.4	1,999.8	13.53	148.820 ES		
2,100.0	2,100.0	2,026.4	2,026.3	7.3	6.9	-174.41	-2,004.4	-196.2	2,014.1	1,999.9	14.21	141.780		
2,200.0	2,200.0	2,112.9	2,112.8	7.7	7.2	-174.42	-2,005.7	-195.9	2,015.5	2,000.7	14.86	135.605		
2,300.0	2,300.0	2,212.4	2,212.3	8.0	7.6	-123.41	-2,007.4	-196.3	2,018.2	2,002.7	15.56	129.672		
2,400.0	2,399.8	2,318.9	2,318.8	8.4	7.9	-123.45	-2,009.0	-197.2	2,022.7	2,006.4	16.29	124.180		
2,500.0	2,499.5	2,425.4	2,425.3	8.7	8.3	-123.54	-2,010.1	-198.4	2,028.7	2,011.7	17.01	119.239		
2,600.0	2,598.7	2,529.7	2,529.6	9.1	8.7	-123.67	-2,011.0	-199.7	2,036.4	2,018.6	17.73	114.837		
2,700.0	2,697.5	2,631.3	2,631.1	9.4	9.0	-123.85	-2,011.6	-201.0	2,045.9	2,027.4	18.44	110.927		
2,800.0	2,795.6	2,728.0	2,727.8	9.8	9.4	-124.05	-2,012.1	-202.4	2,057.3	2,038.2	19.14	107.500		
2,900.0	2,893.1	2,821.6	2,821.4	10.1	9.7	-124.27	-2,012.8	-203.8	2,071.0	2,051.2	19.82	104.481		
3,000.0	2,989.6	2,923.5	2,923.3	10.5	10.0	-124.58	-2,013.5	-205.4	2,086.8	2,066.2	20.54	101.602		
3,100.0	3,085.3	3,017.4	3,017.3	10.9	10.4	-124.88	-2,014.0	-206.4	2,104.6	2,083.4	21.23	99.141		
3,200.0	3,179.8	3,107.3	3,107.1	11.2	10.7	-125.19	-2,014.8	-206.9	2,124.8	2,102.9	21.91	97.000		
3,300.0	3,273.2	3,196.4	3,196.2	11.6	11.0	-125.52	-2,015.7	-207.3	2,147.5	2,125.0	22.58	95.097		
3,387.5	3,353.8	3,275.3	3,275.1	11.9	11.3	-125.82	-2,016.6	-207.7	2,169.5	2,146.3	23.18	93.585		
3,400.0	3,365.2	3,286.5	3,286.3	12.0	11.3	-125.92	-2,016.7	-207.8	2,172.7	2,149.5	23.27	93.379		
3,500.0	3,456.8	3,382.2	3,382.0	12.4	11.6	-126.74	-2,017.8	-208.5	2,199.1	2,175.1	23.98	91.719		
3,600.0	3,548.3	3,481.3	3,481.1	12.8	12.0	-127.58	-2,018.6	-209.2	2,225.6	2,200.9	24.70	90.094		
3,700.0	3,639.8	3,570.6	3,570.4	13.2	12.3	-128.32	-2,019.2	-209.7	2,252.4	2,227.0	25.40	88.689		
3,800.0	3,731.4	3,665.0	3,664.8	13.6	12.6	-129.09	-2,019.8	-210.0	2,279.7	2,253.6	26.11	87.298		
3,900.0	3,822.9	3,758.4	3,758.2	14.0	13.0	-129.85	-2,020.3	-210.0	2,307.1	2,280.3	26.83	85.990		
4,000.0	3,914.4	3,855.2	3,855.0	14.4	13.3	-130.61	-2,020.8	-210.1	2,334.9	2,307.3	27.56	84.711		
4,100.0	4,005.9	3,956.1	3,955.8	14.8	13.6	-131.39	-2,020.8	-210.1	2,362.7	2,334.4	28.32	83.443		
4,200.0	4,097.5	4,068.0	4,067.8	15.2	14.0	-132.23	-2,020.3	-210.1	2,390.4	2,361.3	29.11	82.106		
4,300.0	4,189.0	4,185.1	4,184.8	15.6	14.4	-133.09	-2,018.6	-210.4	2,417.5	2,387.5	29.93	80.759		
4,400.0	4,280.5	4,282.0	4,281.7	16.1	14.8	-133.78	-2,016.5	-210.7	2,444.2	2,413.6	30.68	79.671		
4,500.0	4,372.1	4,365.7	4,365.4	16.5	15.1	-134.37	-2,014.7	-210.6	2,471.4	2,440.0	31.37	78.774		
4,600.0	4,463.6	4,454.6	4,454.3	16.9	15.4	-135.02	-2,013.0	-209.4	2,499.2	2,467.1	32.09	77.883		
4,700.0	4,555.1	4,547.0	4,546.6	17.4	15.7	-135.69	-2,011.0	-207.3	2,527.3	2,494.5	32.82	77.004		
4,800.0	4,646.7	4,631.9	4,631.5	17.8	16.0	-136.31	-2,009.2	-204.9	2,555.8	2,522.3	33.52	76.241		
4,900.0	4,738.2	4,712.6	4,712.1	18.2	16.3	-136.90	-2,007.7	-202.2	2,585.1	2,550.9	34.21	75.570		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - Skurich 13-07 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWGS, 6350-2_Unknown													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,000.0	4,829.7	4,817.1	4,816.5	18.7	16.7	-137.64	-2,005.7	-198.7	2,614.6	2,579.6	34.99	74.715		
5,100.0	4,921.3	4,914.1	4,913.4	19.1	17.0	-138.32	-2,003.5	-195.3	2,644.1	2,608.3	35.75	73.961		
5,200.0	5,012.8	4,988.3	4,987.6	19.5	17.3	-138.82	-2,002.0	-192.9	2,674.1	2,637.7	36.41	73.450		
5,300.0	5,104.3	5,084.2	5,083.4	20.0	17.6	-139.45	-2,000.4	-190.4	2,704.6	2,667.5	37.16	72.786		
5,400.0	5,195.8	5,178.9	5,178.1	20.4	17.9	-140.04	-1,998.8	-188.7	2,735.2	2,697.3	37.91	72.159		
5,500.0	5,287.4	5,279.1	5,278.3	20.9	18.3	-140.63	-1,997.1	-187.7	2,765.9	2,727.3	38.68	71.512		
5,600.0	5,378.9	5,365.9	5,365.1	21.3	18.6	-141.12	-1,995.6	-187.3	2,796.7	2,757.3	39.39	70.998		
5,700.0	5,470.4	5,443.9	5,443.1	21.8	18.8	-141.57	-1,994.4	-186.4	2,828.1	2,788.0	40.06	70.587		
5,800.0	5,562.0	5,522.9	5,522.0	22.2	19.1	-142.01	-1,993.6	-185.6	2,860.1	2,819.4	40.74	70.202		
5,900.0	5,653.5	5,615.1	5,614.3	22.7	19.4	-142.49	-1,993.1	-185.3	2,892.5	2,851.0	41.48	69.734		
6,000.0	5,745.0	5,711.5	5,710.6	23.1	19.8	-142.99	-1,992.6	-185.2	2,925.1	2,882.8	42.24	69.252		
6,100.0	5,836.6	5,819.9	5,819.1	23.6	20.2	-143.53	-1,991.6	-185.4	2,957.4	2,914.4	43.05	68.691		
6,200.0	5,928.1	5,877.4	5,876.6	24.0	20.4	-143.81	-1,991.3	-185.2	2,990.4	2,946.7	43.63	68.543		
6,278.6	6,000.0	5,952.4	5,951.6	24.4	20.6	-144.18	-1,991.2	-184.8	3,016.8	2,972.5	44.22	68.220		
6,290.0	6,010.4	5,966.1	5,965.2	24.4	20.7	-145.78	-1,991.2	-184.7	3,020.7	2,976.4	44.32	68.155		
6,300.0	6,019.5	5,978.1	5,977.2	24.5	20.7	-147.95	-1,991.1	-184.7	3,024.2	2,979.8	44.41	68.099		
6,350.0	6,065.8	6,030.0	6,029.1	24.7	20.9	-160.40	-1,990.9	-184.7	3,041.2	2,996.4	44.80	67.882		
6,400.0	6,113.0	6,077.8	6,076.9	24.9	21.1	-176.10	-1,990.6	-184.7	3,057.0	3,011.9	45.16	67.689		
6,450.0	6,160.7	6,125.6	6,124.8	25.1	21.2	165.46	-1,990.3	-184.7	3,071.7	3,026.2	45.52	67.486		
6,500.0	6,208.5	6,173.2	6,172.3	25.3	21.4	146.77	-1,990.0	-184.8	3,085.0	3,039.1	45.86	67.271		
6,550.0	6,255.8	6,221.7	6,220.8	25.4	21.6	130.76	-1,989.8	-184.8	3,096.8	3,050.6	46.20	67.031		
6,600.0	6,302.5	6,271.1	6,270.2	25.6	21.7	118.55	-1,989.5	-185.0	3,107.1	3,060.6	46.54	66.762		
6,650.0	6,347.9	6,322.6	6,321.7	25.7	21.9	109.71	-1,989.2	-185.1	3,115.9	3,069.0	46.89	66.454		
6,700.0	6,391.6	6,371.7	6,370.9	25.9	22.2	103.37	-1,988.8	-185.5	3,123.0	3,075.7	47.29	66.042		
6,750.0	6,433.4	6,413.4	6,412.6	26.0	22.4	98.79	-1,988.4	-185.7	3,128.5	3,080.8	47.71	65.572		
6,800.0	6,472.8	6,452.7	6,451.9	26.1	22.7	95.49	-1,988.0	-186.0	3,132.6	3,084.5	48.12	65.105		
6,850.0	6,509.4	6,489.2	6,488.4	26.2	22.9	93.13	-1,987.7	-186.3	3,135.3	3,086.8	48.50	64.644		
6,900.0	6,543.0	6,522.7	6,521.8	26.3	23.1	91.48	-1,987.4	-186.5	3,136.7	3,087.8	48.87	64.191		
6,950.0	6,573.2	6,552.7	6,551.8	26.4	23.3	90.38	-1,987.2	-186.7	3,136.9	3,087.7	49.21	63.749		
7,000.0	6,599.8	6,579.0	6,578.2	26.5	23.5	89.70	-1,987.0	-186.9	3,135.9	3,086.4	49.52	63.320		
7,050.0	6,622.5	6,601.5	6,600.6	26.6	23.7	89.36	-1,986.8	-187.1	3,134.0	3,084.2	49.82	62.908		
7,100.0	6,641.1	6,619.8	6,618.9	26.7	23.8	89.28	-1,986.6	-187.2	3,131.1	3,081.0	50.09	62.514		
7,150.0	6,655.4	6,633.8	6,633.0	26.8	23.9	89.41	-1,986.5	-187.3	3,127.4	3,077.1	50.33	62.144		
7,200.0	6,665.4	6,643.5	6,642.6	26.9	23.9	89.71	-1,986.4	-187.4	3,123.0	3,072.5	50.53	61.799		
7,250.0	6,670.8	6,648.6	6,647.8	27.0	24.0	90.15	-1,986.3	-187.4	3,117.9	3,067.2	50.71	61.483		
7,285.7	6,672.0	6,649.6	6,648.7	27.1	24.0	90.55	-1,986.3	-187.4	3,113.9	3,063.1	50.82	61.277		
7,300.0	6,672.0	6,649.5	6,648.6	27.1	24.0	90.55	-1,986.3	-187.4	3,112.3	3,061.5	50.86	61.199		
7,400.0	6,672.0	6,648.8	6,647.9	27.3	24.0	90.54	-1,986.3	-187.4	3,102.8	3,051.7	51.16	60.652		
7,500.0	6,672.0	6,648.1	6,647.2	27.6	24.0	90.52	-1,986.4	-187.4	3,096.5	3,045.0	51.50	60.121		
7,600.0	6,672.0	6,647.4	6,646.5	28.0	24.0	90.51	-1,986.4	-187.4	3,093.5	3,041.6	51.89	59.612		
7,644.6	6,672.0	6,647.1	6,646.2	28.1	24.0	90.50	-1,986.4	-187.4	3,093.1	3,041.0	52.09	59.386		
7,700.0	6,672.0	6,646.7	6,645.8	28.3	24.0	90.50	-1,986.4	-187.4	3,093.6	3,041.3	52.32	59.129		
7,800.0	6,672.0	6,646.0	6,645.2	28.8	23.9	90.48	-1,986.4	-187.4	3,097.0	3,044.3	52.78	58.678		
7,900.0	6,672.0	6,645.3	6,644.5	29.3	23.9	90.47	-1,986.4	-187.4	3,103.7	3,050.4	53.27	58.264		
8,000.0	6,672.0	6,644.7	6,643.8	29.8	23.9	90.46	-1,986.4	-187.4	3,113.5	3,059.7	53.78	57.892		
8,100.0	6,672.0	6,644.0	6,643.1	30.4	23.9	90.45	-1,986.4	-187.4	3,126.6	3,072.2	54.31	57.564		
8,200.0	6,672.0	6,643.3	6,642.4	31.0	23.9	90.43	-1,986.4	-187.4	3,142.7	3,087.9	54.86	57.286		
8,300.0	6,672.0	6,642.6	6,641.7	31.7	23.9	90.42	-1,986.4	-187.4	3,162.0	3,106.5	55.42	57.058		
8,400.0	6,672.0	6,641.9	6,641.0	32.4	23.9	90.41	-1,986.4	-187.4	3,184.2	3,128.3	55.98	56.885		
8,500.0	6,672.0	6,641.2	6,640.3	33.1	23.9	90.40	-1,986.4	-187.3	3,209.5	3,153.0	56.54	56.765		
8,600.0	6,672.0	6,640.5	6,639.7	33.9	23.9	90.38	-1,986.4	-187.3	3,237.6	3,180.5	57.10	56.702		
8,700.0	6,672.0	6,639.8	6,639.0	34.7	23.9	90.37	-1,986.4	-187.3	3,268.6	3,211.0	57.65	56.694 SF		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - Skurich 13-07 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWGS, 6350-2_Unknown													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis		Distance								Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
8,800.0	6,672.0	6,639.2	6,638.3	35.5	23.9	90.36	-1,986.4	-187.3	3,302.3	3,244.1	58.20	56.742		
8,900.0	6,672.0	6,638.5	6,637.6	36.3	23.9	90.34	-1,986.4	-187.3	3,338.7	3,280.0	58.73	56.845		
9,000.0	6,672.0	6,637.8	6,636.9	37.2	23.9	90.33	-1,986.4	-187.3	3,377.7	3,318.4	59.26	57.002		
9,100.0	6,672.0	6,637.1	6,636.2	38.1	23.9	90.32	-1,986.4	-187.3	3,419.1	3,359.4	59.76	57.212		
9,200.0	6,672.0	6,636.4	6,635.5	39.0	23.9	90.31	-1,986.5	-187.3	3,463.0	3,402.7	60.25	57.474		
9,300.0	6,672.0	6,635.7	6,634.9	39.9	23.9	90.29	-1,986.5	-187.3	3,509.1	3,448.4	60.73	57.786		
9,400.0	6,672.0	6,635.0	6,634.2	40.8	23.9	90.28	-1,986.5	-187.3	3,557.5	3,496.3	61.18	58.146		
9,500.0	6,672.0	6,634.3	6,633.5	41.8	23.9	90.27	-1,986.5	-187.3	3,608.0	3,546.4	61.62	58.552		
9,600.0	6,672.0	6,633.7	6,632.8	42.7	23.9	90.26	-1,986.5	-187.3	3,660.6	3,598.5	62.04	59.003		
9,700.0	6,672.0	6,633.0	6,632.1	43.7	23.9	90.24	-1,986.5	-187.3	3,715.1	3,652.6	62.44	59.497		
9,800.0	6,672.0	6,632.3	6,631.4	44.7	23.9	90.23	-1,986.5	-187.3	3,771.4	3,708.6	62.82	60.032		
9,900.0	6,672.0	6,631.6	6,630.7	45.7	23.9	90.22	-1,986.5	-187.3	3,829.6	3,766.4	63.19	60.606		
10,000.0	6,672.0	6,630.9	6,630.1	46.7	23.8	90.20	-1,986.5	-187.3	3,889.5	3,825.9	63.54	61.217		
10,100.0	6,672.0	6,630.2	6,629.4	47.7	23.8	90.19	-1,986.5	-187.3	3,951.0	3,887.1	63.87	61.864		
10,200.0	6,672.0	6,629.5	6,628.7	48.8	23.8	90.18	-1,986.5	-187.3	4,014.0	3,949.8	64.18	62.544		
10,300.0	6,672.0	6,628.9	6,628.0	49.8	23.8	90.17	-1,986.5	-187.3	4,078.6	4,014.1	64.48	63.257		
10,400.0	6,672.0	6,628.2	6,627.3	50.9	23.8	90.15	-1,986.5	-187.3	4,144.5	4,079.7	64.76	64.000		
10,500.0	6,672.0	6,627.5	6,626.6	51.9	23.8	90.14	-1,986.5	-187.3	4,211.8	4,146.8	65.03	64.771		
10,600.0	6,672.0	6,626.8	6,625.9	53.0	23.8	90.13	-1,986.5	-187.2	4,280.4	4,215.1	65.28	65.571		
10,700.0	6,672.0	6,626.1	6,625.3	54.1	23.8	90.12	-1,986.5	-187.2	4,350.2	4,284.7	65.52	66.396		
10,800.0	6,672.0	6,625.4	6,624.6	55.2	23.8	90.10	-1,986.5	-187.2	4,421.2	4,355.4	65.75	67.246		
10,900.0	6,672.0	6,624.7	6,623.9	56.3	23.8	90.09	-1,986.6	-187.2	4,493.2	4,427.3	65.96	68.119		
11,000.0	6,672.0	6,624.1	6,623.2	57.4	23.8	90.08	-1,986.6	-187.2	4,566.4	4,500.2	66.17	69.015		
11,100.0	6,672.0	6,623.4	6,622.5	58.5	23.8	90.07	-1,986.6	-187.2	4,640.5	4,574.2	66.36	69.931		
11,200.0	6,672.0	6,622.7	6,621.8	59.6	23.8	90.05	-1,986.6	-187.2	4,715.6	4,649.1	66.54	70.868		
11,300.0	6,672.0	6,622.0	6,621.1	60.7	23.8	90.04	-1,986.6	-187.2	4,791.6	4,724.9	66.71	71.823		
11,400.0	6,672.0	6,621.3	6,620.5	61.8	23.8	90.03	-1,986.6	-187.2	4,868.5	4,801.6	66.88	72.796		
11,500.0	6,672.0	6,620.6	6,619.8	62.9	23.8	90.01	-1,986.6	-187.2	4,946.2	4,879.2	67.04	73.786		
11,600.0	6,672.0	6,619.9	6,619.1	64.1	23.8	90.00	-1,986.6	-187.2	5,024.8	4,957.6	67.18	74.792		
11,700.0	6,672.0	6,619.3	6,618.4	65.2	23.8	89.99	-1,986.6	-187.2	5,104.0	5,036.7	67.32	75.813		
11,800.0	6,672.0	6,618.6	6,617.7	66.3	23.8	89.98	-1,986.6	-187.2	5,184.0	5,116.6	67.46	76.849		
11,900.0	6,672.0	6,617.9	6,617.0	67.5	23.8	89.96	-1,986.6	-187.2	5,264.7	5,197.1	67.58	77.898		
12,000.0	6,672.0	6,617.2	6,616.3	68.6	23.8	89.95	-1,986.6	-187.2	5,346.0	5,278.3	67.71	78.961		
12,100.0	6,672.0	6,616.5	6,615.7	69.8	23.8	89.94	-1,986.6	-187.2	5,428.0	5,360.2	67.82	80.035		
12,200.0	6,672.0	6,615.8	6,615.0	70.9	23.7	89.93	-1,986.6	-187.2	5,510.6	5,442.6	67.93	81.121		
12,300.0	6,672.0	6,615.2	6,614.3	72.1	23.7	89.91	-1,986.6	-187.2	5,593.7	5,525.7	68.03	82.218		
12,400.0	6,672.0	6,614.5	6,613.6	73.2	23.7	89.90	-1,986.6	-187.2	5,677.4	5,609.2	68.13	83.326		
12,500.0	6,672.0	6,613.8	6,612.9	74.4	23.7	89.89	-1,986.7	-187.2	5,761.6	5,693.4	68.23	84.443		
12,600.0	6,672.0	6,613.1	6,612.2	75.5	23.7	89.87	-1,986.7	-187.2	5,846.3	5,778.0	68.32	85.570		
12,700.0	6,672.0	6,612.4	6,611.6	76.7	23.7	89.86	-1,986.7	-187.1	5,931.5	5,863.1	68.41	86.705		
12,800.0	6,672.0	6,611.7	6,610.9	77.9	23.7	89.85	-1,986.7	-187.1	6,017.1	5,948.6	68.49	87.849		
12,900.0	6,672.0	6,611.0	6,610.2	79.0	23.7	89.84	-1,986.7	-187.1	6,103.2	6,034.7	68.57	89.001		
13,000.0	6,672.0	6,610.4	6,609.5	80.2	23.7	89.82	-1,986.7	-187.1	6,189.7	6,121.1	68.65	90.160		
13,100.0	6,672.0	6,609.7	6,608.8	81.4	23.7	89.81	-1,986.7	-187.1	6,276.7	6,207.9	68.73	91.327		
13,200.0	6,672.0	6,609.0	6,608.1	82.6	23.7	89.80	-1,986.7	-187.1	6,364.0	6,295.2	68.80	92.500		
13,300.0	6,672.0	6,608.3	6,607.4	83.7	23.7	89.79	-1,986.7	-187.1	6,451.6	6,382.8	68.87	93.680		
13,400.0	6,672.0	6,607.6	6,606.8	84.9	23.7	89.77	-1,986.7	-187.1	6,539.7	6,470.7	68.94	94.865		
13,500.0	6,672.0	6,606.9	6,606.1	86.1	23.7	89.76	-1,986.7	-187.1	6,628.0	6,559.0	69.00	96.056		
13,600.0	6,672.0	6,606.3	6,605.4	87.3	23.7	89.75	-1,986.7	-187.1	6,716.8	6,647.7	69.06	97.253		
13,700.0	6,672.0	6,605.6	6,604.7	88.4	23.7	89.73	-1,986.7	-187.1	6,805.8	6,736.7	69.13	98.455		
13,800.0	6,672.0	6,604.9	6,604.0	89.6	23.7	89.72	-1,986.7	-187.1	6,895.1	6,825.9	69.19	99.661		
13,900.0	6,672.0	6,604.2	6,603.3	90.8	23.7	89.71	-1,986.7	-187.1	6,984.7	6,915.5	69.24	100.872		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - Skurich 13-07 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS, 6350-2_Unknown													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
14,000.0	6,672.0	6,603.5	6,602.7	92.0	23.7	89.70	-1,986.7	-187.1	7,074.6	7,005.3	69.30	102.087		
14,100.0	6,672.0	6,602.8	6,602.0	93.2	23.7	89.68	-1,986.7	-187.1	7,164.8	7,095.4	69.35	103.306		
14,200.0	6,672.0	6,602.2	6,601.3	94.4	23.7	89.67	-1,986.8	-187.1	7,255.2	7,185.8	69.41	104.529		
14,300.0	6,672.0	6,601.5	6,600.6	95.6	23.7	89.66	-1,986.8	-187.1	7,345.9	7,276.4	69.46	105.755		
14,400.0	6,672.0	6,600.8	6,599.9	96.8	23.7	89.64	-1,986.8	-187.1	7,436.8	7,367.3	69.51	106.985		
14,500.0	6,672.0	6,600.1	6,599.2	98.0	23.6	89.63	-1,986.8	-187.1	7,528.0	7,458.4	69.56	108.218		
14,600.0	6,672.0	6,599.4	6,598.6	99.2	23.6	89.62	-1,986.8	-187.1	7,619.4	7,549.8	69.61	109.453		
14,700.0	6,672.0	6,598.7	6,597.9	100.4	23.6	89.61	-1,986.8	-187.1	7,711.0	7,641.3	69.66	110.691		
14,800.0	6,672.0	6,598.1	6,597.2	101.6	23.6	89.59	-1,986.8	-187.0	7,802.8	7,733.1	69.71	111.932		
14,900.0	6,672.0	6,597.4	6,596.5	102.7	23.6	89.58	-1,986.8	-187.0	7,894.8	7,825.0	69.76	113.175		
15,000.0	6,672.0	6,596.7	6,595.8	103.9	23.6	89.57	-1,986.8	-187.0	7,987.0	7,917.2	69.80	114.420		
15,100.0	6,672.0	6,596.0	6,595.2	105.1	23.6	89.56	-1,986.8	-187.0	8,079.4	8,009.5	69.85	115.668		
15,200.0	6,672.0	6,595.3	6,594.5	106.3	23.6	89.54	-1,986.8	-187.0	8,172.0	8,102.1	69.90	116.916		
15,300.0	6,672.0	6,594.6	6,593.8	107.6	23.6	89.53	-1,986.8	-187.0	8,264.7	8,194.8	69.94	118.167		
15,400.0	6,672.0	6,594.0	6,593.1	108.8	23.6	89.52	-1,986.8	-187.0	8,357.6	8,287.7	69.99	119.419		
15,500.0	6,672.0	6,593.3	6,592.4	110.0	23.6	89.50	-1,986.8	-187.0	8,450.7	8,380.7	70.03	120.673		
15,600.0	6,672.0	6,592.6	6,591.7	111.2	23.6	89.49	-1,986.8	-187.0	8,544.0	8,473.9	70.07	121.927		
15,700.0	6,672.0	6,591.9	6,591.1	112.4	23.6	89.48	-1,986.8	-187.0	8,637.4	8,567.3	70.12	123.183		
15,800.0	6,672.0	6,591.2	6,590.4	113.6	23.6	89.47	-1,986.8	-187.0	8,730.9	8,660.8	70.16	124.440		
15,900.0	6,672.0	6,590.6	6,589.7	114.8	23.6	89.45	-1,986.9	-187.0	8,824.6	8,754.4	70.21	125.698		
16,000.0	6,672.0	6,589.9	6,589.0	116.0	23.6	89.44	-1,986.9	-187.0	8,918.4	8,848.2	70.25	126.956		
16,100.0	6,672.0	6,589.2	6,588.3	117.2	23.6	89.43	-1,986.9	-187.0	9,012.4	8,942.1	70.29	128.215		
16,200.0	6,672.0	6,588.5	6,587.6	118.4	23.6	89.41	-1,986.9	-187.0	9,106.5	9,036.2	70.33	129.475		
16,300.0	6,672.0	6,587.8	6,587.0	119.6	23.6	89.40	-1,986.9	-187.0	9,200.7	9,130.4	70.38	130.734		
16,400.0	6,672.0	6,587.1	6,586.3	120.8	23.6	89.39	-1,986.9	-187.0	9,295.1	9,224.7	70.42	131.995		
16,500.0	6,672.0	6,586.5	6,585.6	122.0	23.6	89.38	-1,986.9	-187.0	9,389.5	9,319.1	70.46	133.255		
16,600.0	6,672.0	6,585.8	6,584.9	123.2	23.6	89.36	-1,986.9	-187.0	9,484.1	9,413.6	70.51	134.516		
16,700.0	6,672.0	6,585.1	6,584.2	124.5	23.5	89.35	-1,986.9	-187.0	9,578.8	9,508.3	70.55	135.776		
16,800.0	6,672.0	6,584.4	6,583.6	125.7	23.5	89.34	-1,986.9	-186.9	9,673.6	9,603.0	70.59	137.037		
16,900.0	6,672.0	6,583.7	6,582.9	126.9	23.5	89.32	-1,986.9	-186.9	9,768.5	9,697.9	70.63	138.297		
17,000.0	6,672.0	6,583.1	6,582.2	128.1	23.5	89.31	-1,986.9	-186.9	9,863.5	9,792.9	70.68	139.557		
17,100.0	6,672.0	6,582.4	6,581.5	129.3	23.5	89.30	-1,986.9	-186.9	9,958.7	9,887.9	70.72	140.817		



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - Skurich 21-07 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
0.0	0.0	0.0	0.0	0.0	0.0	51.90	876.2	1,117.7	1,420.7					
100.0	100.0	59.0	59.0	0.1	0.1	51.90	876.4	1,117.7	1,420.3	1,420.1	0.23	6,183.209		
200.0	200.0	162.4	162.4	0.5	0.4	51.88	877.0	1,117.7	1,420.7	1,419.9	0.88	1,617.225		
300.0	300.0	270.5	270.5	0.8	0.8	51.87	877.1	1,117.4	1,420.5	1,418.9	1.61	880.145		
400.0	400.0	368.1	368.1	1.2	1.1	51.89	876.4	1,117.4	1,420.1	1,417.8	2.31	614.052		
466.7	466.7	430.7	430.7	1.4	1.3	51.89	876.4	1,117.2	1,420.0	1,417.2	2.77	512.566		
500.0	500.0	461.8	461.8	1.6	1.4	51.88	876.5	1,117.2	1,420.0	1,417.0	3.00	473.663		
600.0	600.0	558.3	558.3	1.9	1.8	51.88	876.7	1,117.4	1,420.3	1,416.6	3.69	384.564		
700.0	700.0	659.6	659.6	2.3	2.1	51.88	877.0	1,117.7	1,420.7	1,416.3	4.41	322.471		
800.0	800.0	766.8	766.8	2.6	2.5	51.87	877.2	1,117.7	1,420.8	1,415.7	5.14	276.518		
900.0	900.0	875.2	875.2	3.0	2.9	51.86	877.1	1,117.1	1,420.3	1,414.4	5.87	241.765		
1,000.0	1,000.0	972.3	972.3	3.4	3.2	51.88	876.2	1,116.8	1,419.5	1,413.0	6.57	215.999		
1,100.0	1,100.0	1,068.5	1,068.4	3.7	3.6	51.91	875.5	1,116.9	1,419.1	1,411.9	7.27	195.305		
1,162.3	1,162.3	1,126.4	1,126.3	3.9	3.8	51.90	875.6	1,116.7	1,419.0	1,411.3	7.69	184.482		
1,200.0	1,200.0	1,159.6	1,159.6	4.1	3.9	51.90	875.6	1,116.7	1,419.0	1,411.1	7.94	178.661		
1,300.0	1,300.0	1,258.5	1,258.5	4.4	4.2	51.90	876.0	1,117.0	1,419.6	1,410.9	8.65	164.178		
1,400.0	1,400.0	1,371.9	1,371.8	4.8	4.6	51.89	876.1	1,116.9	1,419.6	1,410.2	9.40	151.009		
1,500.0	1,500.0	1,466.0	1,466.0	5.1	4.9	51.92	875.2	1,117.0	1,419.0	1,408.9	10.09	140.664		
1,515.5	1,515.5	1,479.5	1,479.5	5.2	5.0	51.92	875.1	1,117.0	1,419.0	1,408.8	10.19	139.247		
1,600.0	1,600.0	1,565.6	1,565.5	5.5	5.3	51.96	874.5	1,117.6	1,419.1	1,408.3	10.79	131.467		
1,700.0	1,700.0	1,665.0	1,664.9	5.9	5.6	51.97	874.2	1,117.6	1,418.9	1,407.4	11.50	123.386		
1,800.0	1,800.0	1,768.3	1,768.3	6.2	6.0	52.01	873.2	1,118.3	1,418.8	1,406.6	12.22	116.114		
1,900.0	1,900.0	1,877.9	1,877.8	6.6	6.4	52.05	872.1	1,118.3	1,418.2	1,405.2	12.96	109.427		
2,000.0	2,000.0	1,980.7	1,980.6	6.9	6.7	52.06	871.1	1,117.5	1,417.1	1,403.4	13.68	103.606		
2,100.0	2,100.0	2,080.8	2,080.7	7.3	7.1	52.07	870.4	1,116.6	1,415.9	1,401.5	14.39	98.424		
2,200.0	2,200.0	2,173.2	2,173.1	7.7	7.4	52.08	869.5	1,116.2	1,414.9	1,399.8	15.07	93.906		
2,253.7	2,253.7	2,223.7	2,223.7	7.8	7.6	103.12	868.9	1,116.3	1,414.8	1,399.3	15.43	91.661		
2,300.0	2,300.0	2,269.4	2,269.3	8.0	7.8	103.19	868.4	1,116.5	1,414.9	1,399.1	15.76	89.781		
2,400.0	2,399.8	2,359.5	2,359.4	8.4	8.1	103.40	867.5	1,117.0	1,415.9	1,399.5	16.43	86.203		
2,500.0	2,499.5	2,453.5	2,453.4	8.7	8.4	103.70	867.2	1,118.0	1,418.6	1,401.5	17.11	82.935		
2,600.0	2,598.7	2,551.7	2,551.7	9.1	8.7	104.13	867.0	1,119.0	1,422.3	1,404.5	17.80	79.904		
2,700.0	2,697.5	2,650.7	2,650.6	9.4	9.1	104.67	867.0	1,120.1	1,427.1	1,408.6	18.50	77.150		
2,800.0	2,795.6	2,763.5	2,763.4	9.8	9.5	105.41	867.1	1,120.6	1,432.5	1,413.3	19.24	74.441		
2,900.0	2,893.1	2,869.6	2,869.5	10.1	9.8	106.24	866.2	1,120.3	1,438.1	1,418.1	19.97	72.020		
3,000.0	2,989.6	2,965.9	2,965.8	10.5	10.2	107.10	864.8	1,120.2	1,444.8	1,424.2	20.66	69.938		
3,100.0	3,085.3	3,064.5	3,064.4	10.9	10.5	108.09	863.0	1,120.3	1,453.1	1,431.8	21.36	68.030		
3,200.0	3,179.8	3,166.4	3,166.3	11.2	10.9	109.21	861.1	1,119.9	1,462.8	1,440.7	22.07	66.264		
3,300.0	3,273.2	3,282.6	3,282.4	11.6	11.3	110.55	859.7	1,117.8	1,473.4	1,450.6	22.84	64.516		
3,387.5	3,353.8	3,387.0	3,386.8	11.9	11.7	111.81	858.6	1,113.8	1,483.0	1,459.5	23.51	63.067		
3,400.0	3,365.2	3,401.9	3,401.6	12.0	11.7	112.02	858.5	1,113.1	1,484.4	1,460.8	23.61	62.868		
3,500.0	3,456.8	3,497.0	3,496.6	12.4	12.0	113.31	858.3	1,107.9	1,495.8	1,471.5	24.31	61.520		
3,600.0	3,548.3	3,591.1	3,590.5	12.8	12.4	114.57	858.0	1,102.6	1,507.9	1,482.9	25.02	60.273		
3,700.0	3,639.8	3,672.2	3,671.5	13.2	12.7	115.66	857.2	1,098.6	1,521.1	1,495.4	25.69	59.222		
3,800.0	3,731.4	3,750.3	3,749.5	13.6	12.9	116.71	856.5	1,095.5	1,536.0	1,509.6	26.34	58.307		
3,900.0	3,822.9	3,829.6	3,828.8	14.0	13.2	117.75	856.3	1,093.0	1,552.5	1,525.5	27.00	57.489		
4,000.0	3,914.4	3,913.7	3,912.9	14.4	13.5	118.83	856.4	1,090.8	1,570.3	1,542.7	27.68	56.726		
4,100.0	4,005.9	4,005.4	4,004.5	14.8	13.8	119.99	856.7	1,088.6	1,589.2	1,560.8	28.39	55.975		
4,200.0	4,097.5	4,103.8	4,103.0	15.2	14.2	121.22	856.4	1,086.2	1,608.6	1,579.4	29.13	55.227		
4,300.0	4,189.0	4,178.5	4,177.6	15.6	14.4	122.16	855.4	1,084.9	1,629.0	1,599.2	29.77	54.716		
4,400.0	4,280.5	4,257.1	4,256.2	16.1	14.7	123.16	854.1	1,084.4	1,651.0	1,620.5	30.43	54.257		
4,500.0	4,372.1	4,349.4	4,348.5	16.5	15.0	124.28	853.1	1,084.2	1,674.1	1,643.0	31.14	53.757		
4,600.0	4,463.6	4,434.6	4,433.7	16.9	15.3	125.29	852.3	1,083.6	1,697.6	1,665.8	31.83	53.339		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - Skurich 21-07 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
4,700.0	4,555.1	4,500.0	4,499.1	17.4	15.6	126.06	851.3	1,084.1	1,722.9	1,690.5	32.42	53.142		
4,800.0	4,646.7	4,571.6	4,570.6	17.8	15.8	126.91	850.0	1,085.7	1,750.0	1,717.0	33.04	52.972		
4,900.0	4,738.2	4,659.3	4,658.3	18.2	16.1	127.92	848.5	1,088.2	1,778.4	1,744.7	33.73	52.729		
5,000.0	4,829.7	4,750.6	4,749.6	18.7	16.4	128.95	846.7	1,090.7	1,807.2	1,772.8	34.44	52.479		
5,100.0	4,921.3	4,831.0	4,829.8	19.1	16.7	129.87	844.0	1,093.3	1,836.8	1,801.7	35.09	52.344		
5,200.0	5,012.8	4,906.3	4,905.0	19.5	17.0	130.71	841.6	1,096.3	1,867.7	1,831.9	35.72	52.291		
5,300.0	5,104.3	5,017.2	5,015.9	20.0	17.4	131.87	839.1	1,100.2	1,898.8	1,862.2	36.53	51.979		
5,400.0	5,195.8	5,110.1	5,108.7	20.4	17.7	132.83	836.4	1,102.9	1,929.9	1,892.6	37.25	51.811		
5,500.0	5,287.4	5,193.3	5,191.8	20.9	18.0	133.69	833.3	1,105.6	1,961.6	1,923.7	37.92	51.733		
5,600.0	5,378.9	5,325.7	5,324.1	21.3	18.5	134.96	829.9	1,108.6	1,993.1	1,954.2	38.85	51.308		
5,700.0	5,470.4	5,435.3	5,433.6	21.8	18.8	135.93	828.3	1,108.8	2,023.2	1,983.5	39.65	51.022		
5,800.0	5,562.0	5,517.5	5,515.9	22.2	19.1	136.61	828.4	1,109.2	2,053.8	2,013.5	40.32	50.933		
5,900.0	5,653.5	5,621.4	5,619.7	22.7	19.5	137.44	828.3	1,109.2	2,084.5	2,043.4	41.10	50.712		
6,000.0	5,745.0	5,699.4	5,697.8	23.1	19.8	138.06	827.8	1,109.4	2,115.7	2,073.9	41.75	50.669		
6,100.0	5,836.6	5,776.7	5,775.0	23.6	20.0	138.65	827.6	1,110.0	2,147.8	2,105.4	42.40	50.657		
6,200.0	5,928.1	5,872.0	5,870.4	24.0	20.4	139.35	827.8	1,111.2	2,180.5	2,137.3	43.14	50.546		
6,278.6	6,000.0	5,957.6	5,955.9	24.4	20.7	139.97	827.6	1,111.8	2,206.0	2,162.2	43.78	50.392		
6,290.0	6,010.4	5,970.3	5,968.7	24.4	20.7	138.11	827.6	1,111.8	2,209.7	2,165.8	43.87	50.367		
6,300.0	6,019.5	5,981.6	5,980.0	24.5	20.7	136.47	827.7	1,111.9	2,212.9	2,168.9	43.95	50.345		
6,350.0	6,065.8	6,027.6	6,026.0	24.7	20.9	126.37	828.1	1,111.9	2,226.1	2,181.8	44.31	50.238		
6,400.0	6,113.0	6,069.0	6,067.4	24.9	21.0	112.75	828.1	1,112.0	2,234.8	2,190.2	44.63	50.072		
6,450.0	6,160.7	6,111.2	6,109.6	25.1	21.2	96.18	827.9	1,112.3	2,239.1	2,194.1	44.95	49.817		
6,500.0	6,208.5	6,155.1	6,153.4	25.3	21.3	79.15	827.6	1,112.6	2,238.8	2,193.6	45.26	49.471		
6,550.0	6,255.8	6,198.7	6,197.1	25.4	21.5	64.58	827.4	1,113.0	2,234.0	2,188.4	45.55	49.047		
6,600.0	6,302.5	6,242.8	6,241.2	25.6	21.7	53.60	827.3	1,113.5	2,224.7	2,178.8	45.83	48.544		
6,650.0	6,347.9	6,286.0	6,284.4	25.7	21.8	45.79	827.2	1,114.0	2,210.9	2,164.8	46.09	47.974		
6,700.0	6,391.6	6,337.6	6,335.9	25.9	22.0	40.43	827.4	1,114.6	2,192.8	2,146.4	46.38	47.282		
6,750.0	6,433.4	6,391.6	6,389.9	26.0	22.2	36.81	827.9	1,114.9	2,170.2	2,123.5	46.67	46.504		
6,800.0	6,472.8	6,433.7	6,432.1	26.1	22.3	34.36	828.5	1,115.1	2,143.5	2,096.6	46.88	45.723		
6,850.0	6,509.4	6,471.4	6,469.7	26.2	22.4	32.86	829.1	1,115.2	2,113.0	2,065.9	47.06	44.902		
6,900.0	6,543.0	6,505.9	6,504.2	26.3	22.6	32.20	829.7	1,115.4	2,079.0	2,031.8	47.21	44.036		
6,950.0	6,573.2	6,527.5	6,525.8	26.4	22.6	32.14	830.0	1,115.5	2,041.9	1,994.6	47.29	43.181		
7,000.0	6,599.8	6,548.0	6,546.4	26.5	22.7	32.91	830.3	1,115.7	2,002.0	1,954.6	47.35	42.278		
7,050.0	6,622.5	6,565.8	6,564.1	26.6	22.8	34.63	830.5	1,115.9	1,959.7	1,912.3	47.41	41.338		
7,100.0	6,641.1	6,625.2	6,623.5	26.7	23.0	37.44	830.6	1,115.9	1,915.2	1,867.6	47.58	40.248		
7,150.0	6,655.4	6,610.0	6,608.3	26.8	22.9	42.62	830.7	1,116.2	1,869.0	1,821.5	47.53	39.325		
7,200.0	6,665.4	6,600.9	6,599.2	26.9	22.9	51.40	830.8	1,116.4	1,821.4	1,773.9	47.49	38.352		
7,250.0	6,670.8	6,607.2	6,605.6	27.0	22.9	66.92	830.8	1,116.5	1,772.8	1,725.3	47.51	37.311		
7,285.7	6,672.0	6,609.0	6,607.4	27.1	22.9	84.52	830.8	1,116.6	1,737.8	1,690.2	47.52	36.566		
7,300.0	6,672.0	6,609.3	6,607.6	27.1	22.9	84.57	830.8	1,116.6	1,723.7	1,676.1	47.53	36.267		
7,400.0	6,672.0	6,611.1	6,609.4	27.3	22.9	84.91	830.9	1,116.6	1,625.3	1,577.7	47.55	34.182		
7,500.0	6,672.0	6,612.9	6,611.2	27.6	22.9	85.26	830.9	1,116.6	1,527.1	1,479.5	47.58	32.098		
7,600.0	6,672.0	6,614.7	6,613.0	28.0	22.9	85.61	830.9	1,116.7	1,429.2	1,381.6	47.62	30.015		
7,700.0	6,672.0	6,616.5	6,614.8	28.3	23.0	85.95	830.9	1,116.7	1,331.6	1,283.9	47.67	27.934		
7,800.0	6,672.0	6,618.3	6,616.6	28.8	23.0	86.30	830.9	1,116.7	1,234.3	1,186.6	47.74	25.854		
7,900.0	6,672.0	6,620.1	6,618.4	29.3	23.0	86.64	830.9	1,116.8	1,137.6	1,089.7	47.84	23.779		
8,000.0	6,672.0	6,621.9	6,620.3	29.8	23.0	86.99	830.9	1,116.8	1,041.4	993.5	47.97	21.708		
8,100.0	6,672.0	6,623.7	6,622.1	30.4	23.0	87.33	831.0	1,116.8	946.1	897.9	48.16	19.645		
8,200.0	6,672.0	6,625.5	6,623.9	31.0	23.0	87.68	831.0	1,116.8	851.8	803.4	48.42	17.592		
8,300.0	6,672.0	6,627.3	6,625.7	31.7	23.0	88.02	831.0	1,116.9	759.0	710.2	48.80	15.555		
8,400.0	6,672.0	6,629.2	6,627.5	32.4	23.0	88.37	831.0	1,116.9	668.3	619.0	49.34	13.544		
8,500.0	6,672.0	6,631.0	6,629.3	33.1	23.0	88.71	831.0	1,116.9	580.6	530.5	50.16	11.576		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - Skurich 21-07 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWWSG													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
8,600.0	6,672.0	6,632.8	6,631.1	33.9	23.0	89.06	831.0	1,117.0	497.6	446.3	51.38	9.685		
8,700.0	6,672.0	6,634.6	6,632.9	34.7	23.0	89.40	831.0	1,117.0	422.1	368.9	53.20	7.934		
8,800.0	6,672.0	6,636.4	6,634.7	35.5	23.0	89.75	831.1	1,117.0	358.7	303.0	55.70	6.439		
8,900.0	6,672.0	6,638.2	6,636.5	36.3	23.0	90.09	831.1	1,117.1	314.8	256.4	58.49	5.383		
8,997.5	6,672.0	6,639.9	6,638.2	37.2	23.0	90.43	831.1	1,117.1	299.3	239.1	60.23	4.970 CC		
9,000.0	6,672.0	6,640.0	6,638.3	37.2	23.0	90.44	831.1	1,117.1	299.4	239.1	60.25	4.969 ES, SF		
9,100.0	6,672.0	6,641.8	6,640.1	38.1	23.0	90.78	831.1	1,117.1	316.4	256.5	59.87	5.285		
9,200.0	6,672.0	6,643.6	6,641.9	39.0	23.0	91.13	831.1	1,117.2	361.4	303.4	58.01	6.229		
9,300.0	6,672.0	6,645.4	6,643.7	39.9	23.1	91.47	831.1	1,117.2	425.5	369.6	55.94	7.608		
9,400.0	6,672.0	6,647.2	6,645.5	40.8	23.1	91.82	831.1	1,117.2	501.6	447.3	54.22	9.251		
9,500.0	6,672.0	6,649.0	6,647.3	41.8	23.1	92.17	831.2	1,117.3	584.8	531.9	52.92	11.051		
9,600.0	6,672.0	6,650.8	6,649.1	42.7	23.1	92.51	831.2	1,117.3	672.7	620.7	51.98	12.942		
9,700.0	6,672.0	6,652.6	6,650.9	43.7	23.1	92.86	831.2	1,117.3	763.5	712.3	51.28	14.891		
9,800.0	6,672.0	6,654.4	6,652.7	44.7	23.1	93.20	831.2	1,117.4	856.4	805.7	50.75	16.874		
9,900.0	6,672.0	6,656.2	6,654.5	45.7	23.1	93.55	831.2	1,117.4	950.8	900.4	50.36	18.880		
10,000.0	6,672.0	6,658.0	6,656.3	46.7	23.1	93.89	831.2	1,117.4	1,046.1	996.1	50.05	20.901		
10,100.0	6,672.0	6,659.8	6,658.1	47.7	23.1	94.24	831.2	1,117.5	1,142.3	1,092.5	49.81	22.932		
10,200.0	6,672.0	6,661.6	6,659.9	48.8	23.1	94.58	831.3	1,117.5	1,239.1	1,189.5	49.63	24.969		
10,300.0	6,672.0	6,663.4	6,661.8	49.8	23.1	94.93	831.3	1,117.5	1,336.3	1,286.9	49.48	27.010		
10,400.0	6,672.0	6,665.2	6,663.6	50.9	23.1	95.28	831.3	1,117.6	1,434.0	1,384.6	49.36	29.054		
10,500.0	6,672.0	6,667.1	6,665.4	51.9	23.1	95.62	831.3	1,117.6	1,531.9	1,482.6	49.26	31.099		
10,600.0	6,672.0	6,668.9	6,667.2	53.0	23.1	95.97	831.3	1,117.6	1,630.1	1,580.9	49.18	33.145		
10,700.0	6,672.0	6,670.7	6,669.0	54.1	23.1	96.31	831.3	1,117.7	1,728.5	1,679.4	49.12	35.190		
10,800.0	6,672.0	6,672.5	6,670.8	55.2	23.1	96.66	831.3	1,117.7	1,827.0	1,778.0	49.07	37.234		
10,900.0	6,672.0	6,674.3	6,672.6	56.3	23.2	97.01	831.4	1,117.7	1,925.8	1,876.7	49.03	39.276		
11,000.0	6,672.0	6,676.1	6,674.4	57.4	23.2	97.35	831.4	1,117.8	2,024.6	1,975.6	49.00	41.317		
11,100.0	6,672.0	6,677.9	6,676.2	58.5	23.2	97.70	831.4	1,117.8	2,123.5	2,074.6	48.98	43.356		
11,200.0	6,672.0	6,679.7	6,678.0	59.6	23.2	98.04	831.4	1,117.8	2,222.6	2,173.6	48.96	45.392		
11,300.0	6,672.0	6,681.5	6,679.8	60.7	23.2	98.39	831.4	1,117.9	2,321.7	2,272.8	48.95	47.426		
11,400.0	6,672.0	6,683.3	6,681.6	61.8	23.2	98.74	831.4	1,117.9	2,420.9	2,372.0	48.95	49.456		
11,500.0	6,672.0	6,685.1	6,683.4	62.9	23.2	99.08	831.4	1,117.9	2,520.2	2,471.2	48.95	51.484		
11,600.0	6,672.0	6,686.9	6,685.2	64.1	23.2	99.43	831.5	1,117.9	2,619.5	2,570.5	48.95	53.508		
11,700.0	6,672.0	6,688.7	6,687.0	65.2	23.2	99.77	831.5	1,118.0	2,718.8	2,669.9	48.96	55.529		
11,800.0	6,672.0	6,690.5	6,688.8	66.3	23.2	100.12	831.5	1,118.0	2,818.3	2,769.3	48.97	57.546		
11,900.0	6,672.0	6,692.3	6,690.6	67.5	23.2	100.47	831.5	1,118.0	2,917.7	2,868.7	48.99	59.559		
12,000.0	6,672.0	6,694.1	6,692.4	68.6	23.2	100.81	831.5	1,118.1	3,017.2	2,968.2	49.00	61.569		
12,100.0	6,672.0	6,696.0	6,694.3	69.8	23.2	101.16	831.5	1,118.1	3,116.7	3,067.7	49.02	63.574		
12,200.0	6,672.0	6,697.8	6,696.1	70.9	23.2	101.51	831.5	1,118.1	3,216.2	3,167.2	49.05	65.576		
12,300.0	6,672.0	6,699.6	6,697.9	72.1	23.2	101.85	831.6	1,118.2	3,315.8	3,266.8	49.07	67.573		
12,400.0	6,672.0	6,701.4	6,699.7	73.2	23.3	102.20	831.6	1,118.2	3,415.4	3,366.3	49.10	69.565		
12,500.0	6,672.0	6,703.2	6,701.5	74.4	23.3	102.55	831.6	1,118.2	3,515.0	3,465.9	49.12	71.553		
12,600.0	6,672.0	6,705.0	6,703.3	75.5	23.3	102.89	831.6	1,118.3	3,614.7	3,565.5	49.15	73.537		
12,700.0	6,672.0	6,706.8	6,705.1	76.7	23.3	103.24	831.6	1,118.3	3,714.3	3,665.2	49.19	75.515		
12,800.0	6,672.0	6,708.6	6,706.9	77.9	23.3	103.58	831.6	1,118.3	3,814.0	3,764.8	49.22	77.489		
12,900.0	6,672.0	6,710.4	6,708.7	79.0	23.3	103.93	831.6	1,118.4	3,913.7	3,864.5	49.26	79.458		
13,000.0	6,672.0	6,712.2	6,710.5	80.2	23.3	104.28	831.7	1,118.4	4,013.4	3,964.1	49.29	81.422		
13,100.0	6,672.0	6,714.0	6,712.3	81.4	23.3	104.63	831.7	1,118.4	4,113.1	4,063.8	49.33	83.381		
13,200.0	6,672.0	6,715.8	6,714.1	82.6	23.3	104.97	831.7	1,118.5	4,212.9	4,163.5	49.37	85.335		
13,300.0	6,672.0	6,717.6	6,715.9	83.7	23.3	105.32	831.7	1,118.5	4,312.6	4,263.2	49.41	87.283		
13,400.0	6,672.0	6,719.4	6,717.7	84.9	23.3	105.67	831.7	1,118.5	4,412.4	4,362.9	49.45	89.226		
13,500.0	6,672.0	6,721.2	6,719.5	86.1	23.3	106.01	831.7	1,118.6	4,512.2	4,462.7	49.50	91.164		
13,600.0	6,672.0	6,723.1	6,721.4	87.3	23.3	106.36	831.7	1,118.6	4,611.9	4,562.4	49.54	93.096		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - Skurich 21-07 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
13,700.0	6,672.0	6,724.9	6,723.2	88.4	23.3	106.71	831.8	1,118.6	4,711.7	4,662.1	49.59	95.023		
13,800.0	6,672.0	6,726.7	6,725.0	89.6	23.3	107.05	831.8	1,118.7	4,811.5	4,761.9	49.63	96.944		
13,900.0	6,672.0	6,728.5	6,726.8	90.8	23.3	107.40	831.8	1,118.7	4,911.3	4,861.7	49.68	98.859		
14,000.0	6,672.0	6,730.3	6,728.6	92.0	23.4	107.75	831.8	1,118.7	5,011.1	4,961.4	49.73	100.768		
14,100.0	6,672.0	6,732.1	6,730.4	93.2	23.4	108.09	831.8	1,118.8	5,111.0	5,061.2	49.78	102.672		
14,200.0	6,672.0	6,733.9	6,732.2	94.4	23.4	108.44	831.8	1,118.8	5,210.8	5,161.0	49.83	104.569		
14,300.0	6,672.0	6,735.7	6,734.0	95.6	23.4	108.79	831.8	1,118.8	5,310.6	5,260.7	49.88	106.461		
14,400.0	6,672.0	6,737.5	6,735.8	96.8	23.4	109.14	831.9	1,118.9	5,410.5	5,360.5	49.94	108.346		
14,500.0	6,672.0	6,739.3	6,737.6	98.0	23.4	109.48	831.9	1,118.9	5,510.3	5,460.3	49.99	110.226		
14,600.0	6,672.0	6,741.1	6,739.4	99.2	23.4	109.83	831.9	1,118.9	5,610.2	5,560.1	50.05	112.099		
14,700.0	6,672.0	6,742.9	6,741.2	100.4	23.4	110.18	831.9	1,119.0	5,710.0	5,659.9	50.10	113.966		
14,800.0	6,672.0	6,744.7	6,743.0	101.6	23.4	110.52	831.9	1,119.0	5,809.9	5,759.7	50.16	115.827		
14,900.0	6,672.0	6,746.6	6,744.8	102.7	23.4	110.87	831.9	1,119.0	5,909.7	5,859.5	50.22	117.681		
15,000.0	6,672.0	6,748.4	6,746.7	103.9	23.4	111.22	831.9	1,119.0	6,009.6	5,959.3	50.28	119.530		
15,100.0	6,672.0	6,750.2	6,748.5	105.1	23.4	111.57	832.0	1,119.1	6,109.5	6,059.1	50.34	121.371		
15,200.0	6,672.0	6,752.0	6,750.3	106.3	23.4	111.91	832.0	1,119.1	6,209.3	6,159.0	50.40	123.206		
15,300.0	6,672.0	6,753.8	6,752.1	107.6	23.4	112.26	832.0	1,119.1	6,309.2	6,258.8	50.46	125.035		
15,400.0	6,672.0	6,755.6	6,753.9	108.8	23.4	112.61	832.0	1,119.2	6,409.1	6,358.6	50.52	126.857		
15,500.0	6,672.0	6,757.4	6,755.7	110.0	23.4	112.96	832.0	1,119.2	6,509.0	6,458.4	50.59	128.672		
15,600.0	6,672.0	6,759.2	6,757.5	111.2	23.5	113.30	832.0	1,119.2	6,608.9	6,558.2	50.65	130.481		
15,700.0	6,672.0	6,761.0	6,759.3	112.4	23.5	113.65	832.0	1,119.3	6,708.8	6,658.1	50.72	132.283		
15,800.0	6,672.0	6,762.8	6,761.1	113.6	23.5	114.00	832.1	1,119.3	6,808.7	6,757.9	50.78	134.079		
15,900.0	6,672.0	6,764.6	6,762.9	114.8	23.5	114.34	832.1	1,119.3	6,908.6	6,857.7	50.85	135.867		
16,000.0	6,672.0	6,766.4	6,764.7	116.0	23.5	114.69	832.1	1,119.4	7,008.5	6,957.6	50.92	137.649		
16,100.0	6,672.0	6,768.3	6,766.5	117.2	23.5	115.04	832.1	1,119.4	7,108.4	7,057.4	50.98	139.424		
16,200.0	6,672.0	6,770.1	6,768.4	118.4	23.5	115.39	832.1	1,119.4	7,208.3	7,157.2	51.05	141.192		
16,300.0	6,672.0	6,771.9	6,770.2	119.6	23.5	115.73	832.1	1,119.5	7,308.2	7,257.1	51.12	142.954		
16,400.0	6,672.0	6,773.7	6,772.0	120.8	23.5	116.08	832.1	1,119.5	7,408.1	7,356.9	51.19	144.708		
16,500.0	6,672.0	6,775.5	6,773.8	122.0	23.5	116.43	832.2	1,119.5	7,508.0	7,456.8	51.26	146.455		
16,600.0	6,672.0	6,777.3	6,775.6	123.2	23.5	116.78	832.2	1,119.6	7,607.9	7,556.6	51.34	148.196		
16,700.0	6,672.0	6,779.1	6,777.4	124.5	23.5	117.12	832.2	1,119.6	7,707.9	7,656.5	51.41	149.929		
16,800.0	6,672.0	6,780.9	6,779.2	125.7	23.5	117.47	832.2	1,119.6	7,807.8	7,756.3	51.48	151.656		
16,900.0	6,672.0	6,782.7	6,781.0	126.9	23.5	117.82	832.2	1,119.7	7,907.7	7,856.1	51.56	153.375		
17,000.0	6,672.0	6,784.5	6,782.8	128.1	23.5	118.16	832.2	1,119.7	8,007.6	7,956.0	51.63	155.087		
17,100.0	6,672.0	6,786.3	6,784.6	129.3	23.5	118.51	832.2	1,119.7	8,107.6	8,055.8	51.71	156.792		
17,200.0	6,672.0	6,788.2	6,786.4	130.5	23.6	118.86	832.3	1,119.8	8,207.5	8,155.7	51.79	158.491		
17,300.0	6,672.0	6,790.0	6,788.2	131.7	23.6	119.21	832.3	1,119.8	8,307.4	8,255.5	51.86	160.182		
17,400.0	6,672.0	6,791.8	6,790.1	133.0	23.6	119.55	832.3	1,119.8	8,407.3	8,355.4	51.94	161.865		
17,500.0	6,672.0	6,793.6	6,791.9	134.2	23.6	119.90	832.3	1,119.9	8,507.3	8,455.3	52.02	163.542		
17,600.0	6,672.0	6,795.4	6,793.7	135.4	23.6	120.25	832.3	1,119.9	8,607.2	8,555.1	52.10	165.212		
17,700.0	6,672.0	6,797.2	6,795.5	136.6	23.6	120.59	832.3	1,119.9	8,707.1	8,655.0	52.18	166.874		
17,800.0	6,672.0	6,799.0	6,797.3	137.8	23.6	120.94	832.3	1,120.0	8,807.1	8,754.8	52.26	168.529		
17,900.0	6,672.0	6,800.8	6,799.1	139.0	23.6	121.29	832.4	1,120.0	8,907.0	8,854.7	52.34	170.178		
18,000.0	6,672.0	6,802.6	6,800.9	140.3	23.6	121.63	832.4	1,120.0	9,007.0	8,954.5	52.42	171.818		
18,100.0	6,672.0	6,804.4	6,802.7	141.5	23.6	121.98	832.4	1,120.1	9,106.9	9,054.4	52.50	173.452		
18,200.0	6,672.0	6,806.2	6,804.5	142.7	23.6	122.33	832.4	1,120.1	9,206.8	9,154.2	52.59	175.079		
18,300.0	6,672.0	6,808.1	6,806.3	143.9	23.6	122.67	832.4	1,120.1	9,306.8	9,254.1	52.67	176.698		
18,342.5	6,672.0	6,808.8	6,807.1	144.4	23.6	122.82	832.4	1,120.1	9,349.2	9,296.5	52.71	177.383		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - Skurich 23-07 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 6864-2_Unknown													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	25.0	-25.0	0.0	0.5	148.22	-1,853.6	1,148.2	2,180.4					
100.0	100.0	75.0	75.0	0.1	1.5	148.22	-1,853.6	1,148.2	2,180.4	2,178.8	1.63	1,341.263		
200.0	200.0	175.0	175.0	0.5	3.5	148.22	-1,853.6	1,148.2	2,180.4	2,176.5	3.98	547.282		
300.0	300.0	275.0	275.0	0.8	5.5	148.22	-1,853.6	1,148.2	2,180.4	2,174.1	6.34	343.777		
400.0	400.0	375.0	375.0	1.2	7.5	148.22	-1,853.6	1,148.2	2,180.4	2,171.7	8.70	250.595		
500.0	500.0	475.0	475.0	1.6	9.5	148.22	-1,853.6	1,148.2	2,180.4	2,169.4	11.06	197.155		
600.0	600.0	575.0	575.0	1.9	11.5	148.22	-1,853.6	1,148.2	2,180.4	2,167.0	13.42	162.501		
700.0	700.0	675.0	675.0	2.3	13.5	148.22	-1,853.6	1,148.2	2,180.4	2,164.7	15.78	138.208		
800.0	800.0	775.0	775.0	2.6	15.5	148.22	-1,853.6	1,148.2	2,180.4	2,162.3	18.13	120.234		
900.0	900.0	875.0	875.0	3.0	17.5	148.22	-1,853.6	1,148.2	2,180.4	2,159.9	20.49	106.397		
1,000.0	1,000.0	975.0	975.0	3.4	19.5	148.22	-1,853.6	1,148.2	2,180.4	2,157.6	22.85	95.416		
1,100.0	1,100.0	1,075.0	1,075.0	3.7	21.5	148.22	-1,853.6	1,148.2	2,180.4	2,155.2	25.21	86.490		
1,200.0	1,200.0	1,175.0	1,175.0	4.1	23.5	148.22	-1,853.6	1,148.2	2,180.4	2,152.9	27.57	79.091		
1,300.0	1,300.0	1,275.0	1,275.0	4.4	25.5	148.22	-1,853.6	1,148.2	2,180.4	2,150.5	29.93	72.858		
1,400.0	1,400.0	1,375.0	1,375.0	4.8	27.5	148.22	-1,853.6	1,148.2	2,180.4	2,148.2	32.29	67.536		
1,500.0	1,500.0	1,475.0	1,475.0	5.1	29.5	148.22	-1,853.6	1,148.2	2,180.4	2,145.8	34.64	62.938		
1,600.0	1,600.0	1,575.0	1,575.0	5.5	31.5	148.22	-1,853.6	1,148.2	2,180.4	2,143.4	37.00	58.927		
1,700.0	1,700.0	1,675.0	1,675.0	5.9	33.5	148.22	-1,853.6	1,148.2	2,180.4	2,141.1	39.36	55.396		
1,800.0	1,800.0	1,775.0	1,775.0	6.2	35.5	148.22	-1,853.6	1,148.2	2,180.4	2,138.7	41.72	52.264		
1,900.0	1,900.0	1,875.0	1,875.0	6.6	37.5	148.22	-1,853.6	1,148.2	2,180.4	2,136.4	44.08	49.468		
2,000.0	2,000.0	1,975.0	1,975.0	6.9	39.5	148.22	-1,853.6	1,148.2	2,180.4	2,134.0	46.44	46.955		
2,100.0	2,100.0	2,075.0	2,075.0	7.3	41.5	148.22	-1,853.6	1,148.2	2,180.4	2,131.6	48.80	44.686		
2,200.0	2,200.0	2,175.0	2,175.0	7.7	43.5	148.22	-1,853.6	1,148.2	2,180.4	2,129.3	51.15	42.625 CC		
2,300.0	2,300.0	2,275.0	2,275.0	8.0	45.5	-160.78	-1,853.6	1,148.2	2,182.1	2,128.6	53.51	40.780 ES		
2,400.0	2,399.8	2,374.8	2,374.8	8.4	47.5	-160.79	-1,853.6	1,148.2	2,187.0	2,131.2	55.86	39.153		
2,500.0	2,499.5	2,474.5	2,474.5	8.7	49.5	-160.81	-1,853.6	1,148.2	2,195.3	2,137.1	58.20	37.716		
2,600.0	2,598.7	2,573.7	2,573.7	9.1	51.5	-160.84	-1,853.6	1,148.2	2,206.8	2,146.2	60.54	36.450		
2,700.0	2,697.5	2,672.5	2,672.5	9.4	53.4	-160.88	-1,853.6	1,148.2	2,221.6	2,158.7	62.87	35.335		
2,800.0	2,795.6	2,770.6	2,770.6	9.8	55.4	-160.92	-1,853.6	1,148.2	2,239.6	2,174.5	65.19	34.357		
2,900.0	2,893.1	2,868.1	2,868.1	10.1	57.4	-160.96	-1,853.6	1,148.2	2,261.0	2,193.5	67.49	33.501		
3,000.0	2,989.6	2,964.6	2,964.6	10.5	59.3	-161.01	-1,853.6	1,148.2	2,285.5	2,215.7	69.77	32.756		
3,100.0	3,085.3	3,060.3	3,060.3	10.9	61.2	-161.05	-1,853.6	1,148.2	2,313.3	2,241.3	72.04	32.112		
3,200.0	3,179.8	3,154.8	3,154.8	11.2	63.1	-161.10	-1,853.6	1,148.2	2,344.3	2,270.0	74.28	31.559		
3,300.0	3,273.2	3,248.2	3,248.2	11.6	65.0	-161.14	-1,853.6	1,148.2	2,378.4	2,301.9	76.50	31.089		
3,387.5	3,353.8	3,328.8	3,328.8	11.9	66.6	-161.18	-1,853.6	1,148.2	2,410.9	2,332.4	78.42	30.741		
3,400.0	3,365.2	3,340.2	3,340.2	12.0	66.8	-161.22	-1,853.6	1,148.2	2,415.7	2,337.0	78.70	30.695		
3,500.0	3,456.8	3,431.8	3,431.8	12.4	68.6	-161.52	-1,853.6	1,148.2	2,454.1	2,373.3	80.88	30.343		
3,600.0	3,548.3	3,523.3	3,523.3	12.8	70.5	-161.81	-1,853.6	1,148.2	2,492.7	2,409.6	83.07	30.008		
3,700.0	3,639.8	3,614.8	3,614.8	13.2	72.3	-162.09	-1,853.6	1,148.2	2,531.3	2,446.0	85.26	29.690		
3,800.0	3,731.4	3,706.4	3,706.4	13.6	74.1	-162.37	-1,853.6	1,148.2	2,569.9	2,482.5	87.45	29.387		
3,900.0	3,822.9	3,797.9	3,797.9	14.0	76.0	-162.63	-1,853.6	1,148.2	2,608.6	2,519.0	89.65	29.098		
4,000.0	3,914.4	3,889.4	3,889.4	14.4	77.8	-162.89	-1,853.6	1,148.2	2,647.4	2,555.5	91.85	28.822		
4,100.0	4,005.9	3,980.9	3,980.9	14.8	79.6	-163.14	-1,853.6	1,148.2	2,686.1	2,592.1	94.06	28.559		
4,200.0	4,097.5	4,072.5	4,072.5	15.2	81.4	-163.39	-1,853.6	1,148.2	2,725.0	2,628.7	96.26	28.307		
4,300.0	4,189.0	4,164.0	4,164.0	15.6	83.3	-163.62	-1,853.6	1,148.2	2,763.9	2,665.4	98.48	28.066		
4,400.0	4,280.5	4,255.5	4,255.5	16.1	85.1	-163.85	-1,853.6	1,148.2	2,802.8	2,702.1	100.69	27.836		
4,500.0	4,372.1	4,347.1	4,347.1	16.5	86.9	-164.08	-1,853.6	1,148.2	2,841.7	2,738.8	102.90	27.615		
4,600.0	4,463.6	4,438.6	4,438.6	16.9	88.8	-164.30	-1,853.6	1,148.2	2,880.7	2,775.6	105.12	27.404		
4,700.0	4,555.1	4,530.1	4,530.1	17.4	90.6	-164.51	-1,853.6	1,148.2	2,919.7	2,812.4	107.34	27.201		
4,800.0	4,646.7	4,621.7	4,621.7	17.8	92.4	-164.72	-1,853.6	1,148.2	2,958.8	2,849.2	109.56	27.006		
4,900.0	4,738.2	4,713.2	4,713.2	18.2	94.3	-164.92	-1,853.6	1,148.2	2,997.9	2,886.1	111.78	26.818		
5,000.0	4,829.7	4,804.7	4,804.7	18.7	96.1	-165.11	-1,853.6	1,148.2	3,037.0	2,923.0	114.01	26.638		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - Skurich 23-07 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 6864-2_Unknown													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,100.0	4,921.3	4,896.3	4,896.3	19.1	97.9	-165.31	-1,853.6	1,148.2	3,076.1	2,959.9	116.23	26.465		
5,200.0	5,012.8	4,987.8	4,987.8	19.5	99.8	-165.49	-1,853.6	1,148.2	3,115.3	2,996.8	118.46	26.298		
5,300.0	5,104.3	5,079.3	5,079.3	20.0	101.6	-165.68	-1,853.6	1,148.2	3,154.5	3,033.8	120.69	26.137		
5,400.0	5,195.8	5,170.8	5,170.8	20.4	103.4	-165.85	-1,853.6	1,148.2	3,193.7	3,070.8	122.92	25.982		
5,500.0	5,287.4	5,262.4	5,262.4	20.9	105.2	-166.03	-1,853.6	1,148.2	3,233.0	3,107.8	125.15	25.833		
5,600.0	5,378.9	5,353.9	5,353.9	21.3	107.1	-166.20	-1,853.6	1,148.2	3,272.3	3,144.9	127.38	25.688		
5,700.0	5,470.4	5,445.4	5,445.4	21.8	108.9	-166.36	-1,853.6	1,148.2	3,311.6	3,182.0	129.62	25.549		
5,800.0	5,562.0	5,537.0	5,537.0	22.2	110.7	-166.52	-1,853.6	1,148.2	3,350.9	3,219.1	131.85	25.414		
5,900.0	5,653.5	5,628.5	5,628.5	22.7	112.6	-166.68	-1,853.6	1,148.2	3,390.3	3,256.2	134.09	25.284		
6,000.0	5,745.0	5,720.0	5,720.0	23.1	114.4	-166.84	-1,853.6	1,148.2	3,429.6	3,293.3	136.32	25.158		
6,100.0	5,836.6	5,811.6	5,811.6	23.6	116.2	-166.99	-1,853.6	1,148.2	3,469.0	3,330.5	138.56	25.036		
6,200.0	5,928.1	5,903.1	5,903.1	24.0	118.1	-167.13	-1,853.6	1,148.2	3,508.4	3,367.6	140.80	24.918		
6,278.6	6,000.0	5,975.0	5,975.0	24.4	119.5	-167.25	-1,853.6	1,148.2	3,539.4	3,396.9	142.56	24.828		
6,290.0	6,010.4	5,985.4	5,985.4	24.4	119.7	-169.01	-1,853.6	1,148.2	3,544.0	3,401.2	142.81	24.816		
6,300.0	6,019.5	5,994.5	5,994.5	24.5	119.9	-171.13	-1,853.6	1,148.2	3,548.1	3,405.1	143.04	24.805		
6,350.0	6,065.8	6,040.8	6,040.8	24.7	120.8	176.69	-1,853.6	1,148.2	3,567.0	3,422.8	144.16	24.743		
6,400.0	6,113.0	6,088.0	6,088.0	24.9	121.8	161.39	-1,853.6	1,148.2	3,583.2	3,437.9	145.30	24.661		
6,450.0	6,160.7	6,135.7	6,135.7	25.1	122.7	143.44	-1,853.6	1,148.2	3,596.6	3,450.2	146.44	24.560		
6,500.0	6,208.5	6,183.5	6,183.5	25.3	123.7	125.34	-1,853.6	1,148.2	3,607.1	3,459.5	147.57	24.443		
6,550.0	6,255.8	6,230.8	6,230.8	25.4	124.6	109.97	-1,853.6	1,148.2	3,614.7	3,466.0	148.69	24.311		
6,600.0	6,302.5	6,277.5	6,277.5	25.6	125.5	98.43	-1,853.6	1,148.2	3,619.3	3,469.5	149.78	24.164		
6,650.0	6,347.9	6,322.9	6,322.9	25.7	126.5	90.29	-1,853.6	1,148.2	3,620.9	3,470.0	150.84	24.005		
6,700.0	6,391.6	6,366.6	6,366.6	25.9	127.3	84.70	-1,853.6	1,148.2	3,619.5	3,467.7	151.85	23.836		
6,750.0	6,433.4	6,408.4	6,408.4	26.0	128.2	80.98	-1,853.6	1,148.2	3,615.3	3,462.5	152.82	23.657		
6,800.0	6,472.8	6,447.8	6,447.8	26.1	129.0	78.63	-1,853.6	1,148.2	3,608.4	3,454.7	153.74	23.471		
6,850.0	6,509.4	6,484.4	6,484.4	26.2	129.7	77.32	-1,853.6	1,148.2	3,598.8	3,444.2	154.59	23.280		
6,900.0	6,543.0	6,518.0	6,518.0	26.3	130.4	76.85	-1,853.6	1,148.2	3,586.8	3,431.4	155.38	23.084		
6,950.0	6,573.2	6,548.2	6,548.2	26.4	131.0	77.06	-1,853.6	1,148.2	3,572.5	3,416.4	156.10	22.886		
7,000.0	6,599.8	6,574.8	6,574.8	26.5	131.5	77.84	-1,853.6	1,148.2	3,556.0	3,399.3	156.75	22.687		
7,050.0	6,622.5	6,597.5	6,597.5	26.6	131.9	79.11	-1,853.6	1,148.2	3,537.7	3,380.4	157.32	22.488		
7,100.0	6,641.1	6,616.1	6,616.1	26.7	132.3	80.81	-1,853.6	1,148.2	3,517.7	3,359.9	157.81	22.291		
7,150.0	6,655.4	6,630.4	6,630.4	26.8	132.6	82.88	-1,853.6	1,148.2	3,496.2	3,338.0	158.22	22.097		
7,200.0	6,665.4	6,640.4	6,640.4	26.9	132.8	85.27	-1,853.6	1,148.2	3,473.5	3,314.9	158.55	21.907		
7,250.0	6,670.8	6,645.8	6,645.8	27.0	132.9	87.95	-1,853.6	1,148.2	3,449.7	3,290.9	158.79	21.724		
7,285.7	6,672.0	6,647.0	6,647.0	27.1	132.9	90.00	-1,853.6	1,148.2	3,432.2	3,273.3	158.91	21.598		
7,300.0	6,672.0	6,647.0	6,647.0	27.1	132.9	90.00	-1,853.6	1,148.2	3,425.2	3,266.2	158.95	21.548		
7,400.0	6,672.0	6,647.0	6,647.0	27.3	132.9	90.00	-1,853.6	1,148.2	3,377.2	3,217.9	159.26	21.206		
7,500.0	6,672.0	6,647.0	6,647.0	27.6	132.9	90.00	-1,853.6	1,148.2	3,331.5	3,171.8	159.62	20.872		
7,600.0	6,672.0	6,647.0	6,647.0	28.0	132.9	90.00	-1,853.6	1,148.2	3,288.2	3,128.2	160.03	20.548		
7,700.0	6,672.0	6,647.0	6,647.0	28.3	132.9	90.00	-1,853.6	1,148.2	3,247.4	3,086.9	160.49	20.234		
7,800.0	6,672.0	6,647.0	6,647.0	28.8	132.9	90.00	-1,853.6	1,148.2	3,209.2	3,048.2	161.01	19.932		
7,900.0	6,672.0	6,647.0	6,647.0	29.3	132.9	90.00	-1,853.6	1,148.2	3,173.8	3,012.2	161.57	19.643		
8,000.0	6,672.0	6,647.0	6,647.0	29.8	132.9	90.00	-1,853.6	1,148.2	3,141.1	2,978.9	162.19	19.367		
8,100.0	6,672.0	6,647.0	6,647.0	30.4	132.9	90.00	-1,853.6	1,148.2	3,111.3	2,948.5	162.85	19.105		
8,200.0	6,672.0	6,647.0	6,647.0	31.0	132.9	90.00	-1,853.6	1,148.2	3,084.5	2,920.9	163.56	18.859		
8,300.0	6,672.0	6,647.0	6,647.0	31.7	132.9	90.00	-1,853.6	1,148.2	3,060.7	2,896.4	164.30	18.629		
8,400.0	6,672.0	6,647.0	6,647.0	32.4	132.9	90.00	-1,853.6	1,148.2	3,040.0	2,874.9	165.07	18.416		
8,500.0	6,672.0	6,647.0	6,647.0	33.1	132.9	90.00	-1,853.6	1,148.2	3,022.5	2,856.6	165.88	18.222		
8,600.0	6,672.0	6,647.0	6,647.0	33.9	132.9	90.00	-1,853.6	1,148.2	3,008.2	2,841.5	166.70	18.046		
8,700.0	6,672.0	6,647.0	6,647.0	34.7	132.9	90.00	-1,853.6	1,148.2	2,997.3	2,829.7	167.54	17.890		
8,800.0	6,672.0	6,647.0	6,647.0	35.5	132.9	90.00	-1,853.6	1,148.2	2,989.6	2,821.2	168.39	17.753		
8,900.0	6,672.0	6,647.0	6,647.0	36.3	132.9	90.00	-1,853.6	1,148.2	2,985.2	2,816.0	169.25	17.638		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - Skurich 23-07 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 6864-2_Unknown													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
8,979.3	6,672.0	6,647.0	6,647.0	37.0	132.9	90.00	-1,853.6	1,148.2	2,984.2	2,814.2	169.93	17.561		
9,000.0	6,672.0	6,647.0	6,647.0	37.2	132.9	90.00	-1,853.6	1,148.2	2,984.3	2,814.1	170.11	17.543		
9,100.0	6,672.0	6,647.0	6,647.0	38.1	132.9	90.00	-1,853.6	1,148.2	2,986.6	2,815.7	170.96	17.470		
9,200.0	6,672.0	6,647.0	6,647.0	39.0	132.9	90.00	-1,853.6	1,148.2	2,992.3	2,820.6	171.79	17.418		
9,300.0	6,672.0	6,647.0	6,647.0	39.9	132.9	90.00	-1,853.6	1,148.2	3,001.4	2,828.8	172.62	17.388		
9,400.0	6,672.0	6,647.0	6,647.0	40.8	132.9	90.00	-1,853.6	1,148.2	3,013.8	2,840.3	173.42	17.379 SF		
9,500.0	6,672.0	6,647.0	6,647.0	41.8	132.9	90.00	-1,853.6	1,148.2	3,029.4	2,855.2	174.20	17.391		
9,600.0	6,672.0	6,647.0	6,647.0	42.7	132.9	90.00	-1,853.6	1,148.2	3,048.2	2,873.2	174.95	17.424		
9,700.0	6,672.0	6,647.0	6,647.0	43.7	132.9	90.00	-1,853.6	1,148.2	3,070.2	2,894.5	175.67	17.477		
9,800.0	6,672.0	6,647.0	6,647.0	44.7	132.9	90.00	-1,853.6	1,148.2	3,095.2	2,918.9	176.35	17.551		
9,900.0	6,672.0	6,647.0	6,647.0	45.7	132.9	90.00	-1,853.6	1,148.2	3,123.3	2,946.3	177.01	17.645		
10,000.0	6,672.0	6,647.0	6,647.0	46.7	132.9	90.00	-1,853.6	1,148.2	3,154.3	2,976.6	177.63	17.758		
10,100.0	6,672.0	6,647.0	6,647.0	47.7	132.9	90.00	-1,853.6	1,148.2	3,188.1	3,009.9	178.21	17.889		
10,200.0	6,672.0	6,647.0	6,647.0	48.8	132.9	90.00	-1,853.6	1,148.2	3,224.7	3,045.9	178.76	18.039		
10,300.0	6,672.0	6,647.0	6,647.0	49.8	132.9	90.00	-1,853.6	1,148.2	3,264.0	3,084.7	179.27	18.207		
10,400.0	6,672.0	6,647.0	6,647.0	50.9	132.9	90.00	-1,853.6	1,148.2	3,305.8	3,126.0	179.75	18.391		
10,500.0	6,672.0	6,647.0	6,647.0	51.9	132.9	90.00	-1,853.6	1,148.2	3,350.1	3,169.9	180.19	18.591		
10,600.0	6,672.0	6,647.0	6,647.0	53.0	132.9	90.00	-1,853.6	1,148.2	3,396.7	3,216.1	180.60	18.808		
10,700.0	6,672.0	6,647.0	6,647.0	54.1	132.9	90.00	-1,853.6	1,148.2	3,445.7	3,264.7	180.98	19.039		
10,800.0	6,672.0	6,647.0	6,647.0	55.2	132.9	90.00	-1,853.6	1,148.2	3,496.8	3,315.5	181.33	19.284		
10,900.0	6,672.0	6,647.0	6,647.0	56.3	132.9	90.00	-1,853.6	1,148.2	3,550.0	3,368.4	181.65	19.543		
11,000.0	6,672.0	6,647.0	6,647.0	57.4	132.9	90.00	-1,853.6	1,148.2	3,605.2	3,423.3	181.94	19.816		
11,100.0	6,672.0	6,647.0	6,647.0	58.5	132.9	90.00	-1,853.6	1,148.2	3,662.3	3,480.1	182.20	20.100		
11,200.0	6,672.0	6,647.0	6,647.0	59.6	132.9	90.00	-1,853.6	1,148.2	3,721.3	3,538.8	182.44	20.397		
11,300.0	6,672.0	6,647.0	6,647.0	60.7	132.9	90.00	-1,853.6	1,148.2	3,781.9	3,599.3	182.66	20.705		
11,400.0	6,672.0	6,647.0	6,647.0	61.8	132.9	90.00	-1,853.6	1,148.2	3,844.2	3,661.4	182.85	21.023		
11,500.0	6,672.0	6,647.0	6,647.0	62.9	132.9	90.00	-1,853.6	1,148.2	3,908.1	3,725.1	183.03	21.352		
11,600.0	6,672.0	6,647.0	6,647.0	64.1	132.9	90.00	-1,853.6	1,148.2	3,973.5	3,790.3	183.19	21.691		
11,700.0	6,672.0	6,647.0	6,647.0	65.2	132.9	90.00	-1,853.6	1,148.2	4,040.3	3,857.0	183.33	22.039		
11,800.0	6,672.0	6,647.0	6,647.0	66.3	132.9	90.00	-1,853.6	1,148.2	4,108.5	3,925.0	183.45	22.395		
11,900.0	6,672.0	6,647.0	6,647.0	67.5	132.9	90.00	-1,853.6	1,148.2	4,177.9	3,994.3	183.56	22.760		
12,000.0	6,672.0	6,647.0	6,647.0	68.6	132.9	90.00	-1,853.6	1,148.2	4,248.6	4,064.9	183.66	23.133		
12,100.0	6,672.0	6,647.0	6,647.0	69.8	132.9	90.00	-1,853.6	1,148.2	4,320.4	4,136.7	183.74	23.514		
12,200.0	6,672.0	6,647.0	6,647.0	70.9	132.9	90.00	-1,853.6	1,148.2	4,393.3	4,209.5	183.81	23.901		
12,300.0	6,672.0	6,647.0	6,647.0	72.1	132.9	90.00	-1,853.6	1,148.2	4,467.3	4,283.4	183.88	24.295		
12,400.0	6,672.0	6,647.0	6,647.0	73.2	132.9	90.00	-1,853.6	1,148.2	4,542.3	4,358.4	183.93	24.696		
12,500.0	6,672.0	6,647.0	6,647.0	74.4	132.9	90.00	-1,853.6	1,148.2	4,618.3	4,434.3	183.97	25.103		
12,600.0	6,672.0	6,647.0	6,647.0	75.5	132.9	90.00	-1,853.6	1,148.2	4,695.1	4,511.1	184.01	25.515		
12,700.0	6,672.0	6,647.0	6,647.0	76.7	132.9	90.00	-1,853.6	1,148.2	4,772.8	4,588.8	184.04	25.933		
12,800.0	6,672.0	6,647.0	6,647.0	77.9	132.9	90.00	-1,853.6	1,148.2	4,851.4	4,667.3	184.07	26.357		
12,900.0	6,672.0	6,647.0	6,647.0	79.0	132.9	90.00	-1,853.6	1,148.2	4,930.7	4,746.6	184.08	26.785		
13,000.0	6,672.0	6,647.0	6,647.0	80.2	132.9	90.00	-1,853.6	1,148.2	5,010.7	4,826.6	184.10	27.218		
13,100.0	6,672.0	6,647.0	6,647.0	81.4	132.9	90.00	-1,853.6	1,148.2	5,091.5	4,907.4	184.11	27.655		
13,200.0	6,672.0	6,647.0	6,647.0	82.6	132.9	90.00	-1,853.6	1,148.2	5,172.9	4,988.8	184.11	28.097		
13,300.0	6,672.0	6,647.0	6,647.0	83.7	132.9	90.00	-1,853.6	1,148.2	5,255.0	5,070.9	184.11	28.542		
13,400.0	6,672.0	6,647.0	6,647.0	84.9	132.9	90.00	-1,853.6	1,148.2	5,337.7	5,153.6	184.11	28.992		
13,500.0	6,672.0	6,647.0	6,647.0	86.1	132.9	90.00	-1,853.6	1,148.2	5,421.0	5,236.9	184.11	29.445		
13,600.0	6,672.0	6,647.0	6,647.0	87.3	132.9	90.00	-1,853.6	1,148.2	5,504.9	5,320.8	184.10	29.902		
13,700.0	6,672.0	6,647.0	6,647.0	88.4	132.9	90.00	-1,853.6	1,148.2	5,589.3	5,405.2	184.09	30.361		
13,800.0	6,672.0	6,647.0	6,647.0	89.6	132.9	90.00	-1,853.6	1,148.2	5,674.2	5,490.1	184.08	30.824		
13,900.0	6,672.0	6,647.0	6,647.0	90.8	132.9	90.00	-1,853.6	1,148.2	5,759.6	5,575.5	184.07	31.290		
14,000.0	6,672.0	6,647.0	6,647.0	92.0	132.9	90.00	-1,853.6	1,148.2	5,845.4	5,661.4	184.05	31.759		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - Skurich 23-07 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 6864-2_Unknown													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
14,100.0	6,672.0	6,647.0	6,647.0	93.2	132.9	90.00	-1,853.6	1,148.2	5,931.7	5,747.7	184.04	32.231		
14,200.0	6,672.0	6,647.0	6,647.0	94.4	132.9	90.00	-1,853.6	1,148.2	6,018.5	5,834.4	184.02	32.705		
14,300.0	6,672.0	6,647.0	6,647.0	95.6	132.9	90.00	-1,853.6	1,148.2	6,105.6	5,921.6	184.01	33.181		
14,400.0	6,672.0	6,647.0	6,647.0	96.8	132.9	90.00	-1,853.6	1,148.2	6,193.1	6,009.1	183.99	33.660		
14,500.0	6,672.0	6,647.0	6,647.0	98.0	132.9	90.00	-1,853.6	1,148.2	6,281.0	6,097.1	183.97	34.141		
14,600.0	6,672.0	6,647.0	6,647.0	99.2	132.9	90.00	-1,853.6	1,148.2	6,369.3	6,185.4	183.96	34.624		
14,700.0	6,672.0	6,647.0	6,647.0	100.4	132.9	90.00	-1,853.6	1,148.2	6,457.9	6,274.0	183.94	35.109		
14,800.0	6,672.0	6,647.0	6,647.0	101.6	132.9	90.00	-1,853.6	1,148.2	6,546.9	6,362.9	183.92	35.596		
14,900.0	6,672.0	6,647.0	6,647.0	102.7	132.9	90.00	-1,853.6	1,148.2	6,636.1	6,452.2	183.90	36.085		
15,000.0	6,672.0	6,647.0	6,647.0	103.9	132.9	90.00	-1,853.6	1,148.2	6,725.7	6,541.8	183.89	36.575		
15,100.0	6,672.0	6,647.0	6,647.0	105.1	132.9	90.00	-1,853.6	1,148.2	6,815.6	6,631.7	183.87	37.067		
15,200.0	6,672.0	6,647.0	6,647.0	106.3	132.9	90.00	-1,853.6	1,148.2	6,905.7	6,721.9	183.85	37.561		
15,300.0	6,672.0	6,647.0	6,647.0	107.6	132.9	90.00	-1,853.6	1,148.2	6,996.1	6,812.3	183.84	38.056		
15,400.0	6,672.0	6,647.0	6,647.0	108.8	132.9	90.00	-1,853.6	1,148.2	7,086.8	6,903.0	183.82	38.553		
15,500.0	6,672.0	6,647.0	6,647.0	110.0	132.9	90.00	-1,853.6	1,148.2	7,177.7	6,993.9	183.80	39.051		
15,600.0	6,672.0	6,647.0	6,647.0	111.2	132.9	90.00	-1,853.6	1,148.2	7,268.9	7,085.1	183.79	39.550		
15,700.0	6,672.0	6,647.0	6,647.0	112.4	132.9	90.00	-1,853.6	1,148.2	7,360.3	7,176.5	183.78	40.050		
15,800.0	6,672.0	6,647.0	6,647.0	113.6	132.9	90.00	-1,853.6	1,148.2	7,451.9	7,268.2	183.76	40.552		
15,900.0	6,672.0	6,647.0	6,647.0	114.8	132.9	90.00	-1,853.6	1,148.2	7,543.8	7,360.0	183.75	41.055		
16,000.0	6,672.0	6,647.0	6,647.0	116.0	132.9	90.00	-1,853.6	1,148.2	7,635.8	7,452.1	183.74	41.558		
16,100.0	6,672.0	6,647.0	6,647.0	117.2	132.9	90.00	-1,853.6	1,148.2	7,728.1	7,544.3	183.73	42.063		
16,200.0	6,672.0	6,647.0	6,647.0	118.4	132.9	90.00	-1,853.6	1,148.2	7,820.5	7,636.8	183.72	42.569		
16,300.0	6,672.0	6,647.0	6,647.0	119.6	132.9	90.00	-1,853.6	1,148.2	7,913.1	7,729.4	183.71	43.075		
16,400.0	6,672.0	6,647.0	6,647.0	120.8	132.9	90.00	-1,853.6	1,148.2	8,005.9	7,822.2	183.70	43.582		
16,500.0	6,672.0	6,647.0	6,647.0	122.0	132.9	90.00	-1,853.6	1,148.2	8,098.9	7,915.2	183.69	44.090		
16,600.0	6,672.0	6,647.0	6,647.0	123.2	132.9	90.00	-1,853.6	1,148.2	8,192.1	8,008.4	183.68	44.599		
16,700.0	6,672.0	6,647.0	6,647.0	124.5	132.9	90.00	-1,853.6	1,148.2	8,285.4	8,101.7	183.68	45.109		
16,800.0	6,672.0	6,647.0	6,647.0	125.7	132.9	90.00	-1,853.6	1,148.2	8,378.9	8,195.2	183.67	45.619		
16,900.0	6,672.0	6,647.0	6,647.0	126.9	132.9	90.00	-1,853.6	1,148.2	8,472.5	8,288.8	183.67	46.130		
17,000.0	6,672.0	6,647.0	6,647.0	128.1	132.9	90.00	-1,853.6	1,148.2	8,566.2	8,382.6	183.66	46.641		
17,100.0	6,672.0	6,647.0	6,647.0	129.3	132.9	90.00	-1,853.6	1,148.2	8,660.2	8,476.5	183.66	47.153		
17,200.0	6,672.0	6,647.0	6,647.0	130.5	132.9	90.00	-1,853.6	1,148.2	8,754.2	8,570.5	183.66	47.666		
17,300.0	6,672.0	6,647.0	6,647.0	131.7	132.9	90.00	-1,853.6	1,148.2	8,848.4	8,664.7	183.66	48.179		
17,400.0	6,672.0	6,647.0	6,647.0	133.0	132.9	90.00	-1,853.6	1,148.2	8,942.7	8,759.0	183.66	48.692		
17,500.0	6,672.0	6,647.0	6,647.0	134.2	132.9	90.00	-1,853.6	1,148.2	9,037.1	8,853.5	183.66	49.206		
17,600.0	6,672.0	6,647.0	6,647.0	135.4	132.9	90.00	-1,853.6	1,148.2	9,131.7	8,948.0	183.66	49.721		
17,700.0	6,672.0	6,647.0	6,647.0	136.6	132.9	90.00	-1,853.6	1,148.2	9,226.4	9,042.7	183.66	50.235		
17,800.0	6,672.0	6,647.0	6,647.0	137.8	132.9	90.00	-1,853.6	1,148.2	9,321.1	9,137.5	183.67	50.750		
17,900.0	6,672.0	6,647.0	6,647.0	139.0	132.9	90.00	-1,853.6	1,148.2	9,416.0	9,232.4	183.67	51.266		
18,000.0	6,672.0	6,647.0	6,647.0	140.3	132.9	90.00	-1,853.6	1,148.2	9,511.0	9,327.4	183.68	51.781		
18,100.0	6,672.0	6,647.0	6,647.0	141.5	132.9	90.00	-1,853.6	1,148.2	9,606.2	9,422.5	183.68	52.297		
18,200.0	6,672.0	6,647.0	6,647.0	142.7	132.9	90.00	-1,853.6	1,148.2	9,701.4	9,517.7	183.69	52.813		
18,300.0	6,672.0	6,647.0	6,647.0	143.9	132.9	90.00	-1,853.6	1,148.2	9,796.7	9,613.0	183.70	53.330		
18,342.5	6,672.0	6,647.0	6,647.0	144.4	132.9	90.00	-1,853.6	1,148.2	9,837.2	9,653.5	183.70	53.549		



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - Skurich 33-07 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	124.75	-1,731.0	2,495.5	3,037.1					
100.0	100.0	94.4	94.4	0.1	0.2	124.75	-1,731.1	2,495.5	3,037.1	3,036.8	0.29	N/A		
200.0	200.0	190.7	190.7	0.5	0.5	124.75	-1,731.1	2,495.5	3,037.2	3,036.2	0.98	3,112.756		
300.0	300.0	292.4	292.4	0.8	0.8	124.74	-1,731.0	2,495.8	3,037.4	3,035.7	1.69	1,797.013		
400.0	400.0	401.3	401.3	1.2	1.2	124.74	-1,730.6	2,496.1	3,037.3	3,034.9	2.43	1,250.731		
494.2	494.2	490.2	490.2	1.5	1.5	124.73	-1,730.5	2,496.1	3,037.3	3,034.2	3.08	987.424		
500.0	500.0	495.7	495.7	1.6	1.6	124.73	-1,730.5	2,496.1	3,037.3	3,034.1	3.12	974.747		
600.0	600.0	594.7	594.7	1.9	1.9	124.73	-1,730.4	2,496.2	3,037.3	3,033.5	3.82	795.076		
700.0	700.0	695.7	695.7	2.3	2.3	124.73	-1,730.4	2,496.2	3,037.3	3,032.8	4.53	670.297		
800.0	800.0	797.9	797.9	2.6	2.6	124.73	-1,730.2	2,496.3	3,037.3	3,032.0	5.25	578.937		
900.0	900.0	897.8	897.8	3.0	3.0	124.72	-1,730.1	2,496.3	3,037.2	3,031.3	5.95	510.201		
1,000.0	1,000.0	999.6	999.6	3.4	3.3	124.72	-1,730.0	2,496.2	3,037.1	3,030.5	6.67	455.563		
1,100.0	1,100.0	1,098.1	1,098.1	3.7	3.7	124.72	-1,730.0	2,496.2	3,037.0	3,029.7	7.37	412.135		
1,183.5	1,183.5	1,179.5	1,179.5	4.0	3.9	124.72	-1,729.9	2,496.2	3,037.0	3,029.1	7.95	381.899		
1,200.0	1,200.0	1,195.6	1,195.6	4.1	4.0	124.72	-1,729.9	2,496.2	3,037.0	3,029.0	8.07	376.431		
1,300.0	1,300.0	1,299.8	1,299.8	4.4	4.4	124.72	-1,729.6	2,496.3	3,037.0	3,028.2	8.79	345.493		
1,400.0	1,400.0	1,411.4	1,411.4	4.8	4.8	124.71	-1,729.2	2,496.2	3,036.7	3,027.1	9.54	318.359		
1,500.0	1,500.0	1,501.1	1,501.1	5.1	5.1	124.71	-1,729.0	2,496.0	3,036.4	3,026.1	10.21	297.378		
1,600.0	1,600.0	1,599.7	1,599.7	5.5	5.4	124.71	-1,728.8	2,495.9	3,036.2	3,025.3	10.91	278.209		
1,700.0	1,700.0	1,705.2	1,705.2	5.9	5.8	124.70	-1,728.4	2,496.0	3,036.0	3,024.4	11.64	260.811		
1,800.0	1,800.0	1,811.8	1,811.8	6.2	6.2	124.69	-1,727.7	2,495.9	3,035.6	3,023.2	12.37	245.371		
1,900.0	1,900.0	1,909.4	1,909.4	6.6	6.5	124.68	-1,727.1	2,495.8	3,035.1	3,022.0	13.07	232.197		
2,000.0	2,000.0	2,003.9	2,003.9	6.9	6.8	124.68	-1,726.6	2,495.8	3,034.8	3,021.0	13.76	220.549		
2,100.0	2,100.0	2,115.6	2,115.5	7.3	7.2	124.67	-1,725.8	2,495.7	3,034.3	3,019.8	14.51	209.136		
2,200.0	2,200.0	2,196.8	2,196.7	7.7	7.5	124.66	-1,725.4	2,495.7	3,034.1	3,018.9	15.15	200.253		
2,200.6	2,200.6	2,197.3	2,197.3	7.7	7.5	175.66	-1,725.4	2,495.7	3,034.1	3,018.9	15.16	200.201		
2,300.0	2,300.0	2,291.1	2,291.0	8.0	7.8	175.65	-1,725.1	2,496.0	3,035.9	3,020.0	15.84	191.717		
2,400.0	2,399.8	2,385.1	2,385.1	8.4	8.2	175.64	-1,724.9	2,496.4	3,041.4	3,024.8	16.52	184.156		
2,500.0	2,499.5	2,481.3	2,481.3	8.7	8.5	175.64	-1,725.1	2,496.8	3,050.5	3,033.3	17.20	177.332		
2,600.0	2,598.7	2,593.8	2,593.8	9.1	8.9	175.64	-1,725.1	2,497.2	3,062.9	3,045.0	17.95	170.675		
2,700.0	2,697.5	2,691.2	2,691.1	9.4	9.2	175.63	-1,725.1	2,497.2	3,078.5	3,059.9	18.64	165.193		
2,800.0	2,795.6	2,800.9	2,800.9	9.8	9.6	175.63	-1,725.0	2,497.2	3,097.5	3,078.1	19.37	159.915		
2,900.0	2,893.1	2,893.8	2,893.7	10.1	9.9	175.63	-1,725.0	2,496.9	3,119.7	3,099.6	20.04	155.651		
3,000.0	2,889.6	2,890.6	2,890.5	10.5	10.3	175.63	-1,725.3	2,496.5	3,145.4	3,124.6	20.73	151.736		
3,100.0	3,085.3	3,088.9	3,088.9	10.9	10.6	175.64	-1,725.7	2,496.0	3,174.3	3,152.9	21.42	148.191		
3,200.0	3,179.8	3,166.5	3,166.5	11.2	10.9	175.63	-1,726.0	2,495.8	3,206.8	3,184.8	22.04	145.525		
3,300.0	3,273.2	3,250.8	3,250.7	11.6	11.2	175.63	-1,726.7	2,495.8	3,243.0	3,220.3	22.67	143.025		
3,387.5	3,353.8	3,328.5	3,328.5	11.9	11.5	175.63	-1,727.6	2,495.8	3,277.4	3,254.2	23.25	140.981		
3,400.0	3,365.2	3,338.9	3,338.9	12.0	11.5	175.64	-1,727.7	2,495.8	3,282.5	3,259.2	23.33	140.710		
3,500.0	3,456.8	3,427.7	3,427.7	12.4	11.8	175.70	-1,728.7	2,495.9	3,323.4	3,299.4	23.98	138.595		
3,600.0	3,548.3	3,527.1	3,527.1	12.8	12.1	175.77	-1,729.6	2,496.0	3,364.1	3,339.4	24.68	136.335		
3,700.0	3,639.8	3,617.2	3,617.1	13.2	12.5	175.83	-1,730.3	2,496.1	3,404.8	3,379.4	25.34	134.360		
3,800.0	3,731.4	3,705.7	3,705.7	13.6	12.8	175.88	-1,730.8	2,496.4	3,445.5	3,419.5	26.00	132.498		
3,900.0	3,822.9	3,801.9	3,801.9	14.0	13.1	175.94	-1,731.4	2,496.6	3,486.2	3,459.5	26.70	130.562		
4,000.0	3,914.4	3,894.9	3,894.9	14.4	13.4	175.98	-1,731.5	2,497.1	3,526.8	3,499.4	27.39	128.762		
4,100.0	4,005.9	3,980.8	3,980.8	14.8	13.7	176.01	-1,731.1	2,497.9	3,567.5	3,539.4	28.05	127.165		
4,200.0	4,097.5	4,060.2	4,060.2	15.2	14.0	176.03	-1,730.7	2,498.9	3,608.4	3,579.7	28.69	125.752		
4,300.0	4,189.0	4,146.4	4,146.3	15.6	14.3	176.05	-1,730.0	2,500.5	3,649.5	3,620.1	29.36	124.284		
4,400.0	4,280.5	4,235.3	4,235.2	16.1	14.6	176.06	-1,729.3	2,502.2	3,690.7	3,660.6	30.05	122.826		
4,500.0	4,372.1	4,316.0	4,315.9	16.5	14.9	176.08	-1,728.8	2,503.8	3,732.0	3,701.3	30.70	121.566		
4,600.0	4,463.6	4,398.3	4,398.2	16.9	15.2	176.09	-1,728.3	2,505.6	3,773.6	3,742.2	31.36	120.335		
4,700.0	4,555.1	4,496.5	4,496.4	17.4	15.5	176.11	-1,727.6	2,508.0	3,815.2	3,783.1	32.09	118.895		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - Skurich 33-07 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
4,800.0	4,646.7	4,589.0	4,588.8	17.8	15.9	176.12	-1,727.0	2,510.0	3,856.7	3,823.9	32.80	117.597		
4,900.0	4,738.2	4,727.6	4,727.4	18.2	16.3	176.14	-1,725.9	2,512.4	3,897.8	3,864.1	33.70	115.651		
5,000.0	4,829.7	4,869.7	4,869.5	18.7	16.8	176.17	-1,723.2	2,513.0	3,937.2	3,902.6	34.62	113.709		
5,100.0	4,921.3	4,955.5	4,955.2	19.1	17.1	176.18	-1,721.5	2,513.1	3,976.4	3,941.1	35.31	112.608		
5,200.0	5,012.8	5,037.8	5,037.5	19.5	17.4	176.20	-1,720.4	2,513.1	4,015.8	3,979.9	35.99	111.597		
5,300.0	5,104.3	5,129.2	5,128.9	20.0	17.7	176.22	-1,719.3	2,513.1	4,055.4	4,018.7	36.70	110.507		
5,400.0	5,195.8	5,231.3	5,231.0	20.4	18.1	176.26	-1,718.4	2,512.7	4,094.8	4,057.4	37.46	109.314		
5,500.0	5,287.4	5,319.0	5,318.7	20.9	18.4	176.30	-1,718.1	2,511.8	4,134.2	4,096.0	38.16	108.340		
5,600.0	5,378.9	5,391.2	5,390.9	21.3	18.7	176.33	-1,718.3	2,511.1	4,173.8	4,135.0	38.79	107.593		
5,700.0	5,470.4	5,513.2	5,512.9	21.8	19.1	176.40	-1,719.0	2,509.6	4,213.4	4,173.8	39.65	106.275		
5,800.0	5,562.0	5,609.1	5,608.7	22.2	19.4	176.46	-1,719.9	2,507.7	4,252.6	4,212.2	40.39	105.298		
5,900.0	5,653.5	5,732.0	5,731.6	22.7	19.8	176.54	-1,720.7	2,504.7	4,291.4	4,250.1	41.25	104.039		
6,000.0	5,745.0	5,838.6	5,838.2	23.1	20.2	176.61	-1,721.1	2,501.6	4,329.6	4,287.6	42.04	102.994		
6,100.0	5,836.6	5,934.8	5,934.3	23.6	20.6	176.67	-1,721.5	2,498.6	4,367.7	4,324.9	42.78	102.088		
6,200.0	5,928.1	6,022.8	6,022.3	24.0	20.9	176.72	-1,721.8	2,495.9	4,405.8	4,362.3	43.50	101.293		
6,278.6	6,000.0	6,080.2	6,079.7	24.4	21.1	176.76	-1,722.0	2,494.3	4,435.9	4,391.9	44.00	100.811		
6,290.0	6,010.4	6,088.5	6,087.9	24.4	21.1	174.90	-1,722.0	2,494.1	4,440.4	4,396.3	44.08	100.743		
6,300.0	6,019.5	6,095.7	6,095.2	24.5	21.1	172.90	-1,722.0	2,493.9	4,444.4	4,400.2	44.14	100.686		
6,350.0	6,065.8	6,140.7	6,140.2	24.7	21.3	161.31	-1,722.2	2,492.8	4,462.0	4,417.5	44.50	100.281		
6,400.0	6,113.0	6,187.6	6,187.0	24.9	21.4	146.56	-1,722.3	2,491.7	4,476.2	4,431.3	44.85	99.800		
6,450.0	6,160.7	6,232.7	6,232.1	25.1	21.6	129.12	-1,722.4	2,490.7	4,486.7	4,441.5	45.19	99.280		
6,500.0	6,208.5	6,277.0	6,276.4	25.3	21.7	111.47	-1,722.4	2,489.7	4,493.5	4,448.0	45.52	98.717		
6,550.0	6,255.8	6,319.3	6,318.7	25.4	21.9	96.49	-1,722.5	2,488.9	4,496.6	4,450.8	45.83	98.122		
6,600.0	6,302.5	6,359.3	6,358.7	25.6	22.0	85.31	-1,722.6	2,488.1	4,496.0	4,449.9	46.11	97.503		
6,650.0	6,347.9	6,398.3	6,397.7	25.7	22.2	77.49	-1,722.7	2,487.4	4,491.7	4,445.3	46.38	96.848		
6,700.0	6,391.6	6,432.5	6,431.9	25.9	22.3	72.19	-1,722.8	2,486.9	4,483.8	4,437.2	46.61	96.193		
6,750.0	6,433.4	6,464.9	6,464.3	26.0	22.4	68.75	-1,722.9	2,486.4	4,472.5	4,425.7	46.83	95.507		
6,800.0	6,472.8	6,495.5	6,494.9	26.1	22.5	66.72	-1,723.1	2,486.0	4,457.8	4,410.8	47.03	94.792		
6,850.0	6,509.4	6,529.8	6,529.1	26.2	22.6	65.83	-1,723.3	2,485.6	4,440.0	4,392.7	47.24	93.994		
6,900.0	6,543.0	6,562.1	6,561.5	26.3	22.7	65.88	-1,723.5	2,485.2	4,419.0	4,371.6	47.43	93.163		
6,950.0	6,573.2	6,591.2	6,590.6	26.4	22.8	66.74	-1,723.6	2,484.9	4,395.2	4,347.6	47.61	92.311		
7,000.0	6,599.8	6,617.3	6,616.6	26.5	22.9	68.36	-1,723.7	2,484.7	4,368.9	4,321.1	47.78	91.436		
7,050.0	6,622.5	6,639.6	6,639.0	26.6	23.0	70.68	-1,723.8	2,484.5	4,340.1	4,292.2	47.93	90.544		
7,100.0	6,641.1	6,657.8	6,657.1	26.7	23.1	73.69	-1,723.9	2,484.3	4,309.3	4,261.2	48.07	89.638		
7,150.0	6,655.4	6,671.6	6,671.0	26.8	23.1	77.37	-1,723.9	2,484.2	4,276.7	4,228.5	48.20	88.723		
7,200.0	6,665.4	6,681.1	6,680.4	26.9	23.2	81.68	-1,724.0	2,484.1	4,242.7	4,194.3	48.32	87.802		
7,250.0	6,670.8	6,686.0	6,685.4	27.0	23.2	86.56	-1,724.0	2,484.0	4,207.4	4,159.0	48.43	86.879		
7,285.7	6,672.0	6,686.8	6,686.2	27.1	23.2	90.36	-1,724.0	2,484.0	4,181.7	4,133.2	48.50	86.221		
7,300.0	6,672.0	6,686.7	6,686.1	27.1	23.2	90.36	-1,724.0	2,484.0	4,171.3	4,122.8	48.53	85.958		
7,400.0	6,672.0	6,685.7	6,685.1	27.3	23.2	90.34	-1,724.0	2,484.0	4,099.5	4,050.7	48.74	84.111		
7,500.0	6,672.0	6,684.7	6,684.1	27.6	23.2	90.32	-1,724.0	2,484.0	4,028.8	3,979.8	48.99	82.237		
7,600.0	6,672.0	6,683.7	6,683.1	28.0	23.2	90.30	-1,724.0	2,484.1	3,959.5	3,910.2	49.29	80.338		
7,700.0	6,672.0	6,682.7	6,682.1	28.3	23.2	90.28	-1,724.0	2,484.1	3,891.4	3,841.8	49.62	78.417		
7,800.0	6,672.0	6,681.7	6,681.1	28.8	23.2	90.26	-1,724.0	2,484.1	3,824.8	3,774.8	50.01	76.480		
7,900.0	6,672.0	6,680.7	6,680.1	29.3	23.2	90.24	-1,724.0	2,484.1	3,759.7	3,709.3	50.45	74.529		
8,000.0	6,672.0	6,679.7	6,679.1	29.8	23.2	90.22	-1,724.0	2,484.1	3,696.1	3,645.2	50.93	72.571		
8,100.0	6,672.0	6,678.7	6,678.1	30.4	23.2	90.20	-1,724.0	2,484.1	3,634.2	3,582.8	51.47	70.611		
8,200.0	6,672.0	6,677.7	6,677.1	31.0	23.1	90.18	-1,724.0	2,484.1	3,574.0	3,522.0	52.06	68.656		
8,300.0	6,672.0	6,676.7	6,676.1	31.7	23.1	90.16	-1,724.0	2,484.1	3,515.7	3,463.0	52.70	66.713		
8,400.0	6,672.0	6,675.7	6,675.1	32.4	23.1	90.14	-1,723.9	2,484.1	3,459.2	3,405.8	53.39	64.788		
8,500.0	6,672.0	6,674.7	6,674.1	33.1	23.1	90.12	-1,723.9	2,484.1	3,404.8	3,350.6	54.14	62.890		
8,600.0	6,672.0	6,673.7	6,673.1	33.9	23.1	90.10	-1,723.9	2,484.1	3,352.4	3,297.5	54.94	61.024		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - Skurich 33-07 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft		
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error: 0.0 ft		
Reference		Offset		Semi Major Axis		Distance								Warning	
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor				
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)				
8,700.0	6,672.0	6,672.7	6,672.1		34.7	23.1	90.08	-1,723.9	2,484.2	3,302.3	3,246.5	55.78	59.199		
8,800.0	6,672.0	6,671.7	6,671.1		35.5	23.1	90.06	-1,723.9	2,484.2	3,254.5	3,197.8	56.68	57.420		
8,900.0	6,672.0	6,670.7	6,670.1		36.3	23.1	90.04	-1,723.9	2,484.2	3,209.1	3,151.4	57.62	55.695		
9,000.0	6,672.0	6,669.7	6,669.1		37.2	23.1	90.02	-1,723.9	2,484.2	3,166.2	3,107.6	58.60	54.031		
9,100.0	6,672.0	6,668.7	6,668.1		38.1	23.1	90.00	-1,723.9	2,484.2	3,125.9	3,066.3	59.62	52.431		
9,200.0	6,672.0	6,667.7	6,667.1		39.0	23.1	89.98	-1,723.9	2,484.2	3,088.3	3,027.6	60.67	50.902		
9,300.0	6,672.0	6,666.7	6,666.1		39.9	23.1	89.96	-1,723.9	2,484.2	3,053.6	2,991.8	61.75	49.447		
9,400.0	6,672.0	6,665.7	6,665.1		40.8	23.1	89.94	-1,723.9	2,484.2	3,021.7	2,958.9	62.86	48.070		
9,500.0	6,672.0	6,664.7	6,664.1		41.8	23.1	89.92	-1,723.9	2,484.2	2,992.9	2,929.0	63.98	46.776		
9,600.0	6,672.0	6,663.7	6,663.1		42.7	23.1	89.90	-1,723.9	2,484.2	2,967.2	2,902.1	65.12	45.565		
9,700.0	6,672.0	6,662.8	6,662.1		43.7	23.1	89.88	-1,723.9	2,484.3	2,944.7	2,878.4	66.26	44.439		
9,800.0	6,672.0	6,661.8	6,661.1		44.7	23.1	89.86	-1,723.9	2,484.3	2,925.4	2,858.0	67.40	43.401		
9,900.0	6,672.0	6,660.8	6,660.1		45.7	23.1	89.84	-1,723.9	2,484.3	2,909.4	2,840.9	68.54	42.450		
10,000.0	6,672.0	6,659.8	6,659.1		46.7	23.1	89.82	-1,723.9	2,484.3	2,896.9	2,827.2	69.66	41.587		
10,100.0	6,672.0	6,658.8	6,658.1		47.7	23.1	89.80	-1,723.9	2,484.3	2,887.7	2,816.9	70.76	40.811		
10,200.0	6,672.0	6,657.8	6,657.1		48.8	23.1	89.78	-1,723.9	2,484.3	2,882.0	2,810.1	71.83	40.122		
10,300.0	6,672.0	6,656.8	6,656.1		49.8	23.1	89.76	-1,723.9	2,484.3	2,879.7	2,806.8	72.87	39.518		
10,314.7	6,672.0	6,656.6	6,656.0		50.0	23.1	89.76	-1,723.9	2,484.3	2,879.7	2,806.7	73.02	39.436		CC, ES
10,400.0	6,672.0	6,655.8	6,655.1		50.9	23.1	89.74	-1,723.9	2,484.3	2,880.9	2,807.1	73.87	38.998		
10,500.0	6,672.0	6,654.8	6,654.1		51.9	23.1	89.72	-1,723.9	2,484.3	2,885.6	2,810.8	74.84	38.560		
10,600.0	6,672.0	6,653.8	6,653.1		53.0	23.1	89.70	-1,723.9	2,484.3	2,893.8	2,818.1	75.75	38.202		
10,700.0	6,672.0	6,652.8	6,652.1		54.1	23.1	89.68	-1,723.8	2,484.4	2,905.4	2,828.8	76.62	37.922		
10,800.0	6,672.0	6,651.8	6,651.1		55.2	23.1	89.66	-1,723.8	2,484.4	2,920.4	2,842.9	77.43	37.717		
10,900.0	6,672.0	6,650.8	6,650.1		56.3	23.1	89.64	-1,723.8	2,484.4	2,938.7	2,860.5	78.19	37.586		
11,000.0	6,672.0	6,650.2	6,649.1		57.4	23.1	89.62	-1,723.8	2,484.4	2,960.3	2,881.4	78.89	37.524		SF
11,100.0	6,672.0	6,651.2	6,648.1		58.5	23.1	89.60	-1,723.8	2,484.4	2,985.0	2,905.5	79.54	37.527		
11,200.0	6,672.0	6,652.2	6,647.1		59.6	23.1	89.59	-1,723.8	2,484.4	3,013.0	2,932.8	80.14	37.596		
11,300.0	6,672.0	6,653.2	6,646.2		60.7	23.1	89.57	-1,723.8	2,484.4	3,043.9	2,963.2	80.68	37.728		
11,400.0	6,672.0	6,654.2	6,645.2		61.8	23.1	89.55	-1,723.8	2,484.4	3,077.8	2,996.6	81.17	37.919		
11,500.0	6,672.0	6,655.2	6,644.2		62.9	23.1	89.53	-1,723.8	2,484.4	3,114.5	3,032.9	81.60	38.167		
11,600.0	6,672.0	6,656.2	6,643.2		64.1	23.1	89.51	-1,723.8	2,484.4	3,154.0	3,072.1	81.99	38.470		
11,700.0	6,672.0	6,657.2	6,642.2		65.2	23.1	89.49	-1,723.8	2,484.5	3,196.2	3,113.9	82.32	38.825		
11,800.0	6,672.0	6,658.2	6,641.2		66.3	23.1	89.47	-1,723.8	2,484.5	3,240.9	3,158.3	82.61	39.230		
11,900.0	6,672.0	6,659.2	6,640.2		67.5	23.1	89.45	-1,723.8	2,484.5	3,288.0	3,205.1	82.86	39.682		
12,000.0	6,672.0	6,660.2	6,639.2		68.6	23.1	89.43	-1,723.8	2,484.5	3,337.5	3,254.4	83.06	40.179		
12,100.0	6,672.0	6,661.2	6,638.2		69.8	23.1	89.41	-1,723.8	2,484.5	3,389.2	3,305.9	83.23	40.719		
12,200.0	6,672.0	6,662.2	6,637.2		70.9	23.1	89.39	-1,723.8	2,484.5	3,443.0	3,359.6	83.37	41.299		
12,300.0	6,672.0	6,663.2	6,636.2		72.1	23.1	89.37	-1,723.8	2,484.5	3,498.9	3,415.4	83.47	41.917		
12,400.0	6,672.0	6,664.2	6,635.2		73.2	23.1	89.35	-1,723.8	2,484.5	3,556.7	3,473.1	83.54	42.573		
12,500.0	6,672.0	6,665.2	6,634.2		74.4	23.1	89.33	-1,723.8	2,484.5	3,616.3	3,532.8	83.59	43.263		
12,600.0	6,672.0	6,666.2	6,633.2		75.5	23.1	89.31	-1,723.8	2,484.5	3,677.8	3,594.1	83.61	43.985		
12,700.0	6,672.0	6,667.2	6,632.2		76.7	23.1	89.29	-1,723.8	2,484.6	3,740.8	3,657.2	83.61	44.739		
12,800.0	6,672.0	6,668.2	6,631.2		77.9	23.1	89.27	-1,723.8	2,484.6	3,805.5	3,721.9	83.60	45.523		
12,900.0	6,672.0	6,631.8	6,631.2		79.0	23.0	89.27	-1,723.8	2,484.6	3,871.7	3,788.3	83.43	46.406		
13,000.0	6,672.0	6,630.9	6,630.3		80.2	23.0	89.25	-1,723.8	2,484.6	3,939.3	3,856.0	83.37	47.250		
13,100.0	6,672.0	6,630.0	6,629.4		81.4	23.0	89.23	-1,723.8	2,484.6	4,008.3	3,925.0	83.30	48.118		
13,200.0	6,672.0	6,629.1	6,628.5		82.6	23.0	89.21	-1,723.7	2,484.6	4,078.6	3,995.3	83.22	49.011		
13,300.0	6,672.0	6,628.2	6,627.5		83.7	23.0	89.19	-1,723.7	2,484.6	4,150.1	4,066.9	83.12	49.926		
13,400.0	6,672.0	6,627.2	6,626.6		84.9	23.0	89.18	-1,723.7	2,484.6	4,222.7	4,139.7	83.02	50.863		
13,500.0	6,672.0	6,626.3	6,625.7		86.1	23.0	89.16	-1,723.7	2,484.6	4,296.5	4,213.6	82.91	51.821		
13,600.0	6,672.0	6,625.4	6,624.8		87.3	23.0	89.14	-1,723.7	2,484.6	4,371.3	4,288.5	82.79	52.798		
13,700.0	6,672.0	6,624.5	6,623.9		88.4	23.0	89.12	-1,723.7	2,484.6	4,447.1	4,364.4	82.67	53.793		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - Skurich 33-07 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
13,800.0	6,672.0	6,623.6	6,623.0	89.6	23.0	89.10	-1,723.7	2,484.6	4,523.8	4,441.3	82.54	54.806		
13,900.0	6,672.0	6,622.7	6,622.1	90.8	23.0	89.08	-1,723.7	2,484.7	4,601.5	4,519.1	82.41	55.835		
14,000.0	6,672.0	6,621.8	6,621.2	92.0	23.0	89.07	-1,723.7	2,484.7	4,680.0	4,597.7	82.28	56.880		
14,100.0	6,672.0	6,620.9	6,620.3	93.2	23.0	89.05	-1,723.7	2,484.7	4,759.3	4,677.1	82.14	57.940		
14,200.0	6,672.0	6,620.0	6,619.4	94.4	22.9	89.03	-1,723.7	2,484.7	4,839.3	4,757.3	82.00	59.015		
14,300.0	6,672.0	6,619.1	6,618.4	95.6	22.9	89.01	-1,723.7	2,484.7	4,920.2	4,838.3	81.86	60.102		
14,400.0	6,672.0	6,618.2	6,617.6	96.8	22.9	88.99	-1,723.7	2,484.7	5,001.7	4,919.9	81.72	61.202		
14,500.0	6,672.0	6,617.3	6,616.7	98.0	22.9	88.98	-1,723.7	2,484.7	5,083.8	5,002.3	81.58	62.314		
14,600.0	6,672.0	6,616.4	6,615.8	99.2	22.9	88.96	-1,723.7	2,484.7	5,166.6	5,085.2	81.44	63.438		
14,700.0	6,672.0	6,620.6	6,620.0	100.4	22.9	89.04	-1,723.7	2,484.7	5,250.1	5,168.7	81.32	64.559		
14,800.0	6,672.0	6,619.5	6,618.9	101.6	22.9	89.02	-1,723.7	2,484.7	5,334.0	5,252.9	81.18	65.704		
14,900.0	6,672.0	6,618.4	6,617.8	102.7	22.9	89.00	-1,723.7	2,484.7	5,418.6	5,337.5	81.04	66.859		
15,000.0	6,672.0	6,617.3	6,616.7	103.9	22.9	88.98	-1,723.7	2,484.7	5,503.6	5,422.7	80.91	68.023		
15,100.0	6,672.0	6,616.2	6,615.5	105.1	22.9	88.95	-1,723.7	2,484.7	5,589.2	5,508.4	80.77	69.196		
15,200.0	6,672.0	6,615.0	6,614.4	106.3	22.9	88.93	-1,723.7	2,484.7	5,675.2	5,594.6	80.64	70.377		
15,300.0	6,672.0	6,613.9	6,613.3	107.6	22.9	88.91	-1,723.7	2,484.7	5,761.7	5,681.2	80.51	71.566		
15,400.0	6,672.0	6,612.7	6,612.1	108.8	22.9	88.88	-1,723.7	2,484.7	5,848.6	5,768.2	80.38	72.763		
15,500.0	6,672.0	6,611.6	6,611.0	110.0	22.9	88.86	-1,723.7	2,484.8	5,935.9	5,855.7	80.25	73.966		
15,600.0	6,672.0	6,610.4	6,609.8	111.2	22.9	88.84	-1,723.7	2,484.8	6,023.7	5,943.5	80.13	75.176		
15,700.0	6,672.0	6,609.2	6,608.6	112.4	22.9	88.81	-1,723.7	2,484.8	6,111.8	6,031.8	80.01	76.392		
15,800.0	6,672.0	6,608.1	6,607.4	113.6	22.9	88.79	-1,723.7	2,484.8	6,200.3	6,120.4	79.89	77.615		
15,900.0	6,672.0	6,606.9	6,606.3	114.8	22.9	88.77	-1,723.7	2,484.8	6,289.1	6,209.3	79.77	78.843		
16,000.0	6,672.0	6,605.7	6,605.1	116.0	22.9	88.74	-1,723.7	2,484.8	6,378.2	6,298.6	79.65	80.076		
16,100.0	6,672.0	6,604.5	6,603.9	117.2	22.9	88.72	-1,723.6	2,484.8	6,467.7	6,388.2	79.54	81.314		
16,200.0	6,672.0	6,603.3	6,602.6	118.4	22.9	88.69	-1,723.6	2,484.8	6,557.5	6,478.1	79.43	82.557		
16,300.0	6,672.0	6,602.0	6,601.4	119.6	22.9	88.67	-1,723.6	2,484.8	6,647.6	6,568.3	79.32	83.804		
16,400.0	6,672.0	6,600.8	6,600.2	120.8	22.9	88.64	-1,723.6	2,484.9	6,737.9	6,658.7	79.22	85.056		
16,500.0	6,672.0	6,599.6	6,598.9	122.0	22.9	88.62	-1,723.6	2,484.9	6,828.6	6,749.5	79.12	86.311		
16,600.0	6,672.0	6,598.3	6,597.7	123.2	22.9	88.59	-1,723.6	2,484.9	6,919.5	6,840.5	79.02	87.570		
16,700.0	6,672.0	6,597.0	6,596.4	124.5	22.9	88.57	-1,723.6	2,484.9	7,010.6	6,931.7	78.92	88.833		
16,800.0	6,672.0	6,595.8	6,595.2	125.7	22.9	88.54	-1,723.6	2,484.9	7,102.0	7,023.2	78.83	90.098		
16,900.0	6,672.0	6,594.5	6,593.9	126.9	22.9	88.52	-1,723.6	2,484.9	7,193.6	7,114.9	78.73	91.367		
17,000.0	6,672.0	6,593.2	6,592.6	128.1	22.9	88.49	-1,723.6	2,484.9	7,285.5	7,206.8	78.64	92.638		
17,100.0	6,672.0	6,591.9	6,591.3	129.3	22.8	88.46	-1,723.6	2,484.9	7,377.5	7,299.0	78.56	93.913		
17,200.0	6,672.0	6,590.6	6,590.0	130.5	22.8	88.44	-1,723.6	2,485.0	7,469.8	7,391.3	78.47	95.189		
17,300.0	6,672.0	6,589.3	6,588.7	131.7	22.8	88.41	-1,723.6	2,485.0	7,562.3	7,483.9	78.39	96.468		
17,400.0	6,672.0	6,588.0	6,587.3	133.0	22.8	88.38	-1,723.6	2,485.0	7,654.9	7,576.6	78.31	97.749		
17,500.0	6,672.0	6,586.6	6,586.0	134.2	22.8	88.36	-1,723.6	2,485.0	7,747.8	7,669.5	78.24	99.031		
17,600.0	6,672.0	6,585.3	6,584.7	135.4	22.8	88.33	-1,723.6	2,485.0	7,840.8	7,762.6	78.16	100.316		
17,700.0	6,672.0	6,583.9	6,583.3	136.6	22.8	88.30	-1,723.6	2,485.0	7,934.0	7,855.9	78.09	101.602		
17,800.0	6,672.0	6,582.6	6,581.9	137.8	22.8	88.28	-1,723.6	2,485.0	8,027.3	7,949.3	78.02	102.889		
17,900.0	6,672.0	6,581.2	6,580.6	139.0	22.8	88.25	-1,723.6	2,485.0	8,120.8	8,042.9	77.95	104.178		
18,000.0	6,672.0	6,579.8	6,579.2	140.3	22.8	88.22	-1,723.5	2,485.1	8,214.5	8,136.6	77.89	105.467		
18,100.0	6,672.0	6,578.4	6,577.8	141.5	22.8	88.19	-1,723.5	2,485.1	8,308.3	8,230.5	77.82	106.758		
18,200.0	6,672.0	6,577.0	6,576.4	142.7	22.8	88.16	-1,723.5	2,485.1	8,402.3	8,324.5	77.76	108.050		
18,300.0	6,672.0	6,575.6	6,574.9	143.9	22.8	88.13	-1,723.5	2,485.1	8,496.4	8,418.7	77.70	109.342		
18,342.5	6,672.0	6,575.0	6,574.3	144.4	22.8	88.12	-1,723.5	2,485.1	8,536.4	8,458.7	77.68	109.891		



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - Skurich 43-07 - Orignal Drilling - Orignal Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	13.5	13.5	0.0	0.0	117.64	-1,967.8	3,756.9	4,241.1					
100.0	100.0	109.5	109.5	0.1	0.2	117.64	-1,967.8	3,757.0	4,241.1	4,240.8	0.33	N/A		
200.0	200.0	204.1	204.1	0.5	0.5	117.65	-1,968.0	3,757.1	4,241.3	4,240.3	1.02	4,147.066		
300.0	300.0	323.1	323.1	0.8	1.0	117.65	-1,968.2	3,756.9	4,241.3	4,239.5	1.80	2,361.053		
400.0	400.0	422.7	422.7	1.2	1.3	117.66	-1,968.6	3,756.5	4,241.1	4,238.6	2.50	1,694.772		
500.0	500.0	522.6	522.6	1.6	1.7	117.66	-1,968.8	3,756.1	4,240.9	4,237.7	3.21	1,321.151		
600.0	600.0	620.5	620.5	1.9	2.0	117.67	-1,969.2	3,755.8	4,240.7	4,236.8	3.91	1,084.412		
700.0	700.0	723.3	723.3	2.3	2.4	117.67	-1,969.5	3,755.3	4,240.5	4,235.8	4.63	916.190		
761.2	761.2	775.2	775.2	2.5	2.5	117.68	-1,969.7	3,755.2	4,240.4	4,235.4	5.03	843.202		
800.0	800.0	810.4	810.3	2.6	2.7	117.68	-1,969.8	3,755.1	4,240.4	4,235.1	5.29	801.479		
900.0	900.0	915.3	915.3	3.0	3.0	117.69	-1,970.5	3,754.8	4,240.4	4,234.4	6.02	704.903		
910.4	910.4	924.4	924.4	3.0	3.1	117.69	-1,970.5	3,754.7	4,240.4	4,234.3	6.08	696.921		
1,000.0	1,000.0	1,004.5	1,004.5	3.4	3.3	117.70	-1,970.9	3,754.7	4,240.5	4,233.8	6.69	634.292		
1,100.0	1,100.0	1,121.3	1,121.3	3.7	3.7	117.70	-1,971.3	3,754.4	4,240.5	4,233.0	7.45	569.068		
1,147.3	1,147.3	1,161.3	1,161.3	3.9	3.9	117.71	-1,971.5	3,754.2	4,240.4	4,232.7	7.76	546.409		
1,200.0	1,200.0	1,207.8	1,207.8	4.1	4.1	117.71	-1,971.7	3,754.2	4,240.5	4,232.4	8.11	522.746		
1,300.0	1,300.0	1,315.9	1,315.9	4.4	4.4	117.72	-1,972.2	3,753.9	4,240.5	4,231.6	8.85	479.261		
1,321.9	1,321.9	1,335.9	1,335.9	4.5	4.5	117.72	-1,972.3	3,753.9	4,240.5	4,231.5	9.00	471.359		
1,400.0	1,400.0	1,406.9	1,406.9	4.8	4.7	117.72	-1,972.5	3,753.9	4,240.5	4,231.0	9.52	445.264		
1,500.0	1,500.0	1,494.7	1,494.7	5.1	5.1	117.72	-1,972.8	3,754.0	4,240.9	4,230.7	10.19	416.245		
1,600.0	1,600.0	1,615.9	1,615.9	5.5	5.5	117.73	-1,973.3	3,754.0	4,241.0	4,230.1	10.97	386.601		
1,629.4	1,629.4	1,643.5	1,643.4	5.6	5.6	117.73	-1,973.5	3,753.9	4,241.0	4,229.8	11.17	379.619		
1,700.0	1,700.0	1,709.0	1,709.0	5.9	5.8	117.74	-1,973.8	3,753.8	4,241.1	4,229.4	11.65	363.928		
1,800.0	1,800.0	1,798.1	1,798.1	6.2	6.1	117.74	-1,973.9	3,753.9	4,241.3	4,229.0	12.32	344.179		
1,900.0	1,900.0	1,906.6	1,906.6	6.6	6.5	117.73	-1,973.4	3,754.5	4,241.6	4,228.5	13.06	324.768		
2,000.0	2,000.0	1,988.0	1,988.0	6.9	6.8	117.71	-1,972.8	3,755.3	4,242.0	4,228.3	13.70	309.564		
2,100.0	2,100.0	2,101.4	2,101.3	7.3	7.2	117.69	-1,971.7	3,756.5	4,242.5	4,228.0	14.46	293.432		
2,200.0	2,200.0	2,183.0	2,182.9	7.7	7.5	117.68	-1,970.7	3,757.5	4,243.0	4,227.9	15.10	280.960		
2,300.0	2,300.0	2,266.8	2,266.8	8.0	7.7	168.65	-1,969.7	3,758.9	4,245.7	4,229.9	15.75	269.563		
2,400.0	2,399.8	2,367.9	2,367.8	8.4	8.1	168.61	-1,968.7	3,760.8	4,252.0	4,235.5	16.46	258.384		
2,500.0	2,499.5	2,468.4	2,468.2	8.7	8.5	168.58	-1,967.8	3,762.4	4,261.5	4,244.4	17.16	248.353		
2,600.0	2,598.7	2,571.8	2,571.6	9.1	8.8	168.54	-1,966.9	3,764.1	4,274.5	4,256.7	17.87	239.176		
2,700.0	2,697.5	2,675.4	2,675.2	9.4	9.2	168.50	-1,966.1	3,765.5	4,290.7	4,272.2	18.58	230.881		
2,800.0	2,795.6	2,785.3	2,785.2	9.8	9.6	168.46	-1,965.3	3,766.9	4,310.2	4,290.9	19.32	223.117		
2,900.0	2,893.1	2,864.7	2,864.5	10.1	9.8	168.40	-1,964.8	3,767.8	4,332.9	4,313.0	19.94	217.277		
3,000.0	2,989.6	2,950.9	2,950.7	10.5	10.1	168.34	-1,964.5	3,769.0	4,359.4	4,338.9	20.59	211.735		
3,100.0	3,085.3	3,041.7	3,041.6	10.9	10.5	168.27	-1,964.2	3,770.5	4,389.3	4,368.1	21.25	206.537		
3,200.0	3,179.8	3,124.9	3,124.7	11.2	10.7	168.20	-1,964.1	3,771.9	4,422.6	4,400.7	21.89	202.079		
3,300.0	3,273.2	3,200.0	3,199.8	11.6	11.0	168.10	-1,964.0	3,773.4	4,459.4	4,436.9	22.49	198.293		
3,387.5	3,353.8	3,252.6	3,252.4	11.9	11.2	167.99	-1,964.2	3,774.6	4,494.5	4,471.6	22.97	195.700		
3,400.0	3,365.2	3,259.4	3,259.2	12.0	11.2	168.00	-1,964.3	3,774.8	4,499.8	4,476.7	23.03	195.355		
3,500.0	3,456.8	3,318.9	3,318.6	12.4	11.4	168.07	-1,965.0	3,776.4	4,542.1	4,518.5	23.57	192.698		
3,600.0	3,548.3	3,391.7	3,391.4	12.8	11.7	168.16	-1,966.7	3,778.4	4,584.9	4,560.7	24.16	189.755		
3,700.0	3,639.8	3,500.8	3,500.4	13.2	12.1	168.30	-1,969.8	3,781.2	4,627.7	4,602.8	24.90	185.871		
3,800.0	3,731.4	3,596.0	3,595.5	13.6	12.4	168.42	-1,972.1	3,783.4	4,670.3	4,644.7	25.58	182.550		
3,900.0	3,822.9	3,707.2	3,706.7	14.0	12.8	168.56	-1,974.8	3,785.8	4,712.6	4,686.3	26.34	178.940		
4,000.0	3,914.4	3,778.4	3,777.9	14.4	13.0	168.64	-1,976.5	3,787.3	4,755.0	4,728.0	26.94	176.523		
4,100.0	4,005.9	3,880.9	3,880.3	14.8	13.4	168.77	-1,978.9	3,789.6	4,797.4	4,769.8	27.66	173.423		
4,200.0	4,097.5	3,964.9	3,964.3	15.2	13.7	168.86	-1,980.7	3,791.4	4,839.7	4,811.4	28.32	170.898		
4,300.0	4,189.0	4,091.8	4,091.1	15.6	14.1	168.99	-1,982.6	3,794.4	4,882.0	4,852.9	29.15	167.478		
4,400.0	4,280.5	4,276.5	4,275.8	16.1	14.8	169.16	-1,983.2	3,796.8	4,922.8	4,892.6	30.21	162.938		
4,500.0	4,372.1	4,368.6	4,367.9	16.5	15.1	169.25	-1,983.1	3,797.2	4,962.7	4,931.8	30.91	160.542		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - Skurich 43-07 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
4,600.0	4,463.6	4,470.8	4,470.1	16.9	15.5	169.34	-1,983.3	3,797.4	5,002.7	4,971.0	31.65	158.045		
4,700.0	4,555.1	4,569.2	4,568.5	17.4	15.8	169.46	-1,985.0	3,796.5	5,042.4	5,010.0	32.38	155.711		
4,800.0	4,646.7	4,677.8	4,677.0	17.8	16.2	169.60	-1,987.8	3,794.8	5,082.0	5,048.9	33.16	153.279		
4,900.0	4,738.2	4,817.2	4,816.4	18.2	16.7	169.74	-1,989.0	3,792.9	5,121.1	5,087.0	34.05	150.392		
5,000.0	4,829.7	4,889.6	4,888.8	18.7	16.9	169.82	-1,989.4	3,791.9	5,159.9	5,125.2	34.68	148.771		
5,100.0	4,921.3	4,986.6	4,985.7	19.1	17.3	169.91	-1,990.1	3,790.5	5,198.8	5,163.4	35.41	146.798		
5,200.0	5,012.8	5,071.6	5,070.8	19.5	17.5	170.00	-1,990.5	3,789.3	5,237.7	5,201.6	36.10	145.090		
5,300.0	5,104.3	5,153.1	5,152.2	20.0	17.8	170.07	-1,990.9	3,788.4	5,276.8	5,240.0	36.77	143.502		
5,400.0	5,195.8	5,233.8	5,233.0	20.4	18.1	170.15	-1,991.3	3,787.7	5,316.1	5,278.6	37.44	141.986		
5,500.0	5,287.4	5,313.5	5,312.6	20.9	18.4	170.21	-1,991.4	3,787.3	5,355.6	5,317.5	38.11	140.541		
5,600.0	5,378.9	5,388.7	5,387.9	21.3	18.7	170.27	-1,991.3	3,787.3	5,395.3	5,356.5	38.75	139.216		
5,700.0	5,470.4	5,473.5	5,472.7	21.8	18.9	170.34	-1,991.4	3,787.4	5,435.2	5,395.8	39.44	137.795		
5,800.0	5,562.0	5,584.2	5,583.3	22.2	19.3	170.42	-1,991.3	3,787.6	5,475.1	5,434.9	40.24	136.047		
5,900.0	5,653.5	5,665.0	5,664.1	22.7	19.6	170.48	-1,991.1	3,787.6	5,514.9	5,474.0	40.92	134.776		
6,000.0	5,745.0	5,741.9	5,741.1	23.1	19.9	170.54	-1,990.9	3,787.9	5,554.9	5,513.3	41.58	133.604		
6,100.0	5,836.6	5,823.4	5,822.6	23.6	20.2	170.59	-1,990.9	3,788.3	5,595.1	5,552.8	42.26	132.411		
6,200.0	5,928.1	5,910.5	5,909.7	24.0	20.5	170.66	-1,990.9	3,788.9	5,635.4	5,592.4	42.96	131.180		
6,278.6	6,000.0	5,972.0	5,971.1	24.4	20.7	170.70	-1,991.0	3,789.3	5,667.1	5,623.7	43.48	130.333		
6,290.0	6,010.4	5,980.8	5,980.0	24.4	20.7	168.77	-1,991.0	3,789.4	5,671.9	5,628.3	43.56	130.213		
6,300.0	6,019.5	5,988.6	5,987.8	24.5	20.7	166.80	-1,991.0	3,789.4	5,676.0	5,632.4	43.63	130.109		
6,350.0	6,065.8	6,028.0	6,027.2	24.7	20.9	155.33	-1,991.1	3,789.8	5,694.4	5,650.5	43.95	129.556		
6,400.0	6,113.0	6,068.2	6,067.3	24.9	21.0	140.65	-1,991.1	3,790.2	5,709.1	5,664.9	44.28	128.939		
6,450.0	6,160.7	6,113.3	6,112.4	25.1	21.2	123.26	-1,991.2	3,790.8	5,720.0	5,675.4	44.62	128.202		
6,500.0	6,208.5	6,174.7	6,173.9	25.3	21.4	105.68	-1,991.1	3,791.5	5,726.8	5,681.8	45.02	127.209		
6,550.0	6,255.8	6,200.0	6,199.2	25.4	21.5	90.66	-1,991.1	3,791.7	5,729.5	5,684.3	45.25	126.626		
6,600.0	6,302.5	6,200.0	6,199.2	25.6	21.5	79.29	-1,991.1	3,791.7	5,728.6	5,683.2	45.35	126.324		
6,650.0	6,347.9	6,239.0	6,238.2	25.7	21.6	71.40	-1,991.1	3,792.4	5,723.5	5,677.9	45.61	125.485		
6,700.0	6,391.6	6,253.5	6,252.6	25.9	21.7	65.93	-1,991.1	3,792.8	5,714.9	5,669.2	45.75	124.922		
6,750.0	6,433.4	6,267.3	6,266.4	26.0	21.7	62.28	-1,991.2	3,793.2	5,702.7	5,656.8	45.87	124.325		
6,800.0	6,472.8	6,300.0	6,299.1	26.1	21.8	60.11	-1,991.3	3,794.6	5,687.0	5,640.9	46.07	123.453		
6,850.0	6,509.4	6,300.0	6,299.1	26.2	21.8	58.84	-1,991.3	3,794.6	5,667.7	5,621.6	46.10	122.940		
6,900.0	6,543.0	6,300.0	6,299.1	26.3	21.8	58.47	-1,991.3	3,794.6	5,645.2	5,599.0	46.13	122.381		
6,950.0	6,573.2	6,300.0	6,299.1	26.4	21.8	58.89	-1,991.3	3,794.6	5,619.6	5,573.5	46.15	121.774		
7,000.0	6,599.8	6,300.0	6,299.1	26.5	21.8	60.07	-1,991.3	3,794.6	5,591.3	5,545.1	46.17	121.113		
7,050.0	6,622.5	6,300.0	6,299.1	26.6	21.8	62.02	-1,991.3	3,794.6	5,560.3	5,514.1	46.18	120.396		
7,100.0	6,641.1	6,300.0	6,299.1	26.7	21.8	64.76	-1,991.3	3,794.6	5,527.0	5,480.8	46.20	119.620		
7,150.0	6,655.4	6,300.0	6,299.1	26.8	21.8	68.38	-1,991.3	3,794.6	5,491.5	5,445.3	46.23	118.785		
7,200.0	6,665.4	6,300.0	6,299.1	26.9	21.8	72.92	-1,991.3	3,794.6	5,454.2	5,407.9	46.26	117.892		
7,250.0	6,670.8	6,300.0	6,299.1	27.0	21.8	78.46	-1,991.3	3,794.6	5,415.4	5,369.0	46.31	116.940		
7,285.7	6,672.0	6,300.0	6,299.1	27.1	21.8	83.03	-1,991.3	3,794.6	5,386.9	5,340.5	46.35	116.226		
7,300.0	6,672.0	6,300.0	6,299.1	27.1	21.8	83.03	-1,991.3	3,794.6	5,375.3	5,329.0	46.37	115.934		
7,400.0	6,672.0	6,300.0	6,299.1	27.3	21.8	83.03	-1,991.3	3,794.6	5,295.2	5,248.7	46.49	113.891		
7,500.0	6,672.0	6,337.2	6,336.3	27.6	22.0	83.70	-1,991.8	3,796.8	5,215.1	5,168.3	46.85	111.320		
7,600.0	6,672.0	6,338.8	6,337.8	28.0	22.0	83.73	-1,991.8	3,796.9	5,136.3	5,089.3	47.05	109.170		
7,700.0	6,672.0	6,340.4	6,339.4	28.3	22.0	83.76	-1,991.8	3,797.0	5,058.3	5,011.0	47.28	106.977		
7,800.0	6,672.0	6,342.1	6,341.1	28.8	22.0	83.79	-1,991.8	3,797.1	4,981.0	4,933.5	47.55	104.745		
7,900.0	6,672.0	6,343.8	6,342.8	29.3	22.0	83.82	-1,991.9	3,797.3	4,904.6	4,856.7	47.86	102.474		
8,000.0	6,672.0	6,345.5	6,344.6	29.8	22.0	83.85	-1,991.9	3,797.4	4,829.0	4,780.8	48.21	100.169		
8,100.0	6,672.0	6,347.3	6,346.4	30.4	22.0	83.88	-1,991.9	3,797.5	4,754.3	4,705.7	48.60	97.834		
8,200.0	6,672.0	6,349.2	6,348.2	31.0	22.0	83.92	-1,992.0	3,797.7	4,680.6	4,631.6	49.03	95.472		
8,300.0	6,672.0	6,351.1	6,350.1	31.7	22.0	83.95	-1,992.0	3,797.8	4,607.9	4,558.4	49.50	93.090		
8,400.0	6,672.0	6,353.1	6,352.1	32.4	22.0	83.99	-1,992.1	3,798.0	4,536.2	4,486.2	50.02	90.691		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - Skurich 43-07 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
8,500.0	6,672.0	6,355.1	6,354.1	33.1	22.0	84.02	-1,992.1	3,798.2	4,465.6	4,415.0	50.58	88.283		
8,600.0	6,672.0	6,357.2	6,356.2	33.9	22.0	84.06	-1,992.2	3,798.3	4,396.2	4,345.0	51.19	85.872		
8,700.0	6,672.0	6,359.4	6,358.4	34.7	22.0	84.10	-1,992.2	3,798.5	4,327.9	4,276.0	51.85	83.464		
8,800.0	6,672.0	6,361.7	6,360.6	35.5	22.1	84.14	-1,992.3	3,798.7	4,260.9	4,208.3	52.56	81.065		
8,900.0	6,672.0	6,364.0	6,362.9	36.3	22.1	84.18	-1,992.3	3,798.9	4,195.2	4,141.9	53.32	78.682		
9,000.0	6,672.0	6,366.4	6,365.3	37.2	22.1	84.23	-1,992.4	3,799.1	4,130.9	4,076.8	54.12	76.323		
9,100.0	6,672.0	6,400.0	6,398.8	38.1	22.2	84.83	-1,993.4	3,802.4	4,068.5	4,013.3	55.18	73.735		
9,200.0	6,672.0	6,400.0	6,398.8	39.0	22.2	84.83	-1,993.4	3,802.4	4,007.0	3,951.0	56.06	71.472		
9,300.0	6,672.0	6,400.0	6,398.8	39.9	22.2	84.83	-1,993.4	3,802.4	3,947.2	3,890.2	57.00	69.249		
9,400.0	6,672.0	6,400.0	6,398.8	40.8	22.2	84.83	-1,993.4	3,802.4	3,889.0	3,831.0	57.98	67.074		
9,500.0	6,672.0	6,400.0	6,398.8	41.8	22.2	84.83	-1,993.4	3,802.4	3,832.6	3,773.6	59.01	64.951		
9,600.0	6,672.0	6,400.0	6,398.8	42.7	22.2	84.83	-1,993.4	3,802.4	3,777.9	3,717.8	60.08	62.884		
9,700.0	6,672.0	6,400.0	6,398.8	43.7	22.2	84.83	-1,993.4	3,802.4	3,725.2	3,664.0	61.19	60.880		
9,800.0	6,672.0	6,400.0	6,398.8	44.7	22.2	84.83	-1,993.4	3,802.4	3,674.4	3,612.1	62.34	58.941		
9,900.0	6,672.0	6,400.0	6,398.8	45.7	22.2	84.83	-1,993.4	3,802.4	3,625.7	3,562.1	63.53	57.072		
10,000.0	6,672.0	6,400.0	6,398.8	46.7	22.2	84.83	-1,993.4	3,802.4	3,579.1	3,514.3	64.75	55.274		
10,100.0	6,672.0	6,400.0	6,398.8	47.7	22.2	84.83	-1,993.4	3,802.4	3,534.7	3,468.7	66.00	53.552		
10,200.0	6,672.0	6,409.1	6,407.8	48.8	22.2	84.99	-1,993.8	3,803.4	3,492.7	3,425.3	67.35	51.860		
10,300.0	6,672.0	6,419.7	6,418.4	49.8	22.3	85.18	-1,994.2	3,804.6	3,452.9	3,384.2	68.72	50.243		
10,400.0	6,672.0	6,429.9	6,428.5	50.9	22.3	85.36	-1,994.6	3,805.6	3,415.7	3,345.6	70.12	48.713		
10,500.0	6,672.0	6,439.7	6,438.2	51.9	22.3	85.54	-1,994.9	3,806.6	3,380.9	3,309.4	71.52	47.270		
10,600.0	6,672.0	6,449.0	6,447.5	53.0	22.4	85.71	-1,995.3	3,807.6	3,348.8	3,275.9	72.94	45.914		
10,700.0	6,672.0	6,458.0	6,456.4	54.1	22.4	85.87	-1,995.7	3,808.4	3,319.3	3,245.0	74.35	44.643		
10,800.0	6,672.0	6,466.6	6,465.0	55.2	22.4	86.02	-1,996.0	3,809.3	3,292.6	3,216.9	75.76	43.459		
10,900.0	6,672.0	6,474.9	6,473.2	56.3	22.5	86.17	-1,996.4	3,810.1	3,268.8	3,191.6	77.17	42.359		
11,000.0	6,672.0	6,482.9	6,481.2	57.4	22.5	86.31	-1,996.8	3,810.8	3,247.8	3,169.2	78.56	41.342		
11,100.0	6,672.0	6,490.6	6,488.9	58.5	22.5	86.45	-1,997.1	3,811.5	3,229.7	3,149.8	79.93	40.408		
11,200.0	6,672.0	6,498.1	6,496.2	59.6	22.5	86.58	-1,997.4	3,812.2	3,214.7	3,133.4	81.27	39.555		
11,300.0	6,672.0	6,525.8	6,523.9	60.7	22.6	87.08	-1,998.7	3,814.4	3,202.7	3,120.0	82.72	38.717		
11,400.0	6,672.0	6,550.5	6,548.5	61.8	22.7	87.53	-1,999.6	3,816.1	3,193.7	3,109.6	84.11	37.970		
11,500.0	6,672.0	6,567.8	6,565.8	62.9	22.8	87.84	-2,000.2	3,817.1	3,187.8	3,102.4	85.41	37.322		
11,600.0	6,672.0	6,580.7	6,578.6	64.1	22.8	88.07	-2,000.7	3,817.7	3,185.0	3,098.3	86.64	36.761		
11,639.5	6,672.0	6,584.9	6,582.8	64.5	22.8	88.14	-2,000.8	3,817.9	3,184.7	3,097.6	87.11	36.561 CC		
11,700.0	6,672.0	6,590.6	6,588.5	65.2	22.9	88.25	-2,001.0	3,818.2	3,185.3	3,097.5	87.80	36.280 ES		
11,800.0	6,672.0	6,598.4	6,596.3	66.3	22.9	88.39	-2,001.2	3,818.5	3,188.8	3,099.9	88.89	35.873		
11,900.0	6,672.0	6,604.8	6,602.7	67.5	22.9	88.50	-2,001.4	3,818.7	3,195.3	3,105.4	89.92	35.536		
12,000.0	6,672.0	6,610.1	6,608.0	68.6	22.9	88.60	-2,001.5	3,818.8	3,205.0	3,114.2	90.88	35.267		
12,100.0	6,672.0	6,614.6	6,612.5	69.8	23.0	88.68	-2,001.7	3,819.0	3,217.8	3,126.0	91.77	35.062		
12,200.0	6,672.0	6,618.4	6,616.3	70.9	23.0	88.75	-2,001.8	3,819.1	3,233.7	3,141.1	92.60	34.920		
12,300.0	6,672.0	6,619.4	6,617.3	72.1	23.0	88.76	-2,001.8	3,819.1	3,252.5	3,159.1	93.35	34.842		
12,400.0	6,672.0	6,622.1	6,620.0	73.2	23.0	88.81	-2,001.9	3,819.2	3,274.3	3,180.2	94.05	34.816 SF		
12,500.0	6,672.0	6,624.5	6,622.4	74.4	23.0	88.86	-2,001.9	3,819.2	3,299.0	3,204.3	94.68	34.845		
12,600.0	6,672.0	6,673.9	6,624.0	75.5	23.2	88.88	-2,002.0	3,819.4	3,326.5	3,231.1	95.41	34.866		
12,700.0	6,672.0	6,673.1	6,624.8	76.7	23.2	88.90	-2,002.0	3,819.4	3,356.7	3,260.8	95.90	35.002		
12,800.0	6,672.0	6,672.3	6,625.5	77.9	23.2	88.91	-2,002.0	3,819.4	3,389.7	3,293.4	96.33	35.187		
12,900.0	6,672.0	6,671.5	6,626.3	79.0	23.2	88.93	-2,002.1	3,819.4	3,425.3	3,328.5	96.71	35.417		
13,000.0	6,672.0	6,670.8	6,627.1	80.2	23.2	88.94	-2,002.1	3,819.4	3,463.4	3,366.3	97.03	35.692		
13,100.0	6,672.0	6,670.0	6,627.9	81.4	23.1	88.95	-2,002.1	3,819.4	3,503.9	3,406.6	97.31	36.009		
13,200.0	6,672.0	6,669.2	6,628.7	82.6	23.1	88.97	-2,002.1	3,819.5	3,546.8	3,449.3	97.53	36.367		
13,300.0	6,672.0	6,668.4	6,629.5	83.7	23.1	88.98	-2,002.1	3,819.5	3,592.0	3,494.3	97.70	36.765		
13,400.0	6,672.0	6,667.6	6,630.2	84.9	23.1	89.00	-2,002.1	3,819.5	3,639.4	3,541.5	97.83	37.199		
13,500.0	6,672.0	6,666.8	6,631.0	86.1	23.1	89.01	-2,002.2	3,819.5	3,688.9	3,590.9	97.93	37.670		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - Skurich 43-07 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance								Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
13,600.0	6,672.0	6,666.1	6,631.8	87.3	23.1	89.02	-2,002.2	3,819.5	3,740.4	3,642.4	97.98	38.175		
13,700.0	6,672.0	6,665.3	6,632.6	88.4	23.1	89.04	-2,002.2	3,819.5	3,793.8	3,695.8	98.00	38.713		
13,800.0	6,672.0	6,664.5	6,633.4	89.6	23.1	89.05	-2,002.2	3,819.5	3,849.1	3,751.2	97.99	39.282		
13,900.0	6,672.0	6,663.7	6,634.2	90.8	23.1	89.07	-2,002.2	3,819.5	3,906.2	3,808.3	97.95	39.882		
14,000.0	6,672.0	6,662.9	6,634.9	92.0	23.1	89.08	-2,002.2	3,819.5	3,965.0	3,867.2	97.88	40.510		
14,100.0	6,672.0	6,662.2	6,635.7	93.2	23.1	89.09	-2,002.3	3,819.5	4,025.5	3,927.7	97.79	41.166		
14,200.0	6,672.0	6,661.4	6,636.5	94.4	23.1	89.11	-2,002.3	3,819.5	4,087.5	3,989.8	97.68	41.848		
14,300.0	6,672.0	6,660.6	6,637.3	95.6	23.1	89.12	-2,002.3	3,819.5	4,151.0	4,053.4	97.54	42.555		
14,400.0	6,672.0	6,659.8	6,638.1	96.8	23.1	89.14	-2,002.3	3,819.5	4,215.9	4,118.5	97.40	43.286		
14,500.0	6,672.0	6,659.0	6,638.9	98.0	23.1	89.15	-2,002.3	3,819.5	4,282.1	4,184.9	97.23	44.040		
14,600.0	6,672.0	6,658.2	6,639.6	99.2	23.1	89.17	-2,002.3	3,819.5	4,349.7	4,252.6	97.06	44.817		
14,700.0	6,672.0	6,657.5	6,640.4	100.4	23.1	89.18	-2,002.4	3,819.6	4,418.5	4,321.6	96.87	45.614		
14,800.0	6,672.0	6,656.7	6,641.2	101.6	23.1	89.19	-2,002.4	3,819.6	4,488.5	4,391.8	96.67	46.431		
14,900.0	6,672.0	6,655.9	6,642.0	102.7	23.1	89.21	-2,002.4	3,819.6	4,559.6	4,463.1	96.46	47.268		
15,000.0	6,672.0	6,655.1	6,642.8	103.9	23.1	89.22	-2,002.4	3,819.6	4,631.7	4,535.5	96.25	48.122		
15,100.0	6,672.0	6,654.3	6,643.5	105.1	23.1	89.24	-2,002.4	3,819.6	4,704.9	4,608.9	96.03	48.995		
15,200.0	6,672.0	6,653.6	6,644.3	106.3	23.1	89.25	-2,002.5	3,819.6	4,779.1	4,683.3	95.80	49.884		
15,300.0	6,672.0	6,652.8	6,645.1	107.6	23.1	89.26	-2,002.5	3,819.6	4,854.2	4,758.6	95.58	50.789		
15,400.0	6,672.0	6,652.0	6,645.9	108.8	23.1	89.28	-2,002.5	3,819.6	4,930.2	4,834.9	95.34	51.709		
15,500.0	6,672.0	6,651.2	6,646.7	110.0	23.1	89.29	-2,002.5	3,819.6	5,007.0	4,911.9	95.11	52.644		
15,600.0	6,672.0	6,650.4	6,647.4	111.2	23.1	89.31	-2,002.5	3,819.6	5,084.7	4,989.8	94.88	53.593		
15,700.0	6,672.0	6,650.3	6,648.2	112.4	23.1	89.32	-2,002.5	3,819.6	5,163.1	5,068.5	94.64	54.554		
15,800.0	6,672.0	6,651.1	6,649.0	113.6	23.1	89.33	-2,002.6	3,819.6	5,242.3	5,147.9	94.41	55.526		
15,900.0	6,672.0	6,651.9	6,649.8	114.8	23.1	89.35	-2,002.6	3,819.6	5,322.2	5,228.0	94.18	56.509		
16,000.0	6,672.0	6,652.7	6,650.6	116.0	23.1	89.36	-2,002.6	3,819.6	5,402.7	5,308.7	93.95	57.505		
16,100.0	6,672.0	6,653.5	6,651.3	117.2	23.1	89.37	-2,002.6	3,819.6	5,483.9	5,390.2	93.72	58.511		
16,200.0	6,672.0	6,654.2	6,652.1	118.4	23.1	89.39	-2,002.6	3,819.6	5,565.7	5,472.2	93.50	59.528		
16,300.0	6,672.0	6,655.0	6,652.9	119.6	23.1	89.40	-2,002.6	3,819.7	5,648.1	5,554.8	93.27	60.555		
16,400.0	6,672.0	6,655.8	6,653.7	120.8	23.1	89.42	-2,002.7	3,819.7	5,731.0	5,638.0	93.05	61.591		
16,500.0	6,672.0	6,656.6	6,654.5	122.0	23.1	89.43	-2,002.7	3,819.7	5,814.5	5,721.7	92.83	62.636		
16,600.0	6,672.0	6,657.4	6,655.2	123.2	23.1	89.44	-2,002.7	3,819.7	5,898.6	5,806.0	92.61	63.691		
16,700.0	6,672.0	6,658.1	6,656.0	124.5	23.1	89.46	-2,002.7	3,819.7	5,983.1	5,890.7	92.40	64.753		
16,800.0	6,672.0	6,658.9	6,656.8	125.7	23.1	89.47	-2,002.7	3,819.7	6,068.1	5,975.9	92.19	65.823		
16,900.0	6,672.0	6,659.7	6,657.6	126.9	23.1	89.49	-2,002.7	3,819.7	6,153.5	6,061.5	91.98	66.901		
17,000.0	6,672.0	6,660.5	6,658.3	128.1	23.1	89.50	-2,002.8	3,819.7	6,239.4	6,147.6	91.77	67.987		
17,100.0	6,672.0	6,661.2	6,659.1	129.3	23.1	89.51	-2,002.8	3,819.7	6,325.7	6,234.1	91.57	69.079		
17,200.0	6,672.0	6,662.0	6,659.9	130.5	23.1	89.53	-2,002.8	3,819.7	6,412.4	6,321.0	91.37	70.177		
17,300.0	6,672.0	6,662.8	6,660.7	131.7	23.1	89.54	-2,002.8	3,819.7	6,499.5	6,408.3	91.18	71.282		
17,400.0	6,672.0	6,663.6	6,661.4	133.0	23.1	89.56	-2,002.8	3,819.7	6,586.9	6,495.9	90.99	72.393		
17,500.0	6,672.0	6,664.4	6,662.2	134.2	23.1	89.57	-2,002.8	3,819.7	6,674.7	6,583.9	90.80	73.509		
17,600.0	6,672.0	6,665.1	6,663.0	135.4	23.1	89.58	-2,002.9	3,819.7	6,762.9	6,672.3	90.62	74.631		
17,700.0	6,672.0	6,665.9	6,663.8	136.6	23.1	89.60	-2,002.9	3,819.7	6,851.4	6,760.9	90.44	75.757		
17,800.0	6,672.0	6,666.7	6,664.6	137.8	23.1	89.61	-2,002.9	3,819.8	6,940.2	6,849.9	90.26	76.889		
17,900.0	6,672.0	6,667.5	6,665.3	139.0	23.1	89.63	-2,002.9	3,819.8	7,029.3	6,939.2	90.09	78.025		
18,000.0	6,672.0	6,668.2	6,666.1	140.3	23.1	89.64	-2,002.9	3,819.8	7,118.7	7,028.7	89.92	79.166		
18,100.0	6,672.0	6,669.0	6,666.9	141.5	23.1	89.65	-2,002.9	3,819.8	7,208.3	7,118.6	89.76	80.310		
18,200.0	6,672.0	6,669.8	6,667.7	142.7	23.1	89.67	-2,003.0	3,819.8	7,298.3	7,208.7	89.59	81.459		
18,300.0	6,672.0	6,670.6	6,668.4	143.9	23.1	89.68	-2,003.0	3,819.8	7,388.5	7,299.1	89.44	82.611		
18,342.5	6,672.0	6,670.9	6,668.8	144.4	23.2	89.69	-2,003.0	3,819.8	7,426.9	7,337.5	89.37	83.102		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - Skurich-SLW 7B - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWGS, 6100-2_Unknown													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	169.26	-2,562.9	486.0	2,608.7					
100.0	100.0	77.4	77.4	0.1	0.1	169.26	-2,562.9	486.1	2,608.6	2,608.3	0.26	N/A		
200.0	200.0	176.8	176.8	0.5	0.4	169.26	-2,563.0	486.0	2,608.6	2,607.7	0.93	2,814.190		
300.0	300.0	285.1	285.1	0.8	0.8	169.27	-2,562.9	485.7	2,608.6	2,606.9	1.66	1,568.356		
391.0	391.0	369.0	369.0	1.2	1.1	169.26	-2,562.7	485.9	2,608.4	2,606.1	2.28	1,142.686		
400.0	400.0	377.0	377.0	1.2	1.1	169.26	-2,562.7	485.9	2,608.4	2,606.1	2.34	1,113.338		
500.0	500.0	475.9	475.9	1.6	1.5	169.26	-2,562.8	486.3	2,608.5	2,605.5	3.05	856.275		
600.0	600.0	586.5	586.5	1.9	1.9	169.25	-2,562.7	486.4	2,608.4	2,604.6	3.79	688.054		
700.0	700.0	690.3	690.3	2.3	2.2	169.25	-2,562.2	486.6	2,608.0	2,603.5	4.51	578.010		
800.0	800.0	782.1	782.1	2.6	2.6	169.23	-2,561.8	487.2	2,607.7	2,602.5	5.19	502.298		
855.5	855.5	833.5	833.5	2.8	2.7	169.22	-2,561.6	487.5	2,607.6	2,602.1	5.57	468.147		
900.0	900.0	875.2	875.2	3.0	2.9	169.22	-2,561.6	487.8	2,607.7	2,601.8	5.88	443.855		
1,000.0	1,000.0	973.1	973.1	3.4	3.2	169.21	-2,561.7	488.3	2,607.8	2,601.2	6.58	396.606		
1,100.0	1,100.0	1,075.7	1,075.6	3.7	3.6	169.20	-2,561.8	488.5	2,608.0	2,600.7	7.29	357.672		
1,200.0	1,200.0	1,181.9	1,181.9	4.1	4.0	169.20	-2,561.7	488.8	2,608.0	2,599.9	8.02	325.146		
1,300.0	1,300.0	1,285.2	1,285.2	4.4	4.3	169.19	-2,561.4	489.1	2,607.7	2,599.0	8.74	298.374		
1,400.0	1,400.0	1,385.7	1,385.7	4.8	4.7	169.18	-2,561.0	489.6	2,607.4	2,598.0	9.45	275.938		
1,500.0	1,500.0	1,483.6	1,483.6	5.1	5.0	169.16	-2,560.6	490.4	2,607.2	2,597.0	10.15	256.864		
1,600.0	1,600.0	1,578.8	1,578.8	5.5	5.3	169.14	-2,560.3	491.3	2,607.1	2,596.2	10.84	240.474		
1,615.6	1,615.6	1,593.6	1,593.6	5.6	5.4	169.13	-2,560.3	491.4	2,607.0	2,596.1	10.95	238.118 CC		
1,700.0	1,700.0	1,672.1	1,672.1	5.9	5.7	169.12	-2,560.2	492.2	2,607.1	2,595.6	11.53	226.204		
1,800.0	1,800.0	1,768.6	1,768.5	6.2	6.0	169.10	-2,560.4	493.0	2,607.5	2,595.2	12.22	213.363		
1,900.0	1,900.0	1,865.6	1,865.6	6.6	6.4	169.10	-2,560.8	493.3	2,607.9	2,595.0	12.92	201.882		
2,000.0	2,000.0	1,960.4	1,960.4	6.9	6.7	169.10	-2,561.3	493.1	2,608.4	2,594.8	13.61	191.698 ES		
2,100.0	2,100.0	2,050.0	2,050.0	7.3	7.0	169.12	-2,562.2	492.5	2,609.3	2,595.0	14.28	182.746		
2,200.0	2,200.0	2,139.8	2,139.8	7.7	7.3	169.15	-2,563.6	491.5	2,610.6	2,595.6	14.95	174.623		
2,300.0	2,300.0	2,243.0	2,242.9	8.0	7.7	-139.81	-2,565.5	490.1	2,613.4	2,597.8	15.67	166.813		
2,400.0	2,399.8	2,353.7	2,353.6	8.4	8.1	-139.77	-2,567.0	488.1	2,618.5	2,602.1	16.41	159.577		
2,500.0	2,499.5	2,456.9	2,456.8	8.7	8.4	-139.75	-2,568.3	486.1	2,626.0	2,608.9	17.12	153.344		
2,600.0	2,598.7	2,559.8	2,559.7	9.1	8.8	-139.75	-2,569.5	484.0	2,636.1	2,618.2	17.84	147.756		
2,700.0	2,697.5	2,661.9	2,661.7	9.4	9.1	-139.76	-2,570.5	481.8	2,648.6	2,630.1	18.55	142.754		
2,800.0	2,795.6	2,770.2	2,769.9	9.8	9.5	-139.80	-2,571.4	479.5	2,663.7	2,644.4	19.29	138.092		
2,900.0	2,893.1	2,875.3	2,875.0	10.1	9.9	-139.86	-2,571.8	477.1	2,681.0	2,661.0	20.01	133.957		
3,000.0	2,989.6	2,974.3	2,974.0	10.5	10.2	-139.91	-2,572.1	475.0	2,700.9	2,680.2	20.72	130.361		
3,100.0	3,085.3	3,066.3	3,066.0	10.9	10.5	-139.94	-2,572.3	473.0	2,723.5	2,702.1	21.40	127.270		
3,200.0	3,179.8	3,156.4	3,156.1	11.2	10.9	-139.97	-2,572.8	471.1	2,749.0	2,726.9	22.07	124.531		
3,300.0	3,273.2	3,244.8	3,244.5	11.6	11.2	-139.99	-2,573.3	469.3	2,777.3	2,754.6	22.75	122.105		
3,387.5	3,353.8	3,321.7	3,321.3	11.9	11.4	-140.01	-2,573.9	468.0	2,804.5	2,781.2	23.33	120.201		
3,400.0	3,365.2	3,333.2	3,332.8	12.0	11.5	-140.07	-2,573.9	467.8	2,808.5	2,785.1	23.42	119.927		
3,500.0	3,456.8	3,424.7	3,424.3	12.4	11.8	-140.54	-2,574.7	466.2	2,841.0	2,816.9	24.10	117.867		
3,600.0	3,548.3	3,514.8	3,514.4	12.8	12.1	-140.98	-2,575.5	464.5	2,873.6	2,848.8	24.79	115.931		
3,700.0	3,639.8	3,606.3	3,605.9	13.2	12.4	-141.42	-2,576.4	462.5	2,906.4	2,881.0	25.48	114.064		
3,800.0	3,731.4	3,698.2	3,697.7	13.6	12.8	-141.86	-2,577.4	460.3	2,939.5	2,913.3	26.18	112.278		
3,900.0	3,822.9	3,787.1	3,786.6	14.0	13.1	-142.26	-2,578.3	458.3	2,972.7	2,945.8	26.87	110.625		
4,000.0	3,914.4	3,873.4	3,872.9	14.4	13.4	-142.66	-2,579.3	456.6	3,006.1	2,978.6	27.56	109.096		
4,100.0	4,005.9	3,961.1	3,960.6	14.8	13.7	-143.05	-2,580.4	455.1	3,039.9	3,011.7	28.25	107.622		
4,200.0	4,097.5	4,052.4	4,051.8	15.2	14.0	-143.45	-2,581.6	453.6	3,074.0	3,045.0	28.95	106.165		
4,300.0	4,189.0	4,148.4	4,147.8	15.6	14.3	-143.87	-2,582.9	451.8	3,108.1	3,078.4	29.68	104.702		
4,400.0	4,280.5	4,247.1	4,246.5	16.1	14.7	-144.28	-2,584.0	450.1	3,142.1	3,111.7	30.43	103.263		
4,500.0	4,372.1	4,339.3	4,338.7	16.5	15.0	-144.68	-2,584.6	449.1	3,176.1	3,145.0	31.15	101.973		
4,600.0	4,463.6	4,424.5	4,423.9	16.9	15.3	-145.05	-2,585.1	448.8	3,210.4	3,178.6	31.84	100.838		
4,700.0	4,555.1	4,511.6	4,511.0	17.4	15.6	-145.42	-2,585.6	448.9	3,245.0	3,212.5	32.54	99.731		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - Skurich-SLW 7B - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS, 6100-2_Unknown													Offset Well Error:	0.0 ft
Reference	Offset	Semi Major Axis		Distance										Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
4,800.0	4,646.7	4,601.9	4,601.3	17.8	15.9	-145.81	-2,586.2	449.1	3,279.8	3,246.6	33.25	98.632		
4,900.0	4,738.2	4,691.7	4,691.1	18.2	16.2	-146.19	-2,586.8	449.5	3,314.8	3,280.8	33.97	97.588		
5,000.0	4,829.7	4,783.2	4,782.6	18.7	16.5	-146.57	-2,587.2	450.3	3,349.9	3,315.3	34.69	96.567		
5,100.0	4,921.3	4,875.7	4,875.1	19.1	16.9	-146.96	-2,587.6	451.4	3,385.2	3,349.8	35.42	95.577		
5,200.0	5,012.8	4,974.1	4,973.5	19.5	17.2	-147.37	-2,587.8	452.6	3,420.5	3,384.3	36.17	94.557		
5,300.0	5,104.3	5,071.3	5,070.7	20.0	17.5	-147.76	-2,587.7	453.8	3,455.7	3,418.8	36.92	93.587		
5,400.0	5,195.8	5,166.5	5,165.9	20.4	17.9	-148.14	-2,587.5	455.1	3,490.9	3,453.2	37.67	92.674		
5,500.0	5,287.4	5,257.1	5,256.4	20.9	18.2	-148.50	-2,587.3	456.3	3,526.2	3,487.8	38.39	91.846		
5,600.0	5,378.9	5,344.0	5,343.3	21.3	18.5	-148.83	-2,587.2	457.2	3,561.6	3,522.5	39.10	91.089		
5,700.0	5,470.4	5,427.7	5,427.1	21.8	18.8	-149.14	-2,587.3	458.0	3,597.4	3,557.6	39.80	90.397		
5,800.0	5,562.0	5,508.0	5,507.3	22.2	19.1	-149.42	-2,587.7	458.6	3,633.5	3,593.0	40.47	89.772		
5,900.0	5,653.5	5,588.8	5,588.1	22.7	19.4	-149.70	-2,588.4	459.0	3,669.9	3,628.8	41.16	89.172		
6,000.0	5,745.0	5,670.7	5,670.0	23.1	19.6	-149.98	-2,589.4	459.4	3,706.7	3,664.9	41.84	88.588		
6,100.0	5,836.6	5,757.8	5,757.1	23.6	19.9	-150.26	-2,590.7	459.7	3,743.8	3,701.3	42.55	87.978		
6,200.0	5,928.1	5,848.2	5,847.5	24.0	20.3	-150.56	-2,592.1	460.1	3,781.0	3,737.7	43.28	87.359		
6,278.6	6,000.0	5,919.1	5,918.4	24.4	20.5	-150.78	-2,593.1	460.5	3,810.3	3,766.5	43.85	86.889		
6,290.0	6,010.4	5,929.2	5,928.5	24.4	20.5	-152.41	-2,593.2	460.6	3,814.7	3,770.7	43.94	86.824		
6,300.0	6,019.5	5,938.1	5,937.4	24.5	20.6	-154.59	-2,593.4	460.7	3,818.6	3,774.6	44.01	86.770		
6,350.0	6,065.8	5,983.0	5,982.3	24.7	20.7	-167.11	-2,594.0	461.0	3,837.3	3,792.9	44.36	86.495		
6,400.0	6,113.0	6,031.2	6,030.4	24.9	20.9	177.15	-2,594.6	461.5	3,854.4	3,809.7	44.73	86.177		
6,450.0	6,160.7	6,081.3	6,080.6	25.1	21.1	158.70	-2,595.2	462.0	3,869.8	3,824.8	45.09	85.824		
6,500.0	6,208.5	6,129.9	6,129.2	25.3	21.4	140.05	-2,595.7	462.7	3,883.4	3,837.8	45.58	85.197		
6,550.0	6,255.8	6,177.3	6,176.5	25.4	21.8	124.10	-2,596.2	463.3	3,895.0	3,848.8	46.14	84.414		
6,600.0	6,302.5	6,223.8	6,223.1	25.6	22.2	111.96	-2,596.7	463.9	3,904.6	3,857.9	46.69	83.630		
6,650.0	6,347.9	6,269.3	6,268.5	25.7	22.5	103.17	-2,597.2	464.5	3,912.1	3,864.9	47.22	82.849		
6,700.0	6,391.6	6,313.2	6,312.4	25.9	22.9	96.91	-2,597.6	465.0	3,917.6	3,869.8	47.73	82.074		
6,750.0	6,433.4	6,355.1	6,354.4	26.0	23.3	92.47	-2,598.0	465.6	3,921.0	3,872.8	48.22	81.309		
6,800.0	6,472.8	6,394.7	6,394.0	26.1	23.6	89.36	-2,598.5	466.1	3,922.5	3,873.8	48.69	80.558		
6,850.0	6,509.4	6,431.7	6,430.9	26.2	23.9	87.23	-2,598.8	466.6	3,922.0	3,872.9	49.13	79.821		
6,900.0	6,543.0	6,465.6	6,464.8	26.3	24.2	85.86	-2,599.2	467.0	3,919.7	3,870.1	49.55	79.104		
6,950.0	6,573.2	6,496.2	6,495.4	26.4	24.4	85.09	-2,599.5	467.4	3,915.6	3,865.7	49.94	78.406		
7,000.0	6,599.8	6,523.2	6,522.4	26.5	24.6	84.81	-2,599.8	467.8	3,909.9	3,859.6	50.30	77.732		
7,050.0	6,622.5	6,546.3	6,545.6	26.6	24.8	84.92	-2,600.0	468.1	3,902.7	3,852.1	50.63	77.084		
7,100.0	6,641.1	6,565.5	6,564.7	26.7	25.0	85.36	-2,600.2	468.3	3,894.1	3,843.2	50.93	76.464		
7,150.0	6,655.4	6,580.4	6,579.6	26.8	25.1	86.09	-2,600.4	468.5	3,884.2	3,833.0	51.19	75.877		
7,200.0	6,665.4	6,590.9	6,590.1	26.9	25.2	87.06	-2,600.5	468.6	3,873.2	3,821.8	51.42	75.324		
7,250.0	6,670.8	6,597.0	6,596.2	27.0	25.3	88.24	-2,600.5	468.7	3,861.3	3,809.6	51.61	74.811		
7,285.7	6,672.0	6,598.6	6,597.8	27.1	25.3	89.20	-2,600.6	468.7	3,852.2	3,800.4	51.73	74.472		
7,300.0	6,672.0	6,598.8	6,598.0	27.1	25.3	89.20	-2,600.6	468.7	3,848.4	3,796.7	51.77	74.340		
7,400.0	6,672.0	6,600.1	6,599.3	27.3	25.3	89.22	-2,600.6	468.7	3,823.9	3,771.8	52.09	73.408		
7,500.0	6,672.0	6,601.4	6,600.6	27.6	25.3	89.24	-2,600.6	468.8	3,801.9	3,749.4	52.47	72.463		
7,600.0	6,672.0	6,602.6	6,601.8	28.0	25.3	89.26	-2,600.6	468.8	3,782.4	3,729.5	52.89	71.513		
7,700.0	6,672.0	6,603.9	6,603.1	28.3	25.3	89.28	-2,600.6	468.8	3,765.4	3,712.0	53.36	70.562		
7,800.0	6,672.0	6,605.2	6,604.4	28.8	25.3	89.30	-2,600.6	468.8	3,751.0	3,697.2	53.88	69.619		
7,900.0	6,672.0	6,606.5	6,605.7	29.3	25.3	89.32	-2,600.6	468.8	3,739.3	3,684.9	54.44	68.690		
8,000.0	6,672.0	6,607.7	6,607.0	29.8	25.3	89.34	-2,600.7	468.8	3,730.2	3,675.2	55.03	67.781		
8,100.0	6,672.0	6,609.0	6,608.2	30.4	25.4	89.36	-2,600.7	468.9	3,723.8	3,668.1	55.66	66.899		
8,200.0	6,672.0	6,610.3	6,609.5	31.0	25.4	89.38	-2,600.7	468.9	3,720.1	3,663.8	56.32	66.050		
8,288.3	6,672.0	6,611.4	6,610.6	31.6	25.4	89.39	-2,600.7	468.9	3,719.0	3,662.1	56.93	65.330		
8,300.0	6,672.0	6,611.6	6,610.8	31.7	25.4	89.40	-2,600.7	468.9	3,719.0	3,662.0	57.01	65.239		
8,400.0	6,672.0	6,612.8	6,612.1	32.4	25.4	89.42	-2,600.7	468.9	3,720.7	3,663.0	57.71	64.470		
8,500.0	6,672.0	6,614.1	6,613.3	33.1	25.4	89.44	-2,600.7	468.9	3,725.1	3,666.6	58.43	63.748		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - Skurich-SLW 7B - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWGS, 6100-2_Unknown													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis		Distance								Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
8,600.0	6,672.0	6,615.4	6,614.6	33.9	25.4	89.45	-2,600.7	468.9	3,732.1	3,672.9	59.17	63.076		
8,700.0	6,672.0	6,616.7	6,615.9	34.7	25.4	89.47	-2,600.8	469.0	3,741.8	3,681.9	59.91	62.456		
8,800.0	6,672.0	6,618.0	6,617.2	35.5	25.4	89.49	-2,600.8	469.0	3,754.2	3,693.5	60.66	61.891		
8,900.0	6,672.0	6,619.2	6,618.4	36.3	25.4	89.51	-2,600.8	469.0	3,769.1	3,707.7	61.41	61.381		
9,000.0	6,672.0	6,620.5	6,619.7	37.2	25.5	89.53	-2,600.8	469.0	3,786.7	3,724.5	62.15	60.928		
9,100.0	6,672.0	6,621.8	6,621.0	38.1	25.5	89.55	-2,600.8	469.0	3,806.8	3,743.9	62.89	60.531		
9,200.0	6,672.0	6,623.1	6,622.3	39.0	25.5	89.57	-2,600.8	469.0	3,829.4	3,765.8	63.62	60.191		
9,300.0	6,672.0	6,624.3	6,623.5	39.9	25.5	89.59	-2,600.8	469.1	3,854.5	3,790.2	64.34	59.908		
9,400.0	6,672.0	6,625.6	6,624.8	40.8	25.5	89.61	-2,600.8	469.1	3,882.0	3,817.0	65.05	59.680		
9,500.0	6,672.0	6,626.9	6,626.1	41.8	25.5	89.63	-2,600.9	469.1	3,911.9	3,846.2	65.74	59.507		
9,600.0	6,672.0	6,628.2	6,627.4	42.7	25.5	89.65	-2,600.9	469.1	3,944.1	3,877.7	66.41	59.387		
9,700.0	6,672.0	6,629.4	6,628.6	43.7	25.5	89.67	-2,600.9	469.1	3,978.6	3,911.5	67.07	59.320		
9,800.0	6,672.0	6,630.7	6,629.9	44.7	25.5	89.69	-2,600.9	469.1	4,015.3	3,947.6	67.71	59.303 SF		
9,900.0	6,672.0	6,632.0	6,631.2	45.7	25.5	89.71	-2,600.9	469.2	4,054.1	3,985.7	68.33	59.335		
10,000.0	6,672.0	6,633.3	6,632.5	46.7	25.6	89.73	-2,600.9	469.2	4,095.0	4,026.0	68.92	59.414		
10,100.0	6,672.0	6,634.5	6,633.7	47.7	25.6	89.75	-2,600.9	469.2	4,137.9	4,068.4	69.50	59.539		
10,200.0	6,672.0	6,635.8	6,635.0	48.8	25.6	89.77	-2,600.9	469.2	4,182.7	4,112.7	70.05	59.708		
10,300.0	6,672.0	6,637.1	6,636.3	49.8	25.6	89.79	-2,601.0	469.2	4,229.5	4,158.9	70.59	59.920		
10,400.0	6,672.0	6,638.4	6,637.6	50.9	25.6	89.81	-2,601.0	469.2	4,278.1	4,207.0	71.10	60.172		
10,500.0	6,672.0	6,639.6	6,638.8	51.9	25.6	89.83	-2,601.0	469.3	4,328.5	4,256.9	71.59	60.464		
10,600.0	6,672.0	6,640.9	6,640.1	53.0	25.6	89.85	-2,601.0	469.3	4,380.5	4,308.5	72.06	60.792		
10,700.0	6,672.0	6,642.2	6,641.4	54.1	25.6	89.87	-2,601.0	469.3	4,434.3	4,361.7	72.51	61.157		
10,800.0	6,672.0	6,643.5	6,642.7	55.2	25.6	89.89	-2,601.0	469.3	4,489.6	4,416.6	72.94	61.555		
10,900.0	6,672.0	6,644.7	6,643.9	56.3	25.7	89.91	-2,601.0	469.3	4,546.4	4,473.1	73.35	61.987		
11,000.0	6,672.0	6,646.0	6,645.2	57.4	25.7	89.93	-2,601.1	469.3	4,604.7	4,531.0	73.74	62.449		
11,100.0	6,672.0	6,647.3	6,646.5	58.5	25.7	89.95	-2,601.1	469.4	4,664.5	4,590.4	74.11	62.941		
11,200.0	6,672.0	6,648.5	6,647.8	59.6	25.7	89.97	-2,601.1	469.4	4,725.6	4,651.1	74.46	63.462		
11,300.0	6,672.0	6,649.8	6,649.0	60.7	25.7	89.98	-2,601.1	469.4	4,788.0	4,713.2	74.80	64.010		
11,400.0	6,672.0	6,651.1	6,650.3	61.8	25.7	90.00	-2,601.1	469.4	4,851.7	4,776.6	75.12	64.584		
11,500.0	6,672.0	6,652.4	6,651.6	62.9	25.7	90.02	-2,601.1	469.4	4,916.6	4,841.2	75.43	65.182		
11,600.0	6,672.0	6,653.6	6,652.8	64.1	25.7	90.04	-2,601.1	469.4	4,982.7	4,907.0	75.72	65.804		
11,700.0	6,672.0	6,654.9	6,654.1	65.2	25.7	90.06	-2,601.1	469.5	5,049.9	4,973.9	76.00	66.449		
11,800.0	6,672.0	6,656.2	6,655.4	66.3	25.7	90.08	-2,601.2	469.5	5,118.1	5,041.9	76.26	67.115		
11,900.0	6,672.0	6,657.5	6,656.7	67.5	25.8	90.10	-2,601.2	469.5	5,187.4	5,110.9	76.51	67.801		
12,000.0	6,672.0	6,658.7	6,657.9	68.6	25.8	90.12	-2,601.2	469.5	5,257.7	5,181.0	76.75	68.507		
12,100.0	6,672.0	6,660.0	6,659.2	69.8	25.8	90.14	-2,601.2	469.5	5,329.0	5,252.0	76.97	69.231		
12,200.0	6,672.0	6,661.3	6,660.5	70.9	25.8	90.16	-2,601.2	469.5	5,401.2	5,324.0	77.19	69.973		
12,300.0	6,672.0	6,662.6	6,661.8	72.1	25.8	90.18	-2,601.2	469.6	5,474.2	5,396.8	77.39	70.732		
12,400.0	6,672.0	6,663.8	6,663.0	73.2	25.8	90.20	-2,601.2	469.6	5,548.1	5,470.5	77.59	71.507		
12,500.0	6,672.0	6,665.1	6,664.3	74.4	25.8	90.22	-2,601.3	469.6	5,622.8	5,545.0	77.77	72.297		
12,600.0	6,672.0	6,666.4	6,665.6	75.5	25.8	90.24	-2,601.3	469.6	5,698.3	5,620.3	77.95	73.102		
12,700.0	6,672.0	6,667.6	6,666.8	76.7	25.8	90.26	-2,601.3	469.6	5,774.5	5,696.4	78.12	73.920		
12,800.0	6,672.0	6,668.9	6,668.1	77.9	25.9	90.28	-2,601.3	469.6	5,851.5	5,773.2	78.28	74.752		
12,900.0	6,672.0	6,670.2	6,669.4	79.0	25.9	90.30	-2,601.3	469.7	5,929.1	5,850.7	78.43	75.597		
13,000.0	6,672.0	6,671.5	6,670.7	80.2	25.9	90.32	-2,601.3	469.7	6,007.4	5,928.9	78.58	76.453		
13,100.0	6,672.0	6,672.7	6,671.9	81.4	25.9	90.34	-2,601.3	469.7	6,086.4	6,007.7	78.72	77.321		
13,200.0	6,672.0	6,674.0	6,673.2	82.6	25.9	90.36	-2,601.3	469.7	6,166.0	6,087.1	78.85	78.200		
13,300.0	6,672.0	6,675.3	6,674.5	83.7	25.9	90.38	-2,601.4	469.7	6,246.1	6,167.1	78.98	79.090		
13,400.0	6,672.0	6,676.6	6,675.8	84.9	25.9	90.40	-2,601.4	469.7	6,326.8	6,247.8	79.10	79.989		
13,500.0	6,672.0	6,677.8	6,677.0	86.1	25.9	90.42	-2,601.4	469.8	6,408.1	6,328.9	79.21	80.898		
13,600.0	6,672.0	6,679.1	6,678.3	87.3	25.9	90.44	-2,601.4	469.8	6,489.9	6,410.6	79.32	81.816		
13,700.0	6,672.0	6,680.4	6,679.6	88.4	25.9	90.46	-2,601.4	469.8	6,572.2	6,492.8	79.43	82.742		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - Skurich-SLW 7B - Original Drilling - Original Drilling - As Drilled												Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWGS, 6100-2_Unknown												Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis		Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)		
13,800.0	6,672.0	6,681.6	6,680.8	89.6	26.0	90.48	-2,601.4	469.8	6,655.0	6,575.5	79.53	83.677	
13,900.0	6,672.0	6,682.9	6,682.1	90.8	26.0	90.50	-2,601.4	469.8	6,738.3	6,658.7	79.63	84.620	
14,000.0	6,672.0	6,684.2	6,683.4	92.0	26.0	90.52	-2,601.5	469.8	6,822.0	6,742.3	79.72	85.570	
14,100.0	6,672.0	6,685.5	6,684.7	93.2	26.0	90.54	-2,601.5	469.9	6,906.2	6,826.4	79.82	86.527	
14,200.0	6,672.0	6,686.7	6,685.9	94.4	26.0	90.56	-2,601.5	469.9	6,990.8	6,910.9	79.90	87.491	
14,300.0	6,672.0	6,688.0	6,687.2	95.6	26.0	90.58	-2,601.5	469.9	7,075.8	6,995.8	79.99	88.461	
14,400.0	6,672.0	6,689.3	6,688.5	96.8	26.0	90.59	-2,601.5	469.9	7,161.1	7,081.1	80.07	89.437	
14,500.0	6,672.0	6,690.5	6,689.7	98.0	26.0	90.61	-2,601.5	469.9	7,246.9	7,166.7	80.15	90.420	
14,600.0	6,672.0	6,691.8	6,691.0	99.2	26.0	90.63	-2,601.5	469.9	7,333.0	7,252.8	80.22	91.408	
14,700.0	6,672.0	6,693.1	6,692.3	100.4	26.1	90.65	-2,601.5	470.0	7,419.5	7,339.2	80.30	92.401	
14,800.0	6,672.0	6,694.4	6,693.6	101.6	26.1	90.67	-2,601.6	470.0	7,506.3	7,425.9	80.37	93.399	
14,900.0	6,672.0	6,695.6	6,694.8	102.7	26.1	90.69	-2,601.6	470.0	7,593.4	7,513.0	80.44	94.402	
15,000.0	6,672.0	6,696.9	6,696.1	103.9	26.1	90.71	-2,601.6	470.0	7,680.9	7,600.4	80.50	95.409	
15,100.0	6,672.0	6,698.2	6,697.4	105.1	26.1	90.73	-2,601.6	470.0	7,768.7	7,688.1	80.57	96.421	
15,200.0	6,672.0	6,699.4	6,698.6	106.3	26.1	90.75	-2,601.6	470.0	7,856.7	7,776.1	80.63	97.437	
15,300.0	6,672.0	6,700.7	6,699.9	107.6	26.1	90.77	-2,601.6	470.1	7,945.1	7,864.4	80.70	98.457	
15,400.0	6,672.0	6,702.0	6,701.2	108.8	26.1	90.79	-2,601.6	470.1	8,033.7	7,952.9	80.76	99.480	
15,500.0	6,672.0	6,703.2	6,702.4	110.0	26.1	90.81	-2,601.6	470.1	8,122.6	8,041.7	80.82	100.507	
15,600.0	6,672.0	6,704.5	6,703.7	111.2	26.1	90.83	-2,601.7	470.1	8,211.7	8,130.8	80.87	101.537	
15,700.0	6,672.0	6,705.8	6,705.0	112.4	26.2	90.85	-2,601.7	470.1	8,301.1	8,220.2	80.93	102.571	
15,800.0	6,672.0	6,707.1	6,706.3	113.6	26.2	90.87	-2,601.7	470.1	8,390.7	8,309.8	80.99	103.607	
15,900.0	6,672.0	6,708.3	6,707.5	114.8	26.2	90.89	-2,601.7	470.2	8,480.6	8,399.6	81.04	104.646	
16,000.0	6,672.0	6,709.6	6,708.8	116.0	26.2	90.91	-2,601.7	470.2	8,570.7	8,489.6	81.09	105.687	
16,100.0	6,672.0	6,710.9	6,710.1	117.2	26.2	90.93	-2,601.7	470.2	8,661.0	8,579.9	81.15	106.732	
16,200.0	6,672.0	6,712.1	6,711.3	118.4	26.2	90.95	-2,601.7	470.2	8,751.6	8,670.4	81.20	107.778	
16,300.0	6,672.0	6,713.4	6,712.6	119.6	26.2	90.97	-2,601.8	470.2	8,842.3	8,761.1	81.25	108.827	
16,400.0	6,672.0	6,714.7	6,713.9	120.8	26.2	90.99	-2,601.8	470.2	8,933.3	8,852.0	81.30	109.877	
16,500.0	6,672.0	6,715.9	6,715.1	122.0	26.2	91.01	-2,601.8	470.3	9,024.4	8,943.0	81.35	110.930	
16,600.0	6,672.0	6,717.2	6,716.4	123.2	26.3	91.03	-2,601.8	470.3	9,115.7	9,034.3	81.40	111.984	
16,700.0	6,672.0	6,718.5	6,717.7	124.5	26.3	91.05	-2,601.8	470.3	9,207.2	9,125.8	81.45	113.040	
16,800.0	6,672.0	6,719.8	6,719.0	125.7	26.3	91.07	-2,601.8	470.3	9,298.9	9,217.4	81.50	114.097	
16,900.0	6,672.0	6,721.0	6,720.2	126.9	26.3	91.09	-2,601.8	470.3	9,390.8	9,309.2	81.55	115.156	
17,000.0	6,672.0	6,722.3	6,721.5	128.1	26.3	91.11	-2,601.8	470.3	9,482.8	9,401.2	81.60	116.216	
17,100.0	6,672.0	6,723.6	6,722.8	129.3	26.3	91.13	-2,601.9	470.3	9,575.0	9,493.4	81.64	117.277	
17,200.0	6,672.0	6,724.8	6,724.0	130.5	26.3	91.15	-2,601.9	470.4	9,667.3	9,585.7	81.69	118.340	
17,300.0	6,672.0	6,726.1	6,725.3	131.7	26.3	91.17	-2,601.9	470.4	9,759.8	9,678.1	81.74	119.403	
17,400.0	6,672.0	6,727.4	6,726.6	133.0	26.3	91.19	-2,601.9	470.4	9,852.5	9,770.7	81.79	120.467	
17,500.0	6,672.0	6,728.6	6,727.8	134.2	26.3	91.21	-2,601.9	470.4	9,945.3	9,863.5	81.83	121.532	



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - Skurich-SLW 7D - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 6985-2_Unknown													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	22.0	-22.0	0.0	0.4	80.10	109.2	625.3	634.7					
100.0	100.0	78.0	78.0	0.1	1.6	80.10	109.2	625.3	634.7	633.1	1.69	376.551		
200.0	200.0	178.0	178.0	0.5	3.6	80.10	109.2	625.3	634.7	630.7	4.04	156.953		
300.0	300.0	278.0	278.0	0.8	5.6	80.10	109.2	625.3	634.7	628.3	6.40	99.138		
400.0	400.0	378.0	378.0	1.2	7.6	80.10	109.2	625.3	634.7	626.0	8.76	72.450		
500.0	500.0	478.0	478.0	1.6	9.6	80.10	109.2	625.3	634.7	623.6	11.12	57.083		
600.0	600.0	578.0	578.0	1.9	11.6	80.10	109.2	625.3	634.7	621.3	13.48	47.094		
700.0	700.0	678.0	678.0	2.3	13.6	80.10	109.2	625.3	634.7	618.9	15.84	40.081		
800.0	800.0	778.0	778.0	2.6	15.6	80.10	109.2	625.3	634.7	616.5	18.19	34.885		
900.0	900.0	878.0	878.0	3.0	17.6	80.10	109.2	625.3	634.7	614.2	20.55	30.882		
1,000.0	1,000.0	978.0	978.0	3.4	19.6	80.10	109.2	625.3	634.7	611.8	22.91	27.703		
1,100.0	1,100.0	1,078.0	1,078.0	3.7	21.6	80.10	109.2	625.3	634.7	609.5	25.27	25.118		
1,200.0	1,200.0	1,178.0	1,178.0	4.1	23.6	80.10	109.2	625.3	634.7	607.1	27.63	22.974		
1,300.0	1,300.0	1,278.0	1,278.0	4.4	25.6	80.10	109.2	625.3	634.7	604.8	29.99	21.167		
1,400.0	1,400.0	1,378.0	1,378.0	4.8	27.6	80.10	109.2	625.3	634.7	602.4	32.35	19.624		
1,500.0	1,500.0	1,478.0	1,478.0	5.1	29.6	80.10	109.2	625.3	634.7	600.0	34.70	18.290		
1,600.0	1,600.0	1,578.0	1,578.0	5.5	31.6	80.10	109.2	625.3	634.7	597.7	37.06	17.126		
1,700.0	1,700.0	1,678.0	1,678.0	5.9	33.6	80.10	109.2	625.3	634.7	595.3	39.42	16.101		
1,800.0	1,800.0	1,778.0	1,778.0	6.2	35.6	80.10	109.2	625.3	634.7	593.0	41.78	15.193		
1,900.0	1,900.0	1,878.0	1,878.0	6.6	37.6	80.10	109.2	625.3	634.7	590.6	44.14	14.381		
2,000.0	2,000.0	1,978.0	1,978.0	6.9	39.6	80.10	109.2	625.3	634.7	588.2	46.50	13.651		
2,100.0	2,100.0	2,078.0	2,078.0	7.3	41.6	80.10	109.2	625.3	634.7	585.9	48.86	12.992		
2,200.0	2,200.0	2,178.0	2,178.0	7.7	43.6	80.10	109.2	625.3	634.7	583.5	51.21	12.394 CC		
2,300.0	2,300.0	2,278.0	2,278.0	8.0	45.6	131.20	109.2	625.3	635.9	582.3	53.57	11.871 ES		
2,400.0	2,399.8	2,377.8	2,377.8	8.4	47.6	131.50	109.2	625.3	639.3	583.4	55.92	11.434		
2,500.0	2,499.5	2,477.5	2,477.5	8.7	49.5	131.99	109.2	625.3	645.2	586.9	58.26	11.074		
2,600.0	2,598.7	2,576.7	2,576.7	9.1	51.5	132.66	109.2	625.3	653.4	592.8	60.60	10.783		
2,700.0	2,697.5	2,675.5	2,675.5	9.4	53.5	133.49	109.2	625.3	664.2	601.2	62.92	10.556		
2,800.0	2,795.6	2,773.6	2,773.6	9.8	55.5	134.46	109.2	625.3	677.5	612.3	65.23	10.386		
2,900.0	2,893.1	2,871.1	2,871.1	10.1	57.4	135.54	109.2	625.3	693.6	626.1	67.53	10.272		
3,000.0	2,989.6	2,967.6	2,967.6	10.5	59.4	136.71	109.2	625.3	712.6	642.8	69.81	10.208		
3,100.0	3,085.3	3,063.3	3,063.3	10.9	61.3	137.94	109.2	625.3	734.5	662.5	72.07	10.192		
3,200.0	3,179.8	3,157.8	3,157.8	11.2	63.2	139.21	109.2	625.3	759.5	685.2	74.31	10.222		
3,300.0	3,273.2	3,251.2	3,251.2	11.6	65.0	140.50	109.2	625.3	787.7	711.2	76.52	10.294		
3,387.5	3,353.8	3,331.8	3,331.8	11.9	66.6	141.62	109.2	625.3	815.0	736.5	78.44	10.390		
3,400.0	3,365.2	3,343.2	3,343.2	12.0	66.9	141.83	109.2	625.3	819.1	740.4	78.71	10.406		
3,500.0	3,456.8	3,434.8	3,434.8	12.4	68.7	143.46	109.2	625.3	852.1	771.2	80.89	10.534		
3,600.0	3,548.3	3,526.3	3,526.3	12.8	70.5	144.97	109.2	625.3	885.7	802.6	83.07	10.662		
3,700.0	3,639.8	3,617.8	3,617.8	13.2	72.4	146.37	109.2	625.3	919.9	834.6	85.26	10.789		
3,800.0	3,731.4	3,709.4	3,709.4	13.6	74.2	147.68	109.2	625.3	954.5	867.0	87.45	10.915		
3,900.0	3,822.9	3,800.9	3,800.9	14.0	76.0	148.90	109.2	625.3	989.6	899.9	89.64	11.039		
4,000.0	3,914.4	3,892.4	3,892.4	14.4	77.8	150.04	109.2	625.3	1,025.0	933.2	91.84	11.161		
4,100.0	4,005.9	3,983.9	3,983.9	14.8	79.7	151.10	109.2	625.3	1,060.8	966.7	94.03	11.281		
4,200.0	4,097.5	4,075.5	4,075.5	15.2	81.5	152.10	109.2	625.3	1,096.9	1,000.6	96.23	11.398		
4,300.0	4,189.0	4,167.0	4,167.0	15.6	83.3	153.04	109.2	625.3	1,133.3	1,034.8	98.44	11.512		
4,400.0	4,280.5	4,258.5	4,258.5	16.1	85.2	153.92	109.2	625.3	1,169.9	1,069.2	100.64	11.624		
4,500.0	4,372.1	4,350.1	4,350.1	16.5	87.0	154.75	109.2	625.3	1,206.8	1,103.9	102.85	11.733		
4,600.0	4,463.6	4,441.6	4,441.6	16.9	88.8	155.53	109.2	625.3	1,243.8	1,138.8	105.06	11.839		
4,700.0	4,555.1	4,533.1	4,533.1	17.4	90.7	156.26	109.2	625.3	1,281.1	1,173.8	107.27	11.942		
4,800.0	4,646.7	4,624.7	4,624.7	17.8	92.5	156.96	109.2	625.3	1,318.6	1,209.1	109.49	12.043		
4,900.0	4,738.2	4,716.2	4,716.2	18.2	94.3	157.62	109.2	625.3	1,356.2	1,244.5	111.71	12.141		
5,000.0	4,829.7	4,807.7	4,807.7	18.7	96.2	158.24	109.2	625.3	1,393.9	1,280.0	113.92	12.236		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - Skurich-SLW 7D - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 6985-2_Unknown													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
5,100.0	4,921.3	4,899.3	4,899.3	19.1	98.0	158.83	109.2	625.3	1,431.8	1,315.7	116.14	12.328		
5,200.0	5,012.8	4,990.8	4,990.8	19.5	99.8	159.39	109.2	625.3	1,469.8	1,351.5	118.36	12.418		
5,300.0	5,104.3	5,082.3	5,082.3	20.0	101.6	159.93	109.2	625.3	1,508.0	1,387.4	120.59	12.505		
5,400.0	5,195.8	5,173.8	5,173.8	20.4	103.5	160.43	109.2	625.3	1,546.2	1,423.4	122.81	12.590		
5,500.0	5,287.4	5,265.4	5,265.4	20.9	105.3	160.92	109.2	625.3	1,584.6	1,459.5	125.04	12.673		
5,600.0	5,378.9	5,356.9	5,356.9	21.3	107.1	161.38	109.2	625.3	1,623.0	1,495.8	127.26	12.753		
5,700.0	5,470.4	5,448.4	5,448.4	21.8	109.0	161.82	109.2	625.3	1,661.5	1,532.1	129.49	12.831		
5,800.0	5,562.0	5,540.0	5,540.0	22.2	110.8	162.24	109.2	625.3	1,700.2	1,568.4	131.72	12.907		
5,900.0	5,653.5	5,631.5	5,631.5	22.7	112.6	162.64	109.2	625.3	1,738.8	1,604.9	133.95	12.981		
6,000.0	5,745.0	5,723.0	5,723.0	23.1	114.5	163.03	109.2	625.3	1,777.6	1,641.4	136.18	13.053		
6,100.0	5,836.6	5,814.6	5,814.6	23.6	116.3	163.39	109.2	625.3	1,816.4	1,678.0	138.41	13.123		
6,200.0	5,928.1	5,906.1	5,906.1	24.0	118.1	163.75	109.2	625.3	1,855.3	1,714.7	140.65	13.191		
6,278.6	6,000.0	5,978.0	5,978.0	24.4	119.6	164.01	109.2	625.3	1,885.9	1,743.5	142.40	13.243		
6,290.0	6,010.4	5,988.4	5,988.4	24.4	119.8	162.10	109.2	625.3	1,890.4	1,747.7	142.66	13.251		
6,300.0	6,019.5	5,997.5	5,997.5	24.5	120.0	160.22	109.2	625.3	1,894.4	1,751.5	142.88	13.259		
6,350.0	6,065.8	6,043.8	6,043.8	24.7	120.9	149.21	109.2	625.3	1,911.7	1,767.7	144.00	13.276		
6,400.0	6,113.0	6,091.0	6,091.0	24.9	121.8	134.98	109.2	625.3	1,925.0	1,779.9	145.14	13.264		
6,450.0	6,160.7	6,138.7	6,138.7	25.1	122.8	118.02	109.2	625.3	1,934.3	1,788.0	146.27	13.224		
6,500.0	6,208.5	6,186.5	6,186.5	25.3	123.7	100.81	109.2	625.3	1,939.3	1,791.9	147.40	13.157		
6,550.0	6,255.8	6,233.8	6,233.8	25.4	124.7	86.26	109.2	625.3	1,940.2	1,791.7	148.51	13.065		
6,600.0	6,302.5	6,280.5	6,280.5	25.6	125.6	75.49	109.2	625.3	1,937.0	1,787.4	149.58	12.949		
6,650.0	6,347.9	6,325.9	6,325.9	25.7	126.5	68.08	109.2	625.3	1,929.7	1,779.1	150.62	12.812		
6,700.0	6,391.6	6,369.6	6,369.6	25.9	127.4	63.22	109.2	625.3	1,918.6	1,767.0	151.61	12.654		
6,750.0	6,433.4	6,411.4	6,411.4	26.0	128.2	60.25	109.2	625.3	1,903.6	1,751.1	152.55	12.479		
6,800.0	6,472.8	6,450.8	6,450.8	26.1	129.0	58.71	109.2	625.3	1,885.1	1,731.7	153.43	12.287		
6,850.0	6,509.4	6,487.4	6,487.4	26.2	129.7	58.33	109.2	625.3	1,863.3	1,709.0	154.24	12.081		
6,900.0	6,543.0	6,521.0	6,521.0	26.3	130.4	58.94	109.2	625.3	1,838.3	1,683.4	154.98	11.862		
6,950.0	6,573.2	6,551.2	6,551.2	26.4	131.0	60.43	109.2	625.3	1,810.6	1,654.9	155.65	11.632		
7,000.0	6,599.8	6,577.8	6,577.8	26.5	131.6	62.77	109.2	625.3	1,780.3	1,624.1	156.25	11.394		
7,050.0	6,622.5	6,600.5	6,600.5	26.6	132.0	65.92	109.2	625.3	1,747.9	1,591.1	156.77	11.150		
7,100.0	6,641.1	6,619.1	6,619.1	26.7	132.4	69.84	109.2	625.3	1,713.6	1,556.4	157.21	10.900		
7,150.0	6,655.4	6,633.4	6,633.4	26.8	132.7	74.51	109.2	625.3	1,677.8	1,520.2	157.58	10.648		
7,200.0	6,665.4	6,643.4	6,643.4	26.9	132.9	79.81	109.2	625.3	1,640.8	1,483.0	157.86	10.394		
7,250.0	6,670.8	6,648.8	6,648.8	27.0	133.0	85.63	109.2	625.3	1,603.0	1,445.0	158.07	10.141		
7,285.7	6,672.0	6,650.0	6,650.0	27.1	133.0	90.00	109.2	625.3	1,575.8	1,417.6	158.17	9.962		
7,300.0	6,672.0	6,650.0	6,650.0	27.1	133.0	90.00	109.2	625.3	1,564.8	1,406.6	158.20	9.891		
7,400.0	6,672.0	6,650.0	6,650.0	27.3	133.0	90.00	109.2	625.3	1,489.9	1,331.5	158.46	9.402		
7,500.0	6,672.0	6,650.0	6,650.0	27.6	133.0	90.00	109.2	625.3	1,418.2	1,259.4	158.79	8.931		
7,600.0	6,672.0	6,650.0	6,650.0	28.0	133.0	90.00	109.2	625.3	1,350.0	1,190.8	159.20	8.480		
7,700.0	6,672.0	6,650.0	6,650.0	28.3	133.0	90.00	109.2	625.3	1,286.0	1,126.3	159.70	8.053		
7,800.0	6,672.0	6,650.0	6,650.0	28.8	133.0	90.00	109.2	625.3	1,226.8	1,066.5	160.29	7.654		
7,900.0	6,672.0	6,650.0	6,650.0	29.3	133.0	90.00	109.2	625.3	1,173.2	1,012.2	160.98	7.288		
8,000.0	6,672.0	6,650.0	6,650.0	29.8	133.0	90.00	109.2	625.3	1,125.9	964.1	161.77	6.960		
8,100.0	6,672.0	6,650.0	6,650.0	30.4	133.0	90.00	109.2	625.3	1,085.8	923.2	162.63	6.677		
8,200.0	6,672.0	6,650.0	6,650.0	31.0	133.0	90.00	109.2	625.3	1,053.8	890.2	163.54	6.444		
8,300.0	6,672.0	6,650.0	6,650.0	31.7	133.0	90.00	109.2	625.3	1,030.4	866.0	164.45	6.266		
8,400.0	6,672.0	6,650.0	6,650.0	32.4	133.0	90.00	109.2	625.3	1,016.5	851.1	165.33	6.148		
8,492.9	6,672.0	6,650.0	6,650.0	33.1	133.0	90.00	109.2	625.3	1,012.2	846.1	166.07	6.095		
8,500.0	6,672.0	6,650.0	6,650.0	33.1	133.0	90.00	109.2	625.3	1,012.2	846.1	166.12	6.093 SF		
8,600.0	6,672.0	6,650.0	6,650.0	33.9	133.0	90.00	109.2	625.3	1,017.8	851.1	166.78	6.103		
8,700.0	6,672.0	6,650.0	6,650.0	34.7	133.0	90.00	109.2	625.3	1,033.2	865.9	167.29	6.176		
8,800.0	6,672.0	6,650.0	6,650.0	35.5	133.0	90.00	109.2	625.3	1,057.8	890.1	167.65	6.310		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - Skurich-SLW 7D - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 6985-2_Unknown													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
8,900.0	6,672.0	6,650.0	6,650.0	36.3	133.0	90.00	109.2	625.3	1,091.0	923.2	167.85	6.500		
9,000.0	6,672.0	6,650.0	6,650.0	37.2	133.0	90.00	109.2	625.3	1,132.2	964.3	167.91	6.743		
9,100.0	6,672.0	6,650.0	6,650.0	38.1	133.0	90.00	109.2	625.3	1,180.4	1,012.5	167.87	7.032		
9,200.0	6,672.0	6,650.0	6,650.0	39.0	133.0	90.00	109.2	625.3	1,234.9	1,067.1	167.74	7.362		
9,300.0	6,672.0	6,650.0	6,650.0	39.9	133.0	90.00	109.2	625.3	1,294.8	1,127.2	167.56	7.727		
9,400.0	6,672.0	6,650.0	6,650.0	40.8	133.0	90.00	109.2	625.3	1,359.4	1,192.1	167.33	8.124		
9,500.0	6,672.0	6,650.0	6,650.0	41.8	133.0	90.00	109.2	625.3	1,428.1	1,261.0	167.08	8.548		
9,600.0	6,672.0	6,650.0	6,650.0	42.7	133.0	90.00	109.2	625.3	1,500.4	1,333.5	166.82	8.994		
9,700.0	6,672.0	6,650.0	6,650.0	43.7	133.0	90.00	109.2	625.3	1,575.7	1,409.1	166.56	9.460		
9,800.0	6,672.0	6,650.0	6,650.0	44.7	133.0	90.00	109.2	625.3	1,653.6	1,487.3	166.30	9.943		
9,900.0	6,672.0	6,650.0	6,650.0	45.7	133.0	90.00	109.2	625.3	1,733.8	1,567.7	166.05	10.441		
10,000.0	6,672.0	6,650.0	6,650.0	46.7	133.0	90.00	109.2	625.3	1,815.9	1,650.1	165.81	10.952		
10,100.0	6,672.0	6,650.0	6,650.0	47.7	133.0	90.00	109.2	625.3	1,899.8	1,734.2	165.59	11.473		
10,200.0	6,672.0	6,650.0	6,650.0	48.8	133.0	90.00	109.2	625.3	1,985.2	1,819.8	165.37	12.004		
10,300.0	6,672.0	6,650.0	6,650.0	49.8	133.0	90.00	109.2	625.3	2,071.9	1,906.7	165.18	12.543		
10,400.0	6,672.0	6,650.0	6,650.0	50.9	133.0	90.00	109.2	625.3	2,159.7	1,994.7	164.99	13.090		
10,500.0	6,672.0	6,650.0	6,650.0	51.9	133.0	90.00	109.2	625.3	2,248.6	2,083.7	164.82	13.643		
10,600.0	6,672.0	6,650.0	6,650.0	53.0	133.0	90.00	109.2	625.3	2,338.3	2,173.7	164.66	14.201		
10,700.0	6,672.0	6,650.0	6,650.0	54.1	133.0	90.00	109.2	625.3	2,428.9	2,264.4	164.51	14.765		
10,800.0	6,672.0	6,650.0	6,650.0	55.2	133.0	90.00	109.2	625.3	2,520.2	2,355.8	164.37	15.332		
10,900.0	6,672.0	6,650.0	6,650.0	56.3	133.0	90.00	109.2	625.3	2,612.1	2,447.8	164.24	15.904		
11,000.0	6,672.0	6,650.0	6,650.0	57.4	133.0	90.00	109.2	625.3	2,704.6	2,540.5	164.12	16.479		
11,100.0	6,672.0	6,650.0	6,650.0	58.5	133.0	90.00	109.2	625.3	2,797.6	2,633.6	164.02	17.057		
11,200.0	6,672.0	6,650.0	6,650.0	59.6	133.0	90.00	109.2	625.3	2,891.1	2,727.2	163.92	17.638		
11,300.0	6,672.0	6,650.0	6,650.0	60.7	133.0	90.00	109.2	625.3	2,985.0	2,821.2	163.82	18.221		
11,400.0	6,672.0	6,650.0	6,650.0	61.8	133.0	90.00	109.2	625.3	3,079.3	2,915.6	163.74	18.806		
11,500.0	6,672.0	6,650.0	6,650.0	62.9	133.0	90.00	109.2	625.3	3,174.0	3,010.3	163.66	19.393		
11,600.0	6,672.0	6,650.0	6,650.0	64.1	133.0	90.00	109.2	625.3	3,268.9	3,105.3	163.59	19.982		
11,700.0	6,672.0	6,650.0	6,650.0	65.2	133.0	90.00	109.2	625.3	3,364.2	3,200.7	163.53	20.572		
11,800.0	6,672.0	6,650.0	6,650.0	66.3	133.0	90.00	109.2	625.3	3,459.7	3,296.2	163.47	21.164		
11,900.0	6,672.0	6,650.0	6,650.0	67.5	133.0	90.00	109.2	625.3	3,555.5	3,392.1	163.42	21.757		
12,000.0	6,672.0	6,650.0	6,650.0	68.6	133.0	90.00	109.2	625.3	3,651.5	3,488.1	163.37	22.351		
12,100.0	6,672.0	6,650.0	6,650.0	69.8	133.0	90.00	109.2	625.3	3,747.7	3,584.4	163.33	22.946		
12,200.0	6,672.0	6,650.0	6,650.0	70.9	133.0	90.00	109.2	625.3	3,844.1	3,680.9	163.29	23.542		
12,300.0	6,672.0	6,650.0	6,650.0	72.1	133.0	90.00	109.2	625.3	3,940.7	3,777.5	163.25	24.139		
12,400.0	6,672.0	6,650.0	6,650.0	73.2	133.0	90.00	109.2	625.3	4,037.5	3,874.3	163.22	24.736		
12,500.0	6,672.0	6,650.0	6,650.0	74.4	133.0	90.00	109.2	625.3	4,134.4	3,971.2	163.20	25.334		
12,600.0	6,672.0	6,650.0	6,650.0	75.5	133.0	90.00	109.2	625.3	4,231.5	4,068.3	163.17	25.933		
12,700.0	6,672.0	6,650.0	6,650.0	76.7	133.0	90.00	109.2	625.3	4,328.7	4,165.5	163.15	26.531		
12,800.0	6,672.0	6,650.0	6,650.0	77.9	133.0	90.00	109.2	625.3	4,426.0	4,262.9	163.14	27.131		
12,900.0	6,672.0	6,650.0	6,650.0	79.0	133.0	90.00	109.2	625.3	4,523.5	4,360.3	163.12	27.730		
13,000.0	6,672.0	6,650.0	6,650.0	80.2	133.0	90.00	109.2	625.3	4,621.0	4,457.9	163.11	28.330		
13,100.0	6,672.0	6,650.0	6,650.0	81.4	133.0	90.00	109.2	625.3	4,718.7	4,555.6	163.11	28.930		
13,200.0	6,672.0	6,650.0	6,650.0	82.6	133.0	90.00	109.2	625.3	4,816.4	4,653.3	163.10	29.530		
13,300.0	6,672.0	6,650.0	6,650.0	83.7	133.0	90.00	109.2	625.3	4,914.3	4,751.2	163.10	30.130		
13,400.0	6,672.0	6,650.0	6,650.0	84.9	133.0	90.00	109.2	625.3	5,012.2	4,849.1	163.10	30.730		
13,500.0	6,672.0	6,650.0	6,650.0	86.1	133.0	90.00	109.2	625.3	5,110.2	4,947.1	163.11	31.331		
13,600.0	6,672.0	6,650.0	6,650.0	87.3	133.0	90.00	109.2	625.3	5,208.3	5,045.2	163.11	31.931		
13,700.0	6,672.0	6,650.0	6,650.0	88.4	133.0	90.00	109.2	625.3	5,306.5	5,143.4	163.12	32.531		
13,800.0	6,672.0	6,650.0	6,650.0	89.6	133.0	90.00	109.2	625.3	5,404.7	5,241.6	163.13	33.132		
13,900.0	6,672.0	6,650.0	6,650.0	90.8	133.0	90.00	109.2	625.3	5,503.0	5,339.9	163.14	33.732		
14,000.0	6,672.0	6,650.0	6,650.0	92.0	133.0	90.00	109.2	625.3	5,601.4	5,438.2	163.16	34.332		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - Skurich-SLW 7D - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 6985-2_Unknown													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
14,100.0	6,672.0	6,650.0	6,650.0	93.2	133.0	90.00	109.2	625.3	5,699.8	5,536.6	163.17	34.931		
14,200.0	6,672.0	6,650.0	6,650.0	94.4	133.0	90.00	109.2	625.3	5,798.3	5,635.1	163.19	35.531		
14,300.0	6,672.0	6,650.0	6,650.0	95.6	133.0	90.00	109.2	625.3	5,896.8	5,733.6	163.21	36.131		
14,400.0	6,672.0	6,650.0	6,650.0	96.8	133.0	90.00	109.2	625.3	5,995.4	5,832.2	163.23	36.730		
14,500.0	6,672.0	6,650.0	6,650.0	98.0	133.0	90.00	109.2	625.3	6,094.0	5,930.8	163.25	37.329		
14,600.0	6,672.0	6,650.0	6,650.0	99.2	133.0	90.00	109.2	625.3	6,192.7	6,029.4	163.28	37.927		
14,700.0	6,672.0	6,650.0	6,650.0	100.4	133.0	90.00	109.2	625.3	6,291.4	6,128.1	163.30	38.526		
14,800.0	6,672.0	6,650.0	6,650.0	101.6	133.0	90.00	109.2	625.3	6,390.1	6,226.8	163.33	39.124		
14,900.0	6,672.0	6,650.0	6,650.0	102.7	133.0	90.00	109.2	625.3	6,488.9	6,325.6	163.36	39.722		
15,000.0	6,672.0	6,650.0	6,650.0	103.9	133.0	90.00	109.2	625.3	6,587.8	6,424.4	163.39	40.319		
15,100.0	6,672.0	6,650.0	6,650.0	105.1	133.0	90.00	109.2	625.3	6,686.6	6,523.2	163.42	40.916		
15,200.0	6,672.0	6,650.0	6,650.0	106.3	133.0	90.00	109.2	625.3	6,785.5	6,622.1	163.46	41.513		
15,300.0	6,672.0	6,650.0	6,650.0	107.6	133.0	90.00	109.2	625.3	6,884.5	6,721.0	163.49	42.109		
15,400.0	6,672.0	6,650.0	6,650.0	108.8	133.0	90.00	109.2	625.3	6,983.4	6,819.9	163.53	42.705		
15,500.0	6,672.0	6,650.0	6,650.0	110.0	133.0	90.00	109.2	625.3	7,082.4	6,918.9	163.57	43.300		
15,600.0	6,672.0	6,650.0	6,650.0	111.2	133.0	90.00	109.2	625.3	7,181.5	7,017.9	163.60	43.895		
15,700.0	6,672.0	6,650.0	6,650.0	112.4	133.0	90.00	109.2	625.3	7,280.5	7,116.9	163.64	44.490		
15,800.0	6,672.0	6,650.0	6,650.0	113.6	133.0	90.00	109.2	625.3	7,379.6	7,215.9	163.69	45.084		
15,900.0	6,672.0	6,650.0	6,650.0	114.8	133.0	90.00	109.2	625.3	7,478.7	7,315.0	163.73	45.678		
16,000.0	6,672.0	6,650.0	6,650.0	116.0	133.0	90.00	109.2	625.3	7,577.8	7,414.1	163.77	46.271		
16,100.0	6,672.0	6,650.0	6,650.0	117.2	133.0	90.00	109.2	625.3	7,677.0	7,513.2	163.82	46.863		
16,200.0	6,672.0	6,650.0	6,650.0	118.4	133.0	90.00	109.2	625.3	7,776.2	7,612.3	163.86	47.455		
16,300.0	6,672.0	6,650.0	6,650.0	119.6	133.0	90.00	109.2	625.3	7,875.4	7,711.4	163.91	48.047		
16,400.0	6,672.0	6,650.0	6,650.0	120.8	133.0	90.00	109.2	625.3	7,974.6	7,810.6	163.96	48.638		
16,500.0	6,672.0	6,650.0	6,650.0	122.0	133.0	90.00	109.2	625.3	8,073.8	7,909.8	164.01	49.229		
16,600.0	6,672.0	6,650.0	6,650.0	123.2	133.0	90.00	109.2	625.3	8,173.1	8,009.0	164.06	49.819		
16,700.0	6,672.0	6,650.0	6,650.0	124.5	133.0	90.00	109.2	625.3	8,272.3	8,108.2	164.11	50.408		
16,800.0	6,672.0	6,650.0	6,650.0	125.7	133.0	90.00	109.2	625.3	8,371.6	8,207.5	164.16	50.997		
16,900.0	6,672.0	6,650.0	6,650.0	126.9	133.0	90.00	109.2	625.3	8,471.0	8,306.7	164.21	51.585		
17,000.0	6,672.0	6,650.0	6,650.0	128.1	133.0	90.00	109.2	625.3	8,570.3	8,406.0	164.27	52.173		
17,100.0	6,672.0	6,650.0	6,650.0	129.3	133.0	90.00	109.2	625.3	8,669.6	8,505.3	164.32	52.760		
17,200.0	6,672.0	6,650.0	6,650.0	130.5	133.0	90.00	109.2	625.3	8,769.0	8,604.6	164.38	53.347		
17,300.0	6,672.0	6,650.0	6,650.0	131.7	133.0	90.00	109.2	625.3	8,868.4	8,703.9	164.43	53.933		
17,400.0	6,672.0	6,650.0	6,650.0	133.0	133.0	90.00	109.2	625.3	8,967.8	8,803.3	164.49	54.518		
17,500.0	6,672.0	6,650.0	6,650.0	134.2	133.0	90.00	109.2	625.3	9,067.2	8,902.6	164.55	55.103		
17,600.0	6,672.0	6,650.0	6,650.0	135.4	133.0	90.00	109.2	625.3	9,166.6	9,002.0	164.61	55.687		
17,700.0	6,672.0	6,650.0	6,650.0	136.6	133.0	90.00	109.2	625.3	9,266.0	9,101.3	164.67	56.270		
17,800.0	6,672.0	6,650.0	6,650.0	137.8	133.0	90.00	109.2	625.3	9,365.5	9,200.7	164.73	56.853		
17,900.0	6,672.0	6,650.0	6,650.0	139.0	133.0	90.00	109.2	625.3	9,464.9	9,300.1	164.79	57.435		
18,000.0	6,672.0	6,650.0	6,650.0	140.3	133.0	90.00	109.2	625.3	9,564.4	9,399.5	164.86	58.017		
18,100.0	6,672.0	6,650.0	6,650.0	141.5	133.0	90.00	109.2	625.3	9,663.9	9,498.9	164.92	58.598		
18,200.0	6,672.0	6,650.0	6,650.0	142.7	133.0	90.00	109.2	625.3	9,763.4	9,598.4	164.98	59.178		
18,300.0	6,672.0	6,650.0	6,650.0	143.9	133.0	90.00	109.2	625.3	9,862.9	9,697.8	165.05	59.757		
18,342.5	6,672.0	6,650.0	6,650.0	144.4	133.0	90.00	109.2	625.3	9,905.1	9,740.0	165.08	60.003		



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - Skurich-SLW Ranch 7A - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	6.9	6.9	0.0	0.0	130.81	-2,664.2	3,085.5	4,076.5					
100.0	100.0	93.7	93.7	0.1	0.2	130.81	-2,664.1	3,085.7	4,076.7	4,076.4	0.29	N/A		
200.0	200.0	219.5	219.5	0.5	0.6	130.80	-2,664.0	3,086.0	4,076.8	4,075.7	1.08	3,788.699		
300.0	300.0	318.4	318.4	0.8	0.9	130.80	-2,663.7	3,086.0	4,076.6	4,074.8	1.78	2,290.041		
400.0	400.0	430.6	430.6	1.2	1.3	130.79	-2,663.1	3,085.8	4,076.1	4,073.6	2.53	1,610.588		
500.0	500.0	522.4	522.4	1.6	1.7	130.79	-2,662.7	3,085.6	4,075.7	4,072.5	3.21	1,269.368		
600.0	600.0	619.6	619.6	1.9	2.0	130.79	-2,662.4	3,085.5	4,075.4	4,071.5	3.91	1,042.471		
700.0	700.0	723.9	723.9	2.3	2.4	130.79	-2,662.0	3,085.3	4,075.0	4,070.4	4.63	879.568		
800.0	800.0	822.2	822.2	2.6	2.7	130.78	-2,661.4	3,085.4	4,074.7	4,069.3	5.34	763.702		
900.0	900.0	920.5	920.5	3.0	3.0	130.77	-2,660.8	3,085.4	4,074.3	4,068.3	6.04	674.839		
1,000.0	1,000.0	1,010.3	1,010.3	3.4	3.4	130.77	-2,660.4	3,085.6	4,074.1	4,067.4	6.71	607.221		
1,100.0	1,100.0	1,116.6	1,116.6	3.7	3.7	130.76	-2,659.8	3,085.9	4,074.0	4,066.6	7.44	547.629		
1,200.0	1,200.0	1,215.9	1,215.9	4.1	4.1	130.75	-2,659.3	3,086.1	4,073.8	4,065.6	8.14	500.181		
1,300.0	1,300.0	1,314.8	1,314.8	4.4	4.4	130.74	-2,658.8	3,086.3	4,073.6	4,064.8	8.85	460.381		
1,400.0	1,400.0	1,417.3	1,417.3	4.8	4.8	130.74	-2,658.2	3,086.5	4,073.4	4,063.8	9.57	425.866		
1,500.0	1,500.0	1,518.5	1,518.5	5.1	5.1	130.73	-2,657.6	3,086.7	4,073.2	4,062.9	10.28	396.337		
1,600.0	1,600.0	1,619.3	1,619.3	5.5	5.5	130.72	-2,657.1	3,086.8	4,072.9	4,061.9	10.99	370.678		
1,700.0	1,700.0	1,721.4	1,721.4	5.9	5.9	130.72	-2,656.7	3,086.7	4,072.6	4,060.9	11.70	347.981		
1,800.0	1,800.0	1,819.5	1,819.5	6.2	6.2	130.71	-2,656.3	3,086.7	4,072.3	4,059.9	12.40	328.281		
1,900.0	1,900.0	1,916.1	1,916.1	6.6	6.5	130.71	-2,655.8	3,086.8	4,072.0	4,058.9	13.10	310.822		
1,966.8	1,966.8	1,974.8	1,974.8	6.8	6.7	130.70	-2,655.5	3,086.9	4,072.0	4,058.4	13.55	300.618		
2,000.0	2,000.0	2,005.0	2,005.0	6.9	6.8	130.70	-2,655.4	3,087.1	4,072.0	4,058.2	13.77	295.720		
2,100.0	2,100.0	2,115.1	2,115.1	7.3	7.2	130.70	-2,655.0	3,087.3	4,071.9	4,057.4	14.51	280.584		
2,200.0	2,200.0	2,227.0	2,227.0	7.7	7.6	130.69	-2,654.5	3,087.3	4,071.6	4,056.4	15.26	266.780		
2,215.2	2,215.2	2,244.9	2,244.9	7.7	7.7	-178.31	-2,654.4	3,087.3	4,071.6	4,056.2	15.38	264.758		
2,300.0	2,300.0	2,339.5	2,339.4	8.0	8.0	-178.31	-2,653.9	3,086.9	4,072.7	4,056.7	16.01	254.379		
2,400.0	2,399.8	2,442.1	2,442.1	8.4	8.4	-178.31	-2,653.3	3,086.2	4,077.1	4,060.4	16.72	243.813		
2,500.0	2,499.5	2,541.5	2,541.5	8.7	8.7	-178.31	-2,652.8	3,085.5	4,085.0	4,067.6	17.42	234.458		
2,600.0	2,598.7	2,641.1	2,641.1	9.1	9.1	-178.31	-2,652.3	3,084.9	4,096.4	4,078.2	18.12	226.016		
2,700.0	2,697.5	2,748.3	2,748.3	9.4	9.5	-178.31	-2,651.6	3,084.2	4,111.1	4,092.3	18.85	218.081		
2,800.0	2,795.6	2,848.3	2,848.2	9.8	9.8	-178.30	-2,651.0	3,083.3	4,129.1	4,109.5	19.55	211.176		
2,900.0	2,893.1	2,940.3	2,940.3	10.1	10.1	-178.30	-2,650.6	3,082.4	4,150.6	4,130.4	20.23	205.214		
3,000.0	2,989.6	3,021.4	3,021.3	10.5	10.4	-178.29	-2,650.3	3,081.7	4,175.6	4,154.7	20.86	200.186		
3,100.0	3,085.3	3,074.4	3,074.4	10.9	10.6	-178.27	-2,650.3	3,081.6	4,204.8	4,183.4	21.39	196.586		
3,200.0	3,179.8	3,151.3	3,151.3	11.2	10.9	-178.26	-2,650.8	3,082.1	4,238.1	4,216.1	22.00	192.629		
3,300.0	3,273.2	3,232.1	3,232.0	11.6	11.1	-178.25	-2,651.4	3,082.5	4,274.7	4,252.1	22.63	188.932		
3,387.5	3,353.8	3,286.1	3,286.0	11.9	11.3	-178.23	-2,652.1	3,082.9	4,309.9	4,286.8	23.11	186.494		
3,400.0	3,365.2	3,300.0	3,299.9	12.0	11.4	-178.23	-2,652.3	3,083.1	4,315.1	4,291.9	23.20	185.967		
3,500.0	3,456.8	3,355.4	3,355.3	12.4	11.6	-178.24	-2,653.4	3,083.8	4,357.4	4,333.6	23.73	183.642		
3,600.0	3,548.3	3,428.1	3,428.0	12.8	11.8	-178.24	-2,655.2	3,084.9	4,400.2	4,375.9	24.32	180.930		
3,700.0	3,639.8	3,524.3	3,524.2	13.2	12.1	-178.24	-2,657.7	3,086.4	4,443.0	4,418.0	25.01	177.682		
3,800.0	3,731.4	3,606.0	3,605.8	13.6	12.4	-178.24	-2,660.0	3,087.5	4,485.9	4,460.2	25.64	174.961		
3,900.0	3,822.9	3,700.6	3,700.4	14.0	12.8	-178.24	-2,662.6	3,088.9	4,528.8	4,502.5	26.33	172.019		
4,000.0	3,914.4	3,783.3	3,783.0	14.4	13.1	-178.25	-2,664.9	3,090.1	4,571.8	4,544.8	26.97	169.499		
4,100.0	4,005.9	3,880.0	3,879.6	14.8	13.4	-178.25	-2,667.6	3,091.7	4,614.8	4,587.1	27.68	166.744		
4,200.0	4,097.5	4,018.9	4,018.5	15.2	13.9	-178.27	-2,669.6	3,094.4	4,657.3	4,628.7	28.55	163.120		
4,300.0	4,189.0	4,156.5	4,156.1	15.6	14.4	-178.32	-2,669.2	3,097.1	4,698.7	4,669.2	29.43	159.679		
4,400.0	4,280.5	4,274.3	4,273.8	16.1	14.8	-178.38	-2,667.4	3,099.6	4,739.5	4,709.3	30.23	156.802		
4,500.0	4,372.1	4,388.6	4,388.1	16.5	15.2	-178.44	-2,665.1	3,101.6	4,779.8	4,748.8	31.02	154.107		
4,600.0	4,463.6	4,484.6	4,484.1	16.9	15.5	-178.49	-2,662.9	3,103.2	4,819.8	4,788.1	31.74	151.872		
4,700.0	4,555.1	4,583.4	4,582.8	17.4	15.8	-178.54	-2,660.5	3,104.9	4,859.8	4,827.3	32.47	149.670		
4,800.0	4,646.7	4,678.9	4,678.2	17.8	16.2	-178.59	-2,657.9	3,106.5	4,899.7	4,866.5	33.19	147.611		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - Skurich-SLW Ranch 7A - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
4,900.0	4,738.2	4,784.8	4,784.2	18.2	16.6	-178.65	-2,654.9	3,108.2	4,939.4	4,905.4	33.96	145.443		
5,000.0	4,829.7	4,871.3	4,870.6	18.7	16.9	-178.69	-2,652.5	3,109.4	4,979.0	4,944.3	34.65	143.687		
5,100.0	4,921.3	4,966.5	4,955.7	19.1	17.2	-178.73	-2,650.2	3,110.7	5,018.7	4,983.4	35.34	142.020		
5,200.0	5,012.8	5,038.5	5,037.7	19.5	17.4	-178.77	-2,648.3	3,111.7	5,058.5	5,022.5	36.01	140.468		
5,300.0	5,104.3	5,115.0	5,114.1	20.0	17.7	-178.79	-2,647.2	3,112.5	5,098.6	5,062.0	36.66	139.065		
5,400.0	5,195.8	5,187.8	5,187.0	20.4	18.0	-178.81	-2,646.5	3,113.2	5,139.0	5,101.7	37.30	137.775		
5,500.0	5,287.4	5,260.3	5,259.5	20.9	18.2	-178.83	-2,646.2	3,113.9	5,179.8	5,141.8	37.94	136.543		
5,600.0	5,378.9	5,347.8	5,347.0	21.3	18.5	-178.84	-2,646.2	3,114.9	5,220.8	5,182.1	38.63	135.133		
5,700.0	5,470.4	5,448.6	5,447.8	21.8	18.9	-178.86	-2,646.1	3,115.8	5,261.6	5,222.2	39.39	133.571		
5,800.0	5,562.0	5,545.9	5,545.0	22.2	19.2	-178.87	-2,646.5	3,116.2	5,302.4	5,262.3	40.14	132.111		
5,900.0	5,653.5	5,645.9	5,645.1	22.7	19.6	-178.87	-2,647.2	3,116.2	5,343.0	5,302.1	40.89	130.657		
6,000.0	5,745.0	5,756.2	5,755.4	23.1	19.9	-178.87	-2,647.9	3,115.8	5,383.5	5,341.8	41.70	129.108		
6,100.0	5,836.6	5,882.3	5,881.5	23.6	20.4	-178.86	-2,649.0	3,114.3	5,423.4	5,380.8	42.57	127.396		
6,200.0	5,928.1	5,990.4	5,989.6	24.0	20.8	-178.85	-2,649.8	3,112.4	5,462.9	5,419.5	43.37	125.964		
6,278.6	6,000.0	6,091.5	6,090.6	24.4	21.1	-178.83	-2,650.8	3,109.9	5,493.6	5,449.6	44.07	124.668		
6,290.0	6,010.4	6,106.6	6,105.6	24.4	21.2	179.33	-2,651.0	3,109.5	5,498.2	5,454.0	44.17	124.478		
6,300.0	6,019.5	6,119.8	6,118.9	24.5	21.2	177.30	-2,651.1	3,109.1	5,502.2	5,457.9	44.26	124.314		
6,350.0	6,065.8	6,159.7	6,158.7	24.7	21.3	165.54	-2,651.4	3,108.0	5,520.2	5,475.6	44.59	123.789		
6,400.0	6,113.0	6,210.6	6,209.7	24.9	21.5	150.64	-2,651.9	3,106.6	5,534.9	5,489.9	44.97	123.086		
6,450.0	6,160.7	6,288.1	6,287.1	25.1	21.8	133.14	-2,652.5	3,104.2	5,545.9	5,500.5	45.45	122.027		
6,500.0	6,208.5	6,346.2	6,345.1	25.3	22.0	115.41	-2,653.0	3,102.1	5,553.3	5,507.5	45.84	121.154		
6,550.0	6,255.8	6,400.1	6,399.0	25.4	22.2	100.39	-2,653.4	3,100.0	5,557.1	5,510.9	46.20	120.292		
6,600.0	6,302.5	6,451.6	6,450.5	25.6	22.4	89.17	-2,653.9	3,097.9	5,557.2	5,510.7	46.53	119.421		
6,650.0	6,347.9	6,505.1	6,504.0	25.7	22.6	81.35	-2,654.3	3,095.7	5,553.7	5,506.9	46.87	118.492		
6,700.0	6,391.6	6,550.0	6,548.9	25.9	23.2	76.23	-2,654.2	3,092.6	5,546.4	5,498.7	47.71	116.261		
6,750.0	6,433.4	6,598.6	6,597.2	26.0	23.1	73.04	-2,653.5	3,089.3	5,535.5	5,487.8	47.71	116.031		
6,800.0	6,472.8	6,646.8	6,645.5	26.1	23.2	71.06	-2,653.1	3,087.7	5,521.4	5,473.4	47.95	115.150		
6,850.0	6,509.4	6,693.2	6,692.0	26.2	23.4	70.19	-2,652.7	3,086.2	5,504.2	5,456.0	48.17	114.259		
6,900.0	6,543.0	6,738.4	6,737.0	26.3	23.5	70.23	-2,652.3	3,084.8	5,484.2	5,435.8	48.38	113.359		
6,950.0	6,573.2	6,783.1	6,781.6	26.4	23.6	71.06	-2,652.0	3,083.6	5,461.4	5,412.9	48.57	112.451		
7,000.0	6,599.8	6,828.9	6,827.5	26.5	23.7	72.60	-2,651.7	3,082.5	5,436.2	5,387.5	48.74	111.536		
7,050.0	6,622.5	6,873.8	6,872.3	26.6	23.7	74.81	-2,651.5	3,081.6	5,408.9	5,360.0	48.90	110.614		
7,100.0	6,641.1	6,918.5	6,917.0	26.7	23.8	77.65	-2,651.3	3,080.9	5,379.6	5,330.5	49.04	109.689		
7,150.0	6,655.4	6,963.9	6,962.4	26.8	23.8	81.07	-2,651.2	3,080.4	5,348.6	5,299.4	49.18	108.762		
7,200.0	6,665.4	7,008.8	7,007.3	26.9	23.9	85.05	-2,651.1	3,080.1	5,316.3	5,267.0	49.30	107.836		
7,250.0	6,670.8	7,053.2	7,051.7	27.0	23.9	89.52	-2,651.1	3,079.9	5,282.8	5,233.4	49.41	106.917		
7,285.7	6,672.0	7,098.0	7,096.5	27.1	23.9	92.96	-2,651.1	3,079.9	5,258.5	5,209.0	49.48	106.266		
7,300.0	6,672.0	7,142.8	7,141.3	27.1	23.9	92.95	-2,651.1	3,080.0	5,248.6	5,199.1	49.51	106.006		
7,400.0	6,672.0	7,187.6	7,186.1	27.3	23.9	92.89	-2,651.1	3,080.1	5,180.5	5,130.8	49.73	104.171		
7,500.0	6,672.0	7,232.4	7,230.9	27.6	23.8	92.83	-2,651.2	3,080.3	5,113.5	5,063.5	49.99	102.293		
7,600.0	6,672.0	7,277.2	7,275.7	28.0	23.8	92.76	-2,651.2	3,080.5	5,047.5	4,997.3	50.29	100.375		
7,700.0	6,672.0	7,322.0	7,320.5	28.3	23.8	92.70	-2,651.3	3,080.7	4,982.7	4,932.1	50.63	98.419		
7,800.0	6,672.0	7,366.8	7,365.3	28.8	23.8	92.64	-2,651.3	3,080.9	4,919.1	4,868.1	51.01	96.431		
7,900.0	6,672.0	7,411.6	7,410.1	29.3	23.8	92.57	-2,651.4	3,081.0	4,856.7	4,805.2	51.44	94.416		
8,000.0	6,672.0	7,456.4	7,454.9	29.8	23.8	92.51	-2,651.4	3,081.2	4,795.6	4,743.6	51.91	92.379		
8,100.0	6,672.0	7,501.2	7,500.0	30.4	23.8	92.45	-2,651.5	3,081.4	4,735.8	4,683.3	52.43	90.326		
8,200.0	6,672.0	7,546.0	7,544.5	31.0	23.7	92.38	-2,651.5	3,081.6	4,677.3	4,624.3	52.99	88.264		
8,300.0	6,672.0	7,590.8	7,589.3	31.7	23.7	92.32	-2,651.5	3,081.8	4,620.3	4,566.7	53.60	86.199		
8,400.0	6,672.0	7,635.6	7,634.1	32.4	23.7	92.26	-2,651.6	3,081.9	4,564.8	4,510.5	54.25	84.138		
8,500.0	6,672.0	7,680.4	7,678.9	33.1	23.7	92.19	-2,651.6	3,082.1	4,510.8	4,455.9	54.95	82.087		
8,600.0	6,672.0	7,725.2	7,723.7	33.9	23.7	92.13	-2,651.7	3,082.3	4,458.4	4,402.7	55.69	80.054		
8,700.0	6,672.0	7,770.0	7,768.5	34.7	23.7	92.07	-2,651.7	3,082.5	4,407.7	4,351.2	56.48	78.045		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - Skurich-SLW Ranch 7A - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
8,800.0	6,672.0	6,815.0	6,813.5	35.5	23.6	92.00	-2,651.8	3,082.7	4,358.7	4,301.3	57.30	76.066		
8,900.0	6,672.0	6,810.7	6,809.3	36.3	23.6	91.94	-2,651.8	3,082.8	4,311.4	4,253.2	58.17	74.123		
9,000.0	6,672.0	6,806.5	6,805.1	37.2	23.6	91.88	-2,651.9	3,083.0	4,265.9	4,206.9	59.07	72.221		
9,100.0	6,672.0	6,802.3	6,800.9	38.1	23.6	91.81	-2,651.9	3,083.2	4,222.4	4,162.4	60.01	70.366		
9,200.0	6,672.0	6,798.1	6,796.6	39.0	23.6	91.75	-2,652.0	3,083.4	4,180.7	4,119.8	60.98	68.562		
9,300.0	6,672.0	6,793.9	6,792.4	39.9	23.6	91.69	-2,652.0	3,083.5	4,141.1	4,079.1	61.98	66.813		
9,400.0	6,672.0	6,789.6	6,788.2	40.8	23.6	91.62	-2,652.1	3,083.7	4,103.5	4,040.5	63.01	65.123		
9,500.0	6,672.0	6,785.4	6,784.0	41.8	23.5	91.56	-2,652.1	3,083.9	4,068.1	4,004.0	64.07	63.496		
9,600.0	6,672.0	6,781.2	6,779.8	42.7	23.5	91.50	-2,652.1	3,084.1	4,034.8	3,969.7	65.15	61.932		
9,700.0	6,672.0	6,777.0	6,775.6	43.7	23.5	91.43	-2,652.2	3,084.3	4,003.7	3,937.5	66.25	60.436		
9,800.0	6,672.0	6,772.8	6,771.4	44.7	23.5	91.37	-2,652.2	3,084.4	3,975.0	3,907.6	67.36	59.008		
9,900.0	6,672.0	6,768.6	6,767.1	45.7	23.5	91.31	-2,652.3	3,084.6	3,948.5	3,880.0	68.49	57.649		
10,000.0	6,672.0	6,764.3	6,762.9	46.7	23.5	91.24	-2,652.3	3,084.8	3,924.4	3,854.8	69.63	56.362		
10,100.0	6,672.0	6,760.1	6,758.7	47.7	23.5	91.18	-2,652.4	3,085.0	3,902.8	3,832.0	70.77	55.145		
10,200.0	6,672.0	6,755.9	6,754.5	48.8	23.4	91.12	-2,652.4	3,085.2	3,883.6	3,811.6	71.92	54.001		
10,300.0	6,672.0	6,751.7	6,750.3	49.8	23.4	91.05	-2,652.5	3,085.3	3,866.8	3,793.8	73.06	52.927		
10,400.0	6,672.0	6,747.5	6,746.1	50.9	23.4	90.99	-2,652.5	3,085.5	3,852.6	3,778.5	74.20	51.925		
10,500.0	6,672.0	6,743.3	6,741.9	51.9	23.4	90.93	-2,652.6	3,085.7	3,841.0	3,765.7	75.33	50.992		
10,600.0	6,672.0	6,739.0	6,737.6	53.0	23.4	90.86	-2,652.6	3,085.9	3,832.0	3,755.5	76.44	50.130		
10,700.0	6,672.0	6,734.8	6,733.4	54.1	23.4	90.80	-2,652.7	3,086.0	3,825.5	3,748.0	77.54	49.336		
10,800.0	6,672.0	6,730.6	6,729.2	55.2	23.3	90.74	-2,652.7	3,086.2	3,821.7	3,743.0	78.62	48.610		
10,897.0	6,672.0	6,726.5	6,725.1	56.2	23.3	90.68	-2,652.7	3,086.4	3,820.4	3,740.8	79.65	47.968 CC		
10,900.0	6,672.0	6,726.4	6,725.0	56.3	23.3	90.67	-2,652.7	3,086.4	3,820.4	3,740.7	79.68	47.949 ES		
11,000.0	6,672.0	6,722.2	6,720.8	57.4	23.3	90.61	-2,652.8	3,086.6	3,821.8	3,741.1	80.71	47.354		
11,100.0	6,672.0	6,717.9	6,716.6	58.5	23.3	90.55	-2,652.8	3,086.8	3,825.8	3,744.1	81.71	46.822		
11,200.0	6,672.0	6,713.7	6,712.4	59.6	23.3	90.49	-2,652.9	3,086.9	3,832.4	3,749.7	82.68	46.351		
11,300.0	6,672.0	6,709.5	6,708.2	60.7	23.3	90.42	-2,652.9	3,087.1	3,841.6	3,758.0	83.62	45.941		
11,400.0	6,672.0	6,705.3	6,703.9	61.8	23.3	90.36	-2,653.0	3,087.3	3,853.4	3,768.9	84.53	45.589		
11,500.0	6,672.0	6,701.1	6,699.7	62.9	23.2	90.30	-2,653.0	3,087.5	3,867.8	3,782.4	85.39	45.294		
11,600.0	6,672.0	6,696.9	6,695.5	64.1	23.2	90.23	-2,653.1	3,087.7	3,884.6	3,798.4	86.22	45.054		
11,700.0	6,672.0	6,692.6	6,691.3	65.2	23.2	90.17	-2,653.1	3,087.8	3,904.0	3,817.0	87.01	44.867		
11,800.0	6,672.0	6,688.4	6,687.1	66.3	23.2	90.11	-2,653.2	3,088.0	3,925.8	3,838.0	87.76	44.731		
11,900.0	6,672.0	6,684.2	6,682.9	67.5	23.2	90.04	-2,653.2	3,088.2	3,950.0	3,861.6	88.48	44.646		
12,000.0	6,672.0	6,680.0	6,678.7	68.6	23.2	89.98	-2,653.3	3,088.4	3,976.6	3,887.5	89.15	44.608		
12,100.0	6,672.0	6,675.8	6,674.5	69.8	23.2	89.92	-2,653.3	3,088.6	4,005.5	3,915.8	89.78	44.617		
12,200.0	6,672.0	6,671.6	6,670.2	70.9	23.1	89.85	-2,653.3	3,088.7	4,036.7	3,946.4	90.37	44.671		
12,300.0	6,672.0	6,667.3	6,666.0	72.1	23.1	89.79	-2,653.4	3,088.9	4,070.2	3,979.2	90.92	44.767		
12,400.0	6,672.0	6,663.1	6,661.8	73.2	23.1	89.73	-2,653.4	3,089.1	4,105.7	4,014.3	91.43	44.906		
12,500.0	6,672.0	6,658.9	6,657.6	74.4	23.1	89.66	-2,653.5	3,089.3	4,143.4	4,051.5	91.90	45.084		
12,600.0	6,672.0	6,654.7	6,653.4	75.5	23.1	89.60	-2,653.5	3,089.4	4,183.2	4,090.8	92.34	45.301		
12,700.0	6,672.0	6,650.5	6,649.2	76.7	23.1	89.54	-2,653.6	3,089.6	4,224.9	4,132.2	92.74	45.554		
12,800.0	6,672.0	6,646.3	6,645.0	77.9	23.0	89.47	-2,653.6	3,089.8	4,268.6	4,175.5	93.11	45.844		
12,900.0	6,672.0	6,642.1	6,640.8	79.0	23.0	89.41	-2,653.7	3,090.0	4,314.2	4,220.7	93.45	46.167		
13,000.0	6,672.0	6,637.8	6,636.5	80.2	23.0	89.35	-2,653.7	3,090.2	4,361.5	4,267.8	93.75	46.523		
13,100.0	6,672.0	6,633.6	6,632.3	81.4	23.0	89.29	-2,653.8	3,090.3	4,410.7	4,316.7	94.02	46.911		
13,200.0	6,672.0	6,629.4	6,628.1	82.6	23.0	89.22	-2,653.8	3,090.5	4,461.5	4,367.3	94.27	47.329		
13,300.0	6,672.0	6,625.2	6,623.9	83.7	23.0	89.16	-2,653.9	3,090.7	4,514.0	4,419.5	94.48	47.776		
13,400.0	6,672.0	6,621.0	6,619.7	84.9	23.0	89.10	-2,653.9	3,090.9	4,568.1	4,473.4	94.67	48.251		
13,500.0	6,672.0	13,500.0	6,581.4	86.1	47.1	88.52	-2,654.2	3,092.5	4,623.7	4,504.9	118.79	38.923 SF		
13,600.0	6,672.0	13,600.0	6,577.3	87.3	47.5	88.46	-2,654.2	3,092.7	4,680.8	4,561.5	119.29	39.237		
13,700.0	6,672.0	13,700.0	6,573.1	88.4	47.8	88.40	-2,654.2	3,092.8	4,739.2	4,619.5	119.77	39.568		
13,800.0	6,672.0	6,612.8	6,611.6	89.6	22.9	88.97	-2,654.0	3,091.2	4,799.2	4,703.9	95.24	50.392		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - Skurich-SLW Ranch 7A - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
13,900.0	6,672.0	6,599.7	6,598.4	90.8	22.9	88.78	-2,654.1	3,091.8	4,860.4	4,765.1	95.29	51.008		
14,000.0	6,672.0	6,586.6	6,585.4	92.0	22.8	88.58	-2,654.3	3,092.3	4,922.9	4,827.6	95.32	51.646		
14,100.0	6,672.0	6,573.7	6,572.4	93.2	22.8	88.39	-2,654.4	3,092.9	4,986.6	4,891.2	95.34	52.305		
14,200.0	6,672.0	6,560.8	6,559.6	94.4	22.7	88.19	-2,654.4	3,093.4	5,051.4	4,956.1	95.34	52.984		
14,300.0	6,672.0	6,548.0	6,546.8	95.6	22.7	88.00	-2,654.5	3,094.0	5,117.4	5,022.1	95.33	53.682		
14,400.0	6,672.0	6,535.2	6,534.0	96.8	22.7	87.81	-2,654.5	3,094.5	5,184.5	5,089.2	95.30	54.400		
14,500.0	6,672.0	6,522.6	6,521.4	98.0	22.6	87.62	-2,654.4	3,095.0	5,252.6	5,157.4	95.27	55.134		
14,600.0	6,672.0	6,510.0	6,508.8	99.2	22.6	87.43	-2,654.4	3,095.5	5,321.7	5,226.5	95.22	55.887		
14,700.0	6,672.0	6,499.1	6,498.0	100.4	22.5	87.27	-2,654.3	3,096.0	5,391.8	5,296.7	95.18	56.652		
14,800.0	6,672.0	6,494.8	6,493.6	101.6	22.5	87.20	-2,654.3	3,096.2	5,462.8	5,367.7	95.14	57.418		
14,900.0	6,672.0	6,490.5	6,489.3	102.7	22.5	87.14	-2,654.2	3,096.3	5,534.8	5,439.7	95.10	58.200		
15,000.0	6,672.0	6,486.1	6,485.0	103.9	22.5	87.07	-2,654.2	3,096.5	5,607.5	5,512.5	95.05	58.997		
15,100.0	6,672.0	6,481.8	6,480.7	105.1	22.5	87.01	-2,654.2	3,096.7	5,681.2	5,586.2	94.99	59.807		
15,200.0	6,672.0	6,477.5	6,476.4	106.3	22.5	86.94	-2,654.1	3,096.9	5,755.6	5,660.6	94.93	60.631		
15,300.0	6,672.0	6,473.2	6,472.1	107.6	22.4	86.88	-2,654.1	3,097.0	5,830.7	5,735.9	94.86	61.468		
15,400.0	6,672.0	6,468.9	6,467.8	108.8	22.4	86.82	-2,654.1	3,097.2	5,906.6	5,811.9	94.78	62.317		
15,500.0	6,672.0	6,464.7	6,463.5	110.0	22.4	86.75	-2,654.0	3,097.4	5,983.3	5,888.6	94.71	63.178		
15,600.0	6,672.0	6,460.4	6,459.3	111.2	22.4	86.69	-2,654.0	3,097.6	6,060.6	5,966.0	94.62	64.050		
15,700.0	6,672.0	6,456.1	6,455.0	112.4	22.4	86.62	-2,654.0	3,097.7	6,138.5	6,044.0	94.54	64.934		
15,800.0	6,672.0	6,451.8	6,450.7	113.6	22.4	86.56	-2,653.9	3,097.9	6,217.1	6,122.7	94.45	65.827		
15,900.0	6,672.0	6,447.6	6,446.5	114.8	22.4	86.49	-2,653.9	3,098.1	6,296.3	6,202.0	94.35	66.731		
16,000.0	6,672.0	6,443.3	6,442.2	116.0	22.3	86.43	-2,653.8	3,098.2	6,376.1	6,281.9	94.26	67.645		
16,100.0	6,672.0	6,439.1	6,438.0	117.2	22.3	86.37	-2,653.8	3,098.4	6,456.5	6,362.3	94.16	68.568		
16,200.0	6,672.0	6,434.9	6,433.7	118.4	22.3	86.30	-2,653.8	3,098.6	6,537.4	6,443.3	94.06	69.500		
16,300.0	6,672.0	6,430.6	6,429.5	119.6	22.3	86.24	-2,653.7	3,098.8	6,618.8	6,524.8	93.96	70.441		
16,400.0	6,672.0	6,426.4	6,425.3	120.8	22.3	86.18	-2,653.7	3,098.9	6,700.7	6,606.9	93.86	71.390		
16,500.0	6,672.0	6,422.2	6,421.1	122.0	22.3	86.11	-2,653.7	3,099.1	6,783.1	6,689.4	93.76	72.346		
16,600.0	6,672.0	6,418.0	6,416.9	123.2	22.2	86.05	-2,653.6	3,099.3	6,866.0	6,772.4	93.66	73.311		
16,700.0	6,672.0	6,413.8	6,412.7	124.5	22.2	85.98	-2,653.6	3,099.4	6,949.4	6,855.8	93.55	74.283		
16,800.0	6,672.0	6,409.6	6,408.5	125.7	22.2	85.92	-2,653.5	3,099.6	7,033.1	6,939.7	93.45	75.261		
16,900.0	6,672.0	6,405.4	6,404.3	126.9	22.2	85.86	-2,653.5	3,099.8	7,117.3	7,024.0	93.35	76.247		
17,000.0	6,672.0	6,401.2	6,400.1	128.1	22.2	85.80	-2,653.5	3,100.0	7,201.9	7,108.7	93.24	77.239		
17,100.0	6,672.0	6,400.0	6,398.9	129.3	22.2	85.78	-2,653.4	3,100.0	7,286.9	7,193.8	93.15	78.230		
17,200.0	6,672.0	6,400.0	6,398.9	130.5	22.2	85.78	-2,653.4	3,100.0	7,372.3	7,279.2	93.06	79.223		
17,300.0	6,672.0	6,391.8	6,390.8	131.7	22.2	85.65	-2,653.4	3,100.3	7,458.0	7,365.1	92.94	80.243		
17,400.0	6,672.0	6,388.9	6,387.8	133.0	22.1	85.61	-2,653.3	3,100.4	7,544.1	7,451.3	92.84	81.255		
17,500.0	6,672.0	6,385.9	6,384.9	134.2	22.1	85.56	-2,653.3	3,100.6	7,630.5	7,537.8	92.75	82.273		
17,600.0	6,672.0	6,383.0	6,381.9	135.4	22.1	85.52	-2,653.3	3,100.7	7,717.3	7,624.6	92.65	83.295		
17,700.0	6,672.0	6,380.1	6,379.0	136.6	22.1	85.48	-2,653.3	3,100.8	7,804.4	7,711.8	92.55	84.322		
17,800.0	6,672.0	6,377.2	6,376.1	137.8	22.1	85.43	-2,653.2	3,100.9	7,891.8	7,799.3	92.46	85.354		
17,900.0	6,672.0	6,374.3	6,373.3	139.0	22.1	85.39	-2,653.2	3,101.0	7,979.4	7,887.1	92.36	86.390		
18,000.0	6,672.0	6,371.5	6,370.4	140.3	22.1	85.34	-2,653.2	3,101.1	8,067.4	7,975.1	92.27	87.431		
18,100.0	6,672.0	6,368.6	6,367.6	141.5	22.1	85.30	-2,653.2	3,101.2	8,155.7	8,063.5	92.18	88.475		
18,200.0	6,672.0	6,365.8	6,364.8	142.7	22.1	85.26	-2,653.1	3,101.3	8,244.2	8,152.1	92.09	89.523		
18,300.0	6,672.0	6,363.0	6,362.0	143.9	22.1	85.22	-2,653.1	3,101.5	8,333.0	8,241.0	92.00	90.575		
18,342.5	6,672.0	6,361.8	6,360.8	144.4	22.0	85.20	-2,653.1	3,101.5	8,370.8	8,278.8	91.96	91.023		



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch 12-07 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
0.0	0.0	0.0	0.0	0.0	0.0	-156.64	-596.8	-257.7	650.4					
100.0	100.0	79.0	79.0	0.1	0.1	-156.64	-596.7	-257.8	650.0	649.7	0.26	2,463.889		
200.0	200.0	179.0	179.0	0.5	0.5	-156.62	-596.5	-257.8	649.8	648.9	0.94	694.737		
300.0	300.0	278.8	278.8	0.8	0.8	-156.62	-596.3	-257.9	649.7	648.1	1.64	395.359		
400.0	400.0	380.5	380.5	1.2	1.2	-156.60	-596.1	-257.9	649.5	647.1	2.36	275.440		
500.0	500.0	481.6	481.6	1.6	1.5	-156.57	-595.5	-258.1	649.0	645.9	3.07	211.344		
600.0	600.0	582.1	582.1	1.9	1.9	-156.53	-594.7	-258.3	648.4	644.6	3.78	171.474		
700.0	700.0	683.0	683.0	2.3	2.2	-156.48	-593.9	-258.5	647.7	643.2	4.49	144.151		
800.0	800.0	783.2	783.1	2.6	2.6	-156.42	-592.8	-258.8	646.9	641.7	5.20	124.344		
900.0	900.0	883.0	883.0	3.0	2.9	-156.34	-591.8	-259.3	646.1	640.2	5.91	109.309		
1,000.0	1,000.0	982.5	982.5	3.4	3.3	-156.26	-590.7	-259.8	645.4	638.8	6.62	97.522		
1,100.0	1,100.0	1,082.2	1,082.2	3.7	3.6	-156.17	-589.8	-260.4	644.7	637.4	7.33	88.014		
1,200.0	1,200.0	1,181.0	1,180.9	4.1	4.0	-156.09	-588.9	-261.0	644.1	636.1	8.03	80.228		
1,300.0	1,300.0	1,279.8	1,279.7	4.4	4.3	-156.03	-588.3	-261.5	643.8	635.1	8.73	73.722		
1,400.0	1,400.0	1,380.6	1,380.6	4.8	4.7	-155.99	-587.8	-261.8	643.5	634.0	9.44	68.141		
1,500.0	1,500.0	1,480.8	1,480.7	5.1	5.0	-155.96	-587.3	-262.0	643.1	632.9	10.15	63.341		
1,600.0	1,600.0	1,580.5	1,580.4	5.5	5.4	-155.92	-586.7	-262.2	642.7	631.8	10.86	59.179		
1,700.0	1,700.0	1,679.4	1,679.3	5.9	5.7	-155.86	-586.2	-262.7	642.3	630.8	11.56	55.551		
1,800.0	1,800.0	1,778.6	1,778.5	6.2	6.1	-155.81	-585.8	-263.1	642.2	629.9	12.27	52.350		
1,900.0	1,900.0	1,879.0	1,879.0	6.6	6.4	-155.79	-585.6	-263.3	642.1	629.1	12.98	49.481		
2,000.0	2,000.0	1,981.0	1,981.0	6.9	6.8	-155.81	-585.5	-263.0	641.8	628.1	13.69	46.875		
2,100.0	2,100.0	2,083.5	2,083.4	7.3	7.1	-155.86	-585.1	-262.2	641.2	626.8	14.41	44.498		
2,200.0	2,200.0	2,184.1	2,184.1	7.7	7.5	-155.91	-584.5	-261.3	640.3	625.1	15.12	42.346		
2,300.0	2,300.0	2,286.1	2,286.0	8.0	7.8	-105.12	-583.7	-260.4	639.6	623.8	15.83	40.401		
2,331.6	2,331.6	2,317.4	2,317.3	8.1	7.9	-105.24	-583.4	-260.2	639.6	623.5	16.05	39.839 CC		
2,400.0	2,399.8	2,383.2	2,383.1	8.4	8.2	-105.58	-582.8	-259.8	639.9	623.4	16.53	38.722 ES		
2,500.0	2,499.5	2,482.5	2,482.5	8.7	8.5	-106.30	-582.1	-259.4	641.6	624.3	17.23	37.239		
2,600.0	2,598.7	2,581.7	2,581.6	9.1	8.9	-107.29	-581.5	-259.0	644.3	626.4	17.93	35.933		
2,700.0	2,697.5	2,680.6	2,680.5	9.4	9.2	-108.53	-580.8	-258.6	648.4	629.8	18.63	34.797		
2,800.0	2,795.6	2,779.2	2,779.1	9.8	9.6	-110.00	-580.1	-258.1	654.0	634.7	19.34	33.821		
2,900.0	2,893.1	2,875.6	2,875.5	10.1	9.9	-111.64	-579.4	-257.9	661.4	641.4	20.04	33.011		
3,000.0	2,989.6	2,969.8	2,969.7	10.5	10.2	-113.40	-579.0	-257.8	671.1	650.4	20.73	32.377		
3,100.0	3,085.3	3,063.1	3,063.0	10.9	10.6	-115.26	-578.8	-258.1	683.5	662.1	21.42	31.912		
3,200.0	3,179.8	3,154.0	3,153.9	11.2	10.9	-117.18	-578.9	-258.5	698.8	676.7	22.10	31.621		
3,300.0	3,273.2	3,244.2	3,244.1	11.6	11.2	-119.16	-579.6	-259.0	717.5	694.7	22.78	31.497 SF		
3,387.5	3,353.8	3,323.9	3,323.8	11.9	11.5	-120.97	-580.4	-259.3	736.6	713.2	23.38	31.503		
3,400.0	3,365.2	3,335.5	3,335.4	12.0	11.5	-121.29	-580.5	-259.4	739.5	716.0	23.47	31.510		
3,500.0	3,456.8	3,427.7	3,427.6	12.4	11.8	-123.69	-581.4	-260.3	763.5	739.3	24.16	31.597		
3,600.0	3,548.3	3,518.6	3,518.4	12.8	12.1	-125.88	-582.2	-261.8	788.8	764.0	24.85	31.737		
3,700.0	3,639.8	3,609.2	3,609.0	13.2	12.4	-127.94	-583.2	-263.2	815.4	789.9	25.55	31.918		
3,800.0	3,731.4	3,703.3	3,703.2	13.6	12.8	-129.99	-584.1	-264.2	843.0	816.8	26.26	32.104		
3,900.0	3,822.9	3,795.8	3,795.7	14.0	13.1	-131.89	-584.8	-265.0	871.4	844.4	26.96	32.317		
4,000.0	3,914.4	3,888.4	3,888.2	14.4	13.4	-133.68	-585.4	-265.8	900.6	872.9	27.67	32.545		
4,100.0	4,005.9	3,981.2	3,981.0	14.8	13.7	-135.37	-585.8	-266.7	930.5	902.1	28.38	32.782		
4,200.0	4,097.5	4,073.2	4,073.0	15.2	14.1	-136.94	-586.3	-267.7	961.0	931.9	29.09	33.034		
4,300.0	4,189.0	4,164.6	4,164.4	15.6	14.4	-138.42	-586.7	-268.5	992.2	962.4	29.80	33.297		
4,400.0	4,280.5	4,255.9	4,255.7	16.1	14.7	-139.83	-587.0	-269.0	1,024.0	993.5	30.50	33.570		
4,500.0	4,372.1	4,349.5	4,349.3	16.5	15.0	-141.22	-587.3	-269.0	1,056.4	1,025.2	31.22	33.833		
4,600.0	4,463.6	4,444.1	4,443.9	16.9	15.4	-142.61	-586.9	-268.0	1,089.0	1,057.1	31.95	34.086		
4,700.0	4,555.1	4,536.0	4,535.7	17.4	15.7	-143.98	-585.8	-265.3	1,122.1	1,089.4	32.66	34.354		
4,800.0	4,646.7	4,628.9	4,628.6	17.8	16.0	-145.31	-584.6	-262.2	1,155.6	1,122.2	33.38	34.619		
4,900.0	4,738.2	4,726.6	4,726.2	18.2	16.3	-146.63	-582.9	-259.1	1,189.3	1,155.2	34.13	34.849		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch 12-07 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,000.0	4,829.7	4,819.9	4,819.5	18.7	16.7	-147.81	-580.9	-256.3	1,223.1	1,188.2	34.85	35.094		
5,100.0	4,921.3	4,906.9	4,906.4	19.1	17.0	-148.84	-579.3	-254.1	1,257.4	1,221.9	35.54	35.380		
5,200.0	5,012.8	4,989.3	4,988.8	19.5	17.3	-149.74	-578.5	-252.4	1,292.6	1,256.4	36.20	35.706		
5,300.0	5,104.3	5,074.1	5,073.6	20.0	17.6	-150.60	-578.3	-251.1	1,328.7	1,291.8	36.88	36.030		
5,400.0	5,195.8	5,162.0	5,161.5	20.4	17.9	-151.43	-578.6	-250.0	1,365.4	1,327.8	37.57	36.342		
5,500.0	5,287.4	5,250.4	5,249.9	20.9	18.2	-152.20	-579.1	-249.0	1,402.5	1,364.2	38.27	36.650		
5,600.0	5,378.9	5,338.6	5,338.1	21.3	18.5	-152.93	-580.0	-248.4	1,440.0	1,401.0	38.96	36.959		
5,700.0	5,470.4	5,428.2	5,427.6	21.8	18.8	-153.61	-581.1	-248.0	1,477.9	1,438.2	39.67	37.256		
5,800.0	5,562.0	5,519.5	5,519.0	22.2	19.1	-154.26	-582.4	-247.7	1,515.9	1,475.6	40.39	37.536		
5,900.0	5,653.5	5,610.4	5,609.9	22.7	19.4	-154.88	-583.8	-247.5	1,554.2	1,513.1	41.10	37.812		
6,000.0	5,745.0	5,702.7	5,702.2	23.1	19.7	-155.48	-585.0	-247.2	1,592.5	1,550.7	41.83	38.073		
6,100.0	5,836.6	5,798.3	5,797.7	23.6	20.1	-156.09	-586.1	-246.8	1,630.9	1,588.3	42.58	38.305		
6,200.0	5,928.1	5,889.4	5,888.8	24.0	20.4	-156.64	-586.8	-246.2	1,669.2	1,625.9	43.30	38.553		
6,278.6	6,000.0	5,963.5	5,962.9	24.4	20.7	-157.08	-587.3	-245.6	1,699.4	1,655.5	43.88	38.729		
6,290.0	6,010.4	5,974.3	5,973.7	24.4	20.7	-158.80	-587.4	-245.5	1,703.9	1,659.9	43.96	38.756		
6,300.0	6,019.5	5,983.8	5,983.2	24.5	20.7	-160.99	-587.4	-245.5	1,707.9	1,663.9	44.04	38.781		
6,350.0	6,065.8	6,031.3	6,030.8	24.7	20.9	-173.50	-587.7	-245.1	1,726.7	1,682.3	44.41	38.884		
6,400.0	6,113.0	6,079.6	6,079.1	24.9	21.1	170.91	-587.9	-244.8	1,743.5	1,698.8	44.77	38.942		
6,450.0	6,160.7	6,128.9	6,128.3	25.1	21.2	152.75	-588.1	-244.5	1,758.1	1,713.0	45.14	38.952		
6,500.0	6,208.5	6,178.7	6,178.1	25.3	21.4	134.48	-588.2	-244.2	1,770.4	1,724.9	45.50	38.914		
6,550.0	6,255.8	6,226.5	6,225.9	25.4	21.6	118.98	-588.2	-243.8	1,780.4	1,734.5	45.84	38.840		
6,600.0	6,302.5	6,272.3	6,271.7	25.6	21.7	107.33	-588.3	-243.5	1,788.0	1,741.8	46.17	38.731		
6,650.0	6,347.9	6,317.1	6,316.5	25.7	21.9	99.10	-588.3	-243.1	1,793.4	1,746.9	46.48	38.581		
6,700.0	6,391.6	6,360.7	6,360.1	25.9	22.0	93.43	-588.4	-242.7	1,796.6	1,749.8	46.79	38.394		
6,750.0	6,433.4	6,402.3	6,401.7	26.0	22.2	89.61	-588.5	-242.3	1,797.7	1,750.6	47.09	38.173		
6,800.0	6,472.8	6,440.8	6,440.2	26.1	22.3	87.11	-588.5	-242.0	1,796.8	1,749.4	47.38	37.926		
6,850.0	6,509.4	6,476.9	6,476.3	26.2	22.4	85.60	-588.6	-241.6	1,794.2	1,746.5	47.65	37.652		
6,900.0	6,543.0	6,510.1	6,509.5	26.3	22.6	84.82	-588.6	-241.2	1,790.0	1,742.1	47.92	37.355		
6,950.0	6,573.2	6,540.2	6,539.6	26.4	22.7	84.60	-588.7	-240.8	1,784.4	1,736.3	48.18	37.037		
7,000.0	6,599.8	6,566.9	6,566.3	26.5	22.8	84.81	-588.7	-240.5	1,777.7	1,729.3	48.43	36.706		
7,050.0	6,622.5	6,589.9	6,589.3	26.6	22.8	85.33	-588.8	-240.2	1,770.0	1,721.4	48.68	36.364		
7,100.0	6,641.1	6,608.8	6,608.2	26.7	22.9	86.07	-588.8	-239.9	1,761.6	1,712.7	48.91	36.018		
7,150.0	6,655.4	6,623.6	6,623.0	26.8	23.0	86.96	-588.8	-239.7	1,752.7	1,703.5	49.13	35.672		
7,200.0	6,665.4	6,634.0	6,633.4	26.9	23.0	87.94	-588.9	-239.5	1,743.3	1,694.0	49.34	35.332		
7,250.0	6,670.8	6,640.1	6,639.5	27.0	23.0	88.96	-588.9	-239.5	1,733.8	1,684.3	49.53	35.002		
7,285.7	6,672.0	6,641.7	6,641.1	27.1	23.0	89.70	-588.9	-239.4	1,727.0	1,677.3	49.66	34.775		
7,300.0	6,672.0	6,641.9	6,641.3	27.1	23.0	89.71	-588.9	-239.4	1,724.3	1,674.6	49.71	34.687		
7,400.0	6,672.0	6,643.2	6,642.6	27.3	23.0	89.75	-588.9	-239.4	1,708.7	1,658.6	50.08	34.122		
7,500.0	6,672.0	6,644.5	6,643.9	27.6	23.0	89.79	-588.9	-239.4	1,698.9	1,648.4	50.48	33.655		
7,600.0	6,672.0	6,645.9	6,645.2	28.0	23.0	89.84	-588.9	-239.4	1,694.9	1,644.0	50.91	33.291		
7,616.9	6,672.0	6,646.1	6,645.5	28.0	23.0	89.85	-588.9	-239.4	1,694.9	1,643.9	50.99	33.238		
7,700.0	6,672.0	6,647.2	6,646.6	28.3	23.0	89.88	-588.9	-239.4	1,696.9	1,645.5	51.36	33.037		
7,800.0	6,672.0	6,648.5	6,647.9	28.8	23.0	89.93	-588.9	-239.3	1,704.7	1,652.9	51.82	32.894		
7,900.0	6,672.0	6,649.8	6,649.2	29.3	23.0	89.97	-588.9	-239.3	1,718.4	1,666.1	52.28	32.866		
8,000.0	6,672.0	6,651.1	6,650.5	29.8	23.1	90.02	-588.9	-239.3	1,737.7	1,684.9	52.73	32.952		
8,100.0	6,672.0	6,652.4	6,651.7	30.4	23.1	90.06	-588.9	-239.3	1,762.4	1,709.3	53.16	33.150		
8,200.0	6,672.0	6,653.6	6,653.0	31.0	23.1	90.10	-588.9	-239.3	1,792.4	1,738.9	53.57	33.459		
8,300.0	6,672.0	6,654.9	6,654.3	31.7	23.1	90.15	-588.9	-239.3	1,827.5	1,773.5	53.95	33.873		
8,400.0	6,672.0	6,656.2	6,655.6	32.4	23.1	90.19	-588.9	-239.2	1,867.2	1,812.9	54.30	34.388		
8,500.0	6,672.0	6,657.5	6,656.9	33.1	23.1	90.23	-588.9	-239.2	1,911.3	1,856.7	54.61	34.997		
8,600.0	6,672.0	6,658.8	6,658.1	33.9	23.1	90.28	-588.9	-239.2	1,959.6	1,904.7	54.90	35.696		
8,700.0	6,672.0	6,660.0	6,659.4	34.7	23.1	90.32	-588.9	-239.2	2,011.7	1,956.5	55.15	36.478		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch 12-07 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
8,800.0	6,672.0	6,661.3	6,660.7	35.5	23.1	90.36	-588.9	-239.2	2,067.3	2,011.9	55.37	37.337		
8,900.0	6,672.0	6,662.5	6,661.9	36.3	23.1	90.40	-588.9	-239.2	2,126.2	2,070.6	55.56	38.266		
9,000.0	6,672.0	6,663.8	6,663.2	37.2	23.1	90.45	-588.9	-239.1	2,188.0	2,132.3	55.73	39.261		
9,100.0	6,672.0	6,665.0	6,664.4	38.1	23.1	90.49	-588.9	-239.1	2,252.6	2,196.8	55.88	40.315		
9,200.0	6,672.0	6,666.3	6,665.7	39.0	23.1	90.53	-588.9	-239.1	2,319.8	2,263.8	56.00	41.424		
9,300.0	6,672.0	6,667.5	6,666.9	39.9	23.1	90.57	-588.9	-239.1	2,389.2	2,333.1	56.11	42.583		
9,400.0	6,672.0	6,668.7	6,668.1	40.8	23.1	90.61	-589.0	-239.1	2,460.8	2,404.6	56.20	43.787		
9,500.0	6,672.0	6,670.0	6,669.3	41.8	23.1	90.65	-589.0	-239.1	2,534.2	2,478.0	56.27	45.033		
9,600.0	6,672.0	6,671.2	6,670.6	42.7	23.1	90.70	-589.0	-239.0	2,609.5	2,553.1	56.34	46.317		
9,700.0	6,672.0	6,672.4	6,671.8	43.7	23.1	90.74	-589.0	-239.0	2,686.3	2,629.9	56.39	47.635		
9,800.0	6,672.0	6,673.6	6,673.0	44.7	23.1	90.78	-589.0	-239.0	2,764.7	2,708.3	56.44	48.985		
9,900.0	6,672.0	6,674.8	6,674.2	45.7	23.1	90.82	-589.0	-239.0	2,844.4	2,787.9	56.48	50.364		
10,000.0	6,672.0	6,676.0	6,675.4	46.7	23.1	90.86	-589.0	-239.0	2,925.4	2,868.9	56.51	51.769		
10,100.0	6,672.0	6,724.4	6,675.0	47.7	23.3	90.84	-589.0	-239.0	3,007.5	2,950.8	56.70	53.042		
10,200.0	6,672.0	6,723.2	6,676.2	48.8	23.3	90.89	-589.0	-239.0	3,090.6	3,033.9	56.71	54.497		
10,300.0	6,672.0	6,721.9	6,677.4	49.8	23.3	90.93	-589.0	-238.9	3,174.8	3,118.1	56.72	55.972		
10,400.0	6,672.0	6,720.7	6,678.7	50.9	23.3	90.97	-589.0	-238.9	3,259.8	3,203.1	56.73	57.465		
10,500.0	6,672.0	6,719.5	6,679.9	51.9	23.3	91.01	-589.0	-238.9	3,345.7	3,289.0	56.73	58.975		
10,600.0	6,672.0	6,718.2	6,681.2	53.0	23.3	91.06	-589.0	-238.9	3,432.3	3,375.6	56.73	60.501		
10,700.0	6,672.0	6,717.0	6,682.4	54.1	23.3	91.10	-589.0	-238.9	3,519.7	3,463.0	56.73	62.041		
10,800.0	6,672.0	6,715.7	6,683.7	55.2	23.3	91.14	-589.0	-238.9	3,607.7	3,551.0	56.73	63.594		
10,900.0	6,672.0	6,714.5	6,684.9	56.3	23.3	91.18	-589.0	-238.9	3,696.3	3,639.6	56.73	65.158		
11,000.0	6,672.0	6,713.2	6,686.1	57.4	23.3	91.22	-589.0	-238.8	3,785.5	3,728.8	56.73	66.734		
11,100.0	6,672.0	6,712.0	6,687.4	58.5	23.3	91.27	-589.0	-238.8	3,875.3	3,818.5	56.72	68.320		
11,200.0	6,672.0	6,710.8	6,688.6	59.6	23.3	91.31	-589.0	-238.8	3,965.5	3,908.8	56.72	69.914		
11,300.0	6,672.0	6,709.5	6,689.9	60.7	23.3	91.35	-589.0	-238.8	4,056.2	3,999.4	56.72	71.517		
11,400.0	6,672.0	6,708.3	6,691.1	61.8	23.3	91.39	-589.0	-238.8	4,147.3	4,090.6	56.71	73.128		
11,500.0	6,672.0	6,707.0	6,692.4	62.9	23.2	91.44	-589.0	-238.8	4,238.8	4,182.1	56.71	74.745		
11,600.0	6,672.0	6,705.8	6,693.6	64.1	23.2	91.48	-589.0	-238.7	4,330.7	4,274.0	56.71	76.369		
11,700.0	6,672.0	6,704.5	6,694.8	65.2	23.2	91.52	-589.0	-238.7	4,422.9	4,366.2	56.71	77.998		
11,800.0	6,672.0	6,703.3	6,696.1	66.3	23.2	91.56	-589.0	-238.7	4,515.5	4,458.8	56.70	79.632		
11,900.0	6,672.0	6,702.1	6,697.3	67.5	23.2	91.61	-589.0	-238.7	4,608.4	4,551.7	56.70	81.271		
12,000.0	6,672.0	6,700.8	6,698.6	68.6	23.2	91.65	-589.0	-238.7	4,701.6	4,644.9	56.70	82.914		
12,100.0	6,672.0	6,700.4	6,699.8	69.8	23.2	91.69	-589.0	-238.7	4,795.1	4,738.3	56.71	84.557		
12,200.0	6,672.0	6,701.7	6,701.0	70.9	23.2	91.73	-589.1	-238.6	4,888.8	4,832.1	56.72	86.194		
12,300.0	6,672.0	6,702.9	6,702.3	72.1	23.2	91.78	-589.1	-238.6	4,982.8	4,926.0	56.73	87.833		
12,400.0	6,672.0	6,704.1	6,703.5	73.2	23.2	91.82	-589.1	-238.6	5,077.0	5,020.2	56.74	89.474		
12,500.0	6,672.0	6,705.4	6,704.8	74.4	23.2	91.86	-589.1	-238.6	5,171.4	5,114.6	56.76	91.117		
12,600.0	6,672.0	6,706.6	6,706.0	75.5	23.2	91.90	-589.1	-238.6	5,266.0	5,209.2	56.77	92.762		
12,700.0	6,672.0	6,707.9	6,707.3	76.7	23.3	91.95	-589.1	-238.6	5,360.8	5,304.1	56.78	94.407		
12,800.0	6,672.0	6,709.1	6,708.5	77.9	23.3	91.99	-589.1	-238.6	5,455.9	5,399.1	56.80	96.053		
12,900.0	6,672.0	6,710.4	6,709.7	79.0	23.3	92.03	-589.1	-238.5	5,551.1	5,494.2	56.82	97.700		
13,000.0	6,672.0	6,711.6	6,711.0	80.2	23.3	92.07	-589.1	-238.5	5,646.4	5,589.6	56.84	99.347		
13,100.0	6,672.0	6,712.8	6,712.2	81.4	23.3	92.12	-589.1	-238.5	5,741.9	5,685.1	56.85	100.994		
13,200.0	6,672.0	6,714.1	6,713.5	82.6	23.3	92.16	-589.1	-238.5	5,837.6	5,780.7	56.87	102.641		
13,300.0	6,672.0	6,715.3	6,714.7	83.7	23.3	92.20	-589.1	-238.5	5,933.4	5,876.5	56.90	104.287		
13,400.0	6,672.0	6,716.6	6,716.0	84.9	23.3	92.24	-589.1	-238.5	6,029.4	5,972.5	56.92	105.933		
13,500.0	6,672.0	6,717.8	6,717.2	86.1	23.3	92.29	-589.1	-238.4	6,125.5	6,068.5	56.94	107.578		
13,600.0	6,672.0	6,719.1	6,718.4	87.3	23.3	92.33	-589.1	-238.4	6,221.7	6,164.7	56.96	109.222		
13,700.0	6,672.0	6,720.3	6,719.7	88.4	23.3	92.37	-589.1	-238.4	6,318.0	6,261.0	56.99	110.865		
13,800.0	6,672.0	6,721.5	6,720.9	89.6	23.3	92.42	-589.1	-238.4	6,414.4	6,357.4	57.01	112.506		
13,900.0	6,672.0	6,722.8	6,722.2	90.8	23.3	92.46	-589.1	-238.4	6,511.0	6,454.0	57.04	114.146		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch 12-07 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
14,000.0	6,672.0	6,724.0	6,723.4	92.0	23.3	92.50	-589.1	-238.4	6,607.7	6,550.6	57.07	115.784		
14,100.0	6,672.0	6,725.3	6,724.6	93.2	23.3	92.55	-589.1	-238.4	6,704.4	6,647.3	57.10	117.421		
14,200.0	6,672.0	6,726.5	6,725.9	94.4	23.3	92.59	-589.1	-238.3	6,801.3	6,744.1	57.13	119.055		
14,300.0	6,672.0	6,727.7	6,727.1	95.6	23.3	92.63	-589.1	-238.3	6,898.2	6,841.1	57.16	120.687		
14,400.0	6,672.0	6,729.0	6,728.4	96.8	23.3	92.67	-589.1	-238.3	6,995.2	6,938.1	57.19	122.318		
14,500.0	6,672.0	6,730.2	6,729.6	98.0	23.3	92.72	-589.1	-238.3	7,092.4	7,035.1	57.22	123.945		
14,600.0	6,672.0	6,731.5	6,730.9	99.2	23.3	92.76	-589.1	-238.3	7,189.6	7,132.3	57.26	125.571		
14,700.0	6,672.0	6,732.7	6,732.1	100.4	23.3	92.80	-589.2	-238.3	7,286.8	7,229.5	57.29	127.193		
14,800.0	6,672.0	6,734.0	6,733.3	101.6	23.3	92.85	-589.2	-238.2	7,384.2	7,326.9	57.32	128.814		
14,900.0	6,672.0	6,735.2	6,734.6	102.7	23.3	92.89	-589.2	-238.2	7,481.6	7,424.2	57.36	130.431		
15,000.0	6,672.0	6,736.4	6,735.8	103.9	23.4	92.93	-589.2	-238.2	7,579.1	7,521.7	57.40	132.045		
15,100.0	6,672.0	6,737.7	6,737.1	105.1	23.4	92.98	-589.2	-238.2	7,676.6	7,619.2	57.44	133.657		
15,200.0	6,672.0	6,738.9	6,738.3	106.3	23.4	93.02	-589.2	-238.2	7,774.3	7,716.8	57.47	135.265		
15,300.0	6,672.0	6,740.2	6,739.5	107.6	23.4	93.06	-589.2	-238.2	7,871.9	7,814.4	57.51	136.870		
15,400.0	6,672.0	6,741.4	6,740.8	108.8	23.4	93.11	-589.2	-238.2	7,969.7	7,912.1	57.55	138.472		
15,500.0	6,672.0	6,742.6	6,742.0	110.0	23.4	93.15	-589.2	-238.1	8,067.5	8,009.9	57.60	140.071		
15,600.0	6,672.0	6,743.9	6,743.3	111.2	23.4	93.19	-589.2	-238.1	8,165.3	8,107.7	57.64	141.666		
15,700.0	6,672.0	6,745.1	6,744.5	112.4	23.4	93.24	-589.2	-238.1	8,263.2	8,205.5	57.68	143.257		
15,800.0	6,672.0	6,746.4	6,745.8	113.6	23.4	93.28	-589.2	-238.1	8,361.2	8,303.5	57.72	144.845		
15,900.0	6,672.0	6,747.6	6,747.0	114.8	23.4	93.33	-589.2	-238.1	8,459.2	8,401.4	57.77	146.430		
16,000.0	6,672.0	6,748.9	6,748.2	116.0	23.4	93.37	-589.2	-238.1	8,557.2	8,499.4	57.82	148.011		
16,100.0	6,672.0	6,750.1	6,749.5	117.2	23.4	93.41	-589.2	-238.0	8,655.3	8,597.5	57.86	149.587		
16,200.0	6,672.0	6,751.3	6,750.7	118.4	23.4	93.46	-589.2	-238.0	8,753.5	8,695.6	57.91	151.160		
16,300.0	6,672.0	6,752.6	6,752.0	119.6	23.4	93.50	-589.2	-238.0	8,851.6	8,793.7	57.96	152.730		
16,400.0	6,672.0	6,753.8	6,753.2	120.8	23.4	93.54	-589.2	-238.0	8,949.9	8,891.9	58.01	154.295		
16,500.0	6,672.0	6,755.1	6,754.4	122.0	23.4	93.59	-589.2	-238.0	9,048.1	8,990.1	58.05	155.856		
16,600.0	6,672.0	6,756.3	6,755.7	123.2	23.4	93.63	-589.2	-238.0	9,146.4	9,088.3	58.10	157.413		
16,700.0	6,672.0	6,757.5	6,756.9	124.5	23.4	93.68	-589.2	-238.0	9,244.8	9,186.6	58.16	158.966		
16,800.0	6,672.0	6,758.8	6,758.2	125.7	23.4	93.72	-589.2	-237.9	9,343.2	9,285.0	58.21	160.515		
16,900.0	6,672.0	6,760.0	6,759.4	126.9	23.4	93.76	-589.2	-237.9	9,441.6	9,383.3	58.26	162.059		
17,000.0	6,672.0	6,761.3	6,760.6	128.1	23.4	93.81	-589.2	-237.9	9,540.0	9,481.7	58.31	163.599		
17,100.0	6,672.0	6,762.5	6,761.9	129.3	23.4	93.85	-589.3	-237.9	9,638.5	9,580.1	58.37	165.135		
17,200.0	6,672.0	6,763.7	6,763.1	130.5	23.4	93.90	-589.3	-237.9	9,737.0	9,678.6	58.42	166.667		
17,300.0	6,672.0	6,765.0	6,764.4	131.7	23.4	93.94	-589.3	-237.9	9,835.6	9,777.1	58.48	168.194		
17,400.0	6,672.0	6,766.2	6,765.6	133.0	23.5	93.99	-589.3	-237.8	9,934.1	9,875.6	58.53	169.716		



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch 14-07 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS, 3273-2_Unknown													Offset Well Error:	0.0 ft
Reference	Offset	Semi Major Axis		Distance										Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-175.42	-3,314.7	-265.7	3,325.6					
100.0	100.0	52.3	52.3	0.1	0.1	-175.42	-3,314.8	-265.6	3,325.4	3,325.2	0.22	N/A CC		
200.0	200.0	150.4	150.4	0.5	0.4	-175.42	-3,315.1	-265.3	3,325.7	3,324.8	0.84	3,978.316		
300.0	300.0	247.5	247.5	0.8	0.7	-175.43	-3,315.3	-265.2	3,325.9	3,324.3	1.53	2,167.968		
400.0	400.0	346.3	346.3	1.2	1.0	-175.43	-3,315.7	-265.0	3,326.3	3,324.1	2.24	1,485.907		
500.0	500.0	448.3	448.3	1.6	1.4	-175.44	-3,316.0	-264.7	3,326.5	3,323.6	2.95	1,126.227		
600.0	600.0	547.9	547.9	1.9	1.7	-175.44	-3,316.3	-264.6	3,326.9	3,323.2	3.66	908.836		
700.0	700.0	646.4	646.4	2.3	2.1	-175.44	-3,316.6	-264.3	3,327.1	3,322.8	4.36	762.493		
800.0	800.0	745.7	745.7	2.6	2.4	-175.45	-3,317.1	-264.1	3,327.6	3,322.5	5.07	656.391		
900.0	900.0	851.2	851.2	3.0	2.8	-175.45	-3,317.3	-263.8	3,327.8	3,322.0	5.80	574.064		
1,000.0	1,000.0	951.6	951.6	3.4	3.2	-175.46	-3,317.6	-263.7	3,328.0	3,321.5	6.51	511.502		
1,100.0	1,100.0	1,052.8	1,052.8	3.7	3.5	-175.46	-3,317.7	-263.5	3,328.2	3,321.0	7.22	461.041		
1,200.0	1,200.0	1,150.8	1,150.8	4.1	3.9	-175.46	-3,317.9	-263.5	3,328.4	3,320.5	7.92	420.249		
1,300.0	1,300.0	1,259.5	1,259.5	4.4	4.2	-175.46	-3,318.1	-263.4	3,328.5	3,319.9	8.66	384.448		
1,400.0	1,400.0	1,358.1	1,358.1	4.8	4.6	-175.46	-3,318.0	-263.5	3,328.4	3,319.1	9.36	355.613		
1,400.6	1,400.6	1,358.6	1,358.6	4.8	4.6	-175.46	-3,318.0	-263.5	3,328.4	3,319.1	9.36	355.463		
1,500.0	1,500.0	1,453.5	1,453.5	5.1	4.9	-175.46	-3,318.1	-263.7	3,328.5	3,318.5	10.05	331.155		
1,600.0	1,600.0	1,555.3	1,555.3	5.5	5.3	-175.45	-3,318.2	-263.9	3,328.6	3,317.9	10.77	309.194		
1,700.0	1,700.0	1,651.5	1,651.5	5.9	5.6	-175.45	-3,318.2	-264.4	3,328.7	3,317.3	11.46	290.464		
1,800.0	1,800.0	1,751.5	1,751.5	6.2	5.9	-175.44	-3,318.5	-264.7	3,329.0	3,316.8	12.17	273.583		
1,900.0	1,900.0	1,854.2	1,854.2	6.6	6.3	-175.43	-3,318.5	-265.4	3,329.1	3,316.2	12.89	258.367		
2,000.0	2,000.0	1,951.5	1,951.5	6.9	6.6	-175.42	-3,318.6	-265.9	3,329.3	3,315.7	13.58	245.099		
2,100.0	2,100.0	2,058.0	2,057.9	7.3	7.0	-175.40	-3,318.7	-266.9	3,329.4	3,315.1	14.31	232.608		
2,195.8	2,195.8	2,153.8	2,153.8	7.6	7.4	-175.38	-3,318.5	-268.1	3,329.4	3,314.4	14.99	222.083		
2,200.0	2,200.0	2,157.6	2,157.6	7.7	7.4	-175.38	-3,318.5	-268.1	3,329.4	3,314.3	15.02	221.660 ES		
2,300.0	2,300.0	2,253.2	2,253.2	8.0	7.7	-124.35	-3,318.5	-270.0	3,330.5	3,314.7	15.71	211.994		
2,400.0	2,399.8	2,356.0	2,356.0	8.4	8.1	-124.34	-3,318.4	-272.3	3,333.5	3,317.1	16.42	202.971		
2,500.0	2,499.5	2,458.6	2,458.5	8.7	8.4	-124.35	-3,318.3	-274.6	3,338.5	3,321.3	17.14	194.809		
2,600.0	2,598.7	2,557.0	2,556.8	9.1	8.8	-124.37	-3,318.1	-276.6	3,345.3	3,327.5	17.84	187.556		
2,700.0	2,697.5	2,656.4	2,656.3	9.4	9.1	-124.42	-3,318.0	-278.1	3,354.3	3,335.7	18.54	180.919		
2,800.0	2,795.6	2,753.8	2,753.6	9.8	9.5	-124.48	-3,317.8	-279.4	3,365.2	3,345.9	19.24	174.932		
2,900.0	2,893.1	2,854.8	2,854.6	10.1	9.8	-124.56	-3,317.7	-280.7	3,378.1	3,358.2	19.95	169.345		
3,000.0	2,989.6	2,959.1	2,959.0	10.5	10.2	-124.67	-3,317.4	-282.2	3,392.9	3,372.3	20.67	164.126		
3,100.0	3,085.3	3,083.7	3,083.6	10.9	10.6	-124.88	-3,316.5	-283.4	3,409.5	3,388.0	21.47	158.803		
3,200.0	3,179.8	3,180.8	3,180.6	11.2	10.9	-125.02	-3,315.3	-283.5	3,427.5	3,405.3	22.17	154.577		
3,300.0	3,273.2	3,274.8	3,274.6	11.6	11.2	-125.16	-3,314.1	-283.0	3,447.8	3,425.0	22.84	150.970		
3,387.5	3,353.8	3,355.4	3,355.2	11.9	14.3	-125.28	-3,313.1	-282.3	3,467.4	3,441.1	26.24	132.117		
3,400.0	3,365.2	3,366.8	3,366.7	12.0	14.7	-125.34	-3,313.0	-282.2	3,470.3	3,443.6	26.72	129.873		
3,500.0	3,456.8	3,458.4	3,458.2	12.4	18.2	-125.86	-3,311.9	-281.4	3,493.8	3,463.3	30.53	114.450		
3,600.0	3,548.3	3,550.0	3,549.8	12.8	21.6	-126.38	-3,310.7	-280.7	3,517.6	3,483.3	34.34	102.440		
3,700.0	3,639.8	3,641.6	3,641.3	13.2	25.0	-126.88	-3,309.6	-279.9	3,541.8	3,503.6	38.15	92.826		
3,800.0	3,731.4	3,733.1	3,732.9	13.6	28.5	-127.38	-3,308.5	-279.2	3,566.2	3,524.2	41.98	84.959		
3,900.0	3,822.9	3,824.7	3,824.5	14.0	31.9	-127.88	-3,307.4	-278.4	3,590.9	3,545.1	45.80	78.404		
4,000.0	3,914.4	3,916.3	3,916.0	14.4	35.3	-128.37	-3,306.2	-277.7	3,615.9	3,566.2	49.63	72.861		
4,100.0	4,005.9	4,007.9	4,007.6	14.8	38.8	-128.85	-3,305.1	-276.9	3,641.1	3,587.7	53.46	68.112		
4,200.0	4,097.5	4,099.4	4,099.2	15.2	42.2	-129.33	-3,304.0	-276.1	3,666.6	3,609.4	57.29	64.000		
4,300.0	4,189.0	4,191.0	4,190.7	15.6	45.6	-129.80	-3,302.9	-275.4	3,692.4	3,631.3	61.13	60.406		
4,400.0	4,280.5	4,282.6	4,282.3	16.1	49.1	-130.26	-3,301.7	-274.6	3,718.5	3,653.5	64.97	57.238		
4,500.0	4,372.1	4,374.2	4,373.8	16.5	52.5	-130.72	-3,300.6	-273.9	3,744.7	3,675.9	68.81	54.425		
4,600.0	4,463.6	4,465.7	4,465.4	16.9	55.9	-131.17	-3,299.5	-273.1	3,771.3	3,698.6	72.65	51.912		
4,700.0	4,555.1	4,557.3	4,557.0	17.4	59.4	-131.62	-3,298.3	-272.3	3,798.0	3,721.6	76.49	49.654		
4,800.0	4,646.7	4,648.9	4,648.5	17.8	62.8	-132.06	-3,297.2	-271.6	3,825.1	3,744.7	80.34	47.613		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch 14-07 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWGS, 3273-2_Unknown													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis		Distance								Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
4,900.0	4,738.2	4,740.4	4,740.1	18.2	66.2	-132.50	-3,296.1	-270.8	3,852.3	3,768.1	84.18	45.761		
5,000.0	4,829.7	4,832.0	4,831.7	18.7	69.6	-132.93	-3,295.0	-270.1	3,879.7	3,791.7	88.03	44.073		
5,100.0	4,921.3	4,923.6	4,923.2	19.1	73.1	-133.35	-3,293.8	-269.3	3,907.4	3,815.5	91.88	42.528		
5,200.0	5,012.8	5,015.2	5,014.8	19.5	76.5	-133.77	-3,292.7	-268.5	3,935.3	3,839.6	95.73	41.109		
5,300.0	5,104.3	5,106.7	5,106.4	20.0	79.9	-134.19	-3,291.6	-267.8	3,963.4	3,863.8	99.58	39.802		
5,400.0	5,195.8	5,198.3	5,197.9	20.4	83.4	-134.60	-3,290.5	-267.0	3,991.7	3,888.3	103.43	38.594		
5,500.0	5,287.4	5,289.9	5,289.5	20.9	86.8	-135.00	-3,289.3	-266.3	4,020.3	3,913.0	107.28	37.474		
5,600.0	5,378.9	5,381.5	5,381.0	21.3	90.2	-135.40	-3,288.2	-265.5	4,049.0	3,937.8	111.13	36.433		
5,700.0	5,470.4	5,473.0	5,472.6	21.8	93.7	-135.79	-3,287.1	-264.8	4,077.9	3,962.9	114.99	35.463		
5,800.0	5,562.0	5,564.6	5,564.2	22.2	97.1	-136.18	-3,286.0	-264.0	4,107.0	3,988.1	118.84	34.558		
5,900.0	5,653.5	5,656.2	5,655.7	22.7	100.5	-136.56	-3,284.8	-263.2	4,136.2	4,013.6	122.70	33.711		
6,000.0	5,745.0	5,747.8	5,747.3	23.1	104.0	-136.94	-3,283.7	-262.5	4,165.7	4,039.2	126.55	32.917		
6,100.0	5,836.6	5,839.3	5,838.9	23.6	107.4	-137.31	-3,282.6	-261.7	4,195.4	4,064.9	130.41	32.171		
6,200.0	5,928.1	5,930.9	5,930.4	24.0	110.8	-137.68	-3,281.4	-261.0	4,225.2	4,090.9	134.26	31.469		
6,278.6	6,000.0	6,002.8	6,002.4	24.4	113.5	-137.97	-3,280.6	-260.4	4,248.7	4,111.4	137.29	30.946		
6,290.0	6,010.4	6,013.2	6,012.8	24.4	113.9	-139.50	-3,280.4	-260.3	4,252.3	4,114.5	137.73	30.873		
6,300.0	6,019.5	6,022.4	6,021.9	24.5	114.3	-141.61	-3,280.3	-260.2	4,255.5	4,117.3	138.12	30.810		
6,350.0	6,065.8	6,068.7	6,068.2	24.7	116.0	-153.91	-3,279.8	-259.8	4,271.2	4,131.2	140.06	30.496		
6,400.0	6,113.0	6,116.0	6,115.5	24.9	117.8	-169.58	-3,279.2	-259.4	4,286.4	4,144.4	142.03	30.180		
6,450.0	6,160.7	6,163.9	6,163.4	25.1	119.6	171.92	-3,278.6	-259.0	4,300.9	4,156.8	144.01	29.866		
6,500.0	6,208.5	6,211.8	6,211.3	25.3	121.4	153.10	-3,278.0	-258.6	4,314.5	4,168.5	145.98	29.556		
6,550.0	6,255.8	6,259.4	6,258.9	25.4	123.1	136.88	-3,277.4	-258.2	4,327.1	4,179.2	147.93	29.251		
6,600.0	6,302.5	6,306.3	6,305.8	25.6	124.9	124.38	-3,276.8	-257.8	4,338.7	4,188.9	149.85	28.954		
6,650.0	6,347.9	6,352.0	6,351.5	25.7	126.6	115.16	-3,276.3	-257.5	4,349.2	4,197.5	151.71	28.667		
6,700.0	6,391.6	6,396.1	6,395.6	25.9	128.3	108.40	-3,275.7	-257.1	4,358.5	4,205.0	153.52	28.391		
6,750.0	6,433.4	6,438.2	6,437.7	26.0	129.8	103.39	-3,275.2	-256.7	4,366.6	4,211.4	155.24	28.128		
6,800.0	6,472.8	6,478.0	6,477.5	26.1	131.3	99.64	-3,274.7	-256.4	4,373.6	4,216.7	156.88	27.879		
6,850.0	6,509.4	6,515.0	6,514.5	26.2	132.7	96.83	-3,274.3	-256.1	4,379.4	4,221.0	158.41	27.647		
6,900.0	6,543.0	6,549.0	6,548.5	26.3	134.0	94.71	-3,273.8	-255.8	4,384.0	4,224.2	159.82	27.431		
6,950.0	6,573.2	6,579.7	6,579.1	26.4	135.1	93.14	-3,273.5	-255.6	4,387.6	4,226.5	161.11	27.234		
7,000.0	6,599.8	6,606.7	6,606.1	26.5	136.2	92.00	-3,273.1	-255.4	4,390.0	4,227.8	162.26	27.056		
7,050.0	6,622.5	6,629.8	6,629.3	26.6	137.0	91.20	-3,272.8	-255.2	4,391.5	4,228.2	163.26	26.898		
7,100.0	6,641.1	6,648.9	6,648.3	26.7	137.7	90.69	-3,272.6	-255.0	4,392.0	4,227.9	164.12	26.761		
7,150.0	6,655.4	6,663.7	6,663.1	26.8	138.3	90.42	-3,272.4	-254.9	4,391.5	4,226.7	164.81	26.646		
7,200.0	6,665.4	6,674.1	6,673.5	26.9	138.7	90.35	-3,272.3	-254.8	4,390.2	4,224.9	165.33	26.554		
7,250.0	6,670.8	6,680.0	6,679.5	27.0	138.9	90.48	-3,272.2	-254.7	4,388.1	4,222.4	165.69	26.484		
7,285.7	6,672.0	6,681.5	6,680.9	27.1	139.0	90.67	-3,272.2	-254.7	4,386.1	4,220.3	165.84	26.449		
7,300.0	6,672.0	6,681.6	6,681.1	27.1	139.0	90.67	-3,272.2	-254.7	4,385.3	4,219.4	165.88	26.437		
7,400.0	6,672.0	6,682.5	6,681.9	27.3	139.0	90.68	-3,272.2	-254.7	4,380.6	4,214.4	166.19	26.358		
7,500.0	6,672.0	6,683.3	6,682.8	27.6	139.0	90.69	-3,272.2	-254.7	4,378.2	4,211.6	166.56	26.286		
7,555.2	6,672.0	6,683.8	6,683.2	27.8	139.1	90.70	-3,272.2	-254.7	4,377.8	4,211.0	166.79	26.248		
7,600.0	6,672.0	6,684.2	6,683.6	28.0	139.1	90.70	-3,272.2	-254.7	4,378.0	4,211.1	166.97	26.220		
7,700.0	6,672.0	6,685.0	6,684.5	28.3	139.1	90.71	-3,272.2	-254.7	4,380.2	4,212.8	167.42	26.163		
7,800.0	6,672.0	6,685.9	6,685.3	28.8	139.1	90.72	-3,272.2	-254.7	4,384.7	4,216.7	167.91	26.113		
7,900.0	6,672.0	6,686.7	6,686.2	29.3	139.2	90.73	-3,272.1	-254.7	4,391.4	4,223.0	168.44	26.071		
8,000.0	6,672.0	6,687.6	6,687.0	29.8	139.2	90.75	-3,272.1	-254.7	4,400.4	4,231.4	169.00	26.038		
8,100.0	6,672.0	6,688.4	6,687.9	30.4	139.2	90.76	-3,272.1	-254.7	4,411.7	4,242.1	169.58	26.015		
8,200.0	6,672.0	6,689.3	6,688.7	31.0	139.3	90.77	-3,272.1	-254.7	4,425.2	4,255.0	170.19	26.001		
8,300.0	6,672.0	6,690.1	6,689.6	31.7	139.3	90.78	-3,272.1	-254.7	4,440.9	4,270.1	170.82	25.998 SF		
8,400.0	6,672.0	6,691.0	6,690.4	32.4	139.3	90.79	-3,272.1	-254.7	4,458.8	4,287.3	171.47	26.004		
8,500.0	6,672.0	6,691.8	6,691.3	33.1	139.4	90.80	-3,272.1	-254.6	4,478.9	4,306.8	172.13	26.021		
8,600.0	6,672.0	6,692.7	6,692.1	33.9	139.4	90.81	-3,272.1	-254.6	4,501.1	4,328.3	172.80	26.049		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch 14-07 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWGS, 3273-2_Unknown													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis		Distance								Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
8,700.0	6,672.0	6,693.5	6,693.0	34.7	139.4	90.82	-3,272.1	-254.6	4,525.5	4,352.0	173.48	26.087		
8,800.0	6,672.0	6,694.4	6,693.8	35.5	139.4	90.84	-3,272.1	-254.6	4,551.9	4,377.7	174.16	26.137		
8,900.0	6,672.0	6,695.2	6,694.7	36.3	139.5	90.85	-3,272.0	-254.6	4,580.3	4,405.5	174.84	26.197		
9,000.0	6,672.0	6,696.1	6,695.5	37.2	139.5	90.86	-3,272.0	-254.6	4,610.8	4,435.2	175.53	26.268		
9,100.0	6,672.0	6,696.9	6,696.4	38.1	139.5	90.87	-3,272.0	-254.6	4,643.2	4,467.0	176.21	26.351		
9,200.0	6,672.0	6,697.8	6,697.2	39.0	139.6	90.88	-3,272.0	-254.6	4,677.5	4,500.6	176.88	26.444		
9,300.0	6,672.0	6,698.6	6,698.1	39.9	139.6	90.89	-3,272.0	-254.6	4,713.7	4,536.2	177.55	26.548		
9,400.0	6,672.0	6,699.5	6,698.9	40.8	139.6	90.90	-3,272.0	-254.6	4,751.8	4,573.5	178.22	26.663		
9,500.0	6,672.0	6,700.3	6,699.8	41.8	139.7	90.91	-3,272.0	-254.6	4,791.6	4,612.7	178.87	26.788		
9,600.0	6,672.0	6,701.2	6,700.6	42.7	139.7	90.92	-3,272.0	-254.6	4,833.2	4,653.7	179.52	26.923		
9,700.0	6,672.0	6,702.0	6,701.5	43.7	139.7	90.94	-3,272.0	-254.6	4,876.5	4,696.3	180.15	27.069		
9,800.0	6,672.0	6,702.9	6,702.3	44.7	139.8	90.95	-3,271.9	-254.6	4,921.4	4,740.6	180.77	27.225		
9,900.0	6,672.0	6,703.7	6,703.2	45.7	139.8	90.96	-3,271.9	-254.5	4,968.0	4,786.6	181.38	27.390		
10,000.0	6,672.0	6,704.6	6,704.0	46.7	139.8	90.97	-3,271.9	-254.5	5,016.1	4,834.1	181.97	27.565		
10,100.0	6,672.0	6,705.4	6,704.9	47.7	139.9	90.98	-3,271.9	-254.5	5,065.7	4,883.2	182.55	27.749		
10,200.0	6,672.0	6,706.3	6,705.7	48.8	139.9	90.99	-3,271.9	-254.5	5,116.9	4,933.7	183.12	27.942		
10,300.0	6,672.0	6,707.2	6,706.6	49.8	139.9	91.00	-3,271.9	-254.5	5,169.4	4,985.8	183.67	28.145		
10,400.0	6,672.0	6,708.0	6,707.4	50.9	140.0	91.01	-3,271.9	-254.5	5,223.4	5,039.2	184.21	28.355		
10,500.0	6,672.0	6,708.9	6,708.3	51.9	140.0	91.03	-3,271.9	-254.5	5,278.7	5,094.0	184.74	28.574		
10,600.0	6,672.0	6,709.7	6,709.1	53.0	140.0	91.04	-3,271.9	-254.5	5,335.3	5,150.1	185.25	28.801		
10,700.0	6,672.0	6,710.6	6,710.0	54.1	140.1	91.05	-3,271.9	-254.5	5,393.2	5,207.4	185.74	29.035		
10,800.0	6,672.0	6,711.4	6,710.9	55.2	140.1	91.06	-3,271.8	-254.5	5,452.3	5,266.1	186.23	29.278		
10,900.0	6,672.0	6,712.3	6,711.7	56.3	140.1	91.07	-3,271.8	-254.5	5,512.6	5,325.9	186.70	29.527		
11,000.0	6,672.0	6,713.1	6,712.6	57.4	140.2	91.08	-3,271.8	-254.5	5,574.0	5,386.9	187.15	29.784		
11,100.0	6,672.0	6,714.0	6,713.4	58.5	140.2	91.09	-3,271.8	-254.5	5,636.6	5,449.0	187.59	30.047		
11,200.0	6,672.0	6,714.8	6,714.3	59.6	140.2	91.10	-3,271.8	-254.5	5,700.2	5,512.2	188.02	30.317		
11,300.0	6,672.0	6,715.7	6,715.1	60.7	140.2	91.12	-3,271.8	-254.4	5,764.8	5,576.4	188.43	30.593		
11,400.0	6,672.0	6,716.5	6,716.0	61.8	140.3	91.13	-3,271.8	-254.4	5,830.5	5,641.7	188.84	30.876		
11,500.0	6,672.0	6,717.4	6,716.8	62.9	140.3	91.14	-3,271.8	-254.4	5,897.1	5,707.9	189.23	31.164		
11,600.0	6,672.0	6,718.2	6,717.7	64.1	140.3	91.15	-3,271.8	-254.4	5,964.7	5,775.1	189.60	31.459		
11,700.0	6,672.0	6,719.1	6,718.5	65.2	140.4	91.16	-3,271.7	-254.4	6,033.2	5,843.2	189.97	31.758		
11,800.0	6,672.0	6,720.0	6,719.4	66.3	140.4	91.17	-3,271.7	-254.4	6,102.5	5,912.2	190.33	32.063		
11,900.0	6,672.0	6,720.8	6,720.2	67.5	140.4	91.18	-3,271.7	-254.4	6,172.7	5,982.1	190.67	32.374		
12,000.0	6,672.0	6,721.7	6,721.1	68.6	140.5	91.19	-3,271.7	-254.4	6,243.8	6,052.7	191.01	32.689		
12,100.0	6,672.0	6,722.5	6,721.9	69.8	140.5	91.21	-3,271.7	-254.4	6,315.6	6,124.2	191.33	33.009		
12,200.0	6,672.0	6,723.4	6,722.8	70.9	140.5	91.22	-3,271.7	-254.4	6,388.1	6,196.5	191.65	33.333		
12,300.0	6,672.0	6,724.2	6,723.7	72.1	140.6	91.23	-3,271.7	-254.4	6,461.4	6,269.5	191.95	33.662		
12,400.0	6,672.0	6,725.1	6,724.5	73.2	140.6	91.24	-3,271.7	-254.4	6,535.5	6,343.2	192.25	33.995		
12,500.0	6,672.0	6,725.9	6,725.4	74.4	140.6	91.25	-3,271.7	-254.4	6,610.2	6,417.6	192.53	34.332		
12,600.0	6,672.0	6,726.8	6,726.2	75.5	140.7	91.26	-3,271.7	-254.4	6,685.5	6,492.7	192.81	34.674		
12,700.0	6,672.0	6,727.6	6,727.1	76.7	140.7	91.27	-3,271.6	-254.4	6,761.6	6,568.5	193.08	35.019		
12,800.0	6,672.0	6,728.5	6,727.9	77.9	140.7	91.28	-3,271.6	-254.3	6,838.2	6,644.8	193.35	35.368		
12,900.0	6,672.0	6,729.3	6,728.8	79.0	140.8	91.30	-3,271.6	-254.3	6,915.4	6,721.8	193.60	35.720		
13,000.0	6,672.0	6,730.2	6,729.6	80.2	140.8	91.31	-3,271.6	-254.3	6,993.3	6,799.4	193.85	36.076		
13,100.0	6,672.0	6,731.1	6,730.5	81.4	140.8	91.32	-3,271.6	-254.3	7,071.6	6,877.6	194.09	36.435		
13,200.0	6,672.0	6,731.9	6,731.3	82.6	140.9	91.33	-3,271.6	-254.3	7,150.6	6,956.2	194.33	36.797		
13,300.0	6,672.0	6,732.8	6,732.2	83.7	140.9	91.34	-3,271.6	-254.3	7,230.0	7,035.5	194.55	37.162		
13,400.0	6,672.0	6,733.6	6,733.1	84.9	140.9	91.35	-3,271.6	-254.3	7,310.0	7,115.2	194.78	37.530		
13,500.0	6,672.0	6,734.5	6,733.9	86.1	141.0	91.36	-3,271.6	-254.3	7,390.4	7,195.5	194.99	37.901		
13,600.0	6,672.0	6,735.3	6,734.8	87.3	141.0	91.38	-3,271.5	-254.3	7,471.4	7,276.2	195.20	38.275		
13,700.0	6,672.0	6,736.2	6,735.6	88.4	141.0	91.39	-3,271.5	-254.3	7,552.8	7,357.4	195.41	38.651		
13,800.0	6,672.0	6,737.0	6,736.5	89.6	141.0	91.40	-3,271.5	-254.3	7,634.6	7,439.0	195.61	39.030		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch 14-07 - Original Drilling - Original Drilling - As Drilled												Offset Site Error: 0.0 ft		
Survey Program: 100-2_Gyro-NS-GC_OWGS, 3273-2_Unknown												Offset Well Error: 0.0 ft		
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
13,900.0	6,672.0	6,737.9	6,737.3	90.8	141.1	91.41	-3,271.5	-254.3	7,716.9	7,521.1	195.81	39.411		
14,000.0	6,672.0	6,738.8	6,738.2	92.0	141.1	91.42	-3,271.5	-254.3	7,799.6	7,603.6	196.00	39.794		
14,100.0	6,672.0	6,739.6	6,739.0	93.2	141.1	91.43	-3,271.5	-254.3	7,882.7	7,686.5	196.18	40.180		
14,200.0	6,672.0	6,740.5	6,739.9	94.4	141.2	91.44	-3,271.5	-254.2	7,966.2	7,769.8	196.37	40.568		
14,300.0	6,672.0	6,741.3	6,740.8	95.6	141.2	91.46	-3,271.5	-254.2	8,050.0	7,853.5	196.54	40.958		
14,400.0	6,672.0	6,742.2	6,741.6	96.8	141.2	91.47	-3,271.5	-254.2	8,134.3	7,937.5	196.72	41.350		
14,500.0	6,672.0	6,743.0	6,742.5	98.0	141.3	91.48	-3,271.5	-254.2	8,218.9	8,022.0	196.89	41.744		
14,600.0	6,672.0	6,743.9	6,743.3	99.2	141.3	91.49	-3,271.4	-254.2	8,303.8	8,106.7	197.05	42.140		
14,700.0	6,672.0	6,744.8	6,744.2	100.4	141.3	91.50	-3,271.4	-254.2	8,389.1	8,191.9	197.22	42.538		
14,800.0	6,672.0	6,745.6	6,745.0	101.6	141.4	91.51	-3,271.4	-254.2	8,474.7	8,277.3	197.38	42.937		
14,900.0	6,672.0	6,746.5	6,745.9	102.7	141.4	91.52	-3,271.4	-254.2	8,560.6	8,363.1	197.53	43.338		
15,000.0	6,672.0	6,747.3	6,746.8	103.9	141.4	91.54	-3,271.4	-254.2	8,646.8	8,449.1	197.68	43.740		
15,100.0	6,672.0	6,748.2	6,747.6	105.1	141.5	91.55	-3,271.4	-254.2	8,733.3	8,535.5	197.84	44.145		
15,200.0	6,672.0	6,749.0	6,748.5	106.3	141.5	91.56	-3,271.4	-254.2	8,820.1	8,622.2	197.98	44.550		
15,300.0	6,672.0	6,749.9	6,749.3	107.6	141.5	91.57	-3,271.4	-254.2	8,907.2	8,709.1	198.13	44.957		
15,400.0	6,672.0	6,750.8	6,750.2	108.8	141.6	91.58	-3,271.4	-254.2	8,994.6	8,796.3	198.27	45.365		
15,500.0	6,672.0	6,751.6	6,751.0	110.0	141.6	91.59	-3,271.3	-254.2	9,082.2	8,883.8	198.41	45.775		
15,600.0	6,672.0	6,752.5	6,751.9	111.2	141.6	91.60	-3,271.3	-254.1	9,170.1	8,971.6	198.55	46.186		
15,700.0	6,672.0	6,753.3	6,752.8	112.4	141.7	91.62	-3,271.3	-254.1	9,258.2	9,059.6	198.68	46.598		
15,800.0	6,672.0	6,754.2	6,753.6	113.6	141.7	91.63	-3,271.3	-254.1	9,346.6	9,147.8	198.82	47.011		
15,900.0	6,672.0	6,755.0	6,754.5	114.8	141.7	91.64	-3,271.3	-254.1	9,435.2	9,236.3	198.95	47.426		
16,000.0	6,672.0	6,755.9	6,755.3	116.0	141.8	91.65	-3,271.3	-254.1	9,524.1	9,325.0	199.08	47.841		
16,100.0	6,672.0	6,756.8	6,756.2	117.2	141.8	91.66	-3,271.3	-254.1	9,613.1	9,413.9	199.20	48.258		
16,200.0	6,672.0	6,757.6	6,757.0	118.4	141.8	91.67	-3,271.3	-254.1	9,702.4	9,503.1	199.33	48.675		
16,300.0	6,672.0	6,758.5	6,757.9	119.6	141.8	91.69	-3,271.3	-254.1	9,791.9	9,592.4	199.45	49.094		
16,400.0	6,672.0	6,759.3	6,758.8	120.8	141.9	91.70	-3,271.3	-254.1	9,881.6	9,682.0	199.57	49.513		
16,500.0	6,672.0	6,760.2	6,759.6	122.0	141.9	91.71	-3,271.2	-254.1	9,971.5	9,771.8	199.70	49.933		



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch 22-07 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	111.65	-449.7	1,132.9	1,219.1					
100.0	100.0	77.0	77.0	0.1	0.1	111.65	-449.8	1,133.0	1,219.0	1,218.8	0.26	4,678.085 CC		
200.0	200.0	175.6	175.6	0.5	0.4	111.66	-450.0	1,133.2	1,219.3	1,218.4	0.92	1,319.075		
300.0	300.0	274.8	274.8	0.8	0.8	111.67	-450.3	1,133.5	1,219.7	1,218.1	1.63	748.228		
400.0	400.0	374.6	374.6	1.2	1.1	111.69	-450.9	1,133.8	1,220.2	1,217.8	2.34	521.790		
500.0	500.0	474.6	474.6	1.6	1.5	111.72	-451.6	1,134.0	1,220.6	1,217.6	3.05	400.623		
600.0	600.0	573.7	573.7	1.9	1.8	111.74	-452.3	1,134.2	1,221.1	1,217.3	3.75	325.443		
700.0	700.0	672.2	672.2	2.3	2.2	111.76	-452.9	1,134.6	1,221.7	1,217.2	4.46	274.191		
800.0	800.0	771.8	771.8	2.6	2.5	111.77	-453.3	1,135.1	1,222.3	1,217.2	5.16	236.760		
900.0	900.0	870.8	870.8	3.0	2.9	111.77	-453.7	1,135.7	1,223.0	1,217.2	5.87	208.410		
1,000.0	1,000.0	970.1	970.1	3.4	3.2	111.78	-454.0	1,136.4	1,223.8	1,217.2	6.57	186.138		
1,100.0	1,100.0	1,071.2	1,071.2	3.7	3.6	111.78	-454.3	1,137.2	1,224.6	1,217.3	7.29	168.036		
1,200.0	1,200.0	1,174.7	1,174.6	4.1	3.9	111.78	-454.7	1,137.7	1,225.2	1,217.2	8.01	152.985		
1,300.0	1,300.0	1,280.8	1,280.8	4.4	4.3	111.79	-454.9	1,137.8	1,225.4	1,216.7	8.74	140.251		
1,400.0	1,400.0	1,382.9	1,382.8	4.8	4.7	111.80	-455.0	1,137.6	1,225.2	1,215.8	9.45	129.663		
1,500.0	1,500.0	1,483.2	1,483.2	5.1	5.0	111.80	-455.0	1,137.3	1,225.0	1,214.8	10.16	120.621		
1,600.0	1,600.0	1,583.1	1,583.1	5.5	5.4	111.81	-455.1	1,137.0	1,224.7	1,213.9	10.86	112.765		
1,700.0	1,700.0	1,681.9	1,681.9	5.9	5.7	111.82	-455.2	1,136.7	1,224.5	1,212.9	11.56	105.899		
1,800.0	1,800.0	1,781.1	1,781.1	6.2	6.1	111.83	-455.3	1,136.6	1,224.4	1,212.1	12.27	99.814		
1,900.0	1,900.0	1,881.7	1,881.7	6.6	6.4	111.84	-455.4	1,136.4	1,224.3	1,211.3	12.98	94.355		
2,000.0	2,000.0	1,984.7	1,984.7	6.9	6.8	111.85	-455.5	1,136.1	1,224.0	1,210.3	13.69	89.395		
2,100.0	2,100.0	2,091.5	2,091.5	7.3	7.1	111.87	-455.7	1,135.3	1,223.4	1,209.0	14.42	84.825		
2,200.0	2,200.0	2,200.4	2,200.3	7.7	7.5	111.89	-455.7	1,133.8	1,222.1	1,206.9	15.16	80.619		
2,257.6	2,257.6	2,261.1	2,261.0	7.9	7.7	162.92	-455.5	1,132.7	1,221.6	1,206.0	15.57	78.438		
2,300.0	2,300.0	2,305.8	2,305.8	8.0	7.9	162.95	-455.4	1,131.7	1,221.9	1,206.0	15.88	76.944 ES		
2,400.0	2,399.8	2,405.2	2,405.1	8.4	8.2	163.03	-455.2	1,129.6	1,224.8	1,208.2	16.58	73.879		
2,500.0	2,499.5	2,504.2	2,504.1	8.7	8.6	163.13	-454.9	1,127.6	1,231.1	1,213.9	17.28	71.263		
2,600.0	2,598.7	2,603.9	2,603.8	9.1	8.9	163.27	-454.7	1,125.5	1,240.8	1,222.8	17.98	69.029		
2,700.0	2,697.5	2,702.7	2,702.6	9.4	9.3	163.43	-454.5	1,123.4	1,253.8	1,235.1	18.67	67.154		
2,800.0	2,795.6	2,798.3	2,798.1	9.8	9.6	163.60	-454.3	1,121.5	1,270.3	1,250.9	19.35	65.632		
2,900.0	2,893.1	2,894.1	2,893.9	10.1	9.9	163.79	-454.4	1,119.8	1,290.3	1,270.2	20.04	64.389		
3,000.0	2,989.6	2,989.3	2,989.1	10.5	10.3	164.01	-454.6	1,118.0	1,313.7	1,293.0	20.72	63.402		
3,100.0	3,085.3	3,085.2	3,085.0	10.9	10.6	164.25	-455.1	1,116.3	1,340.5	1,319.1	21.40	62.632		
3,200.0	3,179.8	3,178.4	3,178.2	11.2	10.9	164.52	-456.1	1,114.4	1,370.6	1,348.5	22.08	62.086		
3,300.0	3,273.2	3,272.0	3,271.7	11.6	11.3	164.83	-458.0	1,112.2	1,404.1	1,381.3	22.75	61.714		
3,387.5	3,353.8	3,352.9	3,352.6	11.9	11.6	165.14	-460.4	1,109.9	1,436.0	1,412.7	23.34	61.526		
3,400.0	3,365.2	3,364.4	3,364.0	12.0	11.6	165.21	-460.7	1,109.6	1,440.8	1,417.3	23.43	61.504		
3,500.0	3,456.8	3,455.5	3,455.1	12.4	11.9	165.76	-463.5	1,106.9	1,478.8	1,454.7	24.09	61.382		
3,600.0	3,548.3	3,543.0	3,542.4	12.8	12.2	166.26	-466.4	1,104.4	1,517.0	1,492.2	24.75	61.301		
3,700.0	3,639.8	3,630.6	3,630.0	13.2	12.5	166.74	-469.4	1,102.2	1,555.6	1,530.2	25.41	61.231		
3,800.0	3,731.4	3,724.7	3,724.0	13.6	12.9	167.23	-472.5	1,099.8	1,594.4	1,568.3	26.10	61.095		
3,900.0	3,822.9	3,816.0	3,815.2	14.0	13.2	167.69	-475.6	1,097.4	1,633.1	1,606.3	26.78	60.985		
4,000.0	3,914.4	3,908.8	3,908.0	14.4	13.5	168.14	-479.0	1,094.9	1,671.9	1,644.5	27.47	60.860		
4,100.0	4,005.9	4,010.7	4,009.7	14.8	13.9	168.61	-482.6	1,091.6	1,710.5	1,682.3	28.21	60.639		
4,200.0	4,097.5	4,110.2	4,109.1	15.2	14.2	169.07	-486.3	1,087.8	1,748.7	1,719.7	28.94	60.428		
4,300.0	4,189.0	4,205.8	4,204.6	15.6	14.5	169.50	-489.8	1,083.8	1,786.6	1,756.9	29.65	60.247		
4,400.0	4,280.5	4,300.1	4,298.7	16.1	14.9	169.89	-492.9	1,079.8	1,824.4	1,794.1	30.37	60.078		
4,500.0	4,372.1	4,395.7	4,394.1	16.5	15.2	170.25	-495.5	1,075.9	1,862.2	1,831.1	31.09	59.900		
4,600.0	4,463.6	4,491.6	4,490.0	16.9	15.6	170.58	-497.4	1,072.2	1,899.8	1,868.0	31.81	59.720		
4,700.0	4,555.1	4,580.8	4,579.2	17.4	15.9	170.84	-498.4	1,069.2	1,937.5	1,905.0	32.51	59.600		
4,800.0	4,646.7	4,668.0	4,666.3	17.8	16.2	171.08	-499.1	1,066.6	1,975.3	1,942.1	33.19	59.508		
4,900.0	4,738.2	4,753.8	4,752.1	18.2	16.5	171.29	-499.5	1,064.5	2,013.5	1,979.6	33.88	59.438		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch 22-07 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,000.0	4,829.7	4,841.8	4,840.0	18.7	16.8	171.48	-499.8	1,062.8	2,052.0	2,017.4	34.57	59.360		
5,100.0	4,921.3	4,933.2	4,931.4	19.1	17.1	171.67	-499.9	1,061.2	2,090.5	2,055.3	35.28	59.258		
5,200.0	5,012.8	5,024.0	5,022.2	19.5	17.4	171.85	-499.9	1,059.6	2,129.2	2,093.2	35.99	59.164		
5,300.0	5,104.3	5,113.5	5,111.7	20.0	17.7	172.01	-499.8	1,058.3	2,167.9	2,131.2	36.69	59.085		
5,400.0	5,195.8	5,205.4	5,203.6	20.4	18.0	172.17	-499.6	1,057.1	2,206.7	2,169.3	37.41	58.989		
5,500.0	5,287.4	5,299.6	5,297.8	20.9	18.4	172.33	-499.3	1,055.8	2,245.4	2,207.3	38.14	58.876		
5,600.0	5,378.9	5,385.3	5,383.5	21.3	18.7	172.47	-499.3	1,054.6	2,284.3	2,245.5	38.83	58.833		
5,700.0	5,470.4	5,474.1	5,472.3	21.8	19.0	172.62	-499.5	1,053.4	2,323.4	2,283.8	39.53	58.773		
5,800.0	5,562.0	5,563.6	5,561.7	22.2	19.3	172.76	-499.8	1,052.3	2,362.6	2,322.3	40.24	58.711		
5,900.0	5,653.5	5,654.4	5,652.5	22.7	19.6	172.90	-500.1	1,051.2	2,401.8	2,360.9	40.96	58.642		
6,000.0	5,745.0	5,740.6	5,738.8	23.1	19.9	173.03	-500.5	1,050.3	2,441.2	2,399.5	41.65	58.609		
6,100.0	5,836.6	5,826.9	5,825.0	23.6	20.2	173.16	-500.8	1,049.6	2,480.9	2,438.5	42.35	58.586		
6,200.0	5,928.1	5,925.7	5,923.8	24.0	20.6	173.28	-500.8	1,049.0	2,520.4	2,477.3	43.11	58.467		
6,278.6	6,000.0	5,997.0	5,995.1	24.4	20.8	173.37	-500.7	1,048.6	2,551.4	2,507.8	43.67	58.419		
6,290.0	6,010.4	6,007.3	6,005.4	24.4	20.8	171.48	-500.6	1,048.6	2,556.0	2,512.3	43.76	58.414		
6,300.0	6,019.5	6,016.3	6,014.5	24.5	20.9	169.50	-500.6	1,048.5	2,560.1	2,516.3	43.83	58.409		
6,350.0	6,065.8	6,062.2	6,060.4	24.7	21.0	158.04	-500.5	1,048.3	2,578.1	2,533.9	44.19	58.344		
6,400.0	6,113.0	6,109.0	6,107.1	24.9	21.2	143.42	-500.3	1,048.1	2,592.4	2,547.9	44.54	58.202		
6,450.0	6,160.7	6,156.0	6,154.1	25.1	21.4	126.13	-500.1	1,048.0	2,603.0	2,558.1	44.89	57.986		
6,500.0	6,208.5	6,203.2	6,201.3	25.3	21.5	108.62	-499.8	1,047.9	2,609.7	2,564.5	45.23	57.700		
6,550.0	6,255.8	6,250.8	6,248.9	25.4	21.7	93.82	-499.3	1,047.9	2,612.6	2,567.0	45.56	57.345		
6,600.0	6,302.5	6,297.7	6,295.8	25.6	21.9	82.83	-498.8	1,047.9	2,611.6	2,565.7	45.87	56.929		
6,650.0	6,347.9	6,339.5	6,337.6	25.7	22.0	75.17	-498.2	1,048.1	2,606.8	2,560.7	46.15	56.485		
6,700.0	6,391.6	6,379.8	6,377.9	25.9	22.1	70.08	-497.6	1,048.4	2,598.4	2,552.0	46.41	55.991		
6,750.0	6,433.4	6,419.7	6,417.8	26.0	22.3	66.87	-496.9	1,048.8	2,586.5	2,539.8	46.65	55.439		
6,800.0	6,472.8	6,458.5	6,456.6	26.1	22.4	65.10	-496.4	1,049.1	2,571.2	2,524.3	46.89	54.834		
6,850.0	6,509.4	6,494.4	6,492.5	26.2	22.5	64.46	-496.1	1,049.3	2,552.6	2,505.5	47.11	54.190		
6,900.0	6,543.0	6,542.2	6,540.3	26.3	22.7	65.02	-495.8	1,049.3	2,531.1	2,483.7	47.39	53.410		
6,950.0	6,573.2	6,587.4	6,585.5	26.4	22.9	66.47	-495.3	1,049.1	2,506.6	2,458.9	47.66	52.590		
7,000.0	6,599.8	6,620.6	6,618.7	26.5	23.0	68.56	-495.0	1,048.8	2,479.5	2,431.6	47.87	51.792		
7,050.0	6,622.5	6,646.4	6,644.5	26.6	23.1	71.30	-494.6	1,048.5	2,450.3	2,402.2	48.06	50.988		
7,100.0	6,641.1	6,667.5	6,665.6	26.7	23.1	74.68	-494.2	1,048.3	2,419.2	2,371.0	48.22	50.167		
7,150.0	6,655.4	6,683.7	6,681.8	26.8	23.2	78.65	-493.9	1,048.2	2,386.6	2,338.2	48.38	49.332		
7,200.0	6,665.4	6,694.8	6,692.8	26.9	23.2	83.13	-493.7	1,048.1	2,352.8	2,304.2	48.52	48.490		
7,250.0	6,670.8	6,700.6	6,698.7	27.0	23.3	88.02	-493.6	1,048.0	2,318.1	2,269.4	48.65	47.645		
7,285.7	6,672.0	6,701.6	6,699.7	27.1	23.3	91.69	-493.6	1,048.0	2,293.0	2,244.2	48.74	47.045		
7,300.0	6,672.0	6,701.5	6,699.6	27.1	23.3	91.68	-493.6	1,048.0	2,282.9	2,234.1	48.77	46.805		
7,400.0	6,672.0	6,700.5	6,698.6	27.3	23.3	91.64	-493.6	1,048.0	2,213.7	2,164.6	49.04	45.141		
7,500.0	6,672.0	6,699.5	6,697.5	27.6	23.3	91.61	-493.6	1,048.0	2,146.9	2,097.5	49.36	43.495		
7,600.0	6,672.0	6,698.5	6,696.5	28.0	23.3	91.57	-493.7	1,048.0	2,082.8	2,033.0	49.74	41.874		
7,700.0	6,672.0	6,697.4	6,695.5	28.3	23.3	91.54	-493.7	1,048.0	2,021.6	1,971.4	50.18	40.283		
7,800.0	6,672.0	6,696.4	6,694.5	28.8	23.2	91.50	-493.7	1,048.1	1,963.6	1,912.9	50.70	38.732		
7,900.0	6,672.0	6,695.4	6,693.5	29.3	23.2	91.47	-493.7	1,048.1	1,909.1	1,857.8	51.28	37.229		
8,000.0	6,672.0	6,694.4	6,692.5	29.8	23.2	91.43	-493.7	1,048.1	1,858.3	1,806.4	51.93	35.785		
8,100.0	6,672.0	6,693.4	6,691.5	30.4	23.2	91.39	-493.8	1,048.1	1,811.7	1,759.1	52.65	34.411		
8,200.0	6,672.0	6,692.3	6,690.4	31.0	23.2	91.36	-493.8	1,048.1	1,769.6	1,716.1	53.43	33.118		
8,300.0	6,672.0	6,691.3	6,689.4	31.7	23.2	91.32	-493.8	1,048.1	1,732.1	1,677.9	54.27	31.919		
8,400.0	6,672.0	6,690.3	6,688.4	32.4	23.2	91.28	-493.8	1,048.1	1,699.8	1,644.7	55.14	30.824		
8,500.0	6,672.0	6,689.3	6,687.4	33.1	23.2	91.25	-493.8	1,048.1	1,672.8	1,616.8	56.05	29.844		
8,600.0	6,672.0	6,688.2	6,686.3	33.9	23.2	91.21	-493.9	1,048.1	1,651.5	1,594.5	56.97	28.988		
8,700.0	6,672.0	6,687.2	6,685.3	34.7	23.2	91.18	-493.9	1,048.1	1,636.0	1,578.1	57.88	28.263		
8,800.0	6,672.0	6,686.2	6,684.3	35.5	23.2	91.14	-493.9	1,048.1	1,626.5	1,567.7	58.77	27.675		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch 22-07 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
8,900.0	6,672.0	6,685.2	6,683.2	36.3	23.2	91.10	-493.9	1,048.2	1,623.2	1,563.5	59.62	27.225	26.711 SF	
8,904.4	6,672.0	6,685.1	6,683.2	36.3	23.2	91.10	-493.9	1,048.2	1,623.2	1,563.5	59.66	27.208		
9,000.0	6,672.0	6,684.1	6,682.2	37.2	23.2	91.07	-493.9	1,048.2	1,626.0	1,565.6	60.41	26.915		
9,100.0	6,672.0	6,683.1	6,681.2	38.1	23.2	91.03	-494.0	1,048.2	1,634.9	1,573.8	61.13	26.745		
9,200.0	6,672.0	6,682.1	6,680.1	39.0	23.2	90.99	-494.0	1,048.2	1,649.9	1,588.1	61.77	26.711 SF		
9,300.0	6,672.0	6,681.0	6,679.1	39.9	23.2	90.96	-494.0	1,048.2	1,670.7	1,608.4	62.32	26.808		
9,400.0	6,672.0	6,680.0	6,678.1	40.8	23.2	90.92	-494.0	1,048.2	1,697.2	1,634.4	62.79	27.032		
9,500.0	6,672.0	6,678.9	6,677.0	41.8	23.2	90.88	-494.0	1,048.2	1,729.1	1,665.9	63.16	27.375		
9,600.0	6,672.0	6,677.9	6,676.0	42.7	23.2	90.85	-494.1	1,048.2	1,766.1	1,702.6	63.46	27.831		
9,700.0	6,672.0	6,676.8	6,674.9	43.7	23.2	90.81	-494.1	1,048.2	1,807.9	1,744.2	63.68	28.392		
9,800.0	6,672.0	6,675.8	6,673.9	44.7	23.2	90.77	-494.1	1,048.2	1,854.1	1,790.3	63.82	29.050		
9,900.0	6,672.0	6,674.7	6,672.8	45.7	23.2	90.74	-494.1	1,048.3	1,904.5	1,840.6	63.91	29.799		
10,000.0	6,672.0	6,673.7	6,671.8	46.7	23.2	90.70	-494.1	1,048.3	1,958.7	1,894.7	63.94	30.631		
10,100.0	6,672.0	6,672.6	6,670.7	47.7	23.2	90.66	-494.1	1,048.3	2,016.4	1,952.5	63.93	31.539		
10,200.0	6,672.0	6,671.6	6,669.7	48.8	23.2	90.62	-494.2	1,048.3	2,077.3	2,013.4	63.88	32.517		
10,300.0	6,672.0	6,670.5	6,668.6	49.8	23.2	90.59	-494.2	1,048.3	2,141.2	2,077.4	63.80	33.559		
10,400.0	6,672.0	6,669.5	6,667.6	50.9	23.2	90.55	-494.2	1,048.3	2,207.7	2,144.0	63.70	34.659		
10,500.0	6,672.0	6,668.4	6,666.5	51.9	23.2	90.51	-494.2	1,048.3	2,276.7	2,213.2	63.58	35.812		
10,600.0	6,672.0	6,667.4	6,665.5	53.0	23.1	90.48	-494.2	1,048.3	2,348.0	2,284.6	63.44	37.013		
10,700.0	6,672.0	6,666.3	6,664.4	54.1	23.1	90.44	-494.3	1,048.3	2,421.3	2,358.0	63.29	38.257		
10,800.0	6,672.0	6,665.2	6,663.3	55.2	23.1	90.40	-494.3	1,048.3	2,496.4	2,433.3	63.13	39.542		
10,900.0	6,672.0	6,664.2	6,662.3	56.3	23.1	90.36	-494.3	1,048.4	2,573.3	2,510.3	62.97	40.863		
11,000.0	6,672.0	6,663.1	6,661.2	57.4	23.1	90.32	-494.3	1,048.4	2,651.7	2,588.8	62.81	42.217		
11,100.0	6,672.0	6,662.0	6,660.1	58.5	23.1	90.29	-494.3	1,048.4	2,731.5	2,668.8	62.65	43.601		
11,200.0	6,672.0	6,661.0	6,659.1	59.6	23.1	90.25	-494.4	1,048.4	2,812.6	2,750.1	62.48	45.013		
11,300.0	6,672.0	6,659.9	6,658.0	60.7	23.1	90.21	-494.4	1,048.4	2,894.9	2,832.5	62.32	46.449		
11,400.0	6,672.0	6,658.8	6,656.9	61.8	23.1	90.17	-494.4	1,048.4	2,978.2	2,916.1	62.17	47.908		
11,500.0	6,672.0	6,657.7	6,655.8	62.9	23.1	90.14	-494.4	1,048.4	3,062.6	3,000.6	62.01	49.388		
11,600.0	6,672.0	6,656.7	6,654.8	64.1	23.1	90.10	-494.4	1,048.4	3,147.9	3,086.0	61.86	50.886		
11,700.0	6,672.0	6,655.6	6,653.7	65.2	23.1	90.06	-494.4	1,048.4	3,234.0	3,172.3	61.72	52.402		
11,800.0	6,672.0	6,654.5	6,652.6	66.3	23.1	90.02	-494.5	1,048.4	3,321.0	3,259.4	61.58	53.933		
11,900.0	6,672.0	6,653.4	6,651.5	67.5	23.1	89.98	-494.5	1,048.5	3,408.6	3,347.2	61.44	55.478		
12,000.0	6,672.0	6,652.3	6,650.4	68.6	23.1	89.94	-494.5	1,048.5	3,496.9	3,435.6	61.31	57.037		
12,100.0	6,672.0	6,651.3	6,649.3	69.8	23.1	89.91	-494.5	1,048.5	3,585.8	3,524.7	61.18	58.607		
12,200.0	6,672.0	6,650.2	6,648.3	70.9	23.1	89.87	-494.5	1,048.5	3,675.3	3,614.3	61.06	60.187		
12,300.0	6,672.0	6,649.1	6,647.2	72.1	23.1	89.83	-494.5	1,048.5	3,765.4	3,704.4	60.95	61.778		
12,400.0	6,672.0	6,648.0	6,646.1	73.2	23.1	89.79	-494.6	1,048.5	3,855.9	3,795.0	60.84	63.377		
12,500.0	6,672.0	6,646.9	6,645.0	74.4	23.1	89.75	-494.6	1,048.5	3,946.9	3,886.1	60.74	64.984		
12,600.0	6,672.0	6,645.8	6,643.9	75.5	23.1	89.71	-494.6	1,048.5	4,038.3	3,977.6	60.64	66.598		
12,700.0	6,672.0	6,644.7	6,642.8	76.7	23.1	89.67	-494.6	1,048.5	4,130.1	4,069.6	60.54	68.219		
12,800.0	6,672.0	6,643.6	6,641.7	77.9	23.1	89.64	-494.6	1,048.5	4,222.3	4,161.8	60.45	69.846		
12,900.0	6,672.0	6,642.5	6,640.6	79.0	23.1	89.60	-494.6	1,048.6	4,314.8	4,254.5	60.37	71.477		
13,000.0	6,672.0	6,641.4	6,639.5	80.2	23.1	89.56	-494.7	1,048.6	4,407.7	4,347.4	60.29	73.114		
13,100.0	6,672.0	6,640.3	6,638.4	81.4	23.1	89.52	-494.7	1,048.6	4,500.9	4,440.7	60.21	74.755		
13,200.0	6,672.0	6,639.2	6,637.3	82.6	23.0	89.48	-494.7	1,048.6	4,594.3	4,534.2	60.14	76.399		
13,300.0	6,672.0	6,638.1	6,636.2	83.7	23.0	89.44	-494.7	1,048.6	4,688.1	4,628.0	60.07	78.046		
13,400.0	6,672.0	6,637.0	6,635.1	84.9	23.0	89.40	-494.7	1,048.6	4,782.1	4,722.1	60.00	79.696		
13,500.0	6,672.0	6,635.9	6,633.9	86.1	23.0	89.36	-494.7	1,048.6	4,876.3	4,816.4	59.94	81.349		
13,600.0	6,672.0	6,634.7	6,632.8	87.3	23.0	89.32	-494.8	1,048.6	4,970.8	4,910.9	59.89	83.003		
13,700.0	6,672.0	6,633.6	6,631.7	88.4	23.0	89.28	-494.8	1,048.6	5,065.4	5,005.6	59.83	84.660		
13,800.0	6,672.0	6,632.5	6,630.6	89.6	23.0	89.24	-494.8	1,048.6	5,160.3	5,100.5	59.78	86.317		
13,900.0	6,672.0	6,631.4	6,629.5	90.8	23.0	89.20	-494.8	1,048.7	5,255.4	5,195.6	59.74	87.976		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch 22-07 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis		Distance								Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
14,000.0	6,672.0	6,630.3	6,628.4	92.0	23.0	89.16	-494.8	1,048.7	5,350.6	5,290.9	59.69	89.635		
14,100.0	6,672.0	6,629.1	6,627.2	93.2	23.0	89.12	-494.8	1,048.7	5,446.1	5,386.4	59.65	91.295		
14,200.0	6,672.0	6,628.0	6,626.1	94.4	23.0	89.08	-494.9	1,048.7	5,541.7	5,482.0	59.62	92.954		
14,300.0	6,672.0	6,626.9	6,625.0	95.6	23.0	89.04	-494.9	1,048.7	5,637.4	5,577.8	59.58	94.614		
14,400.0	6,672.0	6,625.8	6,623.8	96.8	23.0	89.00	-494.9	1,048.7	5,733.3	5,673.7	59.55	96.274		
14,500.0	6,672.0	6,624.6	6,622.7	98.0	23.0	88.96	-494.9	1,048.7	5,829.3	5,769.8	59.52	97.933		
14,600.0	6,672.0	6,623.5	6,621.6	99.2	23.0	88.92	-494.9	1,048.7	5,925.5	5,866.0	59.50	99.591		
14,700.0	6,672.0	6,622.4	6,620.4	100.4	23.0	88.88	-494.9	1,048.7	6,021.8	5,962.3	59.48	101.249		
14,800.0	6,672.0	6,621.2	6,619.3	101.6	23.0	88.84	-494.9	1,048.8	6,118.2	6,058.7	59.45	102.905		
14,900.0	6,672.0	6,620.1	6,618.2	102.7	23.0	88.80	-495.0	1,048.8	6,214.7	6,155.3	59.44	104.560		
15,000.0	6,672.0	6,618.9	6,617.0	103.9	23.0	88.76	-495.0	1,048.8	6,311.3	6,251.9	59.42	106.214		
15,100.0	6,672.0	6,617.8	6,615.9	105.1	23.0	88.71	-495.0	1,048.8	6,408.1	6,348.7	59.41	107.866		
15,200.0	6,672.0	6,616.6	6,614.7	106.3	23.0	88.67	-495.0	1,048.8	6,504.9	6,445.5	59.40	109.516		
15,300.0	6,672.0	6,615.5	6,613.6	107.6	23.0	88.63	-495.0	1,048.8	6,601.9	6,542.5	59.39	111.165		
15,400.0	6,672.0	6,614.3	6,612.4	108.8	23.0	88.59	-495.0	1,048.8	6,698.9	6,639.5	59.38	112.811		
15,500.0	6,672.0	6,613.2	6,611.3	110.0	23.0	88.55	-495.1	1,048.8	6,796.0	6,736.6	59.38	114.456		
15,600.0	6,672.0	6,612.0	6,610.1	111.2	23.0	88.51	-495.1	1,048.8	6,893.2	6,833.8	59.37	116.098		
15,700.0	6,672.0	6,610.9	6,609.0	112.4	22.9	88.47	-495.1	1,048.9	6,990.5	6,931.1	59.37	117.737		
15,800.0	6,672.0	6,609.7	6,607.8	113.6	22.9	88.42	-495.1	1,048.9	7,087.9	7,028.5	59.38	119.374		
15,900.0	6,672.0	6,608.6	6,606.7	114.8	22.9	88.38	-495.1	1,048.9	7,185.3	7,125.9	59.38	121.009		
16,000.0	6,672.0	6,607.4	6,605.5	116.0	22.9	88.34	-495.1	1,048.9	7,282.8	7,223.4	59.38	122.641		
16,100.0	6,672.0	6,606.2	6,604.3	117.2	22.9	88.30	-495.1	1,048.9	7,380.4	7,321.0	59.39	124.270		
16,200.0	6,672.0	6,605.1	6,603.2	118.4	22.9	88.26	-495.2	1,048.9	7,478.0	7,418.6	59.40	125.896		
16,300.0	6,672.0	6,603.9	6,602.0	119.6	22.9	88.21	-495.2	1,048.9	7,575.7	7,516.3	59.41	127.519		
16,400.0	6,672.0	6,602.7	6,600.8	120.8	22.9	88.17	-495.2	1,048.9	7,673.5	7,614.0	59.42	129.138		
16,500.0	6,672.0	6,601.5	6,599.6	122.0	22.9	88.13	-495.2	1,048.9	7,771.3	7,711.9	59.43	130.755		
16,600.0	6,672.0	6,600.4	6,598.5	123.2	22.9	88.09	-495.2	1,049.0	7,869.2	7,809.7	59.45	132.368		
16,700.0	6,672.0	6,600.0	6,598.1	124.5	22.9	88.07	-495.2	1,049.0	7,967.1	7,907.6	59.47	133.976		
16,800.0	6,672.0	6,600.0	6,598.1	125.7	22.9	88.07	-495.2	1,049.0	8,065.1	8,005.6	59.49	135.578		
16,900.0	6,672.0	6,600.0	6,598.1	126.9	22.9	88.07	-495.2	1,049.0	8,163.1	8,103.6	59.51	137.177		
17,000.0	6,672.0	6,600.0	6,598.1	128.1	22.9	88.07	-495.2	1,049.0	8,261.2	8,201.7	59.53	138.772		
17,100.0	6,672.0	6,600.0	6,598.1	129.3	22.9	88.07	-495.2	1,049.0	8,359.3	8,299.8	59.55	140.363		
17,200.0	6,672.0	6,600.0	6,598.1	130.5	22.9	88.07	-495.2	1,049.0	8,457.5	8,397.9	59.58	141.951		
17,300.0	6,672.0	6,600.0	6,598.1	131.7	22.9	88.07	-495.2	1,049.0	8,555.7	8,496.1	59.61	143.534		
17,400.0	6,672.0	6,600.0	6,598.1	133.0	22.9	88.07	-495.2	1,049.0	8,654.0	8,594.3	59.64	145.114		
17,500.0	6,672.0	6,600.0	6,598.1	134.2	22.9	88.07	-495.2	1,049.0	8,752.3	8,692.6	59.67	146.690		
17,600.0	6,672.0	6,600.0	6,598.1	135.4	22.9	88.07	-495.2	1,049.0	8,850.6	8,790.9	59.70	148.261		
17,700.0	6,672.0	6,600.0	6,598.1	136.6	22.9	88.06	-495.2	1,049.0	8,949.0	8,889.3	59.73	149.829		
17,800.0	6,672.0	6,600.0	6,598.1	137.8	22.9	88.06	-495.2	1,049.0	9,047.4	8,987.6	59.76	151.392		
17,900.0	6,672.0	6,600.0	6,598.1	139.0	22.9	88.06	-495.2	1,049.0	9,145.9	9,086.1	59.80	152.951		
18,000.0	6,672.0	6,600.0	6,598.1	140.3	22.9	88.06	-495.2	1,049.0	9,244.3	9,184.5	59.83	154.506		
18,100.0	6,672.0	6,600.0	6,598.1	141.5	22.9	88.06	-495.2	1,049.0	9,342.9	9,283.0	59.87	156.057		
18,200.0	6,672.0	6,600.0	6,598.1	142.7	22.9	88.06	-495.2	1,049.0	9,441.4	9,381.5	59.91	157.603		
18,300.0	6,672.0	6,600.0	6,598.1	143.9	22.9	88.06	-495.2	1,049.0	9,540.0	9,480.1	59.95	159.145		
18,342.5	6,672.0	6,600.0	6,598.1	144.4	22.9	88.06	-495.2	1,049.0	9,581.9	9,521.9	59.96	159.798		



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch 24-07 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWGS, 6600-2_Unknown													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis		Distance								Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	160.78	-3,411.0	1,189.2	3,612.6					
100.0	100.0	69.3	69.3	0.1	0.1	160.78	-3,410.9	1,189.3	3,612.3	3,612.1	0.25	N/A		
200.0	200.0	173.5	173.5	0.5	0.4	160.77	-3,410.4	1,189.8	3,612.0	3,611.1	0.92	3,936.785		
300.0	300.0	281.2	281.2	0.8	0.8	160.76	-3,409.9	1,190.0	3,611.6	3,610.0	1.65	2,185.574		
400.0	400.0	373.9	373.9	1.2	1.1	160.76	-3,409.4	1,190.0	3,611.1	3,608.8	2.34	1,546.302		
500.0	500.0	478.4	478.4	1.6	1.5	160.76	-3,409.1	1,189.8	3,610.8	3,607.8	3.06	1,180.151		
600.0	600.0	568.6	568.5	1.9	1.8	160.77	-3,408.9	1,189.4	3,610.4	3,606.7	3.73	967.185		
700.0	700.0	670.8	670.8	2.3	2.2	160.77	-3,408.8	1,189.1	3,610.3	3,605.9	4.45	811.555		
800.0	800.0	777.2	777.2	2.6	2.5	160.77	-3,408.5	1,188.9	3,610.0	3,604.8	5.18	696.971		
900.0	900.0	870.0	870.0	3.0	2.9	160.78	-3,408.4	1,188.4	3,609.6	3,603.7	5.86	615.699		
1,000.0	1,000.0	968.6	968.6	3.4	3.2	160.78	-3,408.3	1,188.0	3,609.4	3,602.9	6.57	549.759		
1,100.0	1,100.0	1,073.7	1,073.7	3.7	3.6	160.78	-3,408.1	1,187.9	3,609.2	3,601.9	7.29	494.953		
1,200.0	1,200.0	1,181.6	1,181.6	4.1	4.0	160.79	-3,407.7	1,187.7	3,608.8	3,600.7	8.03	449.493		
1,300.0	1,300.0	1,268.4	1,268.4	4.4	4.3	160.79	-3,407.4	1,187.3	3,608.4	3,599.7	8.69	415.206		
1,400.0	1,400.0	1,370.6	1,370.6	4.8	4.6	160.79	-3,407.4	1,187.1	3,608.3	3,598.8	9.41	383.613		
1,500.0	1,500.0	1,468.8	1,468.8	5.1	5.0	160.79	-3,407.1	1,187.0	3,608.0	3,597.9	10.11	356.957		
1,600.0	1,600.0	1,563.8	1,563.8	5.5	5.3	160.79	-3,407.1	1,186.9	3,607.9	3,597.1	10.80	334.127		
1,700.0	1,700.0	1,666.8	1,666.8	5.9	5.7	160.79	-3,406.9	1,187.2	3,607.8	3,596.3	11.52	313.294		
1,775.9	1,775.9	1,737.9	1,737.9	6.1	5.9	160.79	-3,406.8	1,187.2	3,607.7	3,595.7	12.04	299.749 CC		
1,800.0	1,800.0	1,758.3	1,758.3	6.2	6.0	160.79	-3,406.8	1,187.2	3,607.7	3,595.5	12.19	295.878		
1,900.0	1,900.0	1,845.8	1,845.8	6.6	6.3	160.79	-3,407.1	1,187.2	3,608.0	3,595.2	12.86	280.653		
2,000.0	2,000.0	1,939.1	1,939.1	6.9	6.6	160.79	-3,407.6	1,187.5	3,608.6	3,595.1	13.54	266.556		
2,100.0	2,100.0	2,036.3	2,036.3	7.3	6.9	160.79	-3,408.3	1,187.4	3,609.3	3,595.0	14.23	253.568 ES		
2,200.0	2,200.0	2,132.3	2,132.3	7.7	7.3	160.80	-3,409.1	1,187.2	3,610.0	3,595.1	14.93	241.859		
2,300.0	2,300.0	2,233.5	2,233.4	8.0	7.6	-148.19	-3,410.0	1,187.2	3,612.4	3,596.8	15.63	231.063		
2,400.0	2,399.8	2,339.3	2,339.2	8.4	8.0	-148.17	-3,410.8	1,187.1	3,617.5	3,601.1	16.36	221.174		
2,500.0	2,499.5	2,437.9	2,437.9	8.7	8.3	-148.16	-3,411.5	1,187.1	3,625.6	3,608.5	17.05	212.602		
2,600.0	2,598.7	2,546.4	2,546.4	9.1	8.7	-148.15	-3,412.0	1,187.4	3,636.4	3,618.6	17.79	204.454		
2,700.0	2,697.5	2,642.4	2,642.3	9.4	9.1	-148.13	-3,412.4	1,187.4	3,650.1	3,631.7	18.48	197.569		
2,800.0	2,795.6	2,733.9	2,733.9	9.8	9.4	-148.10	-3,412.9	1,187.6	3,667.0	3,647.9	19.15	191.498		
2,900.0	2,893.1	2,835.6	2,835.5	10.1	9.7	-148.08	-3,413.4	1,188.0	3,686.9	3,667.0	19.86	185.652		
3,000.0	2,989.6	2,934.4	2,934.3	10.5	10.1	-148.05	-3,413.7	1,188.2	3,709.4	3,688.9	20.56	180.424		
3,100.0	3,085.3	3,016.1	3,016.0	10.9	10.4	-147.97	-3,414.3	1,188.4	3,735.2	3,714.0	21.20	176.190		
3,200.0	3,179.8	3,093.5	3,093.5	11.2	10.6	-147.86	-3,415.0	1,188.7	3,764.2	3,742.4	21.82	172.477		
3,300.0	3,273.2	3,176.5	3,176.4	11.6	10.9	-147.75	-3,416.1	1,189.1	3,796.5	3,774.0	22.47	168.960		
3,387.5	3,353.8	3,235.9	3,235.9	11.9	11.1	-147.59	-3,417.2	1,189.3	3,827.3	3,804.4	22.99	166.505		
3,400.0	3,365.2	3,243.5	3,243.4	12.0	11.2	-147.62	-3,417.3	1,189.3	3,832.0	3,808.9	23.06	166.188		
3,500.0	3,456.8	3,305.1	3,305.0	12.4	11.4	-147.82	-3,419.0	1,189.5	3,869.3	3,845.7	23.62	163.805		
3,600.0	3,548.3	3,387.7	3,387.5	12.8	11.7	-148.09	-3,421.5	1,189.8	3,907.1	3,882.9	24.27	161.002		
3,700.0	3,639.8	3,478.7	3,478.5	13.2	12.0	-148.39	-3,424.5	1,190.2	3,945.2	3,920.2	24.95	158.119		
3,800.0	3,731.4	3,572.1	3,571.8	13.6	12.3	-148.68	-3,427.5	1,190.3	3,983.3	3,957.6	25.65	155.308		
3,900.0	3,822.9	3,670.0	3,669.7	14.0	12.6	-148.97	-3,430.7	1,190.2	4,021.3	3,994.9	26.37	152.519		
4,000.0	3,914.4	3,771.1	3,770.8	14.4	13.0	-149.28	-3,433.7	1,190.3	4,059.2	4,032.1	27.10	149.783		
4,100.0	4,005.9	3,852.0	3,851.7	14.8	13.3	-149.52	-3,435.9	1,190.6	4,097.2	4,069.4	27.76	147.601		
4,200.0	4,097.5	3,926.7	3,926.3	15.2	13.5	-149.75	-3,438.1	1,191.2	4,135.6	4,107.2	28.39	145.656		
4,300.0	4,189.0	4,006.4	4,006.0	15.6	13.8	-149.99	-3,440.6	1,192.3	4,174.3	4,145.3	29.05	143.698		
4,400.0	4,280.5	4,098.5	4,098.0	16.1	14.1	-150.27	-3,443.2	1,194.1	4,213.2	4,183.5	29.76	141.581		
4,500.0	4,372.1	4,180.4	4,179.9	16.5	14.4	-150.52	-3,445.7	1,195.7	4,252.3	4,221.9	30.43	139.752		
4,600.0	4,463.6	4,273.6	4,273.0	16.9	14.8	-150.79	-3,448.6	1,197.4	4,291.5	4,260.4	31.15	137.791		
4,700.0	4,555.1	4,356.0	4,355.4	17.4	15.1	-151.03	-3,451.2	1,199.0	4,330.8	4,299.0	31.82	136.105		
4,800.0	4,646.7	4,438.3	4,437.6	17.8	15.3	-151.26	-3,454.0	1,200.4	4,370.4	4,337.9	32.49	134.497		
4,900.0	4,738.2	4,528.9	4,528.1	18.2	15.7	-151.51	-3,457.0	1,202.3	4,410.2	4,377.0	33.21	132.809		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch 24-07 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWGS, 6600-2_Unknown													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis		Distance								Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,000.0	4,829.7	4,635.8	4,635.0	18.7	16.0	-151.80	-3,460.7	1,204.0	4,449.9	4,415.9	33.99	130.912		
5,100.0	4,921.3	4,754.6	4,753.7	19.1	16.5	-152.12	-3,464.0	1,205.7	4,489.0	4,454.2	34.83	128.886		
5,200.0	5,012.8	4,842.2	4,841.2	19.5	16.8	-152.35	-3,466.3	1,206.7	4,528.0	4,492.4	35.53	127.428		
5,300.0	5,104.3	4,933.8	4,932.8	20.0	17.1	-152.58	-3,468.7	1,208.0	4,567.2	4,530.9	36.26	125.967		
5,400.0	5,195.8	5,041.4	5,040.3	20.4	17.5	-152.86	-3,471.0	1,209.8	4,606.1	4,569.0	37.05	124.318		
5,500.0	5,287.4	5,128.5	5,127.4	20.9	17.8	-153.08	-3,472.9	1,211.1	4,645.0	4,607.3	37.76	123.024		
5,600.0	5,378.9	5,215.8	5,214.7	21.3	18.1	-153.29	-3,474.9	1,212.5	4,684.1	4,645.6	38.47	121.775		
5,700.0	5,470.4	5,352.5	5,351.4	21.8	18.5	-153.62	-3,477.5	1,214.3	4,723.0	4,683.6	39.39	119.897		
5,800.0	5,562.0	5,485.6	5,484.4	22.2	19.0	-153.93	-3,479.0	1,214.7	4,760.7	4,720.4	40.30	118.123		
5,900.0	5,653.5	5,590.6	5,589.4	22.7	19.4	-154.16	-3,480.0	1,214.5	4,798.2	4,757.1	41.09	116.764		
6,000.0	5,745.0	5,678.0	5,676.9	23.1	19.7	-154.35	-3,480.6	1,214.2	4,835.5	4,793.7	41.81	115.663		
6,100.0	5,836.6	5,798.2	5,797.1	23.6	20.1	-154.61	-3,481.3	1,214.0	4,872.8	4,830.2	42.66	114.212		
6,200.0	5,928.1	5,887.2	5,886.0	24.0	20.4	-154.79	-3,481.6	1,213.4	4,909.8	4,866.5	43.39	113.165		
6,278.6	6,000.0	5,951.8	5,950.6	24.4	20.6	-154.92	-3,482.1	1,212.8	4,939.0	4,895.1	43.93	112.426		
6,290.0	6,010.4	5,960.9	5,959.7	24.4	20.7	-156.57	-3,482.2	1,212.7	4,943.4	4,899.4	44.01	112.324		
6,300.0	6,019.5	5,969.0	5,967.8	24.5	20.7	-158.72	-3,482.2	1,212.6	4,947.3	4,903.2	44.08	112.236		
6,350.0	6,065.8	6,016.4	6,015.2	24.7	20.9	-171.12	-3,482.5	1,212.4	4,965.7	4,921.3	44.45	111.722		
6,400.0	6,113.0	6,086.7	6,085.6	24.9	21.1	173.30	-3,482.9	1,211.7	4,982.2	4,937.3	44.91	110.944		
6,450.0	6,160.7	6,134.0	6,132.8	25.1	21.3	155.03	-3,483.1	1,211.1	4,996.5	4,951.3	45.26	110.403		
6,500.0	6,208.5	6,175.8	6,174.6	25.3	21.4	136.54	-3,483.3	1,210.5	5,008.8	4,963.2	45.57	109.904		
6,550.0	6,255.8	6,225.7	6,224.5	25.4	21.6	120.77	-3,483.7	1,209.7	5,018.9	4,973.0	45.92	109.297		
6,600.0	6,302.5	6,286.9	6,285.7	25.6	21.8	108.86	-3,484.0	1,208.8	5,026.7	4,980.4	46.31	108.549		
6,650.0	6,347.9	6,344.5	6,343.3	25.7	22.0	100.32	-3,484.1	1,207.9	5,032.0	4,985.3	46.67	107.813		
6,700.0	6,391.6	6,399.3	6,398.1	25.9	22.2	94.32	-3,484.2	1,206.8	5,034.9	4,987.9	47.02	107.079		
6,750.0	6,433.4	6,430.9	6,429.7	26.0	22.3	90.03	-3,484.2	1,206.1	5,035.6	4,988.3	47.26	106.546		
6,800.0	6,472.8	6,460.5	6,459.3	26.1	22.4	87.05	-3,484.3	1,205.6	5,034.1	4,986.6	47.49	106.002		
6,850.0	6,509.4	6,488.0	6,486.8	26.2	22.5	85.06	-3,484.4	1,205.2	5,030.6	4,982.9	47.71	105.442		
6,900.0	6,543.0	6,534.2	6,533.0	26.3	22.6	84.04	-3,484.5	1,204.6	5,025.0	4,977.0	47.98	104.727		
6,950.0	6,573.2	6,593.0	6,591.7	26.4	22.8	83.80	-3,484.3	1,203.8	5,017.3	4,969.1	48.29	103.897		
7,000.0	6,599.8	6,622.5	6,621.3	26.5	23.3	83.86	-3,484.1	1,203.4	5,007.8	4,958.8	48.98	102.244		
7,050.0	6,622.5	6,644.7	6,643.5	26.6	23.9	84.31	-3,484.0	1,203.1	4,996.5	4,946.9	49.64	100.662		
7,100.0	6,641.1	6,662.8	6,661.5	26.7	24.3	85.13	-3,483.8	1,202.9	4,983.8	4,933.6	50.20	99.282		
7,150.0	6,655.4	6,676.5	6,675.3	26.8	24.6	86.28	-3,483.7	1,202.7	4,969.6	4,919.0	50.66	98.098		
7,200.0	6,665.4	6,685.9	6,684.7	26.9	24.9	87.70	-3,483.7	1,202.6	4,954.3	4,903.3	51.02	97.108		
7,250.0	6,670.8	6,690.8	6,689.5	27.0	25.0	89.37	-3,483.6	1,202.5	4,937.9	4,886.6	51.27	96.311		
7,285.7	6,672.0	6,691.5	6,690.2	27.1	25.0	90.70	-3,483.6	1,202.5	4,925.6	4,874.2	51.38	95.859		
7,300.0	6,672.0	6,691.3	6,690.1	27.1	25.0	90.70	-3,483.6	1,202.5	4,920.6	4,869.2	51.42	95.698		
7,400.0	6,672.0	6,690.1	6,688.8	27.3	25.0	90.68	-3,483.6	1,202.6	4,886.8	4,835.1	51.69	94.538		
7,500.0	6,672.0	6,688.8	6,687.5	27.6	24.9	90.66	-3,483.6	1,202.6	4,854.8	4,802.8	52.02	93.334		
7,600.0	6,672.0	6,687.5	6,686.3	28.0	24.9	90.65	-3,483.6	1,202.6	4,824.6	4,772.3	52.39	92.092		
7,700.0	6,672.0	6,686.3	6,685.0	28.3	24.9	90.63	-3,483.7	1,202.6	4,796.4	4,743.6	52.81	90.819		
7,800.0	6,672.0	6,685.0	6,683.8	28.8	24.8	90.62	-3,483.7	1,202.6	4,770.1	4,716.8	53.28	89.523		
7,900.0	6,672.0	6,683.7	6,682.5	29.3	24.8	90.60	-3,483.7	1,202.6	4,745.8	4,692.0	53.80	88.211		
8,000.0	6,672.0	6,682.5	6,681.2	29.8	24.8	90.59	-3,483.7	1,202.7	4,723.4	4,669.1	54.36	86.891		
8,100.0	6,672.0	6,681.2	6,680.0	30.4	24.7	90.57	-3,483.7	1,202.7	4,703.1	4,648.2	54.96	85.573		
8,200.0	6,672.0	6,680.0	6,678.7	31.0	24.7	90.56	-3,483.7	1,202.7	4,684.9	4,629.3	55.60	84.262		
8,300.0	6,672.0	6,678.7	6,677.5	31.7	24.7	90.54	-3,483.7	1,202.7	4,668.7	4,612.4	56.27	82.966		
8,400.0	6,672.0	6,677.4	6,676.2	32.4	24.7	90.52	-3,483.7	1,202.7	4,654.6	4,597.7	56.98	81.693		
8,500.0	6,672.0	6,676.2	6,674.9	33.1	24.6	90.51	-3,483.7	1,202.7	4,642.7	4,585.0	57.71	80.448		
8,600.0	6,672.0	6,674.9	6,673.7	33.9	24.6	90.49	-3,483.7	1,202.7	4,632.9	4,574.4	58.47	79.237		
8,700.0	6,672.0	6,673.7	6,672.4	34.7	24.6	90.48	-3,483.7	1,202.8	4,625.2	4,566.0	59.25	78.064		
8,800.0	6,672.0	6,672.4	6,671.1	35.5	24.5	90.46	-3,483.8	1,202.8	4,619.7	4,559.6	60.05	76.934		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch 24-07 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWGS, 6600-2_Unknown													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis		Distance								Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
8,900.0	6,672.0	6,671.1	6,669.9	36.3	24.5	90.45	-3,483.8	1,202.8	4,616.3	4,555.5	60.86	75.850		
9,000.0	6,672.0	6,669.9	6,668.6	37.2	24.5	90.43	-3,483.8	1,202.8	4,615.2	4,553.5	61.69	74.815		
9,003.9	6,672.0	6,669.8	6,668.6	37.2	24.5	90.43	-3,483.8	1,202.8	4,615.2	4,553.5	61.72	74.775		
9,100.0	6,672.0	6,668.6	6,667.4	38.1	24.4	90.41	-3,483.8	1,202.8	4,616.2	4,553.7	62.52	73.832		
9,200.0	6,672.0	6,667.4	6,666.1	39.0	24.4	90.40	-3,483.8	1,202.8	4,619.4	4,556.0	63.36	72.902		
9,300.0	6,672.0	6,666.1	6,664.8	39.9	24.4	90.38	-3,483.8	1,202.9	4,624.7	4,560.5	64.21	72.026		
9,400.0	6,672.0	6,664.8	6,663.6	40.8	24.4	90.37	-3,483.8	1,202.9	4,632.2	4,567.1	65.05	71.206		
9,500.0	6,672.0	6,663.6	6,662.3	41.8	24.3	90.35	-3,483.8	1,202.9	4,641.9	4,576.0	65.90	70.442		
9,600.0	6,672.0	6,662.3	6,661.1	42.7	24.3	90.34	-3,483.8	1,202.9	4,653.6	4,586.9	66.73	69.734		
9,700.0	6,672.0	6,661.1	6,659.8	43.7	24.3	90.32	-3,483.8	1,202.9	4,667.6	4,600.0	67.57	69.081		
9,800.0	6,672.0	6,659.8	6,658.6	44.7	24.2	90.30	-3,483.8	1,202.9	4,683.6	4,615.2	68.39	68.484		
9,900.0	6,672.0	6,658.5	6,657.3	45.7	24.2	90.29	-3,483.9	1,203.0	4,701.7	4,632.5	69.20	67.941		
10,000.0	6,672.0	6,657.3	6,656.0	46.7	24.2	90.27	-3,483.9	1,203.0	4,721.8	4,651.8	70.00	67.452		
10,100.0	6,672.0	6,656.0	6,654.8	47.7	24.1	90.26	-3,483.9	1,203.0	4,744.0	4,673.2	70.79	67.016		
10,200.0	6,672.0	6,654.8	6,653.5	48.8	24.1	90.24	-3,483.9	1,203.0	4,768.2	4,696.6	71.56	66.632		
10,300.0	6,672.0	6,653.5	6,652.3	49.8	24.1	90.23	-3,483.9	1,203.0	4,794.3	4,722.0	72.31	66.298		
10,400.0	6,672.0	6,652.2	6,651.0	50.9	24.1	90.21	-3,483.9	1,203.0	4,822.4	4,749.3	73.05	66.013		
10,500.0	6,672.0	6,651.0	6,649.7	51.9	24.0	90.20	-3,483.9	1,203.1	4,852.4	4,778.6	73.77	65.777		
10,600.0	6,672.0	6,649.7	6,648.5	53.0	24.0	90.18	-3,483.9	1,203.1	4,884.2	4,809.8	74.47	65.586		
10,700.0	6,672.0	6,648.5	6,647.2	54.1	24.0	90.16	-3,483.9	1,203.1	4,917.9	4,842.8	75.15	65.441		
10,800.0	6,672.0	6,647.2	6,646.0	55.2	23.9	90.15	-3,483.9	1,203.1	4,953.4	4,877.6	75.81	65.340		
10,900.0	6,672.0	6,646.0	6,644.7	56.3	23.9	90.13	-3,483.9	1,203.1	4,990.7	4,914.2	76.45	65.280		
11,000.0	6,672.0	6,644.7	6,643.4	57.4	23.9	90.12	-3,484.0	1,203.1	5,029.7	4,952.6	77.07	65.262		
11,100.0	6,672.0	6,643.4	6,642.2	58.5	23.8	90.10	-3,484.0	1,203.1	5,070.3	4,992.6	77.67	65.283		
11,200.0	6,672.0	6,642.2	6,640.9	59.6	23.8	90.09	-3,484.0	1,203.2	5,112.6	5,034.4	78.24	65.342		
11,300.0	6,672.0	6,640.9	6,639.7	60.7	23.8	90.07	-3,484.0	1,203.2	5,156.5	5,077.7	78.80	65.438		
11,400.0	6,672.0	6,639.7	6,638.4	61.8	23.8	90.05	-3,484.0	1,203.2	5,201.9	5,122.6	79.33	65.570		
11,500.0	6,672.0	6,638.4	6,637.1	62.9	23.7	90.04	-3,484.0	1,203.2	5,248.9	5,169.1	79.85	65.735		
11,600.0	6,672.0	6,637.1	6,635.9	64.1	23.7	90.02	-3,484.0	1,203.2	5,297.4	5,217.0	80.34	65.934		
11,700.0	6,672.0	6,635.9	6,634.6	65.2	23.7	90.01	-3,484.0	1,203.2	5,347.2	5,266.4	80.82	66.164		
11,800.0	6,672.0	6,634.6	6,633.4	66.3	23.6	89.99	-3,484.0	1,203.3	5,398.5	5,317.2	81.27	66.424		
11,900.0	6,672.0	6,633.4	6,632.1	67.5	23.6	89.98	-3,484.0	1,203.3	5,451.2	5,369.4	81.71	66.714		
12,000.0	6,672.0	6,632.1	6,630.9	68.6	23.6	89.96	-3,484.0	1,203.3	5,505.1	5,423.0	82.13	67.033		
12,100.0	6,672.0	6,630.8	6,629.6	69.8	23.5	89.95	-3,484.1	1,203.3	5,560.4	5,477.8	82.52	67.378		
12,200.0	6,672.0	6,629.6	6,628.3	70.9	23.5	89.93	-3,484.1	1,203.3	5,616.8	5,533.9	82.91	67.750		
12,300.0	6,672.0	6,628.3	6,627.1	72.1	23.5	89.91	-3,484.1	1,203.3	5,674.5	5,591.3	83.27	68.146		
12,400.0	6,672.0	6,627.1	6,625.8	73.2	23.5	89.90	-3,484.1	1,203.4	5,733.4	5,649.8	83.62	68.567		
12,500.0	6,672.0	6,625.8	6,624.6	74.4	23.4	89.88	-3,484.1	1,203.4	5,793.4	5,709.4	83.95	69.012		
12,600.0	6,672.0	6,624.6	6,623.3	75.5	23.4	89.87	-3,484.1	1,203.4	5,854.5	5,770.2	84.26	69.478		
12,700.0	6,672.0	6,623.3	6,622.0	76.7	23.4	89.85	-3,484.1	1,203.4	5,916.6	5,832.1	84.56	69.966		
12,800.0	6,672.0	6,622.0	6,620.8	77.9	23.3	89.84	-3,484.1	1,203.4	5,979.8	5,895.0	84.85	70.475		
12,900.0	6,672.0	6,620.8	6,619.5	79.0	23.3	89.82	-3,484.1	1,203.4	6,044.0	5,958.9	85.12	71.004		
13,000.0	6,672.0	6,619.5	6,618.3	80.2	23.3	89.80	-3,484.1	1,203.5	6,109.1	6,023.8	85.38	71.553		
13,100.0	6,672.0	6,618.3	6,617.0	81.4	23.2	89.79	-3,484.1	1,203.5	6,175.2	6,089.6	85.63	72.119		
13,200.0	6,672.0	6,617.0	6,615.8	82.6	23.2	89.77	-3,484.2	1,203.5	6,242.2	6,156.4	85.86	72.704		
13,300.0	6,672.0	6,615.8	6,614.5	83.7	23.2	89.76	-3,484.2	1,203.5	6,310.1	6,224.0	86.08	73.305		
13,400.0	6,672.0	6,614.5	6,613.2	84.9	23.2	89.74	-3,484.2	1,203.5	6,378.8	6,292.6	86.29	73.923		
13,500.0	6,672.0	13,500.0	6,583.7	86.1	40.9	89.37	-3,484.3	1,203.9	6,448.4	6,344.1	104.26	61.851 SF		
13,600.0	6,672.0	13,600.0	6,582.4	87.3	41.2	89.36	-3,484.3	1,203.9	6,518.7	6,414.0	104.74	62.240		
13,700.0	6,672.0	13,700.0	6,581.1	88.4	41.5	89.34	-3,484.3	1,203.9	6,589.8	6,484.6	105.21	62.638		
13,800.0	6,672.0	13,800.0	6,579.8	89.6	41.7	89.33	-3,484.3	1,204.0	6,661.7	6,556.0	105.67	63.046		
13,900.0	6,672.0	6,619.1	6,617.8	90.8	22.9	89.80	-3,484.1	1,203.5	6,734.3	6,647.3	87.04	77.370		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch 24-07 - Original Drilling - Original Drilling - As Drilled											Offset Site Error:		0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWSG, 6600-2_Unknown											Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis		Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)		
14,000.0	6,672.0	6,616.2	6,614.9	92.0	22.9	89.76	-3,484.1	1,203.5	6,807.6	6,720.4	87.21	78.056	
14,100.0	6,672.0	6,613.3	6,612.0	93.2	22.8	89.73	-3,484.2	1,203.5	6,881.6	6,794.2	87.38	78.754	
14,200.0	6,672.0	6,610.4	6,609.1	94.4	22.8	89.69	-3,484.2	1,203.6	6,956.2	6,868.7	87.54	79.465	
14,300.0	6,672.0	6,607.4	6,606.2	95.6	22.8	89.65	-3,484.2	1,203.6	7,031.5	6,943.8	87.69	80.187	
14,400.0	6,672.0	6,604.5	6,603.3	96.8	22.8	89.62	-3,484.2	1,203.6	7,107.3	7,019.5	87.83	80.920	
14,500.0	6,672.0	6,601.5	6,600.3	98.0	22.8	89.58	-3,484.3	1,203.7	7,183.8	7,095.8	87.97	81.664	
14,600.0	6,672.0	6,598.6	6,597.3	99.2	22.8	89.54	-3,484.3	1,203.7	7,260.8	7,172.8	88.10	82.418	
14,700.0	6,672.0	6,595.6	6,594.3	100.4	22.8	89.51	-3,484.3	1,203.8	7,338.5	7,250.2	88.22	83.182	
14,800.0	6,672.0	6,592.6	6,591.3	101.6	22.8	89.47	-3,484.3	1,203.8	7,416.6	7,328.3	88.34	83.955	
14,900.0	6,672.0	6,589.6	6,588.3	102.7	22.8	89.43	-3,484.3	1,203.8	7,495.3	7,406.8	88.45	84.738	
15,000.0	6,672.0	6,586.5	6,585.3	103.9	22.8	89.39	-3,484.4	1,203.9	7,574.4	7,485.9	88.56	85.529	
15,100.0	6,672.0	6,583.5	6,582.2	105.1	22.8	89.36	-3,484.4	1,203.9	7,654.1	7,565.4	88.66	86.329	
15,200.0	6,672.0	6,580.4	6,579.2	106.3	22.8	89.32	-3,484.4	1,204.0	7,734.2	7,645.5	88.76	87.137	
15,300.0	6,672.0	6,577.3	6,576.1	107.6	22.8	89.28	-3,484.4	1,204.0	7,814.8	7,726.0	88.85	87.953	
15,400.0	6,672.0	6,574.2	6,573.0	108.8	22.7	89.24	-3,484.4	1,204.0	7,895.9	7,807.0	88.94	88.777	
15,500.0	6,672.0	6,571.1	6,569.9	110.0	22.7	89.20	-3,484.4	1,204.1	7,977.4	7,888.4	89.03	89.608	
15,600.0	6,672.0	6,568.0	6,566.7	111.2	22.7	89.16	-3,484.5	1,204.1	8,059.3	7,970.2	89.11	90.446	
15,700.0	6,672.0	6,564.8	6,563.6	112.4	22.7	89.12	-3,484.5	1,204.2	8,141.6	8,052.4	89.18	91.290	
15,800.0	6,672.0	6,561.7	6,560.4	113.6	22.7	89.08	-3,484.5	1,204.2	8,224.3	8,135.1	89.26	92.142	
15,900.0	6,672.0	6,558.5	6,557.3	114.8	22.7	89.04	-3,484.5	1,204.2	8,307.4	8,218.1	89.33	92.999	
16,000.0	6,672.0	6,555.3	6,554.1	116.0	22.7	89.00	-3,484.5	1,204.3	8,390.9	8,301.5	89.40	93.863	
16,100.0	6,672.0	6,552.1	6,550.9	117.2	22.7	88.96	-3,484.5	1,204.3	8,474.7	8,385.2	89.46	94.732	
16,200.0	6,672.0	6,548.9	6,547.6	118.4	22.7	88.92	-3,484.5	1,204.4	8,558.9	8,469.4	89.52	95.607	
16,300.0	6,672.0	6,545.6	6,544.4	119.6	22.7	88.88	-3,484.5	1,204.4	8,643.4	8,553.8	89.58	96.487	
16,400.0	6,672.0	6,542.3	6,541.1	120.8	22.7	88.84	-3,484.5	1,204.4	8,728.3	8,638.6	89.64	97.373	
16,500.0	6,672.0	6,539.1	6,537.8	122.0	22.7	88.80	-3,484.5	1,204.5	8,813.4	8,723.7	89.69	98.264	
16,600.0	6,672.0	6,535.8	6,534.5	123.2	22.6	88.76	-3,484.5	1,204.5	8,898.9	8,809.2	89.74	99.159	
16,700.0	6,672.0	6,532.4	6,531.2	124.5	22.6	88.72	-3,484.5	1,204.6	8,984.7	8,894.9	89.79	100.060	
16,800.0	6,672.0	6,529.1	6,527.9	125.7	22.6	88.68	-3,484.5	1,204.6	9,070.8	8,980.9	89.84	100.964	
16,900.0	6,672.0	6,525.7	6,524.5	126.9	22.6	88.63	-3,484.5	1,204.7	9,157.1	9,067.3	89.89	101.873	
17,000.0	6,672.0	6,522.4	6,521.1	128.1	22.6	88.59	-3,484.5	1,204.7	9,243.8	9,153.9	89.93	102.786	
17,100.0	6,672.0	6,519.0	6,517.7	129.3	22.6	88.55	-3,484.5	1,204.8	9,330.7	9,240.7	89.97	103.704	
17,200.0	6,672.0	6,515.6	6,514.3	130.5	22.6	88.51	-3,484.5	1,204.8	9,417.9	9,327.9	90.02	104.625	
17,300.0	6,672.0	6,512.1	6,510.9	131.7	22.6	88.46	-3,484.5	1,204.9	9,505.3	9,415.3	90.06	105.549	
17,400.0	6,672.0	6,508.7	6,507.4	133.0	22.6	88.42	-3,484.5	1,204.9	9,593.0	9,502.9	90.09	106.478	
17,500.0	6,672.0	6,505.2	6,504.0	134.2	22.6	88.38	-3,484.5	1,204.9	9,680.9	9,590.8	90.13	107.410	
17,600.0	6,672.0	6,501.7	6,500.5	135.4	22.6	88.33	-3,484.4	1,205.0	9,769.1	9,678.9	90.17	108.345	
17,700.0	6,672.0	6,498.5	6,497.3	136.6	22.5	88.29	-3,484.4	1,205.0	9,857.5	9,767.3	90.20	109.284	
17,800.0	6,672.0	6,495.5	6,494.3	137.8	22.5	88.26	-3,484.4	1,205.1	9,946.1	9,855.8	90.23	110.227	



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch 31-07 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
0.0	0.0	0.0	0.0	0.0	0.0	69.32	898.1	2,378.8	2,542.7					
100.0	100.0	93.0	93.0	0.1	0.2	69.32	898.1	2,378.7	2,542.6	2,542.4	0.29	8,823.927		
200.0	200.0	195.0	195.0	0.5	0.5	69.31	898.2	2,378.5	2,542.5	2,541.5	0.99	2,564.051		
300.0	300.0	296.6	296.6	0.8	0.9	69.31	898.0	2,378.4	2,542.3	2,540.5	1.71	1,490.706		
400.0	400.0	393.9	393.9	1.2	1.2	69.32	897.7	2,378.3	2,542.0	2,539.6	2.40	1,057.308		
500.0	500.0	490.5	490.5	1.6	1.5	69.33	897.4	2,378.3	2,542.0	2,538.9	3.10	820.034		
513.8	513.8	503.8	503.8	1.6	1.6	69.33	897.3	2,378.3	2,542.0	2,538.8	3.20	795.458		
600.0	600.0	587.4	587.4	1.9	1.9	69.33	897.1	2,378.4	2,542.0	2,538.2	3.80	669.688		
700.0	700.0	690.3	690.3	2.3	2.2	69.34	897.0	2,378.5	2,542.1	2,537.5	4.51	563.258		
800.0	800.0	793.6	793.6	2.6	2.6	69.34	897.1	2,378.4	2,542.0	2,536.7	5.23	485.794		
900.0	900.0	895.5	895.5	3.0	3.0	69.33	897.0	2,378.2	2,541.8	2,535.9	5.95	427.381		
978.6	978.6	968.6	968.6	3.3	3.2	69.33	897.0	2,378.2	2,541.7	2,535.2	6.48	391.987		
1,000.0	1,000.0	988.4	988.4	3.4	3.3	69.33	897.0	2,378.2	2,541.7	2,535.1	6.63	383.357		
1,100.0	1,100.0	1,097.8	1,097.8	3.7	3.7	69.34	896.9	2,378.1	2,541.6	2,534.3	7.37	344.842		
1,200.0	1,200.0	1,197.6	1,197.6	4.1	4.0	69.34	896.7	2,377.9	2,541.3	2,533.3	8.08	314.593		
1,300.0	1,300.0	1,312.3	1,312.3	4.4	4.4	69.34	896.5	2,377.2	2,540.7	2,531.9	8.84	287.478		
1,400.0	1,400.0	1,412.2	1,412.2	4.8	4.8	69.33	896.5	2,376.3	2,539.9	2,530.3	9.55	266.058		
1,500.0	1,500.0	1,504.3	1,504.3	5.1	5.1	69.32	896.7	2,375.5	2,539.2	2,528.9	10.23	248.270		
1,600.0	1,600.0	1,614.4	1,614.4	5.5	5.5	69.31	896.8	2,374.6	2,538.4	2,527.4	10.97	231.369		
1,700.0	1,700.0	1,705.7	1,705.7	5.9	5.8	69.30	896.8	2,373.9	2,537.7	2,526.0	11.65	217.835		
1,800.0	1,800.0	1,813.7	1,813.7	6.2	6.2	69.30	896.9	2,372.9	2,536.9	2,524.5	12.39	204.814		
1,900.0	1,900.0	1,907.0	1,907.0	6.6	6.5	69.29	896.9	2,372.1	2,536.1	2,523.0	13.07	194.016		
2,000.0	2,000.0	2,014.9	2,014.9	6.9	6.9	69.28	896.9	2,371.2	2,535.2	2,521.4	13.81	183.612		
2,100.0	2,100.0	2,117.7	2,117.7	7.3	7.2	69.27	897.0	2,370.0	2,534.2	2,519.7	14.53	174.455		
2,200.0	2,200.0	2,215.0	2,214.9	7.7	7.6	69.25	897.3	2,368.8	2,533.2	2,517.9	15.23	166.377		
2,256.8	2,256.8	2,272.1	2,272.1	7.9	7.8	120.26	897.4	2,368.1	2,532.9	2,517.2	15.63	162.082		
2,300.0	2,300.0	2,316.3	2,316.3	8.0	7.9	120.27	897.6	2,367.6	2,533.0	2,517.1	15.94	158.958		
2,400.0	2,399.8	2,420.0	2,419.9	8.4	8.3	120.33	898.0	2,366.2	2,534.5	2,517.9	16.65	152.229		
2,500.0	2,499.5	2,518.9	2,518.8	8.7	8.6	120.43	898.4	2,364.8	2,537.8	2,520.5	17.35	146.293		
2,600.0	2,598.7	2,620.5	2,620.5	9.1	9.0	120.56	898.8	2,363.3	2,542.8	2,524.8	18.05	140.841		
2,700.0	2,697.5	2,720.7	2,720.6	9.4	9.3	120.73	899.0	2,361.9	2,549.6	2,530.8	18.76	135.932		
2,800.0	2,795.6	2,818.7	2,818.6	9.8	9.7	120.93	899.4	2,360.4	2,558.2	2,538.7	19.45	131.524		
2,900.0	2,893.1	2,919.9	2,919.7	10.1	10.0	121.17	899.6	2,358.9	2,568.6	2,548.5	20.16	127.438		
3,000.0	2,989.6	3,011.7	3,011.6	10.5	10.4	121.39	900.0	2,357.4	2,581.1	2,560.2	20.83	123.913		
3,100.0	3,085.3	3,110.4	3,110.3	10.9	10.7	121.68	900.3	2,356.0	2,595.5	2,574.0	21.53	120.563		
3,200.0	3,179.8	3,199.4	3,199.3	11.2	11.0	121.93	900.4	2,354.8	2,612.1	2,589.9	22.20	117.689		
3,300.0	3,273.2	3,276.2	3,276.0	11.6	11.3	122.12	900.3	2,354.2	2,631.2	2,608.4	22.82	115.307		
3,387.5	3,353.8	3,343.3	3,343.2	11.9	11.5	122.29	899.7	2,354.2	2,650.2	2,626.9	23.37	113.421		
3,400.0	3,365.2	3,352.9	3,352.8	12.0	11.6	122.37	899.6	2,354.3	2,653.1	2,629.7	23.44	113.163		
3,500.0	3,456.8	3,431.0	3,430.8	12.4	11.8	122.98	898.3	2,354.9	2,676.6	2,652.5	24.08	111.173		
3,600.0	3,548.3	3,512.8	3,512.6	12.8	12.1	123.63	896.5	2,356.1	2,700.9	2,676.2	24.72	109.241		
3,700.0	3,639.8	3,603.0	3,602.8	13.2	12.4	124.34	894.0	2,357.6	2,725.8	2,700.4	25.41	107.279		
3,800.0	3,731.4	3,687.7	3,687.4	13.6	12.7	125.01	891.5	2,359.2	2,751.2	2,725.1	26.07	105.512		
3,900.0	3,822.9	3,775.9	3,775.5	14.0	13.0	125.69	888.9	2,361.0	2,777.2	2,750.4	26.76	103.791		
4,000.0	3,914.4	3,866.6	3,866.2	14.4	13.4	126.37	886.4	2,362.8	2,803.7	2,776.2	27.45	102.127		
4,100.0	4,005.9	3,984.1	3,983.7	14.8	13.8	127.26	882.6	2,364.8	2,830.2	2,802.0	28.26	100.161		
4,200.0	4,097.5	4,115.2	4,114.7	15.2	14.2	128.22	877.8	2,365.4	2,856.0	2,826.8	29.12	98.089		
4,300.0	4,189.0	4,212.3	4,211.6	15.6	14.6	128.92	874.2	2,365.1	2,881.4	2,851.6	29.85	96.542		
4,400.0	4,280.5	4,318.9	4,318.2	16.1	14.9	129.67	870.3	2,364.2	2,906.9	2,876.3	30.62	94.947		
4,500.0	4,372.1	4,405.6	4,404.8	16.5	15.2	130.27	867.4	2,363.4	2,932.6	2,901.3	31.31	93.662		
4,600.0	4,463.6	4,518.6	4,517.8	16.9	15.6	131.04	863.3	2,362.0	2,958.3	2,926.2	32.11	92.136		
4,700.0	4,555.1	4,643.9	4,642.9	17.4	16.1	131.87	858.6	2,359.0	2,983.4	2,950.5	32.96	90.529		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch 31-07 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
4,800.0	4,646.7	4,744.0	4,742.9	17.8	16.4	132.53	854.8	2,356.0	3,008.3	2,974.6	33.71	89.245		
4,900.0	4,738.2	4,839.3	4,838.1	18.2	16.8	133.14	851.2	2,353.0	3,033.3	2,998.9	34.44	88.067		
5,000.0	4,829.7	4,932.2	4,930.9	18.7	17.1	133.72	848.1	2,349.9	3,058.6	3,023.4	35.17	86.963		
5,100.0	4,921.3	5,019.6	5,018.3	19.1	17.4	134.24	846.0	2,346.9	3,084.3	3,048.4	35.88	85.964		
5,200.0	5,012.8	5,104.7	5,103.3	19.5	17.7	134.74	844.3	2,344.2	3,110.4	3,073.8	36.58	85.036		
5,300.0	5,104.3	5,187.8	5,186.3	20.0	18.0	135.20	843.2	2,341.7	3,137.0	3,099.7	37.27	84.175		
5,400.0	5,195.8	5,274.3	5,272.8	20.4	18.3	135.68	842.4	2,339.3	3,164.1	3,126.1	37.97	83.327		
5,500.0	5,287.4	5,363.6	5,362.1	20.9	18.6	136.15	841.9	2,336.9	3,191.5	3,152.8	38.69	82.493		
5,600.0	5,378.9	5,451.4	5,449.8	21.3	18.9	136.61	841.6	2,334.7	3,219.3	3,179.9	39.40	81.710		
5,700.0	5,470.4	5,531.9	5,530.2	21.8	19.2	137.02	841.4	2,332.8	3,247.5	3,207.4	40.08	81.026		
5,800.0	5,562.0	5,605.8	5,604.2	22.2	19.4	137.39	841.5	2,331.4	3,276.4	3,235.6	40.73	80.439		
5,900.0	5,653.5	5,689.3	5,687.7	22.7	19.7	137.80	841.7	2,330.2	3,305.8	3,264.4	41.42	79.807		
6,000.0	5,745.0	5,770.8	5,769.1	23.1	20.0	138.20	841.8	2,329.2	3,335.7	3,293.6	42.11	79.223		
6,100.0	5,836.6	5,850.4	5,848.8	23.6	20.3	138.58	841.6	2,328.5	3,366.1	3,323.4	42.78	78.686		
6,200.0	5,928.1	5,938.3	5,936.7	24.0	20.6	139.00	841.6	2,328.1	3,397.0	3,353.5	43.49	78.110		
6,278.6	6,000.0	6,017.5	6,015.9	24.4	20.9	139.37	841.4	2,327.5	3,421.3	3,377.2	44.10	77.589		
6,290.0	6,010.4	6,028.2	6,026.6	24.4	20.9	137.49	841.4	2,327.4	3,424.9	3,380.7	44.18	77.522		
6,300.0	6,019.5	6,037.6	6,036.0	24.5	21.0	135.81	841.4	2,327.4	3,428.0	3,383.7	44.25	77.461		
6,350.0	6,065.8	6,085.2	6,083.6	24.7	21.1	125.63	841.1	2,327.0	3,440.5	3,395.9	44.62	77.107		
6,400.0	6,113.0	6,131.9	6,130.3	24.9	21.3	111.96	840.8	2,326.6	3,448.5	3,403.5	44.97	76.678		
6,450.0	6,160.7	6,178.3	6,176.6	25.1	21.5	95.30	840.5	2,326.2	3,451.9	3,406.5	45.32	76.174		
6,500.0	6,208.5	6,224.9	6,223.3	25.3	21.6	78.17	840.2	2,325.9	3,450.6	3,404.9	45.64	75.596		
6,550.0	6,255.8	6,271.3	6,269.6	25.4	21.8	63.49	839.8	2,325.6	3,444.6	3,398.7	45.96	74.954		
6,600.0	6,302.5	6,321.0	6,319.3	25.6	22.0	52.41	839.3	2,325.2	3,434.1	3,387.8	46.27	74.223		
6,650.0	6,347.9	6,376.1	6,374.4	25.7	22.1	44.52	838.8	2,324.7	3,418.9	3,372.3	46.59	73.389		
6,700.0	6,391.6	6,424.5	6,422.8	25.9	22.3	38.94	838.5	2,324.1	3,399.3	3,352.4	46.86	72.546		
6,750.0	6,433.4	6,466.8	6,465.2	26.0	22.5	35.01	838.2	2,323.5	3,375.4	3,328.4	47.09	71.688		
6,800.0	6,472.8	6,506.7	6,505.0	26.1	22.6	32.29	837.9	2,323.0	3,347.6	3,300.3	47.29	70.793		
6,850.0	6,509.4	6,538.5	6,536.8	26.2	22.7	30.45	837.7	2,322.6	3,316.1	3,268.6	47.44	69.901		
6,900.0	6,543.0	6,568.3	6,566.6	26.3	22.8	29.36	837.5	2,322.3	3,281.1	3,233.5	47.57	68.971		
6,950.0	6,573.2	6,605.4	6,592.9	26.4	22.9	28.96	837.4	2,322.0	3,243.0	3,195.3	47.72	67.961		
7,000.0	6,599.8	6,620.7	6,619.0	26.5	23.0	29.30	837.3	2,321.8	3,202.1	3,154.3	47.78	67.015		
7,050.0	6,622.5	6,643.0	6,641.3	26.6	23.1	30.50	837.2	2,321.6	3,158.7	3,110.9	47.86	65.996		
7,100.0	6,641.1	6,661.1	6,659.4	26.7	23.1	32.93	837.1	2,321.4	3,113.3	3,065.4	47.92	64.963		
7,150.0	6,655.4	6,674.9	6,673.2	26.8	23.2	37.45	837.0	2,321.3	3,066.2	3,018.2	47.97	63.921		
7,200.0	6,665.4	6,684.4	6,682.7	26.9	23.2	46.31	837.0	2,321.2	3,017.7	2,969.7	48.00	62.874		
7,250.0	6,670.8	6,689.4	6,687.7	27.0	23.2	66.22	836.9	2,321.1	2,968.5	2,920.5	48.01	61.827		
7,285.7	6,672.0	6,690.2	6,688.5	27.1	23.2	94.85	836.9	2,321.1	2,933.1	2,885.1	48.02	61.083		
7,300.0	6,672.0	6,690.1	6,688.4	27.1	23.2	94.82	836.9	2,321.1	2,918.8	2,870.8	48.02	60.785		
7,400.0	6,672.0	6,689.1	6,687.4	27.3	23.2	94.64	836.9	2,321.1	2,819.4	2,771.4	48.02	58.708		
7,500.0	6,672.0	6,688.2	6,686.5	27.6	23.2	94.47	836.9	2,321.2	2,720.1	2,672.0	48.03	56.629		
7,600.0	6,672.0	6,687.2	6,685.5	28.0	23.2	94.29	836.9	2,321.2	2,620.8	2,572.7	48.05	54.548		
7,700.0	6,672.0	6,686.3	6,684.6	28.3	23.2	94.11	836.9	2,321.2	2,521.5	2,473.5	48.06	52.465		
7,800.0	6,672.0	6,685.3	6,683.6	28.8	23.2	93.94	837.0	2,321.2	2,422.3	2,374.3	48.08	50.380		
7,900.0	6,672.0	6,684.3	6,682.6	29.3	23.2	93.76	837.0	2,321.2	2,323.2	2,275.1	48.11	48.294		
8,000.0	6,672.0	6,683.4	6,681.7	29.8	23.2	93.58	837.0	2,321.2	2,224.2	2,176.1	48.14	46.206		
8,100.0	6,672.0	6,682.4	6,680.7	30.4	23.2	93.41	837.0	2,321.2	2,125.2	2,077.1	48.17	44.116		
8,200.0	6,672.0	6,681.5	6,679.8	31.0	23.2	93.23	837.0	2,321.2	2,026.4	1,978.2	48.22	42.025		
8,300.0	6,672.0	6,680.5	6,678.8	31.7	23.2	93.06	837.0	2,321.2	1,927.7	1,879.4	48.27	39.932		
8,400.0	6,672.0	6,679.5	6,677.8	32.4	23.2	92.88	837.0	2,321.2	1,829.1	1,780.8	48.34	37.837		
8,500.0	6,672.0	6,678.6	6,676.9	33.1	23.2	92.71	837.0	2,321.2	1,730.7	1,682.3	48.42	35.742		
8,600.0	6,672.0	6,677.6	6,675.9	33.9	23.2	92.53	837.0	2,321.3	1,632.5	1,583.9	48.52	33.644		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch 31-07 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
8,700.0	6,672.0	6,676.7	6,675.0		34.7	92.35	837.0	2,321.3	1,534.5	1,485.8	48.64	31.546		
8,800.0	6,672.0	6,675.7	6,674.0		35.5	92.18	837.0	2,321.3	1,436.8	1,388.0	48.79	29.446		
8,900.0	6,672.0	6,674.7	6,673.0		36.3	92.01	837.0	2,321.3	1,339.4	1,290.4	48.98	27.346		
9,000.0	6,672.0	6,673.8	6,672.1		37.2	91.83	837.0	2,321.3	1,242.4	1,193.2	49.21	25.245		
9,100.0	6,672.0	6,672.8	6,671.1		38.1	91.66	837.0	2,321.3	1,146.0	1,096.5	49.52	23.144		
9,200.0	6,672.0	6,671.9	6,670.2		39.0	91.48	837.0	2,321.3	1,050.2	1,000.3	49.90	21.045		
9,300.0	6,672.0	6,670.9	6,669.2		39.9	91.31	837.0	2,321.3	955.3	904.9	50.41	18.950		
9,400.0	6,672.0	6,669.9	6,668.2		40.8	91.13	837.0	2,321.3	861.6	810.5	51.09	16.864		
9,500.0	6,672.0	6,669.0	6,667.3		41.8	90.96	837.0	2,321.3	769.4	717.4	52.01	14.793		
9,600.0	6,672.0	6,668.0	6,666.3		42.7	90.78	837.0	2,321.3	679.5	626.2	53.28	12.753		
9,700.0	6,672.0	6,667.1	6,665.4		43.7	90.61	837.0	2,321.4	592.8	537.7	55.05	10.769		
9,800.0	6,672.0	6,666.1	6,664.4		44.7	90.44	837.0	2,321.4	511.0	453.5	57.51	8.884		
9,900.0	6,672.0	6,665.1	6,663.4		45.7	90.26	837.0	2,321.4	436.8	375.9	60.88	7.174		
10,000.0	6,672.0	6,664.2	6,662.5		46.7	90.09	837.1	2,321.4	374.8	309.7	65.12	5.756		
10,100.0	6,672.0	6,663.2	6,661.5		47.7	89.91	837.1	2,321.4	331.9	262.5	69.42	4.782		
10,200.0	6,672.0	6,662.3	6,660.6		48.8	89.74	837.1	2,321.4	316.1	244.2	71.86	4.399		
10,201.5	6,672.0	6,662.3	6,660.5		48.8	89.74	837.1	2,321.4	316.1	244.2	71.87	4.398 CC, ES, SF		
10,300.0	6,672.0	6,661.3	6,659.6		49.8	89.57	837.1	2,321.4	331.1	260.1	70.98	4.664		
10,400.0	6,672.0	6,660.3	6,658.6		50.9	89.39	837.1	2,321.4	373.3	305.5	67.76	5.508		
10,500.0	6,672.0	6,659.4	6,657.7		51.9	89.22	837.1	2,321.4	434.8	370.7	64.07	6.786		
10,600.0	6,672.0	6,658.4	6,656.7		53.0	89.04	837.1	2,321.4	508.7	447.8	60.90	8.353		
10,700.0	6,672.0	6,657.5	6,655.8		54.1	88.87	837.1	2,321.4	590.3	531.9	58.44	10.102		
10,800.0	6,672.0	6,656.5	6,654.8		55.2	88.69	837.1	2,321.5	676.9	620.3	56.58	11.964		
10,900.0	6,672.0	6,655.5	6,653.8		56.3	88.52	837.1	2,321.5	766.8	711.6	55.19	13.894		
11,000.0	6,672.0	6,654.6	6,652.9		57.4	88.35	837.1	2,321.5	858.9	804.7	54.13	15.867		
11,100.0	6,672.0	6,653.6	6,651.9		58.5	88.17	837.1	2,321.5	952.6	899.2	53.32	17.866		
11,200.0	6,672.0	6,652.7	6,651.0		59.6	88.00	837.1	2,321.5	1,047.4	994.7	52.69	19.880		
11,300.0	6,672.0	6,651.7	6,650.0		60.7	87.82	837.1	2,321.5	1,143.2	1,091.0	52.19	21.905		
11,400.0	6,672.0	6,650.7	6,649.0		61.8	87.65	837.1	2,321.5	1,239.6	1,187.8	51.79	23.934		
11,500.0	6,672.0	6,649.8	6,648.1		62.9	87.47	837.1	2,321.5	1,336.5	1,285.1	51.47	25.966		
11,600.0	6,672.0	6,648.8	6,647.1		64.1	87.30	837.1	2,321.5	1,433.9	1,382.7	51.21	27.999		
11,700.0	6,672.0	6,647.9	6,646.2		65.2	87.12	837.1	2,321.5	1,531.6	1,480.6	51.00	30.031		
11,800.0	6,672.0	6,646.9	6,645.2		66.3	86.95	837.1	2,321.5	1,629.6	1,578.8	50.83	32.062		
11,900.0	6,672.0	6,645.9	6,644.2		67.5	86.77	837.1	2,321.6	1,727.8	1,677.1	50.68	34.090		
12,000.0	6,672.0	6,645.0	6,643.3		68.6	86.59	837.1	2,321.6	1,826.2	1,775.7	50.56	36.117		
12,100.0	6,672.0	6,644.0	6,642.3		69.8	86.42	837.2	2,321.6	1,924.8	1,874.3	50.47	38.140		
12,200.0	6,672.0	6,643.0	6,641.3		70.9	86.24	837.2	2,321.6	2,023.5	1,973.1	50.39	40.160		
12,300.0	6,672.0	6,642.1	6,640.4		72.1	86.07	837.2	2,321.6	2,122.4	2,072.0	50.32	42.176		
12,400.0	6,672.0	6,641.1	6,639.4		73.2	85.89	837.2	2,321.6	2,221.3	2,171.0	50.27	44.189		
12,500.0	6,672.0	6,640.2	6,638.5		74.4	85.71	837.2	2,321.6	2,320.3	2,270.1	50.23	46.198		
12,600.0	6,672.0	6,639.2	6,637.5		75.5	85.54	837.2	2,321.6	2,419.4	2,369.3	50.19	48.203		
12,700.0	6,672.0	6,638.2	6,636.5		76.7	85.36	837.2	2,321.6	2,518.6	2,468.5	50.17	50.204		
12,800.0	6,672.0	6,637.3	6,635.6		77.9	85.18	837.2	2,321.6	2,617.9	2,567.7	50.15	52.201		
12,900.0	6,672.0	6,636.3	6,634.6		79.0	85.00	837.2	2,321.6	2,717.2	2,667.0	50.14	54.194		
13,000.0	6,672.0	6,635.4	6,633.7		80.2	84.83	837.2	2,321.7	2,816.5	2,766.4	50.13	56.182		
13,100.0	6,672.0	6,634.4	6,632.7		81.4	84.65	837.2	2,321.7	2,915.9	2,865.8	50.13	58.166		
13,200.0	6,672.0	6,633.4	6,631.7		82.6	84.47	837.2	2,321.7	3,015.4	2,965.2	50.13	60.145		
13,300.0	6,672.0	6,632.5	6,630.8		83.7	84.29	837.2	2,321.7	3,114.8	3,064.7	50.14	62.119		
13,400.0	6,672.0	6,631.5	6,629.8		84.9	84.11	837.2	2,321.7	3,214.3	3,164.2	50.15	64.089		
13,500.0	6,672.0	6,630.5	6,628.8		86.1	83.93	837.2	2,321.7	3,313.9	3,263.7	50.17	66.054		
13,600.0	6,672.0	6,629.6	6,627.9		87.3	83.75	837.2	2,321.7	3,413.4	3,363.3	50.19	68.014		
13,700.0	6,672.0	6,628.6	6,626.9		88.4	83.57	837.2	2,321.7	3,513.0	3,462.8	50.21	69.969		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch 31-07 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
13,800.0	6,672.0	6,627.7	6,626.0	89.6	23.0	83.39	837.2	2,321.7	3,612.7	3,562.4	50.23	71.920		
13,900.0	6,672.0	6,626.7	6,625.0	90.8	23.0	83.21	837.2	2,321.7	3,712.3	3,662.0	50.26	73.865		
14,000.0	6,672.0	6,625.7	6,624.0	92.0	23.0	83.03	837.2	2,321.7	3,811.9	3,761.7	50.29	75.805		
14,100.0	6,672.0	6,624.8	6,623.1	93.2	23.0	82.85	837.2	2,321.8	3,911.6	3,861.3	50.32	77.739		
14,200.0	6,672.0	6,623.8	6,622.1	94.4	23.0	82.67	837.2	2,321.8	4,011.3	3,960.9	50.35	79.669		
14,300.0	6,672.0	6,622.9	6,621.2	95.6	23.0	82.48	837.3	2,321.8	4,111.0	4,060.6	50.38	81.593		
14,400.0	6,672.0	6,621.9	6,620.2	96.8	23.0	82.30	837.3	2,321.8	4,210.7	4,160.3	50.42	83.512		
14,500.0	6,672.0	6,620.9	6,619.2	98.0	23.0	82.12	837.3	2,321.8	4,310.5	4,260.0	50.46	85.425		
14,600.0	6,672.0	6,620.0	6,618.3	99.2	23.0	81.93	837.3	2,321.8	4,410.2	4,359.7	50.50	87.333		
14,700.0	6,672.0	6,619.0	6,617.3	100.4	23.0	81.75	837.3	2,321.8	4,510.0	4,459.4	50.54	89.235		
14,800.0	6,672.0	6,618.0	6,616.3	101.6	23.0	81.57	837.3	2,321.8	4,609.7	4,559.1	50.58	91.132		
14,900.0	6,672.0	6,620.6	6,618.9	102.7	23.0	82.03	837.3	2,321.8	4,709.5	4,658.9	50.62	93.027		
15,000.0	6,672.0	6,619.5	6,617.8	103.9	23.0	81.82	837.3	2,321.8	4,809.3	4,758.6	50.67	94.912		
15,100.0	6,672.0	6,618.5	6,616.8	105.1	23.0	81.61	837.3	2,321.8	4,909.1	4,858.4	50.72	96.792		
15,200.0	6,672.0	6,617.4	6,615.7	106.3	23.0	81.40	837.3	2,321.8	5,008.9	4,958.1	50.77	98.665		
15,300.0	6,672.0	6,616.2	6,614.5	107.6	23.0	81.19	837.3	2,321.8	5,108.7	5,057.9	50.82	100.533		
15,400.0	6,672.0	6,615.1	6,613.4	108.8	23.0	80.97	837.3	2,321.8	5,208.5	5,157.6	50.87	102.394		
15,500.0	6,672.0	6,614.0	6,612.3	110.0	23.0	80.76	837.3	2,321.9	5,308.3	5,257.4	50.92	104.250		
15,600.0	6,672.0	6,612.9	6,611.2	111.2	23.0	80.54	837.3	2,321.9	5,408.2	5,357.2	50.97	106.100		
15,700.0	6,672.0	6,611.7	6,610.0	112.4	23.0	80.31	837.3	2,321.9	5,508.0	5,457.0	51.03	107.943		
15,800.0	6,672.0	6,610.6	6,608.9	113.6	23.0	80.09	837.3	2,321.9	5,607.9	5,556.8	51.08	109.781		
15,900.0	6,672.0	6,609.4	6,607.7	114.8	23.0	79.86	837.3	2,321.9	5,707.7	5,656.6	51.14	111.613		
16,000.0	6,672.0	6,608.2	6,606.5	116.0	23.0	79.63	837.3	2,321.9	5,807.6	5,756.4	51.20	113.438		
16,100.0	6,672.0	6,607.0	6,605.3	117.2	23.0	79.40	837.3	2,321.9	5,907.4	5,856.2	51.25	115.257		
16,200.0	6,672.0	6,605.8	6,604.1	118.4	22.9	79.17	837.3	2,321.9	6,007.3	5,956.0	51.31	117.071		
16,300.0	6,672.0	6,604.6	6,602.9	119.6	22.9	78.93	837.3	2,321.9	6,107.2	6,055.8	51.37	118.877		
16,400.0	6,672.0	6,603.4	6,601.7	120.8	22.9	78.69	837.3	2,322.0	6,207.0	6,155.6	51.43	120.678		
16,500.0	6,672.0	6,602.2	6,600.5	122.0	22.9	78.45	837.3	2,322.0	6,306.9	6,255.4	51.50	122.472		
16,600.0	6,672.0	6,600.9	6,599.2	123.2	22.9	78.20	837.4	2,322.0	6,406.8	6,355.2	51.56	124.261		
16,700.0	6,672.0	6,599.7	6,598.0	124.5	22.9	77.95	837.4	2,322.0	6,506.7	6,455.1	51.62	126.042		
16,800.0	6,672.0	6,598.4	6,596.7	125.7	22.9	77.70	837.4	2,322.0	6,606.6	6,554.9	51.69	127.818		
16,900.0	6,672.0	6,597.1	6,595.4	126.9	22.9	77.45	837.4	2,322.0	6,706.5	6,654.7	51.75	129.587		
17,000.0	6,672.0	6,595.9	6,594.2	128.1	22.9	77.19	837.4	2,322.0	6,806.4	6,754.5	51.82	131.349		
17,100.0	6,672.0	6,594.6	6,592.9	129.3	22.9	76.93	837.4	2,322.0	6,906.3	6,854.4	51.89	133.105		
17,200.0	6,672.0	6,593.2	6,591.5	130.5	22.9	76.67	837.4	2,322.1	7,006.2	6,954.2	51.95	134.855		
17,300.0	6,672.0	6,591.9	6,590.2	131.7	22.9	76.40	837.4	2,322.1	7,106.1	7,054.1	52.02	136.598		
17,400.0	6,672.0	6,590.6	6,588.9	133.0	22.9	76.14	837.4	2,322.1	7,206.0	7,153.9	52.09	138.335		
17,500.0	6,672.0	6,589.2	6,587.5	134.2	22.9	75.86	837.4	2,322.1	7,305.9	7,253.7	52.16	140.065		
17,600.0	6,672.0	6,587.9	6,586.2	135.4	22.9	75.59	837.4	2,322.1	7,405.8	7,353.6	52.23	141.789		
17,700.0	6,672.0	6,586.5	6,584.8	136.6	22.9	75.31	837.4	2,322.1	7,505.7	7,453.4	52.30	143.506		
17,800.0	6,672.0	6,585.1	6,583.4	137.8	22.9	75.03	837.4	2,322.1	7,605.6	7,553.3	52.37	145.217		
17,900.0	6,672.0	6,583.7	6,582.0	139.0	22.9	74.75	837.4	2,322.1	7,705.6	7,653.1	52.45	146.921		
18,000.0	6,672.0	6,582.3	6,580.6	140.3	22.9	74.46	837.4	2,322.2	7,805.5	7,753.0	52.52	148.619		
18,100.0	6,672.0	6,580.8	6,579.1	141.5	22.9	74.17	837.5	2,322.2	7,905.4	7,852.8	52.59	150.310		
18,200.0	6,672.0	6,579.4	6,577.7	142.7	22.9	73.88	837.5	2,322.2	8,005.3	7,952.7	52.67	151.994		
18,300.0	6,672.0	6,577.9	6,576.2	143.9	22.9	73.58	837.5	2,322.2	8,105.3	8,052.5	52.74	153.672		
18,342.5	6,672.0	6,577.3	6,575.6	144.4	22.8	73.45	837.5	2,322.2	8,147.7	8,094.9	52.78	154.383		



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch 32-07 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
0.0	0.0	0.0	0.0	0.0	0.0	99.93	-386.4	2,207.1	2,240.6					
100.0	100.0	83.4	83.4	0.1	0.1	99.93	-386.5	2,207.2	2,240.8	2,240.5	0.27	8,230.108		
200.0	200.0	178.6	178.6	0.5	0.5	99.94	-387.0	2,207.6	2,241.3	2,240.4	0.94	2,395.623		
300.0	300.0	281.5	281.5	0.8	0.8	99.95	-387.5	2,208.1	2,241.9	2,240.2	1.65	1,355.243		
400.0	400.0	387.2	387.2	1.2	1.2	99.96	-388.0	2,208.4	2,242.2	2,239.8	2.38	941.262		
500.0	500.0	493.4	493.4	1.6	1.6	99.98	-388.5	2,208.4	2,242.3	2,239.2	3.11	720.769		
564.4	564.4	556.4	556.4	1.8	1.8	99.98	-388.7	2,208.3	2,242.3	2,238.7	3.56	629.558		
600.0	600.0	590.9	590.9	1.9	1.9	99.99	-388.9	2,208.3	2,242.3	2,238.5	3.81	588.641		
700.0	700.0	695.5	695.5	2.3	2.3	100.00	-389.5	2,208.1	2,242.2	2,237.7	4.53	494.685		
752.5	752.5	744.5	744.5	2.5	2.4	100.01	-389.8	2,208.1	2,242.2	2,237.3	4.89	458.379		
800.0	800.0	788.3	788.3	2.6	2.6	100.02	-390.0	2,208.1	2,242.2	2,237.0	5.22	429.956		
900.0	900.0	888.6	888.6	3.0	2.9	100.03	-390.4	2,208.2	2,242.4	2,236.5	5.92	378.540		
1,000.0	1,000.0	991.0	991.0	3.4	3.3	100.04	-390.8	2,208.2	2,242.5	2,235.9	6.64	337.739		
1,100.0	1,100.0	1,089.2	1,089.2	3.7	3.6	100.05	-391.4	2,208.2	2,242.6	2,235.2	7.34	305.487		
1,200.0	1,200.0	1,191.2	1,191.2	4.1	4.0	100.06	-391.8	2,208.2	2,242.7	2,234.6	8.06	278.403		
1,300.0	1,300.0	1,304.7	1,304.7	4.4	4.4	100.06	-391.8	2,207.9	2,242.4	2,233.6	8.81	254.547		
1,400.0	1,400.0	1,395.6	1,395.6	4.8	4.7	100.06	-391.8	2,207.6	2,242.1	2,232.6	9.48	236.395		
1,500.0	1,500.0	1,504.8	1,504.8	5.1	5.1	100.06	-391.7	2,207.2	2,241.7	2,231.5	10.22	219.275		
1,600.0	1,600.0	1,602.6	1,602.6	5.5	5.4	100.06	-391.7	2,206.7	2,241.2	2,230.3	10.92	205.181		
1,700.0	1,700.0	1,703.5	1,703.5	5.9	5.8	100.06	-391.4	2,206.3	2,240.7	2,229.1	11.63	192.604		
1,800.0	1,800.0	1,800.3	1,800.3	6.2	6.1	100.05	-390.9	2,205.9	2,240.3	2,228.0	12.33	181.688		
1,900.0	1,900.0	1,896.7	1,896.7	6.6	6.5	100.03	-390.3	2,205.8	2,240.0	2,227.0	13.03	171.968		
2,000.0	2,000.0	2,000.5	2,000.5	6.9	6.8	100.02	-389.7	2,205.5	2,239.7	2,226.0	13.75	162.931		
2,100.0	2,100.0	2,100.3	2,100.3	7.3	7.2	100.01	-389.3	2,205.2	2,239.4	2,224.9	14.45	154.932		
2,200.0	2,200.0	2,205.9	2,205.9	7.7	7.5	100.00	-388.8	2,204.8	2,238.9	2,223.7	15.18	147.477		
2,220.4	2,220.4	2,226.3	2,226.3	7.7	7.6	151.00	-388.7	2,204.7	2,238.8	2,223.5	15.32	146.093		
2,300.0	2,300.0	2,307.0	2,306.9	8.0	7.9	151.00	-388.3	2,204.2	2,239.7	2,223.9	15.89	140.963		
2,400.0	2,399.8	2,406.6	2,406.5	8.4	8.2	151.02	-387.9	2,203.6	2,243.7	2,227.1	16.59	135.253		
2,500.0	2,499.5	2,506.2	2,506.1	8.7	8.6	151.05	-387.4	2,203.1	2,250.6	2,233.4	17.29	130.185		
2,600.0	2,598.7	2,604.5	2,604.5	9.1	8.9	151.09	-386.8	2,202.5	2,260.7	2,242.7	17.98	125.718		
2,700.0	2,697.5	2,696.3	2,696.2	9.4	9.2	151.13	-386.4	2,202.2	2,274.0	2,255.3	18.65	121.913		
2,800.0	2,795.6	2,792.7	2,792.6	9.8	9.6	151.19	-386.2	2,202.0	2,290.5	2,271.2	19.34	118.446		
2,900.0	2,893.1	2,894.7	2,894.7	10.1	9.9	151.27	-385.8	2,201.7	2,310.1	2,290.0	20.04	115.256		
3,000.0	2,889.6	2,889.6	2,889.5	10.5	10.3	151.35	-385.7	2,201.4	2,332.6	2,311.8	20.72	112.566		
3,100.0	3,085.3	3,089.9	3,089.8	10.9	10.6	151.46	-386.0	2,200.9	2,358.1	2,336.7	21.42	110.091		
3,200.0	3,179.8	3,184.1	3,184.1	11.2	10.9	151.55	-386.1	2,200.4	2,386.5	2,364.4	22.10	108.008		
3,300.0	3,273.2	3,291.4	3,291.4	11.6	11.3	151.70	-386.2	2,199.5	2,417.8	2,395.0	22.82	105.952		
3,387.5	3,353.8	3,380.6	3,380.5	11.9	11.6	151.83	-386.7	2,198.3	2,447.2	2,423.8	23.44	104.417		
3,400.0	3,365.2	3,393.2	3,393.1	12.0	11.7	151.90	-386.7	2,198.1	2,451.6	2,428.1	23.53	104.206		
3,500.0	3,456.8	3,483.6	3,483.5	12.4	12.0	152.33	-387.0	2,196.6	2,486.5	2,462.3	24.19	102.792		
3,600.0	3,548.3	3,576.9	3,576.8	12.8	12.3	152.77	-387.4	2,195.2	2,521.5	2,496.6	24.87	101.396		
3,700.0	3,639.8	3,673.5	3,673.4	13.2	12.7	153.22	-388.0	2,193.5	2,556.5	2,531.0	25.56	100.009		
3,800.0	3,731.4	3,770.0	3,769.8	13.6	13.0	153.65	-388.4	2,191.7	2,591.5	2,565.3	26.26	98.678		
3,900.0	3,822.9	3,867.9	3,867.8	14.0	13.3	154.08	-388.7	2,189.7	2,626.5	2,599.5	26.97	97.378		
4,000.0	3,914.4	3,962.9	3,962.8	14.4	13.7	154.48	-389.0	2,187.6	2,661.3	2,633.7	27.67	96.169		
4,100.0	4,005.9	4,063.9	4,063.7	14.8	14.0	154.90	-389.3	2,185.2	2,696.2	2,667.8	28.40	94.930		
4,200.0	4,097.5	4,164.9	4,164.7	15.2	14.4	155.30	-389.0	2,182.5	2,730.8	2,701.6	29.13	93.730		
4,300.0	4,189.0	4,255.5	4,255.2	15.6	14.7	155.64	-388.6	2,180.0	2,765.3	2,735.5	29.83	92.706		
4,400.0	4,280.5	4,336.9	4,336.6	16.1	15.0	155.93	-388.0	2,178.0	2,800.2	2,769.7	30.49	91.842		
4,500.0	4,372.1	4,414.2	4,413.9	16.5	15.3	156.20	-387.4	2,176.6	2,835.6	2,804.5	31.13	91.078		
4,600.0	4,463.6	4,496.9	4,496.6	16.9	15.5	156.48	-386.6	2,175.5	2,871.5	2,839.7	31.80	90.295		
4,700.0	4,555.1	4,575.3	4,575.0	17.4	15.8	156.74	-386.0	2,174.7	2,907.8	2,875.3	32.45	89.606		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch 32-07 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
4,800.0	4,646.7	4,652.2	4,651.8	17.8	16.1	156.99	-385.5	2,174.3	2,944.6	2,911.5	33.09	88.977		
4,900.0	4,738.2	4,730.6	4,730.2	18.2	16.4	157.24	-385.3	2,174.2	2,982.0	2,948.3	33.74	88.372		
5,000.0	4,829.7	4,814.3	4,814.0	18.7	16.7	157.51	-385.4	2,174.3	3,019.8	2,985.4	34.42	87.742		
5,100.0	4,921.3	4,906.9	4,906.5	19.1	17.0	157.81	-385.8	2,174.4	3,057.7	3,022.6	35.13	87.041		
5,200.0	5,012.8	4,997.9	4,997.5	19.5	17.3	158.09	-386.0	2,174.5	3,095.7	3,059.9	35.84	86.383		
5,300.0	5,104.3	5,084.2	5,083.8	20.0	17.6	158.34	-385.9	2,174.9	3,133.8	3,097.3	36.52	85.802		
5,400.0	5,195.8	5,176.6	5,176.3	20.4	17.9	158.60	-385.6	2,175.4	3,172.1	3,134.8	37.24	85.177		
5,500.0	5,287.4	5,274.3	5,274.0	20.9	18.3	158.87	-385.0	2,175.8	3,210.3	3,172.3	37.98	84.516		
5,600.0	5,378.9	5,360.5	5,360.1	21.3	18.6	159.09	-384.3	2,176.3	3,248.4	3,209.8	38.67	83.994		
5,700.0	5,470.4	5,452.8	5,452.5	21.8	18.9	159.32	-383.2	2,177.1	3,286.9	3,247.5	39.40	83.431		
5,800.0	5,562.0	5,548.9	5,548.5	22.2	19.2	159.55	-382.2	2,177.6	3,325.1	3,285.0	40.14	82.847		
5,900.0	5,653.5	5,646.4	5,646.0	22.7	19.5	159.78	-381.2	2,178.1	3,363.4	3,322.5	40.88	82.266		
6,000.0	5,745.0	5,744.1	5,743.8	23.1	19.9	160.01	-380.3	2,178.3	3,401.4	3,359.8	41.63	81.696		
6,100.0	5,836.6	5,839.2	5,838.9	23.6	20.2	160.24	-379.6	2,178.3	3,439.5	3,397.1	42.37	81.169		
6,200.0	5,928.1	5,949.6	5,949.2	24.0	20.6	160.50	-379.1	2,177.9	3,477.3	3,434.1	43.19	80.514		
6,278.6	6,000.0	6,036.3	6,036.0	24.4	20.9	160.70	-378.5	2,177.2	3,506.6	3,462.7	43.83	80.006		
6,290.0	6,010.4	6,048.3	6,047.9	24.4	21.0	158.78	-378.3	2,177.0	3,510.9	3,467.0	43.92	79.939		
6,300.0	6,019.5	6,058.8	6,058.4	24.5	21.0	156.92	-378.3	2,176.9	3,514.6	3,470.6	44.00	79.881		
6,350.0	6,065.8	6,111.8	6,111.5	24.7	21.2	145.99	-377.7	2,176.3	3,530.9	3,486.5	44.39	79.541		
6,400.0	6,113.0	6,153.5	6,153.1	24.9	21.3	131.74	-377.2	2,175.9	3,543.0	3,498.2	44.72	79.223		
6,450.0	6,160.7	6,197.9	6,197.5	25.1	21.5	114.73	-376.6	2,175.5	3,550.8	3,505.8	45.06	78.809		
6,500.0	6,208.5	6,255.4	6,255.0	25.3	21.7	97.47	-375.7	2,175.0	3,554.3	3,508.9	45.44	78.216		
6,550.0	6,255.8	6,313.6	6,313.2	25.4	21.9	82.84	-374.6	2,174.4	3,553.3	3,507.5	45.82	77.552		
6,600.0	6,302.5	6,372.5	6,372.1	25.6	22.1	71.98	-373.1	2,173.7	3,547.9	3,501.7	46.18	76.821		
6,650.0	6,347.9	6,421.9	6,421.5	25.7	22.3	64.39	-371.5	2,173.2	3,538.1	3,491.6	46.49	76.106		
6,700.0	6,391.6	6,462.4	6,461.9	25.9	22.4	59.28	-370.0	2,172.8	3,524.3	3,477.5	46.74	75.403		
6,750.0	6,433.4	6,501.1	6,500.6	26.0	22.5	56.01	-368.6	2,172.5	3,506.4	3,459.5	46.97	74.659		
6,800.0	6,472.8	6,520.4	6,519.8	26.1	22.6	54.00	-367.9	2,172.4	3,485.0	3,437.9	47.09	74.010		
6,850.0	6,509.4	6,538.7	6,538.2	26.2	22.7	53.11	-367.4	2,172.3	3,460.1	3,412.9	47.19	73.316		
6,900.0	6,543.0	6,555.5	6,555.0	26.3	22.7	53.18	-367.1	2,172.3	3,432.1	3,384.8	47.29	72.581		
6,950.0	6,573.2	6,570.7	6,570.1	26.4	22.8	54.14	-366.9	2,172.4	3,401.1	3,353.7	47.36	71.807		
7,000.0	6,599.8	6,600.0	6,599.4	26.5	22.9	56.27	-366.7	2,172.5	3,367.4	3,319.9	47.51	70.875		
7,050.0	6,622.5	6,600.0	6,599.4	26.6	22.9	58.90	-366.7	2,172.5	3,331.2	3,283.7	47.51	70.112		
7,100.0	6,641.1	6,608.6	6,608.0	26.7	22.9	62.78	-366.8	2,172.6	3,292.9	3,245.3	47.56	69.234		
7,150.0	6,655.4	6,621.2	6,620.6	26.8	23.0	68.02	-366.8	2,172.7	3,252.7	3,205.0	47.64	68.277		
7,200.0	6,665.4	6,673.3	6,626.2	26.9	23.1	74.48	-366.8	2,172.7	3,211.0	3,163.1	47.85	67.101		
7,250.0	6,670.8	6,667.5	6,632.0	27.0	23.1	82.42	-366.8	2,172.8	3,168.1	3,120.2	47.88	66.167		
7,285.7	6,672.0	6,666.1	6,633.4	27.1	23.1	88.84	-366.8	2,172.8	3,137.0	3,089.1	47.91	65.472		
7,300.0	6,672.0	6,666.0	6,633.5	27.1	23.1	88.84	-366.8	2,172.8	3,124.5	3,076.6	47.93	65.188		
7,400.0	6,672.0	6,665.3	6,634.1	27.3	23.1	88.87	-366.9	2,172.8	3,037.4	2,989.4	48.05	63.211		
7,500.0	6,672.0	6,664.6	6,634.8	27.6	23.1	88.90	-366.9	2,172.8	2,951.1	2,902.9	48.20	61.225		
7,600.0	6,672.0	6,664.0	6,635.5	28.0	23.1	88.92	-366.9	2,172.8	2,865.8	2,817.4	48.38	59.231		
7,700.0	6,672.0	6,663.3	6,636.1	28.3	23.1	88.95	-366.9	2,172.8	2,781.4	2,732.8	48.60	57.229		
7,800.0	6,672.0	6,662.6	6,636.8	28.8	23.1	88.97	-366.9	2,172.8	2,698.1	2,649.2	48.86	55.222		
7,900.0	6,672.0	6,661.9	6,637.5	29.3	23.1	89.00	-366.9	2,172.8	2,616.0	2,566.8	49.16	53.211		
8,000.0	6,672.0	6,661.3	6,638.2	29.8	23.1	89.02	-366.9	2,172.8	2,535.1	2,485.6	49.52	51.198		
8,100.0	6,672.0	6,660.6	6,638.8	30.4	23.1	89.05	-366.9	2,172.8	2,455.7	2,405.8	49.92	49.189		
8,200.0	6,672.0	6,659.9	6,639.5	31.0	23.1	89.07	-366.9	2,172.8	2,377.8	2,327.4	50.39	47.185		
8,300.0	6,672.0	6,659.3	6,640.2	31.7	23.1	89.10	-366.9	2,172.8	2,301.7	2,250.7	50.93	45.194		
8,400.0	6,672.0	6,658.6	6,640.9	32.4	23.1	89.13	-366.9	2,172.8	2,227.4	2,175.8	51.54	43.220		
8,500.0	6,672.0	6,657.9	6,641.5	33.1	23.1	89.15	-366.9	2,172.8	2,155.2	2,103.0	52.22	41.272		
8,600.0	6,672.0	6,657.2	6,642.2	33.9	23.1	89.18	-366.9	2,172.8	2,085.3	2,032.3	52.98	39.357		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch 32-07 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
8,700.0	6,672.0	6,656.6	6,642.9	34.7	23.1	89.20	-366.9	2,172.8	2,018.0	1,964.2	53.83	37.485		
8,800.0	6,672.0	6,655.9	6,643.5	35.5	23.1	89.23	-366.9	2,172.9	1,953.5	1,898.7	54.77	35.666		
8,900.0	6,672.0	6,655.2	6,644.2	36.3	23.1	89.25	-366.9	2,172.9	1,892.0	1,836.2	55.80	33.910		
9,000.0	6,672.0	6,654.6	6,644.9	37.2	23.1	89.28	-366.9	2,172.9	1,834.0	1,777.1	56.90	32.229		
9,100.0	6,672.0	6,653.9	6,645.6	38.1	23.1	89.30	-366.9	2,172.9	1,779.7	1,721.6	58.09	30.635		
9,200.0	6,672.0	6,653.2	6,646.2	39.0	23.1	89.33	-366.9	2,172.9	1,729.5	1,670.1	59.35	29.139		
9,300.0	6,672.0	6,652.5	6,646.9	39.9	23.1	89.35	-367.0	2,172.9	1,683.7	1,623.1	60.67	27.751		
9,400.0	6,672.0	6,651.9	6,647.6	40.8	23.1	89.38	-367.0	2,172.9	1,642.8	1,580.8	62.03	26.483		
9,500.0	6,672.0	6,651.2	6,648.2	41.8	23.1	89.41	-367.0	2,172.9	1,607.1	1,543.7	63.41	25.343		
9,600.0	6,672.0	6,650.5	6,648.9	42.7	23.1	89.43	-367.0	2,172.9	1,576.9	1,512.1	64.79	24.339		
9,700.0	6,672.0	6,650.1	6,649.6	43.7	23.1	89.46	-367.0	2,172.9	1,552.6	1,486.5	66.14	23.476		
9,800.0	6,672.0	6,650.8	6,650.3	44.7	23.1	89.48	-367.0	2,172.9	1,534.4	1,467.0	67.43	22.757		
9,900.0	6,672.0	6,651.5	6,650.9	45.7	23.1	89.51	-367.0	2,172.9	1,522.6	1,454.0	68.63	22.187		
10,000.0	6,672.0	6,652.2	6,651.6	46.7	23.1	89.53	-367.0	2,172.9	1,517.4	1,447.7	69.72	21.765		
10,030.0	6,672.0	6,652.4	6,651.8	47.0	23.1	89.54	-367.0	2,172.9	1,517.1	1,447.1	70.02	21.667 CC, ES		
10,100.0	6,672.0	6,652.8	6,652.3	47.7	23.1	89.56	-367.0	2,172.9	1,518.7	1,448.0	70.67	21.490		
10,200.0	6,672.0	6,653.5	6,652.9	48.8	23.1	89.58	-367.0	2,172.9	1,526.6	1,455.1	71.47	21.359 SF		
10,300.0	6,672.0	6,654.2	6,653.6	49.8	23.1	89.61	-367.0	2,172.9	1,541.0	1,468.8	72.12	21.366		
10,400.0	6,672.0	6,654.8	6,654.3	50.9	23.1	89.63	-367.0	2,172.9	1,561.6	1,489.0	72.61	21.508		
10,500.0	6,672.0	6,655.5	6,655.0	51.9	23.1	89.66	-367.0	2,172.9	1,588.3	1,515.4	72.94	21.776		
10,600.0	6,672.0	6,656.2	6,655.6	53.0	23.1	89.68	-367.0	2,172.9	1,620.8	1,547.6	73.13	22.164		
10,700.0	6,672.0	6,656.9	6,656.3	54.1	23.1	89.71	-367.0	2,172.9	1,658.6	1,585.4	73.18	22.663		
10,800.0	6,672.0	6,657.5	6,657.0	55.2	23.1	89.73	-367.0	2,172.9	1,701.5	1,628.4	73.13	23.267		
10,900.0	6,672.0	6,658.2	6,657.6	56.3	23.1	89.76	-367.0	2,172.9	1,749.1	1,676.1	72.98	23.968		
11,000.0	6,672.0	6,658.9	6,658.3	57.4	23.1	89.79	-367.0	2,173.0	1,801.0	1,728.2	72.74	24.758		
11,100.0	6,672.0	6,659.5	6,659.0	58.5	23.1	89.81	-367.0	2,173.0	1,856.8	1,784.4	72.45	25.630		
11,200.0	6,672.0	6,660.2	6,659.7	59.6	23.1	89.84	-367.1	2,173.0	1,916.2	1,844.1	72.10	26.577		
11,300.0	6,672.0	6,660.9	6,660.3	60.7	23.1	89.86	-367.1	2,173.0	1,979.0	1,907.2	71.72	27.592		
11,400.0	6,672.0	6,661.6	6,661.0	61.8	23.1	89.89	-367.1	2,173.0	2,044.6	1,973.3	71.32	28.670		
11,500.0	6,672.0	6,662.2	6,661.7	62.9	23.1	89.91	-367.1	2,173.0	2,113.0	2,042.1	70.89	29.806		
11,600.0	6,672.0	6,662.9	6,662.3	64.1	23.1	89.94	-367.1	2,173.0	2,183.9	2,113.4	70.46	30.993		
11,700.0	6,672.0	6,663.6	6,663.0	65.2	23.1	89.96	-367.1	2,173.0	2,256.9	2,186.9	70.03	32.227		
11,800.0	6,672.0	6,664.2	6,663.7	66.3	23.1	89.99	-367.1	2,173.0	2,331.9	2,262.3	69.60	33.505		
11,900.0	6,672.0	6,664.9	6,664.3	67.5	23.1	90.01	-367.1	2,173.0	2,408.8	2,339.6	69.18	34.822		
12,000.0	6,672.0	6,665.6	6,665.0	68.6	23.1	90.04	-367.1	2,173.0	2,487.3	2,418.6	68.76	36.174		
12,100.0	6,672.0	6,666.2	6,665.7	69.8	23.1	90.06	-367.1	2,173.0	2,567.3	2,499.0	68.36	37.558		
12,200.0	6,672.0	6,666.9	6,666.4	70.9	23.1	90.09	-367.1	2,173.0	2,648.7	2,580.8	67.96	38.972		
12,300.0	6,672.0	6,667.6	6,667.0	72.1	23.1	90.11	-367.1	2,173.0	2,731.3	2,663.8	67.59	40.412		
12,400.0	6,672.0	6,668.3	6,667.7	73.2	23.1	90.14	-367.1	2,173.0	2,815.1	2,747.9	67.22	41.877		
12,500.0	6,672.0	6,668.9	6,668.4	74.4	23.1	90.17	-367.1	2,173.0	2,899.9	2,833.0	66.87	43.363		
12,600.0	6,672.0	6,669.6	6,669.0	75.5	23.1	90.19	-367.1	2,173.0	2,985.6	2,919.1	66.54	44.870		
12,700.0	6,672.0	6,670.3	6,669.7	76.7	23.1	90.22	-367.1	2,173.0	3,072.2	3,006.0	66.22	46.394		
12,800.0	6,672.0	6,670.9	6,670.4	77.9	23.1	90.24	-367.1	2,173.0	3,159.6	3,093.7	65.91	47.935		
12,900.0	6,672.0	6,671.6	6,671.0	79.0	23.1	90.27	-367.1	2,173.0	3,247.7	3,182.1	65.62	49.491		
13,000.0	6,672.0	6,672.3	6,671.7	80.2	23.1	90.29	-367.2	2,173.0	3,336.5	3,271.2	65.34	51.061		
13,100.0	6,672.0	6,672.9	6,672.4	81.4	23.1	90.32	-367.2	2,173.1	3,425.9	3,360.8	65.08	52.642		
13,200.0	6,672.0	6,673.6	6,673.1	82.6	23.1	90.34	-367.2	2,173.1	3,515.9	3,451.1	64.83	54.235		
13,300.0	6,672.0	6,674.3	6,673.7	83.7	23.1	90.37	-367.2	2,173.1	3,606.4	3,541.8	64.59	55.838		
13,400.0	6,672.0	6,675.0	6,674.4	84.9	23.1	90.39	-367.2	2,173.1	3,697.4	3,633.1	64.36	57.449		
13,500.0	6,672.0	6,675.6	6,675.1	86.1	23.1	90.42	-367.2	2,173.1	3,788.9	3,724.8	64.14	59.069		
13,600.0	6,672.0	6,676.3	6,675.7	87.3	23.1	90.44	-367.2	2,173.1	3,880.8	3,816.9	63.94	60.696		
13,700.0	6,672.0	6,677.0	6,676.4	88.4	23.2	90.47	-367.2	2,173.1	3,973.1	3,909.3	63.74	62.329		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch 32-07 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
13,800.0	6,672.0	6,677.6	6,677.1	89.6	23.2	90.50	-367.2	2,173.1	4,065.7	4,002.2	63.56	63.968		
13,900.0	6,672.0	6,678.3	6,677.7	90.8	23.2	90.52	-367.2	2,173.1	4,158.7	4,095.3	63.38	65.612		
14,000.0	6,672.0	6,679.0	6,678.4	92.0	23.2	90.55	-367.2	2,173.1	4,252.0	4,188.8	63.22	67.261		
14,100.0	6,672.0	6,679.6	6,679.1	93.2	23.2	90.57	-367.2	2,173.1	4,345.7	4,282.6	63.06	68.913		
14,200.0	6,672.0	6,680.3	6,679.7	94.4	23.2	90.60	-367.2	2,173.1	4,439.6	4,376.7	62.91	70.569		
14,300.0	6,672.0	6,681.0	6,680.4	95.6	23.2	90.62	-367.2	2,173.1	4,533.7	4,471.0	62.77	72.228		
14,400.0	6,672.0	6,681.6	6,681.1	96.8	23.2	90.65	-367.2	2,173.1	4,628.1	4,565.5	62.64	73.890		
14,500.0	6,672.0	6,682.3	6,681.8	98.0	23.2	90.67	-367.2	2,173.1	4,722.8	4,660.3	62.51	75.553		
14,600.0	6,672.0	6,683.0	6,682.4	99.2	23.2	90.70	-367.2	2,173.1	4,817.6	4,755.2	62.39	77.218		
14,700.0	6,672.0	6,683.6	6,683.1	100.4	23.2	90.72	-367.2	2,173.1	4,912.7	4,850.4	62.28	78.884		
14,800.0	6,672.0	6,684.3	6,683.8	101.6	23.2	90.75	-367.2	2,173.1	5,008.0	4,945.8	62.17	80.551		
14,900.0	6,672.0	6,685.0	6,684.4	102.7	23.2	90.78	-367.3	2,173.1	5,103.4	5,041.3	62.07	82.219		
15,000.0	6,672.0	6,685.7	6,685.1	103.9	23.2	90.80	-367.3	2,173.1	5,199.0	5,137.0	61.98	83.887		
15,100.0	6,672.0	6,686.3	6,685.8	105.1	23.2	90.83	-367.3	2,173.1	5,294.8	5,232.9	61.89	85.555		
15,200.0	6,672.0	6,687.0	6,686.4	106.3	23.2	90.85	-367.3	2,173.1	5,390.7	5,328.9	61.80	87.223		
15,300.0	6,672.0	6,687.7	6,687.1	107.6	23.2	90.88	-367.3	2,173.2	5,486.8	5,425.1	61.73	88.890		
15,400.0	6,672.0	6,688.3	6,687.8	108.8	23.2	90.90	-367.3	2,173.2	5,583.0	5,521.4	61.65	90.557		
15,500.0	6,672.0	6,689.0	6,688.4	110.0	23.2	90.93	-367.3	2,173.2	5,679.4	5,617.8	61.58	92.222		
15,600.0	6,672.0	6,689.7	6,689.1	111.2	23.2	90.96	-367.3	2,173.2	5,775.9	5,714.4	61.52	93.886		
15,700.0	6,672.0	6,690.3	6,689.8	112.4	23.2	90.98	-367.3	2,173.2	5,872.5	5,811.0	61.46	95.549		
15,800.0	6,672.0	6,691.0	6,690.4	113.6	23.2	91.01	-367.3	2,173.2	5,969.2	5,907.8	61.40	97.210		
15,900.0	6,672.0	6,691.7	6,691.1	114.8	23.2	91.03	-367.3	2,173.2	6,066.0	6,004.7	61.35	98.870		
16,000.0	6,672.0	6,692.3	6,691.8	116.0	23.2	91.06	-367.3	2,173.2	6,162.9	6,101.6	61.31	100.527		
16,100.0	6,672.0	6,693.0	6,692.4	117.2	23.2	91.08	-367.3	2,173.2	6,260.0	6,198.7	61.26	102.183		
16,200.0	6,672.0	6,693.7	6,693.1	118.4	23.2	91.11	-367.3	2,173.2	6,357.1	6,295.9	61.22	103.836		
16,300.0	6,672.0	6,694.3	6,693.8	119.6	23.2	91.14	-367.3	2,173.2	6,454.3	6,393.1	61.19	105.486		
16,400.0	6,672.0	6,695.0	6,694.4	120.8	23.2	91.16	-367.3	2,173.2	6,551.6	6,490.4	61.15	107.135		
16,500.0	6,672.0	6,695.7	6,695.1	122.0	23.2	91.19	-367.3	2,173.2	6,649.0	6,587.8	61.12	108.780		
16,600.0	6,672.0	6,696.3	6,695.8	123.2	23.2	91.21	-367.3	2,173.2	6,746.4	6,685.3	61.10	110.423		
16,700.0	6,672.0	6,697.0	6,696.4	124.5	23.2	91.24	-367.3	2,173.2	6,843.9	6,782.9	61.07	112.062		
16,800.0	6,672.0	6,697.7	6,697.1	125.7	23.2	91.26	-367.4	2,173.2	6,941.5	6,880.5	61.05	113.699		
16,900.0	6,672.0	6,698.3	6,697.8	126.9	23.2	91.29	-367.4	2,173.2	7,039.2	6,978.2	61.03	115.332		
17,000.0	6,672.0	6,699.0	6,698.4	128.1	23.2	91.32	-367.4	2,173.2	7,136.9	7,075.9	61.02	116.962		
17,100.0	6,672.0	6,699.7	6,699.1	129.3	23.2	91.34	-367.4	2,173.2	7,234.7	7,173.7	61.01	118.589		
17,200.0	6,672.0	6,700.3	6,699.8	130.5	23.2	91.37	-367.4	2,173.2	7,332.6	7,271.6	61.00	120.212		
17,300.0	6,672.0	6,701.0	6,700.4	131.7	23.2	91.39	-367.4	2,173.2	7,430.5	7,369.5	60.99	121.832		
17,400.0	6,672.0	6,701.7	6,701.1	133.0	23.2	91.42	-367.4	2,173.2	7,528.5	7,467.5	60.98	123.448		
17,500.0	6,672.0	6,702.3	6,701.8	134.2	23.2	91.45	-367.4	2,173.3	7,626.5	7,565.5	60.98	125.061		
17,600.0	6,672.0	6,703.0	6,702.5	135.4	23.2	91.47	-367.4	2,173.3	7,724.6	7,663.6	60.98	126.669		
17,700.0	6,672.0	6,703.7	6,703.1	136.6	23.2	91.50	-367.4	2,173.3	7,822.7	7,761.7	60.98	128.274		
17,800.0	6,672.0	6,704.3	6,703.8	137.8	23.2	91.52	-367.4	2,173.3	7,920.9	7,859.9	60.99	129.874		
17,900.0	6,672.0	6,705.0	6,704.5	139.0	23.2	91.55	-367.4	2,173.3	8,019.1	7,958.1	61.00	131.471		
18,000.0	6,672.0	6,705.7	6,705.1	140.3	23.3	91.58	-367.4	2,173.3	8,117.4	8,056.4	61.00	133.064		
18,100.0	6,672.0	6,706.3	6,705.8	141.5	23.3	91.60	-367.4	2,173.3	8,215.7	8,154.7	61.01	134.652		
18,200.0	6,672.0	6,707.0	6,706.4	142.7	23.3	91.63	-367.4	2,173.3	8,314.1	8,253.0	61.03	136.236		
18,300.0	6,672.0	6,707.7	6,707.1	143.9	23.3	91.66	-367.4	2,173.3	8,412.5	8,351.4	61.04	137.816		
18,342.5	6,672.0	6,708.0	6,707.4	144.4	23.3	91.67	-367.4	2,173.3	8,454.3	8,393.2	61.05	138.486		



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch 34-07 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	143.19	-3,431.6	2,568.0	4,286.1					
100.0	100.0	114.5	114.5	0.1	0.2	143.18	-3,431.1	2,568.3	4,285.8	4,285.5	0.33	N/A		
200.0	200.0	201.9	201.9	0.5	0.5	143.18	-3,430.9	2,568.1	4,285.6	4,284.6	1.02	4,219.512		
300.0	300.0	303.2	303.2	0.8	0.9	143.19	-3,431.1	2,567.5	4,285.4	4,283.7	1.73	2,479.031		
400.0	400.0	400.5	400.5	1.2	1.2	143.20	-3,431.3	2,567.1	4,285.2	4,282.8	2.43	1,765.773		
500.0	500.0	509.5	509.5	1.6	1.6	143.20	-3,431.3	2,566.6	4,285.0	4,281.8	3.17	1,353.360		
600.0	600.0	608.7	608.7	1.9	2.0	143.21	-3,431.4	2,566.0	4,284.7	4,280.8	3.87	1,106.836		
700.0	700.0	716.1	716.1	2.3	2.3	143.22	-3,431.3	2,565.3	4,284.3	4,279.7	4.61	930.279		
800.0	800.0	812.0	812.0	2.6	2.7	143.23	-3,431.3	2,564.6	4,283.8	4,278.5	5.30	808.401		
900.0	900.0	913.3	913.2	3.0	3.0	143.23	-3,431.3	2,563.8	4,283.4	4,277.4	6.01	712.521		
1,000.0	1,000.0	1,011.0	1,011.0	3.4	3.4	143.24	-3,431.4	2,563.1	4,283.0	4,276.3	6.71	638.110		
1,100.0	1,100.0	1,104.0	1,104.0	3.7	3.7	143.25	-3,431.6	2,562.4	4,282.7	4,275.3	7.40	579.115		
1,200.0	1,200.0	1,212.4	1,212.4	4.1	4.1	143.26	-3,431.8	2,561.6	4,282.4	4,274.3	8.13	526.581		
1,300.0	1,300.0	1,322.0	1,321.9	4.4	4.5	143.27	-3,431.8	2,560.6	4,281.9	4,273.0	8.87	482.512		
1,400.0	1,400.0	1,423.2	1,423.2	4.8	4.8	143.28	-3,431.7	2,559.6	4,281.3	4,271.7	9.59	446.580		
1,500.0	1,500.0	1,525.4	1,525.3	5.1	5.2	143.29	-3,431.6	2,558.6	4,280.6	4,270.2	10.30	415.479		
1,600.0	1,600.0	1,619.3	1,619.3	5.5	5.5	143.30	-3,431.5	2,557.7	4,279.9	4,268.9	10.99	389.442		
1,700.0	1,700.0	1,706.4	1,706.3	5.9	5.8	143.31	-3,431.6	2,556.9	4,279.5	4,267.8	11.65	367.254		
1,754.4	1,754.4	1,749.4	1,749.4	6.1	6.0	143.32	-3,431.8	2,556.5	4,279.4	4,267.4	12.00	356.683 CC		
1,800.0	1,800.0	1,785.6	1,785.5	6.2	6.1	143.32	-3,432.1	2,556.2	4,279.5	4,267.2	12.29	348.277		
1,900.0	1,900.0	1,865.6	1,865.6	6.6	6.4	143.34	-3,433.0	2,555.6	4,279.9	4,267.0	12.92	331.137 ES		
2,000.0	2,000.0	1,952.9	1,952.9	6.9	6.7	143.35	-3,434.4	2,555.1	4,280.8	4,267.2	13.59	315.053		
2,100.0	2,100.0	2,058.4	2,058.3	7.3	7.0	143.37	-3,436.1	2,554.5	4,281.8	4,267.5	14.31	299.142		
2,200.0	2,200.0	2,180.0	2,179.9	7.7	7.5	143.39	-3,437.4	2,554.0	4,282.4	4,267.3	15.10	283.670		
2,300.0	2,300.0	2,317.7	2,317.6	8.0	7.9	-165.60	-3,437.7	2,553.5	4,284.0	4,268.1	15.93	268.890		
2,400.0	2,399.8	2,415.4	2,415.3	8.4	8.3	-165.60	-3,437.4	2,553.1	4,288.6	4,272.0	16.63	257.937		
2,500.0	2,499.5	2,509.7	2,509.6	8.7	8.6	-165.58	-3,437.2	2,552.7	4,296.7	4,279.4	17.31	248.223		
2,600.0	2,598.7	2,609.4	2,609.3	9.1	9.0	-165.56	-3,437.2	2,552.2	4,308.1	4,290.1	18.01	239.188		
2,700.0	2,697.5	2,711.3	2,711.2	9.4	9.3	-165.53	-3,437.3	2,551.4	4,322.9	4,304.2	18.72	230.913		
2,800.0	2,795.6	2,801.6	2,801.5	9.8	9.6	-165.49	-3,437.4	2,550.7	4,341.0	4,321.7	19.39	223.894		
2,900.0	2,893.1	2,880.9	2,880.8	10.1	9.9	-165.43	-3,437.5	2,550.4	4,362.8	4,342.8	20.02	217.955		
3,000.0	2,989.6	2,962.5	2,962.4	10.5	10.2	-165.37	-3,438.0	2,550.3	4,388.2	4,367.6	20.65	212.487		
3,100.0	3,085.3	3,045.9	3,045.8	10.9	10.5	-165.29	-3,438.8	2,550.1	4,417.2	4,395.9	21.29	207.457		
3,200.0	3,179.8	3,150.0	3,149.9	11.2	10.9	-165.22	-3,439.8	2,550.2	4,449.6	4,427.6	22.01	202.193		
3,300.0	3,273.2	3,265.3	3,265.2	11.6	11.3	-165.18	-3,439.7	2,550.8	4,484.6	4,461.8	22.76	197.019		
3,387.5	3,353.8	3,338.6	3,338.5	11.9	11.5	-165.11	-3,439.5	2,551.2	4,517.7	4,494.4	23.32	193.689		
3,400.0	3,365.2	3,347.6	3,347.5	12.0	11.5	-165.12	-3,439.4	2,551.2	4,522.6	4,499.2	23.40	193.264		
3,500.0	3,456.8	3,422.0	3,421.8	12.4	11.8	-165.24	-3,439.3	2,552.0	4,562.2	4,538.2	24.01	190.043		
3,600.0	3,548.3	3,502.3	3,502.2	12.8	12.1	-165.36	-3,439.3	2,553.0	4,602.1	4,577.5	24.64	186.795		
3,700.0	3,639.8	3,581.7	3,581.6	13.2	12.3	-165.48	-3,439.4	2,554.3	4,642.2	4,616.9	25.27	183.718		
3,800.0	3,731.4	3,661.6	3,661.4	13.6	12.6	-165.60	-3,439.4	2,555.9	4,682.6	4,656.7	25.90	180.765		
3,900.0	3,822.9	3,744.9	3,744.7	14.0	12.9	-165.73	-3,439.6	2,557.7	4,723.2	4,696.6	26.56	177.852		
4,000.0	3,914.4	3,825.6	3,825.4	14.4	13.2	-165.86	-3,439.7	2,559.6	4,763.9	4,736.7	27.20	175.131		
4,100.0	4,005.9	3,895.9	3,895.7	14.8	13.4	-165.96	-3,440.0	2,561.5	4,805.0	4,777.2	27.81	172.785		
4,200.0	4,097.5	3,973.8	3,973.5	15.2	13.7	-166.08	-3,440.6	2,563.6	4,846.4	4,817.9	28.45	170.363		
4,300.0	4,189.0	4,072.4	4,072.1	15.6	14.1	-166.22	-3,441.7	2,566.2	4,887.9	4,858.7	29.17	167.562		
4,400.0	4,280.5	4,168.1	4,167.8	16.1	14.4	-166.35	-3,442.7	2,568.3	4,929.2	4,899.4	29.89	164.939		
4,500.0	4,372.1	4,261.2	4,260.8	16.5	14.7	-166.47	-3,443.7	2,570.3	4,970.6	4,940.0	30.59	162.480		
4,600.0	4,463.6	4,366.1	4,365.7	16.9	15.1	-166.61	-3,444.8	2,572.3	5,011.8	4,980.4	31.35	159.871		
4,700.0	4,555.1	4,466.7	4,466.3	17.4	15.4	-166.73	-3,445.8	2,573.8	5,052.7	5,020.6	32.09	157.449		
4,800.0	4,646.7	4,573.9	4,573.5	17.8	15.8	-166.86	-3,447.0	2,575.0	5,093.5	5,060.6	32.86	154.994		
4,900.0	4,738.2	4,695.8	4,695.3	18.2	16.2	-166.99	-3,448.2	2,575.5	5,133.9	5,100.2	33.70	152.355		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch 34-07 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,000.0	4,829.7	4,808.8	4,808.4	18.7	16.6	-167.11	-3,448.8	2,575.7	5,173.8	5,139.3	34.50	149.976		
5,100.0	4,921.3	4,919.0	4,918.5	19.1	17.0	-167.23	-3,448.9	2,575.9	5,213.4	5,178.1	35.29	147.737		
5,200.0	5,012.8	5,051.2	5,050.8	19.5	17.5	-167.36	-3,448.6	2,575.2	5,252.3	5,216.1	36.17	145.208		
5,300.0	5,104.3	5,152.7	5,152.3	20.0	17.8	-167.46	-3,448.4	2,573.9	5,290.9	5,254.0	36.93	143.268		
5,400.0	5,195.8	5,239.4	5,239.0	20.4	18.1	-167.54	-3,448.4	2,572.6	5,329.5	5,291.8	37.63	141.625		
5,500.0	5,287.4	5,319.5	5,319.0	20.9	18.4	-167.61	-3,448.4	2,571.6	5,368.2	5,329.9	38.31	140.144		
5,600.0	5,378.9	5,405.5	5,405.0	21.3	18.7	-167.68	-3,448.6	2,570.5	5,407.1	5,368.1	39.00	138.628		
5,700.0	5,470.4	5,502.9	5,502.5	21.8	19.1	-167.76	-3,448.9	2,569.2	5,446.1	5,406.3	39.75	136.997		
5,800.0	5,562.0	5,662.8	5,662.3	22.2	19.6	-167.89	-3,449.3	2,566.0	5,484.7	5,444.0	40.76	134.548		
5,900.0	5,653.5	5,865.5	5,864.9	22.7	20.3	-168.03	-3,447.4	2,558.6	5,521.3	5,479.3	41.95	131.621		
6,000.0	5,745.0	6,013.0	6,012.2	23.1	20.8	-168.16	-3,442.9	2,553.9	5,556.7	5,513.8	42.90	129.515		
6,100.0	5,836.6	6,072.1	6,071.2	23.6	21.0	-168.22	-3,440.1	2,553.1	5,592.1	5,548.6	43.51	128.536		
6,200.0	5,928.1	6,133.1	6,132.1	24.0	21.3	-168.30	-3,436.8	2,553.2	5,627.9	5,583.8	44.11	127.576		
6,278.6	6,000.0	6,178.0	6,177.0	24.4	21.4	-168.36	-3,434.2	2,553.9	5,656.4	5,611.9	44.58	126.888		
6,290.0	6,010.4	6,184.5	6,183.4	24.4	21.4	-170.11	-3,433.9	2,554.0	5,660.7	5,616.1	44.65	126.791		
6,300.0	6,019.5	6,200.0	6,198.9	24.5	21.5	-172.21	-3,433.0	2,554.3	5,664.6	5,619.8	44.75	126.592		
6,350.0	6,065.8	6,225.0	6,223.9	24.7	21.6	175.79	-3,431.6	2,554.8	5,682.0	5,637.0	45.02	126.211		
6,400.0	6,113.0	6,263.7	6,262.5	24.9	21.7	160.60	-3,429.6	2,555.5	5,696.9	5,651.5	45.34	125.638		
6,450.0	6,160.7	6,303.4	6,302.2	25.1	21.8	142.73	-3,427.8	2,555.9	5,708.9	5,663.3	45.66	125.024		
6,500.0	6,208.5	6,350.4	6,349.1	25.3	22.0	124.68	-3,426.0	2,556.3	5,718.0	5,672.0	46.00	124.295		
6,550.0	6,255.8	6,396.9	6,395.7	25.4	22.2	109.35	-3,424.3	2,556.5	5,724.1	5,677.8	46.33	123.542		
6,600.0	6,302.5	6,463.4	6,462.1	25.6	22.4	97.91	-3,422.0	2,556.4	5,727.1	5,680.4	46.74	122.536		
6,650.0	6,347.9	6,516.5	6,515.2	25.7	22.6	89.84	-3,420.3	2,555.9	5,726.9	5,679.8	47.08	121.649		
6,700.0	6,391.6	6,552.0	6,550.6	25.9	22.7	84.24	-3,419.4	2,555.4	5,723.6	5,676.3	47.33	120.924		
6,750.0	6,433.4	6,618.2	6,618.0	26.0	22.9	80.48	-3,418.8	2,554.8	5,717.5	5,669.8	47.68	119.906		
6,800.0	6,472.8	6,620.5	6,619.1	26.1	23.0	78.15	-3,418.4	2,553.7	5,708.6	5,660.8	47.81	119.397		
6,850.0	6,509.4	6,656.4	6,655.0	26.2	23.1	76.89	-3,418.0	2,552.7	5,697.0	5,648.9	48.05	118.560		
6,900.0	6,543.0	6,689.1	6,687.7	26.3	23.2	76.48	-3,417.6	2,551.8	5,682.8	5,634.5	48.28	117.716		
6,950.0	6,573.2	6,718.3	6,716.9	26.4	23.3	76.77	-3,417.3	2,551.0	5,666.1	5,617.6	48.48	116.866		
7,000.0	6,599.8	6,743.8	6,742.4	26.5	23.4	77.68	-3,417.0	2,550.3	5,647.3	5,598.6	48.68	116.011		
7,050.0	6,622.5	6,765.4	6,763.9	26.6	23.5	79.12	-3,416.7	2,549.7	5,626.4	5,577.5	48.86	115.152		
7,100.0	6,641.1	6,782.7	6,781.3	26.7	23.5	81.05	-3,416.5	2,549.2	5,603.6	5,554.6	49.03	114.292		
7,150.0	6,655.4	6,795.8	6,794.3	26.8	23.6	83.43	-3,416.4	2,548.8	5,579.3	5,530.1	49.19	113.433		
7,200.0	6,665.4	6,804.5	6,803.0	26.9	23.6	86.20	-3,416.3	2,548.6	5,553.6	5,504.3	49.33	112.579		
7,250.0	6,670.8	6,808.6	6,807.1	27.0	23.6	89.33	-3,416.2	2,548.5	5,526.8	5,477.4	49.46	111.735		
7,285.7	6,672.0	6,808.8	6,807.3	27.1	23.6	91.76	-3,416.2	2,548.5	5,507.1	5,457.6	49.55	111.142		
7,300.0	6,672.0	6,808.4	6,806.9	27.1	23.6	91.75	-3,416.2	2,548.5	5,499.2	5,449.6	49.58	110.905		
7,400.0	6,672.0	6,805.6	6,804.1	27.3	23.6	91.72	-3,416.2	2,548.5	5,444.2	5,394.4	49.85	109.223		
7,500.0	6,672.0	6,802.8	6,801.3	27.6	23.6	91.68	-3,416.3	2,548.6	5,390.6	5,340.4	50.15	107.486		
7,600.0	6,672.0	6,800.1	6,798.6	28.0	23.6	91.65	-3,416.3	2,548.7	5,338.3	5,287.8	50.50	105.699		
7,700.0	6,672.0	6,797.3	6,795.8	28.3	23.6	91.61	-3,416.3	2,548.8	5,287.4	5,236.5	50.90	103.868		
7,800.0	6,672.0	6,794.5	6,793.1	28.8	23.6	91.58	-3,416.4	2,548.9	5,237.9	5,186.5	51.35	101.999		
7,900.0	6,672.0	6,791.8	6,790.3	29.3	23.6	91.55	-3,416.4	2,548.9	5,189.8	5,138.0	51.85	100.102		
8,000.0	6,672.0	6,789.0	6,787.5	29.8	23.5	91.51	-3,416.4	2,549.0	5,143.3	5,090.9	52.39	98.182		
8,100.0	6,672.0	6,786.2	6,784.8	30.4	23.5	91.48	-3,416.5	2,549.1	5,098.3	5,045.3	52.97	96.248		
8,200.0	6,672.0	6,783.5	6,782.0	31.0	23.5	91.44	-3,416.5	2,549.2	5,054.8	5,001.3	53.60	94.308		
8,300.0	6,672.0	6,780.7	6,779.2	31.7	23.5	91.41	-3,416.5	2,549.2	5,013.1	4,958.8	54.27	92.371		
8,400.0	6,672.0	6,777.9	6,776.5	32.4	23.5	91.37	-3,416.6	2,549.3	4,972.9	4,917.9	54.98	90.443		
8,500.0	6,672.0	6,775.2	6,773.7	33.1	23.5	91.34	-3,416.6	2,549.4	4,934.5	4,878.8	55.74	88.533		
8,600.0	6,672.0	6,772.4	6,770.9	33.9	23.5	91.30	-3,416.6	2,549.5	4,897.8	4,841.3	56.53	86.647		
8,700.0	6,672.0	6,769.6	6,768.2	34.7	23.5	91.27	-3,416.7	2,549.5	4,862.9	4,805.6	57.35	84.793		
8,800.0	6,672.0	6,766.9	6,765.4	35.5	23.5	91.23	-3,416.7	2,549.6	4,829.9	4,771.7	58.21	82.975		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch 34-07 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
8,900.0	6,672.0	6,764.1	6,762.7	36.3	23.5	91.20	-3,416.7	2,549.7	4,798.7	4,739.6	59.10	81.200		
9,000.0	6,672.0	6,761.4	6,759.9	37.2	23.5	91.16	-3,416.8	2,549.8	4,769.4	4,709.3	60.01	79.472		
9,100.0	6,672.0	6,758.6	6,757.1	38.1	23.4	91.13	-3,416.8	2,549.9	4,742.0	4,681.0	60.95	77.795		
9,200.0	6,672.0	6,755.8	6,754.4	39.0	23.4	91.09	-3,416.8	2,549.9	4,716.6	4,654.7	61.92	76.174		
9,300.0	6,672.0	6,753.1	6,751.6	39.9	23.4	91.06	-3,416.9	2,550.0	4,693.2	4,630.3	62.90	74.610		
9,400.0	6,672.0	6,750.3	6,748.8	40.8	23.4	91.03	-3,416.9	2,550.1	4,671.8	4,607.9	63.90	73.106		
9,500.0	6,672.0	6,747.5	6,746.1	41.8	23.4	90.99	-3,416.9	2,550.2	4,652.5	4,587.6	64.92	71.665		
9,600.0	6,672.0	6,744.8	6,743.3	42.7	23.4	90.96	-3,417.0	2,550.2	4,635.2	4,569.3	65.95	70.288		
9,700.0	6,672.0	6,742.0	6,740.5	43.7	23.4	90.92	-3,417.0	2,550.3	4,620.1	4,553.1	66.98	68.975		
9,800.0	6,672.0	6,739.2	6,737.8	44.7	23.4	90.89	-3,417.0	2,550.4	4,607.1	4,539.1	68.02	67.728		
9,900.0	6,672.0	6,736.5	6,735.0	45.7	23.4	90.85	-3,417.0	2,550.5	4,596.3	4,527.2	69.07	66.546		
10,000.0	6,672.0	6,733.7	6,732.3	46.7	23.4	90.82	-3,417.1	2,550.6	4,587.6	4,517.5	70.11	65.430		
10,100.0	6,672.0	6,730.9	6,729.5	47.7	23.3	90.78	-3,417.1	2,550.6	4,581.0	4,509.9	71.16	64.379		
10,200.0	6,672.0	6,728.2	6,726.7	48.8	23.3	90.75	-3,417.1	2,550.7	4,576.7	4,504.5	72.20	63.394		
10,300.0	6,672.0	6,725.4	6,724.0	49.8	23.3	90.71	-3,417.2	2,550.8	4,574.5	4,501.3	73.23	62.472		
10,348.3	6,672.0	6,724.1	6,722.6	50.3	23.3	90.70	-3,417.2	2,550.8	4,574.3	4,500.6	73.72	62.049		
10,400.0	6,672.0	6,722.7	6,721.2	50.9	23.3	90.68	-3,417.2	2,550.9	4,574.6	4,500.3	74.25	61.613		
10,500.0	6,672.0	6,719.9	6,718.5	51.9	23.3	90.64	-3,417.2	2,550.9	4,576.8	4,501.6	75.26	60.816		
10,600.0	6,672.0	6,717.1	6,715.7	53.0	23.3	90.61	-3,417.3	2,551.0	4,581.2	4,505.0	76.25	60.080		
10,700.0	6,672.0	6,714.4	6,712.9	54.1	23.3	90.58	-3,417.3	2,551.1	4,587.8	4,510.6	77.23	59.404		
10,800.0	6,672.0	6,711.6	6,710.2	55.2	23.3	90.54	-3,417.3	2,551.2	4,596.6	4,518.4	78.19	58.786		
10,900.0	6,672.0	6,708.8	6,707.4	56.3	23.3	90.51	-3,417.4	2,551.2	4,607.5	4,528.4	79.13	58.224		
11,000.0	6,672.0	6,706.1	6,704.6	57.4	23.3	90.47	-3,417.4	2,551.3	4,620.6	4,540.6	80.06	57.718		
11,100.0	6,672.0	6,703.3	6,701.9	58.5	23.2	90.44	-3,417.4	2,551.4	4,635.8	4,554.9	80.95	57.265		
11,200.0	6,672.0	6,700.6	6,699.1	59.6	23.2	90.40	-3,417.5	2,551.5	4,653.1	4,571.3	81.83	56.864		
11,300.0	6,672.0	6,697.8	6,696.4	60.7	23.2	90.37	-3,417.5	2,551.6	4,672.5	4,589.8	82.68	56.514		
11,400.0	6,672.0	6,695.0	6,693.6	61.8	23.2	90.33	-3,417.5	2,551.6	4,694.0	4,610.5	83.50	56.213		
11,500.0	6,672.0	6,692.3	6,690.8	62.9	23.2	90.30	-3,417.6	2,551.7	4,717.4	4,633.1	84.30	55.960		
11,600.0	6,672.0	6,689.5	6,688.1	64.1	23.2	90.26	-3,417.6	2,551.8	4,742.9	4,657.8	85.07	55.752		
11,700.0	6,672.0	6,686.7	6,685.3	65.2	23.2	90.23	-3,417.6	2,551.9	4,770.3	4,684.5	85.81	55.589		
11,800.0	6,672.0	6,684.0	6,682.6	66.3	23.2	90.19	-3,417.7	2,551.9	4,799.7	4,713.2	86.53	55.469		
11,900.0	6,672.0	6,681.2	6,679.8	67.5	23.2	90.16	-3,417.7	2,552.0	4,831.0	4,743.8	87.22	55.390		
12,000.0	6,672.0	6,678.5	6,677.0	68.6	23.2	90.13	-3,417.7	2,552.1	4,864.1	4,776.2	87.88	55.351		
12,100.0	6,672.0	6,675.7	6,674.3	69.8	23.2	90.09	-3,417.8	2,552.2	4,899.1	4,810.6	88.51	55.351 SF		
12,200.0	6,672.0	6,672.9	6,671.5	70.9	23.1	90.06	-3,417.8	2,552.2	4,935.8	4,846.7	89.11	55.388		
12,300.0	6,672.0	6,670.2	6,668.8	72.1	23.1	90.02	-3,417.8	2,552.3	4,974.3	4,884.6	89.69	55.461		
12,400.0	6,672.0	6,667.4	6,666.0	73.2	23.1	89.99	-3,417.9	2,552.4	5,014.5	4,924.2	90.24	55.568		
12,500.0	6,672.0	6,664.7	6,663.2	74.4	23.1	89.95	-3,417.9	2,552.5	5,056.3	4,965.6	90.76	55.709		
12,600.0	6,672.0	6,661.9	6,660.5	75.5	23.1	89.92	-3,417.9	2,552.6	5,099.8	5,008.5	91.26	55.882		
12,700.0	6,672.0	6,659.1	6,657.7	76.7	23.1	89.88	-3,417.9	2,552.6	5,144.9	5,053.1	91.73	56.086		
12,800.0	6,672.0	6,656.4	6,655.0	77.9	23.1	89.85	-3,418.0	2,552.7	5,191.5	5,099.3	92.18	56.319		
12,900.0	6,672.0	6,653.6	6,652.2	79.0	23.1	89.81	-3,418.0	2,552.8	5,239.5	5,146.9	92.60	56.582		
13,000.0	6,672.0	6,650.8	6,649.4	80.2	23.1	89.78	-3,418.0	2,552.9	5,289.1	5,196.1	93.00	56.872		
13,100.0	6,672.0	6,648.1	6,646.7	81.4	23.1	89.75	-3,418.1	2,552.9	5,340.1	5,246.7	93.38	57.188		
13,200.0	6,672.0	6,645.3	6,643.9	82.6	23.0	89.71	-3,418.1	2,553.0	5,392.4	5,298.7	93.73	57.530		
13,300.0	6,672.0	6,642.6	6,641.2	83.7	23.0	89.68	-3,418.1	2,553.1	5,446.1	5,352.0	94.07	57.897		
13,400.0	6,672.0	6,639.8	6,638.4	84.9	23.0	89.64	-3,418.2	2,553.2	5,501.1	5,406.7	94.38	58.287		
13,500.0	6,672.0	6,637.0	6,635.6	86.1	23.0	89.61	-3,418.2	2,553.2	5,557.3	5,462.7	94.67	58.701		
13,600.0	6,672.0	6,634.3	6,632.9	87.3	23.0	89.57	-3,418.2	2,553.3	5,614.8	5,519.9	94.95	59.136		
13,700.0	6,672.0	6,631.5	6,630.1	88.4	23.0	89.54	-3,418.3	2,553.4	5,673.5	5,578.3	95.20	59.592		
13,800.0	6,672.0	6,628.8	6,627.4	89.6	23.0	89.50	-3,418.3	2,553.5	5,733.3	5,637.8	95.44	60.069		
13,900.0	6,672.0	6,626.0	6,624.6	90.8	23.0	89.47	-3,418.3	2,553.6	5,794.2	5,698.5	95.67	60.565		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch 34-07 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance							Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
14,000.0	6,672.0	6,623.2	6,621.8	92.0	23.0	89.43	-3,418.4	2,553.6	5,856.2	5,760.3	95.88	61.081		
14,100.0	6,672.0	6,620.5	6,619.1	93.2	23.0	89.40	-3,418.4	2,553.7	5,919.2	5,823.2	96.07	61.614		
14,200.0	6,672.0	6,617.7	6,616.3	94.4	22.9	89.36	-3,418.4	2,553.8	5,983.3	5,887.0	96.25	62.165		
14,300.0	6,672.0	6,615.0	6,613.6	95.6	22.9	89.33	-3,418.5	2,553.9	6,048.3	5,951.9	96.41	62.733		
14,400.0	6,672.0	6,612.2	6,610.8	96.8	22.9	89.30	-3,418.5	2,553.9	6,114.3	6,017.7	96.57	63.317		
14,500.0	6,672.0	6,609.4	6,608.1	98.0	22.9	89.26	-3,418.5	2,554.0	6,181.2	6,084.5	96.71	63.917		
14,600.0	6,672.0	6,606.7	6,605.3	99.2	22.9	89.23	-3,418.6	2,554.1	6,249.0	6,152.1	96.84	64.531		
14,700.0	6,672.0	6,603.9	6,602.5	100.4	22.9	89.19	-3,418.6	2,554.2	6,317.6	6,220.7	96.95	65.161		
14,800.0	6,672.0	6,601.2	6,599.8	101.6	22.9	89.16	-3,418.6	2,554.2	6,387.1	6,290.0	97.06	65.804		
14,900.0	6,672.0	6,601.6	6,597.0	102.7	22.9	89.12	-3,418.7	2,554.3	6,457.4	6,360.2	97.17	66.453		
15,000.0	6,672.0	6,604.4	6,594.3	103.9	22.9	89.09	-3,418.7	2,554.4	6,528.4	6,431.2	97.28	67.109		
15,100.0	6,672.0	6,607.1	6,591.5	105.1	22.9	89.05	-3,418.7	2,554.5	6,600.3	6,502.9	97.38	67.778		
15,200.0	6,672.0	6,609.9	6,588.7	106.3	22.9	89.02	-3,418.7	2,554.6	6,672.8	6,575.3	97.47	68.458		
15,300.0	6,672.0	6,612.6	6,586.0	107.6	22.9	88.98	-3,418.8	2,554.6	6,746.1	6,648.5	97.56	69.150		
15,400.0	6,672.0	6,615.4	6,583.2	108.8	22.9	88.95	-3,418.8	2,554.7	6,820.0	6,722.4	97.63	69.852		
15,500.0	6,672.0	6,618.1	6,580.5	110.0	22.9	88.91	-3,418.8	2,554.8	6,894.6	6,796.9	97.70	70.566		
15,600.0	6,672.0	6,620.9	6,577.7	111.2	23.0	88.88	-3,418.9	2,554.9	6,969.8	6,872.1	97.77	71.289		
15,700.0	6,672.0	6,623.7	6,575.0	112.4	23.0	88.84	-3,418.9	2,554.9	7,045.7	6,947.9	97.83	72.022		
15,800.0	6,672.0	6,626.4	6,572.2	113.6	23.0	88.81	-3,418.9	2,555.0	7,122.1	7,024.3	97.88	72.764		
15,900.0	6,672.0	6,629.2	6,569.4	114.8	23.0	88.78	-3,419.0	2,555.1	7,199.2	7,101.3	97.93	73.516		
16,000.0	6,672.0	6,631.9	6,566.7	116.0	23.0	88.74	-3,419.0	2,555.2	7,276.8	7,178.8	97.97	74.276		
16,100.0	6,672.0	6,634.7	6,563.9	117.2	23.0	88.71	-3,419.0	2,555.2	7,354.9	7,256.9	98.01	75.044		
16,200.0	6,672.0	6,637.5	6,561.2	118.4	23.0	88.67	-3,419.1	2,555.3	7,433.6	7,335.6	98.04	75.821		
16,300.0	6,672.0	6,600.0	6,598.6	119.6	22.9	89.14	-3,418.6	2,554.3	7,512.9	7,415.0	97.92	76.726		
16,400.0	6,672.0	6,600.0	6,598.6	120.8	22.9	89.14	-3,418.6	2,554.3	7,592.6	7,494.6	97.93	77.528		
16,500.0	6,672.0	6,600.0	6,598.6	122.0	22.9	89.14	-3,418.6	2,554.3	7,672.8	7,574.8	97.94	78.338		
16,600.0	6,672.0	6,600.0	6,598.6	123.2	22.9	89.14	-3,418.6	2,554.3	7,753.4	7,655.4	97.95	79.154		
16,700.0	6,672.0	6,600.0	6,598.6	124.5	22.9	89.14	-3,418.6	2,554.3	7,834.5	7,736.5	97.96	79.978		
16,800.0	6,672.0	6,600.0	6,598.6	125.7	22.9	89.14	-3,418.6	2,554.3	7,916.0	7,818.0	97.96	80.808		
16,900.0	6,672.0	6,600.0	6,598.6	126.9	22.9	89.14	-3,418.6	2,554.3	7,997.9	7,900.0	97.96	81.644		
17,000.0	6,672.0	6,600.0	6,598.6	128.1	22.9	89.14	-3,418.6	2,554.3	8,080.3	7,982.3	97.96	82.487		
17,100.0	6,672.0	6,600.0	6,598.6	129.3	22.9	89.14	-3,418.6	2,554.3	8,163.1	8,065.1	97.95	83.336		
17,200.0	6,672.0	6,600.0	6,598.6	130.5	22.9	89.14	-3,418.6	2,554.3	8,246.2	8,148.3	97.95	84.190		
17,300.0	6,672.0	6,600.0	6,598.6	131.7	22.9	89.14	-3,418.6	2,554.3	8,329.7	8,231.8	97.94	85.050		
17,400.0	6,672.0	6,600.0	6,598.6	133.0	22.9	89.14	-3,418.6	2,554.3	8,413.6	8,315.7	97.93	85.915		
17,500.0	6,672.0	6,600.0	6,598.6	134.2	22.9	89.14	-3,418.6	2,554.3	8,497.8	8,399.9	97.92	86.786		
17,600.0	6,672.0	6,600.0	6,598.6	135.4	22.9	89.14	-3,418.6	2,554.3	8,582.4	8,484.5	97.90	87.661		
17,700.0	6,672.0	6,600.0	6,598.6	136.6	22.9	89.14	-3,418.6	2,554.3	8,667.3	8,569.4	97.89	88.541		
17,800.0	6,672.0	6,600.0	6,598.6	137.8	22.9	89.14	-3,418.6	2,554.3	8,752.6	8,654.7	97.87	89.426		
17,900.0	6,672.0	6,600.0	6,598.6	139.0	22.9	89.14	-3,418.6	2,554.3	8,838.1	8,740.3	97.86	90.315		
18,000.0	6,672.0	6,600.0	6,598.6	140.3	22.9	89.14	-3,418.6	2,554.3	8,924.0	8,826.1	97.84	91.209		
18,100.0	6,672.0	6,600.0	6,598.6	141.5	22.9	89.14	-3,418.6	2,554.3	9,010.1	8,912.3	97.82	92.106		
18,200.0	6,672.0	6,600.0	6,598.6	142.7	22.9	89.14	-3,418.6	2,554.3	9,096.5	8,998.7	97.80	93.008		
18,300.0	6,672.0	6,600.0	6,598.6	143.9	22.9	89.14	-3,418.6	2,554.3	9,183.2	9,085.5	97.78	93.913		
18,342.5	6,672.0	6,600.0	6,598.6	144.4	22.9	89.14	-3,418.6	2,554.3	9,220.2	9,122.4	97.78	94.298		



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch 41-07 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	76.96	862.6	3,724.1	3,822.7					
100.0	100.0	69.3	69.3	0.1	0.1	76.95	862.9	3,724.3	3,823.1	3,822.8	0.25	N/A		
200.0	200.0	167.9	167.9	0.5	0.4	76.94	864.1	3,724.9	3,823.9	3,823.0	0.90	4,233.679		
300.0	300.0	276.4	276.4	0.8	0.8	76.93	865.0	3,725.3	3,824.5	3,822.8	1.64	2,332.008		
400.0	400.0	375.1	375.1	1.2	1.1	76.92	865.4	3,725.7	3,824.9	3,822.6	2.34	1,632.671		
500.0	500.0	477.2	477.2	1.6	1.5	76.92	865.8	3,726.2	3,825.4	3,822.4	3.06	1,251.120		
600.0	600.0	576.0	576.0	1.9	1.8	76.92	866.1	3,726.5	3,825.9	3,822.2	3.76	1,017.037		
700.0	700.0	677.7	677.7	2.3	2.2	76.91	866.5	3,727.0	3,826.4	3,821.9	4.48	854.852		
800.0	800.0	777.6	777.6	2.6	2.6	76.91	866.8	3,727.3	3,826.8	3,821.7	5.18	738.183		
900.0	900.0	873.7	873.7	3.0	2.9	76.90	867.2	3,727.7	3,827.3	3,821.5	5.88	651.003		
1,000.0	1,000.0	972.8	972.8	3.4	3.2	76.90	867.6	3,728.2	3,827.9	3,821.3	6.58	581.342		
1,100.0	1,100.0	1,071.8	1,071.7	3.7	3.6	76.90	867.9	3,728.8	3,828.5	3,821.2	7.29	525.197		
1,200.0	1,200.0	1,173.6	1,173.6	4.1	3.9	76.89	868.2	3,729.3	3,829.1	3,821.1	8.00	478.342		
1,300.0	1,300.0	1,279.8	1,279.7	4.4	4.3	76.90	868.2	3,729.9	3,829.6	3,820.9	8.74	438.406		
1,400.0	1,400.0	1,387.1	1,387.1	4.8	4.7	76.90	867.9	3,730.3	3,829.9	3,820.4	9.47	404.473		
1,500.0	1,500.0	1,488.1	1,488.0	5.1	5.0	76.91	867.3	3,730.6	3,830.1	3,819.9	10.18	376.254		
1,600.0	1,600.0	1,591.1	1,591.0	5.5	5.4	76.92	866.6	3,730.9	3,830.2	3,819.3	10.90	351.486		
1,700.0	1,700.0	1,698.2	1,698.1	5.9	5.8	76.93	865.9	3,731.1	3,830.3	3,818.6	11.63	329.375		
1,800.0	1,800.0	1,802.1	1,802.1	6.2	6.1	76.94	865.2	3,731.1	3,830.1	3,817.8	12.35	310.158		
1,900.0	1,900.0	1,905.2	1,905.1	6.6	6.5	76.95	864.7	3,731.0	3,829.9	3,816.8	13.07	293.128		
2,000.0	2,000.0	2,020.5	2,020.5	6.9	6.9	76.96	863.8	3,730.6	3,829.4	3,815.6	13.82	276.994		
2,100.0	2,100.0	2,120.1	2,120.0	7.3	7.2	76.97	863.1	3,730.1	3,828.7	3,814.2	14.53	263.520		
2,200.0	2,200.0	2,224.6	2,224.5	7.7	7.6	76.98	862.4	3,729.5	3,828.0	3,812.8	15.25	251.002		
2,235.5	2,235.5	2,259.7	2,259.6	7.8	7.7	127.99	862.2	3,729.3	3,827.9	3,812.4	15.50	246.979		
2,300.0	2,300.0	2,319.7	2,319.7	8.0	7.9	128.00	861.8	3,728.9	3,828.3	3,812.4	15.94	240.220		
2,400.0	2,399.8	2,400.0	2,399.9	8.4	8.2	128.01	861.4	3,728.6	3,831.1	3,814.6	16.57	231.237		
2,500.0	2,499.5	2,472.9	2,472.9	8.7	8.5	128.00	861.1	3,728.8	3,836.7	3,819.5	17.17	223.407		
2,600.0	2,598.7	2,560.5	2,560.4	9.1	8.8	128.00	860.8	3,729.6	3,845.1	3,827.2	17.83	215.651		
2,700.0	2,697.5	2,656.4	2,656.3	9.4	9.1	128.02	860.6	3,730.6	3,855.7	3,837.1	18.52	208.245		
2,800.0	2,795.6	2,760.2	2,760.1	9.8	9.5	128.06	860.3	3,731.6	3,868.5	3,849.2	19.23	201.190		
2,900.0	2,893.1	2,895.6	2,895.5	10.1	9.9	128.20	859.8	3,732.2	3,883.0	3,862.9	20.05	193.650		
3,000.0	2,989.6	3,019.8	3,019.8	10.5	10.4	128.33	858.7	3,731.8	3,898.8	3,878.0	20.83	187.133		
3,100.0	3,085.3	3,130.3	3,130.2	10.9	10.8	128.43	858.7	3,730.4	3,916.2	3,894.7	21.57	181.560		
3,200.0	3,179.8	3,215.4	3,215.3	11.2	11.1	128.43	859.2	3,729.3	3,936.0	3,913.8	22.22	177.147		
3,300.0	3,273.2	3,309.1	3,309.0	11.6	11.4	128.45	859.8	3,728.2	3,958.2	3,935.3	22.90	172.849		
3,387.5	3,353.8	3,372.0	3,371.9	11.9	11.6	128.38	860.1	3,727.7	3,979.7	3,956.2	23.43	169.852		
3,400.0	3,365.2	3,381.2	3,381.1	12.0	11.6	128.42	860.1	3,727.6	3,982.9	3,959.4	23.51	169.432		
3,500.0	3,456.8	3,470.5	3,470.4	12.4	11.9	128.84	860.5	3,727.2	4,008.9	3,984.8	24.18	165.817		
3,600.0	3,548.3	3,561.1	3,561.0	12.8	12.3	129.25	861.0	3,726.7	4,035.2	4,010.3	24.86	162.340		
3,700.0	3,639.8	3,652.0	3,651.8	13.2	12.6	129.65	861.7	3,726.2	4,061.7	4,036.1	25.54	159.026		
3,800.0	3,731.4	3,739.8	3,739.6	13.6	12.9	130.04	862.4	3,725.7	4,088.4	4,062.2	26.22	155.935		
3,900.0	3,822.9	3,824.9	3,824.8	14.0	13.2	130.40	863.1	3,725.4	4,115.5	4,088.6	26.89	153.048		
4,000.0	3,914.4	3,918.0	3,917.9	14.4	13.5	130.80	864.1	3,725.1	4,142.9	4,115.3	27.59	150.134		
4,100.0	4,005.9	4,020.4	4,020.2	14.8	13.9	131.23	865.0	3,724.6	4,170.3	4,141.9	28.34	147.172		
4,200.0	4,097.5	4,130.1	4,130.0	15.2	14.2	131.69	865.7	3,723.8	4,197.6	4,168.5	29.11	144.205		
4,300.0	4,189.0	4,237.4	4,237.2	15.6	14.6	132.14	866.1	3,722.6	4,224.7	4,194.8	29.87	141.414		
4,400.0	4,280.5	4,338.2	4,338.1	16.1	15.0	132.56	866.2	3,721.2	4,251.7	4,221.1	30.62	138.859		
4,500.0	4,372.1	4,429.3	4,429.2	16.5	15.3	132.94	866.1	3,719.8	4,278.8	4,247.5	31.33	136.574		
4,600.0	4,463.6	4,501.4	4,501.2	16.9	15.5	133.23	866.1	3,718.9	4,306.3	4,274.4	31.97	134.701		
4,700.0	4,555.1	4,577.8	4,577.6	17.4	15.8	133.53	866.2	3,718.3	4,334.5	4,301.8	32.63	132.850		
4,800.0	4,646.7	4,660.5	4,660.3	17.8	16.1	133.86	866.5	3,717.8	4,363.0	4,329.7	33.31	130.986		
4,900.0	4,738.2	4,744.6	4,744.4	18.2	16.4	134.19	866.7	3,717.5	4,391.9	4,357.9	34.00	129.182		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch 41-07 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
5,000.0	4,829.7	4,828.2	4,828.0	18.7	16.7	134.52	866.9	3,717.4	4,421.2	4,386.5	34.69	127.463		
5,100.0	4,921.3	4,913.9	4,913.9	19.1	17.0	134.85	867.1	3,717.3	4,450.7	4,415.3	35.38	125.788		
5,200.0	5,012.8	5,004.2	5,004.0	19.5	17.3	135.19	867.2	3,717.4	4,480.5	4,444.4	36.10	124.117		
5,300.0	5,104.3	5,082.0	5,081.9	20.0	17.6	135.48	867.3	3,717.6	4,510.6	4,473.9	36.77	122.685		
5,400.0	5,195.8	5,164.7	5,164.5	20.4	17.9	135.79	867.5	3,718.0	4,541.1	4,503.7	37.45	121.251		
5,500.0	5,287.4	5,251.5	5,251.3	20.9	18.2	136.11	867.8	3,718.5	4,571.9	4,533.8	38.16	119.820		
5,600.0	5,378.9	5,341.6	5,341.4	21.3	18.5	136.43	868.3	3,719.1	4,602.9	4,564.0	38.88	118.402		
5,700.0	5,470.4	5,436.8	5,436.6	21.8	18.8	136.77	868.7	3,719.8	4,634.0	4,594.4	39.62	116.973		
5,800.0	5,562.0	5,535.7	5,535.5	22.2	19.2	137.12	869.4	3,720.3	4,665.2	4,624.8	40.37	115.550		
5,900.0	5,653.5	5,630.3	5,630.1	22.7	19.5	137.44	870.2	3,720.7	4,696.4	4,655.2	41.11	114.228		
6,000.0	5,745.0	5,726.5	5,726.3	23.1	19.8	137.76	870.9	3,721.0	4,727.6	4,685.7	41.86	112.933		
6,100.0	5,836.6	5,819.4	5,819.2	23.6	20.1	138.08	871.6	3,721.2	4,758.9	4,716.3	42.60	111.720		
6,200.0	5,928.1	5,899.1	5,898.9	24.0	20.4	138.34	872.3	3,721.5	4,790.4	4,747.2	43.28	110.697		
6,278.6	6,000.0	5,963.6	5,963.4	24.4	20.6	138.55	872.9	3,721.9	4,815.4	4,771.6	43.82	109.900		
6,290.0	6,010.4	5,972.9	5,972.7	24.4	20.7	136.63	873.0	3,722.0	4,819.1	4,775.2	43.90	109.787		
6,300.0	6,019.5	5,981.2	5,980.9	24.5	20.7	134.94	873.1	3,722.0	4,822.3	4,778.3	43.96	109.687		
6,350.0	6,065.8	6,023.7	6,023.5	24.7	20.9	124.68	873.7	3,722.3	4,835.4	4,791.1	44.31	109.128		
6,400.0	6,113.0	6,068.1	6,067.8	24.9	21.0	110.94	874.4	3,722.7	4,844.0	4,799.3	44.65	108.477		
6,450.0	6,160.7	6,112.3	6,112.1	25.1	21.2	94.20	875.1	3,723.1	4,847.9	4,802.9	44.99	107.759		
6,500.0	6,208.5	6,155.3	6,155.1	25.3	21.3	76.98	876.0	3,723.5	4,847.2	4,801.8	45.30	106.994		
6,550.0	6,255.8	6,198.1	6,197.9	25.4	21.5	62.18	877.0	3,724.0	4,841.8	4,796.2	45.60	106.176		
6,600.0	6,302.5	6,241.2	6,241.0	25.6	21.6	50.95	878.1	3,724.5	4,831.8	4,785.9	45.88	105.304		
6,650.0	6,347.9	6,283.3	6,283.0	25.7	21.8	42.84	879.1	3,725.0	4,817.3	4,771.2	46.15	104.395		
6,700.0	6,391.6	6,327.0	6,326.7	25.9	21.9	37.06	880.1	3,725.6	4,798.4	4,752.0	46.40	103.423		
6,750.0	6,433.4	6,370.6	6,370.3	26.0	22.1	32.92	881.0	3,726.1	4,775.3	4,728.6	46.63	102.406		
6,800.0	6,472.8	6,414.8	6,414.4	26.1	22.2	29.96	881.8	3,726.7	4,748.1	4,701.2	46.85	101.339		
6,850.0	6,509.4	6,462.7	6,462.3	26.2	22.4	27.91	882.3	3,727.2	4,717.0	4,669.9	47.08	100.194		
6,900.0	6,543.0	6,506.2	6,505.9	26.3	22.5	26.55	882.4	3,727.5	4,682.3	4,635.0	47.27	99.048		
6,950.0	6,573.2	6,543.7	6,543.3	26.4	22.7	25.78	882.4	3,727.8	4,644.3	4,596.8	47.43	97.918		
7,000.0	6,599.8	6,576.7	6,576.4	26.5	22.8	25.58	882.3	3,727.9	4,603.4	4,555.8	47.56	96.787		
7,050.0	6,622.5	6,606.3	6,605.9	26.6	22.9	26.05	882.3	3,728.0	4,560.0	4,512.3	47.67	95.649		
7,100.0	6,641.1	6,636.1	6,635.7	26.7	23.0	27.49	882.1	3,728.1	4,514.4	4,466.6	47.79	94.473		
7,150.0	6,655.4	6,658.7	6,658.3	26.8	23.1	30.50	881.9	3,728.0	4,467.1	4,419.2	47.87	93.326		
7,200.0	6,665.4	6,665.3	6,665.0	26.9	23.1	36.64	881.8	3,728.0	4,418.5	4,370.6	47.88	92.283		
7,250.0	6,670.8	6,670.7	6,670.4	27.0	23.1	53.81	881.8	3,728.0	4,369.1	4,321.2	47.89	91.223		
7,285.7	6,672.0	6,671.8	6,671.5	27.1	23.1	90.87	881.7	3,728.0	4,333.5	4,285.6	47.90	90.473		
7,300.0	6,672.0	6,671.8	6,671.4	27.1	23.1	90.87	881.7	3,728.0	4,319.2	4,271.3	47.90	90.174		
7,400.0	6,672.0	6,671.6	6,671.3	27.3	23.1	90.83	881.8	3,728.0	4,219.5	4,171.6	47.90	88.089		
7,500.0	6,672.0	6,671.4	6,671.1	27.6	23.1	90.80	881.8	3,728.0	4,119.7	4,071.8	47.90	86.001		
7,600.0	6,672.0	6,671.2	6,670.9	28.0	23.1	90.76	881.8	3,728.0	4,020.0	3,972.1	47.91	83.911		
7,700.0	6,672.0	6,671.1	6,670.7	28.3	23.1	90.73	881.8	3,728.0	3,920.2	3,872.3	47.91	81.818		
7,800.0	6,672.0	6,670.9	6,670.5	28.8	23.1	90.69	881.8	3,728.0	3,820.5	3,772.6	47.92	79.723		
7,900.0	6,672.0	6,670.7	6,670.4	29.3	23.1	90.66	881.8	3,728.0	3,720.8	3,672.9	47.93	77.626		
8,000.0	6,672.0	6,670.5	6,670.2	29.8	23.1	90.62	881.8	3,728.0	3,621.1	3,573.2	47.95	75.527		
8,100.0	6,672.0	6,670.4	6,670.0	30.4	23.1	90.59	881.8	3,728.0	3,521.5	3,473.5	47.96	73.425		
8,200.0	6,672.0	6,670.2	6,669.8	31.0	23.1	90.55	881.8	3,728.0	3,421.8	3,373.9	47.98	71.322		
8,300.0	6,672.0	6,670.0	6,669.7	31.7	23.1	90.52	881.8	3,728.0	3,322.2	3,274.2	48.00	69.216		
8,400.0	6,672.0	6,669.8	6,669.5	32.4	23.1	90.48	881.8	3,728.0	3,222.6	3,174.6	48.02	67.109		
8,500.0	6,672.0	6,669.7	6,669.3	33.1	23.1	90.45	881.8	3,728.0	3,123.1	3,075.0	48.05	65.000		
8,600.0	6,672.0	6,669.5	6,669.1	33.9	23.1	90.41	881.8	3,728.0	3,023.5	2,975.5	48.08	62.889		
8,700.0	6,672.0	6,669.3	6,669.0	34.7	23.1	90.38	881.8	3,728.0	2,924.0	2,875.9	48.11	60.776		
8,800.0	6,672.0	6,669.1	6,668.8	35.5	23.1	90.34	881.8	3,728.0	2,824.6	2,776.4	48.15	58.661		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch 41-07 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
8,900.0	6,672.0	6,668.9	6,668.6	36.3	23.1	90.31	881.8	3,728.0	2,725.1	2,676.9	48.19	56.545	3.432 CC, ES, SF	
9,000.0	6,672.0	6,668.8	6,668.4	37.2	23.1	90.27	881.8	3,728.0	2,625.8	2,577.5	48.24	54.427		
9,100.0	6,672.0	6,668.6	6,668.2	38.1	23.1	90.24	881.8	3,728.0	2,526.4	2,478.1	48.30	52.307		
9,200.0	6,672.0	6,668.4	6,668.1	39.0	23.1	90.21	881.8	3,728.0	2,427.1	2,378.8	48.36	50.185		
9,300.0	6,672.0	6,668.2	6,667.9	39.9	23.1	90.17	881.8	3,728.0	2,327.9	2,279.5	48.44	48.061		
9,400.0	6,672.0	6,668.1	6,667.7	40.8	23.1	90.14	881.8	3,728.0	2,228.8	2,180.3	48.52	45.936		
9,500.0	6,672.0	6,667.9	6,667.5	41.8	23.1	90.10	881.8	3,728.0	2,129.7	2,081.1	48.61	43.808		
9,600.0	6,672.0	6,667.7	6,667.4	42.7	23.1	90.07	881.8	3,728.0	2,030.7	1,982.0	48.72	41.678		
9,700.0	6,672.0	6,667.5	6,667.2	43.7	23.1	90.03	881.8	3,728.0	1,931.9	1,883.0	48.85	39.546		
9,800.0	6,672.0	6,667.3	6,667.0	44.7	23.1	90.00	881.8	3,728.0	1,833.1	1,784.1	49.00	37.412		
9,900.0	6,672.0	6,667.2	6,666.8	45.7	23.1	89.96	881.8	3,728.0	1,734.6	1,685.4	49.17	35.274		
10,000.0	6,672.0	6,667.0	6,666.6	46.7	23.1	89.93	881.8	3,728.0	1,636.1	1,586.8	49.38	33.134		
10,100.0	6,672.0	6,666.8	6,666.5	47.7	23.1	89.90	881.8	3,728.0	1,537.9	1,488.3	49.62	30.991		
10,200.0	6,672.0	6,666.6	6,666.3	48.8	23.1	89.86	881.8	3,728.0	1,439.9	1,390.0	49.92	28.845		
10,300.0	6,672.0	6,666.4	6,666.1	49.8	23.1	89.83	881.8	3,728.0	1,342.3	1,292.0	50.28	26.697		
10,400.0	6,672.0	6,666.3	6,665.9	50.9	23.1	89.79	881.8	3,728.0	1,245.0	1,194.3	50.72	24.545		
10,500.0	6,672.0	6,666.1	6,665.7	51.9	23.1	89.76	881.8	3,728.0	1,148.2	1,096.9	51.27	22.392		
10,600.0	6,672.0	6,665.9	6,665.6	53.0	23.1	89.72	881.8	3,728.0	1,051.9	999.9	51.97	20.239		
10,700.0	6,672.0	6,665.7	6,665.4	54.1	23.1	89.69	881.8	3,728.0	956.5	903.6	52.87	18.091		
10,800.0	6,672.0	6,665.6	6,665.2	55.2	23.1	89.66	881.8	3,728.0	862.0	808.0	54.04	15.952		
10,900.0	6,672.0	6,665.4	6,665.0	56.3	23.1	89.62	881.8	3,728.0	769.0	713.4	55.59	13.833		
11,000.0	6,672.0	6,665.2	6,664.8	57.4	23.1	89.59	881.8	3,728.0	678.0	620.3	57.68	11.755		
11,100.0	6,672.0	6,665.0	6,664.7	58.5	23.1	89.55	881.8	3,728.0	589.9	529.4	60.53	9.746		
11,200.0	6,672.0	6,664.8	6,664.5	59.6	23.1	89.52	881.8	3,728.0	506.3	441.8	64.44	7.857		
11,300.0	6,672.0	6,664.7	6,664.3	60.7	23.1	89.48	881.8	3,728.0	429.7	360.0	69.71	6.164		
11,400.0	6,672.0	6,664.5	6,664.1	61.8	23.1	89.45	881.8	3,728.0	364.6	288.3	76.34	4.776		
11,500.0	6,672.0	6,664.3	6,663.9	62.9	23.1	89.42	881.8	3,728.0	318.2	235.1	83.16	3.826		
11,600.0	6,672.0	6,664.1	6,663.8	64.1	23.1	89.38	881.8	3,728.0	299.3	212.2	87.08	3.437		
11,608.4	6,672.0	6,664.1	6,663.8	64.2	23.1	89.38	881.8	3,728.0	299.2	212.0	87.17	3.432 CC, ES, SF		
11,700.0	6,672.0	6,663.9	6,663.6	65.2	23.1	89.35	881.8	3,728.0	312.9	227.4	85.49	3.660		
11,800.0	6,672.0	6,663.8	6,663.4	66.3	23.1	89.31	881.8	3,728.0	355.3	275.3	80.00	4.442		
11,900.0	6,672.0	6,663.6	6,663.2	67.5	23.1	89.28	881.8	3,728.0	417.8	344.0	73.84	5.659		
12,000.0	6,672.0	6,663.4	6,663.0	68.6	23.1	89.24	881.8	3,728.0	492.9	424.3	68.62	7.182		
12,100.0	6,672.0	6,663.2	6,662.9	69.8	23.1	89.21	881.8	3,728.0	575.6	511.0	64.61	8.908		
12,200.0	6,672.0	6,663.0	6,662.7	70.9	23.1	89.17	881.8	3,728.0	663.0	601.4	61.61	10.762		
12,300.0	6,672.0	6,662.9	6,662.5	72.1	23.1	89.14	881.8	3,728.0	753.6	694.3	59.36	12.697		
12,400.0	6,672.0	6,662.7	6,662.3	73.2	23.1	89.10	881.8	3,728.0	846.4	788.7	57.65	14.681		
12,500.0	6,672.0	6,662.5	6,662.1	74.4	23.1	89.07	881.8	3,728.0	940.6	884.2	56.34	16.694		
12,600.0	6,672.0	6,662.3	6,662.0	75.5	23.1	89.03	881.9	3,728.0	1,035.9	980.6	55.33	18.723		
12,700.0	6,672.0	6,662.1	6,661.8	76.7	23.1	89.00	881.9	3,728.0	1,132.0	1,077.5	54.52	20.762		
12,800.0	6,672.0	6,662.0	6,661.6	77.9	23.1	88.97	881.9	3,728.0	1,228.7	1,174.9	53.88	22.804		
12,900.0	6,672.0	6,661.8	6,661.4	79.0	23.1	88.93	881.9	3,728.0	1,326.0	1,272.6	53.37	24.846		
13,000.0	6,672.0	6,661.6	6,661.2	80.2	23.1	88.89	881.9	3,728.0	1,423.6	1,370.6	52.95	26.886		
13,100.0	6,672.0	6,661.4	6,661.1	81.4	23.1	88.86	881.9	3,728.0	1,521.5	1,468.9	52.60	28.923		
13,200.0	6,672.0	6,661.2	6,660.9	82.6	23.1	88.82	881.9	3,728.0	1,619.7	1,567.4	52.32	30.956		
13,300.0	6,672.0	6,661.0	6,660.7	83.7	23.1	88.79	881.9	3,728.0	1,718.1	1,666.0	52.09	32.985		
13,400.0	6,672.0	6,660.9	6,660.5	84.9	23.1	88.75	881.9	3,728.0	1,816.6	1,764.7	51.89	35.008		
13,500.0	6,672.0	6,660.7	6,660.3	86.1	23.1	88.72	881.9	3,728.0	1,915.4	1,863.6	51.73	37.025		
13,600.0	6,672.0	6,660.5	6,660.2	87.3	23.1	88.68	881.9	3,728.0	2,014.2	1,962.6	51.60	39.037		
13,700.0	6,672.0	6,660.3	6,660.0	88.4	23.1	88.65	881.9	3,728.0	2,113.2	2,061.7	51.49	41.044		
13,800.0	6,672.0	6,660.1	6,659.8	89.6	23.1	88.61	881.9	3,728.0	2,212.2	2,160.8	51.39	43.044		
13,900.0	6,672.0	6,660.0	6,659.6	90.8	23.1	88.58	881.9	3,728.0	2,311.3	2,260.0	51.32	45.039		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch 41-07 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
14,000.0	6,672.0	6,659.8	6,659.4	92.0	23.1	88.54	881.9	3,728.0	2,410.5	2,359.3	51.26	47.028		
14,100.0	6,672.0	6,659.6	6,659.2	93.2	23.1	88.50	881.9	3,728.0	2,509.8	2,458.6	51.21	49.011		
14,200.0	6,672.0	6,659.4	6,659.1	94.4	23.1	88.47	881.9	3,728.0	2,609.1	2,558.0	51.17	50.988		
14,300.0	6,672.0	6,659.2	6,658.9	95.6	23.1	88.43	881.9	3,728.0	2,708.5	2,657.4	51.14	52.959		
14,400.0	6,672.0	6,659.0	6,658.7	96.8	23.1	88.40	881.9	3,728.0	2,807.9	2,756.8	51.12	54.925		
14,500.0	6,672.0	6,658.9	6,658.5	98.0	23.1	88.36	881.9	3,728.0	2,907.4	2,856.3	51.11	56.884		
14,600.0	6,672.0	6,658.7	6,658.3	99.2	23.1	88.32	881.9	3,728.0	3,006.9	2,955.8	51.11	58.837		
14,700.0	6,672.0	6,658.5	6,658.2	100.4	23.1	88.29	881.9	3,728.0	3,106.4	3,055.3	51.11	60.785		
14,800.0	6,672.0	6,658.3	6,658.0	101.6	23.1	88.25	881.9	3,728.0	3,206.0	3,154.9	51.11	62.726		
14,900.0	6,672.0	6,658.1	6,657.8	102.7	23.1	88.21	881.9	3,728.0	3,305.6	3,254.4	51.12	64.662		
15,000.0	6,672.0	6,658.0	6,657.6	103.9	23.1	88.18	881.9	3,728.0	3,405.2	3,354.0	51.14	66.591		
15,100.0	6,672.0	6,657.8	6,657.4	105.1	23.1	88.14	881.9	3,728.0	3,504.8	3,453.7	51.15	68.515		
15,200.0	6,672.0	6,657.6	6,657.2	106.3	23.1	88.10	881.9	3,728.0	3,604.5	3,553.3	51.18	70.432		
15,300.0	6,672.0	6,657.4	6,657.1	107.6	23.1	88.06	881.9	3,728.0	3,704.1	3,652.9	51.20	72.344		
15,400.0	6,672.0	6,657.2	6,656.9	108.8	23.1	88.03	881.9	3,728.0	3,803.8	3,752.6	51.23	74.249		
15,500.0	6,672.0	6,657.0	6,656.7	110.0	23.1	87.99	881.9	3,728.0	3,903.5	3,852.3	51.26	76.148		
15,600.0	6,672.0	6,656.9	6,656.5	111.2	23.1	87.95	881.9	3,728.0	4,003.3	3,952.0	51.30	78.041		
15,700.0	6,672.0	6,656.7	6,656.3	112.4	23.1	87.91	881.9	3,728.0	4,103.0	4,051.7	51.33	79.927		
15,800.0	6,672.0	6,656.5	6,656.1	113.6	23.1	87.87	881.9	3,728.0	4,202.8	4,151.4	51.37	81.808		
15,900.0	6,672.0	6,656.3	6,656.0	114.8	23.1	87.84	881.9	3,728.0	4,302.5	4,251.1	51.41	83.682		
16,000.0	6,672.0	6,656.1	6,655.8	116.0	23.1	87.80	881.9	3,728.0	4,402.3	4,350.8	51.46	85.550		
16,100.0	6,672.0	6,655.9	6,655.6	117.2	23.1	87.76	881.9	3,728.0	4,502.1	4,450.6	51.50	87.412		
16,200.0	6,672.0	6,655.8	6,655.4	118.4	23.1	87.72	881.9	3,728.0	4,601.9	4,550.3	51.55	89.267		
16,300.0	6,672.0	6,655.6	6,655.2	119.6	23.1	87.68	881.9	3,728.0	4,701.7	4,650.1	51.60	91.117		
16,400.0	6,672.0	6,655.4	6,655.0	120.8	23.1	87.64	881.9	3,728.0	4,801.5	4,749.8	51.65	92.959		
16,500.0	6,672.0	6,655.2	6,654.9	122.0	23.1	87.60	881.9	3,728.0	4,901.3	4,849.6	51.70	94.796		
16,600.0	6,672.0	6,655.0	6,654.7	123.2	23.1	87.56	881.9	3,728.0	5,001.1	4,949.4	51.76	96.626		
16,700.0	6,672.0	6,654.8	6,654.5	124.5	23.1	87.52	881.9	3,728.0	5,101.0	5,049.2	51.81	98.449		
16,800.0	6,672.0	6,654.7	6,654.3	125.7	23.1	87.48	881.9	3,728.0	5,200.8	5,148.9	51.87	100.266		
16,900.0	6,672.0	6,654.5	6,654.1	126.9	23.1	87.44	881.9	3,728.0	5,300.7	5,248.7	51.93	102.077		
17,000.0	6,672.0	6,654.3	6,653.9	128.1	23.1	87.40	881.9	3,728.0	5,400.5	5,348.5	51.99	103.881		
17,100.0	6,672.0	6,654.1	6,653.8	129.3	23.1	87.36	881.9	3,728.0	5,500.4	5,448.3	52.05	105.679		
17,200.0	6,672.0	6,653.9	6,653.6	130.5	23.1	87.32	881.9	3,728.0	5,600.2	5,548.1	52.11	107.470		
17,300.0	6,672.0	6,653.7	6,653.4	131.7	23.1	87.28	881.9	3,728.0	5,700.1	5,647.9	52.17	109.254		
17,400.0	6,672.0	6,653.5	6,653.2	133.0	23.1	87.24	881.9	3,728.0	5,800.0	5,747.8	52.24	111.032		
17,500.0	6,672.0	6,653.4	6,653.0	134.2	23.1	87.20	881.9	3,728.0	5,899.9	5,847.6	52.30	112.804		
17,600.0	6,672.0	6,653.2	6,652.8	135.4	23.1	87.16	882.0	3,728.0	5,999.8	5,947.4	52.37	114.568		
17,700.0	6,672.0	6,653.0	6,652.6	136.6	23.1	87.12	882.0	3,728.0	6,099.6	6,047.2	52.44	116.327		
17,800.0	6,672.0	6,652.8	6,652.5	137.8	23.1	87.08	882.0	3,728.0	6,199.5	6,147.0	52.50	118.078		
17,900.0	6,672.0	6,652.6	6,652.3	139.0	23.1	87.03	882.0	3,728.0	6,299.4	6,246.9	52.57	119.823		
18,000.0	6,672.0	6,652.4	6,652.1	140.3	23.1	86.99	882.0	3,728.0	6,399.3	6,346.7	52.64	121.561		
18,100.0	6,672.0	6,652.3	6,651.9	141.5	23.1	86.95	882.0	3,728.0	6,499.2	6,446.5	52.71	123.293		
18,200.0	6,672.0	6,652.1	6,651.7	142.7	23.1	86.91	882.0	3,728.0	6,599.1	6,546.4	52.79	125.018		
18,300.0	6,672.0	6,651.9	6,651.5	143.9	23.1	86.86	882.0	3,728.0	6,699.1	6,646.2	52.86	126.736		
18,342.5	6,672.0	6,651.8	6,651.5	144.4	23.1	86.85	882.0	3,728.0	6,741.5	6,688.6	52.89	127.464		



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch 42-07 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	1.8	1.8	0.0	0.0	96.93	-452.6	3,725.5	3,752.8					
100.0	100.0	90.2	90.2	0.1	0.2	96.92	-452.3	3,725.6	3,753.0	3,752.7	0.29	N/A		
200.0	200.0	187.4	187.4	0.5	0.5	96.91	-451.5	3,726.1	3,753.4	3,752.4	0.97	3,876.121		
300.0	300.0	306.5	306.5	0.8	0.9	96.90	-450.7	3,726.4	3,753.5	3,751.8	1.74	2,153.899		
311.6	311.6	320.7	320.7	0.9	1.0	96.89	-450.6	3,726.4	3,753.5	3,751.7	1.83	2,046.615		
400.0	400.0	387.5	387.5	1.2	1.2	96.90	-450.6	3,726.5	3,753.7	3,751.3	2.38	1,575.272		
500.0	500.0	487.8	487.8	1.6	1.5	96.90	-451.2	3,726.9	3,754.1	3,751.0	3.09	1,214.361		
600.0	600.0	612.8	612.7	1.9	2.0	96.92	-452.1	3,726.9	3,754.2	3,750.3	3.89	966.002		
667.8	667.8	669.8	669.8	2.2	2.2	96.93	-452.7	3,726.8	3,754.1	3,749.8	4.33	867.257		
700.0	700.0	698.7	698.7	2.3	2.3	96.93	-453.1	3,726.7	3,754.2	3,749.6	4.55	825.884		
800.0	800.0	791.2	791.2	2.6	2.6	96.95	-454.2	3,726.8	3,754.4	3,749.1	5.23	718.143		
900.0	900.0	899.3	899.3	3.0	3.0	96.97	-455.4	3,726.8	3,754.6	3,748.6	5.96	629.518		
1,000.0	1,000.0	1,013.3	1,013.3	3.4	3.4	96.99	-456.6	3,726.5	3,754.4	3,747.7	6.72	558.611		
1,063.3	1,063.3	1,065.3	1,065.3	3.6	3.6	97.00	-457.4	3,726.4	3,754.4	3,747.2	7.13	526.571		
1,100.0	1,100.0	1,097.3	1,097.3	3.7	3.7	97.01	-457.9	3,726.4	3,754.4	3,747.0	7.37	509.166		
1,200.0	1,200.0	1,197.0	1,197.0	4.1	4.0	97.03	-459.3	3,726.3	3,754.5	3,746.5	8.08	464.617		
1,300.0	1,300.0	1,314.8	1,314.7	4.4	4.4	97.05	-460.8	3,726.0	3,754.4	3,745.6	8.85	424.193		
1,371.8	1,371.8	1,373.9	1,373.8	4.7	4.6	97.06	-461.6	3,725.9	3,754.4	3,745.0	9.31	403.060		
1,400.0	1,400.0	1,398.6	1,398.5	4.8	4.7	97.07	-462.0	3,725.8	3,754.4	3,744.9	9.50	395.101		
1,500.0	1,500.0	1,521.8	1,521.7	5.1	5.1	97.10	-463.7	3,725.3	3,754.1	3,743.8	10.29	364.795		
1,600.0	1,600.0	1,624.0	1,623.9	5.5	5.5	97.11	-464.8	3,724.6	3,753.5	3,742.5	11.01	341.035		
1,700.0	1,700.0	1,717.5	1,717.4	5.9	5.8	97.13	-465.9	3,724.0	3,753.0	3,741.4	11.69	321.019		
1,800.0	1,800.0	1,825.1	1,825.0	6.2	6.2	97.14	-466.7	3,723.4	3,752.6	3,740.2	12.42	302.023		
1,900.0	1,900.0	1,931.6	1,931.4	6.6	6.6	97.16	-467.3	3,722.4	3,751.8	3,738.6	13.15	285.209		
2,000.0	2,000.0	2,021.9	2,021.7	6.9	6.9	97.16	-467.7	3,721.9	3,751.2	3,737.4	13.83	271.272		
2,100.0	2,100.0	2,131.4	2,131.3	7.3	7.3	97.17	-468.2	3,720.9	3,750.4	3,735.8	14.57	257.429		
2,200.0	2,200.0	2,227.1	2,227.0	7.7	7.6	97.18	-468.5	3,720.3	3,749.8	3,734.5	15.26	245.709		
2,239.9	2,239.9	2,286.5	2,286.4	7.8	7.8	148.18	-468.5	3,719.8	3,749.7	3,734.1	15.61	240.215		
2,300.0	2,300.0	2,343.2	2,343.0	8.0	8.0	148.19	-468.3	3,719.1	3,750.2	3,734.2	16.02	234.085		
2,400.0	2,399.8	2,437.4	2,437.3	8.4	8.3	148.19	-468.1	3,718.3	3,753.7	3,737.0	16.70	224.753		
2,500.0	2,499.5	2,543.5	2,543.4	8.7	8.7	148.19	-467.5	3,717.2	3,760.0	3,742.6	17.42	215.810		
2,600.0	2,598.7	2,638.6	2,638.4	9.1	9.1	148.18	-467.2	3,716.2	3,769.4	3,751.3	18.11	208.186		
2,700.0	2,697.5	2,739.5	2,739.3	9.4	9.4	148.17	-466.6	3,715.3	3,781.7	3,762.9	18.81	201.072		
2,800.0	2,795.6	2,838.1	2,837.9	9.8	9.7	148.16	-466.3	3,714.2	3,796.9	3,777.4	19.50	194.698		
2,900.0	2,893.1	2,928.3	2,928.1	10.1	10.1	148.12	-466.0	3,713.5	3,815.3	3,795.1	20.16	189.203		
3,000.0	2,989.6	3,030.6	3,030.5	10.5	10.4	148.10	-465.7	3,712.3	3,836.3	3,815.5	20.87	183.817		
3,100.0	3,085.3	3,100.7	3,100.5	10.9	10.7	148.00	-465.6	3,711.9	3,860.8	3,839.3	21.46	179.890		
3,200.0	3,179.8	3,214.1	3,213.9	11.2	11.1	148.00	-465.5	3,711.2	3,888.3	3,866.1	22.21	175.095		
3,300.0	3,273.2	3,276.3	3,276.1	11.6	11.3	147.84	-465.3	3,711.1	3,918.9	3,896.1	22.77	172.120		
3,387.5	3,353.8	3,338.8	3,338.6	11.9	11.5	147.70	-464.9	3,711.3	3,948.5	3,925.2	23.29	169.551		
3,400.0	3,365.2	3,348.1	3,347.9	12.0	11.5	147.73	-464.8	3,711.3	3,952.9	3,929.5	23.36	169.184		
3,500.0	3,456.8	3,423.5	3,423.3	12.4	11.8	147.96	-463.6	3,712.1	3,988.4	3,964.5	23.97	166.394		
3,600.0	3,548.3	3,501.7	3,501.4	12.8	12.1	148.19	-462.4	3,713.1	4,024.4	3,999.9	24.59	163.663		
3,700.0	3,639.8	3,606.2	3,606.0	13.2	12.4	148.50	-460.5	3,714.5	4,060.5	4,035.2	25.31	160.413		
3,800.0	3,731.4	3,707.5	3,707.2	13.6	12.8	148.78	-458.1	3,715.7	4,096.4	4,070.4	26.03	157.376		
3,900.0	3,822.9	3,789.3	3,789.0	14.0	13.1	149.01	-456.5	3,716.7	4,132.4	4,105.7	26.68	154.917		
4,000.0	3,914.4	3,858.3	3,858.0	14.4	13.3	149.20	-455.5	3,717.6	4,168.8	4,141.5	27.27	152.851		
4,100.0	4,005.9	3,927.9	3,927.5	14.8	13.5	149.40	-454.8	3,719.0	4,205.8	4,177.9	27.88	150.878		
4,200.0	4,097.5	4,003.7	4,003.4	15.2	13.8	149.61	-454.3	3,720.7	4,243.2	4,214.7	28.50	148.868		
4,300.0	4,189.0	4,128.0	4,127.6	15.6	14.2	149.99	-455.2	3,722.8	4,280.5	4,251.2	29.33	145.961		
4,400.0	4,280.5	4,259.1	4,258.6	16.1	14.7	150.41	-458.7	3,723.6	4,317.3	4,287.1	30.18	143.047		
4,500.0	4,372.1	4,410.3	4,409.7	16.5	15.2	150.91	-464.4	3,722.2	4,352.9	4,321.8	31.12	139.879		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch 42-07 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
4,600.0	4,463.6	4,505.7	4,505.1	16.9	15.6	151.24	-469.0	3,720.4	4,388.1	4,356.3	31.84	137.807		
4,700.0	4,555.1	4,589.9	4,589.1	17.4	15.9	151.53	-473.4	3,718.7	4,423.4	4,390.8	32.52	136.009		
4,800.0	4,646.7	4,799.8	4,798.7	17.8	16.6	152.20	-481.3	3,711.8	4,456.8	4,423.1	33.70	132.257		
4,900.0	4,738.2	4,868.2	4,867.0	18.2	16.8	152.40	-482.9	3,709.2	4,490.2	4,455.8	34.32	130.826		
5,000.0	4,829.7	4,952.0	4,950.8	18.7	17.1	152.64	-484.4	3,706.6	4,524.0	4,489.0	35.01	129.237		
5,100.0	4,921.3	5,047.7	5,046.4	19.1	17.5	152.90	-485.4	3,703.7	4,557.9	4,522.1	35.74	127.539		
5,200.0	5,012.8	5,126.0	5,124.7	19.5	17.7	153.10	-486.0	3,701.4	4,591.9	4,555.5	36.40	126.146		
5,300.0	5,104.3	5,184.7	5,183.4	20.0	18.0	153.25	-486.4	3,700.1	4,626.5	4,589.5	36.99	125.089		
5,400.0	5,195.8	5,295.9	5,294.6	20.4	18.3	153.53	-486.6	3,698.1	4,661.5	4,623.7	37.78	123.372		
5,500.0	5,287.4	5,378.4	5,377.1	20.9	18.6	153.72	-486.6	3,696.4	4,696.3	4,657.8	38.47	122.087		
5,600.0	5,378.9	5,449.8	5,448.5	21.3	18.9	153.89	-486.7	3,695.1	4,731.4	4,692.3	39.10	120.996		
5,700.0	5,470.4	5,519.0	5,517.6	21.8	19.1	154.06	-486.9	3,694.2	4,767.0	4,727.3	39.73	119.984		
5,800.0	5,562.0	5,591.9	5,590.6	22.2	19.4	154.23	-487.1	3,693.6	4,803.2	4,762.8	40.37	118.969		
5,900.0	5,653.5	5,714.0	5,712.6	22.7	19.8	154.50	-486.9	3,692.6	4,839.3	4,798.0	41.23	117.385		
6,000.0	5,745.0	5,796.9	5,795.5	23.1	20.1	154.68	-486.8	3,691.7	4,875.2	4,833.3	41.91	116.319		
6,100.0	5,836.6	5,851.6	5,850.2	23.6	20.3	154.80	-486.9	3,691.4	4,911.6	4,869.1	42.48	115.631		
6,200.0	5,928.1	5,908.3	5,906.9	24.0	20.5	154.92	-486.9	3,691.5	4,948.7	4,905.7	43.05	114.961		
6,278.6	6,000.0	5,980.5	5,979.2	24.4	20.7	155.08	-487.0	3,691.8	4,978.2	4,934.6	43.62	114.135		
6,290.0	6,010.4	5,991.0	5,989.6	24.4	20.8	153.12	-487.0	3,691.8	4,982.5	4,938.8	43.70	114.018		
6,300.0	6,019.5	6,000.2	5,998.8	24.5	20.8	151.29	-487.0	3,691.9	4,986.3	4,942.5	43.77	113.915		
6,350.0	6,065.8	6,047.2	6,045.9	24.7	21.0	140.49	-487.1	3,692.1	5,002.6	4,958.4	44.13	113.350		
6,400.0	6,113.0	6,095.3	6,093.9	24.9	21.1	126.37	-487.2	3,692.3	5,014.5	4,970.0	44.49	112.703		
6,450.0	6,160.7	6,138.9	6,137.6	25.1	21.3	109.39	-487.2	3,692.4	5,022.1	4,977.3	44.82	112.040		
6,500.0	6,208.5	6,182.1	6,180.8	25.3	21.4	92.07	-487.3	3,692.7	5,025.2	4,980.1	45.14	111.322		
6,550.0	6,255.8	6,236.1	6,234.7	25.4	21.6	77.36	-487.3	3,693.0	5,023.8	4,978.3	45.49	110.432		
6,600.0	6,302.5	6,297.1	6,295.7	25.6	21.8	66.37	-487.1	3,693.3	5,017.9	4,972.0	45.86	109.417		
6,650.0	6,347.9	6,369.4	6,368.1	25.7	22.1	58.72	-486.3	3,693.4	5,007.3	4,961.1	46.26	108.237		
6,700.0	6,391.6	6,424.7	6,423.4	25.9	22.3	53.49	-485.5	3,693.4	4,992.3	4,945.7	46.57	107.193		
6,750.0	6,433.4	6,466.4	6,465.0	26.0	22.4	50.02	-484.8	3,693.3	4,973.1	4,926.3	46.81	106.245		
6,800.0	6,472.8	6,505.7	6,504.3	26.1	22.6	47.91	-484.2	3,693.3	4,949.9	4,902.9	47.02	105.276		
6,850.0	6,509.4	6,536.3	6,534.9	26.2	22.7	46.86	-483.8	3,693.2	4,923.0	4,875.8	47.18	104.348		
6,900.0	6,543.0	6,565.1	6,563.7	26.3	22.8	46.78	-483.4	3,693.2	4,892.7	4,845.3	47.32	103.392		
6,950.0	6,573.2	6,610.6	6,608.0	26.4	22.9	47.60	-483.2	3,693.2	4,859.1	4,811.6	47.51	102.273		
7,000.0	6,599.8	6,616.0	6,614.6	26.5	22.9	49.45	-483.0	3,693.2	4,822.7	4,775.1	47.56	101.404		
7,050.0	6,622.5	6,638.8	6,637.3	26.6	23.0	52.40	-482.8	3,693.2	4,783.6	4,736.0	47.66	100.366		
7,100.0	6,641.1	6,657.4	6,656.0	26.7	23.1	56.71	-482.6	3,693.2	4,742.3	4,694.6	47.75	99.321		
7,150.0	6,655.4	6,671.8	6,670.4	26.8	23.1	62.70	-482.5	3,693.2	4,699.2	4,651.3	47.82	98.272		
7,200.0	6,665.4	6,681.8	6,680.4	26.9	23.2	70.82	-482.4	3,693.2	4,654.5	4,606.6	47.88	97.221		
7,250.0	6,670.8	6,687.3	6,685.9	27.0	23.2	81.41	-482.3	3,693.2	4,608.7	4,560.8	47.92	96.171		
7,285.7	6,672.0	6,688.5	6,687.1	27.1	23.2	90.45	-482.3	3,693.2	4,575.6	4,527.6	47.95	95.424		
7,300.0	6,672.0	6,688.5	6,687.1	27.1	23.2	90.45	-482.3	3,693.2	4,562.2	4,514.3	47.96	95.125		
7,400.0	6,672.0	6,688.5	6,687.1	27.3	23.2	90.45	-482.3	3,693.2	4,469.2	4,421.1	48.03	93.041		
7,500.0	6,672.0	6,688.5	6,687.1	27.6	23.2	90.45	-482.3	3,693.2	4,376.5	4,328.3	48.12	90.943		
7,600.0	6,672.0	6,688.6	6,687.2	28.0	23.2	90.45	-482.3	3,693.2	4,284.1	4,235.8	48.23	88.829		
7,700.0	6,672.0	6,688.6	6,687.2	28.3	23.2	90.46	-482.3	3,693.2	4,192.0	4,143.7	48.35	86.700		
7,800.0	6,672.0	6,688.6	6,687.2	28.8	23.2	90.46	-482.3	3,693.2	4,100.4	4,051.9	48.49	84.557		
7,900.0	6,672.0	6,688.6	6,687.2	29.3	23.2	90.46	-482.3	3,693.2	4,009.1	3,960.4	48.65	82.399		
8,000.0	6,672.0	6,688.7	6,687.3	29.8	23.2	90.46	-482.3	3,693.2	3,918.3	3,869.4	48.84	80.226		
8,100.0	6,672.0	6,688.7	6,687.3	30.4	23.2	90.46	-482.3	3,693.2	3,827.9	3,778.8	49.05	78.039		
8,200.0	6,672.0	6,688.7	6,687.3	31.0	23.2	90.46	-482.3	3,693.2	3,738.0	3,688.7	49.29	75.838		
8,300.0	6,672.0	6,688.7	6,687.3	31.7	23.2	90.46	-482.3	3,693.2	3,648.7	3,599.1	49.56	73.625		
8,400.0	6,672.0	6,688.8	6,687.4	32.4	23.2	90.46	-482.3	3,693.2	3,559.9	3,510.0	49.86	71.401		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch 42-07 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
8,500.0	6,672.0	6,688.8	6,687.4	33.1	23.2	90.46	-482.3	3,693.2	3,471.7	3,421.5	50.19	69.167		
8,600.0	6,672.0	6,688.8	6,687.4	33.9	23.2	90.46	-482.3	3,693.2	3,384.2	3,333.6	50.57	66.924		
8,700.0	6,672.0	6,688.8	6,687.4	34.7	23.2	90.46	-482.3	3,693.2	3,297.4	3,246.4	50.98	64.675		
8,800.0	6,672.0	6,688.9	6,687.5	35.5	23.2	90.46	-482.3	3,693.2	3,211.4	3,159.9	51.45	62.423		
8,900.0	6,672.0	6,688.9	6,687.5	36.3	23.2	90.47	-482.3	3,693.2	3,126.2	3,074.3	51.96	60.170		
9,000.0	6,672.0	6,688.9	6,687.5	37.2	23.2	90.47	-482.3	3,693.2	3,041.9	2,989.4	52.52	57.920		
9,100.0	6,672.0	6,688.9	6,687.5	38.1	23.2	90.47	-482.3	3,693.2	2,958.6	2,905.5	53.14	55.677		
9,200.0	6,672.0	6,689.0	6,687.6	39.0	23.2	90.47	-482.3	3,693.2	2,876.4	2,822.6	53.82	53.446		
9,300.0	6,672.0	6,689.0	6,687.6	39.9	23.2	90.47	-482.3	3,693.2	2,795.4	2,740.8	54.56	51.230		
9,400.0	6,672.0	6,689.0	6,687.6	40.8	23.2	90.47	-482.3	3,693.2	2,715.6	2,660.2	55.38	49.036		
9,500.0	6,672.0	6,689.1	6,687.6	41.8	23.2	90.47	-482.3	3,693.2	2,637.2	2,580.9	56.27	46.869		
9,600.0	6,672.0	6,689.1	6,687.7	42.7	23.2	90.47	-482.3	3,693.2	2,560.3	2,503.0	57.23	44.736		
9,700.0	6,672.0	6,689.1	6,687.7	43.7	23.2	90.47	-482.3	3,693.2	2,485.0	2,426.7	58.27	42.644		
9,800.0	6,672.0	6,689.1	6,687.7	44.7	23.2	90.47	-482.3	3,693.2	2,411.6	2,352.2	59.40	40.598		
9,900.0	6,672.0	6,689.2	6,687.8	45.7	23.2	90.47	-482.3	3,693.2	2,340.1	2,279.5	60.61	38.607		
10,000.0	6,672.0	6,689.2	6,687.8	46.7	23.2	90.48	-482.3	3,693.2	2,270.8	2,208.9	61.91	36.677		
10,100.0	6,672.0	6,689.2	6,687.8	47.7	23.2	90.48	-482.3	3,693.2	2,203.8	2,140.5	63.30	34.816		
10,200.0	6,672.0	6,689.2	6,687.8	48.8	23.2	90.48	-482.3	3,693.2	2,139.5	2,074.7	64.77	33.031		
10,300.0	6,672.0	6,689.3	6,687.9	49.8	23.2	90.48	-482.3	3,693.2	2,077.9	2,011.6	66.33	31.329		
10,400.0	6,672.0	6,689.3	6,687.9	50.9	23.2	90.48	-482.3	3,693.2	2,019.5	1,951.5	67.96	29.718		
10,500.0	6,672.0	6,689.3	6,687.9	51.9	23.2	90.48	-482.3	3,693.2	1,964.4	1,894.8	69.65	28.203		
10,600.0	6,672.0	6,689.4	6,687.9	53.0	23.2	90.48	-482.3	3,693.2	1,913.0	1,841.6	71.41	26.790		
10,700.0	6,672.0	6,689.4	6,688.0	54.1	23.2	90.48	-482.3	3,693.2	1,865.5	1,792.3	73.20	25.484		
10,800.0	6,672.0	6,689.4	6,688.0	55.2	23.2	90.48	-482.3	3,693.2	1,822.3	1,747.3	75.02	24.291		
10,900.0	6,672.0	6,689.4	6,688.0	56.3	23.2	90.48	-482.3	3,693.2	1,783.6	1,706.8	76.83	23.214		
11,000.0	6,672.0	6,689.5	6,688.1	57.4	23.2	90.48	-482.3	3,693.2	1,749.9	1,671.2	78.62	22.256		
11,100.0	6,672.0	6,689.5	6,688.1	58.5	23.2	90.49	-482.3	3,693.2	1,721.2	1,640.9	80.36	21.419		
11,200.0	6,672.0	6,689.5	6,688.1	59.6	23.2	90.49	-482.3	3,693.2	1,698.1	1,616.0	82.01	20.705		
11,300.0	6,672.0	6,689.5	6,688.1	60.7	23.2	90.49	-482.3	3,693.2	1,680.5	1,597.0	83.55	20.114		
11,400.0	6,672.0	6,689.6	6,688.2	61.8	23.2	90.49	-482.3	3,693.2	1,668.8	1,583.9	84.95	19.645		
11,500.0	6,672.0	6,689.6	6,688.2	62.9	23.2	90.49	-482.3	3,693.2	1,663.0	1,576.9	86.18	19.296		
11,545.9	6,672.0	6,689.6	6,688.2	63.5	23.2	90.49	-482.3	3,693.2	1,662.4	1,575.7	86.69	19.176 CC, ES		
11,600.0	6,672.0	6,689.6	6,688.2	64.1	23.2	90.49	-482.3	3,693.2	1,663.3	1,576.1	87.24	19.067		
11,700.0	6,672.0	6,689.7	6,688.3	65.2	23.2	90.49	-482.3	3,693.2	1,669.5	1,581.5	88.09	18.953		
11,800.0	6,672.0	6,689.7	6,688.3	66.3	23.2	90.49	-482.3	3,693.2	1,681.7	1,593.0	88.74	18.951 SF		
11,900.0	6,672.0	6,689.7	6,688.3	67.5	23.2	90.49	-482.3	3,693.2	1,699.7	1,610.6	89.19	19.057		
12,000.0	6,672.0	6,689.7	6,688.3	68.6	23.2	90.49	-482.3	3,693.2	1,723.4	1,633.9	89.45	19.266		
12,100.0	6,672.0	6,689.8	6,688.4	69.8	23.2	90.50	-482.3	3,693.2	1,752.4	1,662.9	89.53	19.574		
12,200.0	6,672.0	6,689.8	6,688.4	70.9	23.2	90.50	-482.3	3,693.2	1,786.6	1,697.2	89.44	19.976		
12,300.0	6,672.0	6,689.8	6,688.4	72.1	23.2	90.50	-482.3	3,693.2	1,825.6	1,736.4	89.20	20.466		
12,400.0	6,672.0	6,689.9	6,688.5	73.2	23.2	90.50	-482.3	3,693.2	1,869.2	1,780.4	88.84	21.039		
12,500.0	6,672.0	6,689.9	6,688.5	74.4	23.2	90.50	-482.3	3,693.2	1,917.0	1,828.7	88.38	21.691		
12,600.0	6,672.0	6,689.9	6,688.5	75.5	23.2	90.50	-482.3	3,693.2	1,968.8	1,880.9	87.83	22.415		
12,700.0	6,672.0	6,689.9	6,688.5	76.7	23.2	90.50	-482.3	3,693.2	2,024.2	1,936.9	87.22	23.208		
12,800.0	6,672.0	6,690.0	6,688.6	77.9	23.2	90.50	-482.3	3,693.2	2,082.9	1,996.3	86.56	24.064		
12,900.0	6,672.0	6,690.0	6,688.6	79.0	23.2	90.50	-482.3	3,693.2	2,144.6	2,058.8	85.86	24.979		
13,000.0	6,672.0	6,690.0	6,688.6	80.2	23.2	90.50	-482.3	3,693.2	2,209.2	2,124.1	85.14	25.949		
13,100.0	6,672.0	6,690.1	6,688.7	81.4	23.2	90.51	-482.3	3,693.2	2,276.4	2,192.0	84.40	26.970		
13,200.0	6,672.0	6,690.1	6,688.7	82.6	23.2	90.51	-482.3	3,693.2	2,345.9	2,262.2	83.67	28.038		
13,300.0	6,672.0	6,690.1	6,688.7	83.7	23.2	90.51	-482.3	3,693.2	2,417.5	2,334.6	82.93	29.150		
13,400.0	6,672.0	6,690.1	6,688.7	84.9	23.2	90.51	-482.3	3,693.2	2,491.1	2,408.9	82.21	30.303		
13,500.0	6,672.0	6,690.2	6,688.8	86.1	23.2	90.51	-482.3	3,693.2	2,566.5	2,485.0	81.50	31.492		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch 42-07 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
13,600.0	6,672.0	6,690.2	6,688.8	87.3	23.2	90.51	-482.3	3,693.2	2,643.5	2,562.7	80.80	32.717		
13,700.0	6,672.0	6,690.2	6,688.8	88.4	23.2	90.51	-482.3	3,693.2	2,722.0	2,641.9	80.12	33.973		
13,800.0	6,672.0	6,690.3	6,688.9	89.6	23.2	90.51	-482.3	3,693.2	2,801.9	2,722.5	79.47	35.259		
13,900.0	6,672.0	6,690.3	6,688.9	90.8	23.2	90.51	-482.3	3,693.2	2,883.1	2,804.3	78.83	36.571		
14,000.0	6,672.0	6,690.3	6,688.9	92.0	23.2	90.51	-482.3	3,693.2	2,965.4	2,887.2	78.22	37.909		
14,100.0	6,672.0	6,690.4	6,688.9	93.2	23.2	90.52	-482.3	3,693.2	3,048.8	2,971.2	77.64	39.271		
14,200.0	6,672.0	6,690.4	6,689.0	94.4	23.2	90.52	-482.3	3,693.2	3,133.1	3,056.1	77.07	40.653		
14,300.0	6,672.0	6,690.4	6,689.0	95.6	23.2	90.52	-482.3	3,693.2	3,218.4	3,141.9	76.53	42.056		
14,400.0	6,672.0	6,690.4	6,689.0	96.8	23.2	90.52	-482.3	3,693.2	3,304.5	3,228.5	76.01	43.476		
14,500.0	6,672.0	6,690.5	6,689.1	98.0	23.2	90.52	-482.3	3,693.2	3,391.3	3,315.8	75.51	44.913		
14,600.0	6,672.0	6,690.5	6,689.1	99.2	23.2	90.52	-482.3	3,693.2	3,478.9	3,403.9	75.03	46.366		
14,700.0	6,672.0	6,690.5	6,689.1	100.4	23.2	90.52	-482.3	3,693.2	3,567.1	3,492.5	74.57	47.833		
14,800.0	6,672.0	6,690.6	6,689.2	101.6	23.2	90.52	-482.3	3,693.2	3,655.9	3,581.8	74.14	49.313		
14,900.0	6,672.0	6,690.6	6,689.2	102.7	23.2	90.52	-482.3	3,693.2	3,745.3	3,671.6	73.72	50.805		
15,000.0	6,672.0	6,690.6	6,689.2	103.9	23.2	90.53	-482.3	3,693.2	3,835.3	3,761.9	73.32	52.308		
15,100.0	6,672.0	6,690.7	6,689.2	105.1	23.2	90.53	-482.3	3,693.2	3,925.7	3,852.7	72.94	53.821		
15,200.0	6,672.0	6,690.7	6,689.3	106.3	23.2	90.53	-482.3	3,693.2	4,016.5	3,944.0	72.58	55.343		
15,300.0	6,672.0	6,690.7	6,689.3	107.6	23.2	90.53	-482.3	3,693.2	4,107.8	4,035.6	72.23	56.873		
15,400.0	6,672.0	6,690.7	6,689.3	108.8	23.2	90.53	-482.3	3,693.2	4,199.5	4,127.6	71.90	58.411		
15,500.0	6,672.0	6,690.8	6,689.4	110.0	23.2	90.53	-482.3	3,693.2	4,291.6	4,220.0	71.58	59.957		
15,600.0	6,672.0	6,690.8	6,689.4	111.2	23.2	90.53	-482.3	3,693.2	4,384.0	4,312.8	71.28	61.508		
15,700.0	6,672.0	6,690.8	6,689.4	112.4	23.2	90.53	-482.3	3,693.2	4,476.8	4,405.8	70.99	63.065		
15,800.0	6,672.0	6,690.9	6,689.5	113.6	23.2	90.54	-482.3	3,693.2	4,569.8	4,499.1	70.71	64.627		
15,900.0	6,672.0	6,690.9	6,689.5	114.8	23.2	90.54	-482.3	3,693.2	4,663.2	4,592.7	70.45	66.194		
16,000.0	6,672.0	6,690.9	6,689.5	116.0	23.2	90.54	-482.3	3,693.2	4,756.8	4,686.6	70.20	67.765		
16,100.0	6,672.0	6,691.0	6,689.6	117.2	23.2	90.54	-482.3	3,693.2	4,850.7	4,780.7	69.96	69.340		
16,200.0	6,672.0	6,691.0	6,689.6	118.4	23.2	90.54	-482.3	3,693.2	4,944.8	4,875.1	69.73	70.918		
16,300.0	6,672.0	6,691.0	6,689.6	119.6	23.2	90.54	-482.3	3,693.2	5,039.2	4,969.7	69.51	72.498		
16,400.0	6,672.0	6,691.1	6,689.6	120.8	23.2	90.54	-482.3	3,693.2	5,133.7	5,064.4	69.30	74.081		
16,500.0	6,672.0	6,691.1	6,689.7	122.0	23.2	90.54	-482.3	3,693.2	5,228.5	5,159.4	69.10	75.666		
16,600.0	6,672.0	6,691.1	6,689.7	123.2	23.2	90.54	-482.3	3,693.2	5,323.5	5,254.6	68.91	77.252		
16,700.0	6,672.0	6,691.2	6,689.7	124.5	23.2	90.55	-482.3	3,693.2	5,418.6	5,349.9	68.73	78.840		
16,800.0	6,672.0	6,691.2	6,689.8	125.7	23.2	90.55	-482.3	3,693.2	5,513.9	5,445.4	68.56	80.429		
16,900.0	6,672.0	6,691.2	6,689.8	126.9	23.2	90.55	-482.3	3,693.2	5,609.4	5,541.0	68.39	82.018		
17,000.0	6,672.0	6,691.2	6,689.8	128.1	23.2	90.55	-482.3	3,693.2	5,705.1	5,636.8	68.24	83.608		
17,100.0	6,672.0	6,691.3	6,689.9	129.3	23.2	90.55	-482.3	3,693.2	5,800.9	5,732.8	68.09	85.198		
17,200.0	6,672.0	6,691.3	6,689.9	130.5	23.2	90.55	-482.3	3,693.2	5,896.8	5,828.8	67.94	86.788		
17,300.0	6,672.0	6,691.3	6,689.9	131.7	23.2	90.55	-482.3	3,693.2	5,992.9	5,925.1	67.81	88.378		
17,400.0	6,672.0	6,691.4	6,690.0	133.0	23.2	90.55	-482.3	3,693.2	6,089.1	6,021.4	67.68	89.967		
17,500.0	6,672.0	6,691.4	6,690.0	134.2	23.2	90.56	-482.3	3,693.2	6,185.4	6,117.8	67.56	91.556		
17,600.0	6,672.0	6,691.4	6,690.0	135.4	23.2	90.56	-482.3	3,693.2	6,281.8	6,214.4	67.44	93.143		
17,700.0	6,672.0	6,691.5	6,690.1	136.6	23.2	90.56	-482.3	3,693.2	6,378.4	6,311.0	67.33	94.730		
17,800.0	6,672.0	6,691.5	6,690.1	137.8	23.2	90.56	-482.3	3,693.2	6,475.0	6,407.8	67.23	96.315		
17,900.0	6,672.0	6,691.5	6,690.1	139.0	23.2	90.56	-482.3	3,693.2	6,571.8	6,504.7	67.13	97.899		
18,000.0	6,672.0	6,691.6	6,690.2	140.3	23.2	90.56	-482.3	3,693.2	6,668.6	6,601.6	67.03	99.481		
18,100.0	6,672.0	6,691.6	6,690.2	141.5	23.2	90.56	-482.3	3,693.2	6,765.6	6,698.6	66.95	101.061		
18,200.0	6,672.0	6,691.6	6,690.2	142.7	23.2	90.56	-482.3	3,693.2	6,862.6	6,795.8	66.86	102.639		
18,300.0	6,672.0	6,691.7	6,690.3	143.9	23.2	90.57	-482.3	3,693.2	6,959.8	6,893.0	66.78	104.215		
18,342.5	6,672.0	6,691.7	6,690.3	144.4	23.2	90.57	-482.3	3,693.2	7,001.0	6,934.3	66.75	104.884		



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch 44-07 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	35.3	35.3	0.0	0.1	132.03	-3,406.6	3,779.1	5,087.9					
100.0	100.0	155.6	155.6	0.1	0.4	132.04	-3,406.5	3,778.4	5,087.4	5,086.9	0.50	N/A		
200.0	200.0	269.5	269.5	0.5	0.8	132.04	-3,406.1	3,777.7	5,086.8	5,085.5	1.25	4,056.886		
300.0	300.0	371.6	371.6	0.8	1.1	132.04	-3,405.8	3,776.8	5,085.8	5,083.8	1.97	2,581.433		
400.0	400.0	467.4	467.4	1.2	1.5	132.05	-3,405.5	3,775.9	5,084.9	5,082.3	2.66	1,908.474		
500.0	500.0	558.5	558.5	1.6	1.8	132.05	-3,405.2	3,775.2	5,084.2	5,080.8	3.34	1,521.325		
600.0	600.0	659.2	659.2	1.9	2.1	132.05	-3,404.8	3,774.7	5,083.6	5,079.5	4.05	1,254.136		
700.0	700.0	761.3	761.3	2.3	2.5	132.05	-3,404.2	3,774.3	5,082.8	5,078.1	4.77	1,065.647		
800.0	800.0	855.1	855.1	2.6	2.8	132.05	-3,403.7	3,773.9	5,082.2	5,076.7	5.46	931.338		
900.0	900.0	943.6	943.6	3.0	3.1	132.05	-3,403.5	3,773.5	5,081.7	5,075.6	6.13	829.629		
1,000.0	1,000.0	1,031.7	1,031.6	3.4	3.4	132.05	-3,403.5	3,773.2	5,081.4	5,074.7	6.79	748.179		
1,100.0	1,100.0	1,129.6	1,129.6	3.7	3.8	132.05	-3,403.5	3,773.1	5,081.4	5,073.9	7.49	678.182		
1,200.0	1,200.0	1,246.7	1,246.7	4.1	4.2	132.05	-3,403.1	3,773.1	5,081.2	5,072.9	8.26	615.106		
1,300.0	1,300.0	1,357.3	1,357.2	4.4	4.6	132.05	-3,402.5	3,772.8	5,080.5	5,071.5	9.01	564.114		
1,400.0	1,400.0	1,449.3	1,449.3	4.8	4.9	132.04	-3,402.1	3,772.5	5,080.0	5,070.3	9.69	524.399		
1,500.0	1,500.0	1,547.7	1,547.6	5.1	5.2	132.04	-3,401.5	3,772.4	5,079.6	5,069.2	10.39	488.896		
1,600.0	1,600.0	1,638.3	1,638.3	5.5	5.6	132.04	-3,401.2	3,772.1	5,079.1	5,068.0	11.06	459.026		
1,647.1	1,647.1	1,672.2	1,672.1	5.7	5.7	132.04	-3,401.2	3,772.1	5,079.1	5,067.7	11.35	447.432		
1,700.0	1,700.0	1,717.6	1,717.5	5.9	5.8	132.04	-3,401.2	3,772.2	5,079.1	5,067.4	11.70	434.149		
1,800.0	1,800.0	1,825.6	1,825.5	6.2	6.2	132.04	-3,401.0	3,772.3	5,079.1	5,066.6	12.43	408.519		
1,802.1	1,802.1	1,827.2	1,827.1	6.2	6.2	132.04	-3,401.0	3,772.3	5,079.1	5,066.6	12.45	408.084		
1,900.0	1,900.0	1,900.0	1,900.0	6.6	6.5	132.04	-3,401.1	3,772.5	5,079.3	5,066.3	13.05	389.222		
2,000.0	2,000.0	1,979.4	1,979.3	6.9	6.7	132.03	-3,401.3	3,773.0	5,080.0	5,066.3	13.68	371.268		
2,100.0	2,100.0	2,070.2	2,070.1	7.3	7.1	132.03	-3,401.7	3,773.9	5,081.0	5,066.7	14.36	353.934		
2,200.0	2,200.0	2,154.8	2,154.7	7.7	7.4	132.03	-3,402.4	3,774.6	5,082.2	5,067.2	15.01	338.649		
2,300.0	2,300.0	2,234.8	2,234.8	8.0	7.6	-176.96	-3,403.5	3,775.3	5,085.5	5,069.9	15.64	325.173		
2,400.0	2,399.8	2,315.6	2,315.5	8.4	7.9	-176.95	-3,405.1	3,776.0	5,092.7	5,076.5	16.27	312.978		
2,500.0	2,499.5	2,398.5	2,398.4	8.7	8.2	-176.93	-3,407.3	3,776.6	5,103.7	5,086.8	16.91	301.782		
2,600.0	2,598.7	2,481.6	2,481.5	9.1	8.5	-176.90	-3,409.7	3,777.4	5,118.5	5,100.9	17.55	291.614		
2,700.0	2,697.5	2,614.4	2,614.2	9.4	9.0	-176.88	-3,413.2	3,778.6	5,136.6	5,118.2	18.37	279.641		
2,800.0	2,795.6	2,701.4	2,701.2	9.8	9.3	-176.85	-3,415.6	3,779.1	5,157.8	5,138.8	19.02	271.160		
2,900.0	2,893.1	2,818.1	2,817.8	10.1	9.7	-176.81	-3,418.5	3,779.7	5,182.3	5,162.5	19.78	262.009		
3,000.0	2,989.6	2,908.7	2,908.4	10.5	10.0	-176.78	-3,420.8	3,780.1	5,210.0	5,189.6	20.44	254.855		
3,100.0	3,085.3	2,998.1	2,997.8	10.9	10.3	-176.74	-3,423.1	3,780.5	5,241.2	5,220.1	21.10	248.378		
3,200.0	3,179.8	3,121.1	3,120.8	11.2	10.7	-176.71	-3,425.9	3,781.0	5,275.4	5,253.6	21.88	241.093		
3,300.0	3,273.2	3,215.9	3,215.5	11.6	11.1	-176.66	-3,428.2	3,780.9	5,312.7	5,290.1	22.56	235.502		
3,387.5	3,353.8	3,286.5	3,286.0	11.9	11.3	-176.62	-3,430.3	3,780.6	5,347.9	5,324.8	23.11	231.441		
3,400.0	3,365.2	3,296.5	3,296.0	12.0	11.4	-176.62	-3,430.6	3,780.6	5,353.2	5,330.0	23.19	230.870		
3,500.0	3,456.8	3,397.2	3,396.7	12.4	11.7	-176.61	-3,434.0	3,779.7	5,394.9	5,371.0	23.88	225.874		
3,600.0	3,548.3	3,518.6	3,518.0	12.8	12.1	-176.58	-3,438.8	3,777.4	5,436.2	5,411.6	24.67	220.391		
3,700.0	3,639.8	3,596.4	3,595.7	13.2	12.4	-176.57	-3,441.9	3,775.8	5,477.5	5,452.2	25.29	216.582		
3,800.0	3,731.4	3,732.8	3,732.0	13.6	12.9	-176.54	-3,446.6	3,773.0	5,518.4	5,492.3	26.14	211.122		
3,900.0	3,822.9	3,830.0	3,829.1	14.0	13.2	-176.53	-3,449.7	3,770.7	5,559.0	5,532.1	26.84	207.095		
4,000.0	3,914.4	3,925.6	3,924.7	14.4	13.6	-176.52	-3,452.1	3,768.9	5,599.4	5,571.9	27.54	203.288		
4,100.0	4,005.9	4,018.4	4,017.5	14.8	13.9	-176.52	-3,453.6	3,768.0	5,639.9	5,611.7	28.24	199.731		
4,200.0	4,097.5	4,151.4	4,150.5	15.2	14.3	-176.55	-3,454.2	3,767.2	5,680.0	5,650.9	29.09	195.287		
4,300.0	4,189.0	4,252.6	4,251.7	15.6	14.7	-176.57	-3,454.1	3,766.3	5,719.6	5,689.8	29.82	191.823		
4,400.0	4,280.5	4,341.2	4,340.2	16.1	15.0	-176.59	-3,454.1	3,765.6	5,759.3	5,728.8	30.50	188.808		
4,500.0	4,372.1	4,441.3	4,440.4	16.5	15.4	-176.61	-3,453.8	3,765.0	5,798.9	5,767.6	31.24	185.645		
4,600.0	4,463.6	4,528.6	4,527.7	16.9	15.7	-176.63	-3,453.8	3,764.1	5,838.4	5,806.5	31.92	182.891		
4,700.0	4,555.1	4,600.0	4,599.0	17.4	15.9	-176.64	-3,454.0	3,763.5	5,878.2	5,845.6	32.55	180.596		
4,800.0	4,646.7	4,663.4	4,662.5	17.8	16.1	-176.65	-3,454.2	3,763.2	5,918.4	5,885.2	33.14	178.563		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch 44-07 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
4,900.0	4,738.2	4,730.9	4,729.9	18.2	16.4	-176.67	-3,454.6	3,763.2	5,958.9	5,925.1	33.76	176.530		
5,000.0	4,829.7	4,800.0	4,799.0	18.7	16.6	-176.68	-3,455.3	3,763.3	5,999.8	5,965.4	34.37	174.545		
5,100.0	4,921.3	4,864.7	4,863.7	19.1	16.8	-176.69	-3,456.0	3,763.7	6,041.1	6,006.1	34.97	172.728		
5,200.0	5,012.8	4,970.6	4,969.6	19.5	17.2	-176.72	-3,457.0	3,764.8	6,082.6	6,046.9	35.74	170.170		
5,300.0	5,104.3	5,082.6	5,081.6	20.0	17.6	-176.75	-3,457.5	3,765.7	6,123.6	6,087.1	36.54	167.582		
5,400.0	5,195.8	5,170.4	5,169.4	20.4	17.9	-176.77	-3,457.7	3,766.4	6,164.6	6,127.3	37.24	165.535		
5,500.0	5,287.4	5,236.4	5,235.4	20.9	18.1	-176.79	-3,457.8	3,767.2	6,205.7	6,167.8	37.85	163.954		
5,600.0	5,378.9	5,300.0	5,299.0	21.3	18.3	-176.81	-3,458.2	3,768.2	6,247.3	6,208.9	38.45	162.479		
5,700.0	5,470.4	5,347.7	5,346.6	21.8	18.5	-176.82	-3,458.6	3,769.2	6,289.4	6,250.4	38.98	161.345		
5,800.0	5,562.0	5,404.2	5,403.2	22.2	18.7	-176.84	-3,459.4	3,770.5	6,332.1	6,292.5	39.55	160.107		
5,900.0	5,653.5	5,482.5	5,481.4	22.7	19.0	-176.86	-3,460.7	3,772.4	6,375.0	6,334.8	40.21	158.544		
6,000.0	5,745.0	5,581.8	5,580.7	23.1	19.3	-176.88	-3,462.5	3,775.0	6,418.0	6,377.1	40.96	156.679		
6,100.0	5,836.6	5,661.0	5,659.8	23.6	19.6	-176.90	-3,463.8	3,776.9	6,461.0	6,419.3	41.63	155.202		
6,200.0	5,928.1	5,727.9	5,726.7	24.0	19.8	-176.92	-3,465.1	3,778.7	6,504.2	6,461.9	42.24	153.973		
6,278.6	6,000.0	5,774.5	5,773.3	24.4	20.0	-176.93	-3,466.2	3,780.0	6,538.4	6,495.7	42.70	153.136		
6,290.0	6,010.4	5,781.2	5,780.0	24.4	20.0	-178.80	-3,466.3	3,780.2	6,543.5	6,500.7	42.76	153.016		
6,300.0	6,019.5	5,787.1	5,785.9	24.5	20.0	179.10	-3,466.5	3,780.4	6,548.0	6,505.2	42.82	152.914		
6,350.0	6,065.8	5,821.0	5,819.7	24.7	20.2	167.02	-3,467.3	3,781.5	6,568.6	6,525.5	43.12	152.323		
6,400.0	6,113.0	5,858.7	5,857.4	24.9	20.3	151.80	-3,468.2	3,782.8	6,586.2	6,542.7	43.43	151.634		
6,450.0	6,160.7	5,896.9	5,895.6	25.1	20.4	133.91	-3,469.1	3,784.3	6,600.4	6,556.7	43.74	150.898		
6,500.0	6,208.5	5,940.3	5,938.9	25.3	20.6	115.84	-3,470.1	3,786.0	6,611.3	6,567.3	44.06	150.046		
6,550.0	6,255.8	6,429.8	6,428.2	25.4	22.3	101.78	-3,475.5	3,789.8	6,618.2	6,571.9	46.31	142.913		
6,600.0	6,302.5	6,506.2	6,504.6	25.6	22.6	90.57	-3,475.2	3,787.6	6,618.8	6,572.0	46.75	141.583		
6,650.0	6,347.9	6,533.1	6,531.5	25.7	22.7	82.57	-3,475.0	3,786.8	6,615.9	6,568.9	46.97	140.846		
6,700.0	6,391.6	6,562.6	6,560.9	25.9	22.8	77.12	-3,475.0	3,785.9	6,609.6	6,562.4	47.20	140.048		
6,750.0	6,433.4	6,613.9	6,584.4	26.0	22.9	73.51	-3,474.9	3,785.3	6,600.1	6,552.6	47.48	139.007		
6,800.0	6,472.8	6,624.8	6,623.1	26.1	23.0	71.38	-3,474.9	3,784.3	6,587.4	6,539.8	47.63	138.314		
6,850.0	6,509.4	6,660.6	6,658.9	26.2	23.1	70.35	-3,474.9	3,783.4	6,571.6	6,523.8	47.85	137.335		
6,900.0	6,543.0	6,693.3	6,691.6	26.3	23.2	70.21	-3,474.8	3,782.6	6,552.9	6,504.8	48.06	136.355		
6,950.0	6,573.2	6,722.5	6,720.8	26.4	23.3	70.85	-3,474.8	3,781.8	6,531.4	6,483.2	48.25	135.373		
7,000.0	6,599.8	6,748.0	6,746.3	26.5	23.4	72.20	-3,474.8	3,781.2	6,507.4	6,459.0	48.42	134.391		
7,050.0	6,622.5	6,769.6	6,767.8	26.6	23.5	74.19	-3,474.8	3,780.6	6,481.1	6,432.5	48.58	133.408		
7,100.0	6,641.1	6,787.0	6,785.2	26.7	23.5	76.81	-3,474.8	3,780.2	6,452.8	6,404.0	48.73	132.425		
7,150.0	6,655.4	6,800.1	6,798.4	26.8	23.6	80.02	-3,474.8	3,779.9	6,422.7	6,373.8	48.86	131.446		
7,200.0	6,665.4	6,808.8	6,807.1	26.9	23.6	83.79	-3,474.8	3,779.6	6,391.0	6,342.1	48.98	130.472		
7,250.0	6,670.8	6,813.1	6,811.3	27.0	23.6	88.07	-3,474.8	3,779.5	6,358.2	6,309.1	49.10	129.508		
7,285.7	6,672.0	6,813.3	6,811.6	27.1	23.6	91.41	-3,474.8	3,779.5	6,334.2	6,285.0	49.17	128.828		
7,300.0	6,672.0	6,812.9	6,811.2	27.1	23.6	91.41	-3,474.8	3,779.5	6,324.5	6,275.3	49.20	128.556		
7,400.0	6,672.0	6,810.4	6,808.6	27.3	23.6	91.38	-3,474.8	3,779.6	6,257.1	6,207.7	49.41	126.632		
7,500.0	6,672.0	6,807.9	6,806.1	27.6	23.6	91.34	-3,474.8	3,779.7	6,190.7	6,141.0	49.67	124.645		
7,600.0	6,672.0	6,805.3	6,803.6	28.0	23.6	91.31	-3,474.8	3,779.7	6,125.1	6,075.2	49.96	122.600		
7,700.0	6,672.0	6,802.8	6,801.0	28.3	23.6	91.28	-3,474.8	3,779.8	6,060.6	6,010.3	50.29	120.501		
7,800.0	6,672.0	6,800.2	6,798.5	28.8	23.6	91.25	-3,474.8	3,779.9	5,996.9	5,946.3	50.67	118.352		
7,900.0	6,672.0	6,797.7	6,795.9	29.3	23.6	91.22	-3,474.8	3,779.9	5,934.3	5,883.2	51.09	116.159		
8,000.0	6,672.0	6,795.1	6,793.4	29.8	23.6	91.19	-3,474.8	3,780.0	5,872.8	5,821.2	51.55	113.929		
8,100.0	6,672.0	6,792.6	6,790.8	30.4	23.6	91.16	-3,474.8	3,780.1	5,812.3	5,760.2	52.05	111.669		
8,200.0	6,672.0	6,790.0	6,788.3	31.0	23.6	91.12	-3,474.8	3,780.1	5,752.9	5,700.3	52.59	109.385		
8,300.0	6,672.0	6,787.5	6,785.7	31.7	23.6	91.09	-3,474.8	3,780.2	5,694.7	5,641.5	53.18	107.084		
8,400.0	6,672.0	6,784.9	6,783.2	32.4	23.5	91.06	-3,474.8	3,780.2	5,637.6	5,583.8	53.81	104.775		
8,500.0	6,672.0	6,782.4	6,780.7	33.1	23.5	91.03	-3,474.8	3,780.3	5,581.7	5,527.3	54.48	102.464		
8,600.0	6,672.0	6,779.9	6,778.1	33.9	23.5	91.00	-3,474.8	3,780.4	5,527.1	5,472.0	55.18	100.158		
8,700.0	6,672.0	6,777.3	6,775.6	34.7	23.5	90.97	-3,474.8	3,780.4	5,473.8	5,417.9	55.93	97.864		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch 44-07 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
8,800.0	6,672.0	6,774.8	6,773.0	35.5	23.5	90.94	-3,474.8	3,780.5	5,421.8	5,365.1	56.72	95.589		
8,900.0	6,672.0	6,772.2	6,770.5	36.3	23.5	90.90	-3,474.8	3,780.6	5,371.2	5,313.7	57.55	93.339		
9,000.0	6,672.0	6,769.7	6,767.9	37.2	23.5	90.87	-3,474.8	3,780.6	5,322.0	5,263.6	58.41	91.121		
9,100.0	6,672.0	6,767.1	6,765.4	38.1	23.5	90.84	-3,474.8	3,780.7	5,274.2	5,214.9	59.30	88.938		
9,200.0	6,672.0	6,764.6	6,762.8	39.0	23.5	90.81	-3,474.8	3,780.8	5,227.9	5,167.7	60.23	86.798		
9,300.0	6,672.0	6,762.0	6,760.3	39.9	23.5	90.78	-3,474.8	3,780.8	5,183.2	5,122.0	61.19	84.703		
9,400.0	6,672.0	6,759.5	6,757.8	40.8	23.5	90.75	-3,474.8	3,780.9	5,139.9	5,077.8	62.18	82.657		
9,500.0	6,672.0	6,756.9	6,755.2	41.8	23.4	90.72	-3,474.8	3,781.0	5,098.3	5,035.1	63.20	80.665		
9,600.0	6,672.0	6,754.4	6,752.7	42.7	23.4	90.69	-3,474.8	3,781.0	5,058.4	4,994.1	64.25	78.729		
9,700.0	6,672.0	6,751.9	6,750.1	43.7	23.4	90.65	-3,474.8	3,781.1	5,020.1	4,954.8	65.32	76.852		
9,800.0	6,672.0	6,749.3	6,747.6	44.7	23.4	90.62	-3,474.8	3,781.2	4,983.5	4,917.1	66.41	75.036		
9,900.0	6,672.0	6,746.8	6,745.0	45.7	23.4	90.59	-3,474.8	3,781.2	4,948.7	4,881.2	67.53	73.283		
10,000.0	6,672.0	6,744.2	6,742.5	46.7	23.4	90.56	-3,474.8	3,781.3	4,915.7	4,847.0	68.66	71.593		
10,100.0	6,672.0	6,741.7	6,739.9	47.7	23.4	90.53	-3,474.8	3,781.3	4,884.5	4,814.7	69.81	69.969		
10,200.0	6,672.0	6,739.1	6,737.4	48.8	23.4	90.50	-3,474.8	3,781.4	4,855.1	4,784.2	70.97	68.410		
10,300.0	6,672.0	6,736.6	6,734.9	49.8	23.4	90.47	-3,474.8	3,781.5	4,827.7	4,755.6	72.14	66.917		
10,400.0	6,672.0	6,734.0	6,732.3	50.9	23.4	90.43	-3,474.8	3,781.5	4,802.2	4,728.9	73.33	65.491		
10,500.0	6,672.0	6,731.5	6,729.8	51.9	23.4	90.40	-3,474.8	3,781.6	4,778.7	4,704.2	74.52	64.130		
10,600.0	6,672.0	6,728.9	6,727.2	53.0	23.3	90.37	-3,474.8	3,781.7	4,757.1	4,681.4	75.71	62.835		
10,700.0	6,672.0	6,726.4	6,724.7	54.1	23.3	90.34	-3,474.8	3,781.7	4,737.6	4,660.7	76.90	61.606		
10,800.0	6,672.0	6,723.9	6,722.1	55.2	23.3	90.31	-3,474.8	3,781.8	4,720.1	4,642.0	78.10	60.441		
10,900.0	6,672.0	6,721.3	6,719.6	56.3	23.3	90.28	-3,474.8	3,781.9	4,704.7	4,625.5	79.28	59.340		
11,000.0	6,672.0	6,718.8	6,717.0	57.4	23.3	90.25	-3,474.8	3,781.9	4,691.4	4,610.9	80.47	58.301		
11,100.0	6,672.0	6,716.2	6,714.5	58.5	23.3	90.22	-3,474.8	3,782.0	4,680.2	4,598.6	81.64	57.325		
11,200.0	6,672.0	6,713.7	6,712.0	59.6	23.3	90.18	-3,474.8	3,782.1	4,671.1	4,588.3	82.81	56.409		
11,300.0	6,672.0	6,711.1	6,709.4	60.7	23.3	90.15	-3,474.8	3,782.1	4,664.1	4,580.2	83.96	55.553		
11,400.0	6,672.0	6,708.6	6,706.9	61.8	23.3	90.12	-3,474.8	3,782.2	4,659.3	4,574.2	85.09	54.755		
11,500.0	6,672.0	6,706.0	6,704.3	62.9	23.3	90.09	-3,474.8	3,782.3	4,656.6	4,570.4	86.21	54.014		
11,574.1	6,672.0	6,704.1	6,702.4	63.8	23.3	90.07	-3,474.8	3,782.3	4,656.1	4,569.0	87.03	53.501 CC		
11,600.0	6,672.0	6,703.5	6,701.8	64.1	23.3	90.06	-3,474.8	3,782.3	4,656.1	4,568.8	87.31	53.329 ES		
11,700.0	6,672.0	6,700.9	6,699.2	65.2	23.2	90.03	-3,474.8	3,782.4	4,657.8	4,569.4	88.39	52.698		
11,800.0	6,672.0	6,698.4	6,696.7	66.3	23.2	90.00	-3,474.8	3,782.4	4,661.5	4,572.1	89.44	52.120		
11,900.0	6,672.0	6,695.9	6,694.1	67.5	23.2	89.96	-3,474.8	3,782.5	4,667.5	4,577.0	90.47	51.593		
12,000.0	6,672.0	6,693.3	6,691.6	68.6	23.2	89.93	-3,474.8	3,782.6	4,675.5	4,584.1	91.47	51.117		
12,100.0	6,672.0	6,690.8	6,689.1	69.8	23.2	89.90	-3,474.8	3,782.6	4,685.7	4,593.3	92.44	50.689		
12,200.0	6,672.0	6,688.2	6,686.5	70.9	23.2	89.87	-3,474.8	3,782.7	4,698.0	4,604.7	93.38	50.309		
12,300.0	6,672.0	6,685.7	6,684.0	72.1	23.2	89.84	-3,474.9	3,782.8	4,712.5	4,618.2	94.30	49.974		
12,400.0	6,672.0	6,683.1	6,681.4	73.2	23.2	89.81	-3,474.9	3,782.8	4,728.9	4,633.8	95.18	49.684		
12,500.0	6,672.0	6,680.6	6,678.9	74.4	23.2	89.78	-3,474.9	3,782.9	4,747.5	4,651.4	96.03	49.437		
12,600.0	6,672.0	6,678.0	6,676.3	75.5	23.2	89.75	-3,474.9	3,783.0	4,768.0	4,671.2	96.85	49.232		
12,700.0	6,672.0	6,675.5	6,673.8	76.7	23.2	89.71	-3,474.9	3,783.0	4,790.6	4,693.0	97.63	49.068		
12,800.0	6,672.0	6,672.9	6,671.2	77.9	23.1	89.68	-3,474.9	3,783.1	4,815.2	4,716.8	98.38	48.943		
12,900.0	6,672.0	6,670.4	6,668.7	79.0	23.1	89.65	-3,474.9	3,783.2	4,841.7	4,742.6	99.10	48.855		
13,000.0	6,672.0	6,667.9	6,666.2	80.2	23.1	89.62	-3,474.9	3,783.2	4,870.1	4,770.3	99.79	48.805		
13,100.0	6,672.0	6,665.3	6,663.6	81.4	23.1	89.59	-3,474.9	3,783.3	4,900.4	4,799.9	100.44	48.790 SF		
13,200.0	6,672.0	6,662.8	6,661.1	82.6	23.1	89.56	-3,474.9	3,783.4	4,932.5	4,831.5	101.06	48.810		
13,300.0	6,672.0	6,660.2	6,658.5	83.7	23.1	89.53	-3,474.9	3,783.4	4,966.5	4,864.8	101.64	48.862		
13,400.0	6,672.0	6,657.7	6,656.0	84.9	23.1	89.50	-3,474.9	3,783.5	5,002.2	4,900.0	102.20	48.947		
13,500.0	6,672.0	6,655.1	6,653.4	86.1	23.1	89.46	-3,474.9	3,783.6	5,039.7	4,937.0	102.72	49.063		
13,600.0	6,672.0	6,652.6	6,650.9	87.3	23.1	89.43	-3,474.9	3,783.6	5,078.8	4,975.6	103.21	49.209		
13,700.0	6,672.0	6,650.0	6,648.3	88.4	23.1	89.40	-3,474.9	3,783.7	5,119.7	5,016.0	103.67	49.384		
13,800.0	6,672.0	6,647.5	6,645.8	89.6	23.1	89.37	-3,474.9	3,783.7	5,162.1	5,058.0	104.10	49.586		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch 44-07 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
13,900.0	6,672.0	6,645.0	6,643.3	90.8	23.1	89.34	-3,474.9	3,783.8	5,206.1	5,101.6	104.51	49.816		
14,000.0	6,672.0	6,642.4	6,640.7	92.0	23.0	89.31	-3,474.9	3,783.9	5,251.7	5,146.8	104.88	50.072		
14,100.0	6,672.0	6,639.9	6,638.2	93.2	23.0	89.28	-3,474.9	3,783.9	5,298.8	5,193.5	105.23	50.353		
14,200.0	6,672.0	6,637.3	6,635.6	94.4	23.0	89.24	-3,474.9	3,784.0	5,347.3	5,241.8	105.56	50.659		
14,300.0	6,672.0	6,634.8	6,633.1	95.6	23.0	89.21	-3,474.9	3,784.1	5,397.3	5,291.4	105.85	50.988		
14,400.0	6,672.0	6,632.2	6,630.5	96.8	23.0	89.18	-3,474.9	3,784.1	5,448.6	5,342.5	106.13	51.339		
14,500.0	6,672.0	6,629.7	6,628.0	98.0	23.0	89.15	-3,474.9	3,784.2	5,501.3	5,394.9	106.38	51.713		
14,600.0	6,672.0	6,627.1	6,625.4	99.2	23.0	89.12	-3,474.9	3,784.3	5,555.3	5,448.6	106.61	52.108		
14,700.0	6,672.0	6,624.6	6,622.9	100.4	23.0	89.09	-3,474.9	3,784.3	5,610.5	5,503.7	106.82	52.523		
14,800.0	6,672.0	6,622.0	6,620.4	101.6	23.0	89.06	-3,474.9	3,784.4	5,667.0	5,560.0	107.01	52.958		
14,900.0	6,672.0	6,619.5	6,617.8	102.7	23.0	89.02	-3,474.9	3,784.5	5,724.7	5,617.5	107.18	53.412		
15,000.0	6,672.0	6,617.0	6,615.3	103.9	23.0	88.99	-3,474.9	3,784.5	5,783.5	5,676.2	107.33	53.884		
15,100.0	6,672.0	6,614.4	6,612.7	105.1	22.9	88.96	-3,474.9	3,784.6	5,843.5	5,736.0	107.47	54.374		
15,200.0	6,672.0	6,611.9	6,610.2	106.3	22.9	88.93	-3,474.9	3,784.7	5,904.5	5,796.9	107.59	54.881		
15,300.0	6,672.0	6,609.4	6,607.7	107.6	22.9	88.90	-3,474.9	3,784.7	5,966.6	5,858.9	107.69	55.405		
15,400.0	6,672.0	6,606.9	6,605.2	108.8	22.9	88.87	-3,474.9	3,784.8	6,029.7	5,922.0	107.78	55.944		
15,500.0	6,672.0	6,604.3	6,602.6	110.0	22.9	88.84	-3,474.9	3,784.8	6,093.9	5,986.0	107.86	56.499		
15,600.0	6,672.0	6,601.7	6,600.0	111.2	22.9	88.81	-3,474.9	3,784.9	6,159.0	6,051.0	107.92	57.069		
15,700.0	6,672.0	6,599.1	6,597.4	112.4	22.9	88.77	-3,474.9	3,785.0	6,225.0	6,117.0	107.97	57.654		
15,800.0	6,672.0	6,596.5	6,594.8	113.6	22.9	88.74	-3,474.9	3,785.0	6,291.9	6,183.9	108.01	58.252		
15,900.0	6,672.0	6,593.8	6,592.1	114.8	22.9	88.71	-3,474.9	3,785.1	6,359.7	6,251.6	108.04	58.864		
16,000.0	6,672.0	6,591.1	6,589.4	116.0	22.9	88.67	-3,474.9	3,785.2	6,428.3	6,320.2	108.06	59.489		
16,100.0	6,672.0	6,588.4	6,586.7	117.2	22.9	88.64	-3,474.9	3,785.3	6,497.7	6,389.7	108.07	60.127		
16,200.0	6,672.0	6,585.6	6,583.9	118.4	22.8	88.61	-3,474.9	3,785.3	6,568.0	6,459.9	108.07	60.777		
16,300.0	6,672.0	6,582.8	6,581.1	119.6	22.8	88.57	-3,474.9	3,785.4	6,639.0	6,530.9	108.06	61.438		
16,400.0	6,672.0	6,580.0	6,578.3	120.8	22.8	88.54	-3,474.9	3,785.5	6,710.8	6,602.7	108.04	62.111		
16,500.0	6,672.0	6,577.1	6,575.4	122.0	22.8	88.50	-3,474.9	3,785.6	6,783.2	6,675.2	108.02	62.795		
16,600.0	6,672.0	6,574.2	6,572.5	123.2	22.8	88.47	-3,474.9	3,785.6	6,856.4	6,748.4	107.99	63.490		
16,700.0	6,672.0	6,571.3	6,569.6	124.5	22.8	88.43	-3,474.9	3,785.7	6,930.2	6,822.3	107.96	64.195		
16,800.0	6,672.0	6,568.3	6,566.6	125.7	22.8	88.39	-3,474.9	3,785.8	7,004.7	6,896.8	107.92	64.909		
16,900.0	6,672.0	6,565.3	6,563.6	126.9	22.8	88.36	-3,475.0	3,785.9	7,079.9	6,972.0	107.87	65.634		
17,000.0	6,672.0	6,562.2	6,560.6	128.1	22.8	88.32	-3,475.0	3,786.0	7,155.6	7,047.8	107.82	66.368		
17,100.0	6,672.0	6,559.1	6,557.5	129.3	22.7	88.28	-3,475.0	3,786.0	7,231.9	7,124.2	107.76	67.110		
17,200.0	6,672.0	6,556.0	6,554.3	130.5	22.7	88.24	-3,475.0	3,786.1	7,308.8	7,201.1	107.70	67.862		
17,300.0	6,672.0	6,552.8	6,551.2	131.7	22.7	88.20	-3,475.0	3,786.2	7,386.3	7,278.7	107.64	68.622		
17,400.0	6,672.0	6,549.6	6,548.0	133.0	22.7	88.16	-3,475.0	3,786.3	7,464.3	7,356.7	107.57	69.390		
17,500.0	6,672.0	6,546.4	6,544.7	134.2	22.7	88.12	-3,475.0	3,786.4	7,542.8	7,435.3	107.50	70.165		
17,600.0	6,672.0	6,543.1	6,541.4	135.4	22.7	88.08	-3,475.0	3,786.5	7,621.9	7,514.5	107.43	70.949		
17,700.0	6,672.0	6,539.8	6,538.1	136.6	22.7	88.04	-3,475.0	3,786.6	7,701.4	7,594.1	107.35	71.740		
17,800.0	6,672.0	6,536.4	6,534.7	137.8	22.7	88.00	-3,475.0	3,786.7	7,781.4	7,674.1	107.27	72.538		
17,900.0	6,672.0	6,533.0	6,531.3	139.0	22.7	87.96	-3,475.0	3,786.8	7,861.9	7,754.7	107.19	73.343		
18,000.0	6,672.0	6,529.5	6,527.8	140.3	22.6	87.91	-3,475.1	3,786.9	7,942.8	7,835.7	107.11	74.154		
18,100.0	6,672.0	6,526.0	6,524.3	141.5	22.6	87.87	-3,475.1	3,787.0	8,024.1	7,917.1	107.03	74.972		
18,200.0	6,672.0	6,522.4	6,520.8	142.7	22.6	87.82	-3,475.1	3,787.1	8,105.9	7,998.9	106.94	75.797		
18,300.0	6,672.0	6,518.8	6,517.2	143.9	22.6	87.78	-3,475.1	3,787.2	8,188.0	8,081.2	106.86	76.627		
18,342.5	6,672.0	6,517.3	6,515.6	144.4	22.6	87.76	-3,475.1	3,787.3	8,223.1	8,116.2	106.82	76.982		



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch BB07-79HNL - Original Drilling - APD - Rev 0													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-172.42	-4,298.2	-571.9	4,336.2					
100.0	100.0	68.0	68.0	0.1	0.0	-172.42	-4,298.2	-571.9	4,336.1	4,336.0	0.13	N/A		
200.0	200.0	168.0	168.0	0.5	0.0	-172.42	-4,298.2	-571.9	4,336.1	4,335.6	0.48	8,956.420		
300.0	300.0	268.0	268.0	0.8	0.0	-172.42	-4,298.2	-571.9	4,336.1	4,335.3	0.84	5,146.083		
400.0	400.0	368.0	368.0	1.2	0.0	-172.42	-4,298.2	-571.9	4,336.1	4,334.9	1.20	3,610.195		
500.0	500.0	468.0	468.0	1.6	0.0	-172.42	-4,298.2	-571.9	4,336.1	4,334.6	1.56	2,780.371		
600.0	600.0	568.0	568.0	1.9	0.0	-172.42	-4,298.2	-571.9	4,336.1	4,334.2	1.92	2,260.730		
700.0	700.0	668.0	668.0	2.3	0.0	-172.42	-4,298.2	-571.9	4,336.1	4,333.9	2.28	1,904.741		
800.0	800.0	768.0	768.0	2.6	0.0	-172.42	-4,298.2	-571.9	4,336.1	4,333.5	2.63	1,645.612		
900.0	900.0	868.0	868.0	3.0	0.0	-172.42	-4,298.2	-571.9	4,336.1	4,333.1	2.99	1,448.546		
1,000.0	1,000.0	968.0	968.0	3.4	0.0	-172.42	-4,298.2	-571.9	4,336.1	4,332.8	3.35	1,293.631		
1,100.0	1,100.0	1,068.0	1,068.0	3.7	0.0	-172.42	-4,298.2	-571.9	4,336.1	4,332.4	3.71	1,168.649		
1,200.0	1,200.0	1,168.0	1,168.0	4.1	0.0	-172.42	-4,298.2	-571.9	4,336.1	4,332.1	4.07	1,065.689		
1,300.0	1,300.0	1,268.0	1,268.0	4.4	0.0	-172.42	-4,298.2	-571.9	4,336.1	4,331.7	4.43	979.403		
1,400.0	1,400.0	1,368.0	1,368.0	4.8	0.0	-172.42	-4,298.2	-571.9	4,336.1	4,331.3	4.79	906.042		
1,500.0	1,500.0	1,468.0	1,468.0	5.1	0.0	-172.42	-4,298.2	-571.9	4,336.1	4,331.0	5.14	842.906		
1,600.0	1,600.0	1,568.0	1,568.0	5.5	0.0	-172.42	-4,298.2	-571.9	4,336.1	4,330.6	5.50	787.995		
1,700.0	1,700.0	1,668.0	1,668.0	5.9	0.0	-172.42	-4,298.2	-571.9	4,336.1	4,330.3	5.86	739.802		
1,800.0	1,800.0	1,775.3	1,768.0	6.2	0.0	-172.42	-4,298.2	-571.9	4,336.1	4,329.9	6.22	697.163		
1,900.0	1,900.0	1,872.1	1,868.0	6.6	0.0	-172.42	-4,298.2	-571.9	4,336.1	4,329.6	6.58	659.172		
2,000.0	2,000.0	1,969.0	1,968.0	6.9	0.0	-172.42	-4,298.2	-571.9	4,336.1	4,329.2	6.94	625.107		
2,100.0	2,100.0	2,143.0	2,142.9	7.3	0.0	-172.36	-4,296.5	-576.0	4,335.5	4,328.2	7.29	594.379		
2,200.0	2,200.0	2,351.0	2,349.6	7.7	0.0	-172.08	-4,287.5	-596.5	4,332.6	4,324.9	7.65	566.482		
2,300.0	2,300.0	2,554.1	2,548.7	8.0	0.0	-120.69	-4,271.5	-633.0	4,328.1	4,320.1	8.00	541.328		
2,400.0	2,399.8	10,383.5	6,542.4	8.4	0.0	-55.98	-18.4	-911.1	4,271.8	4,267.8	3.98	1,073.560		
2,500.0	2,499.5	10,389.5	6,542.5	8.7	0.0	-66.39	-12.4	-911.1	4,173.1	4,168.9	4.11	1,016.045		
2,600.0	2,598.7	10,397.7	6,542.5	9.1	0.0	-78.47	-4.2	-911.1	4,074.2	4,069.9	4.23	962.712		
2,700.0	2,697.5	10,408.1	6,542.6	9.4	0.0	-91.51	6.2	-911.1	3,975.2	3,970.8	4.35	913.189		
2,800.0	2,795.6	10,420.6	6,542.6	9.8	0.0	-104.33	18.7	-911.1	3,876.2	3,871.8	4.47	867.127		
2,900.0	2,893.1	10,435.3	6,542.7	10.1	0.0	-115.89	33.4	-911.2	3,777.4	3,772.9	4.58	824.199		
3,000.0	2,889.6	10,452.1	6,542.8	10.5	0.0	-125.69	50.2	-911.2	3,678.9	3,674.2	4.69	784.096		
3,100.0	3,085.3	10,471.0	6,542.9	10.9	0.0	-133.71	69.1	-911.2	3,580.7	3,575.9	4.80	746.529		
3,200.0	3,179.8	10,492.1	6,543.0	11.2	0.0	-140.23	90.2	-911.2	3,483.0	3,478.1	4.90	711.217		
3,300.0	3,273.2	10,515.1	6,543.1	11.6	0.0	-145.55	113.2	-911.2	3,385.9	3,380.9	4.99	677.892		
3,387.5	3,353.8	10,537.0	6,543.3	11.9	0.0	-149.44	135.1	-911.3	3,301.6	3,296.5	5.08	650.212		
3,400.0	3,365.2	10,540.2	6,543.3	12.0	0.0	-149.52	138.3	-911.3	3,289.6	3,284.5	5.09	646.652		
3,500.0	3,456.8	10,566.1	6,543.4	12.4	0.0	-150.14	164.2	-911.3	3,193.6	3,188.4	5.19	614.988		
3,600.0	3,548.3	10,591.9	6,543.5	12.8	0.0	-150.80	190.0	-911.3	3,097.6	3,092.3	5.30	584.001		
3,700.0	3,639.8	10,617.8	6,543.7	13.2	0.0	-151.49	215.9	-911.3	3,001.7	2,996.3	5.42	553.752		
3,800.0	3,731.4	10,643.6	6,543.8	13.6	0.0	-152.22	241.7	-911.4	2,905.8	2,900.3	5.54	524.288		
3,900.0	3,822.9	10,669.5	6,543.9	14.0	0.0	-152.99	267.6	-911.4	2,810.0	2,804.3	5.67	495.643		
4,000.0	3,914.4	10,695.3	6,544.1	14.4	0.0	-153.81	293.4	-911.4	2,714.2	2,708.4	5.80	467.842		
4,100.0	4,005.9	10,735.5	6,544.2	14.8	0.0	-154.67	319.3	-911.5	2,618.5	2,612.5	5.94	440.899		
4,200.0	4,097.5	10,747.1	6,544.4	15.2	0.0	-155.59	345.2	-911.5	2,522.8	2,516.7	6.08	414.821		
4,300.0	4,189.0	10,772.9	6,544.5	15.6	0.0	-156.56	371.0	-911.5	2,427.2	2,421.0	6.23	389.605		
4,400.0	4,280.5	10,798.8	6,544.6	16.1	0.0	-157.59	396.9	-911.5	2,331.7	2,325.4	6.38	365.245		
4,500.0	4,372.1	10,824.6	6,544.8	16.5	0.0	-158.68	422.7	-911.6	2,236.3	2,229.8	6.54	341.727		
4,600.0	4,463.6	10,850.5	6,544.9	16.9	0.0	-159.85	448.6	-911.6	2,141.1	2,134.3	6.71	319.034		
4,700.0	4,555.1	10,876.3	6,545.0	17.4	0.0	-161.09	474.4	-911.6	2,045.9	2,039.0	6.89	297.145		
4,800.0	4,646.7	10,902.2	6,545.2	17.8	0.0	-162.42	500.3	-911.6	1,950.9	1,943.8	7.07	276.038		
4,900.0	4,738.2	10,928.1	6,545.3	18.2	0.0	-163.84	526.1	-911.7	1,856.0	1,848.7	7.26	255.685		
5,000.0	4,829.7	10,953.9	6,545.4	18.7	0.0	-165.35	552.0	-911.7	1,761.3	1,753.9	7.46	236.059		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch BB07-79HNL - Original Drilling - APD - Rev 0													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,100.0	4,921.3	10,979.8	6,545.6	19.1	0.0	-166.98	577.9	-911.7	1,666.9	1,659.2	7.68	217.134		
5,200.0	5,012.8	11,005.6	6,545.7	19.5	0.0	-168.71	603.7	-911.7	1,572.7	1,564.8	7.91	198.879		
5,300.0	5,104.3	11,031.5	6,545.8	20.0	0.0	-170.58	629.6	-911.8	1,478.8	1,470.6	8.16	181.268		
5,400.0	5,195.8	11,057.3	6,546.0	20.4	0.0	-172.57	655.4	-911.8	1,385.3	1,376.9	8.43	164.275		
5,500.0	5,287.4	11,083.2	6,546.1	20.9	0.0	-174.71	681.3	-911.8	1,292.2	1,283.5	8.74	147.879		
5,600.0	5,378.9	11,109.0	6,546.3	21.3	0.0	-177.01	707.1	-911.8	1,199.7	1,190.7	9.08	132.063		
5,700.0	5,470.4	11,134.9	6,546.4	21.8	0.0	-179.46	733.0	-911.9	1,108.0	1,098.5	9.48	116.823		
5,800.0	5,562.0	11,160.8	6,546.5	22.2	0.0	177.91	758.9	-911.9	1,017.0	1,007.1	9.95	102.169		
5,900.0	5,653.5	11,186.6	6,546.7	22.7	0.0	175.11	784.7	-911.9	927.3	916.8	10.52	88.133		
6,000.0	5,745.0	11,212.5	6,546.8	23.1	0.0	172.13	810.6	-911.9	839.1	827.9	11.22	74.782		
6,100.0	5,836.6	11,238.3	6,546.9	23.6	0.0	168.97	836.4	-912.0	752.9	740.8	12.10	62.224		
6,200.0	5,928.1	11,264.2	6,547.1	24.0	0.0	165.64	862.3	-912.0	669.6	656.4	13.23	50.622		
6,278.6	6,000.0	11,284.5	6,547.2	24.4	0.0	162.90	882.6	-912.0	606.9	592.6	14.34	42.318		
6,290.0	6,010.4	11,287.6	6,547.2	24.4	0.0	162.12	885.6	-912.0	598.1	583.6	14.52	41.186		
6,300.0	6,019.5	11,290.4	6,547.2	24.5	0.0	160.62	888.5	-912.0	590.4	575.7	14.69	40.203		
6,350.0	6,065.8	11,304.6	6,547.3	24.7	0.0	151.34	902.7	-912.0	551.3	535.8	15.51	35.554		
6,400.0	6,113.0	11,319.2	6,547.4	24.9	0.0	138.69	917.3	-912.1	511.0	494.6	16.32	31.302		
6,450.0	6,160.7	11,334.0	6,547.4	25.1	0.0	123.21	932.1	-912.1	469.4	452.3	17.12	27.414		
6,500.0	6,208.5	11,349.0	6,547.5	25.3	0.0	107.47	947.1	-912.1	426.7	408.8	17.90	23.843		
6,550.0	6,255.8	11,363.9	6,547.6	25.4	0.0	94.44	961.9	-912.1	383.0	364.4	18.64	20.546		
6,600.0	6,302.5	11,378.6	6,547.7	25.6	0.0	85.35	976.7	-912.1	338.3	318.9	19.35	17.483		
6,650.0	6,347.9	11,393.0	6,547.7	25.7	0.0	79.95	991.1	-912.1	292.6	272.6	20.01	14.622		
6,700.0	6,391.6	11,407.0	6,547.8	25.9	0.0	77.66	1,005.1	-912.1	246.2	225.5	20.63	11.932		
6,750.0	6,433.4	11,420.4	6,547.9	26.0	0.0	78.27	1,018.5	-912.2	198.9	177.8	21.19	9.388		
6,800.0	6,472.8	11,433.2	6,547.9	26.1	0.0	82.18	1,031.2	-912.2	151.1	129.4	21.68	6.969		
6,850.0	6,509.4	11,445.1	6,548.0	26.2	0.0	91.19	1,043.2	-912.2	102.7	80.7	22.06	4.657		
6,900.0	6,543.0	11,456.2	6,548.1	26.3	0.0	112.19	1,054.2	-912.2	54.0	31.9	22.11	2.441		
6,950.0	6,573.2	11,466.2	6,548.1	26.4	0.0	177.97	1,064.3	-912.2	6.9	-6.3	13.23	0.524 Level 1		
6,954.5	6,575.8	11,467.1	6,548.1	26.4	0.0	-172.98	1,065.2	-912.2	5.3	-9.4	14.62	0.360 Level 1, CC, ES, SF		
7,000.0	6,599.8	11,475.2	6,548.2	26.5	0.0	-108.69	1,073.3	-912.2	45.2	20.7	24.56	1.841		
7,050.0	6,622.5	11,483.0	6,548.2	26.6	0.0	-73.56	1,081.0	-912.2	94.6	70.1	24.51	3.859		
7,100.0	6,641.1	11,489.5	6,548.2	26.7	0.0	-48.15	1,087.6	-912.2	144.0	119.4	24.66	5.840		
7,150.0	6,655.4	11,494.7	6,548.3	26.8	0.0	-29.73	1,092.8	-912.2	193.4	168.5	24.84	7.783		
7,200.0	6,665.4	11,498.6	6,548.3	26.9	0.0	-17.02	1,096.7	-912.2	242.4	217.4	25.01	9.693		
7,250.0	6,670.8	11,501.1	6,548.3	27.0	0.0	-8.18	1,099.2	-912.2	291.0	265.9	25.14	11.575		
7,285.7	6,672.0	11,502.1	6,548.3	27.1	0.0	-3.44	1,100.2	-912.2	325.4	300.2	25.22	12.904		
7,300.0	6,672.0	11,502.3	6,548.3	27.1	0.0	-3.58	1,100.4	-912.2	339.2	313.9	25.24	13.437		
7,400.0	6,672.0	11,503.9	6,548.3	27.3	0.0	-4.60	1,102.0	-912.2	436.3	411.0	25.33	17.224		
7,500.0	6,672.0	11,505.5	6,548.3	27.6	0.0	-5.63	1,103.6	-912.2	534.5	509.1	25.35	21.086		
7,600.0	6,672.0	11,524.3	6,548.3	28.0	0.0	-6.66	1,105.3	-912.2	633.2	607.9	25.34	24.988		
7,700.0	6,672.0	11,522.7	6,548.3	28.3	0.0	-7.70	1,106.9	-912.2	732.3	706.9	25.33	28.914		
7,800.0	6,672.0	11,521.0	6,548.4	28.8	0.0	-8.75	1,108.5	-912.2	831.6	806.3	25.31	32.854		
7,900.0	6,672.0	11,519.4	6,548.4	29.3	0.0	-9.79	1,110.2	-912.3	931.0	905.7	25.30	36.803		
8,000.0	6,672.0	11,517.7	6,548.4	29.8	0.0	-10.84	1,111.9	-912.3	1,030.5	1,005.3	25.28	40.758		
8,100.0	6,672.0	11,515.4	6,548.4	30.4	0.0	-11.89	1,113.5	-912.3	1,130.2	1,104.9	25.27	44.716		
8,200.0	6,672.0	11,517.1	6,548.4	31.0	0.0	-12.95	1,115.2	-912.3	1,229.9	1,204.6	25.27	48.675		
8,300.0	6,672.0	11,518.8	6,548.4	31.7	0.0	-14.00	1,116.9	-912.3	1,329.6	1,304.3	25.26	52.635		
8,400.0	6,672.0	11,520.5	6,548.4	32.4	0.0	-15.05	1,118.6	-912.3	1,429.3	1,404.1	25.26	56.593		
8,500.0	6,672.0	11,522.2	6,548.4	33.1	0.0	-16.10	1,120.3	-912.3	1,529.1	1,503.9	25.25	60.549		
8,600.0	6,672.0	11,523.9	6,548.4	33.9	0.0	-17.15	1,122.0	-912.3	1,629.0	1,603.7	25.25	64.502		
8,700.0	6,672.0	11,525.6	6,548.4	34.7	0.0	-18.19	1,123.7	-912.3	1,728.8	1,703.5	25.26	68.452		
8,800.0	6,672.0	11,527.3	6,548.4	35.5	0.0	-19.24	1,125.4	-912.3	1,828.6	1,803.4	25.26	72.397		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch BB07-79HNL - Original Drilling - APD - Rev 0													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
8,900.0	6,672.0	11,529.0	6,548.5	36.3	0.0	-20.27	1,127.1	-912.3	1,928.5	1,903.2	25.26	76.338		
9,000.0	6,672.0	11,530.8	6,548.5	37.2	0.0	-21.30	1,128.9	-912.3	2,028.4	2,003.1	25.27	80.273		
9,100.0	6,672.0	11,532.5	6,548.5	38.1	0.0	-22.33	1,130.6	-912.3	2,128.3	2,103.0	25.28	84.202		
9,200.0	6,672.0	11,534.3	6,548.5	39.0	0.0	-23.35	1,132.4	-912.3	2,228.2	2,202.9	25.28	88.124		
9,300.0	6,672.0	11,536.0	6,548.5	39.9	0.0	-24.36	1,134.1	-912.3	2,328.1	2,302.8	25.29	92.040		
9,400.0	6,672.0	11,537.8	6,548.5	40.8	0.0	-25.36	1,135.9	-912.3	2,428.0	2,402.7	25.31	95.948		
9,500.0	6,672.0	11,539.6	6,548.5	41.8	0.0	-26.36	1,137.6	-912.3	2,527.9	2,502.6	25.32	99.848		
9,600.0	6,672.0	11,541.3	6,548.5	42.7	0.0	-27.34	1,139.4	-912.3	2,627.8	2,602.5	25.33	103.739		
9,700.0	6,672.0	11,543.1	6,548.5	43.7	0.0	-28.32	1,141.2	-912.3	2,727.7	2,702.4	25.35	107.622		
9,800.0	6,672.0	11,544.9	6,548.5	44.7	0.0	-29.28	1,143.0	-912.3	2,827.7	2,802.3	25.36	111.495		
9,900.0	6,672.0	11,546.7	6,548.5	45.7	0.0	-30.24	1,144.8	-912.3	2,927.6	2,902.2	25.38	115.359		
10,000.0	6,672.0	11,548.5	6,548.6	46.7	0.0	-31.18	1,146.6	-912.3	3,027.5	3,002.1	25.40	119.213		
10,100.0	6,672.0	11,550.3	6,548.6	47.7	0.0	-32.12	1,148.4	-912.3	3,127.5	3,102.1	25.42	123.056		
10,200.0	6,672.0	11,552.2	6,548.6	48.8	0.0	-33.04	1,150.3	-912.3	3,227.4	3,202.0	25.44	126.888		
10,300.0	6,672.0	11,554.0	6,548.6	49.8	0.0	-33.94	1,152.1	-912.3	3,327.4	3,301.9	25.46	130.708		
10,400.0	6,672.0	11,555.8	6,548.6	50.9	0.0	-34.84	1,153.9	-912.3	3,427.3	3,401.8	25.48	134.517		
10,500.0	6,672.0	11,557.7	6,548.6	51.9	0.0	-35.72	1,155.8	-912.3	3,527.3	3,501.8	25.50	138.314		
10,600.0	6,672.0	11,559.5	6,548.6	53.0	0.0	-36.59	1,157.6	-912.3	3,627.2	3,601.7	25.53	142.098		
10,700.0	6,672.0	11,561.4	6,548.6	54.1	0.0	-37.45	1,159.5	-912.3	3,727.2	3,701.6	25.55	145.870		
10,800.0	6,672.0	11,563.3	6,548.6	55.2	0.0	-38.29	1,161.4	-912.3	3,827.1	3,801.5	25.58	149.628		
10,900.0	6,672.0	11,565.2	6,548.6	56.3	0.0	-39.12	1,163.2	-912.3	3,927.1	3,901.5	25.60	153.373		
11,000.0	6,672.0	11,567.0	6,548.7	57.4	0.0	-39.94	1,165.1	-912.3	4,027.0	4,001.4	25.63	157.104		
11,100.0	6,672.0	11,568.9	6,548.7	58.5	0.0	-40.75	1,167.0	-912.3	4,127.0	4,101.3	25.66	160.821		
11,200.0	6,672.0	11,570.8	6,548.7	59.6	0.0	-41.54	1,168.9	-912.3	4,226.9	4,201.3	25.69	164.523		
11,300.0	6,672.0	11,572.7	6,548.7	60.7	0.0	-42.31	1,170.8	-912.3	4,326.9	4,301.2	25.72	168.210		
11,400.0	6,672.0	11,574.7	6,548.7	61.8	0.0	-43.08	1,172.7	-912.3	4,426.9	4,401.1	25.76	171.883		
11,500.0	6,672.0	11,576.6	6,548.7	62.9	0.0	-43.83	1,174.7	-912.3	4,526.8	4,501.0	25.79	175.539		
11,600.0	6,672.0	11,578.5	6,548.7	64.1	0.0	-44.56	1,176.6	-912.3	4,626.8	4,601.0	25.82	179.180		
11,700.0	6,672.0	11,580.4	6,548.7	65.2	0.0	-45.28	1,178.5	-912.3	4,726.7	4,700.9	25.86	182.805		
11,800.0	6,672.0	11,582.4	6,548.7	66.3	0.0	-45.99	1,180.5	-912.3	4,826.7	4,800.8	25.89	186.414		
11,900.0	6,672.0	11,584.3	6,548.7	67.5	0.0	-46.69	1,182.4	-912.3	4,926.7	4,900.7	25.93	190.006		
12,000.0	6,672.0	11,586.3	6,548.8	68.6	0.0	-47.37	1,184.4	-912.3	5,026.6	5,000.7	25.97	193.581		
12,100.0	6,672.0	11,588.3	6,548.8	69.8	0.0	-48.04	1,186.3	-912.3	5,126.6	5,100.6	26.01	197.139		
12,200.0	6,672.0	11,590.2	6,548.8	70.9	0.0	-48.70	1,188.3	-912.3	5,226.6	5,200.5	26.04	200.680		
12,300.0	6,672.0	11,592.2	6,548.8	72.1	0.0	-49.35	1,190.3	-912.3	5,326.5	5,300.4	26.08	204.203		
12,400.0	6,672.0	11,594.2	6,548.8	73.2	0.0	-49.98	1,192.3	-912.3	5,426.5	5,400.4	26.13	207.708		
12,500.0	6,672.0	11,596.2	6,548.8	74.4	0.0	-50.60	1,194.3	-912.3	5,526.5	5,500.3	26.17	211.195		
12,600.0	6,672.0	11,598.2	6,548.8	75.5	0.0	-51.21	1,196.3	-912.3	5,626.4	5,600.2	26.21	214.664		
12,700.0	6,672.0	11,600.2	6,548.8	76.7	0.0	-51.81	1,198.3	-912.3	5,726.4	5,700.1	26.25	218.114		
12,800.0	6,672.0	11,602.2	6,548.8	77.9	0.0	-52.39	1,200.3	-912.3	5,826.4	5,800.1	26.30	221.546		
12,900.0	6,672.0	11,604.3	6,548.8	79.0	0.0	-52.96	1,202.4	-912.3	5,926.3	5,900.0	26.34	224.959		
13,000.0	6,672.0	11,622.0	6,548.9	80.2	0.0	-53.53	1,204.4	-912.3	6,026.3	5,999.9	26.39	228.352		
13,100.0	6,672.0	11,620.0	6,548.9	81.4	0.0	-54.08	1,206.4	-912.3	6,126.3	6,099.8	26.44	231.727		
13,200.0	6,672.0	11,617.9	6,548.9	82.6	0.0	-54.62	1,208.5	-912.3	6,226.2	6,199.7	26.49	235.082		
13,300.0	6,672.0	11,615.9	6,548.9	83.7	0.0	-55.15	1,210.5	-912.4	6,326.2	6,299.7	26.53	238.417		
13,400.0	6,672.0	11,614.5	6,548.9	84.9	0.0	-55.66	1,212.6	-912.4	6,426.2	6,399.6	26.58	241.733		
13,500.0	6,672.0	11,616.6	6,548.9	86.1	0.0	-56.17	1,214.7	-912.4	6,526.1	6,499.5	26.63	245.028		
13,600.0	6,672.0	11,618.7	6,548.9	87.3	0.0	-56.67	1,216.8	-912.4	6,626.1	6,599.4	26.69	248.304		
13,700.0	6,672.0	11,620.8	6,548.9	88.4	0.0	-57.16	1,218.8	-912.4	6,726.1	6,699.3	26.74	251.560		
13,800.0	6,672.0	11,622.9	6,548.9	89.6	0.0	-57.64	1,220.9	-912.4	6,826.0	6,799.3	26.79	254.795		
13,900.0	6,672.0	11,625.0	6,549.0	90.8	0.0	-58.11	1,223.0	-912.4	6,926.0	6,899.2	26.84	258.009		
14,000.0	6,672.0	11,627.1	6,549.0	92.0	0.0	-58.57	1,225.1	-912.4	7,026.0	6,999.1	26.90	261.203		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch BB07-79HNL - Original Drilling - APD - Rev 0													Offset Site Error: 0.0 ft	
Survey Program: 0-2_MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
14,100.0	6,672.0	11,629.2	6,549.0	93.2	0.0	-59.02	1,227.3	-912.4	7,126.0	7,099.0	26.95	264.377		
14,200.0	6,672.0	11,631.3	6,549.0	94.4	0.0	-59.46	1,229.4	-912.4	7,225.9	7,198.9	27.01	267.529		
14,300.0	6,672.0	11,633.4	6,549.0	95.6	0.0	-59.89	1,231.5	-912.4	7,325.9	7,298.8	27.07	270.661		
14,400.0	6,672.0	11,635.6	6,549.0	96.8	0.0	-60.31	1,233.7	-912.4	7,425.9	7,398.7	27.12	273.772		
14,500.0	6,672.0	11,637.7	6,549.0	98.0	0.0	-60.73	1,235.8	-912.4	7,525.8	7,498.6	27.18	276.862		
14,600.0	6,672.0	11,639.9	6,549.0	99.2	0.0	-61.14	1,238.0	-912.4	7,625.8	7,598.6	27.24	279.931		
14,700.0	6,672.0	11,642.0	6,549.0	100.4	0.0	-61.54	1,240.1	-912.4	7,725.8	7,698.5	27.30	282.978		
14,800.0	6,672.0	11,644.2	6,549.1	101.6	0.0	-61.93	1,242.3	-912.4	7,825.7	7,798.4	27.36	286.004		
14,900.0	6,672.0	11,646.4	6,549.1	102.7	0.0	-62.31	1,244.5	-912.4	7,925.7	7,898.3	27.42	289.009		
15,000.0	6,672.0	11,648.6	6,549.1	103.9	0.0	-62.69	1,246.7	-912.4	8,025.7	7,998.2	27.49	291.993		
15,100.0	6,672.0	11,650.8	6,549.1	105.1	0.0	-63.06	1,248.9	-912.4	8,125.6	8,098.1	27.55	294.955		
15,200.0	6,672.0	11,653.0	6,549.1	106.3	0.0	-63.42	1,251.0	-912.4	8,225.6	8,198.0	27.61	297.896		
15,300.0	6,672.0	11,655.2	6,549.1	107.6	0.0	-63.78	1,253.3	-912.4	8,325.6	8,297.9	27.68	300.815		
15,400.0	6,672.0	11,657.4	6,549.1	108.8	0.0	-64.13	1,255.5	-912.4	8,425.6	8,397.8	27.74	303.713		
15,500.0	6,672.0	11,659.6	6,549.1	110.0	0.0	-64.47	1,257.7	-912.4	8,525.5	8,497.7	27.81	306.589		
15,600.0	6,672.0	11,661.8	6,549.1	111.2	0.0	-64.80	1,259.9	-912.4	8,625.5	8,597.6	27.87	309.444		
15,700.0	6,672.0	11,664.1	6,549.2	112.4	0.0	-65.13	1,262.2	-912.4	8,725.5	8,697.5	27.94	312.278		
15,800.0	6,672.0	11,666.3	6,549.2	113.6	0.0	-65.45	1,264.4	-912.4	8,825.4	8,797.4	28.01	315.089		
15,900.0	6,672.0	11,668.6	6,549.2	114.8	0.0	-65.77	1,266.7	-912.4	8,925.4	8,897.3	28.08	317.880		
16,000.0	6,672.0	11,670.8	6,549.2	116.0	0.0	-66.08	1,268.9	-912.4	9,025.4	8,997.2	28.15	320.648		
16,100.0	6,672.0	11,673.1	6,549.2	117.2	0.0	-66.39	1,271.2	-912.4	9,125.3	9,097.1	28.22	323.396		
16,200.0	6,672.0	11,675.4	6,549.2	118.4	0.0	-66.69	1,273.5	-912.4	9,225.3	9,197.0	28.29	326.121		
16,300.0	6,672.0	11,677.7	6,549.2	119.6	0.0	-66.98	1,275.7	-912.4	9,325.3	9,296.9	28.36	328.826		
16,400.0	6,672.0	11,679.9	6,549.2	120.8	0.0	-67.27	1,278.0	-912.4	9,425.2	9,396.8	28.43	331.509		
16,500.0	6,672.0	11,682.2	6,549.3	122.0	0.0	-67.55	1,280.3	-912.4	9,525.2	9,496.7	28.50	334.170		
16,600.0	6,672.0	11,684.5	6,549.3	123.2	0.0	-67.83	1,282.6	-912.4	9,625.2	9,596.6	28.58	336.810		
16,700.0	6,672.0	11,686.9	6,549.3	124.5	0.0	-68.10	1,284.9	-912.4	9,725.2	9,696.5	28.65	339.429		
16,800.0	6,672.0	11,689.2	6,549.3	125.7	0.0	-68.37	1,287.3	-912.4	9,825.1	9,796.4	28.73	342.026		
16,900.0	6,672.0	11,691.5	6,549.3	126.9	0.0	-68.63	1,289.6	-912.4	9,925.1	9,896.3	28.80	344.602		



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch State BB06-690 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-0.66	21.9	-0.3	21.9					
100.0	100.0	100.0	100.0	0.1	0.1	-0.66	21.9	-0.3	21.9	21.6	0.25	87.140		
200.0	200.0	200.0	200.0	0.5	0.5	-0.66	21.9	-0.3	21.9	20.9	0.97	22.592		
300.0	300.0	300.0	300.0	0.8	0.8	-0.66	21.9	-0.3	21.9	20.2	1.68	12.978		
400.0	400.0	400.0	400.0	1.2	1.2	-0.66	21.9	-0.3	21.9	19.5	2.40	9.104		
500.0	500.0	500.0	500.0	1.6	1.6	-0.66	21.9	-0.3	21.9	18.7	3.12	7.011		
600.0	600.0	600.0	600.0	1.9	1.9	-0.66	21.9	-0.3	21.9	18.0	3.84	5.701		
700.0	700.0	700.0	700.0	2.3	2.3	-0.66	21.9	-0.3	21.9	17.3	4.55	4.803		
800.0	800.0	800.0	800.0	2.6	2.6	-0.66	21.9	-0.3	21.9	16.6	5.27	4.150		
900.0	900.0	900.0	900.0	3.0	3.0	-0.66	21.9	-0.3	21.9	15.9	5.99	3.653		
1,000.0	1,000.0	1,000.0	1,000.0	3.4	3.4	-0.66	21.9	-0.3	21.9	15.2	6.70	3.262		
1,100.0	1,100.0	1,100.0	1,100.0	3.7	3.7	-0.66	21.9	-0.3	21.9	14.4	7.42	2.947		
1,200.0	1,200.0	1,200.0	1,200.0	4.1	4.1	-0.66	21.9	-0.3	21.9	13.7	8.14	2.687		
1,300.0	1,300.0	1,300.0	1,300.0	4.4	4.4	-0.66	21.9	-0.3	21.9	13.0	8.85	2.470		
1,400.0	1,400.0	1,400.0	1,400.0	4.8	4.8	-0.66	21.9	-0.3	21.9	12.3	9.57	2.285		
1,500.0	1,500.0	1,500.0	1,500.0	5.1	5.1	-0.66	21.9	-0.3	21.9	11.6	10.29	2.125		
1,600.0	1,600.0	1,600.0	1,600.0	5.5	5.5	-0.66	21.9	-0.3	21.9	10.9	11.01	1.987		
1,700.0	1,700.0	1,700.0	1,700.0	5.9	5.9	-0.66	21.9	-0.3	21.9	10.1	11.72	1.865		
1,800.0	1,800.0	1,800.0	1,800.0	6.2	6.2	-0.66	21.9	-0.3	21.9	9.4	12.44	1.758		
1,900.0	1,900.0	1,900.0	1,900.0	6.6	6.6	-0.66	21.9	-0.3	21.9	8.7	13.16	1.662		
2,000.0	2,000.0	2,000.0	2,000.0	6.9	6.9	-0.66	21.9	-0.3	21.9	8.0	13.87	1.576 CC, ES, SF		
2,100.0	2,100.0	2,099.4	2,099.4	7.3	7.3	-3.80	23.0	-1.5	23.1	8.5	14.58	1.583		
2,200.0	2,200.0	2,198.6	2,198.5	7.7	7.6	-11.41	26.5	-5.3	27.1	11.8	15.28	1.772		
2,300.0	2,300.0	2,297.5	2,297.0	8.0	8.0	32.58	32.2	-11.7	32.9	17.0	15.95	2.066		
2,400.0	2,399.8	2,396.2	2,394.9	8.4	8.3	28.02	40.3	-20.5	39.2	22.6	16.60	2.362		
2,500.0	2,499.5	2,494.6	2,492.2	8.7	8.7	24.98	50.5	-31.8	45.7	28.5	17.23	2.651		
2,600.0	2,598.7	2,592.8	2,588.6	9.1	9.0	22.91	63.0	-45.5	52.3	34.4	17.85	2.929		
2,700.0	2,697.5	2,690.8	2,684.1	9.4	9.4	21.49	77.6	-61.6	58.9	40.5	18.45	3.193		
2,800.0	2,795.6	2,788.5	2,778.6	9.8	9.8	20.54	94.4	-80.1	65.6	46.5	19.03	3.445		
2,900.0	2,893.1	2,886.1	2,872.0	10.1	10.1	19.91	113.3	-100.9	72.2	52.6	19.60	3.684		
3,000.0	2,889.6	2,883.4	2,864.2	10.5	10.5	19.54	134.2	-124.0	78.9	58.7	20.16	3.911		
3,100.0	3,085.3	3,080.5	3,055.1	10.9	10.8	19.35	157.3	-149.3	85.5	64.7	20.71	4.127		
3,200.0	3,179.8	3,177.4	3,144.5	11.2	11.2	19.31	182.3	-176.8	92.0	70.8	21.25	4.330		
3,300.0	3,273.2	3,274.1	3,232.5	11.6	11.6	19.39	209.2	-206.5	98.5	76.7	21.78	4.523		
3,387.5	3,353.8	3,358.6	3,308.2	11.9	11.9	19.54	234.4	-234.3	104.2	81.9	22.24	4.683		
3,400.0	3,365.2	3,370.6	3,318.9	12.0	11.9	19.56	238.1	-238.4	105.0	82.7	22.31	4.706		
3,500.0	3,456.8	3,469.3	3,406.1	12.4	12.3	19.61	269.2	-272.5	112.6	89.6	23.01	4.895		
3,600.0	3,548.3	3,569.0	3,494.1	12.8	12.8	19.63	300.7	-307.2	120.5	96.7	23.80	5.061		
3,700.0	3,639.8	3,668.7	3,582.1	13.2	13.2	19.65	332.1	-341.8	128.3	103.7	24.61	5.213		
3,800.0	3,731.4	3,768.4	3,670.2	13.6	13.6	19.66	363.6	-376.5	136.1	110.7	25.42	5.353		
3,900.0	3,822.9	3,868.0	3,758.2	14.0	14.0	19.68	395.1	-411.1	143.9	117.6	26.25	5.482		
4,000.0	3,914.4	3,967.7	3,846.2	14.4	14.5	19.69	426.5	-445.8	151.7	124.6	27.08	5.602		
4,100.0	4,005.9	4,067.4	3,934.2	14.8	14.9	19.70	458.0	-480.4	159.5	131.6	27.92	5.712		
4,200.0	4,097.5	4,167.1	4,022.3	15.2	15.4	19.71	489.5	-515.1	167.3	138.5	28.77	5.815		
4,300.0	4,189.0	4,266.8	4,110.3	15.6	15.8	19.72	520.9	-549.7	175.1	145.5	29.63	5.911		
4,400.0	4,280.5	4,366.5	4,198.3	16.1	16.3	19.73	552.4	-584.3	182.9	152.4	30.49	6.000		
4,500.0	4,372.1	4,466.2	4,286.3	16.5	16.7	19.74	583.9	-619.0	190.7	159.4	31.36	6.083		
4,600.0	4,463.6	4,565.9	4,374.4	16.9	17.2	19.75	615.4	-653.6	198.5	166.3	32.23	6.160		
4,700.0	4,555.1	4,665.6	4,462.4	17.4	17.7	19.75	646.8	-688.3	206.4	173.3	33.11	6.233		
4,800.0	4,646.7	4,765.3	4,550.4	17.8	18.1	19.76	678.3	-722.9	214.2	180.2	33.99	6.301		
4,900.0	4,738.2	4,865.0	4,638.4	18.2	18.6	19.77	709.8	-757.6	222.0	187.1	34.88	6.365		
5,000.0	4,829.7	4,964.7	4,726.5	18.7	19.1	19.77	741.2	-792.2	229.8	194.0	35.77	6.425		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch State BB06-690 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,100.0	4,921.3	5,064.4	4,814.5	19.1	19.5	19.78	772.7	-826.9	237.6	200.9	36.66	6.481		
5,200.0	5,012.8	5,164.1	4,902.5	19.5	20.0	19.78	804.2	-861.5	245.4	207.9	37.56	6.535		
5,300.0	5,104.3	5,263.8	4,990.5	20.0	20.5	19.79	835.6	-896.1	253.2	214.8	38.45	6.585		
5,400.0	5,195.8	5,363.5	5,078.6	20.4	21.0	19.79	867.1	-930.8	261.0	221.7	39.36	6.632		
5,500.0	5,287.4	5,463.2	5,166.6	20.9	21.5	19.79	898.6	-965.4	268.8	228.6	40.26	6.677		
5,600.0	5,378.9	5,562.9	5,254.6	21.3	21.9	19.80	930.1	-1,000.1	276.6	235.5	41.17	6.720		
5,700.0	5,470.4	5,662.6	5,342.7	21.8	22.4	19.80	961.5	-1,034.7	284.5	242.4	42.08	6.760		
5,800.0	5,562.0	5,762.2	5,430.7	22.2	22.9	19.80	993.0	-1,069.4	292.3	249.3	42.99	6.798		
5,900.0	5,653.5	5,861.9	5,518.7	22.7	23.4	19.81	1,024.5	-1,104.0	300.1	256.2	43.91	6.835		
6,000.0	5,745.0	5,961.6	5,606.7	23.1	23.9	19.81	1,055.9	-1,138.7	307.9	263.1	44.82	6.869		
6,100.0	5,836.6	6,061.3	5,694.8	23.6	24.4	19.81	1,087.4	-1,173.3	315.7	270.0	45.74	6.902		
6,200.0	5,928.1	6,161.0	5,782.8	24.0	24.9	19.82	1,118.9	-1,208.0	323.5	276.8	46.66	6.933		
6,278.6	6,000.0	6,239.3	5,851.9	24.4	25.3	19.82	1,143.6	-1,235.2	329.6	282.3	47.38	6.957		
6,290.0	6,010.4	6,246.1	5,857.9	24.4	25.3	18.30	1,145.8	-1,237.5	330.5	283.1	47.36	6.979		
6,300.0	6,019.5	6,252.8	5,863.7	24.5	25.3	16.66	1,148.0	-1,239.8	331.3	284.0	47.35	6.997		
6,350.0	6,065.8	6,300.3	5,905.0	24.7	25.6	6.62	1,165.4	-1,255.7	337.6	289.9	47.73	7.074		
6,400.0	6,113.0	6,366.1	5,963.5	24.9	25.9	-6.90	1,190.6	-1,272.0	344.5	295.9	48.62	7.086		
6,450.0	6,160.7	6,432.6	6,023.9	25.1	26.2	-23.27	1,216.8	-1,281.1	351.0	301.6	49.40	7.106		
6,500.0	6,208.5	6,499.5	6,085.2	25.3	26.4	-39.98	1,243.5	-1,282.8	357.2	307.2	50.08	7.133		
6,550.0	6,255.8	6,566.9	6,146.6	25.4	26.6	-54.14	1,270.4	-1,276.8	363.0	312.4	50.65	7.168		
6,600.0	6,302.5	6,634.4	6,207.1	25.6	26.8	-64.63	1,297.1	-1,263.1	368.3	317.2	51.12	7.206		
6,650.0	6,347.9	6,702.0	6,265.7	25.7	27.0	-71.90	1,323.2	-1,241.9	373.1	321.6	51.51	7.243		
6,700.0	6,391.6	6,769.4	6,321.5	25.9	27.2	-76.80	1,348.2	-1,213.5	377.4	325.5	51.86	7.277		
6,750.0	6,433.4	6,836.6	6,373.7	26.0	27.3	-80.01	1,371.7	-1,178.5	381.1	328.9	52.19	7.303		
6,800.0	6,472.8	6,903.3	6,421.6	26.1	27.4	-82.05	1,393.5	-1,137.5	384.3	331.8	52.52	7.316		
6,850.0	6,509.4	6,969.4	6,464.4	26.2	27.6	-83.23	1,413.3	-1,091.3	386.9	334.0	52.88	7.316		
6,900.0	6,543.0	7,034.8	6,501.9	26.3	27.7	-83.79	1,430.7	-1,040.7	388.9	335.7	53.27	7.301		
6,950.0	6,573.2	7,099.3	6,533.5	26.4	27.8	-83.89	1,445.7	-986.5	390.4	336.7	53.70	7.270		
7,000.0	6,599.8	7,162.9	6,559.1	26.5	27.9	-83.63	1,458.1	-929.7	391.4	337.3	54.17	7.226		
7,050.0	6,622.5	7,225.5	6,578.7	26.6	28.0	-83.10	1,468.0	-871.1	391.9	337.3	54.66	7.171		
7,100.0	6,641.1	7,287.1	6,592.3	26.7	28.1	-82.35	1,475.2	-811.5	392.0	336.8	55.15	7.107		
7,150.0	6,655.4	7,347.6	6,599.9	26.8	28.2	-81.42	1,479.8	-751.7	391.6	335.9	55.63	7.038		
7,200.0	6,665.4	7,407.0	6,602.0	26.9	28.3	-80.36	1,482.0	-692.4	390.8	334.7	56.09	6.967		
7,250.0	6,670.8	7,455.3	6,602.0	27.0	28.4	-79.80	1,483.1	-644.0	390.3	333.8	56.43	6.916		
7,265.0	6,671.6	7,470.3	6,602.0	27.0	28.5	-79.72	1,483.4	-629.0	390.2	333.7	56.53	6.904		
7,285.7	6,672.0	7,491.0	6,602.0	27.1	28.5	-79.67	1,483.9	-608.4	390.3	333.6	56.65	6.889		
7,300.0	6,672.0	7,505.3	6,602.0	27.1	28.6	-79.67	1,484.2	-594.1	390.4	333.6	56.74	6.880		
7,400.0	6,672.0	7,605.3	6,602.0	27.3	28.8	-79.68	1,486.4	-494.1	390.8	333.4	57.39	6.809		
7,500.0	6,672.0	7,705.3	6,602.0	27.6	29.2	-79.69	1,488.5	-394.1	391.3	333.1	58.15	6.729		
7,600.0	6,672.0	7,805.3	6,602.0	28.0	29.6	-79.71	1,490.7	-294.1	391.7	332.7	59.00	6.639		
7,700.0	6,672.0	7,905.3	6,602.0	28.3	30.0	-79.72	1,492.9	-194.1	392.1	332.2	59.93	6.543		
7,800.0	6,672.0	8,005.3	6,602.0	28.8	30.5	-79.73	1,495.1	-94.2	392.6	331.6	60.96	6.440		
7,900.0	6,672.0	8,105.3	6,602.0	29.3	31.0	-79.74	1,497.3	5.8	393.0	330.9	62.06	6.332		
8,000.0	6,672.0	8,205.3	6,602.0	29.8	31.6	-79.75	1,499.4	105.8	393.4	330.1	63.24	6.220		
8,100.0	6,672.0	8,305.3	6,602.0	30.4	32.2	-79.76	1,501.6	205.8	393.8	329.3	64.49	6.106		
8,200.0	6,672.0	8,405.3	6,602.0	31.0	32.9	-79.77	1,503.8	305.8	394.2	328.4	65.82	5.989		
8,300.0	6,672.0	8,505.3	6,602.0	31.7	33.6	-79.78	1,505.9	405.7	394.6	327.4	67.20	5.871		
8,400.0	6,672.0	8,605.3	6,602.0	32.4	34.3	-79.79	1,508.1	505.7	394.9	326.3	68.65	5.753		
8,500.0	6,672.0	8,705.3	6,602.0	33.1	35.1	-79.80	1,510.3	605.7	395.3	325.2	70.15	5.635		
8,600.0	6,672.0	8,805.3	6,602.0	33.9	35.9	-79.81	1,512.5	705.7	395.7	324.0	71.71	5.518		
8,700.0	6,672.0	8,905.3	6,602.0	34.7	36.7	-79.82	1,514.6	805.7	396.0	322.7	73.31	5.402		
8,800.0	6,672.0	9,005.3	6,602.0	35.5	37.5	-79.83	1,516.8	905.6	396.4	321.4	74.96	5.287		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch State BB06-690 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
8,900.0	6,672.0	9,105.3	6,602.0	36.3	38.4	-79.84	1,519.0	1,005.6	396.7	320.0	76.66	5.175		
9,000.0	6,672.0	9,205.3	6,602.0	37.2	39.2	-79.84	1,521.1	1,105.6	397.0	318.6	78.40	5.064		
9,100.0	6,672.0	9,305.4	6,602.0	38.1	40.1	-79.85	1,523.3	1,205.6	397.3	317.2	80.17	4.956		
9,200.0	6,672.0	9,405.4	6,602.0	39.0	41.0	-79.86	1,525.5	1,305.5	397.6	315.7	81.98	4.851		
9,300.0	6,672.0	9,505.4	6,602.0	39.9	42.0	-79.87	1,527.6	1,405.5	397.9	314.1	83.82	4.747		
9,400.0	6,672.0	9,605.4	6,602.0	40.8	42.9	-79.88	1,529.8	1,505.5	398.2	312.5	85.70	4.647		
9,500.0	6,672.0	9,705.4	6,602.0	41.8	43.9	-79.88	1,532.0	1,605.5	398.5	310.9	87.60	4.549		
9,600.0	6,672.0	9,805.4	6,602.0	42.7	44.9	-79.89	1,534.1	1,705.5	398.8	309.3	89.53	4.454		
9,700.0	6,672.0	9,905.4	6,602.0	43.7	45.8	-79.90	1,536.3	1,805.4	399.1	307.6	91.49	4.362		
9,800.0	6,672.0	10,005.4	6,602.0	44.7	46.8	-79.90	1,538.4	1,905.4	399.3	305.9	93.47	4.272		
9,900.0	6,672.0	10,105.4	6,602.0	45.7	47.9	-79.91	1,540.6	2,005.4	399.6	304.1	95.47	4.185		
10,000.0	6,672.0	10,205.4	6,602.0	46.7	48.9	-79.92	1,542.8	2,105.4	399.8	302.3	97.50	4.101		
10,100.0	6,672.0	10,305.4	6,602.0	47.7	49.9	-79.92	1,544.9	2,205.4	400.1	300.5	99.54	4.019		
10,200.0	6,672.0	10,405.4	6,602.0	48.8	51.0	-79.93	1,547.1	2,305.3	400.3	298.7	101.61	3.940		
10,300.0	6,672.0	10,505.4	6,602.0	49.8	52.0	-79.93	1,549.2	2,405.3	400.5	296.8	103.69	3.863		
10,400.0	6,672.0	10,605.4	6,602.0	50.9	53.1	-79.94	1,551.4	2,505.3	400.7	294.9	105.78	3.788		
10,500.0	6,672.0	10,705.4	6,602.0	51.9	54.1	-79.94	1,553.5	2,605.3	400.9	293.0	107.90	3.716		
10,600.0	6,672.0	10,805.4	6,602.0	53.0	55.2	-79.95	1,555.7	2,705.3	401.1	291.1	110.02	3.646		
10,700.0	6,672.0	10,905.4	6,602.0	54.1	56.3	-79.95	1,557.8	2,805.2	401.3	289.1	112.16	3.578		
10,800.0	6,672.0	11,005.4	6,602.0	55.2	57.4	-79.96	1,560.0	2,905.2	401.5	287.2	114.32	3.512		
10,900.0	6,672.0	11,105.4	6,602.0	56.3	58.5	-79.96	1,562.1	3,005.2	401.7	285.2	116.48	3.448		
11,000.0	6,672.0	11,205.4	6,602.0	57.4	59.6	-79.97	1,564.3	3,105.2	401.8	283.2	118.66	3.386		
11,100.0	6,672.0	11,305.4	6,602.0	58.5	60.7	-79.97	1,566.4	3,205.2	402.0	281.1	120.85	3.326		
11,200.0	6,672.0	11,405.4	6,602.0	59.6	61.8	-79.97	1,568.6	3,305.1	402.1	279.1	123.05	3.268		
11,300.0	6,672.0	11,505.4	6,602.0	60.7	62.9	-79.98	1,570.7	3,405.1	402.3	277.0	125.26	3.211		
11,400.0	6,672.0	11,605.4	6,602.0	61.8	64.0	-79.98	1,572.9	3,505.1	402.4	274.9	127.48	3.157		
11,500.0	6,672.0	11,705.4	6,602.0	62.9	65.1	-79.98	1,575.0	3,605.1	402.5	272.8	129.71	3.103		
11,600.0	6,672.0	11,805.4	6,602.0	64.1	66.3	-79.99	1,577.2	3,705.1	402.6	270.7	131.94	3.052		
11,700.0	6,672.0	11,905.4	6,602.0	65.2	67.4	-79.99	1,579.3	3,805.0	402.7	268.5	134.18	3.001		
11,800.0	6,672.0	12,005.4	6,602.0	66.3	68.5	-79.99	1,581.5	3,905.0	402.8	266.4	136.44	2.952		
11,900.0	6,672.0	12,105.4	6,602.0	67.5	69.7	-79.99	1,583.6	4,005.0	402.9	264.2	138.69	2.905		
12,000.0	6,672.0	12,205.4	6,602.0	68.6	70.8	-80.00	1,585.7	4,105.0	403.0	262.0	140.96	2.859		
12,100.0	6,672.0	12,305.4	6,602.0	69.8	72.0	-80.00	1,587.9	4,205.0	403.1	259.8	143.23	2.814		
12,200.0	6,672.0	12,405.4	6,602.0	70.9	73.1	-80.00	1,590.0	4,304.9	403.1	257.6	145.51	2.770		
12,300.0	6,672.0	12,505.5	6,602.0	72.1	74.3	-80.00	1,592.2	4,404.9	403.2	255.4	147.79	2.728		
12,400.0	6,672.0	12,605.5	6,602.0	73.2	75.4	-80.00	1,594.3	4,504.9	403.2	253.1	150.08	2.687		
12,500.0	6,672.0	12,705.5	6,602.0	74.4	76.6	-80.00	1,596.4	4,604.9	403.3	250.9	152.38	2.646		
12,600.0	6,672.0	12,805.5	6,602.0	75.5	77.7	-80.00	1,598.6	4,704.9	403.3	248.6	154.68	2.607		
12,700.0	6,672.0	12,849.2	6,602.0	76.7	78.2	-80.00	1,599.5	4,748.6	407.2	251.6	155.64	2.616		
12,800.0	6,672.0	12,849.2	6,602.0	77.9	78.2	-80.00	1,599.5	4,748.6	432.5	282.8	149.73	2.889		
12,900.0	6,672.0	12,849.2	6,602.0	79.0	78.2	-80.01	1,599.5	4,748.6	477.8	338.6	139.27	3.431		
13,000.0	6,672.0	12,849.2	6,602.0	80.2	78.2	-80.01	1,599.5	4,748.6	538.1	410.5	127.68	4.215		
13,100.0	6,672.0	12,849.2	6,602.0	81.4	78.2	-80.01	1,599.5	4,748.6	609.0	492.0	116.93	5.208		
13,200.0	6,672.0	12,849.2	6,602.0	82.6	78.2	-80.01	1,599.5	4,748.6	687.1	579.3	107.73	6.378		
13,300.0	6,672.0	12,849.2	6,602.0	83.7	78.2	-80.01	1,599.5	4,748.6	770.3	670.2	100.10	7.695		
13,400.0	6,672.0	12,849.2	6,602.0	84.9	78.2	-80.01	1,599.5	4,748.6	857.0	763.2	93.86	9.131		
13,500.0	6,672.0	12,849.2	6,602.0	86.1	78.2	-80.01	1,599.5	4,748.6	946.4	857.7	88.75	10.663		
13,600.0	6,672.0	12,849.2	6,602.0	87.3	78.2	-80.01	1,599.5	4,748.6	1,037.8	953.2	84.56	12.272		
13,700.0	6,672.0	12,849.2	6,602.0	88.4	78.2	-80.02	1,599.5	4,748.6	1,130.6	1,049.5	81.09	13.941		
13,800.0	6,672.0	12,849.2	6,602.0	89.6	78.2	-80.02	1,599.5	4,748.6	1,224.5	1,146.3	78.21	15.657		
13,900.0	6,672.0	12,849.2	6,602.0	90.8	78.2	-80.02	1,599.5	4,748.6	1,319.3	1,243.5	75.78	17.409		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch State BB06-690 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
14,000.0	6,672.0	12,849.2	6,602.0	92.0	78.2	-80.02	1,599.5	4,748.6	1,414.8	1,341.1	73.74	19.188		
14,100.0	6,672.0	12,849.2	6,602.0	93.2	78.2	-80.02	1,599.5	4,748.6	1,510.9	1,438.9	71.99	20.987		
14,200.0	6,672.0	12,849.2	6,602.0	94.4	78.2	-80.03	1,599.5	4,748.6	1,607.5	1,537.0	70.50	22.802		
14,300.0	6,672.0	12,849.2	6,602.0	95.6	78.2	-80.03	1,599.5	4,748.6	1,704.5	1,635.3	69.21	24.628		
14,400.0	6,672.0	12,849.2	6,602.0	96.8	78.2	-80.03	1,599.5	4,748.6	1,801.8	1,733.7	68.09	26.462		
14,500.0	6,672.0	12,849.2	6,602.0	98.0	78.2	-80.04	1,599.5	4,748.6	1,899.4	1,832.2	67.12	28.300		
14,600.0	6,672.0	12,849.2	6,602.0	99.2	78.2	-80.04	1,599.5	4,748.6	1,997.2	1,930.9	66.26	30.141		
14,700.0	6,672.0	12,849.2	6,602.0	100.4	78.2	-80.04	1,599.5	4,748.6	2,095.2	2,029.7	65.51	31.983		
14,800.0	6,672.0	12,849.2	6,602.0	101.6	78.2	-80.05	1,599.5	4,748.6	2,193.4	2,128.6	64.85	33.824		
14,900.0	6,672.0	12,849.2	6,602.0	102.7	78.2	-80.05	1,599.5	4,748.6	2,291.8	2,227.5	64.26	35.664		
15,000.0	6,672.0	12,849.2	6,602.0	103.9	78.2	-80.06	1,599.5	4,748.6	2,390.2	2,326.5	63.74	37.502		
15,100.0	6,672.0	12,849.2	6,602.0	105.1	78.2	-80.06	1,599.5	4,748.6	2,488.9	2,425.6	63.27	39.337		
15,200.0	6,672.0	12,849.2	6,602.0	106.3	78.2	-80.06	1,599.5	4,748.6	2,587.6	2,524.7	62.85	41.168		
15,300.0	6,672.0	12,849.2	6,602.0	107.6	78.2	-80.07	1,599.5	4,748.6	2,686.4	2,623.9	62.48	42.995		
15,400.0	6,672.0	12,849.2	6,602.0	108.8	78.2	-80.07	1,599.5	4,748.6	2,785.3	2,723.1	62.15	44.818		
15,500.0	6,672.0	12,849.2	6,602.0	110.0	78.2	-80.08	1,599.5	4,748.6	2,884.2	2,822.4	61.85	46.636		
15,600.0	6,672.0	12,849.2	6,602.0	111.2	78.2	-80.08	1,599.5	4,748.6	2,983.3	2,921.7	61.57	48.450		
15,700.0	6,672.0	12,849.2	6,602.0	112.4	78.2	-80.09	1,599.5	4,748.6	3,082.4	3,021.0	61.33	50.258		
15,800.0	6,672.0	12,849.2	6,602.0	113.6	78.2	-80.10	1,599.5	4,748.6	3,181.5	3,120.4	61.11	52.061		
15,900.0	6,672.0	12,849.2	6,602.0	114.8	78.2	-80.10	1,599.5	4,748.6	3,280.7	3,219.8	60.91	53.858		
16,000.0	6,672.0	12,849.2	6,602.0	116.0	78.2	-80.11	1,599.5	4,748.6	3,380.0	3,319.2	60.74	55.651		
16,100.0	6,672.0	12,849.2	6,602.0	117.2	78.2	-80.11	1,599.5	4,748.6	3,479.3	3,418.7	60.58	57.437		
16,200.0	6,672.0	12,849.2	6,602.0	118.4	78.2	-80.12	1,599.5	4,748.6	3,578.6	3,518.2	60.43	59.218		
16,300.0	6,672.0	12,849.2	6,602.0	119.6	78.2	-80.13	1,599.5	4,748.6	3,678.0	3,617.7	60.30	60.994		
16,400.0	6,672.0	12,849.2	6,602.0	120.8	78.2	-80.13	1,599.5	4,748.6	3,777.4	3,717.2	60.18	62.763		
16,500.0	6,672.0	12,849.2	6,602.0	122.0	78.2	-80.14	1,599.5	4,748.6	3,876.8	3,816.7	60.08	64.527		
16,600.0	6,672.0	12,849.2	6,602.0	123.2	78.2	-80.15	1,599.5	4,748.6	3,976.2	3,916.3	59.99	66.285		
16,700.0	6,672.0	12,849.2	6,602.0	124.5	78.2	-80.15	1,599.5	4,748.6	4,075.7	4,015.8	59.90	68.037		
16,800.0	6,672.0	12,849.2	6,602.0	125.7	78.2	-80.16	1,599.5	4,748.6	4,175.2	4,115.4	59.83	69.784		
16,900.0	6,672.0	12,849.2	6,602.0	126.9	78.2	-80.17	1,599.5	4,748.6	4,274.8	4,215.0	59.77	71.525		
17,000.0	6,672.0	12,849.2	6,602.0	128.1	78.2	-80.18	1,599.5	4,748.6	4,374.3	4,314.6	59.71	73.259		
17,100.0	6,672.0	12,849.2	6,602.0	129.3	78.2	-80.19	1,599.5	4,748.6	4,473.9	4,414.2	59.66	74.988		
17,200.0	6,672.0	12,849.2	6,602.0	130.5	78.2	-80.19	1,599.5	4,748.6	4,573.5	4,513.8	59.62	76.711		
17,300.0	6,672.0	12,849.2	6,602.0	131.7	78.2	-80.20	1,599.5	4,748.6	4,673.1	4,613.5	59.58	78.428		
17,400.0	6,672.0	12,849.2	6,602.0	133.0	78.2	-80.21	1,599.5	4,748.6	4,772.7	4,713.1	59.55	80.140		
17,500.0	6,672.0	12,849.2	6,602.0	134.2	78.2	-80.22	1,599.5	4,748.6	4,872.3	4,812.8	59.53	81.845		
17,600.0	6,672.0	12,849.2	6,602.0	135.4	78.2	-80.23	1,599.5	4,748.6	4,972.0	4,912.5	59.51	83.544		
17,700.0	6,672.0	12,849.2	6,602.0	136.6	78.2	-80.24	1,599.5	4,748.6	5,071.6	5,012.1	59.50	85.238		
17,800.0	6,672.0	12,849.2	6,602.0	137.8	78.2	-80.24	1,599.5	4,748.6	5,171.3	5,111.8	59.49	86.925		
17,900.0	6,672.0	12,849.2	6,602.0	139.0	78.2	-80.25	1,599.5	4,748.6	5,271.0	5,211.5	59.49	88.607		
18,000.0	6,672.0	12,849.2	6,602.0	140.3	78.2	-80.26	1,599.5	4,748.6	5,370.7	5,311.2	59.49	90.282		
18,100.0	6,672.0	12,849.2	6,602.0	141.5	78.2	-80.27	1,599.5	4,748.6	5,470.4	5,410.9	59.49	91.952		
18,200.0	6,672.0	12,849.2	6,602.0	142.7	78.2	-80.28	1,599.5	4,748.6	5,570.1	5,510.6	59.50	93.616		
18,300.0	6,672.0	12,849.2	6,602.0	143.9	78.2	-80.29	1,599.5	4,748.6	5,669.8	5,610.3	59.51	95.274		
18,342.5	6,672.0	12,849.2	6,602.0	144.4	78.2	-80.30	1,599.5	4,748.6	5,712.2	5,652.7	59.52	95.976		



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch State BB07-615 - Original Drilling - Plan 1													Offset Site Error: 0.0 ft	
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis		Distance								Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-162.17	-2,365.9	-761.1	2,485.3					
100.0	100.0	85.0	85.0	0.1	0.1	-162.17	-2,365.9	-761.1	2,485.3	2,485.0	0.23	N/A		
200.0	200.0	185.0	185.0	0.5	0.4	-162.17	-2,365.9	-761.1	2,485.3	2,484.3	0.91	2,718.791		
300.0	300.0	285.0	285.0	0.8	0.8	-162.17	-2,365.9	-761.1	2,485.3	2,483.6	1.63	1,523.719		
400.0	400.0	385.0	385.0	1.2	1.1	-162.17	-2,365.9	-761.1	2,485.3	2,482.9	2.35	1,058.461		
500.0	500.0	485.0	485.0	1.6	1.5	-162.17	-2,365.9	-761.1	2,485.3	2,482.2	3.06	810.868		
600.0	600.0	585.0	585.0	1.9	1.9	-162.17	-2,365.9	-761.1	2,485.3	2,481.5	3.78	657.149		
700.0	700.0	685.0	685.0	2.3	2.2	-162.17	-2,365.9	-761.1	2,485.3	2,480.8	4.50	552.424		
800.0	800.0	785.0	785.0	2.6	2.6	-162.17	-2,365.9	-761.1	2,485.3	2,480.0	5.22	476.489		
900.0	900.0	885.0	885.0	3.0	2.9	-162.17	-2,365.9	-761.1	2,485.3	2,479.3	5.93	418.908		
1,000.0	1,000.0	985.0	985.0	3.4	3.3	-162.17	-2,365.9	-761.1	2,485.3	2,478.6	6.65	373.742		
1,100.0	1,100.0	1,085.0	1,085.0	3.7	3.7	-162.17	-2,365.9	-761.1	2,485.3	2,477.9	7.37	337.368		
1,200.0	1,200.0	1,185.0	1,185.0	4.1	4.0	-162.17	-2,365.9	-761.1	2,485.3	2,477.2	8.08	307.447		
1,300.0	1,300.0	1,285.0	1,285.0	4.4	4.4	-162.17	-2,365.9	-761.1	2,485.3	2,476.5	8.80	282.400		
1,400.0	1,400.0	1,385.0	1,385.0	4.8	4.7	-162.17	-2,365.9	-761.1	2,485.3	2,475.7	9.52	261.127		
1,500.0	1,500.0	1,485.0	1,485.0	5.1	5.1	-162.17	-2,365.9	-761.1	2,485.3	2,475.0	10.23	242.834		
1,600.0	1,600.0	1,585.0	1,585.0	5.5	5.4	-162.17	-2,365.9	-761.1	2,485.3	2,474.3	10.95	226.937		
1,700.0	1,700.0	1,685.0	1,685.0	5.9	5.8	-162.17	-2,365.9	-761.1	2,485.3	2,473.6	11.67	212.993		
1,800.0	1,800.0	1,785.0	1,785.0	6.2	6.2	-162.17	-2,365.9	-761.1	2,485.3	2,472.9	12.39	200.663		
1,900.0	1,900.0	1,885.0	1,885.0	6.6	6.5	-162.17	-2,365.9	-761.1	2,485.3	2,472.2	13.10	189.683		
2,000.0	2,000.0	1,985.0	1,985.0	6.9	6.9	-162.17	-2,365.9	-761.1	2,485.3	2,471.4	13.82	179.842 CC, ES		
2,100.0	2,100.0	2,045.8	2,045.8	7.3	7.1	-162.17	-2,366.2	-761.2	2,485.9	2,471.5	14.39	172.796		
2,200.0	2,200.0	2,100.0	2,100.0	7.7	7.3	-162.16	-2,367.4	-761.9	2,488.4	2,473.5	14.92	166.738		
2,300.0	2,300.0	2,153.6	2,153.5	8.0	7.5	-111.08	-2,369.5	-763.0	2,493.4	2,478.0	15.44	161.444		
2,400.0	2,399.8	2,200.0	2,199.8	8.4	7.6	-110.96	-2,372.0	-764.3	2,501.5	2,485.6	15.93	157.019		
2,500.0	2,499.5	2,260.4	2,260.1	8.7	7.8	-110.85	-2,376.3	-766.6	2,512.6	2,496.2	16.47	152.594		
2,600.0	2,598.7	2,300.0	2,299.5	9.1	7.9	-110.66	-2,379.7	-768.4	2,526.9	2,510.0	16.92	149.379		
2,700.0	2,697.5	2,365.6	2,364.6	9.4	8.2	-110.52	-2,386.4	-772.0	2,544.1	2,526.6	17.46	145.673		
2,800.0	2,795.6	2,400.0	2,398.7	9.8	8.3	-110.24	-2,390.5	-774.1	2,564.5	2,546.6	17.88	143.422		
2,900.0	2,893.1	2,468.0	2,465.9	10.1	8.5	-110.08	-2,399.5	-779.0	2,587.6	2,569.2	18.43	140.374		
3,000.0	2,989.6	2,500.0	2,497.5	10.5	8.6	-109.71	-2,404.3	-781.5	2,613.9	2,595.1	18.83	138.831		
3,100.0	3,085.3	2,566.9	2,563.2	10.9	8.8	-109.50	-2,415.2	-787.3	2,642.8	2,623.5	19.37	136.405		
3,200.0	3,179.8	2,600.0	2,595.6	11.2	8.9	-109.07	-2,421.1	-790.4	2,674.8	2,655.1	19.76	135.332		
3,300.0	3,273.2	2,661.6	2,655.7	11.6	9.1	-108.78	-2,433.0	-796.8	2,709.5	2,689.2	20.29	133.542		
3,387.5	3,353.8	2,700.0	2,693.1	11.9	9.3	-108.39	-2,441.0	-801.0	2,742.1	2,721.4	20.67	132.637		
3,400.0	3,365.2	2,700.0	2,693.1	12.0	9.3	-108.39	-2,441.0	-801.0	2,747.0	2,726.3	20.70	132.692		
3,500.0	3,456.8	2,752.0	2,743.4	12.4	9.5	-108.78	-2,452.5	-807.1	2,786.5	2,765.3	21.18	131.556		
3,600.0	3,548.3	2,800.0	2,789.6	12.8	9.6	-109.13	-2,463.8	-813.2	2,827.6	2,806.0	21.64	130.668		
3,700.0	3,639.8	2,840.1	2,828.1	13.2	9.8	-109.42	-2,473.8	-818.5	2,870.3	2,848.3	22.06	130.138		
3,800.0	3,731.4	2,900.0	2,885.3	13.6	10.0	-109.83	-2,489.7	-826.9	2,914.7	2,892.1	22.58	129.083		
3,900.0	3,822.9	2,926.0	2,910.0	14.0	10.1	-110.00	-2,496.9	-830.7	2,960.3	2,937.4	22.91	129.189		
4,000.0	3,914.4	2,968.2	2,949.9	14.4	10.2	-110.28	-2,509.0	-837.1	3,007.5	2,984.2	23.34	128.873		
4,100.0	4,005.9	3,019.8	2,998.5	14.8	10.4	-110.61	-2,524.4	-845.4	3,056.1	3,032.2	23.81	128.332		
4,200.0	4,097.5	3,103.2	3,076.8	15.2	10.7	-111.12	-2,549.6	-858.7	3,105.1	3,080.7	24.48	126.831		
4,300.0	4,189.0	3,186.6	3,155.2	15.6	11.0	-111.63	-2,574.8	-872.1	3,154.4	3,129.3	25.16	125.385		
4,400.0	4,280.5	3,270.0	3,233.5	16.1	11.3	-112.11	-2,599.9	-885.5	3,203.9	3,178.1	25.84	123.994		
4,500.0	4,372.1	3,353.4	3,311.9	16.5	11.6	-112.59	-2,625.1	-898.9	3,253.6	3,227.1	26.53	122.658		
4,600.0	4,463.6	3,436.8	3,390.2	16.9	11.9	-113.05	-2,650.3	-912.3	3,303.4	3,276.2	27.22	121.375		
4,700.0	4,555.1	3,520.1	3,468.6	17.4	12.3	-113.49	-2,675.5	-925.7	3,353.4	3,325.5	27.91	120.142		
4,800.0	4,646.7	3,603.5	3,546.9	17.8	12.6	-113.93	-2,700.7	-939.1	3,403.6	3,375.0	28.61	118.958		
4,900.0	4,738.2	3,686.9	3,625.3	18.2	12.9	-114.35	-2,725.8	-952.5	3,453.9	3,424.6	29.32	117.820		
5,000.0	4,829.7	3,770.3	3,703.6	18.7	13.2	-114.76	-2,751.0	-965.9	3,504.4	3,474.4	30.02	116.726		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch State BB07-615 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,100.0	4,921.3	3,853.7	3,782.0	19.1	13.6	-115.17	-2,776.2	-979.2	3,555.0	3,524.3	30.73	115.674		
5,200.0	5,012.8	3,937.1	3,860.4	19.5	13.9	-115.56	-2,801.4	-992.6	3,605.8	3,574.3	31.45	114.663		
5,300.0	5,104.3	4,020.4	3,938.7	20.0	14.2	-115.94	-2,826.6	-1,006.0	3,656.6	3,624.5	32.16	113.692		
5,400.0	5,195.8	4,103.8	4,017.1	20.4	14.6	-116.31	-2,851.7	-1,019.4	3,707.6	3,674.7	32.88	112.757		
5,500.0	5,287.4	4,187.2	4,095.4	20.9	14.9	-116.67	-2,876.9	-1,032.8	3,758.7	3,725.1	33.60	111.856		
5,600.0	5,378.9	4,270.6	4,173.8	21.3	15.2	-117.02	-2,902.1	-1,046.2	3,810.0	3,775.7	34.33	110.989		
5,700.0	5,470.4	4,354.0	4,252.1	21.8	15.6	-117.36	-2,927.3	-1,059.6	3,861.3	3,826.3	35.05	110.154		
5,800.0	5,562.0	4,437.3	4,330.5	22.2	15.9	-117.70	-2,952.5	-1,073.0	3,912.8	3,877.0	35.78	109.349		
5,900.0	5,653.5	4,520.7	4,408.8	22.7	16.3	-118.02	-2,977.6	-1,086.3	3,964.3	3,927.8	36.51	108.574		
6,000.0	5,745.0	4,604.1	4,487.2	23.1	16.6	-118.34	-3,002.8	-1,099.7	4,016.0	3,978.7	37.24	107.826		
6,100.0	5,836.6	4,687.5	4,565.5	23.6	17.0	-118.65	-3,028.0	-1,113.1	4,067.7	4,029.7	37.98	107.103		
6,200.0	5,928.1	4,770.9	4,643.9	24.0	17.3	-118.96	-3,053.2	-1,126.5	4,119.5	4,080.8	38.72	106.406		
6,278.6	6,000.0	4,836.4	4,705.4	24.4	17.6	-119.19	-3,073.0	-1,137.0	4,160.3	4,121.0	39.29	105.875		
6,290.0	6,010.4	4,845.8	4,714.3	24.4	17.6	-120.42	-3,075.8	-1,138.5	4,166.3	4,126.9	39.38	105.800		
6,300.0	6,019.5	4,854.1	4,722.1	24.5	17.7	-122.84	-3,078.3	-1,139.9	4,171.7	4,132.3	39.45	105.737		
6,350.0	6,065.8	4,904.6	4,760.9	24.7	17.9	-136.80	-3,090.8	-1,146.5	4,199.1	4,159.3	39.85	105.370		
6,400.0	6,113.0	4,936.7	4,799.7	24.9	18.0	-154.36	-3,103.3	-1,153.1	4,227.2	4,187.1	40.16	105.255		
6,450.0	6,160.7	4,977.6	4,838.2	25.1	18.2	-174.94	-3,115.6	-1,159.7	4,255.7	4,215.2	40.49	105.093		
6,500.0	6,208.5	5,017.9	4,876.0	25.3	18.3	164.01	-3,127.8	-1,166.2	4,284.4	4,243.6	40.81	104.976		
6,550.0	6,255.8	5,057.0	4,912.8	25.4	18.5	145.47	-3,139.6	-1,172.5	4,313.0	4,271.9	41.12	104.898		
6,600.0	6,302.5	5,105.3	4,948.2	25.6	18.7	130.59	-3,151.0	-1,178.5	4,341.3	4,299.8	41.45	104.742		
6,650.0	6,347.9	5,130.6	4,981.9	25.7	18.8	118.99	-3,161.8	-1,184.3	4,369.1	4,327.4	41.68	104.835		
6,700.0	6,391.6	5,164.4	5,013.7	25.9	19.0	109.85	-3,172.0	-1,189.7	4,396.2	4,354.3	41.93	104.840		
6,750.0	6,433.4	5,195.8	5,043.2	26.0	19.1	102.51	-3,181.5	-1,194.7	4,422.5	4,380.3	42.17	104.866		
6,800.0	6,472.8	5,224.5	5,070.2	26.1	19.2	96.50	-3,190.2	-1,199.4	4,447.7	4,405.3	42.40	104.908		
6,850.0	6,509.4	5,250.2	5,094.4	26.2	19.3	91.49	-3,197.9	-1,203.5	4,471.8	4,429.2	42.60	104.964		
6,900.0	6,543.0	5,272.8	5,115.6	26.3	19.4	87.28	-3,204.8	-1,207.1	4,494.5	4,451.7	42.79	105.030		
6,950.0	6,573.2	5,292.0	5,133.6	26.4	19.5	83.71	-3,210.6	-1,210.2	4,515.8	4,472.9	42.97	105.104		
7,000.0	6,599.8	5,307.7	5,148.3	26.5	19.6	80.67	-3,215.3	-1,212.7	4,535.5	4,492.4	43.12	105.182		
7,050.0	6,622.5	5,319.6	5,159.5	26.6	19.6	78.09	-3,218.9	-1,214.6	4,553.5	4,510.3	43.26	105.261		
7,100.0	6,641.1	5,327.7	5,167.2	26.7	19.7	75.92	-3,221.3	-1,215.9	4,569.7	4,526.3	43.38	105.340		
7,150.0	6,655.4	5,332.0	5,171.2	26.8	19.7	74.12	-3,222.6	-1,216.6	4,584.0	4,540.5	43.48	105.416		
7,200.0	6,665.4	5,332.3	5,171.5	26.9	19.7	72.65	-3,222.7	-1,216.7	4,596.2	4,552.7	43.57	105.489		
7,250.0	6,670.8	5,328.8	5,168.1	27.0	19.7	71.51	-3,221.7	-1,216.1	4,606.4	4,562.7	43.64	105.558		
7,285.7	6,672.0	5,323.8	5,163.5	27.1	19.6	70.88	-3,220.2	-1,215.3	4,612.3	4,568.6	43.67	105.607		
7,300.0	6,672.0	5,321.5	5,161.3	27.1	19.6	70.85	-3,219.5	-1,214.9	4,614.4	4,570.7	43.69	105.627		
7,400.0	6,672.0	5,304.9	5,145.7	27.3	19.6	70.65	-3,214.4	-1,212.3	4,630.7	4,586.9	43.81	105.690		
7,500.0	6,672.0	5,288.3	5,130.1	27.6	19.5	70.44	-3,209.4	-1,209.6	4,649.0	4,605.0	43.99	105.680		
7,600.0	6,672.0	5,271.7	5,114.5	28.0	19.4	70.24	-3,204.4	-1,206.9	4,669.3	4,625.1	44.22	105.605		
7,700.0	6,672.0	5,255.2	5,099.0	28.3	19.3	70.03	-3,199.4	-1,204.3	4,691.6	4,647.2	44.48	105.474		
7,800.0	6,672.0	5,238.6	5,083.4	28.8	19.3	69.83	-3,194.4	-1,201.6	4,715.9	4,671.1	44.79	105.297		
7,900.0	6,672.0	5,222.0	5,067.8	29.3	19.2	69.62	-3,189.4	-1,198.9	4,742.1	4,697.0	45.13	105.083		
8,000.0	6,672.0	5,205.4	5,052.2	29.8	19.1	69.42	-3,184.4	-1,196.3	4,770.3	4,724.8	45.50	104.844		
8,100.0	6,672.0	5,188.8	5,036.6	30.4	19.1	69.21	-3,179.4	-1,193.6	4,800.2	4,754.3	45.90	104.587		
8,200.0	6,672.0	8,304.2	6,622.0	31.0	31.1	89.58	-3,686.3	357.4	4,802.6	4,740.6	62.02	77.434		
8,300.0	6,672.0	8,404.2	6,622.0	31.7	31.9	89.58	-3,685.4	457.4	4,803.5	4,740.0	63.45	75.710		
8,400.0	6,672.0	8,504.3	6,622.0	32.4	32.7	89.58	-3,684.5	557.4	4,804.4	4,739.4	64.93	73.989		
8,500.0	6,672.0	8,604.3	6,622.0	33.1	33.5	89.58	-3,683.6	657.4	4,805.2	4,738.8	66.48	72.281		
8,600.0	6,672.0	8,704.3	6,622.0	33.9	34.3	89.58	-3,682.7	757.5	4,806.2	4,738.1	68.08	70.593		
8,700.0	6,672.0	8,804.4	6,622.0	34.7	35.2	89.58	-3,681.8	857.5	4,807.1	4,737.3	69.74	68.932		
8,800.0	6,672.0	8,904.4	6,622.0	35.5	36.1	89.58	-3,680.9	957.5	4,808.0	4,736.5	71.44	67.303		
8,900.0	6,672.0	9,004.4	6,622.0	36.3	37.0	89.58	-3,680.0	1,057.6	4,808.9	4,735.7	73.18	65.709		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch State BB07-615 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
9,000.0	6,672.0	9,104.5	6,622.0	37.2	37.9	89.58	-3,679.1	1,157.6	4,809.8	4,734.9	74.97	64.155		
9,100.0	6,672.0	9,204.5	6,622.0	38.1	38.9	89.58	-3,678.2	1,257.6	4,810.8	4,734.0	76.80	62.641		
9,200.0	6,672.0	9,304.5	6,622.0	39.0	39.9	89.58	-3,677.3	1,357.6	4,811.7	4,733.1	78.66	61.170		
9,300.0	6,672.0	9,404.6	6,622.0	39.9	40.8	89.58	-3,676.4	1,457.7	4,812.7	4,732.1	80.56	59.742		
9,400.0	6,672.0	9,504.6	6,622.0	40.8	41.8	89.58	-3,675.5	1,557.7	4,813.6	4,731.1	82.48	58.358		
9,500.0	6,672.0	9,604.6	6,622.0	41.8	42.8	89.58	-3,674.6	1,657.7	4,814.6	4,730.1	84.44	57.017		
9,600.0	6,672.0	9,704.7	6,622.0	42.7	43.9	89.58	-3,673.6	1,757.8	4,815.6	4,729.1	86.42	55.720		
9,700.0	6,672.0	9,804.7	6,622.0	43.7	44.9	89.58	-3,672.7	1,857.8	4,816.5	4,728.1	88.43	54.466		
9,800.0	6,672.0	9,904.7	6,622.0	44.7	45.9	89.58	-3,671.8	1,957.8	4,817.5	4,727.1	90.46	53.253		
9,900.0	6,672.0	10,004.8	6,622.0	45.7	47.0	89.58	-3,670.9	2,057.8	4,818.5	4,726.0	92.52	52.081		
10,000.0	6,672.0	10,104.8	6,622.0	46.7	48.0	89.58	-3,670.0	2,157.9	4,819.5	4,724.9	94.59	50.950		
10,100.0	6,672.0	10,204.8	6,622.0	47.7	49.1	89.58	-3,669.1	2,257.9	4,820.5	4,723.8	96.69	49.857		
10,200.0	6,672.0	10,304.9	6,622.0	48.8	50.2	89.58	-3,668.2	2,357.9	4,821.5	4,722.7	98.80	48.801		
10,300.0	6,672.0	10,404.9	6,622.0	49.8	51.2	89.58	-3,667.3	2,458.0	4,822.5	4,721.6	100.93	47.782		
10,400.0	6,672.0	10,504.9	6,622.0	50.9	52.3	89.58	-3,666.3	2,558.0	4,823.6	4,720.5	103.07	46.798		
10,500.0	6,672.0	10,605.0	6,622.0	51.9	53.4	89.58	-3,665.4	2,658.0	4,824.6	4,719.4	105.23	45.847		
10,600.0	6,672.0	10,705.0	6,622.0	53.0	54.5	89.58	-3,664.5	2,758.0	4,825.6	4,718.2	107.41	44.929		
10,700.0	6,672.0	10,805.0	6,622.0	54.1	55.6	89.58	-3,663.6	2,858.1	4,826.7	4,717.1	109.59	44.042		
10,800.0	6,672.0	10,905.1	6,622.0	55.2	56.8	89.58	-3,662.7	2,958.1	4,827.7	4,715.9	111.79	43.185		
10,900.0	6,672.0	11,005.1	6,622.0	56.3	57.9	89.58	-3,661.7	3,058.1	4,828.8	4,714.8	114.00	42.357		
11,000.0	6,672.0	11,105.1	6,622.0	57.4	59.0	89.58	-3,660.8	3,158.2	4,829.9	4,713.6	116.22	41.556		
11,100.0	6,672.0	11,205.1	6,622.0	58.5	60.1	89.58	-3,659.9	3,258.2	4,830.9	4,712.5	118.46	40.782		
11,200.0	6,672.0	11,305.2	6,622.0	59.6	61.3	89.58	-3,659.0	3,358.2	4,832.0	4,711.3	120.70	40.034		
11,300.0	6,672.0	11,405.2	6,622.0	60.7	62.4	89.59	-3,658.1	3,458.2	4,833.1	4,710.1	122.95	39.310		
11,400.0	6,672.0	11,505.2	6,622.0	61.8	63.5	89.59	-3,657.1	3,558.3	4,834.2	4,709.0	125.21	38.609		
11,500.0	6,672.0	11,605.3	6,622.0	62.9	64.7	89.59	-3,656.2	3,658.3	4,835.3	4,707.8	127.48	37.930		
11,600.0	6,672.0	11,705.3	6,622.0	64.1	65.8	89.59	-3,655.3	3,758.3	4,836.4	4,706.6	129.75	37.274		
11,700.0	6,672.0	11,805.3	6,622.0	65.2	67.0	89.59	-3,654.4	3,858.4	4,837.5	4,705.5	132.04	36.637		
11,800.0	6,672.0	11,905.4	6,622.0	66.3	68.1	89.59	-3,653.4	3,958.4	4,838.6	4,704.3	134.33	36.021		
11,900.0	6,672.0	12,005.4	6,622.0	67.5	69.3	89.59	-3,652.5	4,058.4	4,839.8	4,703.1	136.63	35.423		
12,000.0	6,672.0	12,105.4	6,622.0	68.6	70.4	89.59	-3,651.6	4,158.4	4,840.9	4,702.0	138.93	34.844		
12,100.0	6,672.0	12,205.5	6,622.0	69.8	71.6	89.59	-3,650.7	4,258.5	4,842.0	4,700.8	141.24	34.282		
12,200.0	6,672.0	12,305.5	6,622.0	70.9	72.8	89.59	-3,649.7	4,358.5	4,843.2	4,699.6	143.55	33.737		
12,300.0	6,672.0	12,405.5	6,622.0	72.1	73.9	89.59	-3,648.8	4,458.5	4,844.3	4,698.4	145.88	33.209		
12,400.0	6,672.0	12,505.6	6,622.0	73.2	75.1	89.59	-3,647.9	4,558.5	4,845.5	4,697.3	148.20	32.695		
12,500.0	6,672.0	12,605.6	6,622.0	74.4	76.3	89.59	-3,646.9	4,658.6	4,846.6	4,696.1	150.53	32.197		
12,600.0	6,672.0	12,705.6	6,622.0	75.5	77.5	89.59	-3,646.0	4,758.6	4,847.8	4,695.0	152.87	31.712		
12,700.0	6,672.0	12,805.7	6,622.0	76.7	78.6	89.59	-3,645.1	4,858.6	4,849.0	4,693.8	155.21	31.242		
12,800.0	6,672.0	12,905.7	6,622.0	77.9	79.8	89.59	-3,644.1	4,958.7	4,850.2	4,692.6	157.55	30.784		
12,900.0	6,672.0	13,005.7	6,622.0	79.0	81.0	89.59	-3,643.2	5,058.7	4,851.4	4,691.5	159.90	30.339		
13,000.0	6,672.0	13,105.7	6,622.0	80.2	82.2	89.59	-3,642.3	5,158.7	4,852.6	4,690.3	162.26	29.907		
13,100.0	6,672.0	13,205.8	6,622.0	81.4	83.4	89.59	-3,641.3	5,258.7	4,853.8	4,689.2	164.61	29.486		
13,200.0	6,672.0	13,305.8	6,622.0	82.6	84.5	89.59	-3,640.4	5,358.8	4,855.0	4,688.0	166.97	29.076		
13,300.0	6,672.0	13,405.8	6,622.0	83.7	85.7	89.59	-3,639.4	5,458.8	4,856.2	4,686.9	169.34	28.678		
13,400.0	6,672.0	13,505.9	6,622.0	84.9	86.9	89.59	-3,638.5	5,558.8	4,857.4	4,685.7	171.71	28.289		
13,500.0	6,672.0	13,605.9	6,622.0	86.1	88.1	89.59	-3,637.6	5,658.8	4,858.7	4,684.6	174.08	27.911		
13,600.0	6,672.0	13,705.9	6,622.0	87.3	89.3	89.59	-3,636.6	5,758.9	4,859.9	4,683.5	176.45	27.543		
13,700.0	6,672.0	13,806.0	6,622.0	88.4	90.5	89.59	-3,635.7	5,858.9	4,861.2	4,682.3	178.83	27.184		
13,800.0	6,672.0	13,906.0	6,622.0	89.6	91.7	89.59	-3,634.7	5,958.9	4,862.4	4,681.2	181.21	26.834		
13,900.0	6,672.0	14,006.0	6,622.0	90.8	92.9	89.59	-3,633.8	6,058.9	4,863.7	4,680.1	183.59	26.492		
14,000.0	6,672.0	14,106.1	6,622.0	92.0	94.1	89.59	-3,632.8	6,159.0	4,864.9	4,679.0	185.97	26.159		
14,100.0	6,672.0	14,206.1	6,622.0	93.2	95.3	89.59	-3,631.9	6,259.0	4,866.2	4,677.9	188.36	25.835		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch State BB07-615 - Original Drilling - Plan 1													Offset Site Error: 0.0 ft	
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre +N/-S	Centre +E/-W	Between Centres	Between Ellipses	Minimum Separation	Separation Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)			
14,200.0	6,672.0	14,306.1	6,622.0	94.4	96.5	89.59	-3,631.0	6,359.0	4,867.5	4,676.7	190.75	25.518		
14,300.0	6,672.0	14,406.1	6,622.0	95.6	97.7	89.59	-3,630.0	6,459.0	4,868.8	4,675.6	193.14	25.208		
14,400.0	6,672.0	14,506.2	6,622.0	96.8	98.9	89.59	-3,629.1	6,559.1	4,870.1	4,674.5	195.54	24.906		
14,500.0	6,672.0	14,606.2	6,622.0	98.0	100.1	89.59	-3,628.1	6,659.1	4,871.4	4,673.4	197.93	24.611		
14,600.0	6,672.0	14,706.2	6,622.0	99.2	101.3	89.59	-3,627.2	6,759.1	4,872.7	4,672.4	200.33	24.323		
14,700.0	6,672.0	14,806.3	6,622.0	100.4	102.5	89.59	-3,626.2	6,859.1	4,874.0	4,671.3	202.73	24.042		
14,800.0	6,672.0	14,906.3	6,622.0	101.6	103.7	89.59	-3,625.3	6,959.2	4,875.3	4,670.2	205.13	23.766		
14,900.0	6,672.0	15,006.3	6,622.0	102.7	104.9	89.59	-3,624.3	7,059.2	4,876.6	4,669.1	207.54	23.498		
15,000.0	6,672.0	15,106.4	6,622.0	103.9	106.1	89.59	-3,623.4	7,159.2	4,878.0	4,668.0	209.95	23.235		
15,100.0	6,672.0	15,206.4	6,622.0	105.1	107.3	89.59	-3,622.4	7,259.2	4,879.3	4,667.0	212.35	22.977		
15,200.0	6,672.0	15,306.4	6,622.0	106.3	108.5	89.59	-3,621.5	7,359.3	4,880.7	4,665.9	214.76	22.726		
15,300.0	6,672.0	15,406.4	6,622.0	107.6	109.7	89.59	-3,620.5	7,459.3	4,882.0	4,664.9	217.17	22.480		
15,400.0	6,672.0	15,506.5	6,622.0	108.8	111.0	89.59	-3,619.5	7,559.3	4,883.4	4,663.8	219.59	22.239		
15,500.0	6,672.0	15,606.5	6,622.0	110.0	112.2	89.59	-3,618.6	7,659.3	4,884.8	4,662.8	222.00	22.003		
15,600.0	6,672.0	15,706.5	6,622.0	111.2	113.4	89.59	-3,617.6	7,759.4	4,886.1	4,661.7	224.42	21.773		
15,700.0	6,672.0	15,806.6	6,622.0	112.4	114.6	89.59	-3,616.7	7,859.4	4,887.5	4,660.7	226.83	21.547		
15,800.0	6,672.0	15,906.6	6,622.0	113.6	115.8	89.59	-3,615.7	7,959.4	4,888.9	4,659.6	229.25	21.325		
15,900.0	6,672.0	16,006.6	6,622.0	114.8	117.0	89.59	-3,614.8	8,059.4	4,890.3	4,658.6	231.67	21.109		
16,000.0	6,672.0	16,106.6	6,622.0	116.0	118.2	89.59	-3,613.8	8,159.5	4,891.7	4,657.6	234.09	20.896		
16,100.0	6,672.0	16,206.7	6,622.0	117.2	119.4	89.59	-3,612.8	8,259.5	4,893.1	4,656.6	236.52	20.688		
16,200.0	6,672.0	16,306.7	6,622.0	118.4	120.7	89.59	-3,611.9	8,359.5	4,894.5	4,655.6	238.94	20.484		
16,300.0	6,672.0	16,406.7	6,622.0	119.6	121.9	89.59	-3,610.9	8,459.5	4,895.9	4,654.6	241.37	20.284		
16,400.0	6,672.0	16,506.8	6,622.0	120.8	123.1	89.59	-3,610.0	8,559.6	4,897.4	4,653.6	243.79	20.088		
16,500.0	6,672.0	16,606.8	6,622.0	122.0	124.3	89.59	-3,609.0	8,659.6	4,898.8	4,652.6	246.22	19.896		
16,600.0	6,672.0	16,706.8	6,622.0	123.2	125.5	89.59	-3,608.0	8,759.6	4,900.2	4,651.6	248.65	19.708		
16,700.0	6,672.0	16,806.8	6,622.0	124.5	126.7	89.59	-3,607.1	8,859.6	4,901.7	4,650.6	251.08	19.523		
16,800.0	6,672.0	16,906.9	6,622.0	125.7	128.0	89.59	-3,606.1	8,959.7	4,903.1	4,649.6	253.51	19.341		
16,900.0	6,672.0	17,006.9	6,622.0	126.9	129.2	89.59	-3,605.1	9,059.7	4,904.6	4,648.7	255.94	19.163		
17,000.0	6,672.0	17,106.9	6,622.0	128.1	130.4	89.59	-3,604.2	9,159.7	4,906.1	4,647.7	258.37	18.988		
17,100.0	6,672.0	17,207.0	6,622.0	129.3	131.6	89.59	-3,603.2	9,259.7	4,907.5	4,646.7	260.80	18.817		
17,200.0	6,672.0	17,307.0	6,622.0	130.5	132.8	89.59	-3,602.2	9,359.7	4,909.0	4,645.8	263.24	18.649		
17,300.0	6,672.0	17,407.0	6,622.0	131.7	134.0	89.59	-3,601.3	9,459.8	4,910.5	4,644.8	265.67	18.483		
17,400.0	6,672.0	17,507.0	6,622.0	133.0	135.3	89.59	-3,600.3	9,559.8	4,912.0	4,643.9	268.11	18.321		
17,500.0	6,672.0	17,607.1	6,622.0	134.2	136.5	89.59	-3,599.3	9,659.8	4,913.5	4,643.0	270.55	18.161		
17,600.0	6,672.0	17,707.1	6,622.0	135.4	137.7	89.59	-3,598.3	9,759.8	4,915.0	4,642.0	272.98	18.005		
17,700.0	6,672.0	17,807.1	6,622.0	136.6	138.9	89.59	-3,597.4	9,859.9	4,916.5	4,641.1	275.42	17.851		
17,800.0	6,672.0	17,907.1	6,622.0	137.8	140.2	89.59	-3,596.4	9,959.9	4,918.1	4,640.2	277.86	17.700		
17,900.0	6,672.0	17,978.2	6,622.0	139.0	141.0	89.59	-3,595.7	10,030.9	4,919.7	4,639.7	279.95	17.574		
18,000.0	6,672.0	17,978.2	6,622.0	140.3	141.0	89.59	-3,595.7	10,030.9	4,922.8	4,641.7	281.10	17.513		
18,100.0	6,672.0	17,978.2	6,622.0	141.5	141.0	89.59	-3,595.7	10,030.9	4,928.0	4,645.9	282.13	17.467		
18,200.0	6,672.0	17,978.2	6,622.0	142.7	141.0	89.59	-3,595.7	10,030.9	4,935.2	4,652.1	283.06	17.435		
18,300.0	6,672.0	17,978.2	6,622.0	143.9	141.0	89.59	-3,595.7	10,030.9	4,944.4	4,660.6	283.87	17.418		
18,342.5	6,672.0	17,978.2	6,622.0	144.4	141.0	89.59	-3,595.7	10,030.9	4,948.9	4,664.8	284.18	17.415 SF		



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch State BB07-621 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-162.01	-2,344.0	-761.3	2,464.6					
100.0	100.0	85.0	85.0	0.1	0.1	-162.01	-2,344.0	-761.3	2,464.5	2,464.3	0.23	N/A		
200.0	200.0	185.0	185.0	0.5	0.4	-162.01	-2,344.0	-761.3	2,464.5	2,463.6	0.91	2,696.124		
300.0	300.0	285.0	285.0	0.8	0.8	-162.01	-2,344.0	-761.3	2,464.5	2,462.9	1.63	1,511.015		
400.0	400.0	385.0	385.0	1.2	1.1	-162.01	-2,344.0	-761.3	2,464.5	2,462.2	2.35	1,049.636		
500.0	500.0	485.0	485.0	1.6	1.5	-162.01	-2,344.0	-761.3	2,464.5	2,461.5	3.06	804.107		
600.0	600.0	585.0	585.0	1.9	1.9	-162.01	-2,344.0	-761.3	2,464.5	2,460.8	3.78	651.670		
700.0	700.0	685.0	685.0	2.3	2.2	-162.01	-2,344.0	-761.3	2,464.5	2,460.0	4.50	547.818		
800.0	800.0	785.0	785.0	2.6	2.6	-162.01	-2,344.0	-761.3	2,464.5	2,459.3	5.22	472.517		
900.0	900.0	885.0	885.0	3.0	2.9	-162.01	-2,344.0	-761.3	2,464.5	2,458.6	5.93	415.415		
1,000.0	1,000.0	985.0	985.0	3.4	3.3	-162.01	-2,344.0	-761.3	2,464.5	2,457.9	6.65	370.626		
1,100.0	1,100.0	1,085.0	1,085.0	3.7	3.7	-162.01	-2,344.0	-761.3	2,464.5	2,457.2	7.37	334.556		
1,200.0	1,200.0	1,185.0	1,185.0	4.1	4.0	-162.01	-2,344.0	-761.3	2,464.5	2,456.5	8.08	304.883		
1,300.0	1,300.0	1,285.0	1,285.0	4.4	4.4	-162.01	-2,344.0	-761.3	2,464.5	2,455.7	8.80	280.046		
1,400.0	1,400.0	1,385.0	1,385.0	4.8	4.7	-162.01	-2,344.0	-761.3	2,464.5	2,455.0	9.52	258.950		
1,500.0	1,500.0	1,485.0	1,485.0	5.1	5.1	-162.01	-2,344.0	-761.3	2,464.5	2,454.3	10.23	240.810		
1,600.0	1,600.0	1,585.0	1,585.0	5.5	5.4	-162.01	-2,344.0	-761.3	2,464.5	2,453.6	10.95	225.045		
1,700.0	1,700.0	1,685.0	1,685.0	5.9	5.8	-162.01	-2,344.0	-761.3	2,464.5	2,452.9	11.67	211.217		
1,800.0	1,800.0	1,785.0	1,785.0	6.2	6.2	-162.01	-2,344.0	-761.3	2,464.5	2,452.1	12.39	198.990		
1,900.0	1,900.0	1,885.0	1,885.0	6.6	6.5	-162.01	-2,344.0	-761.3	2,464.5	2,451.4	13.10	188.102		
2,000.0	2,000.0	1,985.0	1,985.0	6.9	6.9	-162.01	-2,344.0	-761.3	2,464.5	2,450.7	13.82	178.343		
2,100.0	2,100.0	2,085.0	2,085.0	7.3	7.2	-162.01	-2,344.0	-761.3	2,464.5	2,450.0	14.54	169.547		
2,200.0	2,200.0	2,185.0	2,185.0	7.7	7.6	-162.01	-2,344.0	-761.3	2,464.5	2,449.3	15.25	161.577 CC, ES		
2,300.0	2,300.0	2,246.5	2,246.5	8.0	7.8	-111.00	-2,344.3	-761.5	2,465.8	2,450.0	15.82	155.871		
2,400.0	2,399.8	2,300.0	2,300.0	8.4	8.0	-110.97	-2,345.5	-762.3	2,470.2	2,453.8	16.35	151.086		
2,500.0	2,499.5	2,355.4	2,355.3	8.7	8.2	-110.92	-2,347.5	-763.6	2,477.6	2,460.7	16.87	146.830		
2,600.0	2,598.7	2,400.0	2,399.8	9.1	8.3	-110.82	-2,349.8	-765.2	2,488.2	2,470.8	17.35	143.377		
2,700.0	2,697.5	2,463.0	2,462.6	9.4	8.5	-110.74	-2,354.0	-768.0	2,501.7	2,483.8	17.90	139.771		
2,800.0	2,795.6	2,500.0	2,499.5	9.8	8.7	-110.55	-2,357.0	-770.0	2,518.4	2,500.1	18.34	137.337		
2,900.0	2,893.1	2,568.3	2,567.3	10.1	8.9	-110.45	-2,363.7	-774.4	2,538.0	2,519.1	18.90	134.301		
3,000.0	2,989.6	2,619.9	2,618.4	10.5	9.1	-110.26	-2,369.5	-778.4	2,560.6	2,541.2	19.39	132.077		
3,100.0	3,085.3	2,670.6	2,668.5	10.9	9.2	-110.03	-2,376.1	-782.7	2,586.2	2,566.3	19.87	130.152		
3,200.0	3,179.8	2,720.4	2,717.6	11.2	9.4	-109.77	-2,383.2	-787.5	2,614.7	2,594.3	20.35	128.502		
3,300.0	3,273.2	2,769.2	2,765.4	11.6	9.6	-109.46	-2,390.9	-792.6	2,646.0	2,625.2	20.82	127.101		
3,387.5	3,353.8	2,800.0	2,795.6	11.9	9.7	-109.08	-2,396.1	-796.1	2,675.9	2,654.7	21.17	126.377		
3,400.0	3,365.2	2,800.0	2,795.6	12.0	9.7	-109.08	-2,396.1	-796.1	2,680.3	2,659.1	21.20	126.412		
3,500.0	3,456.8	2,863.8	2,857.9	12.4	9.9	-109.54	-2,407.7	-803.8	2,716.5	2,694.8	21.75	124.925		
3,600.0	3,548.3	2,900.0	2,893.1	12.8	10.0	-109.79	-2,414.8	-808.6	2,754.5	2,732.4	22.15	124.357		
3,700.0	3,639.8	2,956.4	2,947.6	13.2	10.2	-110.17	-2,426.5	-816.5	2,794.1	2,771.4	22.66	123.318		
3,800.0	3,731.4	3,000.0	2,989.6	13.6	10.3	-110.46	-2,436.3	-823.0	2,835.2	2,812.1	23.10	122.754		
3,900.0	3,822.9	3,050.0	3,037.6	14.0	10.5	-110.77	-2,448.1	-830.9	2,877.9	2,854.3	23.57	122.104		
4,000.0	3,914.4	3,131.0	3,115.0	14.4	10.8	-111.26	-2,467.8	-844.0	2,921.4	2,897.2	24.22	120.643		
4,100.0	4,005.9	3,217.5	3,197.7	14.8	11.1	-111.78	-2,488.8	-858.1	2,965.2	2,940.3	24.90	119.093		
4,200.0	4,097.5	3,303.9	3,280.4	15.2	11.4	-112.28	-2,509.8	-872.1	3,009.2	2,983.6	25.59	117.607		
4,300.0	4,189.0	3,409.6	3,363.1	15.6	11.8	-112.76	-2,530.8	-886.1	3,053.4	3,027.1	26.35	115.874		
4,400.0	4,280.5	3,476.8	3,445.7	16.1	12.0	-113.24	-2,551.8	-900.2	3,097.8	3,070.8	26.98	114.815		
4,500.0	4,372.1	3,563.3	3,528.4	16.5	12.4	-113.70	-2,572.9	-914.2	3,142.3	3,114.6	27.68	113.505		
4,600.0	4,463.6	3,649.7	3,611.1	16.9	12.7	-114.15	-2,593.9	-928.3	3,187.1	3,158.7	28.39	112.250		
4,700.0	4,555.1	3,736.2	3,693.8	17.4	13.0	-114.58	-2,614.9	-942.3	3,231.9	3,202.8	29.10	111.047		
4,800.0	4,646.7	3,822.6	3,776.5	17.8	13.3	-115.01	-2,635.9	-956.4	3,277.0	3,247.2	29.82	109.893		
4,900.0	4,738.2	3,909.1	3,859.1	18.2	13.7	-115.42	-2,656.9	-970.4	3,322.2	3,291.6	30.54	108.787		
5,000.0	4,829.7	4,004.5	3,941.8	18.7	14.0	-115.83	-2,677.9	-984.4	3,367.5	3,336.2	31.29	107.608		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch State BB07-621 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,100.0	4,921.3	4,082.0	4,024.5	19.1	14.3	-116.22	-2,699.0	-998.5	3,413.0	3,381.0	31.99	106.704		
5,200.0	5,012.8	4,168.5	4,107.2	19.5	14.7	-116.61	-2,720.0	-1,012.5	3,458.6	3,425.8	32.71	105.724		
5,300.0	5,104.3	4,254.9	4,189.8	20.0	15.0	-116.98	-2,741.0	-1,026.6	3,504.3	3,470.8	33.44	104.783		
5,400.0	5,195.8	4,341.4	4,272.5	20.4	15.3	-117.35	-2,762.0	-1,040.6	3,550.1	3,516.0	34.18	103.879		
5,500.0	5,287.4	4,427.8	4,355.2	20.9	15.7	-117.71	-2,783.0	-1,054.7	3,596.1	3,561.2	34.91	103.009		
5,600.0	5,378.9	4,514.3	4,437.9	21.3	16.0	-118.05	-2,804.0	-1,068.7	3,642.2	3,606.5	35.65	102.173		
5,700.0	5,470.4	4,600.7	4,520.5	21.8	16.3	-118.39	-2,825.1	-1,082.7	3,688.4	3,652.0	36.39	101.368		
5,800.0	5,562.0	4,687.2	4,603.2	22.2	16.7	-118.73	-2,846.1	-1,096.8	3,734.7	3,697.6	37.13	100.592		
5,900.0	5,653.5	4,773.6	4,685.9	22.7	17.0	-119.05	-2,867.1	-1,110.8	3,781.1	3,743.2	37.87	99.845		
6,000.0	5,745.0	4,860.1	4,768.6	23.1	17.4	-119.37	-2,888.1	-1,124.9	3,827.6	3,789.0	38.61	99.124		
6,100.0	5,836.6	4,946.5	4,851.3	23.6	17.7	-119.68	-2,909.1	-1,138.9	3,874.2	3,834.8	39.36	98.429		
6,200.0	5,928.1	5,033.0	4,933.9	24.0	18.1	-119.98	-2,930.1	-1,153.0	3,920.8	3,880.7	40.11	97.759		
6,278.6	6,000.0	5,100.9	4,998.9	24.4	18.3	-120.21	-2,946.7	-1,164.0	3,957.6	3,916.9	40.70	97.249		
6,290.0	6,010.4	5,110.7	5,008.2	24.4	18.4	-121.50	-2,949.0	-1,165.6	3,963.0	3,922.2	40.78	97.177		
6,300.0	6,019.5	5,119.3	5,016.4	24.5	18.4	-123.84	-2,951.1	-1,167.0	3,967.9	3,927.0	40.86	97.117		
6,350.0	6,065.8	5,162.2	5,057.5	24.7	18.6	-137.37	-2,961.6	-1,173.9	3,992.8	3,951.5	41.22	96.858		
6,400.0	6,113.0	5,205.2	5,098.6	24.9	18.8	-154.46	-2,972.0	-1,180.9	4,018.3	3,976.7	41.58	96.648		
6,450.0	6,160.7	5,247.8	5,139.3	25.1	18.9	-174.56	-2,982.4	-1,187.8	4,044.2	4,002.3	41.92	96.486		
6,500.0	6,208.5	5,289.6	5,179.4	25.3	19.1	164.86	-2,992.5	-1,194.6	4,070.3	4,028.1	42.24	96.365		
6,550.0	6,255.8	5,330.4	5,218.3	25.4	19.3	146.78	-3,002.4	-1,201.3	4,096.4	4,053.9	42.55	96.280		
6,600.0	6,302.5	5,369.7	5,255.9	25.6	19.4	132.34	-3,012.0	-1,207.6	4,122.4	4,079.5	42.84	96.225		
6,650.0	6,347.9	5,407.2	5,291.8	25.7	19.6	121.13	-3,021.1	-1,213.7	4,147.9	4,104.8	43.12	96.196		
6,700.0	6,391.6	5,442.5	5,325.5	25.9	19.7	112.34	-3,029.7	-1,219.5	4,172.9	4,129.5	43.38	96.189		
6,750.0	6,433.4	5,475.3	5,356.9	26.0	19.8	105.31	-3,037.7	-1,224.8	4,197.1	4,153.5	43.63	96.201		
6,800.0	6,472.8	5,505.3	5,385.6	26.1	20.0	99.55	-3,045.0	-1,229.7	4,220.6	4,176.7	43.86	96.230		
6,850.0	6,509.4	5,532.3	5,411.5	26.2	20.1	94.75	-3,051.5	-1,234.1	4,243.0	4,198.9	44.07	96.274		
6,900.0	6,543.0	5,556.1	5,434.1	26.3	20.2	90.69	-3,057.3	-1,237.9	4,264.4	4,220.1	44.27	96.329		
6,950.0	6,573.2	5,576.3	5,453.5	26.4	20.3	87.23	-3,062.2	-1,241.2	4,284.5	4,240.0	44.45	96.394		
7,000.0	6,599.8	5,607.2	5,469.3	26.5	20.4	84.27	-3,066.2	-1,243.9	4,303.2	4,258.6	44.67	96.342		
7,050.0	6,622.5	5,605.5	5,481.4	26.6	20.4	81.73	-3,069.3	-1,245.9	4,320.6	4,275.8	44.75	96.543		
7,100.0	6,641.1	5,614.2	5,489.8	26.7	20.4	79.56	-3,071.4	-1,247.4	4,336.4	4,291.5	44.88	96.623		
7,150.0	6,655.4	5,618.9	5,494.3	26.8	20.4	77.72	-3,072.6	-1,248.1	4,350.5	4,305.5	44.99	96.706		
7,200.0	6,665.4	5,619.6	5,494.9	26.9	20.4	76.20	-3,072.7	-1,248.2	4,362.9	4,317.8	45.08	96.790		
7,250.0	6,670.8	5,616.2	5,491.6	27.0	20.4	74.98	-3,071.9	-1,247.7	4,373.4	4,328.3	45.14	96.875		
7,285.7	6,672.0	5,611.2	5,486.9	27.1	20.4	74.29	-3,070.7	-1,246.9	4,379.8	4,334.6	45.18	96.938		
7,300.0	6,672.0	5,608.8	5,484.6	27.1	20.4	74.26	-3,070.1	-1,246.5	4,382.1	4,337.0	45.19	96.964		
7,400.0	6,672.0	5,607.8	5,468.7	27.3	20.4	74.04	-3,066.1	-1,243.8	4,399.9	4,354.5	45.38	96.952		
7,500.0	6,672.0	5,575.5	5,452.8	27.6	20.3	73.82	-3,062.0	-1,241.1	4,419.8	4,374.4	45.50	97.150		
7,600.0	6,672.0	5,558.9	5,436.8	28.0	20.2	73.60	-3,058.0	-1,238.4	4,441.9	4,396.2	45.71	97.167		
7,700.0	6,672.0	7,628.0	6,560.0	28.3	26.9	88.75	-3,354.9	-150.7	4,463.2	4,408.1	55.13	80.957		
7,800.0	6,672.0	7,728.3	6,560.0	28.8	27.5	88.75	-3,354.1	-50.5	4,464.2	4,408.0	56.17	79.475		
7,900.0	6,672.0	7,828.5	6,560.0	29.3	28.1	88.76	-3,353.3	49.8	4,465.1	4,407.8	57.30	77.927		
8,000.0	6,672.0	7,928.8	6,560.0	29.8	28.8	88.76	-3,352.5	150.1	4,466.1	4,407.6	58.51	76.329		
8,100.0	6,672.0	8,029.1	6,560.0	30.4	29.5	88.76	-3,351.7	250.4	4,467.0	4,407.2	59.80	74.698		
8,200.0	6,672.0	8,129.4	6,560.0	31.0	30.2	88.76	-3,350.8	350.6	4,468.0	4,406.8	61.17	73.048		
8,300.0	6,672.0	8,229.6	6,560.0	31.7	31.0	88.76	-3,350.0	450.9	4,469.0	4,406.4	62.60	71.391		
8,400.0	6,672.0	8,329.9	6,560.0	32.4	31.8	88.76	-3,349.2	551.2	4,469.9	4,405.8	64.10	69.739		
8,500.0	6,672.0	8,430.2	6,560.0	33.1	32.6	88.76	-3,348.4	651.5	4,470.9	4,405.2	65.65	68.100		
8,600.0	6,672.0	8,530.5	6,560.0	33.9	33.5	88.76	-3,347.5	751.7	4,471.9	4,404.6	67.26	66.482		
8,700.0	6,672.0	8,630.8	6,560.0	34.7	34.4	88.76	-3,346.7	852.0	4,472.8	4,403.9	68.93	64.891		
8,800.0	6,672.0	8,731.0	6,560.0	35.5	35.3	88.76	-3,345.8	952.3	4,473.8	4,403.1	70.64	63.331		
8,900.0	6,672.0	8,831.3	6,560.0	36.3	36.2	88.76	-3,345.0	1,052.6	4,474.8	4,402.4	72.40	61.808		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
**Anticollision Report**

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch State BB07-621 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
9,000.0	6,672.0	8,931.6	6,560.0	37.2	37.2	88.76	-3,344.1	1,152.8	4,475.7	4,401.5	74.20	60.323		
9,100.0	6,672.0	9,031.9	6,560.0	38.1	38.1	88.76	-3,343.2	1,253.1	4,476.7	4,400.7	76.03	58.878		
9,200.0	6,672.0	9,132.1	6,560.0	39.0	39.1	88.76	-3,342.3	1,353.4	4,477.7	4,399.8	77.91	57.475		
9,300.0	6,672.0	9,232.4	6,560.0	39.9	40.1	88.76	-3,341.5	1,453.7	4,478.7	4,398.8	79.81	56.114		
9,400.0	6,672.0	9,332.7	6,560.0	40.8	41.1	88.76	-3,340.6	1,553.9	4,479.6	4,397.9	81.75	54.796		
9,500.0	6,672.0	9,433.0	6,560.0	41.8	42.1	88.76	-3,339.7	1,654.2	4,480.6	4,396.9	83.72	53.521		
9,600.0	6,672.0	9,533.3	6,560.0	42.7	43.1	88.76	-3,338.8	1,754.5	4,481.6	4,395.9	85.71	52.287		
9,700.0	6,672.0	9,633.5	6,560.0	43.7	44.2	88.76	-3,337.9	1,854.8	4,482.6	4,394.8	87.73	51.095		
9,800.0	6,672.0	9,733.8	6,560.0	44.7	45.2	88.76	-3,336.9	1,955.0	4,483.5	4,393.8	89.77	49.944		
9,900.0	6,672.0	9,834.1	6,560.0	45.7	46.3	88.76	-3,336.0	2,055.3	4,484.5	4,392.7	91.84	48.832		
10,000.0	6,672.0	9,934.4	6,560.0	46.7	47.3	88.76	-3,335.1	2,155.6	4,485.5	4,391.6	93.92	47.759		
10,100.0	6,672.0	10,034.7	6,560.0	47.7	48.4	88.76	-3,334.1	2,255.9	4,486.5	4,390.5	96.02	46.723		
10,200.0	6,672.0	10,134.9	6,560.0	48.8	49.5	88.76	-3,333.2	2,356.1	4,487.5	4,389.3	98.14	45.724		
10,300.0	6,672.0	10,235.2	6,560.0	49.8	50.6	88.76	-3,332.3	2,456.4	4,488.5	4,388.2	100.28	44.759		
10,400.0	6,672.0	10,335.5	6,560.0	50.9	51.7	88.76	-3,331.3	2,556.7	4,489.5	4,387.0	102.43	43.827		
10,500.0	6,672.0	10,435.8	6,560.0	51.9	52.8	88.76	-3,330.3	2,656.9	4,490.4	4,385.8	104.60	42.928		
10,600.0	6,672.0	10,536.0	6,560.0	53.0	53.9	88.76	-3,329.4	2,757.2	4,491.4	4,384.7	106.79	42.061		
10,700.0	6,672.0	10,636.3	6,560.0	54.1	55.0	88.76	-3,328.4	2,857.5	4,492.4	4,383.5	108.98	41.222		
10,800.0	6,672.0	10,736.6	6,560.0	55.2	56.2	88.76	-3,327.4	2,957.8	4,493.4	4,382.2	111.19	40.413		
10,900.0	6,672.0	10,836.9	6,560.0	56.3	57.3	88.76	-3,326.4	3,058.0	4,494.4	4,381.0	113.41	39.631		
11,000.0	6,672.0	10,937.2	6,560.0	57.4	58.4	88.76	-3,325.4	3,158.3	4,495.4	4,379.8	115.64	38.876		
11,100.0	6,672.0	11,037.4	6,560.0	58.5	59.5	88.76	-3,324.4	3,258.6	4,496.4	4,378.5	117.88	38.145		
11,200.0	6,672.0	11,137.7	6,560.0	59.6	60.7	88.76	-3,323.4	3,358.9	4,497.4	4,377.3	120.12	37.439		
11,300.0	6,672.0	11,238.0	6,560.0	60.7	61.8	88.76	-3,322.4	3,459.1	4,498.4	4,376.0	122.38	36.757		
11,400.0	6,672.0	11,338.3	6,560.0	61.8	63.0	88.76	-3,321.4	3,559.4	4,499.4	4,374.8	124.65	36.096		
11,500.0	6,672.0	11,438.6	6,560.0	62.9	64.1	88.76	-3,320.4	3,659.7	4,500.4	4,373.5	126.93	35.457		
11,600.0	6,672.0	11,538.8	6,560.0	64.1	65.3	88.77	-3,319.4	3,760.0	4,501.4	4,372.2	129.21	34.838		
11,700.0	6,672.0	11,639.1	6,560.0	65.2	66.4	88.77	-3,318.3	3,860.2	4,502.4	4,370.9	131.50	34.239		
11,800.0	6,672.0	11,739.4	6,560.0	66.3	67.6	88.77	-3,317.3	3,960.5	4,503.4	4,369.6	133.80	33.659		
11,900.0	6,672.0	11,839.7	6,560.0	67.5	68.8	88.77	-3,316.2	4,060.8	4,504.4	4,368.3	136.10	33.096		
12,000.0	6,672.0	11,940.0	6,560.0	68.6	69.9	88.77	-3,315.2	4,161.1	4,505.4	4,367.0	138.41	32.551		
12,100.0	6,672.0	12,040.2	6,560.0	69.8	71.1	88.77	-3,314.1	4,261.3	4,506.4	4,365.7	140.73	32.023		
12,200.0	6,672.0	12,140.5	6,560.0	70.9	72.3	88.77	-3,313.0	4,361.6	4,507.4	4,364.4	143.05	31.510		
12,300.0	6,672.0	12,240.8	6,560.0	72.1	73.5	88.77	-3,312.0	4,461.9	4,508.5	4,363.1	145.38	31.012		
12,400.0	6,672.0	12,341.1	6,560.0	73.2	74.6	88.77	-3,310.9	4,562.2	4,509.5	4,361.8	147.71	30.530		
12,500.0	6,672.0	12,441.4	6,560.0	74.4	75.8	88.77	-3,309.8	4,662.4	4,510.5	4,360.4	150.05	30.061		
12,600.0	6,672.0	12,541.6	6,560.0	75.5	77.0	88.77	-3,308.7	4,762.7	4,511.5	4,359.1	152.39	29.606		
12,700.0	6,672.0	12,641.9	6,560.0	76.7	78.2	88.77	-3,307.6	4,863.0	4,512.5	4,357.8	154.73	29.163		
12,800.0	6,672.0	12,742.2	6,560.0	77.9	79.4	88.77	-3,306.5	4,963.2	4,513.5	4,356.4	157.08	28.733		
12,900.0	6,672.0	12,842.5	6,560.0	79.0	80.6	88.77	-3,305.4	5,063.5	4,514.5	4,355.1	159.44	28.315		
13,000.0	6,672.0	12,942.8	6,560.0	80.2	81.7	88.77	-3,304.3	5,163.8	4,515.6	4,353.8	161.80	27.909		
13,100.0	6,672.0	13,043.0	6,560.0	81.4	82.9	88.77	-3,303.1	5,264.1	4,516.6	4,352.4	164.16	27.513		
13,200.0	6,672.0	13,143.3	6,560.0	82.6	84.1	88.77	-3,302.0	5,364.3	4,517.6	4,351.1	166.53	27.129		
13,300.0	6,672.0	13,243.6	6,560.0	83.7	85.3	88.77	-3,300.9	5,464.6	4,518.6	4,349.7	168.89	26.754		
13,400.0	6,672.0	13,343.9	6,560.0	84.9	86.5	88.77	-3,299.7	5,564.9	4,519.7	4,348.4	171.27	26.390		
13,500.0	6,672.0	13,444.2	6,560.0	86.1	87.7	88.77	-3,298.6	5,665.2	4,520.7	4,347.0	173.64	26.034		
13,600.0	6,672.0	13,544.4	6,560.0	87.3	88.9	88.77	-3,297.4	5,765.4	4,521.7	4,345.7	176.02	25.688		
13,700.0	6,672.0	13,644.7	6,560.0	88.4	90.1	88.77	-3,296.2	5,865.7	4,522.7	4,344.3	178.40	25.351		
13,800.0	6,672.0	13,745.0	6,560.0	89.6	91.3	88.77	-3,295.1	5,966.0	4,523.8	4,343.0	180.79	25.023		
13,900.0	6,672.0	13,845.3	6,560.0	90.8	92.5	88.77	-3,293.9	6,066.3	4,524.8	4,341.6	183.17	24.702		
14,000.0	6,672.0	13,945.6	6,560.0	92.0	93.7	88.77	-3,292.7	6,166.5	4,525.8	4,340.3	185.56	24.390		
14,100.0	6,672.0	14,045.8	6,560.0	93.2	94.9	88.77	-3,291.5	6,266.8	4,526.9	4,338.9	187.96	24.085		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch State BB07-621 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
14,200.0	6,672.0	14,146.1	6,560.0	94.4	96.1	88.77	-3,290.3	6,367.1	4,527.9	4,337.5	190.35	23.787		
14,300.0	6,672.0	14,246.4	6,560.0	95.6	97.3	88.77	-3,289.1	6,467.4	4,528.9	4,336.2	192.75	23.497		
14,400.0	6,672.0	14,346.7	6,560.0	96.8	98.5	88.77	-3,287.9	6,567.6	4,530.0	4,334.8	195.15	23.213		
14,500.0	6,672.0	14,447.0	6,560.0	98.0	99.7	88.77	-3,286.7	6,667.9	4,531.0	4,333.4	197.55	22.936		
14,600.0	6,672.0	14,547.2	6,560.0	99.2	101.0	88.77	-3,285.5	6,768.2	4,532.0	4,332.1	199.95	22.666		
14,700.0	6,672.0	14,647.5	6,560.0	100.4	102.2	88.77	-3,284.3	6,868.4	4,533.1	4,330.7	202.35	22.402		
14,800.0	6,672.0	14,747.8	6,560.0	101.6	103.4	88.77	-3,283.0	6,968.7	4,534.1	4,329.4	204.76	22.143		
14,900.0	6,672.0	14,848.1	6,560.0	102.7	104.6	88.77	-3,281.8	7,069.0	4,535.2	4,328.0	207.17	21.891		
15,000.0	6,672.0	14,948.4	6,560.0	103.9	105.8	88.77	-3,280.5	7,169.3	4,536.2	4,326.6	209.58	21.644		
15,100.0	6,672.0	15,048.6	6,560.0	105.1	107.0	88.77	-3,279.3	7,269.5	4,537.2	4,325.2	211.99	21.403		
15,200.0	6,672.0	15,148.9	6,560.0	106.3	108.2	88.78	-3,278.0	7,369.8	4,538.3	4,323.9	214.41	21.167		
15,300.0	6,672.0	15,249.2	6,560.0	107.6	109.4	88.78	-3,276.8	7,470.1	4,539.3	4,322.5	216.82	20.936		
15,400.0	6,672.0	15,349.5	6,560.0	108.8	110.6	88.78	-3,275.5	7,570.4	4,540.4	4,321.1	219.24	20.710		
15,500.0	6,672.0	15,449.8	6,560.0	110.0	111.9	88.78	-3,274.2	7,670.6	4,541.4	4,319.8	221.66	20.488		
15,600.0	6,672.0	15,550.1	6,560.0	111.2	113.1	88.78	-3,272.9	7,770.9	4,542.5	4,318.4	224.08	20.272		
15,700.0	6,672.0	15,650.3	6,560.0	112.4	114.3	88.78	-3,271.6	7,871.2	4,543.5	4,317.0	226.50	20.060		
15,800.0	6,672.0	15,750.6	6,560.0	113.6	115.5	88.78	-3,270.3	7,971.5	4,544.6	4,315.7	228.92	19.852		
15,900.0	6,672.0	15,850.9	6,560.0	114.8	116.7	88.78	-3,269.0	8,071.7	4,545.6	4,314.3	231.35	19.649		
16,000.0	6,672.0	15,951.2	6,560.0	116.0	118.0	88.78	-3,267.7	8,172.0	4,546.7	4,312.9	233.77	19.449		
16,100.0	6,672.0	16,051.5	6,560.0	117.2	119.2	88.78	-3,266.4	8,272.3	4,547.7	4,311.5	236.20	19.254		
16,200.0	6,672.0	16,151.7	6,560.0	118.4	120.4	88.78	-3,265.1	8,372.5	4,548.8	4,310.2	238.62	19.063		
16,300.0	6,672.0	16,252.0	6,560.0	119.6	121.6	88.78	-3,263.8	8,472.8	4,549.9	4,308.8	241.05	18.875		
16,400.0	6,672.0	16,352.3	6,560.0	120.8	122.8	88.78	-3,262.4	8,573.1	4,550.9	4,307.4	243.48	18.691		
16,500.0	6,672.0	16,452.6	6,560.0	122.0	124.0	88.78	-3,261.1	8,673.4	4,552.0	4,306.1	245.91	18.510		
16,600.0	6,672.0	16,552.9	6,560.0	123.2	125.3	88.78	-3,259.7	8,773.6	4,553.0	4,304.7	248.35	18.333		
16,700.0	6,672.0	16,653.2	6,560.0	124.5	126.5	88.78	-3,258.4	8,873.9	4,554.1	4,303.3	250.78	18.160		
16,800.0	6,672.0	16,753.4	6,560.0	125.7	127.7	88.78	-3,257.0	8,974.2	4,555.2	4,302.0	253.21	17.989		
16,900.0	6,672.0	16,853.7	6,560.0	126.9	128.9	88.78	-3,255.7	9,074.5	4,556.2	4,300.6	255.65	17.822		
17,000.0	6,672.0	16,954.0	6,560.0	128.1	130.2	88.78	-3,254.3	9,174.7	4,557.3	4,299.2	258.08	17.658		
17,100.0	6,672.0	17,054.3	6,560.0	129.3	131.4	88.78	-3,252.9	9,275.0	4,558.4	4,297.8	260.52	17.497		
17,200.0	6,672.0	17,154.6	6,560.0	130.5	132.6	88.78	-3,251.5	9,375.3	4,559.4	4,296.5	262.96	17.339		
17,300.0	6,672.0	17,254.8	6,560.0	131.7	133.8	88.78	-3,250.1	9,475.5	4,560.5	4,295.1	265.40	17.184		
17,400.0	6,672.0	17,355.1	6,560.0	133.0	135.1	88.78	-3,248.7	9,575.8	4,561.6	4,293.7	267.84	17.031		
17,500.0	6,672.0	17,455.4	6,560.0	134.2	136.3	88.78	-3,247.3	9,676.1	4,562.7	4,292.4	270.28	16.881		
17,600.0	6,672.0	17,555.7	6,560.0	135.4	137.5	88.78	-3,245.9	9,776.4	4,563.7	4,291.0	272.72	16.734		
17,700.0	6,672.0	17,656.0	6,560.0	136.6	138.7	88.78	-3,244.5	9,876.6	4,564.8	4,289.6	275.16	16.590		
17,800.0	6,672.0	17,756.3	6,560.0	137.8	140.0	88.78	-3,243.1	9,976.9	4,565.9	4,288.3	277.60	16.448		
17,900.0	6,672.0	17,808.9	6,560.0	139.0	140.6	88.78	-3,242.3	10,029.5	4,567.2	4,287.7	279.46	16.343		
18,000.0	6,672.0	17,808.9	6,560.0	140.3	140.6	88.78	-3,242.3	10,029.5	4,570.4	4,289.8	280.58	16.289		
18,100.0	6,672.0	17,808.9	6,560.0	141.5	140.6	88.78	-3,242.3	10,029.5	4,575.8	4,294.3	281.56	16.252		
18,200.0	6,672.0	17,808.9	6,560.0	142.7	140.6	88.78	-3,242.3	10,029.5	4,583.4	4,301.0	282.42	16.229		
18,300.0	6,672.0	17,808.9	6,560.0	143.9	140.6	88.78	-3,242.3	10,029.5	4,593.2	4,310.0	283.14	16.222 SF		
18,342.5	6,672.0	17,808.9	6,560.0	144.4	140.6	88.78	-3,242.3	10,029.5	4,598.0	4,314.6	283.41	16.224		



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch State BB07-627 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-161.82	-2,318.5	-761.6	2,440.4					
100.0	100.0	85.0	85.0	0.1	0.1	-161.82	-2,318.5	-761.6	2,440.4	2,440.2	0.23	N/A		
200.0	200.0	185.0	185.0	0.5	0.4	-161.82	-2,318.5	-761.6	2,440.4	2,439.5	0.91	2,669.706		
300.0	300.0	285.0	285.0	0.8	0.8	-161.82	-2,318.5	-761.6	2,440.4	2,438.8	1.63	1,496.209		
400.0	400.0	385.0	385.0	1.2	1.1	-161.82	-2,318.5	-761.6	2,440.4	2,438.0	2.35	1,039.351		
500.0	500.0	485.0	485.0	1.6	1.5	-161.82	-2,318.5	-761.6	2,440.4	2,437.3	3.06	796.228		
600.0	600.0	585.0	585.0	1.9	1.9	-161.82	-2,318.5	-761.6	2,440.4	2,436.6	3.78	645.285		
700.0	700.0	685.0	685.0	2.3	2.2	-161.82	-2,318.5	-761.6	2,440.4	2,435.9	4.50	542.450		
800.0	800.0	785.0	785.0	2.6	2.6	-161.82	-2,318.5	-761.6	2,440.4	2,435.2	5.22	467.887		
900.0	900.0	885.0	885.0	3.0	2.9	-161.82	-2,318.5	-761.6	2,440.4	2,434.5	5.93	411.345		
1,000.0	1,000.0	985.0	985.0	3.4	3.3	-161.82	-2,318.5	-761.6	2,440.4	2,433.7	6.65	366.995		
1,100.0	1,100.0	1,085.0	1,085.0	3.7	3.7	-161.82	-2,318.5	-761.6	2,440.4	2,433.0	7.37	331.277		
1,200.0	1,200.0	1,185.0	1,185.0	4.1	4.0	-161.82	-2,318.5	-761.6	2,440.4	2,432.3	8.08	301.896		
1,300.0	1,300.0	1,285.0	1,285.0	4.4	4.4	-161.82	-2,318.5	-761.6	2,440.4	2,431.6	8.80	277.302		
1,400.0	1,400.0	1,385.0	1,385.0	4.8	4.7	-161.82	-2,318.5	-761.6	2,440.4	2,430.9	9.52	256.413		
1,500.0	1,500.0	1,485.0	1,485.0	5.1	5.1	-161.82	-2,318.5	-761.6	2,440.4	2,430.2	10.23	238.450		
1,600.0	1,600.0	1,585.0	1,585.0	5.5	5.4	-161.82	-2,318.5	-761.6	2,440.4	2,429.4	10.95	222.840		
1,700.0	1,700.0	1,685.0	1,685.0	5.9	5.8	-161.82	-2,318.5	-761.6	2,440.4	2,428.7	11.67	209.148		
1,800.0	1,800.0	1,785.0	1,785.0	6.2	6.2	-161.82	-2,318.5	-761.6	2,440.4	2,428.0	12.39	197.041		
1,900.0	1,900.0	1,885.0	1,885.0	6.6	6.5	-161.82	-2,318.5	-761.6	2,440.4	2,427.3	13.10	186.259		
2,000.0	2,000.0	1,985.0	1,985.0	6.9	6.9	-161.82	-2,318.5	-761.6	2,440.4	2,426.6	13.82	176.595		
2,100.0	2,100.0	2,085.0	2,085.0	7.3	7.2	-161.82	-2,318.5	-761.6	2,440.4	2,425.8	14.54	167.885		
2,200.0	2,200.0	2,185.0	2,185.0	7.7	7.6	-161.82	-2,318.5	-761.6	2,440.4	2,425.1	15.25	159.994 CC		
2,300.0	2,300.0	2,285.0	2,285.0	8.0	8.0	-110.84	-2,318.5	-761.6	2,441.0	2,425.0	15.97	152.880 ES		
2,400.0	2,399.8	2,384.8	2,384.8	8.4	8.3	-110.92	-2,318.5	-761.6	2,442.9	2,426.2	16.68	146.473		
2,500.0	2,499.5	2,448.6	2,448.6	8.7	8.5	-110.97	-2,318.8	-761.9	2,446.6	2,429.4	17.25	141.819		
2,600.0	2,598.7	2,500.0	2,500.0	9.1	8.7	-110.96	-2,319.7	-762.9	2,453.4	2,435.6	17.78	138.016		
2,700.0	2,697.5	2,562.5	2,562.4	9.4	8.9	-110.96	-2,321.6	-765.0	2,463.1	2,444.7	18.33	134.388		
2,800.0	2,795.6	2,618.9	2,618.7	9.8	9.1	-110.91	-2,324.1	-767.8	2,475.8	2,456.9	18.86	131.306		
2,900.0	2,893.1	2,674.8	2,674.4	10.1	9.3	-110.83	-2,327.3	-771.4	2,491.5	2,472.1	19.38	128.578		
3,000.0	2,989.6	2,730.1	2,729.4	10.5	9.5	-110.72	-2,331.2	-775.7	2,510.1	2,490.2	19.89	126.174		
3,100.0	3,085.3	2,800.0	2,798.7	10.9	9.7	-110.65	-2,337.2	-782.3	2,531.7	2,511.3	20.47	123.688		
3,200.0	3,179.8	2,838.7	2,837.0	11.2	9.8	-110.39	-2,340.9	-786.5	2,556.1	2,535.2	20.91	122.225		
3,300.0	3,273.2	2,900.0	2,897.5	11.6	10.1	-110.22	-2,347.6	-793.9	2,583.5	2,562.0	21.45	120.428		
3,387.5	3,353.8	2,937.6	2,934.4	11.9	10.2	-109.94	-2,352.2	-799.0	2,609.7	2,587.8	21.85	119.417		
3,400.0	3,365.2	2,944.0	2,940.8	12.0	10.2	-109.99	-2,353.0	-799.9	2,613.6	2,591.7	21.92	119.254		
3,500.0	3,456.8	3,000.0	2,995.6	12.4	10.4	-110.34	-2,360.4	-808.1	2,645.8	2,623.4	22.43	117.947		
3,600.0	3,548.3	3,054.6	3,049.0	12.8	10.6	-110.67	-2,368.3	-816.9	2,679.6	2,656.6	22.94	116.794		
3,700.0	3,639.8	3,145.3	3,137.4	13.2	10.9	-111.21	-2,381.7	-831.8	2,714.0	2,690.4	23.63	114.842		
3,800.0	3,731.4	3,236.0	3,225.8	13.6	11.2	-111.72	-2,395.1	-846.6	2,748.7	2,724.3	24.33	112.979		
3,900.0	3,822.9	3,326.6	3,314.2	14.0	11.5	-112.23	-2,408.5	-861.5	2,783.5	2,758.5	25.03	111.200		
4,000.0	3,914.4	3,417.3	3,402.7	14.4	11.8	-112.73	-2,421.9	-876.4	2,818.6	2,792.9	25.74	109.502		
4,100.0	4,005.9	3,508.0	3,491.1	14.8	12.2	-113.21	-2,435.2	-891.3	2,853.9	2,827.4	26.45	107.882		
4,200.0	4,097.5	3,601.4	3,579.5	15.2	12.5	-113.69	-2,448.6	-906.1	2,889.3	2,862.1	27.18	106.295		
4,300.0	4,189.0	3,689.3	3,668.0	15.6	12.8	-114.15	-2,462.0	-921.0	2,925.0	2,897.1	27.90	104.855		
4,400.0	4,280.5	3,779.9	3,756.4	16.1	13.1	-114.60	-2,475.4	-935.9	2,960.8	2,932.1	28.62	103.443		
4,500.0	4,372.1	3,870.6	3,844.8	16.5	13.5	-115.04	-2,488.8	-950.7	2,996.7	2,967.4	29.35	102.094		
4,600.0	4,463.6	3,961.3	3,933.2	16.9	13.8	-115.47	-2,502.2	-965.6	3,032.9	3,002.8	30.09	100.804		
4,700.0	4,555.1	4,051.9	4,021.7	17.4	14.1	-115.90	-2,515.6	-980.5	3,069.1	3,038.3	30.82	99.571		
4,800.0	4,646.7	4,142.6	4,110.1	17.8	14.5	-116.31	-2,529.0	-995.3	3,105.6	3,074.0	31.56	98.390		
4,900.0	4,738.2	4,233.3	4,198.5	18.2	14.8	-116.71	-2,542.4	-1,010.2	3,142.1	3,109.8	32.31	97.261		
5,000.0	4,829.7	4,323.9	4,287.0	18.7	15.1	-117.11	-2,555.7	-1,025.1	3,178.9	3,145.8	33.05	96.178		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch State BB07-627 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,100.0	4,921.3	4,414.6	4,375.4	19.1	15.5	-117.49	-2,569.1	-1,040.0	3,215.7	3,181.9	33.80	95.141		
5,200.0	5,012.8	4,505.3	4,463.8	19.5	15.8	-117.87	-2,582.5	-1,054.8	3,252.7	3,218.1	34.55	94.147		
5,300.0	5,104.3	4,604.1	4,552.3	20.0	16.2	-118.24	-2,595.9	-1,069.7	3,289.8	3,254.5	35.33	93.113		
5,400.0	5,195.8	4,686.6	4,640.7	20.4	16.5	-118.60	-2,609.3	-1,084.6	3,327.0	3,291.0	36.05	92.277		
5,500.0	5,287.4	4,777.3	4,729.1	20.9	16.8	-118.96	-2,622.7	-1,099.4	3,364.4	3,327.5	36.81	91.397		
5,600.0	5,378.9	4,867.9	4,817.5	21.3	17.2	-119.30	-2,636.1	-1,114.3	3,401.8	3,364.2	37.57	90.551		
5,700.0	5,470.4	4,958.6	4,906.0	21.8	17.5	-119.64	-2,649.5	-1,129.2	3,439.4	3,401.0	38.33	89.738		
5,800.0	5,562.0	5,049.3	4,994.4	22.2	17.9	-119.98	-2,662.9	-1,144.0	3,477.0	3,438.0	39.09	88.956		
5,900.0	5,653.5	5,139.9	5,082.8	22.7	18.2	-120.30	-2,676.2	-1,158.9	3,514.8	3,475.0	39.85	88.204		
6,000.0	5,745.0	5,230.6	5,171.3	23.1	18.6	-120.62	-2,689.6	-1,173.8	3,552.7	3,512.1	40.61	87.479		
6,100.0	5,836.6	5,321.2	5,259.7	23.6	18.9	-120.93	-2,703.0	-1,188.6	3,590.7	3,549.3	41.38	86.780		
6,200.0	5,928.1	5,411.9	5,348.1	24.0	19.3	-121.24	-2,716.4	-1,203.5	3,628.7	3,586.6	42.14	86.107		
6,278.6	6,000.0	5,483.1	5,417.6	24.4	19.5	-121.48	-2,726.9	-1,215.2	3,658.7	3,615.9	42.74	85.595		
6,290.0	6,010.4	5,506.6	5,427.6	24.4	19.6	-122.84	-2,728.4	-1,216.9	3,663.1	3,620.3	42.88	85.423		
6,300.0	6,019.5	5,502.4	5,436.4	24.5	19.6	-125.05	-2,729.8	-1,218.4	3,667.2	3,624.3	42.91	85.462		
6,350.0	6,065.8	5,547.6	5,480.4	24.7	19.8	-137.94	-2,736.4	-1,225.8	3,687.8	3,644.5	43.29	85.197		
6,400.0	6,113.0	5,607.2	5,524.6	24.9	20.0	-154.36	-2,743.1	-1,233.2	3,709.0	3,665.3	43.70	84.870		
6,450.0	6,160.7	5,637.7	5,568.4	25.1	20.1	-173.78	-2,749.8	-1,240.6	3,730.6	3,686.6	44.00	84.796		
6,500.0	6,208.5	5,681.9	5,611.5	25.3	20.3	166.34	-2,756.3	-1,247.8	3,752.6	3,708.3	44.33	84.654		
6,550.0	6,255.8	5,725.0	5,653.5	25.4	20.5	148.92	-2,762.6	-1,254.9	3,774.6	3,730.0	44.65	84.545		
6,600.0	6,302.5	5,766.5	5,694.0	25.6	20.6	135.12	-2,768.8	-1,261.7	3,796.6	3,751.7	44.95	84.463		
6,650.0	6,347.9	5,806.2	5,732.7	25.7	20.8	124.50	-2,774.6	-1,268.2	3,818.4	3,773.2	45.24	84.407		
6,700.0	6,391.6	5,843.6	5,769.2	25.9	20.9	116.25	-2,780.2	-1,274.3	3,839.9	3,794.4	45.51	84.371		
6,750.0	6,433.4	5,878.5	5,803.2	26.0	21.0	109.69	-2,785.3	-1,280.0	3,860.9	3,815.1	45.77	84.356		
6,800.0	6,472.8	5,910.4	5,834.3	26.1	21.2	104.34	-2,790.0	-1,285.3	3,881.4	3,835.4	46.01	84.359		
6,850.0	6,509.4	5,939.2	5,862.4	26.2	21.3	99.87	-2,794.3	-1,290.0	3,901.3	3,855.0	46.23	84.379		
6,900.0	6,543.0	5,964.5	5,887.1	26.3	21.4	96.08	-2,798.0	-1,294.2	3,920.4	3,873.9	46.44	84.415		
6,950.0	6,573.2	5,986.2	5,908.2	26.4	21.5	92.82	-2,801.2	-1,297.7	3,938.7	3,892.0	46.63	84.464		
7,000.0	6,599.8	6,004.0	5,925.6	26.5	21.5	89.99	-2,803.8	-1,300.6	3,956.0	3,909.2	46.80	84.525		
7,050.0	6,622.5	6,017.8	5,939.0	26.6	21.6	87.51	-2,805.9	-1,302.9	3,972.4	3,925.4	46.96	84.598		
7,100.0	6,641.1	6,027.4	5,948.5	26.7	21.6	85.35	-2,807.3	-1,304.5	3,987.6	3,940.5	47.09	84.681		
7,150.0	6,655.4	6,032.8	5,953.7	26.8	21.6	83.47	-2,808.1	-1,305.4	4,001.7	3,954.5	47.20	84.774		
7,200.0	6,665.4	6,034.0	5,954.8	26.9	21.6	81.85	-2,808.3	-1,305.5	4,014.4	3,967.1	47.30	84.875		
7,250.0	6,670.8	7,255.9	6,717.0	27.0	24.9	90.98	-2,917.8	-605.5	4,017.4	3,965.5	51.85	77.478		
7,285.7	6,672.0	7,308.5	6,717.0	27.1	25.1	90.86	-2,917.5	-569.9	4,018.1	3,966.0	52.11	77.115		
7,300.0	6,672.0	7,305.9	6,717.0	27.1	25.1	90.86	-2,917.4	-555.5	4,018.2	3,966.1	52.12	77.090		
7,400.0	6,672.0	7,405.9	6,717.0	27.3	25.5	90.86	-2,916.7	-455.6	4,019.2	3,966.4	52.76	76.174		
7,500.0	6,672.0	7,505.8	6,717.0	27.6	25.9	90.86	-2,915.9	-355.6	4,020.2	3,966.6	53.51	75.129		
7,600.0	6,672.0	7,605.8	6,717.0	28.0	26.4	90.85	-2,915.2	-255.6	4,021.1	3,966.8	54.36	73.973		
7,700.0	6,672.0	7,705.8	6,717.0	28.3	27.0	90.85	-2,914.4	-155.7	4,022.1	3,966.8	55.31	72.723		
7,800.0	6,672.0	7,805.7	6,717.0	28.8	27.5	90.85	-2,913.7	-55.7	4,023.1	3,966.8	56.35	71.397		
7,900.0	6,672.0	7,905.7	6,717.0	29.3	28.2	90.85	-2,912.9	44.3	4,024.1	3,966.7	57.48	70.012		
8,000.0	6,672.0	8,005.7	6,717.0	29.8	28.8	90.85	-2,912.2	144.2	4,025.1	3,966.5	58.69	68.583		
8,100.0	6,672.0	8,105.7	6,717.0	30.4	29.5	90.85	-2,911.4	244.2	4,026.2	3,966.2	59.98	67.124		
8,200.0	6,672.0	8,205.6	6,717.0	31.0	30.3	90.85	-2,910.7	344.2	4,027.2	3,965.9	61.34	65.649		
8,300.0	6,672.0	8,305.6	6,717.0	31.7	31.1	90.85	-2,909.9	444.1	4,028.2	3,965.5	62.78	64.168		
8,400.0	6,672.0	8,405.6	6,717.0	32.4	31.9	90.85	-2,909.2	544.1	4,029.3	3,965.0	64.27	62.691		
8,500.0	6,672.0	8,505.5	6,717.0	33.1	32.7	90.85	-2,908.5	644.1	4,030.3	3,964.5	65.83	61.226		
8,600.0	6,672.0	8,605.5	6,717.0	33.9	33.5	90.85	-2,907.7	744.0	4,031.4	3,964.0	67.44	59.779		
8,700.0	6,672.0	8,705.5	6,717.0	34.7	34.4	90.85	-2,907.0	844.0	4,032.5	3,963.4	69.10	58.357		
8,800.0	6,672.0	8,805.4	6,717.0	35.5	35.3	90.85	-2,906.2	944.0	4,033.6	3,962.7	70.81	56.963		
8,900.0	6,672.0	8,905.4	6,717.0	36.3	36.2	90.85	-2,905.5	1,043.9	4,034.6	3,962.1	72.57	55.600		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch State BB07-627 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
9,000.0	6,672.0	9,005.4	6,717.0	37.2	37.2	90.85	-2,904.8	1,143.9	4,035.7	3,961.4	74.36	54.272		
9,100.0	6,672.0	9,105.3	6,717.0	38.1	38.1	90.85	-2,904.0	1,243.9	4,036.8	3,960.6	76.20	52.980		
9,200.0	6,672.0	9,205.3	6,717.0	39.0	39.1	90.85	-2,903.3	1,343.8	4,038.0	3,959.9	78.07	51.725		
9,300.0	6,672.0	9,305.3	6,717.0	39.9	40.1	90.85	-2,902.5	1,443.8	4,039.1	3,959.1	79.97	50.508		
9,400.0	6,672.0	9,405.2	6,717.0	40.8	41.1	90.85	-2,901.8	1,543.7	4,040.2	3,958.3	81.90	49.328		
9,500.0	6,672.0	9,505.2	6,717.0	41.8	42.1	90.85	-2,901.1	1,643.7	4,041.3	3,957.5	83.87	48.187		
9,600.0	6,672.0	9,605.2	6,717.0	42.7	43.1	90.85	-2,900.3	1,743.7	4,042.5	3,956.6	85.86	47.083		
9,700.0	6,672.0	9,705.2	6,717.0	43.7	44.2	90.85	-2,899.6	1,843.6	4,043.6	3,955.8	87.87	46.017		
9,800.0	6,672.0	9,805.1	6,717.0	44.7	45.2	90.85	-2,898.9	1,943.6	4,044.8	3,954.9	89.91	44.986		
9,900.0	6,672.0	9,905.1	6,717.0	45.7	46.3	90.85	-2,898.1	2,043.6	4,046.0	3,954.0	91.97	43.991		
10,000.0	6,672.0	10,005.1	6,717.0	46.7	47.3	90.85	-2,897.4	2,143.5	4,047.1	3,953.1	94.05	43.030		
10,100.0	6,672.0	10,105.0	6,717.0	47.7	48.4	90.85	-2,896.7	2,243.5	4,048.3	3,952.2	96.15	42.103		
10,200.0	6,672.0	10,205.0	6,717.0	48.8	49.5	90.85	-2,895.9	2,343.5	4,049.5	3,951.3	98.27	41.208		
10,300.0	6,672.0	10,305.0	6,717.0	49.8	50.6	90.85	-2,895.2	2,443.4	4,050.7	3,950.3	100.41	40.344		
10,400.0	6,672.0	10,404.9	6,717.0	50.9	51.7	90.85	-2,894.5	2,543.4	4,051.9	3,949.4	102.56	39.510		
10,500.0	6,672.0	10,504.9	6,717.0	51.9	52.8	90.85	-2,893.7	2,643.4	4,053.2	3,948.4	104.72	38.705		
10,600.0	6,672.0	10,604.9	6,717.0	53.0	53.9	90.85	-2,893.0	2,743.3	4,054.4	3,947.5	106.90	37.927		
10,700.0	6,672.0	10,704.8	6,717.0	54.1	55.0	90.85	-2,892.3	2,843.3	4,055.6	3,946.5	109.09	37.177		
10,800.0	6,672.0	10,804.8	6,717.0	55.2	56.1	90.85	-2,891.6	2,943.3	4,056.9	3,945.6	111.29	36.452		
10,900.0	6,672.0	10,904.8	6,717.0	56.3	57.2	90.85	-2,890.8	3,043.2	4,058.1	3,944.6	113.51	35.751		
11,000.0	6,672.0	11,004.7	6,717.0	57.4	58.4	90.85	-2,890.1	3,143.2	4,059.4	3,943.6	115.74	35.074		
11,100.0	6,672.0	11,104.7	6,717.0	58.5	59.5	90.85	-2,889.4	3,243.1	4,060.6	3,942.7	117.97	34.420		
11,200.0	6,672.0	11,204.7	6,717.0	59.6	60.6	90.85	-2,888.7	3,343.1	4,061.9	3,941.7	120.22	33.788		
11,300.0	6,672.0	11,304.6	6,717.0	60.7	61.8	90.85	-2,887.9	3,443.1	4,063.2	3,940.7	122.47	33.176		
11,400.0	6,672.0	11,404.6	6,717.0	61.8	62.9	90.85	-2,887.2	3,543.0	4,064.5	3,939.7	124.74	32.584		
11,500.0	6,672.0	11,504.6	6,717.0	62.9	64.1	90.85	-2,886.5	3,643.0	4,065.8	3,938.8	127.01	32.012		
11,600.0	6,672.0	11,604.5	6,717.0	64.1	65.2	90.85	-2,885.8	3,743.0	4,067.1	3,937.8	129.29	31.457		
11,700.0	6,672.0	11,704.5	6,717.0	65.2	66.4	90.85	-2,885.0	3,842.9	4,068.4	3,936.8	131.58	30.921		
11,800.0	6,672.0	11,804.5	6,717.0	66.3	67.5	90.84	-2,884.3	3,942.9	4,069.7	3,935.9	133.87	30.401		
11,900.0	6,672.0	11,904.4	6,717.0	67.5	68.7	90.84	-2,883.6	4,042.9	4,071.1	3,934.9	136.17	29.897		
12,000.0	6,672.0	12,004.4	6,717.0	68.6	69.9	90.84	-2,882.9	4,142.8	4,072.4	3,933.9	138.48	29.408		
12,100.0	6,672.0	12,104.4	6,717.0	69.8	71.0	90.84	-2,882.2	4,242.8	4,073.7	3,933.0	140.79	28.935		
12,200.0	6,672.0	12,204.3	6,717.0	70.9	72.2	90.84	-2,881.4	4,342.7	4,075.1	3,932.0	143.11	28.475		
12,300.0	6,672.0	12,304.3	6,717.0	72.1	73.4	90.84	-2,880.7	4,442.7	4,076.5	3,931.0	145.43	28.030		
12,400.0	6,672.0	12,404.3	6,717.0	73.2	74.5	90.84	-2,880.0	4,542.7	4,077.8	3,930.1	147.76	27.597		
12,500.0	6,672.0	12,504.2	6,717.0	74.4	75.7	90.84	-2,879.3	4,642.6	4,079.2	3,929.1	150.10	27.177		
12,600.0	6,672.0	12,604.2	6,717.0	75.5	76.9	90.84	-2,878.6	4,742.6	4,080.6	3,928.2	152.43	26.769		
12,700.0	6,672.0	12,704.1	6,717.0	76.7	78.1	90.84	-2,877.9	4,842.6	4,082.0	3,927.2	154.78	26.373		
12,800.0	6,672.0	12,804.1	6,717.0	77.9	79.3	90.84	-2,877.1	4,942.5	4,083.4	3,926.3	157.13	25.988		
12,900.0	6,672.0	12,904.1	6,717.0	79.0	80.4	90.84	-2,876.4	5,042.5	4,084.8	3,925.3	159.48	25.614		
13,000.0	6,672.0	13,004.0	6,717.0	80.2	81.6	90.84	-2,875.7	5,142.4	4,086.2	3,924.4	161.83	25.250		
13,100.0	6,672.0	13,104.0	6,717.0	81.4	82.8	90.84	-2,875.0	5,242.4	4,087.7	3,923.5	164.19	24.896		
13,200.0	6,672.0	13,204.0	6,717.0	82.6	84.0	90.84	-2,874.3	5,342.4	4,089.1	3,922.6	166.55	24.551		
13,300.0	6,672.0	13,303.9	6,717.0	83.7	85.2	90.84	-2,873.6	5,442.3	4,090.6	3,921.6	168.92	24.216		
13,400.0	6,672.0	13,403.9	6,717.0	84.9	86.4	90.84	-2,872.9	5,542.3	4,092.0	3,920.7	171.29	23.889		
13,500.0	6,672.0	13,503.9	6,717.0	86.1	87.6	90.84	-2,872.1	5,642.3	4,093.5	3,919.8	173.66	23.571		
13,600.0	6,672.0	13,603.8	6,717.0	87.3	88.8	90.84	-2,871.4	5,742.2	4,094.9	3,918.9	176.04	23.262		
13,700.0	6,672.0	13,703.8	6,717.0	88.4	90.0	90.84	-2,870.7	5,842.2	4,096.4	3,918.0	178.42	22.960		
13,800.0	6,672.0	13,803.7	6,717.0	89.6	91.2	90.84	-2,870.0	5,942.1	4,097.9	3,917.1	180.80	22.666		
13,900.0	6,672.0	13,903.7	6,717.0	90.8	92.4	90.84	-2,869.3	6,042.1	4,099.4	3,916.2	183.18	22.379		
14,000.0	6,672.0	14,003.7	6,717.0	92.0	93.6	90.84	-2,868.6	6,142.1	4,100.9	3,915.3	185.57	22.099		
14,100.0	6,672.0	14,103.6	6,717.0	93.2	94.8	90.84	-2,867.9	6,242.0	4,102.4	3,914.5	187.96	21.826		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch State BB07-627 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance							Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
14,200.0	6,672.0	14,203.6	6,717.0	94.4	96.0	90.84	-2,867.2	6,342.0	4,103.9	3,913.6	190.35	21.560		
14,300.0	6,672.0	14,303.6	6,717.0	95.6	97.2	90.84	-2,866.5	6,441.9	4,105.5	3,912.7	192.74	21.300		
14,400.0	6,672.0	14,403.5	6,717.0	96.8	98.4	90.84	-2,865.8	6,541.9	4,107.0	3,911.9	195.14	21.046		
14,500.0	6,672.0	14,503.5	6,717.0	98.0	99.6	90.84	-2,865.1	6,641.9	4,108.5	3,911.0	197.54	20.799		
14,600.0	6,672.0	14,603.5	6,717.0	99.2	100.8	90.84	-2,864.4	6,741.8	4,110.1	3,910.1	199.94	20.557		
14,700.0	6,672.0	14,703.4	6,717.0	100.4	102.0	90.84	-2,863.7	6,841.8	4,111.6	3,909.3	202.34	20.321		
14,800.0	6,672.0	14,803.4	6,717.0	101.6	103.2	90.84	-2,863.0	6,941.7	4,113.2	3,908.5	204.74	20.090		
14,900.0	6,672.0	14,903.3	6,717.0	102.7	104.4	90.84	-2,862.3	7,041.7	4,114.8	3,907.6	207.15	19.864		
15,000.0	6,672.0	15,003.3	6,717.0	103.9	105.6	90.84	-2,861.6	7,141.7	4,116.4	3,906.8	209.56	19.643		
15,100.0	6,672.0	15,103.3	6,717.0	105.1	106.8	90.83	-2,860.9	7,241.6	4,118.0	3,906.0	211.97	19.427		
15,200.0	6,672.0	15,203.2	6,717.0	106.3	108.0	90.83	-2,860.2	7,341.6	4,119.6	3,905.2	214.38	19.216		
15,300.0	6,672.0	15,303.2	6,717.0	107.6	109.2	90.83	-2,859.5	7,441.5	4,121.2	3,904.4	216.79	19.010		
15,400.0	6,672.0	15,403.1	6,717.0	108.8	110.4	90.83	-2,858.8	7,541.5	4,122.8	3,903.6	219.20	18.808		
15,500.0	6,672.0	15,503.1	6,717.0	110.0	111.7	90.83	-2,858.1	7,641.4	4,124.4	3,902.8	221.62	18.610		
15,600.0	6,672.0	15,603.1	6,717.0	111.2	112.9	90.83	-2,857.4	7,741.4	4,126.0	3,902.0	224.04	18.417		
15,700.0	6,672.0	15,703.0	6,717.0	112.4	114.1	90.83	-2,856.7	7,841.4	4,127.7	3,901.2	226.46	18.227		
15,800.0	6,672.0	15,803.0	6,717.0	113.6	115.3	90.83	-2,856.0	7,941.3	4,129.3	3,900.5	228.87	18.042		
15,900.0	6,672.0	15,902.9	6,717.0	114.8	116.5	90.83	-2,855.3	8,041.3	4,131.0	3,899.7	231.30	17.860		
16,000.0	6,672.0	16,002.9	6,717.0	116.0	117.7	90.83	-2,854.6	8,141.2	4,132.7	3,898.9	233.72	17.682		
16,100.0	6,672.0	16,102.9	6,717.0	117.2	118.9	90.83	-2,853.9	8,241.2	4,134.3	3,898.2	236.14	17.508		
16,200.0	6,672.0	16,202.8	6,717.0	118.4	120.2	90.83	-2,853.2	8,341.2	4,136.0	3,897.4	238.57	17.337		
16,300.0	6,672.0	16,302.8	6,717.0	119.6	121.4	90.83	-2,852.5	8,441.1	4,137.7	3,896.7	240.99	17.169		
16,400.0	6,672.0	16,402.7	6,717.0	120.8	122.6	90.83	-2,851.8	8,541.1	4,139.4	3,896.0	243.42	17.005		
16,500.0	6,672.0	16,502.7	6,717.0	122.0	123.8	90.83	-2,851.1	8,641.0	4,141.1	3,895.3	245.85	16.844		
16,600.0	6,672.0	16,602.7	6,717.0	123.2	125.0	90.83	-2,850.4	8,741.0	4,142.8	3,894.5	248.28	16.686		
16,700.0	6,672.0	16,702.6	6,717.0	124.5	126.2	90.83	-2,849.7	8,840.9	4,144.5	3,893.8	250.71	16.531		
16,800.0	6,672.0	16,802.6	6,717.0	125.7	127.5	90.83	-2,849.0	8,940.9	4,146.3	3,893.1	253.14	16.379		
16,900.0	6,672.0	16,902.5	6,717.0	126.9	128.7	90.83	-2,848.3	9,040.9	4,148.0	3,892.4	255.57	16.230		
17,000.0	6,672.0	17,002.5	6,717.0	128.1	129.9	90.83	-2,847.7	9,140.8	4,149.8	3,891.7	258.00	16.084		
17,100.0	6,672.0	17,102.5	6,717.0	129.3	131.1	90.83	-2,847.0	9,240.8	4,151.5	3,891.1	260.44	15.940		
17,200.0	6,672.0	17,202.4	6,717.0	130.5	132.3	90.83	-2,846.3	9,340.7	4,153.3	3,890.4	262.87	15.799		
17,300.0	6,672.0	17,302.4	6,717.0	131.7	133.6	90.83	-2,845.6	9,440.7	4,155.0	3,889.7	265.31	15.661		
17,400.0	6,672.0	17,402.3	6,717.0	133.0	134.8	90.83	-2,844.9	9,540.6	4,156.8	3,889.1	267.75	15.525		
17,500.0	6,672.0	17,502.3	6,717.0	134.2	136.0	90.83	-2,844.2	9,640.6	4,158.6	3,888.4	270.18	15.392		
17,600.0	6,672.0	17,602.3	6,717.0	135.4	137.2	90.83	-2,843.5	9,740.5	4,160.4	3,887.8	272.62	15.261		
17,700.0	6,672.0	17,702.2	6,717.0	136.6	138.5	90.83	-2,842.9	9,840.5	4,162.2	3,887.1	275.06	15.132		
17,800.0	6,672.0	17,802.2	6,717.0	137.8	139.7	90.83	-2,842.2	9,940.5	4,164.0	3,886.5	277.50	15.005		
17,900.0	6,672.0	17,892.1	6,717.0	139.0	140.8	90.83	-2,841.6	10,030.4	4,165.8	3,886.0	279.81	14.888		
18,000.0	6,672.0	17,892.1	6,717.0	140.3	140.8	90.83	-2,841.6	10,030.4	4,169.1	3,888.2	280.89	14.843		
18,100.0	6,672.0	17,892.1	6,717.0	141.5	140.8	90.83	-2,841.6	10,030.4	4,174.8	3,893.0	281.81	14.814		
18,200.0	6,672.0	17,892.1	6,717.0	142.7	140.8	90.83	-2,841.6	10,030.4	4,182.8	3,900.3	282.57	14.803 SF		
18,300.0	6,672.0	17,892.1	6,717.0	143.9	140.8	90.83	-2,841.6	10,030.4	4,193.3	3,910.1	283.18	14.808		
18,342.5	6,672.0	17,892.1	6,717.0	144.4	140.8	90.83	-2,841.6	10,030.4	4,198.4	3,915.0	283.39	14.815		



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch State BB07-633 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-161.65	-2,296.6	-761.8	2,419.8					
100.0	100.0	84.0	84.0	0.1	0.1	-161.65	-2,296.6	-761.8	2,419.7	2,419.5	0.23	N/A		
200.0	200.0	184.0	184.0	0.5	0.4	-161.65	-2,296.6	-761.8	2,419.7	2,418.8	0.91	2,657.504		
300.0	300.0	284.0	284.0	0.8	0.8	-161.65	-2,296.6	-761.8	2,419.7	2,418.1	1.63	1,486.797		
400.0	400.0	384.0	384.0	1.2	1.1	-161.65	-2,296.6	-761.8	2,419.7	2,417.4	2.34	1,032.119		
500.0	500.0	484.0	484.0	1.6	1.5	-161.65	-2,296.6	-761.8	2,419.7	2,416.6	3.06	790.405		
600.0	600.0	584.0	584.0	1.9	1.9	-161.65	-2,296.6	-761.8	2,419.7	2,415.9	3.78	640.423		
700.0	700.0	684.0	684.0	2.3	2.2	-161.65	-2,296.6	-761.8	2,419.7	2,415.2	4.50	538.282		
800.0	800.0	784.0	784.0	2.6	2.6	-161.65	-2,296.6	-761.8	2,419.7	2,414.5	5.21	464.241		
900.0	900.0	884.0	884.0	3.0	2.9	-161.65	-2,296.6	-761.8	2,419.7	2,413.8	5.93	408.105		
1,000.0	1,000.0	984.0	984.0	3.4	3.3	-161.65	-2,296.6	-761.8	2,419.7	2,413.1	6.65	364.081		
1,100.0	1,100.0	1,084.0	1,084.0	3.7	3.7	-161.65	-2,296.6	-761.8	2,419.7	2,412.3	7.36	328.630		
1,200.0	1,200.0	1,184.0	1,184.0	4.1	4.0	-161.65	-2,296.6	-761.8	2,419.7	2,411.6	8.08	299.470		
1,300.0	1,300.0	1,284.0	1,284.0	4.4	4.4	-161.65	-2,296.6	-761.8	2,419.7	2,410.9	8.80	275.064		
1,400.0	1,400.0	1,384.0	1,384.0	4.8	4.7	-161.65	-2,296.6	-761.8	2,419.7	2,410.2	9.51	254.335		
1,500.0	1,500.0	1,484.0	1,484.0	5.1	5.1	-161.65	-2,296.6	-761.8	2,419.7	2,409.5	10.23	236.512		
1,600.0	1,600.0	1,584.0	1,584.0	5.5	5.4	-161.65	-2,296.6	-761.8	2,419.7	2,408.8	10.95	221.024		
1,700.0	1,700.0	1,684.0	1,684.0	5.9	5.8	-161.65	-2,296.6	-761.8	2,419.7	2,408.0	11.66	207.439		
1,800.0	1,800.0	1,784.0	1,784.0	6.2	6.2	-161.65	-2,296.6	-761.8	2,419.7	2,407.3	12.38	195.427		
1,900.0	1,900.0	1,884.0	1,884.0	6.6	6.5	-161.65	-2,296.6	-761.8	2,419.7	2,406.6	13.10	184.731		
2,000.0	2,000.0	1,984.0	1,984.0	6.9	6.9	-161.65	-2,296.6	-761.8	2,419.7	2,405.9	13.82	175.144		
2,100.0	2,100.0	2,084.0	2,084.0	7.3	7.2	-161.65	-2,296.6	-761.8	2,419.7	2,405.2	14.53	166.504		
2,200.0	2,200.0	2,184.0	2,184.0	7.7	7.6	-161.65	-2,296.6	-761.8	2,419.7	2,404.5	15.25	158.676	CC, ES	
2,300.0	2,300.0	2,256.1	2,256.1	8.0	7.8	-110.64	-2,296.8	-762.4	2,420.8	2,404.9	15.86	152.674		
2,400.0	2,399.8	2,322.8	2,322.7	8.4	8.1	-110.61	-2,297.4	-764.4	2,424.5	2,408.1	16.44	147.518		
2,500.0	2,499.5	2,389.4	2,389.2	8.7	8.3	-110.55	-2,298.5	-767.8	2,430.8	2,413.8	17.01	142.921		
2,600.0	2,598.7	2,455.8	2,455.4	9.1	8.5	-110.47	-2,300.1	-772.7	2,439.6	2,422.1	17.58	138.784		
2,700.0	2,697.5	2,521.9	2,521.2	9.4	8.8	-110.35	-2,302.1	-779.1	2,451.1	2,432.9	18.15	135.068		
2,800.0	2,795.6	2,587.8	2,586.6	9.8	9.0	-110.21	-2,304.6	-786.8	2,465.1	2,446.4	18.71	131.733		
2,900.0	2,893.1	2,653.2	2,651.3	10.1	9.2	-110.04	-2,307.5	-795.9	2,481.6	2,462.3	19.28	128.742		
3,000.0	2,989.6	2,746.2	2,743.1	10.5	9.5	-109.94	-2,312.1	-810.1	2,500.2	2,480.2	19.95	125.306		
3,100.0	3,085.3	2,843.2	2,838.8	10.9	9.9	-109.89	-2,316.9	-825.0	2,520.0	2,499.3	20.65	122.029		
3,200.0	3,179.8	2,939.3	2,933.7	11.2	10.2	-109.88	-2,321.6	-839.7	2,541.0	2,519.7	21.35	119.012		
3,300.0	3,273.2	3,034.6	3,027.8	11.6	10.5	-109.90	-2,326.2	-854.3	2,563.4	2,541.4	22.05	116.229		
3,387.5	3,353.8	3,117.2	3,109.3	11.9	10.8	-109.96	-2,330.3	-866.9	2,584.1	2,561.4	22.67	113.972		
3,400.0	3,365.2	3,128.9	3,120.9	12.0	10.9	-110.02	-2,330.9	-868.7	2,587.1	2,564.4	22.76	113.661		
3,500.0	3,456.8	3,222.8	3,213.5	12.4	11.2	-110.56	-2,335.5	-883.1	2,611.5	2,588.0	23.47	111.254		
3,600.0	3,548.3	3,316.7	3,306.2	12.8	11.5	-111.08	-2,340.1	-897.5	2,636.1	2,611.9	24.19	108.968		
3,700.0	3,639.8	3,410.6	3,398.9	13.2	11.9	-111.60	-2,344.7	-911.9	2,660.9	2,636.0	24.92	106.797		
3,800.0	3,731.4	3,504.5	3,491.5	13.6	12.2	-112.11	-2,349.3	-926.2	2,685.9	2,660.3	25.65	104.733		
3,900.0	3,822.9	3,601.6	3,584.2	14.0	12.6	-112.61	-2,353.9	-940.6	2,711.2	2,684.8	26.39	102.727		
4,000.0	3,914.4	3,707.7	3,676.9	14.4	13.0	-113.09	-2,358.5	-955.0	2,736.6	2,709.4	27.18	100.701		
4,100.0	4,005.9	3,786.2	3,769.6	14.8	13.2	-113.58	-2,363.1	-969.3	2,762.2	2,734.4	27.86	99.134		
4,200.0	4,097.5	3,880.1	3,862.2	15.2	13.6	-114.05	-2,367.7	-983.7	2,788.0	2,759.4	28.61	97.446		
4,300.0	4,189.0	3,974.0	3,954.9	15.6	13.9	-114.51	-2,372.3	-998.1	2,814.1	2,784.7	29.36	95.840		
4,400.0	4,280.5	4,067.8	4,047.6	16.1	14.3	-114.97	-2,376.9	-1,012.5	2,840.2	2,810.1	30.12	94.309		
4,500.0	4,372.1	4,161.7	4,140.2	16.5	14.6	-115.42	-2,381.5	-1,026.8	2,866.6	2,835.7	30.87	92.850		
4,600.0	4,463.6	4,255.6	4,232.9	16.9	15.0	-115.86	-2,386.1	-1,041.2	2,893.1	2,861.5	31.63	91.458		
4,700.0	4,555.1	4,349.5	4,325.6	17.4	15.3	-116.29	-2,390.7	-1,055.6	2,919.8	2,887.4	32.40	90.130		
4,800.0	4,646.7	4,443.4	4,418.2	17.8	15.6	-116.72	-2,395.3	-1,070.0	2,946.6	2,913.5	33.16	88.861		
4,900.0	4,738.2	4,537.3	4,510.9	18.2	16.0	-117.14	-2,399.9	-1,084.3	2,973.7	2,939.7	33.93	87.649		
5,000.0	4,829.7	4,631.2	4,603.6	18.7	16.3	-117.55	-2,404.5	-1,098.7	3,000.8	2,966.1	34.70	86.490		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch State BB07-633 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,100.0	4,921.3	4,725.1	4,696.2	19.1	16.7	-117.95	-2,409.1	-1,113.1	3,028.1	2,992.6	35.47	85.381		
5,200.0	5,012.8	4,819.0	4,788.9	19.5	17.0	-118.35	-2,413.7	-1,127.5	3,055.6	3,019.3	36.24	84.319		
5,300.0	5,104.3	4,912.9	4,881.6	20.0	17.4	-118.74	-2,418.3	-1,141.8	3,083.1	3,046.1	37.01	83.301		
5,400.0	5,195.8	5,006.7	4,974.3	20.4	17.7	-119.12	-2,422.9	-1,156.2	3,110.9	3,073.1	37.79	82.326		
5,500.0	5,287.4	5,100.6	5,066.9	20.9	18.1	-119.50	-2,427.5	-1,170.6	3,138.7	3,100.2	38.56	81.390		
5,600.0	5,378.9	5,205.5	5,159.6	21.3	18.5	-119.87	-2,432.1	-1,185.0	3,166.7	3,127.3	39.38	80.410		
5,700.0	5,470.4	5,288.4	5,252.3	21.8	18.8	-120.24	-2,436.7	-1,199.3	3,194.8	3,154.7	40.12	79.630		
5,800.0	5,562.0	5,382.3	5,344.9	22.2	19.1	-120.59	-2,441.3	-1,213.7	3,223.1	3,182.2	40.90	78.801		
5,900.0	5,653.5	5,476.2	5,437.6	22.7	19.5	-120.95	-2,445.9	-1,228.1	3,251.4	3,209.7	41.68	78.005		
6,000.0	5,745.0	5,570.1	5,530.3	23.1	19.8	-121.29	-2,450.5	-1,242.5	3,279.9	3,237.4	42.46	77.238		
6,100.0	5,836.6	5,664.0	5,622.9	23.6	20.2	-121.63	-2,455.1	-1,256.8	3,308.5	3,265.2	43.25	76.501		
6,200.0	5,928.1	5,757.9	5,715.6	24.0	20.5	-121.97	-2,459.7	-1,271.2	3,337.2	3,293.1	44.03	75.790		
6,278.6	6,000.0	5,831.6	5,788.4	24.4	20.8	-122.23	-2,463.3	-1,282.5	3,359.8	3,315.1	44.65	75.250		
6,290.0	6,010.4	5,842.3	5,798.9	24.4	20.8	-123.66	-2,463.8	-1,284.1	3,363.2	3,318.4	44.74	75.175		
6,300.0	6,019.5	5,851.7	5,808.2	24.5	20.9	-125.75	-2,464.3	-1,285.6	3,366.3	3,321.5	44.82	75.111		
6,350.0	6,065.8	5,899.7	5,855.6	24.7	21.1	-138.03	-2,466.6	-1,292.9	3,382.2	3,337.0	45.21	74.815		
6,400.0	6,113.0	5,967.8	5,922.9	24.9	21.3	-153.84	-2,469.8	-1,302.7	3,398.7	3,353.0	45.68	74.394		
6,450.0	6,160.7	6,038.4	5,993.3	25.1	21.6	-172.69	-2,473.0	-1,305.1	3,415.3	3,369.2	46.14	74.019		
6,500.0	6,208.5	6,108.5	6,063.1	25.3	21.8	167.93	-2,476.2	-1,299.3	3,432.0	3,385.4	46.56	73.709		
6,550.0	6,255.8	6,178.1	6,131.2	25.4	22.0	150.97	-2,479.3	-1,285.5	3,448.5	3,401.6	46.96	73.442		
6,600.0	6,302.5	6,247.2	6,196.8	25.6	22.2	137.56	-2,482.1	-1,264.2	3,464.8	3,417.5	47.33	73.206		
6,650.0	6,347.9	6,315.7	6,259.0	25.7	22.4	127.29	-2,484.8	-1,235.8	3,480.8	3,433.1	47.68	72.999		
6,700.0	6,391.6	6,383.5	6,317.1	25.9	22.6	119.36	-2,487.3	-1,200.9	3,496.1	3,448.1	48.02	72.811		
6,750.0	6,433.4	6,450.6	6,370.3	26.0	22.7	113.10	-2,489.5	-1,160.1	3,510.8	3,462.5	48.34	72.635		
6,800.0	6,472.8	6,517.1	6,418.3	26.1	22.9	108.05	-2,491.5	-1,114.2	3,524.7	3,476.0	48.64	72.465		
6,850.0	6,509.4	6,582.7	6,460.4	26.2	23.1	103.90	-2,493.1	-1,064.0	3,537.6	3,488.7	48.93	72.293		
6,900.0	6,543.0	6,647.5	6,496.4	26.3	23.2	100.46	-2,494.5	-1,010.1	3,549.5	3,500.3	49.22	72.113		
6,950.0	6,573.2	6,711.3	6,526.0	26.4	23.4	97.58	-2,495.5	-953.6	3,560.2	3,510.7	49.50	71.919		
7,000.0	6,599.8	6,774.2	6,549.2	26.5	23.5	95.18	-2,496.3	-895.2	3,569.7	3,519.9	49.78	71.708		
7,050.0	6,622.5	6,836.0	6,566.0	26.6	23.7	93.20	-2,496.7	-835.8	3,577.8	3,527.8	50.06	71.477		
7,100.0	6,641.1	6,896.7	6,576.4	26.7	23.9	91.60	-2,496.8	-776.0	3,584.6	3,534.2	50.33	71.228		
7,150.0	6,655.4	6,956.3	6,580.8	26.8	24.0	90.34	-2,496.7	-716.6	3,589.8	3,539.3	50.59	70.962		
7,200.0	6,665.4	7,007.8	6,581.0	26.9	24.2	89.45	-2,496.4	-665.1	3,593.6	3,542.8	50.83	70.694		
7,250.0	6,670.8	7,057.5	6,581.0	27.0	24.3	88.94	-2,496.2	-615.4	3,596.0	3,544.9	51.10	70.376		
7,285.7	6,672.0	7,093.2	6,581.0	27.1	24.4	88.81	-2,496.0	-579.7	3,596.8	3,545.5	51.29	70.131		
7,300.0	6,672.0	7,107.6	6,581.0	27.1	24.5	88.81	-2,495.9	-565.3	3,597.0	3,545.6	51.36	70.030		
7,400.0	6,672.0	7,207.8	6,581.0	27.3	24.9	88.81	-2,495.3	-465.1	3,598.1	3,546.1	52.00	69.194		
7,500.0	6,672.0	7,308.0	6,581.0	27.6	25.3	88.81	-2,494.7	-364.9	3,599.3	3,546.5	52.74	68.247		
7,600.0	6,672.0	7,408.2	6,581.0	28.0	25.8	88.81	-2,494.1	-264.7	3,600.4	3,546.8	53.59	67.189		
7,700.0	6,672.0	7,508.4	6,581.0	28.3	26.3	88.81	-2,493.6	-164.5	3,601.6	3,547.0	54.54	66.038		
7,800.0	6,672.0	7,608.6	6,581.0	28.8	26.9	88.81	-2,493.0	-64.3	3,602.7	3,547.1	55.58	64.826		
7,900.0	6,672.0	7,708.7	6,581.0	29.3	27.5	88.81	-2,492.4	35.8	3,603.9	3,547.2	56.71	63.549		
8,000.0	6,672.0	7,808.9	6,581.0	29.8	28.2	88.81	-2,491.8	136.0	3,605.0	3,547.1	57.93	62.235		
8,100.0	6,672.0	7,909.1	6,581.0	30.4	28.9	88.81	-2,491.2	236.2	3,606.2	3,547.0	59.22	60.894		
8,200.0	6,672.0	8,009.3	6,581.0	31.0	29.7	88.81	-2,490.5	336.4	3,607.3	3,546.8	60.59	59.541		
8,300.0	6,672.0	8,109.5	6,581.0	31.7	30.4	88.81	-2,489.9	436.6	3,608.5	3,546.5	62.02	58.180		
8,400.0	6,672.0	8,209.7	6,581.0	32.4	31.3	88.81	-2,489.3	536.8	3,609.7	3,546.1	63.53	56.823		
8,500.0	6,672.0	8,309.9	6,581.0	33.1	32.1	88.81	-2,488.7	637.0	3,610.8	3,545.7	65.09	55.475		
8,600.0	6,672.0	8,410.1	6,581.0	33.9	33.0	88.81	-2,488.0	737.2	3,612.0	3,545.3	66.71	54.147		
8,700.0	6,672.0	8,510.3	6,581.0	34.7	33.8	88.81	-2,487.4	837.4	3,613.2	3,544.8	68.38	52.842		
8,800.0	6,672.0	8,610.5	6,581.0	35.5	34.8	88.81	-2,486.7	937.6	3,614.3	3,544.3	70.09	51.564		
8,900.0	6,672.0	8,710.7	6,581.0	36.3	35.7	88.81	-2,486.1	1,037.8	3,615.5	3,543.7	71.86	50.315		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch State BB07-633 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
9,000.0	6,672.0	8,810.9	6,581.0	37.2	36.6	88.81	-2,485.4	1,138.0	3,616.7	3,543.0	73.66	49.099		
9,100.0	6,672.0	8,911.1	6,581.0	38.1	37.6	88.81	-2,484.7	1,238.2	3,617.9	3,542.4	75.50	47.917		
9,200.0	6,672.0	9,011.3	6,581.0	39.0	38.6	88.81	-2,484.1	1,338.4	3,619.1	3,541.7	77.38	46.769		
9,300.0	6,672.0	9,111.5	6,581.0	39.9	39.6	88.81	-2,483.4	1,438.6	3,620.2	3,540.9	79.29	45.656		
9,400.0	6,672.0	9,211.7	6,581.0	40.8	40.6	88.81	-2,482.7	1,538.8	3,621.4	3,540.2	81.24	44.579		
9,500.0	6,672.0	9,311.9	6,581.0	41.8	41.6	88.81	-2,482.0	1,639.0	3,622.6	3,539.4	83.21	43.537		
9,600.0	6,672.0	9,412.1	6,581.0	42.7	42.6	88.81	-2,481.3	1,739.1	3,623.8	3,538.6	85.21	42.530		
9,700.0	6,672.0	9,512.3	6,581.0	43.7	43.7	88.81	-2,480.6	1,839.3	3,625.0	3,537.8	87.23	41.557		
9,800.0	6,672.0	9,612.5	6,581.0	44.7	44.7	88.81	-2,479.9	1,939.5	3,626.2	3,536.9	89.27	40.618		
9,900.0	6,672.0	9,712.7	6,581.0	45.7	45.8	88.82	-2,479.2	2,039.7	3,627.4	3,536.0	91.34	39.712		
10,000.0	6,672.0	9,812.9	6,581.0	46.7	46.9	88.82	-2,478.5	2,139.9	3,628.6	3,535.1	93.43	38.837		
10,100.0	6,672.0	9,913.1	6,581.0	47.7	48.0	88.82	-2,477.8	2,240.1	3,629.8	3,534.2	95.54	37.993		
10,200.0	6,672.0	10,013.3	6,581.0	48.8	49.0	88.82	-2,477.1	2,340.3	3,631.0	3,533.3	97.66	37.178		
10,300.0	6,672.0	10,113.5	6,581.0	49.8	50.1	88.82	-2,476.3	2,440.5	3,632.2	3,532.4	99.80	36.393		
10,400.0	6,672.0	10,213.7	6,581.0	50.9	51.2	88.82	-2,475.6	2,540.7	3,633.4	3,531.4	101.96	35.634		
10,500.0	6,672.0	10,313.9	6,581.0	51.9	52.3	88.82	-2,474.8	2,640.9	3,634.6	3,530.4	104.13	34.903		
10,600.0	6,672.0	10,414.1	6,581.0	53.0	53.5	88.82	-2,474.1	2,741.1	3,635.8	3,529.5	106.32	34.197		
10,700.0	6,672.0	10,514.3	6,581.0	54.1	54.6	88.82	-2,473.3	2,841.3	3,637.0	3,528.5	108.52	33.515		
10,800.0	6,672.0	10,614.4	6,581.0	55.2	55.7	88.82	-2,472.6	2,941.5	3,638.2	3,527.5	110.73	32.857		
10,900.0	6,672.0	10,714.6	6,581.0	56.3	56.8	88.82	-2,471.8	3,041.7	3,639.4	3,526.4	112.95	32.221		
11,000.0	6,672.0	10,814.8	6,581.0	57.4	58.0	88.82	-2,471.0	3,141.9	3,640.6	3,525.4	115.18	31.607		
11,100.0	6,672.0	10,915.0	6,581.0	58.5	59.1	88.82	-2,470.2	3,242.1	3,641.8	3,524.4	117.42	31.014		
11,200.0	6,672.0	11,015.2	6,581.0	59.6	60.3	88.82	-2,469.5	3,342.3	3,643.0	3,523.4	119.68	30.441		
11,300.0	6,672.0	11,115.4	6,581.0	60.7	61.4	88.82	-2,468.7	3,442.5	3,644.3	3,522.3	121.94	29.886		
11,400.0	6,672.0	11,215.6	6,581.0	61.8	62.6	88.82	-2,467.9	3,542.6	3,645.5	3,521.3	124.21	29.350		
11,500.0	6,672.0	11,315.8	6,581.0	62.9	63.7	88.82	-2,467.1	3,642.8	3,646.7	3,520.2	126.49	28.831		
11,600.0	6,672.0	11,416.0	6,581.0	64.1	64.9	88.82	-2,466.3	3,743.0	3,647.9	3,519.2	128.77	28.329		
11,700.0	6,672.0	11,516.2	6,581.0	65.2	66.0	88.82	-2,465.5	3,843.2	3,649.2	3,518.1	131.06	27.843		
11,800.0	6,672.0	11,616.4	6,581.0	66.3	67.2	88.82	-2,464.6	3,943.4	3,650.4	3,517.0	133.36	27.372		
11,900.0	6,672.0	11,716.6	6,581.0	67.5	68.4	88.82	-2,463.8	4,043.6	3,651.6	3,516.0	135.67	26.916		
12,000.0	6,672.0	11,816.8	6,581.0	68.6	69.5	88.82	-2,463.0	4,143.8	3,652.9	3,514.9	137.98	26.474		
12,100.0	6,672.0	11,917.0	6,581.0	69.8	70.7	88.82	-2,462.2	4,244.0	3,654.1	3,513.8	140.30	26.045		
12,200.0	6,672.0	12,017.2	6,581.0	70.9	71.9	88.82	-2,461.3	4,344.2	3,655.3	3,512.7	142.62	25.629		
12,300.0	6,672.0	12,117.4	6,581.0	72.1	73.1	88.82	-2,460.5	4,444.4	3,656.6	3,511.6	144.95	25.226		
12,400.0	6,672.0	12,217.6	6,581.0	73.2	74.2	88.83	-2,459.6	4,544.6	3,657.8	3,510.5	147.29	24.835		
12,500.0	6,672.0	12,317.8	6,581.0	74.4	75.4	88.83	-2,458.8	4,644.8	3,659.0	3,509.4	149.63	24.455		
12,600.0	6,672.0	12,418.0	6,581.0	75.5	76.6	88.83	-2,457.9	4,745.0	3,660.3	3,508.3	151.97	24.086		
12,700.0	6,672.0	12,518.2	6,581.0	76.7	77.8	88.83	-2,457.0	4,845.2	3,661.5	3,507.2	154.32	23.727		
12,800.0	6,672.0	12,618.4	6,581.0	77.9	79.0	88.83	-2,456.1	4,945.4	3,662.8	3,506.1	156.67	23.379		
12,900.0	6,672.0	12,718.6	6,581.0	79.0	80.2	88.83	-2,455.3	5,045.6	3,664.0	3,505.0	159.02	23.041		
13,000.0	6,672.0	12,818.8	6,581.0	80.2	81.4	88.83	-2,454.4	5,145.8	3,665.3	3,503.9	161.38	22.711		
13,100.0	6,672.0	12,919.0	6,581.0	81.4	82.6	88.83	-2,453.5	5,245.9	3,666.5	3,502.8	163.75	22.391		
13,200.0	6,672.0	13,019.2	6,581.0	82.6	83.8	88.83	-2,452.6	5,346.1	3,667.8	3,501.7	166.12	22.080		
13,300.0	6,672.0	13,119.4	6,581.0	83.7	84.9	88.83	-2,451.7	5,446.3	3,669.0	3,500.6	168.49	21.777		
13,400.0	6,672.0	13,219.6	6,581.0	84.9	86.1	88.83	-2,450.8	5,546.5	3,670.3	3,499.4	170.86	21.481		
13,500.0	6,672.0	13,319.8	6,581.0	86.1	87.3	88.83	-2,449.9	5,646.7	3,671.6	3,498.3	173.24	21.194		
13,600.0	6,672.0	13,420.0	6,581.0	87.3	88.5	88.83	-2,449.0	5,746.9	3,672.8	3,497.2	175.62	20.914		
13,700.0	6,672.0	13,520.2	6,581.0	88.4	89.7	88.83	-2,448.0	5,847.1	3,674.1	3,496.1	178.00	20.641		
13,800.0	6,672.0	13,620.4	6,581.0	89.6	90.9	88.83	-2,447.1	5,947.3	3,675.4	3,495.0	180.39	20.375		
13,900.0	6,672.0	13,720.6	6,581.0	90.8	92.1	88.83	-2,446.2	6,047.5	3,676.6	3,493.9	182.77	20.116		
14,000.0	6,672.0	13,820.8	6,581.0	92.0	93.3	88.83	-2,445.2	6,147.7	3,677.9	3,492.7	185.16	19.863		
14,100.0	6,672.0	13,921.0	6,581.0	93.2	94.6	88.83	-2,444.3	6,247.9	3,679.2	3,491.6	187.56	19.616		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch State BB07-633 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance						Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
14,200.0	6,672.0	14,021.2	6,581.0	94.4	95.8	88.83	-2,443.3	6,348.1	3,680.4	3,490.5	189.95	19.376		
14,300.0	6,672.0	14,121.4	6,581.0	95.6	97.0	88.83	-2,442.4	6,448.3	3,681.7	3,489.4	192.35	19.141		
14,400.0	6,672.0	14,221.6	6,581.0	96.8	98.2	88.83	-2,441.4	6,548.5	3,683.0	3,488.2	194.75	18.911		
14,500.0	6,672.0	14,321.8	6,581.0	98.0	99.4	88.83	-2,440.4	6,648.7	3,684.3	3,487.1	197.15	18.688		
14,600.0	6,672.0	14,422.0	6,581.0	99.2	100.6	88.83	-2,439.4	6,748.9	3,685.6	3,486.0	199.56	18.469		
14,700.0	6,672.0	14,522.2	6,581.0	100.4	101.8	88.83	-2,438.5	6,849.1	3,686.8	3,484.9	201.96	18.255		
14,800.0	6,672.0	14,622.4	6,581.0	101.6	103.0	88.83	-2,437.5	6,949.3	3,688.1	3,483.8	204.37	18.046		
14,900.0	6,672.0	14,722.6	6,581.0	102.7	104.2	88.84	-2,436.5	7,049.4	3,689.4	3,482.6	206.78	17.842		
15,000.0	6,672.0	14,822.8	6,581.0	103.9	105.4	88.84	-2,435.5	7,149.6	3,690.7	3,481.5	209.19	17.643		
15,100.0	6,672.0	14,923.0	6,581.0	105.1	106.7	88.84	-2,434.5	7,249.8	3,692.0	3,480.4	211.60	17.448		
15,200.0	6,672.0	15,023.2	6,581.0	106.3	107.9	88.84	-2,433.5	7,350.0	3,693.3	3,479.3	214.02	17.257		
15,300.0	6,672.0	15,123.4	6,581.0	107.6	109.1	88.84	-2,432.5	7,450.2	3,694.6	3,478.1	216.43	17.070		
15,400.0	6,672.0	15,223.6	6,581.0	108.8	110.3	88.84	-2,431.4	7,550.4	3,695.9	3,477.0	218.85	16.888		
15,500.0	6,672.0	15,323.8	6,581.0	110.0	111.5	88.84	-2,430.4	7,650.6	3,697.2	3,475.9	221.27	16.709		
15,600.0	6,672.0	15,424.0	6,581.0	111.2	112.7	88.84	-2,429.4	7,750.8	3,698.5	3,474.8	223.69	16.534		
15,700.0	6,672.0	15,524.2	6,581.0	112.4	113.9	88.84	-2,428.3	7,851.0	3,699.8	3,473.7	226.11	16.363		
15,800.0	6,672.0	15,624.4	6,581.0	113.6	115.2	88.84	-2,427.3	7,951.2	3,701.1	3,472.5	228.53	16.195		
15,900.0	6,672.0	15,724.6	6,581.0	114.8	116.4	88.84	-2,426.2	8,051.4	3,702.4	3,471.4	230.96	16.031		
16,000.0	6,672.0	15,824.8	6,581.0	116.0	117.6	88.84	-2,425.2	8,151.6	3,703.7	3,470.3	233.38	15.869		
16,100.0	6,672.0	15,925.0	6,581.0	117.2	118.8	88.84	-2,424.1	8,251.8	3,705.0	3,469.2	235.81	15.712		
16,200.0	6,672.0	16,025.2	6,581.0	118.4	120.0	88.84	-2,423.1	8,352.0	3,706.3	3,468.1	238.24	15.557		
16,300.0	6,672.0	16,125.4	6,581.0	119.6	121.3	88.84	-2,422.0	8,452.2	3,707.6	3,467.0	240.67	15.406		
16,400.0	6,672.0	16,225.6	6,581.0	120.8	122.5	88.84	-2,420.9	8,552.4	3,708.9	3,465.8	243.10	15.257		
16,500.0	6,672.0	16,325.8	6,581.0	122.0	123.7	88.84	-2,419.8	8,652.6	3,710.3	3,464.7	245.53	15.111		
16,600.0	6,672.0	16,426.0	6,581.0	123.2	124.9	88.84	-2,418.7	8,752.7	3,711.6	3,463.6	247.96	14.968		
16,700.0	6,672.0	16,526.2	6,581.0	124.5	126.1	88.84	-2,417.6	8,852.9	3,712.9	3,462.5	250.40	14.828		
16,800.0	6,672.0	16,626.4	6,581.0	125.7	127.4	88.84	-2,416.5	8,953.1	3,714.2	3,461.4	252.83	14.691		
16,900.0	6,672.0	16,726.6	6,581.0	126.9	128.6	88.84	-2,415.4	9,053.3	3,715.6	3,460.3	255.27	14.556		
17,000.0	6,672.0	16,826.8	6,581.0	128.1	129.8	88.84	-2,414.3	9,153.5	3,716.9	3,459.2	257.70	14.423		
17,100.0	6,672.0	16,927.0	6,581.0	129.3	131.0	88.84	-2,413.2	9,253.7	3,718.2	3,458.1	260.14	14.293		
17,200.0	6,672.0	17,027.2	6,581.0	130.5	132.3	88.84	-2,412.1	9,353.9	3,719.5	3,457.0	262.58	14.165		
17,300.0	6,672.0	17,127.4	6,581.0	131.7	133.5	88.84	-2,411.0	9,454.1	3,720.9	3,455.9	265.02	14.040		
17,400.0	6,672.0	17,227.6	6,581.0	133.0	134.7	88.85	-2,409.8	9,554.3	3,722.2	3,454.7	267.46	13.917		
17,500.0	6,672.0	17,327.8	6,581.0	134.2	135.9	88.85	-2,408.7	9,654.5	3,723.5	3,453.6	269.90	13.796		
17,600.0	6,672.0	17,428.0	6,581.0	135.4	137.2	88.85	-2,407.5	9,754.7	3,724.9	3,452.5	272.34	13.677		
17,700.0	6,672.0	17,528.2	6,581.0	136.6	138.4	88.85	-2,406.4	9,854.9	3,726.2	3,451.4	274.78	13.561		
17,800.0	6,672.0	17,628.4	6,581.0	137.8	139.6	88.85	-2,405.2	9,955.1	3,727.6	3,450.3	277.22	13.446		
17,900.0	6,672.0	17,701.3	6,581.0	139.0	140.5	88.85	-2,404.4	10,028.0	3,729.0	3,449.7	279.31	13.351		
18,000.0	6,672.0	17,701.3	6,581.0	140.3	140.5	88.85	-2,404.4	10,028.0	3,732.4	3,452.1	280.33	13.314		
18,100.0	6,672.0	17,701.3	6,581.0	141.5	140.5	88.85	-2,404.4	10,028.0	3,738.5	3,457.4	281.16	13.297 SF		
18,200.0	6,672.0	17,701.3	6,581.0	142.7	140.5	88.85	-2,404.4	10,028.0	3,747.3	3,465.5	281.79	13.298		
18,300.0	6,672.0	17,701.3	6,581.0	143.9	140.5	88.85	-2,404.4	10,028.0	3,758.7	3,476.5	282.23	13.318		
18,342.5	6,672.0	17,701.3	6,581.0	144.4	140.5	88.85	-2,404.4	10,028.0	3,764.3	3,482.0	282.35	13.332		



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch State BB07-639 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-161.54	-2,274.8	-759.3	2,398.2					
100.0	100.0	84.0	84.0	0.1	0.1	-161.54	-2,274.8	-759.3	2,398.1	2,397.9	0.23	N/A		
200.0	200.0	184.0	184.0	0.5	0.4	-161.54	-2,274.8	-759.3	2,398.1	2,397.2	0.91	2,633.819		
300.0	300.0	284.0	284.0	0.8	0.8	-161.54	-2,274.8	-759.3	2,398.1	2,396.5	1.63	1,473.547		
400.0	400.0	384.0	384.0	1.2	1.1	-161.54	-2,274.8	-759.3	2,398.1	2,395.8	2.34	1,022.921		
500.0	500.0	484.0	484.0	1.6	1.5	-161.54	-2,274.8	-759.3	2,398.1	2,395.1	3.06	783.361		
600.0	600.0	584.0	584.0	1.9	1.9	-161.54	-2,274.8	-759.3	2,398.1	2,394.4	3.78	634.716		
700.0	700.0	684.0	684.0	2.3	2.2	-161.54	-2,274.8	-759.3	2,398.1	2,393.6	4.50	533.485		
800.0	800.0	784.0	784.0	2.6	2.6	-161.54	-2,274.8	-759.3	2,398.1	2,392.9	5.21	460.103		
900.0	900.0	884.0	884.0	3.0	2.9	-161.54	-2,274.8	-759.3	2,398.1	2,392.2	5.93	404.468		
1,000.0	1,000.0	984.0	984.0	3.4	3.3	-161.54	-2,274.8	-759.3	2,398.1	2,391.5	6.65	360.836		
1,100.0	1,100.0	1,084.0	1,084.0	3.7	3.7	-161.54	-2,274.8	-759.3	2,398.1	2,390.8	7.36	325.701		
1,200.0	1,200.0	1,184.0	1,184.0	4.1	4.0	-161.54	-2,274.8	-759.3	2,398.1	2,390.1	8.08	296.801		
1,300.0	1,300.0	1,284.0	1,284.0	4.4	4.4	-161.54	-2,274.8	-759.3	2,398.1	2,389.3	8.80	272.612		
1,400.0	1,400.0	1,384.0	1,384.0	4.8	4.7	-161.54	-2,274.8	-759.3	2,398.1	2,388.6	9.51	252.069		
1,500.0	1,500.0	1,484.0	1,484.0	5.1	5.1	-161.54	-2,274.8	-759.3	2,398.1	2,387.9	10.23	234.404		
1,600.0	1,600.0	1,584.0	1,584.0	5.5	5.4	-161.54	-2,274.8	-759.3	2,398.1	2,387.2	10.95	219.054		
1,700.0	1,700.0	1,684.0	1,684.0	5.9	5.8	-161.54	-2,274.8	-759.3	2,398.1	2,386.5	11.66	205.590		
1,800.0	1,800.0	1,784.0	1,784.0	6.2	6.2	-161.54	-2,274.8	-759.3	2,398.1	2,385.8	12.38	193.686		
1,900.0	1,900.0	1,884.0	1,884.0	6.6	6.5	-161.54	-2,274.8	-759.3	2,398.1	2,385.0	13.10	183.084		
2,000.0	2,000.0	1,984.0	1,984.0	6.9	6.9	-161.54	-2,274.8	-759.3	2,398.1	2,384.3	13.82	173.583		
2,100.0	2,100.0	2,084.0	2,084.0	7.3	7.2	-161.54	-2,274.8	-759.3	2,398.1	2,383.6	14.53	165.020		
2,200.0	2,200.0	2,184.0	2,184.0	7.7	7.6	-161.54	-2,274.8	-759.3	2,398.1	2,382.9	15.25	157.261	CC, ES	
2,300.0	2,300.0	2,276.8	2,276.8	8.0	7.9	-110.54	-2,274.5	-760.3	2,398.9	2,382.9	15.93	150.567		
2,400.0	2,399.8	2,368.2	2,368.1	8.4	8.2	-110.51	-2,273.7	-764.1	2,401.2	2,384.6	16.60	144.623		
2,500.0	2,499.5	2,459.5	2,459.2	8.7	8.6	-110.45	-2,272.3	-770.8	2,405.1	2,387.8	17.27	139.228		
2,600.0	2,598.7	2,550.8	2,549.9	9.1	8.9	-110.37	-2,270.3	-780.3	2,410.6	2,392.6	17.95	134.310		
2,700.0	2,697.5	2,642.0	2,640.2	9.4	9.2	-110.26	-2,267.7	-792.6	2,417.6	2,399.0	18.62	129.822		
2,800.0	2,795.6	2,740.9	2,737.9	9.8	9.5	-110.16	-2,264.5	-807.7	2,426.0	2,406.7	19.33	125.519		
2,900.0	2,893.1	2,840.2	2,836.0	10.1	9.9	-110.11	-2,261.2	-822.9	2,435.7	2,415.7	20.04	121.549		
3,000.0	2,989.6	2,939.2	2,933.8	10.5	10.3	-110.11	-2,258.0	-838.1	2,446.6	2,425.8	20.75	117.895		
3,100.0	3,085.3	3,037.8	3,031.1	10.9	10.6	-110.16	-2,254.8	-853.1	2,458.7	2,437.2	21.47	114.527		
3,200.0	3,179.8	3,135.7	3,127.8	11.2	11.0	-110.26	-2,251.6	-868.1	2,472.1	2,449.9	22.19	111.419		
3,300.0	3,273.2	3,232.9	3,223.9	11.6	11.3	-110.40	-2,248.5	-883.0	2,486.8	2,463.8	22.91	108.549		
3,387.5	3,353.8	3,317.2	3,307.2	11.9	11.6	-110.56	-2,245.7	-895.9	2,500.7	2,477.2	23.54	106.216		
3,400.0	3,365.2	3,329.2	3,319.0	12.0	11.7	-110.62	-2,245.3	-897.7	2,502.8	2,479.2	23.63	105.894		
3,500.0	3,456.8	3,425.3	3,413.9	12.4	12.0	-111.13	-2,242.2	-912.4	2,519.5	2,495.1	24.37	103.403		
3,600.0	3,548.3	3,521.3	3,508.7	12.8	12.4	-111.63	-2,239.1	-927.1	2,536.4	2,511.3	25.10	101.039		
3,700.0	3,639.8	3,617.3	3,603.5	13.2	12.7	-112.12	-2,236.0	-941.8	2,553.5	2,527.6	25.85	98.794		
3,800.0	3,731.4	3,713.3	3,698.4	13.6	13.1	-112.60	-2,232.8	-956.5	2,570.8	2,544.2	26.60	96.662		
3,900.0	3,822.9	3,809.3	3,793.2	14.0	13.4	-113.08	-2,229.7	-971.2	2,588.2	2,560.9	27.35	94.637		
4,000.0	3,914.4	3,905.3	3,888.0	14.4	13.8	-113.56	-2,226.6	-985.9	2,605.9	2,577.8	28.11	92.712		
4,100.0	4,005.9	4,001.4	3,982.9	14.8	14.1	-114.02	-2,223.5	-1,000.6	2,623.7	2,594.9	28.87	90.881		
4,200.0	4,097.5	4,102.6	4,077.7	15.2	14.5	-114.49	-2,220.3	-1,015.3	2,641.7	2,612.1	29.66	89.082		
4,300.0	4,189.0	4,206.6	4,172.6	15.6	14.9	-114.94	-2,217.2	-1,030.0	2,659.9	2,629.5	30.45	87.343		
4,400.0	4,280.5	4,289.4	4,267.4	16.1	15.2	-115.39	-2,214.1	-1,044.7	2,678.3	2,647.1	31.18	85.902		
4,500.0	4,372.1	4,385.4	4,362.2	16.5	15.5	-115.83	-2,211.0	-1,059.4	2,696.8	2,664.8	31.95	84.397		
4,600.0	4,463.6	4,481.5	4,457.1	16.9	15.9	-116.27	-2,207.9	-1,074.1	2,715.4	2,682.7	32.73	82.961		
4,700.0	4,555.1	4,577.5	4,551.9	17.4	16.2	-116.70	-2,204.7	-1,088.7	2,734.3	2,700.8	33.51	81.590		
4,800.0	4,646.7	4,673.5	4,646.7	17.8	16.6	-117.13	-2,201.6	-1,103.4	2,753.2	2,719.0	34.29	80.282		
4,900.0	4,738.2	4,769.5	4,741.6	18.2	16.9	-117.55	-2,198.5	-1,118.1	2,772.4	2,737.3	35.08	79.031		
5,000.0	4,829.7	4,865.5	4,836.4	18.7	17.3	-117.97	-2,195.4	-1,132.8	2,791.7	2,755.8	35.87	77.835		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch State BB07-639 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,100.0	4,921.3	4,961.5	4,931.2	19.1	17.7	-118.38	-2,192.2	-1,147.5	2,811.1	2,774.4	36.65	76.691		
5,200.0	5,012.8	5,057.6	5,026.1	19.5	18.0	-118.78	-2,189.1	-1,162.2	2,830.7	2,793.2	37.44	75.595		
5,300.0	5,104.3	5,153.6	5,120.9	20.0	18.4	-119.18	-2,186.0	-1,176.9	2,850.4	2,812.1	38.24	74.546		
5,400.0	5,195.8	5,249.6	5,215.7	20.4	18.7	-119.57	-2,182.9	-1,191.6	2,870.2	2,831.2	39.03	73.540		
5,500.0	5,287.4	5,345.6	5,310.6	20.9	19.1	-119.96	-2,179.8	-1,206.3	2,890.2	2,850.4	39.82	72.575		
5,600.0	5,378.9	5,441.6	5,405.4	21.3	19.4	-120.35	-2,176.6	-1,221.0	2,910.3	2,869.7	40.62	71.649		
5,700.0	5,470.4	5,537.7	5,500.3	21.8	19.8	-120.72	-2,173.5	-1,235.7	2,930.6	2,889.1	41.42	70.759		
5,800.0	5,562.0	5,633.7	5,595.1	22.2	20.1	-121.10	-2,170.4	-1,250.4	2,950.9	2,908.7	42.21	69.905		
5,900.0	5,653.5	5,729.7	5,689.9	22.7	20.5	-121.47	-2,167.3	-1,265.1	2,971.4	2,928.4	43.01	69.083		
6,000.0	5,745.0	5,825.7	5,784.8	23.1	20.9	-121.83	-2,164.1	-1,279.7	2,992.0	2,948.2	43.81	68.293		
6,100.0	5,836.6	5,921.7	5,879.6	23.6	21.2	-122.19	-2,161.0	-1,294.4	3,012.7	2,968.1	44.61	67.533		
6,200.0	5,928.1	6,017.7	5,974.4	24.0	21.6	-122.54	-2,157.9	-1,309.1	3,033.6	2,988.2	45.41	66.800		
6,278.6	6,000.0	6,139.0	6,094.5	24.4	22.0	-123.03	-2,153.3	-1,324.9	3,049.6	3,003.3	46.24	65.949		
6,290.0	6,010.4	6,156.5	6,111.9	24.4	22.1	-124.58	-2,152.6	-1,325.5	3,051.9	3,005.5	46.36	65.831		
6,300.0	6,019.5	6,171.6	6,127.1	24.5	22.1	-126.62	-2,152.0	-1,325.7	3,054.1	3,007.6	46.46	65.737		
6,350.0	6,065.8	6,244.9	6,200.1	24.7	22.4	-138.66	-2,149.0	-1,321.2	3,065.0	3,018.1	46.93	65.313		
6,400.0	6,113.0	6,314.6	6,268.7	24.9	22.6	-154.26	-2,146.2	-1,309.0	3,076.3	3,028.9	47.35	64.963		
6,450.0	6,160.7	6,381.3	6,332.5	25.1	22.8	-172.87	-2,143.6	-1,290.1	3,087.8	3,040.1	47.75	64.671		
6,500.0	6,208.5	6,445.1	6,391.3	25.3	23.0	168.00	-2,141.1	-1,265.6	3,099.6	3,051.4	48.11	64.427		
6,550.0	6,255.8	6,506.4	6,445.2	25.4	23.2	151.31	-2,138.8	-1,236.5	3,111.3	3,062.9	48.45	64.221		
6,600.0	6,302.5	6,565.5	6,494.2	25.6	23.3	138.17	-2,136.7	-1,203.5	3,123.1	3,074.3	48.76	64.044		
6,650.0	6,347.9	6,622.7	6,538.3	25.7	23.5	128.17	-2,134.8	-1,167.3	3,134.6	3,085.6	49.06	63.888		
6,700.0	6,391.6	6,678.1	6,577.8	25.9	23.6	120.51	-2,133.0	-1,128.4	3,145.9	3,096.6	49.35	63.746		
6,750.0	6,433.4	6,732.1	6,612.7	26.0	23.8	114.51	-2,131.4	-1,087.2	3,156.9	3,107.2	49.63	63.613		
6,800.0	6,472.8	6,784.8	6,643.1	26.1	23.9	109.69	-2,130.0	-1,044.3	3,167.3	3,117.4	49.89	63.482		
6,850.0	6,509.4	6,836.3	6,669.2	26.2	24.0	105.76	-2,128.8	-1,000.0	3,177.2	3,127.0	50.15	63.350		
6,900.0	6,543.0	6,886.7	6,691.2	26.3	24.2	102.51	-2,127.8	-954.5	3,186.4	3,136.0	50.41	63.213		
6,950.0	6,573.2	6,936.3	6,709.0	26.4	24.3	99.81	-2,126.9	-908.3	3,194.8	3,144.1	50.66	63.068		
7,000.0	6,599.8	6,985.0	6,722.9	26.5	24.4	97.56	-2,126.1	-861.6	3,202.3	3,151.4	50.90	62.911		
7,050.0	6,622.5	7,033.0	6,732.9	26.6	24.6	95.71	-2,125.5	-814.7	3,209.0	3,157.8	51.15	62.742		
7,100.0	6,641.1	7,080.3	6,739.2	26.7	24.7	94.21	-2,125.1	-767.8	3,214.5	3,163.2	51.38	62.559		
7,150.0	6,655.4	7,127.1	6,741.9	26.8	24.8	93.04	-2,124.8	-721.2	3,219.1	3,167.5	51.62	62.362		
7,200.0	6,665.4	7,175.4	6,742.0	26.9	25.0	92.17	-2,124.6	-672.8	3,222.5	3,170.6	51.86	62.135		
7,250.0	6,670.8	7,225.1	6,742.0	27.0	25.1	91.67	-2,124.4	-623.1	3,224.7	3,172.5	52.13	61.864		
7,285.7	6,672.0	7,260.8	6,742.0	27.1	25.2	91.53	-2,124.3	-587.4	3,225.5	3,173.1	52.32	61.646		
7,300.0	6,672.0	7,275.2	6,742.0	27.1	25.3	91.53	-2,124.2	-573.1	3,225.6	3,173.2	52.40	61.555		
7,400.0	6,672.0	7,375.3	6,742.0	27.3	25.7	91.53	-2,123.8	-472.9	3,227.0	3,173.9	53.04	60.843		
7,500.0	6,672.0	7,475.5	6,742.0	27.6	26.1	91.53	-2,123.4	-372.8	3,228.3	3,174.5	53.78	60.027		
7,600.0	6,672.0	7,575.6	6,742.0	28.0	26.6	91.53	-2,123.0	-272.6	3,229.6	3,175.0	54.63	59.122		
7,700.0	6,672.0	7,675.8	6,742.0	28.3	27.1	91.53	-2,122.6	-172.5	3,230.9	3,175.4	55.57	58.142		
7,800.0	6,672.0	7,775.9	6,742.0	28.8	27.7	91.52	-2,122.2	-72.3	3,232.3	3,175.7	56.61	57.101		
7,900.0	6,672.0	7,876.1	6,742.0	29.3	28.3	91.52	-2,121.8	27.8	3,233.6	3,175.9	57.73	56.011		
8,000.0	6,672.0	7,976.3	6,742.0	29.8	29.0	91.52	-2,121.4	128.0	3,234.9	3,176.0	58.94	54.886		
8,100.0	6,672.0	8,076.4	6,742.0	30.4	29.6	91.52	-2,120.9	228.1	3,236.3	3,176.1	60.23	53.736		
8,200.0	6,672.0	8,176.6	6,742.0	31.0	30.4	91.52	-2,120.5	328.3	3,237.6	3,176.0	61.59	52.571		
8,300.0	6,672.0	8,276.7	6,742.0	31.7	31.1	91.52	-2,120.1	428.4	3,239.0	3,176.0	63.01	51.401		
8,400.0	6,672.0	8,376.9	6,742.0	32.4	31.9	91.52	-2,119.6	528.6	3,240.3	3,175.8	64.51	50.233		
8,500.0	6,672.0	8,477.0	6,742.0	33.1	32.8	91.52	-2,119.2	628.7	3,241.7	3,175.6	66.06	49.074		
8,600.0	6,672.0	8,577.2	6,742.0	33.9	33.6	91.52	-2,118.7	728.9	3,243.0	3,175.4	67.66	47.928		
8,700.0	6,672.0	8,677.3	6,742.0	34.7	34.5	91.52	-2,118.3	829.1	3,244.4	3,175.0	69.32	46.800		
8,800.0	6,672.0	8,777.5	6,742.0	35.5	35.4	91.52	-2,117.8	929.2	3,245.7	3,174.7	71.03	45.695		
8,900.0	6,672.0	8,877.6	6,742.0	36.3	36.3	91.52	-2,117.3	1,029.4	3,247.1	3,174.3	72.78	44.613		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
**Anticollision Report**

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch State BB07-639 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
9,000.0	6,672.0	8,977.8	6,742.0	37.2	37.2	91.52	-2,116.8	1,129.5	3,248.4	3,173.9	74.58	43.559		
9,100.0	6,672.0	9,077.9	6,742.0	38.1	38.2	91.52	-2,116.4	1,229.7	3,249.8	3,173.4	76.41	42.532		
9,200.0	6,672.0	9,178.1	6,742.0	39.0	39.1	91.52	-2,115.9	1,329.8	3,251.2	3,172.9	78.28	41.535		
9,300.0	6,672.0	9,278.2	6,742.0	39.9	40.1	91.52	-2,115.4	1,430.0	3,252.5	3,172.4	80.18	40.567		
9,400.0	6,672.0	9,378.4	6,742.0	40.8	41.1	91.51	-2,114.9	1,530.1	3,253.9	3,171.8	82.11	39.628		
9,500.0	6,672.0	9,478.6	6,742.0	41.8	42.1	91.51	-2,114.4	1,630.3	3,255.3	3,171.2	84.07	38.720		
9,600.0	6,672.0	9,578.7	6,742.0	42.7	43.2	91.51	-2,113.9	1,730.4	3,256.7	3,170.6	86.06	37.841		
9,700.0	6,672.0	9,678.9	6,742.0	43.7	44.2	91.51	-2,113.4	1,830.6	3,258.0	3,170.0	88.08	36.992		
9,800.0	6,672.0	9,779.0	6,742.0	44.7	45.2	91.51	-2,112.9	1,930.7	3,259.4	3,169.3	90.11	36.171		
9,900.0	6,672.0	9,879.2	6,742.0	45.7	46.3	91.51	-2,112.4	2,030.9	3,260.8	3,168.6	92.17	35.377		
10,000.0	6,672.0	9,979.3	6,742.0	46.7	47.4	91.51	-2,111.8	2,131.0	3,262.2	3,167.9	94.25	34.611		
10,100.0	6,672.0	10,079.5	6,742.0	47.7	48.4	91.51	-2,111.3	2,231.2	3,263.6	3,167.2	96.35	33.872		
10,200.0	6,672.0	10,179.6	6,742.0	48.8	49.5	91.51	-2,110.8	2,331.3	3,265.0	3,166.5	98.47	33.158		
10,300.0	6,672.0	10,279.8	6,742.0	49.8	50.6	91.51	-2,110.2	2,431.5	3,266.4	3,165.8	100.60	32.468		
10,400.0	6,672.0	10,379.9	6,742.0	50.9	51.7	91.51	-2,109.7	2,531.6	3,267.8	3,165.0	102.75	31.802		
10,500.0	6,672.0	10,480.1	6,742.0	51.9	52.8	91.51	-2,109.1	2,631.8	3,269.2	3,164.2	104.92	31.160		
10,600.0	6,672.0	10,580.2	6,742.0	53.0	53.9	91.51	-2,108.6	2,732.0	3,270.6	3,163.5	107.10	30.539		
10,700.0	6,672.0	10,680.4	6,742.0	54.1	55.0	91.51	-2,108.0	2,832.1	3,272.0	3,162.7	109.29	29.939		
10,800.0	6,672.0	10,780.6	6,742.0	55.2	56.1	91.51	-2,107.5	2,932.3	3,273.4	3,161.9	111.49	29.360		
10,900.0	6,672.0	10,880.7	6,742.0	56.3	57.3	91.50	-2,106.9	3,032.4	3,274.8	3,161.1	113.71	28.800		
11,000.0	6,672.0	10,980.9	6,742.0	57.4	58.4	91.50	-2,106.3	3,132.6	3,276.2	3,160.3	115.93	28.260		
11,100.0	6,672.0	11,081.0	6,742.0	58.5	59.5	91.50	-2,105.7	3,232.7	3,277.6	3,159.4	118.17	27.737		
11,200.0	6,672.0	11,181.2	6,742.0	59.6	60.7	91.50	-2,105.1	3,332.9	3,279.0	3,158.6	120.42	27.231		
11,300.0	6,672.0	11,281.3	6,742.0	60.7	61.8	91.50	-2,104.6	3,433.0	3,280.4	3,157.8	122.67	26.742		
11,400.0	6,672.0	11,381.5	6,742.0	61.8	63.0	91.50	-2,104.0	3,533.2	3,281.9	3,156.9	124.94	26.269		
11,500.0	6,672.0	11,481.6	6,742.0	62.9	64.1	91.50	-2,103.4	3,633.3	3,283.3	3,156.1	127.21	25.810		
11,600.0	6,672.0	11,581.8	6,742.0	64.1	65.3	91.50	-2,102.8	3,733.5	3,284.7	3,155.2	129.49	25.367		
11,700.0	6,672.0	11,681.9	6,742.0	65.2	66.4	91.50	-2,102.1	3,833.6	3,286.1	3,154.4	131.78	24.937		
11,800.0	6,672.0	11,782.1	6,742.0	66.3	67.6	91.50	-2,101.5	3,933.8	3,287.6	3,153.5	134.07	24.521		
11,900.0	6,672.0	11,882.3	6,742.0	67.5	68.7	91.50	-2,100.9	4,033.9	3,289.0	3,152.6	136.37	24.118		
12,000.0	6,672.0	11,982.4	6,742.0	68.6	69.9	91.50	-2,100.3	4,134.1	3,290.4	3,151.8	138.68	23.727		
12,100.0	6,672.0	12,082.6	6,742.0	69.8	71.1	91.50	-2,099.7	4,234.2	3,291.9	3,150.9	140.99	23.348		
12,200.0	6,672.0	12,182.7	6,742.0	70.9	72.2	91.50	-2,099.0	4,334.4	3,293.3	3,150.0	143.31	22.980		
12,300.0	6,672.0	12,282.9	6,742.0	72.1	73.4	91.50	-2,098.4	4,434.5	3,294.8	3,149.1	145.64	22.623		
12,400.0	6,672.0	12,383.0	6,742.0	73.2	74.6	91.50	-2,097.7	4,534.7	3,296.2	3,148.2	147.97	22.276		
12,500.0	6,672.0	12,483.2	6,742.0	74.4	75.8	91.49	-2,097.1	4,634.9	3,297.7	3,147.4	150.30	21.940		
12,600.0	6,672.0	12,583.3	6,742.0	75.5	77.0	91.49	-2,096.4	4,735.0	3,299.1	3,146.5	152.64	21.613		
12,700.0	6,672.0	12,683.5	6,742.0	76.7	78.1	91.49	-2,095.8	4,835.2	3,300.6	3,145.6	154.99	21.296		
12,800.0	6,672.0	12,783.7	6,742.0	77.9	79.3	91.49	-2,095.1	4,935.3	3,302.0	3,144.7	157.34	20.987		
12,900.0	6,672.0	12,883.8	6,742.0	79.0	80.5	91.49	-2,094.4	5,035.5	3,303.5	3,143.8	159.69	20.687		
13,000.0	6,672.0	12,984.0	6,742.0	80.2	81.7	91.49	-2,093.8	5,135.6	3,304.9	3,142.9	162.05	20.395		
13,100.0	6,672.0	13,084.1	6,742.0	81.4	82.9	91.49	-2,093.1	5,235.8	3,306.4	3,142.0	164.41	20.111		
13,200.0	6,672.0	13,184.3	6,742.0	82.6	84.1	91.49	-2,092.4	5,335.9	3,307.9	3,141.1	166.77	19.835		
13,300.0	6,672.0	13,284.4	6,742.0	83.7	85.3	91.49	-2,091.7	5,436.1	3,309.3	3,140.2	169.14	19.566		
13,400.0	6,672.0	13,384.6	6,742.0	84.9	86.5	91.49	-2,091.0	5,536.2	3,310.8	3,139.3	171.51	19.304		
13,500.0	6,672.0	13,484.7	6,742.0	86.1	87.6	91.49	-2,090.3	5,636.4	3,312.3	3,138.4	173.88	19.049		
13,600.0	6,672.0	13,584.9	6,742.0	87.3	88.8	91.49	-2,089.6	5,736.5	3,313.8	3,137.5	176.26	18.800		
13,700.0	6,672.0	13,685.0	6,742.0	88.4	90.0	91.49	-2,088.9	5,836.7	3,315.2	3,136.6	178.64	18.558		
13,800.0	6,672.0	13,785.2	6,742.0	89.6	91.2	91.49	-2,088.2	5,936.8	3,316.7	3,135.7	181.02	18.322		
13,900.0	6,672.0	13,885.4	6,742.0	90.8	92.4	91.49	-2,087.5	6,037.0	3,318.2	3,134.8	183.41	18.092		
14,000.0	6,672.0	13,985.5	6,742.0	92.0	93.6	91.48	-2,086.7	6,137.1	3,319.7	3,133.9	185.80	17.867		
14,100.0	6,672.0	14,085.7	6,742.0	93.2	94.8	91.48	-2,086.0	6,237.3	3,321.2	3,133.0	188.19	17.648		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch State BB07-639 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
14,200.0	6,672.0	14,185.8	6,742.0	94.4	96.0	91.48	-2,085.3	6,337.5	3,322.7	3,132.1	190.58	17.434		
14,300.0	6,672.0	14,286.0	6,742.0	95.6	97.3	91.48	-2,084.5	6,437.6	3,324.2	3,131.2	192.98	17.226		
14,400.0	6,672.0	14,386.1	6,742.0	96.8	98.5	91.48	-2,083.8	6,537.8	3,325.7	3,130.3	195.37	17.022		
14,500.0	6,672.0	14,486.3	6,742.0	98.0	99.7	91.48	-2,083.0	6,637.9	3,327.1	3,129.4	197.77	16.823		
14,600.0	6,672.0	14,586.4	6,742.0	99.2	100.9	91.48	-2,082.3	6,738.1	3,328.6	3,128.5	200.17	16.629		
14,700.0	6,672.0	14,686.6	6,742.0	100.4	102.1	91.48	-2,081.5	6,838.2	3,330.2	3,127.6	202.58	16.439		
14,800.0	6,672.0	14,786.8	6,742.0	101.6	103.3	91.48	-2,080.7	6,938.4	3,331.7	3,126.7	204.98	16.253		
14,900.0	6,672.0	14,886.9	6,742.0	102.7	104.5	91.48	-2,080.0	7,038.5	3,333.2	3,125.8	207.39	16.072		
15,000.0	6,672.0	14,987.1	6,742.0	103.9	105.7	91.48	-2,079.2	7,138.7	3,334.7	3,124.9	209.80	15.894		
15,100.0	6,672.0	15,087.2	6,742.0	105.1	106.9	91.48	-2,078.4	7,238.8	3,336.2	3,124.0	212.21	15.721		
15,200.0	6,672.0	15,187.4	6,742.0	106.3	108.1	91.48	-2,077.6	7,339.0	3,337.7	3,123.1	214.62	15.551		
15,300.0	6,672.0	15,287.5	6,742.0	107.6	109.3	91.48	-2,076.8	7,439.1	3,339.2	3,122.2	217.04	15.385		
15,400.0	6,672.0	15,387.7	6,742.0	108.8	110.6	91.48	-2,076.0	7,539.3	3,340.7	3,121.3	219.46	15.223		
15,500.0	6,672.0	15,487.8	6,742.0	110.0	111.8	91.47	-2,075.2	7,639.4	3,342.3	3,120.4	221.87	15.064		
15,600.0	6,672.0	15,588.0	6,742.0	111.2	113.0	91.47	-2,074.4	7,739.6	3,343.8	3,119.5	224.29	14.908		
15,700.0	6,672.0	15,688.2	6,742.0	112.4	114.2	91.47	-2,073.6	7,839.7	3,345.3	3,118.6	226.71	14.756		
15,800.0	6,672.0	15,788.3	6,742.0	113.6	115.4	91.47	-2,072.8	7,939.9	3,346.8	3,117.7	229.13	14.607		
15,900.0	6,672.0	15,888.5	6,742.0	114.8	116.6	91.47	-2,072.0	8,040.1	3,348.4	3,116.8	231.56	14.460		
16,000.0	6,672.0	15,988.6	6,742.0	116.0	117.8	91.47	-2,071.2	8,140.2	3,349.9	3,115.9	233.98	14.317		
16,100.0	6,672.0	16,088.8	6,742.0	117.2	119.1	91.47	-2,070.3	8,240.4	3,351.5	3,115.0	236.41	14.177		
16,200.0	6,672.0	16,188.9	6,742.0	118.4	120.3	91.47	-2,069.5	8,340.5	3,353.0	3,114.2	238.83	14.039		
16,300.0	6,672.0	16,289.1	6,742.0	119.6	121.5	91.47	-2,068.7	8,440.7	3,354.5	3,113.3	241.26	13.904		
16,400.0	6,672.0	16,389.3	6,742.0	120.8	122.7	91.47	-2,067.8	8,540.8	3,356.1	3,112.4	243.69	13.772		
16,500.0	6,672.0	16,489.4	6,742.0	122.0	123.9	91.47	-2,067.0	8,641.0	3,357.6	3,111.5	246.12	13.642		
16,600.0	6,672.0	16,589.6	6,742.0	123.2	125.2	91.47	-2,066.1	8,741.1	3,359.2	3,110.6	248.55	13.515		
16,700.0	6,672.0	16,689.7	6,742.0	124.5	126.4	91.47	-2,065.2	8,841.3	3,360.7	3,109.8	250.98	13.390		
16,800.0	6,672.0	16,789.9	6,742.0	125.7	127.6	91.47	-2,064.4	8,941.4	3,362.3	3,108.9	253.42	13.268		
16,900.0	6,672.0	16,890.0	6,742.0	126.9	128.8	91.47	-2,063.5	9,041.6	3,363.8	3,108.0	255.85	13.148		
17,000.0	6,672.0	16,990.2	6,742.0	128.1	130.0	91.46	-2,062.6	9,141.7	3,365.4	3,107.1	258.29	13.030		
17,100.0	6,672.0	17,090.4	6,742.0	129.3	131.3	91.46	-2,061.7	9,241.9	3,367.0	3,106.2	260.72	12.914		
17,200.0	6,672.0	17,190.5	6,742.0	130.5	132.5	91.46	-2,060.9	9,342.0	3,368.5	3,105.4	263.16	12.800		
17,300.0	6,672.0	17,290.7	6,742.0	131.7	133.7	91.46	-2,060.0	9,442.2	3,370.1	3,104.5	265.60	12.689		
17,400.0	6,672.0	17,390.8	6,742.0	133.0	134.9	91.46	-2,059.1	9,542.3	3,371.7	3,103.6	268.04	12.579		
17,500.0	6,672.0	17,491.0	6,742.0	134.2	136.2	91.46	-2,058.2	9,642.5	3,373.2	3,102.8	270.47	12.472		
17,600.0	6,672.0	17,591.1	6,742.0	135.4	137.4	91.46	-2,057.3	9,742.6	3,374.8	3,101.9	272.91	12.366		
17,700.0	6,672.0	17,691.3	6,742.0	136.6	138.6	91.46	-2,056.3	9,842.8	3,376.4	3,101.0	275.36	12.262		
17,800.0	6,672.0	17,791.4	6,742.0	137.8	139.8	91.46	-2,055.4	9,943.0	3,378.0	3,100.2	277.80	12.160		
17,900.0	6,672.0	17,875.1	6,742.0	139.0	140.9	91.46	-2,054.7	10,026.6	3,379.6	3,099.6	280.02	12.069		
18,000.0	6,672.0	17,875.1	6,742.0	140.3	140.9	91.46	-2,054.7	10,026.6	3,383.2	3,102.2	280.98	12.041		
18,100.0	6,672.0	17,875.1	6,742.0	141.5	140.9	91.46	-2,054.7	10,026.6	3,389.7	3,108.0	281.70	12.033 SF		
18,200.0	6,672.0	17,875.1	6,742.0	142.7	140.9	91.46	-2,054.7	10,026.6	3,399.1	3,116.9	282.18	12.046		
18,300.0	6,672.0	17,875.1	6,742.0	143.9	140.9	91.46	-2,054.7	10,026.6	3,411.5	3,129.0	282.43	12.079		
18,342.5	6,672.0	17,875.1	6,742.0	144.4	140.9	91.46	-2,054.7	10,026.6	3,417.6	3,135.1	282.47	12.099		



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch State BB07-646 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-161.37	-2,252.9	-759.6	2,377.5					
100.0	100.0	85.0	85.0	0.1	0.1	-161.37	-2,252.9	-759.6	2,377.5	2,377.3	0.23	N/A		
200.0	200.0	185.0	185.0	0.5	0.4	-161.37	-2,252.9	-759.6	2,377.5	2,376.6	0.91	2,600.908		
300.0	300.0	285.0	285.0	0.8	0.8	-161.37	-2,252.9	-759.6	2,377.5	2,375.9	1.63	1,457.652		
400.0	400.0	385.0	385.0	1.2	1.1	-161.37	-2,252.9	-759.6	2,377.5	2,375.1	2.35	1,012.568		
500.0	500.0	485.0	485.0	1.6	1.5	-161.37	-2,252.9	-759.6	2,377.5	2,374.4	3.06	775.710		
600.0	600.0	585.0	585.0	1.9	1.9	-161.37	-2,252.9	-759.6	2,377.5	2,373.7	3.78	628.656		
700.0	700.0	685.0	685.0	2.3	2.2	-161.37	-2,252.9	-759.6	2,377.5	2,373.0	4.50	528.472		
800.0	800.0	785.0	785.0	2.6	2.6	-161.37	-2,252.9	-759.6	2,377.5	2,372.3	5.22	455.829		
900.0	900.0	885.0	885.0	3.0	2.9	-161.37	-2,252.9	-759.6	2,377.5	2,371.6	5.93	400.744		
1,000.0	1,000.0	985.0	985.0	3.4	3.3	-161.37	-2,252.9	-759.6	2,377.5	2,370.8	6.65	357.537		
1,100.0	1,100.0	1,085.0	1,085.0	3.7	3.7	-161.37	-2,252.9	-759.6	2,377.5	2,370.1	7.37	322.741		
1,200.0	1,200.0	1,185.0	1,185.0	4.1	4.0	-161.37	-2,252.9	-759.6	2,377.5	2,369.4	8.08	294.116		
1,300.0	1,300.0	1,285.0	1,285.0	4.4	4.4	-161.37	-2,252.9	-759.6	2,377.5	2,368.7	8.80	270.156		
1,400.0	1,400.0	1,385.0	1,385.0	4.8	4.7	-161.37	-2,252.9	-759.6	2,377.5	2,368.0	9.52	249.805		
1,500.0	1,500.0	1,485.0	1,485.0	5.1	5.1	-161.37	-2,252.9	-759.6	2,377.5	2,367.3	10.23	232.305		
1,600.0	1,600.0	1,585.0	1,585.0	5.5	5.4	-161.37	-2,252.9	-759.6	2,377.5	2,366.5	10.95	217.097		
1,700.0	1,700.0	1,685.0	1,685.0	5.9	5.8	-161.37	-2,252.9	-759.6	2,377.5	2,365.8	11.67	203.758		
1,800.0	1,800.0	1,785.0	1,785.0	6.2	6.2	-161.37	-2,252.9	-759.6	2,377.5	2,365.1	12.39	191.963		
1,900.0	1,900.0	1,885.0	1,885.0	6.6	6.5	-161.37	-2,252.9	-759.6	2,377.5	2,364.4	13.10	181.459		
2,000.0	2,000.0	1,985.0	1,985.0	6.9	6.9	-161.37	-2,252.9	-759.6	2,377.5	2,363.7	13.82	172.045		
2,100.0	2,100.0	2,122.4	2,122.3	7.3	7.4	-161.31	-2,251.2	-761.6	2,376.8	2,362.2	14.66	162.080		
2,200.0	2,200.0	2,265.7	2,265.3	7.7	7.9	-161.09	-2,244.9	-769.0	2,374.3	2,358.8	15.52	152.941		
2,300.0	2,300.0	2,408.1	2,406.7	8.0	8.4	-109.84	-2,234.2	-781.7	2,370.7	2,354.3	16.38	144.769		
2,400.0	2,399.8	2,549.4	2,546.1	8.4	8.9	-109.56	-2,219.0	-799.7	2,366.5	2,349.2	17.22	137.434		
2,500.0	2,499.5	2,649.1	2,643.9	8.7	9.2	-109.39	-2,206.7	-814.2	2,362.6	2,344.6	17.93	131.763		
2,600.0	2,598.7	2,748.8	2,741.8	9.1	9.6	-109.29	-2,194.4	-828.7	2,359.9	2,341.2	18.65	126.565		
2,700.0	2,697.5	2,848.7	2,839.9	9.4	10.0	-109.24	-2,182.1	-843.2	2,358.3	2,338.9	19.36	121.791		
2,784.0	2,780.0	2,932.8	2,922.4	9.7	10.3	-109.25	-2,171.7	-855.5	2,357.9	2,337.9	19.97	118.075 CC		
2,800.0	2,795.6	2,948.7	2,938.0	9.8	10.3	-109.25	-2,169.7	-857.8	2,357.9	2,337.8	20.08	117.398 ES		
2,900.0	2,893.1	3,048.7	3,036.1	10.1	10.7	-109.32	-2,157.4	-872.4	2,358.7	2,337.9	20.81	113.348		
3,000.0	2,989.6	3,148.4	3,134.0	10.5	11.1	-109.45	-2,145.1	-886.9	2,360.6	2,339.1	21.54	109.610		
3,100.0	3,085.3	3,247.9	3,231.7	10.9	11.4	-109.63	-2,132.9	-901.4	2,363.7	2,341.5	22.27	106.155		
3,200.0	3,179.8	3,346.9	3,328.9	11.2	11.8	-109.87	-2,120.6	-915.8	2,368.1	2,345.1	23.00	102.956		
3,300.0	3,273.2	3,445.4	3,425.5	11.6	12.2	-110.15	-2,108.5	-930.1	2,373.7	2,350.0	23.74	99.991		
3,387.5	3,353.8	3,531.0	3,509.6	11.9	12.5	-110.44	-2,098.0	-942.6	2,379.7	2,355.3	24.39	97.575		
3,400.0	3,365.2	3,543.2	3,521.5	12.0	12.5	-110.50	-2,096.4	-944.4	2,380.7	2,356.2	24.48	97.243		
3,500.0	3,456.8	3,640.7	3,617.3	12.4	12.9	-110.99	-2,084.4	-958.6	2,388.3	2,363.0	25.23	94.658		
3,600.0	3,548.3	3,738.2	3,713.0	12.8	13.2	-111.48	-2,072.4	-972.8	2,396.0	2,370.1	25.99	92.205		
3,700.0	3,639.8	3,835.8	3,808.8	13.2	13.6	-111.96	-2,060.4	-987.0	2,404.0	2,377.2	26.75	89.876		
3,800.0	3,731.4	3,933.3	3,904.5	13.6	14.0	-112.44	-2,048.4	-1,001.2	2,412.1	2,384.6	27.51	87.666		
3,900.0	3,822.9	4,030.8	4,000.3	14.0	14.3	-112.92	-2,036.3	-1,015.4	2,420.4	2,392.1	28.29	85.566		
4,000.0	3,914.4	4,128.4	4,096.0	14.4	14.7	-113.39	-2,024.3	-1,029.6	2,428.9	2,399.8	29.06	83.570		
4,100.0	4,005.9	4,225.9	4,191.7	14.8	15.1	-113.86	-2,012.3	-1,043.8	2,437.5	2,407.7	29.85	81.672		
4,200.0	4,097.5	4,323.4	4,287.5	15.2	15.4	-114.33	-2,000.3	-1,058.0	2,446.4	2,415.7	30.63	79.867		
4,300.0	4,189.0	4,421.0	4,383.2	15.6	15.8	-114.79	-1,988.2	-1,072.2	2,455.3	2,423.9	31.42	78.148		
4,400.0	4,280.5	4,518.5	4,479.0	16.1	16.1	-115.25	-1,976.2	-1,086.4	2,464.5	2,432.3	32.21	76.511		
4,500.0	4,372.1	4,616.0	4,574.7	16.5	16.5	-115.71	-1,964.2	-1,100.6	2,473.8	2,440.8	33.01	74.951		
4,600.0	4,463.6	4,713.6	4,670.4	16.9	16.9	-116.16	-1,952.2	-1,114.8	2,483.3	2,449.5	33.80	73.463		
4,700.0	4,555.1	4,811.1	4,766.2	17.4	17.2	-116.61	-1,940.1	-1,129.0	2,492.9	2,458.3	34.60	72.043		
4,800.0	4,646.7	4,908.6	4,861.9	17.8	17.6	-117.06	-1,928.1	-1,143.2	2,502.7	2,467.3	35.41	70.687		
4,900.0	4,738.2	5,006.2	4,957.7	18.2	18.0	-117.50	-1,916.1	-1,157.4	2,512.6	2,476.4	36.21	69.391		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch State BB07-646 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,000.0	4,829.7	5,103.7	5,053.4	18.7	18.3	-117.94	-1,904.1	-1,171.6	2,522.7	2,485.7	37.02	68.152		
5,100.0	4,921.3	5,201.2	5,149.1	19.1	18.7	-118.38	-1,892.0	-1,185.8	2,533.0	2,495.2	37.82	66.967		
5,200.0	5,012.8	5,301.2	5,244.9	19.5	19.1	-118.81	-1,880.0	-1,200.0	2,543.4	2,504.7	38.64	65.817		
5,300.0	5,104.3	5,403.7	5,340.6	20.0	19.5	-119.24	-1,868.0	-1,214.2	2,553.9	2,514.5	39.47	64.700		
5,400.0	5,195.8	5,506.2	5,436.4	20.4	19.9	-119.67	-1,856.0	-1,228.4	2,564.6	2,524.3	40.31	63.630		
5,500.0	5,287.4	5,608.7	5,532.1	20.9	20.2	-120.09	-1,843.9	-1,242.6	2,575.5	2,534.3	41.14	62.606		
5,600.0	5,378.9	5,688.9	5,627.8	21.3	20.6	-120.51	-1,831.9	-1,256.9	2,586.5	2,544.6	41.89	61.748		
5,700.0	5,470.4	5,786.4	5,723.6	21.8	20.9	-120.93	-1,819.9	-1,271.1	2,597.6	2,554.9	42.70	60.828		
5,800.0	5,562.0	5,883.9	5,819.3	22.2	21.3	-121.34	-1,807.9	-1,285.3	2,608.9	2,565.3	43.52	59.944		
5,900.0	5,653.5	6,008.6	6,137.0	22.7	22.4	-123.75	-1,758.4	-1,280.3	2,614.1	2,569.1	44.98	58.115		
6,000.0	5,745.0	6,358.4	6,273.3	23.1	22.9	-125.90	-1,736.2	-1,223.3	2,617.2	2,571.4	45.85	57.082		
6,100.0	5,836.6	6,456.2	6,353.3	23.6	23.2	-127.60	-1,722.9	-1,168.7	2,621.0	2,574.4	46.61	56.228		
6,200.0	5,928.1	6,522.1	6,401.8	24.0	23.4	-128.84	-1,714.8	-1,124.9	2,626.8	2,579.5	47.30	55.533		
6,278.6	6,000.0	6,559.8	6,427.4	24.4	23.5	-129.59	-1,710.5	-1,097.6	2,633.4	2,585.6	47.80	55.096		
6,290.0	6,010.4	6,564.4	6,430.5	24.4	23.5	-131.19	-1,710.0	-1,094.1	2,634.6	2,586.8	47.86	55.043		
6,300.0	6,019.5	6,568.5	6,433.1	24.5	23.5	-133.11	-1,709.6	-1,091.1	2,635.9	2,587.9	47.92	55.000		
6,350.0	6,065.8	6,589.3	6,446.3	24.7	23.5	-144.63	-1,707.4	-1,075.1	2,642.6	2,594.4	48.21	54.814		
6,400.0	6,113.0	6,611.3	6,459.6	24.9	23.6	-159.76	-1,705.1	-1,057.8	2,650.2	2,601.7	48.48	54.670		
6,450.0	6,160.7	6,634.1	6,472.8	25.1	23.7	-177.97	-1,702.8	-1,039.3	2,658.5	2,609.8	48.72	54.566		
6,500.0	6,208.5	6,657.6	6,485.7	25.3	23.7	163.25	-1,700.6	-1,019.8	2,667.5	2,618.5	48.95	54.496		
6,550.0	6,255.8	6,681.7	6,498.1	25.4	23.8	146.85	-1,698.5	-999.2	2,676.9	2,627.8	49.16	54.454		
6,600.0	6,302.5	6,706.3	6,509.9	25.6	23.8	133.96	-1,696.4	-977.8	2,686.7	2,637.3	49.36	54.435		
6,650.0	6,347.9	6,731.3	6,521.1	25.7	23.9	124.18	-1,694.5	-955.5	2,696.6	2,647.0	49.54	54.433		
6,700.0	6,391.6	6,756.6	6,531.5	25.9	24.0	116.69	-1,692.7	-932.5	2,706.5	2,656.8	49.71	54.443		
6,750.0	6,433.4	6,782.2	6,541.0	26.0	24.1	110.84	-1,691.0	-908.8	2,716.4	2,666.5	49.88	54.461		
6,800.0	6,472.8	6,808.1	6,549.6	26.1	24.1	106.15	-1,689.4	-884.5	2,725.9	2,675.9	50.04	54.480		
6,850.0	6,509.4	6,834.1	6,557.3	26.2	24.2	102.32	-1,688.0	-859.6	2,735.1	2,685.0	50.19	54.497		
6,900.0	6,543.0	6,860.3	6,563.9	26.3	24.3	99.16	-1,686.7	-834.3	2,743.9	2,693.5	50.34	54.507		
6,950.0	6,573.2	6,886.7	6,569.5	26.4	24.3	96.53	-1,685.6	-808.5	2,752.0	2,701.5	50.49	54.506		
7,000.0	6,599.8	6,913.2	6,574.0	26.5	24.4	94.35	-1,684.7	-782.4	2,759.4	2,708.7	50.64	54.489		
7,050.0	6,622.5	6,939.9	6,577.4	26.6	24.5	92.55	-1,684.0	-756.0	2,766.0	2,715.2	50.79	54.454		
7,100.0	6,641.1	6,966.6	6,579.7	26.7	24.6	91.10	-1,683.4	-729.4	2,771.7	2,720.7	50.95	54.398		
7,150.0	6,655.4	7,000.0	6,581.0	26.8	24.6	89.93	-1,683.0	-696.0	2,776.5	2,725.3	51.13	54.303		
7,200.0	6,665.4	7,031.6	6,581.0	26.9	24.7	89.10	-1,682.7	-664.4	2,780.2	2,728.8	51.31	54.179		
7,250.0	6,670.8	7,081.3	6,581.0	27.0	24.9	88.57	-1,682.3	-614.7	2,782.5	2,730.9	51.56	53.970		
7,285.7	6,672.0	7,117.0	6,581.0	27.1	25.0	88.44	-1,682.1	-579.1	2,783.2	2,731.4	51.74	53.788		
7,300.0	6,672.0	7,131.3	6,581.0	27.1	25.1	88.44	-1,682.0	-564.8	2,783.3	2,731.5	51.82	53.707		
7,400.0	6,672.0	7,231.3	6,581.0	27.3	25.4	88.44	-1,681.2	-464.7	2,784.3	2,731.8	52.44	53.092		
7,500.0	6,672.0	7,331.3	6,581.0	27.6	25.9	88.44	-1,680.5	-364.7	2,785.3	2,732.1	53.17	52.384		
7,600.0	6,672.0	7,431.4	6,581.0	28.0	26.4	88.44	-1,679.7	-264.7	2,786.2	2,732.2	54.00	51.595		
7,700.0	6,672.0	7,531.4	6,581.0	28.3	26.9	88.44	-1,678.9	-164.6	2,787.2	2,732.3	54.93	50.739		
7,800.0	6,672.0	7,631.4	6,581.0	28.8	27.5	88.44	-1,678.2	-64.6	2,788.2	2,732.2	55.96	49.827		
7,900.0	6,672.0	7,731.4	6,581.0	29.3	28.1	88.44	-1,677.4	35.4	2,789.2	2,732.1	57.07	48.871		
8,000.0	6,672.0	7,831.5	6,581.0	29.8	28.7	88.44	-1,676.7	135.4	2,790.2	2,731.9	58.27	47.883		
8,100.0	6,672.0	7,931.5	6,581.0	30.4	29.4	88.44	-1,675.9	235.5	2,791.2	2,731.7	59.55	46.872		
8,200.0	6,672.0	8,031.5	6,581.0	31.0	30.2	88.44	-1,675.1	335.5	2,792.2	2,731.3	60.90	45.848		
8,300.0	6,672.0	8,131.6	6,581.0	31.7	30.9	88.44	-1,674.4	435.5	2,793.2	2,730.9	62.32	44.819		
8,400.0	6,672.0	8,231.6	6,581.0	32.4	31.7	88.44	-1,673.6	535.5	2,794.3	2,730.4	63.81	43.791		
8,500.0	6,672.0	8,331.6	6,581.0	33.1	32.5	88.44	-1,672.9	635.6	2,795.3	2,729.9	65.36	42.771		
8,600.0	6,672.0	8,431.6	6,581.0	33.9	33.4	88.44	-1,672.1	735.6	2,796.3	2,729.4	66.96	41.763		
8,700.0	6,672.0	8,531.7	6,581.0	34.7	34.3	88.44	-1,671.3	835.6	2,797.4	2,728.8	68.61	40.770		
8,800.0	6,672.0	8,631.7	6,581.0	35.5	35.2	88.44	-1,670.5	935.6	2,798.4	2,728.1	70.32	39.798		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch State BB07-646 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
8,900.0	6,672.0	8,731.7	6,581.0	36.3	36.1	88.44	-1,669.8	1,035.7	2,799.5	2,727.4	72.06	38.847		
9,000.0	6,672.0	8,831.8	6,581.0	37.2	37.0	88.44	-1,669.0	1,135.7	2,800.5	2,726.7	73.86	37.919		
9,100.0	6,672.0	8,931.8	6,581.0	38.1	38.0	88.45	-1,668.2	1,235.7	2,801.6	2,725.9	75.69	37.017		
9,200.0	6,672.0	9,031.8	6,581.0	39.0	38.9	88.45	-1,667.5	1,335.7	2,802.7	2,725.1	77.55	36.140		
9,300.0	6,672.0	9,131.8	6,581.0	39.9	39.9	88.45	-1,666.7	1,435.8	2,803.8	2,724.3	79.45	35.290		
9,400.0	6,672.0	9,231.9	6,581.0	40.8	40.9	88.45	-1,665.9	1,535.8	2,804.9	2,723.5	81.38	34.466		
9,500.0	6,672.0	9,331.9	6,581.0	41.8	41.9	88.45	-1,665.1	1,635.8	2,806.0	2,722.6	83.34	33.668		
9,600.0	6,672.0	9,431.9	6,581.0	42.7	42.9	88.45	-1,664.3	1,735.8	2,807.1	2,721.7	85.33	32.897		
9,700.0	6,672.0	9,531.9	6,581.0	43.7	44.0	88.45	-1,663.6	1,835.9	2,808.2	2,720.8	87.34	32.152		
9,800.0	6,672.0	9,632.0	6,581.0	44.7	45.0	88.45	-1,662.8	1,935.9	2,809.3	2,719.9	89.38	31.432		
9,900.0	6,672.0	9,732.0	6,581.0	45.7	46.1	88.45	-1,662.0	2,035.9	2,810.4	2,719.0	91.44	30.736		
10,000.0	6,672.0	9,832.0	6,581.0	46.7	47.1	88.45	-1,661.2	2,135.9	2,811.5	2,718.0	93.51	30.065		
10,100.0	6,672.0	9,932.1	6,581.0	47.7	48.2	88.45	-1,660.4	2,235.9	2,812.7	2,717.0	95.61	29.417		
10,200.0	6,672.0	10,032.1	6,581.0	48.8	49.3	88.45	-1,659.6	2,336.0	2,813.8	2,716.1	97.73	28.792		
10,300.0	6,672.0	10,132.1	6,581.0	49.8	50.4	88.45	-1,658.9	2,436.0	2,814.9	2,715.1	99.86	28.189		
10,400.0	6,672.0	10,232.1	6,581.0	50.9	51.5	88.45	-1,658.1	2,536.0	2,816.1	2,714.1	102.01	27.606		
10,500.0	6,672.0	10,332.2	6,581.0	51.9	52.6	88.45	-1,657.3	2,636.0	2,817.2	2,713.1	104.17	27.044		
10,600.0	6,672.0	10,432.2	6,581.0	53.0	53.7	88.45	-1,656.5	2,736.1	2,818.4	2,712.1	106.35	26.501		
10,700.0	6,672.0	10,532.2	6,581.0	54.1	54.8	88.46	-1,655.7	2,836.1	2,819.6	2,711.0	108.54	25.977		
10,800.0	6,672.0	10,632.2	6,581.0	55.2	55.9	88.46	-1,654.9	2,936.1	2,820.8	2,710.0	110.74	25.471		
10,900.0	6,672.0	10,732.3	6,581.0	56.3	57.0	88.46	-1,654.1	3,036.1	2,821.9	2,709.0	112.96	24.982		
11,000.0	6,672.0	10,832.3	6,581.0	57.4	58.2	88.46	-1,653.3	3,136.2	2,823.1	2,707.9	115.18	24.510		
11,100.0	6,672.0	10,932.3	6,581.0	58.5	59.3	88.46	-1,652.5	3,236.2	2,824.3	2,706.9	117.42	24.054		
11,200.0	6,672.0	11,032.4	6,581.0	59.6	60.4	88.46	-1,651.7	3,336.2	2,825.5	2,705.9	119.66	23.612		
11,300.0	6,672.0	11,132.4	6,581.0	60.7	61.6	88.46	-1,650.9	3,436.2	2,826.7	2,704.8	121.92	23.186		
11,400.0	6,672.0	11,232.4	6,581.0	61.8	62.7	88.46	-1,650.1	3,536.3	2,828.0	2,703.8	124.18	22.773		
11,500.0	6,672.0	11,332.4	6,581.0	62.9	63.9	88.46	-1,649.3	3,636.3	2,829.2	2,702.7	126.45	22.373		
11,600.0	6,672.0	11,432.5	6,581.0	64.1	65.0	88.46	-1,648.5	3,736.3	2,830.4	2,701.7	128.73	21.987		
11,700.0	6,672.0	11,532.5	6,581.0	65.2	66.2	88.46	-1,647.7	3,836.3	2,831.6	2,700.6	131.02	21.613		
11,800.0	6,672.0	11,632.5	6,581.0	66.3	67.3	88.46	-1,646.9	3,936.3	2,832.9	2,699.6	133.31	21.250		
11,900.0	6,672.0	11,732.5	6,581.0	67.5	68.5	88.46	-1,646.1	4,036.4	2,834.1	2,698.5	135.61	20.899		
12,000.0	6,672.0	11,832.6	6,581.0	68.6	69.7	88.46	-1,645.3	4,136.4	2,835.4	2,697.5	137.92	20.558		
12,100.0	6,672.0	11,932.6	6,581.0	69.8	70.8	88.46	-1,644.5	4,236.4	2,836.6	2,696.4	140.23	20.228		
12,200.0	6,672.0	12,032.6	6,581.0	70.9	72.0	88.47	-1,643.7	4,336.4	2,837.9	2,695.3	142.55	19.908		
12,300.0	6,672.0	12,132.6	6,581.0	72.1	73.2	88.47	-1,642.9	4,436.5	2,839.2	2,694.3	144.87	19.598		
12,400.0	6,672.0	12,232.7	6,581.0	73.2	74.3	88.47	-1,642.0	4,536.5	2,840.4	2,693.2	147.20	19.296		
12,500.0	6,672.0	12,332.7	6,581.0	74.4	75.5	88.47	-1,641.2	4,636.5	2,841.7	2,692.2	149.53	19.004		
12,600.0	6,672.0	12,432.7	6,581.0	75.5	76.7	88.47	-1,640.4	4,736.5	2,843.0	2,691.1	151.87	18.720		
12,700.0	6,672.0	12,532.7	6,581.0	76.7	77.9	88.47	-1,639.6	4,836.5	2,844.3	2,690.1	154.22	18.444		
12,800.0	6,672.0	12,632.8	6,581.0	77.9	79.1	88.47	-1,638.8	4,936.6	2,845.6	2,689.1	156.56	18.176		
12,900.0	6,672.0	12,732.8	6,581.0	79.0	80.2	88.47	-1,638.0	5,036.6	2,846.9	2,688.0	158.91	17.915		
13,000.0	6,672.0	12,832.8	6,581.0	80.2	81.4	88.47	-1,637.1	5,136.6	2,848.2	2,687.0	161.27	17.661		
13,100.0	6,672.0	12,932.8	6,581.0	81.4	82.6	88.47	-1,636.3	5,236.6	2,849.6	2,685.9	163.63	17.415		
13,200.0	6,672.0	13,032.9	6,581.0	82.6	83.8	88.47	-1,635.5	5,336.7	2,850.9	2,684.9	165.99	17.175		
13,300.0	6,672.0	13,132.9	6,581.0	83.7	85.0	88.47	-1,634.7	5,436.7	2,852.2	2,683.9	168.36	16.942		
13,400.0	6,672.0	13,232.9	6,581.0	84.9	86.2	88.47	-1,633.9	5,536.7	2,853.6	2,682.8	170.72	16.714		
13,500.0	6,672.0	13,332.9	6,581.0	86.1	87.4	88.47	-1,633.0	5,636.7	2,854.9	2,681.8	173.10	16.493		
13,600.0	6,672.0	13,433.0	6,581.0	87.3	88.6	88.48	-1,632.2	5,736.7	2,856.3	2,680.8	175.47	16.278		
13,700.0	6,672.0	13,533.0	6,581.0	88.4	89.8	88.48	-1,631.4	5,836.8	2,857.6	2,679.8	177.85	16.068		
13,800.0	6,672.0	13,633.0	6,581.0	89.6	91.0	88.48	-1,630.5	5,936.8	2,859.0	2,678.8	180.23	15.863		
13,900.0	6,672.0	13,733.0	6,581.0	90.8	92.2	88.48	-1,629.7	6,036.8	2,860.4	2,677.8	182.62	15.663		
14,000.0	6,672.0	13,833.1	6,581.0	92.0	93.4	88.48	-1,628.9	6,136.8	2,861.7	2,676.7	185.00	15.469		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch State BB07-646 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
14,100.0	6,672.0	13,933.1	6,581.0	93.2	94.6	88.48	-1,628.1	6,236.9	2,863.1	2,675.7	187.39	15.279		
14,200.0	6,672.0	14,033.1	6,581.0	94.4	95.8	88.48	-1,627.2	6,336.9	2,864.5	2,674.7	189.78	15.094		
14,300.0	6,672.0	14,133.1	6,581.0	95.6	97.0	88.48	-1,626.4	6,436.9	2,865.9	2,673.7	192.18	14.913		
14,400.0	6,672.0	14,233.2	6,581.0	96.8	98.2	88.48	-1,625.5	6,536.9	2,867.3	2,672.8	194.57	14.737		
14,500.0	6,672.0	14,333.2	6,581.0	98.0	99.4	88.48	-1,624.7	6,636.9	2,868.7	2,671.8	196.97	14.564		
14,600.0	6,672.0	14,433.2	6,581.0	99.2	100.6	88.48	-1,623.9	6,737.0	2,870.2	2,670.8	199.37	14.396		
14,700.0	6,672.0	14,533.2	6,581.0	100.4	101.8	88.48	-1,623.0	6,837.0	2,871.6	2,669.8	201.77	14.232		
14,800.0	6,672.0	14,633.3	6,581.0	101.6	103.0	88.48	-1,622.2	6,937.0	2,873.0	2,668.8	204.17	14.071		
14,900.0	6,672.0	14,733.3	6,581.0	102.7	104.2	88.48	-1,621.3	7,037.0	2,874.4	2,667.9	206.58	13.914		
15,000.0	6,672.0	14,833.3	6,581.0	103.9	105.4	88.49	-1,620.5	7,137.0	2,875.9	2,666.9	208.99	13.761		
15,100.0	6,672.0	14,933.3	6,581.0	105.1	106.6	88.49	-1,619.7	7,237.1	2,877.3	2,665.9	211.40	13.611		
15,200.0	6,672.0	15,033.4	6,581.0	106.3	107.8	88.49	-1,618.8	7,337.1	2,878.8	2,665.0	213.81	13.464		
15,300.0	6,672.0	15,133.4	6,581.0	107.6	109.0	88.49	-1,618.0	7,437.1	2,880.2	2,664.0	216.22	13.321		
15,400.0	6,672.0	15,233.4	6,581.0	108.8	110.3	88.49	-1,617.1	7,537.1	2,881.7	2,663.1	218.63	13.181		
15,500.0	6,672.0	15,333.4	6,581.0	110.0	111.5	88.49	-1,616.3	7,637.1	2,883.2	2,662.1	221.05	13.043		
15,600.0	6,672.0	15,433.5	6,581.0	111.2	112.7	88.49	-1,615.4	7,737.2	2,884.7	2,661.2	223.47	12.909		
15,700.0	6,672.0	15,533.5	6,581.0	112.4	113.9	88.49	-1,614.6	7,837.2	2,886.1	2,660.3	225.88	12.777		
15,800.0	6,672.0	15,633.5	6,581.0	113.6	115.1	88.49	-1,613.7	7,937.2	2,887.6	2,659.3	228.30	12.648		
15,900.0	6,672.0	15,733.5	6,581.0	114.8	116.3	88.49	-1,612.9	8,037.2	2,889.1	2,658.4	230.72	12.522		
16,000.0	6,672.0	15,833.5	6,581.0	116.0	117.5	88.49	-1,612.0	8,137.2	2,890.6	2,657.5	233.15	12.398		
16,100.0	6,672.0	15,933.6	6,581.0	117.2	118.8	88.49	-1,611.1	8,237.3	2,892.2	2,656.6	235.57	12.277		
16,200.0	6,672.0	16,033.6	6,581.0	118.4	120.0	88.49	-1,610.3	8,337.3	2,893.7	2,655.7	237.99	12.159		
16,300.0	6,672.0	16,133.6	6,581.0	119.6	121.2	88.50	-1,609.4	8,437.3	2,895.2	2,654.8	240.42	12.042		
16,400.0	6,672.0	16,233.6	6,581.0	120.8	122.4	88.50	-1,608.6	8,537.3	2,896.7	2,653.9	242.85	11.928		
16,500.0	6,672.0	16,333.7	6,581.0	122.0	123.6	88.50	-1,607.7	8,637.3	2,898.3	2,653.0	245.27	11.816		
16,600.0	6,672.0	16,433.7	6,581.0	123.2	124.8	88.50	-1,606.8	8,737.4	2,899.8	2,652.1	247.70	11.706		
16,700.0	6,672.0	16,533.7	6,581.0	124.5	126.1	88.50	-1,606.0	8,837.4	2,901.4	2,651.2	250.13	11.599		
16,800.0	6,672.0	16,633.7	6,581.0	125.7	127.3	88.50	-1,605.1	8,937.4	2,902.9	2,650.3	252.56	11.494		
16,900.0	6,672.0	16,733.7	6,581.0	126.9	128.5	88.50	-1,604.2	9,037.4	2,904.5	2,649.5	255.00	11.390		
17,000.0	6,672.0	16,833.8	6,581.0	128.1	129.7	88.50	-1,603.4	9,137.4	2,906.0	2,648.6	257.43	11.289		
17,100.0	6,672.0	16,933.8	6,581.0	129.3	130.9	88.50	-1,602.5	9,237.4	2,907.6	2,647.7	259.86	11.189		
17,200.0	6,672.0	17,033.8	6,581.0	130.5	132.2	88.50	-1,601.6	9,337.5	2,909.2	2,646.9	262.30	11.091		
17,300.0	6,672.0	17,133.8	6,581.0	131.7	133.4	88.50	-1,600.8	9,437.5	2,910.8	2,646.0	264.73	10.995		
17,400.0	6,672.0	17,233.9	6,581.0	133.0	134.6	88.50	-1,599.9	9,537.5	2,912.4	2,645.2	267.17	10.901		
17,500.0	6,672.0	17,333.9	6,581.0	134.2	135.8	88.51	-1,599.0	9,637.5	2,914.0	2,644.4	269.61	10.808		
17,600.0	6,672.0	17,433.9	6,581.0	135.4	137.1	88.51	-1,598.1	9,737.5	2,915.6	2,643.5	272.05	10.717		
17,700.0	6,672.0	17,533.9	6,581.0	136.6	138.3	88.51	-1,597.3	9,837.6	2,917.2	2,642.7	274.48	10.628		
17,800.0	6,672.0	17,633.9	6,581.0	137.8	139.5	88.51	-1,596.4	9,937.6	2,918.8	2,641.9	276.92	10.540		
17,900.0	6,672.0	17,723.1	6,581.0	139.0	140.6	88.51	-1,595.6	10,026.7	2,920.5	2,641.2	279.21	10.460		
18,000.0	6,672.0	17,723.1	6,581.0	140.3	140.6	88.51	-1,595.6	10,026.7	2,924.2	2,644.1	280.08	10.441 SF		
18,100.0	6,672.0	17,723.1	6,581.0	141.5	140.6	88.51	-1,595.6	10,026.7	2,931.3	2,650.7	280.63	10.445		
18,200.0	6,672.0	17,723.1	6,581.0	142.7	140.6	88.51	-1,595.6	10,026.7	2,941.8	2,660.9	280.87	10.474		
18,300.0	6,672.0	17,723.1	6,581.0	143.9	140.6	88.51	-1,595.6	10,026.7	2,955.7	2,674.9	280.80	10.526		
18,342.5	6,672.0	17,723.1	6,581.0	144.4	140.6	88.51	-1,595.6	10,026.7	2,962.6	2,681.9	280.68	10.555		



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch State BB07-650 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-161.19	-2,231.0	-759.8	2,356.9					
100.0	100.0	85.0	85.0	0.1	0.1	-161.19	-2,231.0	-759.8	2,356.9	2,356.6	0.23	N/A		
200.0	200.0	185.0	185.0	0.5	0.4	-161.19	-2,231.0	-759.8	2,356.9	2,356.0	0.91	2,578.354		
300.0	300.0	285.0	285.0	0.8	0.8	-161.19	-2,231.0	-759.8	2,356.9	2,355.2	1.63	1,445.012		
400.0	400.0	385.0	385.0	1.2	1.1	-161.19	-2,231.0	-759.8	2,356.9	2,354.5	2.35	1,003.787		
500.0	500.0	485.0	485.0	1.6	1.5	-161.19	-2,231.0	-759.8	2,356.9	2,353.8	3.06	768.983		
600.0	600.0	585.0	585.0	1.9	1.9	-161.19	-2,231.0	-759.8	2,356.9	2,353.1	3.78	623.204		
700.0	700.0	685.0	685.0	2.3	2.2	-161.19	-2,231.0	-759.8	2,356.9	2,352.4	4.50	523.889		
800.0	800.0	785.0	785.0	2.6	2.6	-161.19	-2,231.0	-759.8	2,356.9	2,351.7	5.22	451.877		
900.0	900.0	885.0	885.0	3.0	2.9	-161.19	-2,231.0	-759.8	2,356.9	2,350.9	5.93	397.269		
1,000.0	1,000.0	985.0	985.0	3.4	3.3	-161.19	-2,231.0	-759.8	2,356.9	2,350.2	6.65	354.437		
1,100.0	1,100.0	1,085.0	1,085.0	3.7	3.7	-161.19	-2,231.0	-759.8	2,356.9	2,349.5	7.37	319.942		
1,200.0	1,200.0	1,185.0	1,185.0	4.1	4.0	-161.19	-2,231.0	-759.8	2,356.9	2,348.8	8.08	291.566		
1,300.0	1,300.0	1,285.0	1,285.0	4.4	4.4	-161.19	-2,231.0	-759.8	2,356.9	2,348.1	8.80	267.813		
1,400.0	1,400.0	1,385.0	1,385.0	4.8	4.7	-161.19	-2,231.0	-759.8	2,356.9	2,347.4	9.52	247.639		
1,500.0	1,500.0	1,485.0	1,485.0	5.1	5.1	-161.19	-2,231.0	-759.8	2,356.9	2,346.6	10.23	230.291		
1,600.0	1,600.0	1,585.0	1,585.0	5.5	5.4	-161.19	-2,231.0	-759.8	2,356.9	2,345.9	10.95	215.215		
1,700.0	1,700.0	1,685.0	1,685.0	5.9	5.8	-161.19	-2,231.0	-759.8	2,356.9	2,345.2	11.67	201.991		
1,800.0	1,800.0	1,785.0	1,785.0	6.2	6.2	-161.19	-2,231.0	-759.8	2,356.9	2,344.5	12.39	190.298		
1,900.0	1,900.0	1,885.0	1,885.0	6.6	6.5	-161.19	-2,231.0	-759.8	2,356.9	2,343.8	13.10	179.885		
2,000.0	2,000.0	1,985.0	1,985.0	6.9	6.9	-161.19	-2,231.0	-759.8	2,356.9	2,343.1	13.82	170.553		
2,100.0	2,100.0	2,174.8	2,174.7	7.3	7.6	-161.09	-2,226.6	-762.7	2,355.3	2,340.4	14.85	158.643		
2,200.0	2,200.0	2,378.7	2,377.6	7.7	8.3	-160.72	-2,210.0	-773.2	2,349.2	2,333.3	15.90	147.773		
2,300.0	2,300.0	2,579.4	2,575.5	8.0	9.0	-109.33	-2,181.8	-791.2	2,339.5	2,322.6	16.91	138.338		
2,400.0	2,399.8	2,400.0	2,745.3	8.4	8.4	-108.99	-2,147.8	-812.9	2,326.7	2,310.2	16.56	140.510		
2,500.0	2,499.5	2,867.8	2,855.1	8.7	10.0	-108.87	-2,122.6	-828.9	2,313.4	2,294.8	18.58	124.496		
2,600.0	2,598.7	2,966.6	2,950.5	9.1	10.4	-108.87	-2,100.7	-842.9	2,301.3	2,282.0	19.30	119.246		
2,700.0	2,697.5	3,065.8	3,046.2	9.4	10.8	-108.92	-2,078.7	-856.9	2,290.2	2,270.2	20.02	114.400		
2,800.0	2,795.6	3,165.3	3,142.1	9.8	11.1	-109.03	-2,056.6	-870.9	2,280.4	2,259.6	20.75	109.922		
2,900.0	2,893.1	3,264.9	3,238.2	10.1	11.5	-109.20	-2,034.5	-885.0	2,271.6	2,250.2	21.48	105.776		
3,000.0	2,989.6	3,364.5	3,334.4	10.5	11.9	-109.44	-2,012.4	-899.1	2,264.0	2,241.8	22.21	101.935		
3,100.0	3,085.3	3,464.1	3,430.4	10.9	12.2	-109.73	-1,990.3	-913.2	2,257.6	2,234.7	22.95	98.371		
3,200.0	3,179.8	3,563.4	3,526.2	11.2	12.6	-110.09	-1,968.3	-927.2	2,252.4	2,228.7	23.69	95.060		
3,300.0	3,273.2	3,662.4	3,621.8	11.6	13.0	-110.50	-1,946.3	-941.2	2,248.5	2,224.0	24.44	91.982		
3,387.5	3,353.8	3,748.7	3,705.0	11.9	13.3	-110.91	-1,927.2	-953.4	2,246.1	2,221.0	25.11	89.466		
3,400.0	3,365.2	3,761.0	3,716.8	12.0	13.4	-110.97	-1,924.5	-955.1	2,245.8	2,220.6	25.20	89.120		
3,500.0	3,456.8	3,859.3	3,811.7	12.4	13.7	-111.42	-1,902.7	-969.0	2,243.8	2,217.9	25.96	86.421		
3,600.0	3,548.3	3,957.7	3,906.6	12.8	14.1	-111.87	-1,880.8	-982.9	2,241.9	2,215.2	26.73	83.859		
3,700.0	3,639.8	4,056.0	4,001.5	13.2	14.5	-112.32	-1,859.0	-996.8	2,240.2	2,212.7	27.51	81.425		
3,800.0	3,731.4	4,154.4	4,096.4	13.6	14.9	-112.78	-1,837.2	-1,010.7	2,238.6	2,210.3	28.30	79.114		
3,900.0	3,822.9	4,252.7	4,191.3	14.0	15.2	-113.23	-1,815.4	-1,024.6	2,237.2	2,208.1	29.09	76.917		
4,000.0	3,914.4	4,351.1	4,286.2	14.4	15.6	-113.68	-1,793.6	-1,038.5	2,235.9	2,206.0	29.88	74.828		
4,100.0	4,005.9	4,449.5	4,381.1	14.8	16.0	-114.14	-1,771.7	-1,052.4	2,234.7	2,204.0	30.68	72.841		
4,200.0	4,097.5	4,547.8	4,476.0	15.2	16.4	-114.59	-1,749.9	-1,066.3	2,233.7	2,202.2	31.48	70.950		
4,300.0	4,189.0	4,646.2	4,570.9	15.6	16.7	-115.05	-1,728.1	-1,080.2	2,232.9	2,200.6	32.29	69.148		
4,400.0	4,280.5	4,744.5	4,665.8	16.1	17.1	-115.50	-1,706.3	-1,094.1	2,232.1	2,199.0	33.10	67.432		
4,500.0	4,372.1	4,842.9	4,760.6	16.5	17.5	-115.96	-1,684.5	-1,108.0	2,231.6	2,197.6	33.92	65.796		
4,600.0	4,463.6	4,941.2	4,855.5	16.9	17.9	-116.42	-1,662.6	-1,121.9	2,231.1	2,196.4	34.73	64.235		
4,700.0	4,555.1	5,039.6	4,950.4	17.4	18.3	-116.87	-1,640.8	-1,135.8	2,230.9	2,195.3	35.55	62.744		
4,800.0	4,646.7	5,137.9	5,045.3	17.8	18.7	-117.33	-1,619.0	-1,149.7	2,230.7	2,194.4	36.38	61.321		
4,839.9	4,683.2	5,177.2	5,083.2	18.0	18.8	-117.51	-1,610.3	-1,155.3	2,230.7	2,194.0	36.71	60.770		
4,900.0	4,738.2	5,236.3	5,140.2	18.2	19.0	-117.79	-1,597.2	-1,163.6	2,230.7	2,193.5	37.20	59.961		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch State BB07-650 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,000.0	4,829.7	5,334.6	5,235.1	18.7	19.4	-118.24	-1,575.4	-1,177.5	2,230.9	2,192.9	38.03	58.660		
5,100.0	4,921.3	5,433.0	5,330.0	19.1	19.8	-118.70	-1,553.6	-1,191.4	2,231.2	2,192.4	38.86	57.415		
5,200.0	5,012.8	5,531.4	5,424.9	19.5	20.2	-119.15	-1,531.7	-1,205.3	2,231.7	2,192.0	39.69	56.223		
5,300.0	5,104.3	5,629.7	5,519.8	20.0	20.6	-119.61	-1,509.9	-1,219.2	2,232.3	2,191.7	40.53	55.082		
5,400.0	5,195.8	5,728.1	5,614.7	20.4	21.0	-120.07	-1,488.1	-1,233.1	2,233.0	2,191.7	41.36	53.988		
5,500.0	5,287.4	5,826.4	5,709.6	20.9	21.3	-120.52	-1,466.3	-1,247.0	2,233.9	2,191.7	42.20	52.938		
5,600.0	5,378.9	5,924.8	5,804.4	21.3	21.7	-120.98	-1,444.5	-1,260.9	2,234.9	2,191.9	43.04	51.931		
5,700.0	5,470.4	6,135.1	6,007.2	21.8	22.6	-122.07	-1,394.9	-1,285.1	2,235.2	2,191.0	44.13	50.649		
5,800.0	5,562.0	6,331.6	6,194.7	22.2	23.2	-124.31	-1,346.1	-1,257.0	2,229.6	2,184.5	45.07	49.468		
5,900.0	5,653.5	6,469.9	6,317.6	22.7	23.7	-126.65	-1,314.1	-1,202.9	2,222.2	2,176.3	45.92	48.397		
6,000.0	5,745.0	6,564.5	6,393.9	23.1	23.9	-128.57	-1,294.3	-1,150.8	2,215.9	2,169.1	46.74	47.412		
6,100.0	5,836.6	6,630.6	6,442.4	23.6	24.1	-130.03	-1,281.7	-1,107.8	2,211.9	2,164.4	47.52	46.549		
6,167.8	5,898.6	6,664.6	6,465.7	23.9	24.2	-130.82	-1,275.6	-1,083.8	2,211.1	2,163.1	48.02	46.048 CC		
6,200.0	5,928.1	6,678.5	6,474.8	24.0	24.2	-131.14	-1,273.2	-1,073.6	2,211.3	2,163.1	48.24	45.836 ES		
6,278.6	6,000.0	6,707.5	6,493.3	24.4	24.3	-131.84	-1,268.4	-1,051.7	2,213.4	2,164.7	48.76	45.391		
6,290.0	6,010.4	6,711.2	6,495.5	24.4	24.3	-133.45	-1,267.8	-1,048.8	2,214.1	2,165.2	48.84	45.337		
6,300.0	6,019.5	6,714.4	6,497.5	24.5	24.3	-135.32	-1,267.3	-1,046.3	2,214.8	2,165.9	48.90	45.293		
6,350.0	6,065.8	6,731.5	6,507.8	24.7	24.4	-146.54	-1,264.7	-1,032.9	2,218.9	2,169.7	49.20	45.103		
6,400.0	6,113.0	6,750.0	6,518.5	24.9	24.4	-161.39	-1,261.9	-1,018.1	2,223.9	2,174.5	49.47	44.955		
6,450.0	6,160.7	6,769.9	6,529.5	25.1	24.5	-179.34	-1,259.0	-1,001.8	2,229.8	2,180.1	49.72	44.846		
6,500.0	6,208.5	6,790.7	6,540.5	25.3	24.5	162.13	-1,256.2	-984.4	2,236.4	2,186.4	49.95	44.773		
6,550.0	6,255.8	6,812.3	6,551.4	25.4	24.6	145.97	-1,253.3	-965.9	2,243.5	2,193.3	50.16	44.729		
6,600.0	6,302.5	6,834.6	6,562.0	25.6	24.6	133.30	-1,250.6	-946.5	2,251.0	2,200.6	50.35	44.709		
6,650.0	6,347.9	6,857.5	6,572.2	25.7	24.7	123.73	-1,247.9	-926.1	2,258.8	2,208.3	50.52	44.708		
6,700.0	6,391.6	6,881.0	6,581.9	25.9	24.8	116.44	-1,245.4	-904.9	2,266.7	2,216.0	50.68	44.722		
6,750.0	6,433.4	6,900.0	6,589.2	26.0	24.8	110.85	-1,243.5	-887.5	2,274.6	2,223.8	50.82	44.759		
6,800.0	6,472.8	6,929.0	6,599.4	26.1	24.9	106.26	-1,240.8	-860.4	2,282.4	2,231.5	50.98	44.772		
6,850.0	6,509.4	6,950.0	6,606.0	26.2	24.9	102.63	-1,239.1	-840.6	2,290.0	2,238.9	51.11	44.809		
6,900.0	6,543.0	6,978.3	6,614.0	26.3	25.0	99.58	-1,237.0	-813.5	2,297.2	2,245.9	51.25	44.820		
6,950.0	6,573.2	7,000.0	6,619.3	26.4	25.1	97.11	-1,235.7	-792.5	2,303.9	2,252.6	51.38	44.842		
7,000.0	6,599.8	7,028.5	6,625.2	26.5	25.2	95.01	-1,234.1	-764.6	2,310.1	2,258.6	51.53	44.831		
7,050.0	6,622.5	7,050.0	6,628.9	26.6	25.2	93.35	-1,233.2	-743.5	2,315.7	2,264.0	51.66	44.823		
7,100.0	6,641.1	7,079.4	6,632.8	26.7	25.3	91.97	-1,232.1	-714.4	2,320.5	2,268.7	51.82	44.776		
7,150.0	6,655.4	7,100.0	6,634.8	26.8	25.4	90.94	-1,231.6	-693.9	2,324.6	2,272.6	51.97	44.728		
7,200.0	6,665.4	7,130.6	6,636.6	26.9	25.4	90.16	-1,231.2	-663.4	2,327.8	2,275.7	52.15	44.635		
7,250.0	6,670.8	7,158.4	6,637.0	27.0	25.5	89.67	-1,231.0	-635.6	2,330.2	2,277.8	52.33	44.527		
7,285.7	6,672.0	7,194.0	6,637.0	27.1	25.6	89.51	-1,231.0	-600.0	2,331.1	2,278.6	52.51	44.397		
7,300.0	6,672.0	7,208.4	6,637.0	27.1	25.7	89.51	-1,231.0	-585.6	2,331.4	2,278.8	52.58	44.337		
7,400.0	6,672.0	7,308.6	6,637.0	27.3	26.0	89.51	-1,231.0	-485.4	2,333.1	2,279.9	53.18	43.875		
7,500.0	6,672.0	7,408.8	6,637.0	27.6	26.4	89.51	-1,231.0	-385.2	2,334.8	2,280.9	53.87	43.341		
7,600.0	6,672.0	7,509.0	6,637.0	28.0	26.9	89.51	-1,231.0	-285.0	2,336.5	2,281.8	54.68	42.731		
7,700.0	6,672.0	7,609.2	6,637.0	28.3	27.4	89.51	-1,231.0	-184.8	2,338.2	2,282.6	55.58	42.066		
7,800.0	6,672.0	7,709.4	6,637.0	28.8	27.9	89.51	-1,230.9	-84.6	2,339.9	2,283.3	56.58	41.354		
7,900.0	6,672.0	7,809.6	6,637.0	29.3	28.5	89.51	-1,230.9	15.6	2,341.6	2,283.9	57.67	40.606		
8,000.0	6,672.0	7,909.8	6,637.0	29.8	29.2	89.51	-1,230.8	115.8	2,343.3	2,284.4	58.84	39.822		
8,100.0	6,672.0	8,010.0	6,637.0	30.4	29.8	89.51	-1,230.7	216.0	2,345.0	2,284.9	60.09	39.023		
8,200.0	6,672.0	8,110.2	6,637.0	31.0	30.6	89.51	-1,230.6	316.2	2,346.7	2,285.3	61.42	38.204		
8,300.0	6,672.0	8,210.4	6,637.0	31.7	31.3	89.51	-1,230.6	416.4	2,348.4	2,285.5	62.82	37.381		
8,400.0	6,672.0	8,310.6	6,637.0	32.4	32.1	89.51	-1,230.5	516.6	2,350.1	2,285.8	64.29	36.556		
8,500.0	6,672.0	8,410.8	6,637.0	33.1	32.9	89.51	-1,230.3	616.8	2,351.8	2,285.9	65.81	35.734		
8,600.0	6,672.0	8,510.9	6,637.0	33.9	33.7	89.51	-1,230.2	717.0	2,353.4	2,286.0	67.39	34.920		
8,700.0	6,672.0	8,611.1	6,637.0	34.7	34.6	89.51	-1,230.1	817.2	2,355.1	2,286.1	69.03	34.117		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch State BB07-650 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
8,800.0	6,672.0	8,711.3	6,637.0	35.5	35.4	89.51	-1,230.0	917.4	2,356.8	2,286.1	70.72	33.328		
8,900.0	6,672.0	8,811.5	6,637.0	36.3	36.3	89.51	-1,229.8	1,017.6	2,358.5	2,286.1	72.45	32.555		
9,000.0	6,672.0	8,911.7	6,637.0	37.2	37.2	89.51	-1,229.7	1,117.8	2,360.2	2,286.0	74.22	31.800		
9,100.0	6,672.0	9,011.9	6,637.0	38.1	38.2	89.51	-1,229.5	1,218.0	2,361.9	2,285.8	76.03	31.063		
9,200.0	6,672.0	9,112.1	6,637.0	39.0	39.1	89.52	-1,229.3	1,318.1	2,363.5	2,285.7	77.89	30.346		
9,300.0	6,672.0	9,212.3	6,637.0	39.9	40.1	89.52	-1,229.2	1,418.3	2,365.2	2,285.5	79.77	29.650		
9,400.0	6,672.0	9,312.5	6,637.0	40.8	41.1	89.52	-1,229.0	1,518.5	2,366.9	2,285.2	81.69	28.975		
9,500.0	6,672.0	9,412.7	6,637.0	41.8	42.1	89.52	-1,228.8	1,618.7	2,368.6	2,284.9	83.64	28.320		
9,600.0	6,672.0	9,512.9	6,637.0	42.7	43.1	89.52	-1,228.6	1,718.9	2,370.2	2,284.6	85.61	27.686		
9,700.0	6,672.0	9,613.1	6,637.0	43.7	44.1	89.52	-1,228.4	1,819.1	2,371.9	2,284.3	87.61	27.073		
9,800.0	6,672.0	9,713.3	6,637.0	44.7	45.1	89.52	-1,228.1	1,919.3	2,373.6	2,284.0	89.64	26.480		
9,900.0	6,672.0	9,813.5	6,637.0	45.7	46.2	89.52	-1,227.9	2,019.5	2,375.3	2,283.6	91.69	25.906		
10,000.0	6,672.0	9,913.7	6,637.0	46.7	47.2	89.52	-1,227.7	2,119.7	2,376.9	2,283.2	93.76	25.352		
10,100.0	6,672.0	10,013.9	6,637.0	47.7	48.3	89.52	-1,227.4	2,219.9	2,378.6	2,282.8	95.85	24.817		
10,200.0	6,672.0	10,114.1	6,637.0	48.8	49.4	89.52	-1,227.1	2,320.1	2,380.3	2,282.3	97.95	24.300		
10,300.0	6,672.0	10,214.3	6,637.0	49.8	50.5	89.52	-1,226.9	2,420.3	2,381.9	2,281.8	100.08	23.801		
10,400.0	6,672.0	10,314.5	6,637.0	50.9	51.5	89.52	-1,226.6	2,520.5	2,383.6	2,281.4	102.22	23.318		
10,500.0	6,672.0	10,414.7	6,637.0	51.9	52.6	89.52	-1,226.3	2,620.7	2,385.3	2,280.9	104.38	22.852		
10,600.0	6,672.0	10,514.9	6,637.0	53.0	53.7	89.52	-1,226.0	2,720.9	2,386.9	2,280.4	106.55	22.402		
10,700.0	6,672.0	10,615.1	6,637.0	54.1	54.8	89.52	-1,225.7	2,821.1	2,388.6	2,279.8	108.73	21.968		
10,800.0	6,672.0	10,715.3	6,637.0	55.2	55.9	89.52	-1,225.4	2,921.3	2,390.2	2,279.3	110.93	21.547		
10,900.0	6,672.0	10,815.5	6,637.0	56.3	57.1	89.52	-1,225.1	3,021.5	2,391.9	2,278.7	113.14	21.141		
11,000.0	6,672.0	10,915.7	6,637.0	57.4	58.2	89.52	-1,224.7	3,121.7	2,393.5	2,278.2	115.36	20.749		
11,100.0	6,672.0	11,015.9	6,637.0	58.5	59.3	89.52	-1,224.4	3,221.9	2,395.2	2,277.6	117.59	20.369		
11,200.0	6,672.0	11,116.1	6,637.0	59.6	60.4	89.52	-1,224.0	3,322.1	2,396.8	2,277.0	119.83	20.002		
11,300.0	6,672.0	11,216.3	6,637.0	60.7	61.6	89.52	-1,223.7	3,422.3	2,398.5	2,276.4	122.08	19.647		
11,400.0	6,672.0	11,316.5	6,637.0	61.8	62.7	89.52	-1,223.3	3,522.5	2,400.1	2,275.8	124.34	19.303		
11,500.0	6,672.0	11,416.7	6,637.0	62.9	63.9	89.52	-1,222.9	3,622.7	2,401.8	2,275.2	126.61	18.970		
11,600.0	6,672.0	11,516.9	6,637.0	64.1	65.0	89.52	-1,222.6	3,722.9	2,403.4	2,274.5	128.88	18.648		
11,700.0	6,672.0	11,617.1	6,637.0	65.2	66.2	89.52	-1,222.2	3,823.1	2,405.1	2,273.9	131.17	18.336		
11,800.0	6,672.0	11,717.3	6,637.0	66.3	67.3	89.52	-1,221.8	3,923.3	2,406.7	2,273.3	133.46	18.033		
11,900.0	6,672.0	11,817.5	6,637.0	67.5	68.5	89.52	-1,221.3	4,023.5	2,408.4	2,272.6	135.76	17.740		
12,000.0	6,672.0	11,917.7	6,637.0	68.6	69.6	89.52	-1,220.9	4,123.7	2,410.0	2,271.9	138.06	17.456		
12,100.0	6,672.0	12,017.9	6,637.0	69.8	70.8	89.52	-1,220.5	4,223.9	2,411.6	2,271.3	140.37	17.180		
12,200.0	6,672.0	12,118.1	6,637.0	70.9	72.0	89.53	-1,220.1	4,324.1	2,413.3	2,270.6	142.69	16.913		
12,300.0	6,672.0	12,218.3	6,637.0	72.1	73.1	89.53	-1,219.6	4,424.3	2,414.9	2,269.9	145.01	16.653		
12,400.0	6,672.0	12,318.5	6,637.0	73.2	74.3	89.53	-1,219.1	4,524.5	2,416.5	2,269.2	147.34	16.402		
12,500.0	6,672.0	12,418.7	6,637.0	74.4	75.5	89.53	-1,218.7	4,624.7	2,418.2	2,268.5	149.67	16.157		
12,600.0	6,672.0	12,518.9	6,637.0	75.5	76.7	89.53	-1,218.2	4,724.9	2,419.8	2,267.8	152.01	15.919		
12,700.0	6,672.0	12,619.1	6,637.0	76.7	77.8	89.53	-1,217.7	4,825.1	2,421.4	2,267.1	154.35	15.688		
12,800.0	6,672.0	12,719.3	6,637.0	77.9	79.0	89.53	-1,217.2	4,925.3	2,423.1	2,266.4	156.69	15.464		
12,900.0	6,672.0	12,819.5	6,637.0	79.0	80.2	89.53	-1,216.7	5,025.5	2,424.7	2,265.6	159.04	15.245		
13,000.0	6,672.0	12,919.7	6,637.0	80.2	81.4	89.53	-1,216.2	5,125.7	2,426.3	2,264.9	161.40	15.033		
13,100.0	6,672.0	13,020.0	6,637.0	81.4	82.6	89.53	-1,215.7	5,225.9	2,427.9	2,264.2	163.76	14.826		
13,200.0	6,672.0	13,120.2	6,637.0	82.6	83.8	89.53	-1,215.2	5,326.1	2,429.6	2,263.4	166.12	14.625		
13,300.0	6,672.0	13,220.4	6,637.0	83.7	84.9	89.53	-1,214.6	5,426.4	2,431.2	2,262.7	168.49	14.430		
13,400.0	6,672.0	13,320.6	6,637.0	84.9	86.1	89.53	-1,214.1	5,526.6	2,432.8	2,262.0	170.85	14.239		
13,500.0	6,672.0	13,420.8	6,637.0	86.1	87.3	89.53	-1,213.5	5,626.8	2,434.4	2,261.2	173.23	14.053		
13,600.0	6,672.0	13,521.0	6,637.0	87.3	88.5	89.53	-1,213.0	5,727.0	2,436.0	2,260.4	175.60	13.873		
13,700.0	6,672.0	13,621.2	6,637.0	88.4	89.7	89.53	-1,212.4	5,827.2	2,437.7	2,259.7	177.98	13.696		
13,800.0	6,672.0	13,721.4	6,637.0	89.6	90.9	89.53	-1,211.8	5,927.4	2,439.3	2,258.9	180.36	13.524		
13,900.0	6,672.0	13,821.6	6,637.0	90.8	92.1	89.53	-1,211.2	6,027.6	2,440.9	2,258.1	182.75	13.357		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch State BB07-650 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
14,000.0	6,672.0	13,921.8	6,637.0	92.0	93.3	89.53	-1,210.6	6,127.8	2,442.5	2,257.4	185.13	13.193		
14,100.0	6,672.0	14,022.0	6,637.0	93.2	94.5	89.53	-1,210.0	6,228.0	2,444.1	2,256.6	187.52	13.034		
14,200.0	6,672.0	14,122.2	6,637.0	94.4	95.7	89.53	-1,209.4	6,328.2	2,445.7	2,255.8	189.91	12.878		
14,300.0	6,672.0	14,222.4	6,637.0	95.6	96.9	89.53	-1,208.8	6,428.4	2,447.3	2,255.0	192.31	12.726		
14,400.0	6,672.0	14,322.6	6,637.0	96.8	98.1	89.53	-1,208.1	6,528.6	2,448.9	2,254.2	194.70	12.578		
14,500.0	6,672.0	14,422.8	6,637.0	98.0	99.3	89.53	-1,207.5	6,628.8	2,450.5	2,253.4	197.10	12.433		
14,600.0	6,672.0	14,523.0	6,637.0	99.2	100.5	89.53	-1,206.8	6,729.0	2,452.1	2,252.6	199.50	12.291		
14,700.0	6,672.0	14,623.2	6,637.0	100.4	101.7	89.53	-1,206.2	6,829.2	2,453.7	2,251.8	201.91	12.153		
14,800.0	6,672.0	14,723.4	6,637.0	101.6	102.9	89.53	-1,205.5	6,929.4	2,455.3	2,251.0	204.31	12.018		
14,900.0	6,672.0	14,823.6	6,637.0	102.7	104.1	89.53	-1,204.8	7,029.6	2,456.9	2,250.2	206.72	11.885		
15,000.0	6,672.0	14,923.9	6,637.0	103.9	105.4	89.53	-1,204.1	7,129.8	2,458.5	2,249.4	209.13	11.756		
15,100.0	6,672.0	15,024.1	6,637.0	105.1	106.6	89.53	-1,203.4	7,230.0	2,460.1	2,248.6	211.54	11.630		
15,200.0	6,672.0	15,124.3	6,637.0	106.3	107.8	89.53	-1,202.7	7,330.2	2,461.7	2,247.8	213.95	11.506		
15,300.0	6,672.0	15,224.5	6,637.0	107.6	109.0	89.53	-1,202.0	7,430.4	2,463.3	2,246.9	216.36	11.385		
15,400.0	6,672.0	15,324.7	6,637.0	108.8	110.2	89.54	-1,201.3	7,530.6	2,464.9	2,246.1	218.78	11.267		
15,500.0	6,672.0	15,424.9	6,637.0	110.0	111.4	89.54	-1,200.5	7,630.8	2,466.5	2,245.3	221.19	11.151		
15,600.0	6,672.0	15,525.1	6,637.0	111.2	112.6	89.54	-1,199.8	7,731.0	2,468.1	2,244.5	223.61	11.037		
15,700.0	6,672.0	15,625.3	6,637.0	112.4	113.8	89.54	-1,199.0	7,831.3	2,469.7	2,243.6	226.03	10.926		
15,800.0	6,672.0	15,725.5	6,637.0	113.6	115.1	89.54	-1,198.3	7,931.5	2,471.2	2,242.8	228.45	10.817		
15,900.0	6,672.0	15,825.7	6,637.0	114.8	116.3	89.54	-1,197.5	8,031.7	2,472.8	2,242.0	230.88	10.711		
16,000.0	6,672.0	15,925.9	6,637.0	116.0	117.5	89.54	-1,196.7	8,131.9	2,474.4	2,241.1	233.30	10.606		
16,100.0	6,672.0	16,026.1	6,637.0	117.2	118.7	89.54	-1,195.9	8,232.1	2,476.0	2,240.3	235.72	10.504		
16,200.0	6,672.0	16,126.4	6,637.0	118.4	119.9	89.54	-1,195.1	8,332.3	2,477.6	2,239.4	238.15	10.403		
16,300.0	6,672.0	16,226.6	6,637.0	119.6	121.1	89.54	-1,194.3	8,432.5	2,479.2	2,238.6	240.58	10.305		
16,400.0	6,672.0	16,326.8	6,637.0	120.8	122.4	89.54	-1,193.5	8,532.7	2,480.7	2,237.7	243.01	10.208		
16,500.0	6,672.0	16,427.0	6,637.0	122.0	123.6	89.54	-1,192.7	8,632.9	2,482.3	2,236.9	245.44	10.114		
16,600.0	6,672.0	16,527.2	6,637.0	123.2	124.8	89.54	-1,191.8	8,733.1	2,483.9	2,236.0	247.87	10.021		
16,700.0	6,672.0	16,627.4	6,637.0	124.5	126.0	89.54	-1,191.0	8,833.3	2,485.4	2,235.1	250.30	9.930		
16,800.0	6,672.0	16,727.6	6,637.0	125.7	127.2	89.54	-1,190.2	8,933.5	2,487.0	2,234.3	252.73	9.841		
16,900.0	6,672.0	16,827.8	6,637.0	126.9	128.5	89.54	-1,189.3	9,033.7	2,488.6	2,233.4	255.17	9.753		
17,000.0	6,672.0	16,928.0	6,637.0	128.1	129.7	89.54	-1,188.4	9,133.9	2,490.2	2,232.6	257.60	9.667		
17,100.0	6,672.0	17,028.2	6,637.0	129.3	130.9	89.54	-1,187.5	9,234.1	2,491.7	2,231.7	260.04	9.582		
17,200.0	6,672.0	17,128.5	6,637.0	130.5	132.1	89.54	-1,186.7	9,334.3	2,493.3	2,230.8	262.47	9.499		
17,300.0	6,672.0	17,228.7	6,637.0	131.7	133.3	89.54	-1,185.8	9,434.5	2,494.9	2,229.9	264.91	9.418		
17,400.0	6,672.0	17,328.9	6,637.0	133.0	134.6	89.54	-1,184.9	9,534.8	2,496.4	2,229.1	267.35	9.338		
17,500.0	6,672.0	17,429.1	6,637.0	134.2	135.8	89.54	-1,183.9	9,635.0	2,498.0	2,228.2	269.79	9.259		
17,600.0	6,672.0	17,529.3	6,637.0	135.4	137.0	89.54	-1,183.0	9,735.2	2,499.5	2,227.3	272.23	9.182		
17,700.0	6,672.0	17,629.5	6,637.0	136.6	138.2	89.54	-1,182.1	9,835.4	2,501.1	2,226.4	274.67	9.106		
17,800.0	6,672.0	17,729.7	6,637.0	137.8	139.5	89.54	-1,181.1	9,935.6	2,502.6	2,225.5	277.11	9.031		
17,900.0	6,672.0	17,821.5	6,637.0	139.0	140.6	89.54	-1,180.3	10,027.4	2,504.2	2,224.8	279.43	8.962		
18,000.0	6,672.0	17,821.5	6,637.0	140.3	140.6	89.54	-1,180.3	10,027.4	2,508.1	2,227.9	280.19	8.952 SF		
18,100.0	6,672.0	17,821.5	6,637.0	141.5	140.6	89.54	-1,180.3	10,027.4	2,516.0	2,235.5	280.52	8.969		
18,200.0	6,672.0	17,821.5	6,637.0	142.7	140.6	89.54	-1,180.3	10,027.4	2,527.8	2,247.4	280.42	9.014		
18,300.0	6,672.0	17,821.5	6,637.0	143.9	140.6	89.54	-1,180.3	10,027.4	2,543.5	2,263.5	279.93	9.086		
18,342.5	6,672.0	17,821.5	6,637.0	144.4	140.6	89.54	-1,180.3	10,027.4	2,551.3	2,271.7	279.59	9.125		



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch State BB07-653 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	2.0	-2.0	0.0	0.0	-179.24	-113.0	-1.5	113.0					
100.0	100.0	102.0	98.0	0.1	0.1	-179.24	-113.0	-1.5	113.0	112.7	0.26	437.687		
200.0	200.0	202.0	198.0	0.5	0.5	-179.24	-113.0	-1.5	113.0	112.0	0.98	115.858		
300.0	300.0	302.0	298.0	0.8	0.8	-179.24	-113.0	-1.5	113.0	111.3	1.69	66.766		
400.0	400.0	402.0	398.0	1.2	1.2	-179.24	-113.0	-1.5	113.0	110.6	2.41	46.895		
500.0	500.0	502.0	498.0	1.6	1.6	-179.24	-113.0	-1.5	113.0	109.8	3.13	36.139		
600.0	600.0	602.0	598.0	1.9	1.9	-179.24	-113.0	-1.5	113.0	109.1	3.84	29.397		
700.0	700.0	702.0	698.0	2.3	2.3	-179.24	-113.0	-1.5	113.0	108.4	4.56	24.775		
800.0	800.0	802.0	798.0	2.6	2.6	-179.24	-113.0	-1.5	113.0	107.7	5.28	21.409		
900.0	900.0	902.0	898.0	3.0	3.0	-179.24	-113.0	-1.5	113.0	107.0	5.99	18.848		
1,000.0	1,000.0	1,002.0	998.0	3.4	3.4	-179.24	-113.0	-1.5	113.0	106.3	6.71	16.834		
1,100.0	1,100.0	1,102.0	1,098.0	3.7	3.7	-179.24	-113.0	-1.5	113.0	105.5	7.43	15.209		
1,200.0	1,200.0	1,202.0	1,198.0	4.1	4.1	-179.24	-113.0	-1.5	113.0	104.8	8.14	13.870		
1,300.0	1,300.0	1,302.0	1,298.0	4.4	4.4	-179.24	-113.0	-1.5	113.0	104.1	8.86	12.748		
1,400.0	1,400.0	1,402.0	1,398.0	4.8	4.8	-179.24	-113.0	-1.5	113.0	103.4	9.58	11.794		
1,500.0	1,500.0	1,502.0	1,498.0	5.1	5.2	-179.24	-113.0	-1.5	113.0	102.7	10.30	10.973		
1,600.0	1,600.0	1,602.0	1,598.0	5.5	5.5	-179.24	-113.0	-1.5	113.0	102.0	11.01	10.258		
1,700.0	1,700.0	1,702.0	1,698.0	5.9	5.9	-179.24	-113.0	-1.5	113.0	101.2	11.73	9.631		
1,800.0	1,800.0	1,802.0	1,798.0	6.2	6.2	-179.24	-113.0	-1.5	113.0	100.5	12.45	9.076		
1,900.0	1,900.0	1,902.0	1,898.0	6.6	6.6	-179.24	-113.0	-1.5	113.0	99.8	13.16	8.582		
2,000.0	2,000.0	2,002.0	1,998.0	6.9	6.9	-179.24	-113.0	-1.5	113.0	99.1	13.88	8.139		
2,100.0	2,100.0	2,102.0	2,098.0	7.3	7.3	-179.24	-113.0	-1.5	113.0	98.4	14.60	7.739		
2,200.0	2,200.0	2,198.0	2,198.0	7.7	7.6	-179.24	-113.0	-1.5	113.0	97.7	15.30	7.384 CC, ES		
2,300.0	2,300.0	2,296.1	2,296.1	8.0	8.0	-128.18	-113.7	-2.9	114.8	98.8	15.99	7.181 SF		
2,400.0	2,399.8	2,394.0	2,393.9	8.4	8.3	-127.94	-116.0	-7.3	120.5	103.8	16.67	7.230		
2,500.0	2,499.5	2,491.5	2,491.0	8.7	8.6	-127.56	-119.9	-14.6	130.0	112.6	17.34	7.495		
2,600.0	2,598.7	2,588.4	2,587.2	9.1	9.0	-127.09	-125.3	-24.7	143.2	125.2	18.01	7.950		
2,700.0	2,697.5	2,684.4	2,682.1	9.4	9.3	-126.56	-132.1	-37.6	160.1	141.5	18.67	8.576		
2,800.0	2,795.6	2,779.5	2,775.5	9.8	9.6	-126.01	-140.4	-53.1	180.7	161.4	19.33	9.351		
2,900.0	2,893.1	2,873.3	2,867.1	10.1	10.0	-125.45	-149.9	-71.0	204.9	185.0	19.98	10.259		
3,000.0	2,889.6	2,865.9	2,856.8	10.5	10.3	-124.88	-160.7	-91.3	232.7	212.1	20.62	11.285		
3,100.0	3,085.3	3,056.9	3,044.2	10.9	10.6	-124.32	-172.7	-113.8	263.9	242.6	21.25	12.416		
3,200.0	3,179.8	3,146.3	3,129.2	11.2	10.9	-123.75	-185.7	-138.2	298.4	276.5	21.88	13.637		
3,300.0	3,273.2	3,234.0	3,211.7	11.6	11.2	-123.18	-199.6	-164.5	336.2	313.7	22.50	14.939		
3,387.5	3,353.8	3,309.3	3,281.8	11.9	11.5	-122.66	-212.5	-188.8	371.9	348.8	23.05	16.136		
3,400.0	3,365.2	3,319.9	3,291.6	12.0	11.6	-122.68	-214.4	-192.3	377.1	354.0	23.12	16.309		
3,500.0	3,456.8	3,405.6	3,370.4	12.4	11.9	-122.64	-230.3	-222.2	420.0	396.3	23.75	17.686		
3,600.0	3,548.3	3,504.3	3,452.9	12.8	12.3	-122.51	-247.3	-254.2	463.4	438.9	24.48	18.929		
3,700.0	3,639.8	3,585.9	3,535.3	13.2	12.6	-122.40	-264.4	-286.2	506.7	481.6	25.16	20.144		
3,800.0	3,731.4	3,676.0	3,617.8	13.6	13.0	-122.30	-281.4	-318.3	550.1	524.2	25.87	21.260		
3,900.0	3,822.9	3,766.1	3,700.3	14.0	13.3	-122.22	-298.4	-350.3	593.4	566.8	26.60	22.309		
4,000.0	3,914.4	3,856.2	3,782.8	14.4	13.7	-122.15	-315.5	-382.4	636.7	609.4	27.33	23.295		
4,100.0	4,005.9	3,946.3	3,865.3	14.8	14.1	-122.09	-332.5	-414.4	680.1	652.0	28.08	24.223		
4,200.0	4,097.5	4,036.5	3,947.8	15.2	14.4	-122.04	-349.6	-446.5	723.4	694.6	28.82	25.097		
4,300.0	4,189.0	4,126.6	4,030.3	15.6	14.8	-121.99	-366.6	-478.5	766.8	737.2	29.58	25.922		
4,400.0	4,280.5	4,216.7	4,112.7	16.1	15.2	-121.95	-383.6	-510.6	810.1	779.8	30.34	26.700		
4,500.0	4,372.1	4,306.8	4,195.2	16.5	15.6	-121.91	-400.7	-542.6	853.5	822.3	31.11	27.436		
4,600.0	4,463.6	4,396.9	4,277.7	16.9	16.0	-121.88	-417.7	-574.7	896.8	864.9	31.88	28.131		
4,700.0	4,555.1	4,487.0	4,360.2	17.4	16.4	-121.85	-434.8	-606.7	940.1	907.5	32.66	28.790		
4,800.0	4,646.7	4,577.2	4,442.7	17.8	16.8	-121.82	-451.8	-638.8	983.5	950.0	33.44	29.414		
4,900.0	4,738.2	4,667.3	4,525.2	18.2	17.2	-121.79	-468.8	-670.8	1,026.8	992.6	34.22	30.006		
5,000.0	4,829.7	4,757.4	4,607.7	18.7	17.6	-121.77	-485.9	-702.8	1,070.2	1,035.2	35.01	30.568		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch State BB07-653 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,100.0	4,921.3	4,847.5	4,690.1	19.1	18.0	-121.75	-502.9	-734.9	1,113.5	1,077.7	35.80	31.102		
5,200.0	5,012.8	4,937.6	4,772.6	19.5	18.4	-121.73	-520.0	-766.9	1,156.9	1,120.3	36.60	31.611		
5,300.0	5,104.3	5,027.7	4,855.1	20.0	18.8	-121.71	-537.0	-799.0	1,200.2	1,162.8	37.40	32.095		
5,400.0	5,195.8	5,117.9	4,937.6	20.4	19.2	-121.69	-554.0	-831.0	1,243.5	1,205.4	38.20	32.556		
5,500.0	5,287.4	5,208.0	5,020.1	20.9	19.6	-121.68	-571.1	-863.1	1,286.9	1,247.9	39.00	32.996		
5,600.0	5,378.9	5,301.9	5,102.6	21.3	20.0	-121.66	-588.1	-895.1	1,330.2	1,290.4	39.83	33.402		
5,700.0	5,470.4	5,388.2	5,185.1	21.8	20.4	-121.65	-605.1	-927.2	1,373.6	1,333.0	40.62	33.817		
5,800.0	5,562.0	5,478.3	5,267.5	22.2	20.8	-121.63	-622.2	-959.2	1,416.9	1,375.5	41.43	34.200		
5,900.0	5,653.5	5,568.4	5,350.0	22.7	21.2	-121.62	-639.2	-991.3	1,460.3	1,418.0	42.24	34.567		
6,000.0	5,745.0	5,658.6	5,432.5	23.1	21.6	-121.61	-656.3	-1,023.3	1,503.6	1,460.6	43.06	34.918		
6,100.0	5,836.6	5,748.7	5,515.0	23.6	22.0	-121.60	-673.3	-1,055.4	1,547.0	1,503.1	43.88	35.255		
6,200.0	5,928.1	5,838.8	5,597.5	24.0	22.5	-121.59	-690.3	-1,087.4	1,590.3	1,545.6	44.70	35.578		
6,278.6	6,000.0	5,909.6	5,662.3	24.4	22.8	-121.58	-703.7	-1,112.6	1,624.4	1,579.0	45.34	35.822		
6,290.0	6,010.4	5,919.8	5,671.6	24.4	22.8	-122.87	-705.7	-1,116.2	1,629.4	1,584.0	45.44	35.859		
6,300.0	6,019.5	5,928.8	5,679.8	24.5	22.9	-125.13	-707.4	-1,119.4	1,633.9	1,588.4	45.52	35.893		
6,350.0	6,065.8	5,973.0	5,720.3	24.7	23.1	-138.17	-715.7	-1,135.1	1,657.0	1,611.1	45.92	36.086		
6,400.0	6,113.0	6,016.3	5,760.0	24.9	23.3	-154.67	-723.9	-1,150.5	1,680.8	1,634.5	46.29	36.307		
6,450.0	6,160.7	6,058.4	5,798.5	25.1	23.5	-174.09	-731.9	-1,165.5	1,705.0	1,658.3	46.64	36.553		
6,500.0	6,208.5	6,101.1	5,835.5	25.3	23.7	166.05	-739.5	-1,179.9	1,729.5	1,682.5	46.98	36.816		
6,550.0	6,255.8	6,143.9	5,876.5	25.4	23.9	148.83	-747.9	-1,196.5	1,754.3	1,706.9	47.33	37.062		
6,600.0	6,302.5	6,191.1	5,920.2	25.6	24.1	135.26	-756.7	-1,212.2	1,779.0	1,731.2	47.71	37.286		
6,650.0	6,347.9	6,241.3	5,967.9	25.7	24.3	124.90	-766.2	-1,224.4	1,803.5	1,755.3	48.11	37.489		
6,700.0	6,391.6	6,295.4	6,020.3	25.9	24.5	116.95	-776.6	-1,232.3	1,827.5	1,779.0	48.52	37.666		
6,750.0	6,433.4	6,354.5	6,078.2	26.0	24.7	110.76	-788.1	-1,234.6	1,851.0	1,802.0	48.95	37.813		
6,800.0	6,472.8	6,420.1	6,142.3	26.1	24.9	105.89	-800.7	-1,229.3	1,873.5	1,824.1	49.40	37.928		
6,850.0	6,509.4	6,493.9	6,213.1	26.2	25.1	102.03	-814.5	-1,213.5	1,894.8	1,844.9	49.86	37.999		
6,900.0	6,543.0	6,578.1	6,290.2	26.3	25.3	98.96	-829.5	-1,183.4	1,914.6	1,864.3	50.35	38.026		
6,950.0	6,573.2	6,674.3	6,371.2	26.4	25.4	96.51	-845.1	-1,134.1	1,932.6	1,881.7	50.84	38.010		
7,000.0	6,599.8	6,783.3	6,450.4	26.5	25.7	94.47	-860.1	-1,061.1	1,948.1	1,896.8	51.34	37.949		
7,050.0	6,622.5	6,903.3	6,518.5	26.6	25.9	92.66	-872.7	-963.4	1,960.9	1,909.1	51.82	37.843		
7,100.0	6,641.1	7,029.3	6,564.5	26.7	26.1	90.93	-880.7	-846.8	1,970.6	1,918.3	52.28	37.692		
7,150.0	6,655.4	7,153.6	6,581.9	26.8	26.4	89.22	-883.0	-724.0	1,977.0	1,924.3	52.69	37.520		
7,200.0	6,665.4	7,210.0	6,582.0	26.9	26.5	88.17	-882.6	-667.6	1,980.8	1,927.9	52.92	37.432		
7,250.0	6,670.8	7,259.7	6,582.0	27.0	26.6	87.60	-882.1	-617.9	1,983.1	1,930.0	53.15	37.311		
7,285.7	6,672.0	7,295.4	6,582.0	27.1	26.7	87.46	-881.8	-582.2	1,983.8	1,930.5	53.32	37.206		
7,300.0	6,672.0	7,309.7	6,582.0	27.1	26.7	87.46	-881.7	-567.9	1,984.0	1,930.6	53.39	37.160		
7,400.0	6,672.0	7,409.8	6,582.0	27.3	27.0	87.46	-880.8	-467.8	1,984.8	1,930.8	53.97	36.775		
7,500.0	6,672.0	7,509.9	6,582.0	27.6	27.3	87.46	-879.9	-367.7	1,985.6	1,930.9	54.65	36.331		
7,600.0	6,672.0	7,610.0	6,582.0	28.0	27.7	87.46	-879.0	-267.6	1,986.4	1,931.0	55.44	35.831		
7,700.0	6,672.0	7,710.1	6,582.0	28.3	28.2	87.46	-878.0	-167.5	1,987.2	1,930.9	56.32	35.284		
7,800.0	6,672.0	7,810.2	6,582.0	28.8	28.7	87.46	-877.1	-67.4	1,988.0	1,930.7	57.30	34.697		
7,900.0	6,672.0	7,910.3	6,582.0	29.3	29.3	87.46	-876.2	32.7	1,988.9	1,930.5	58.36	34.077		
8,000.0	6,672.0	8,010.4	6,582.0	29.8	29.9	87.47	-875.3	132.8	1,989.7	1,930.2	59.52	33.432		
8,100.0	6,672.0	8,110.5	6,582.0	30.4	30.5	87.47	-874.3	232.9	1,990.5	1,929.8	60.75	32.768		
8,200.0	6,672.0	8,210.6	6,582.0	31.0	31.2	87.47	-873.4	333.0	1,991.4	1,929.3	62.05	32.093		
8,300.0	6,672.0	8,310.7	6,582.0	31.7	31.9	87.47	-872.4	433.1	1,992.2	1,928.8	63.43	31.410		
8,400.0	6,672.0	8,410.8	6,582.0	32.4	32.6	87.47	-871.5	533.2	1,993.0	1,928.2	64.87	30.725		
8,500.0	6,672.0	8,510.9	6,582.0	33.1	33.4	87.47	-870.5	633.2	1,993.9	1,927.5	66.37	30.042		
8,600.0	6,672.0	8,611.0	6,582.0	33.9	34.2	87.47	-869.6	733.3	1,994.7	1,926.8	67.93	29.364		
8,700.0	6,672.0	8,711.1	6,582.0	34.7	35.0	87.47	-868.6	833.4	1,995.6	1,926.0	69.54	28.695		
8,800.0	6,672.0	8,811.2	6,582.0	35.5	35.9	87.47	-867.6	933.5	1,996.4	1,925.2	71.21	28.036		
8,900.0	6,672.0	8,911.3	6,582.0	36.3	36.8	87.47	-866.6	1,033.6	1,997.3	1,924.3	72.92	27.390		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch State BB07-653 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
9,000.0	6,672.0	9,011.4	6,582.0	37.2	37.7	87.48	-865.7	1,133.7	1,998.1	1,923.4	74.67	26.759		
9,100.0	6,672.0	9,111.5	6,582.0	38.1	38.6	87.48	-864.7	1,233.8	1,999.0	1,922.5	76.47	26.142		
9,200.0	6,672.0	9,211.6	6,582.0	39.0	39.5	87.48	-863.7	1,333.9	1,999.8	1,921.5	78.30	25.541		
9,300.0	6,672.0	9,311.7	6,582.0	39.9	40.5	87.48	-862.7	1,434.0	2,000.7	1,920.5	80.16	24.957		
9,400.0	6,672.0	9,411.8	6,582.0	40.8	41.4	87.48	-861.7	1,534.1	2,001.5	1,919.5	82.06	24.390		
9,500.0	6,672.0	9,511.9	6,582.0	41.8	42.4	87.48	-860.7	1,634.2	2,002.4	1,918.4	83.99	23.840		
9,600.0	6,672.0	9,612.0	6,582.0	42.7	43.4	87.48	-859.6	1,734.3	2,003.3	1,917.3	85.95	23.307		
9,700.0	6,672.0	9,712.1	6,582.0	43.7	44.4	87.48	-858.6	1,834.4	2,004.1	1,916.2	87.94	22.791		
9,800.0	6,672.0	9,812.2	6,582.0	44.7	45.4	87.48	-857.6	1,934.5	2,005.0	1,915.1	89.94	22.292		
9,900.0	6,672.0	9,912.3	6,582.0	45.7	46.5	87.49	-856.6	2,034.6	2,005.9	1,913.9	91.98	21.809		
10,000.0	6,672.0	10,012.4	6,582.0	46.7	47.5	87.49	-855.5	2,134.7	2,006.8	1,912.7	94.03	21.342		
10,100.0	6,672.0	10,112.5	6,582.0	47.7	48.6	87.49	-854.5	2,234.8	2,007.6	1,911.5	96.10	20.890		
10,200.0	6,672.0	10,212.6	6,582.0	48.8	49.6	87.49	-853.4	2,334.8	2,008.5	1,910.3	98.20	20.454		
10,300.0	6,672.0	10,312.7	6,582.0	49.8	50.7	87.49	-852.4	2,434.9	2,009.4	1,909.1	100.31	20.032		
10,400.0	6,672.0	10,412.8	6,582.0	50.9	51.8	87.49	-851.3	2,535.0	2,010.3	1,907.9	102.43	19.625		
10,500.0	6,672.0	10,512.9	6,582.0	51.9	52.8	87.49	-850.3	2,635.1	2,011.2	1,906.6	104.58	19.231		
10,600.0	6,672.0	10,613.0	6,582.0	53.0	53.9	87.49	-849.2	2,735.2	2,012.1	1,905.3	106.74	18.851		
10,700.0	6,672.0	10,713.1	6,582.0	54.1	55.0	87.49	-848.1	2,835.3	2,013.0	1,904.0	108.91	18.483		
10,800.0	6,672.0	10,813.2	6,582.0	55.2	56.1	87.50	-847.1	2,935.4	2,013.8	1,902.8	111.09	18.128		
10,900.0	6,672.0	10,913.3	6,582.0	56.3	57.2	87.50	-846.0	3,035.5	2,014.7	1,901.5	113.29	17.784		
11,000.0	6,672.0	11,013.4	6,582.0	57.4	58.3	87.50	-844.9	3,135.6	2,015.6	1,900.1	115.50	17.452		
11,100.0	6,672.0	11,113.5	6,582.0	58.5	59.5	87.50	-843.8	3,235.7	2,016.5	1,898.8	117.72	17.131		
11,200.0	6,672.0	11,213.6	6,582.0	59.6	60.6	87.50	-842.7	3,335.8	2,017.4	1,897.5	119.94	16.820		
11,300.0	6,672.0	11,313.7	6,582.0	60.7	61.7	87.50	-841.6	3,435.9	2,018.4	1,896.2	122.18	16.519		
11,400.0	6,672.0	11,413.8	6,582.0	61.8	62.9	87.50	-840.5	3,536.0	2,019.3	1,894.8	124.43	16.228		
11,500.0	6,672.0	11,513.9	6,582.0	62.9	64.0	87.50	-839.4	3,636.1	2,020.2	1,893.5	126.69	15.946		
11,600.0	6,672.0	11,614.0	6,582.0	64.1	65.1	87.50	-838.3	3,736.2	2,021.1	1,892.1	128.95	15.673		
11,700.0	6,672.0	11,714.1	6,582.0	65.2	66.3	87.51	-837.1	3,836.3	2,022.0	1,890.8	131.23	15.408		
11,800.0	6,672.0	11,814.2	6,582.0	66.3	67.4	87.51	-836.0	3,936.4	2,022.9	1,889.4	133.51	15.152		
11,900.0	6,672.0	11,914.3	6,582.0	67.5	68.6	87.51	-834.9	4,036.4	2,023.8	1,888.0	135.80	14.904		
12,000.0	6,672.0	12,014.4	6,582.0	68.6	69.7	87.51	-833.7	4,136.5	2,024.8	1,886.7	138.09	14.663		
12,100.0	6,672.0	12,114.5	6,582.0	69.8	70.9	87.51	-832.6	4,236.6	2,025.7	1,885.3	140.39	14.429		
12,200.0	6,672.0	12,214.6	6,582.0	70.9	72.0	87.51	-831.5	4,336.7	2,026.6	1,883.9	142.70	14.202		
12,300.0	6,672.0	12,314.7	6,582.0	72.1	73.2	87.51	-830.3	4,436.8	2,027.5	1,882.5	145.01	13.982		
12,400.0	6,672.0	12,414.8	6,582.0	73.2	74.4	87.51	-829.1	4,536.9	2,028.5	1,881.1	147.33	13.769		
12,500.0	6,672.0	12,514.9	6,582.0	74.4	75.5	87.51	-828.0	4,637.0	2,029.4	1,879.8	149.65	13.561		
12,600.0	6,672.0	12,615.0	6,582.0	75.5	76.7	87.52	-826.8	4,737.1	2,030.3	1,878.4	151.98	13.359		
12,700.0	6,672.0	12,715.1	6,582.0	76.7	77.9	87.52	-825.6	4,837.2	2,031.3	1,877.0	154.31	13.164		
12,800.0	6,672.0	12,815.2	6,582.0	77.9	79.0	87.52	-824.5	4,937.3	2,032.2	1,875.6	156.65	12.973		
12,900.0	6,672.0	12,915.3	6,582.0	79.0	80.2	87.52	-823.3	5,037.4	2,033.2	1,874.2	158.99	12.788		
13,000.0	6,672.0	13,015.4	6,582.0	80.2	81.4	87.52	-822.1	5,137.5	2,034.1	1,872.8	161.34	12.608		
13,100.0	6,672.0	13,115.5	6,582.0	81.4	82.6	87.52	-820.9	5,237.6	2,035.1	1,871.4	163.69	12.433		
13,200.0	6,672.0	13,215.6	6,582.0	82.6	83.8	87.52	-819.7	5,337.7	2,036.0	1,870.0	166.04	12.262		
13,300.0	6,672.0	13,315.7	6,582.0	83.7	84.9	87.52	-818.5	5,437.8	2,037.0	1,868.6	168.40	12.096		
13,400.0	6,672.0	13,415.8	6,582.0	84.9	86.1	87.53	-817.3	5,537.8	2,037.9	1,867.2	170.76	11.934		
13,500.0	6,672.0	13,515.9	6,582.0	86.1	87.3	87.53	-816.1	5,637.9	2,038.9	1,865.8	173.12	11.777		
13,600.0	6,672.0	13,616.0	6,582.0	87.3	88.5	87.53	-814.8	5,738.0	2,039.8	1,864.3	175.49	11.624		
13,700.0	6,672.0	13,716.1	6,582.0	88.4	89.7	87.53	-813.6	5,838.1	2,040.8	1,862.9	177.86	11.474		
13,800.0	6,672.0	13,816.2	6,582.0	89.6	90.9	87.53	-812.4	5,938.2	2,041.8	1,861.5	180.24	11.328		
13,900.0	6,672.0	13,916.3	6,582.0	90.8	92.1	87.53	-811.1	6,038.3	2,042.7	1,860.1	182.61	11.186		
14,000.0	6,672.0	14,016.4	6,582.0	92.0	93.3	87.53	-809.9	6,138.4	2,043.7	1,858.7	184.99	11.048		
14,100.0	6,672.0	14,116.5	6,582.0	93.2	94.5	87.53	-808.6	6,238.5	2,044.7	1,857.3	187.37	10.912		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch State BB07-653 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
14,200.0	6,672.0	14,216.6	6,582.0	94.4	95.7	87.53	-807.4	6,338.6	2,045.6	1,855.9	189.76	10.780		
14,300.0	6,672.0	14,316.7	6,582.0	95.6	96.9	87.54	-806.1	6,438.7	2,046.6	1,854.5	192.14	10.651		
14,400.0	6,672.0	14,416.8	6,582.0	96.8	98.1	87.54	-804.9	6,538.8	2,047.6	1,853.1	194.53	10.526		
14,500.0	6,672.0	14,516.9	6,582.0	98.0	99.3	87.54	-803.6	6,638.9	2,048.6	1,851.7	196.93	10.403		
14,600.0	6,672.0	14,617.0	6,582.0	99.2	100.5	87.54	-802.3	6,739.0	2,049.6	1,850.2	199.32	10.283		
14,700.0	6,672.0	14,717.1	6,582.0	100.4	101.7	87.54	-801.1	6,839.1	2,050.6	1,848.8	201.71	10.166		
14,800.0	6,672.0	14,817.2	6,582.0	101.6	102.9	87.54	-799.8	6,939.1	2,051.5	1,847.4	204.11	10.051		
14,900.0	6,672.0	14,917.3	6,582.0	102.7	104.1	87.54	-798.5	7,039.2	2,052.5	1,846.0	206.51	9.939		
15,000.0	6,672.0	15,017.4	6,582.0	103.9	105.3	87.54	-797.2	7,139.3	2,053.5	1,844.6	208.91	9.829		
15,100.0	6,672.0	15,117.5	6,582.0	105.1	106.5	87.55	-795.9	7,239.4	2,054.5	1,843.2	211.32	9.722		
15,200.0	6,672.0	15,217.6	6,582.0	106.3	107.7	87.55	-794.6	7,339.5	2,055.5	1,841.8	213.72	9.618		
15,300.0	6,672.0	15,317.7	6,582.0	107.6	108.9	87.55	-793.3	7,439.6	2,056.5	1,840.4	216.13	9.515		
15,400.0	6,672.0	15,417.8	6,582.0	108.8	110.1	87.55	-792.0	7,539.7	2,057.5	1,839.0	218.54	9.415		
15,500.0	6,672.0	15,517.9	6,582.0	110.0	111.3	87.55	-790.6	7,639.8	2,058.5	1,837.6	220.95	9.317		
15,600.0	6,672.0	15,618.0	6,582.0	111.2	112.5	87.55	-789.3	7,739.9	2,059.5	1,836.2	223.36	9.221		
15,700.0	6,672.0	15,718.1	6,582.0	112.4	113.7	87.55	-788.0	7,840.0	2,060.5	1,834.8	225.77	9.127		
15,800.0	6,672.0	15,818.2	6,582.0	113.6	114.9	87.55	-786.7	7,940.1	2,061.5	1,833.4	228.19	9.034		
15,900.0	6,672.0	15,918.3	6,582.0	114.8	116.2	87.55	-785.3	8,040.2	2,062.6	1,832.0	230.61	8.944		
16,000.0	6,672.0	16,018.4	6,582.0	116.0	117.4	87.56	-784.0	8,140.3	2,063.6	1,830.6	233.02	8.856		
16,100.0	6,672.0	16,118.5	6,582.0	117.2	118.6	87.56	-782.6	8,240.3	2,064.6	1,829.2	235.44	8.769		
16,200.0	6,672.0	16,218.6	6,582.0	118.4	119.8	87.56	-781.3	8,340.4	2,065.6	1,827.8	237.86	8.684		
16,300.0	6,672.0	16,318.7	6,582.0	119.6	121.0	87.56	-779.9	8,440.5	2,066.6	1,826.4	240.28	8.601		
16,400.0	6,672.0	16,418.8	6,582.0	120.8	122.2	87.56	-778.5	8,540.6	2,067.7	1,825.0	242.71	8.519		
16,500.0	6,672.0	16,518.9	6,582.0	122.0	123.4	87.56	-777.2	8,640.7	2,068.7	1,823.6	245.13	8.439		
16,600.0	6,672.0	16,619.0	6,582.0	123.2	124.7	87.56	-775.8	8,740.8	2,069.7	1,822.2	247.55	8.361		
16,700.0	6,672.0	16,719.1	6,582.0	124.5	125.9	87.56	-774.4	8,840.9	2,070.8	1,820.8	249.98	8.284		
16,800.0	6,672.0	16,819.2	6,582.0	125.7	127.1	87.57	-773.0	8,941.0	2,071.8	1,819.4	252.41	8.208		
16,900.0	6,672.0	16,919.3	6,582.0	126.9	128.3	87.57	-771.6	9,041.1	2,072.8	1,818.0	254.84	8.134		
17,000.0	6,672.0	17,019.4	6,582.0	128.1	129.5	87.57	-770.2	9,141.2	2,073.9	1,816.6	257.26	8.061		
17,100.0	6,672.0	17,119.5	6,582.0	129.3	130.7	87.57	-768.8	9,241.3	2,074.9	1,815.2	259.69	7.990		
17,200.0	6,672.0	17,219.6	6,582.0	130.5	132.0	87.57	-767.4	9,341.4	2,076.0	1,813.8	262.13	7.920		
17,300.0	6,672.0	17,319.7	6,582.0	131.7	133.2	87.57	-766.0	9,441.4	2,077.0	1,812.4	264.56	7.851		
17,400.0	6,672.0	17,419.8	6,582.0	133.0	134.4	87.57	-764.6	9,541.5	2,078.1	1,811.1	266.99	7.783		
17,500.0	6,672.0	17,519.9	6,582.0	134.2	135.6	87.57	-763.2	9,641.6	2,079.1	1,809.7	269.42	7.717		
17,600.0	6,672.0	17,620.0	6,582.0	135.4	136.8	87.58	-761.8	9,741.7	2,080.2	1,808.3	271.86	7.652		
17,700.0	6,672.0	17,720.1	6,582.0	136.6	138.1	87.58	-760.3	9,841.8	2,081.2	1,806.9	274.29	7.588		
17,800.0	6,672.0	17,820.2	6,582.0	137.8	139.3	87.58	-758.9	9,941.9	2,082.3	1,805.5	276.73	7.525		
17,900.0	6,672.0	17,903.5	6,582.0	139.0	140.3	87.58	-757.7	10,025.2	2,083.4	1,804.5	278.95	7.469		
18,000.0	6,672.0	17,903.5	6,582.0	140.3	140.3	87.58	-757.7	10,025.2	2,087.7	1,808.0	279.72	7.464		
18,100.0	6,672.0	17,903.5	6,582.0	141.5	140.3	87.58	-757.7	10,025.2	2,096.7	1,816.8	279.87	7.492		
18,200.0	6,672.0	17,903.5	6,582.0	142.7	140.3	87.58	-757.7	10,025.2	2,110.5	1,831.0	279.42	7.553		
18,300.0	6,672.0	17,903.5	6,582.0	143.9	140.3	87.58	-757.7	10,025.2	2,128.8	1,850.4	278.41	7.647		
18,342.5	6,672.0	17,903.5	6,582.0	144.4	140.3	87.58	-757.7	10,025.2	2,138.0	1,860.2	277.81	7.696		



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch State BB07-660 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	1.0	-1.0	0.0	0.0	-178.90	-91.1	-1.7	91.1					
100.0	100.0	101.0	99.0	0.1	0.1	-178.90	-91.1	-1.7	91.1	90.9	0.25	358.003		
200.0	200.0	201.0	199.0	0.5	0.5	-178.90	-91.1	-1.7	91.1	90.1	0.97	93.794		
300.0	300.0	301.0	299.0	0.8	0.8	-178.90	-91.1	-1.7	91.1	89.4	1.69	53.967		
400.0	400.0	401.0	399.0	1.2	1.2	-178.90	-91.1	-1.7	91.1	88.7	2.41	37.881		
500.0	500.0	501.0	499.0	1.6	1.6	-178.90	-91.1	-1.7	91.1	88.0	3.12	29.183		
600.0	600.0	601.0	599.0	1.9	1.9	-178.90	-91.1	-1.7	91.1	87.3	3.84	23.733		
700.0	700.0	701.0	699.0	2.3	2.3	-178.90	-91.1	-1.7	91.1	86.6	4.56	19.999		
800.0	800.0	801.0	799.0	2.6	2.6	-178.90	-91.1	-1.7	91.1	85.8	5.27	17.280		
900.0	900.0	901.0	899.0	3.0	3.0	-178.90	-91.1	-1.7	91.1	85.1	5.99	15.211		
1,000.0	1,000.0	1,001.0	999.0	3.4	3.4	-178.90	-91.1	-1.7	91.1	84.4	6.71	13.585		
1,100.0	1,100.0	1,101.0	1,099.0	3.7	3.7	-178.90	-91.1	-1.7	91.1	83.7	7.42	12.273		
1,200.0	1,200.0	1,201.0	1,199.0	4.1	4.1	-178.90	-91.1	-1.7	91.1	83.0	8.14	11.193		
1,300.0	1,300.0	1,301.0	1,299.0	4.4	4.4	-178.90	-91.1	-1.7	91.1	82.3	8.86	10.287		
1,400.0	1,400.0	1,401.0	1,399.0	4.8	4.8	-178.90	-91.1	-1.7	91.1	81.5	9.57	9.516		
1,500.0	1,500.0	1,501.0	1,499.0	5.1	5.1	-178.90	-91.1	-1.7	91.1	80.8	10.29	8.853		
1,600.0	1,600.0	1,601.0	1,599.0	5.5	5.5	-178.90	-91.1	-1.7	91.1	80.1	11.01	8.277		
1,700.0	1,700.0	1,701.0	1,699.0	5.9	5.9	-178.90	-91.1	-1.7	91.1	79.4	11.73	7.771		
1,800.0	1,800.0	1,801.0	1,799.0	6.2	6.2	-178.90	-91.1	-1.7	91.1	78.7	12.44	7.323		
1,900.0	1,900.0	1,901.0	1,899.0	6.6	6.6	-178.90	-91.1	-1.7	91.1	78.0	13.16	6.924		
2,000.0	2,000.0	2,001.0	1,999.0	6.9	6.9	-178.90	-91.1	-1.7	91.1	77.2	13.88	6.566		
2,100.0	2,100.0	2,101.0	2,099.0	7.3	7.3	-178.90	-91.1	-1.7	91.1	76.5	14.59	6.244		
2,200.0	2,200.0	2,201.0	2,199.0	7.7	7.7	-178.90	-91.1	-1.7	91.1	75.8	15.31	5.951 CC, ES		
2,300.0	2,300.0	2,301.0	2,299.0	8.0	8.0	-128.74	-91.1	-1.7	92.2	76.2	16.02	5.754		
2,400.0	2,399.8	2,398.8	2,398.8	8.4	8.4	-131.14	-91.1	-1.7	95.6	78.8	16.73	5.713		
2,500.0	2,499.5	2,497.9	2,497.9	8.7	8.7	-133.80	-91.5	-3.4	101.8	84.3	17.43	5.839		
2,600.0	2,598.7	2,596.9	2,596.8	9.1	9.0	-135.58	-92.7	-8.3	111.1	93.0	18.12	6.132		
2,700.0	2,697.5	2,695.7	2,695.1	9.4	9.4	-136.54	-94.8	-16.5	123.4	104.6	18.81	6.561		
2,800.0	2,795.6	2,794.0	2,792.8	9.8	9.7	-136.83	-97.6	-28.0	138.6	119.1	19.50	7.107		
2,900.0	2,893.1	2,891.9	2,889.5	10.1	10.1	-136.61	-101.3	-42.6	156.6	136.4	20.20	7.756		
3,000.0	2,889.6	2,889.2	2,885.0	10.5	10.4	-136.04	-105.7	-60.3	177.5	156.6	20.89	8.496		
3,100.0	3,085.3	3,085.7	3,079.1	10.9	10.7	-135.24	-110.9	-81.0	201.1	179.5	21.59	9.317		
3,200.0	3,179.8	3,181.3	3,171.6	11.2	11.1	-134.29	-116.7	-104.5	227.5	205.2	22.28	10.210		
3,300.0	3,273.2	3,275.9	3,262.4	11.6	11.4	-133.26	-123.2	-130.7	256.6	233.7	22.98	11.169		
3,387.5	3,353.8	3,357.9	3,340.1	11.9	11.7	-132.32	-129.5	-155.7	284.4	260.8	23.59	12.054		
3,400.0	3,365.2	3,369.5	3,351.1	12.0	11.8	-132.24	-130.4	-159.4	288.5	264.8	23.68	12.183		
3,500.0	3,456.8	3,462.4	3,438.2	12.4	12.1	-131.39	-138.2	-190.7	321.6	297.2	24.38	13.193		
3,600.0	3,548.3	3,554.6	3,523.6	12.8	12.4	-130.20	-146.6	-224.5	355.3	330.2	25.07	14.170		
3,700.0	3,639.8	3,648.4	3,609.9	13.2	12.8	-128.99	-155.5	-260.0	389.4	363.6	25.80	15.093		
3,800.0	3,731.4	3,742.1	3,696.2	13.6	13.2	-127.97	-164.4	-295.5	423.5	397.0	26.53	15.965		
3,900.0	3,822.9	3,835.8	3,782.4	14.0	13.5	-127.10	-173.2	-331.1	457.8	430.6	27.27	16.787		
4,000.0	3,914.4	3,929.5	3,868.7	14.4	13.9	-126.35	-182.1	-366.6	492.2	464.2	28.03	17.563		
4,100.0	4,005.9	4,023.3	3,955.0	14.8	14.3	-125.71	-190.9	-402.1	526.7	497.9	28.79	18.295		
4,200.0	4,097.5	4,117.0	4,041.3	15.2	14.7	-125.14	-199.8	-437.7	561.2	531.6	29.56	18.987		
4,300.0	4,189.0	4,210.7	4,127.5	15.6	15.1	-124.63	-208.6	-473.2	595.7	565.4	30.33	19.639		
4,400.0	4,280.5	4,304.4	4,213.8	16.1	15.5	-124.18	-217.5	-508.7	630.3	599.1	31.11	20.257		
4,500.0	4,372.1	4,401.8	4,300.1	16.5	15.9	-123.78	-226.4	-544.3	664.9	632.9	31.92	20.830		
4,600.0	4,463.6	4,508.1	4,386.4	16.9	16.3	-123.42	-235.2	-579.8	699.5	666.7	32.77	21.348		
4,700.0	4,555.1	4,585.6	4,472.6	17.4	16.7	-123.09	-244.1	-615.3	734.1	700.6	33.50	21.917		
4,800.0	4,646.7	4,679.3	4,558.9	17.8	17.1	-122.79	-252.9	-650.9	768.8	734.5	34.30	22.413		
4,900.0	4,738.2	4,773.1	4,645.2	18.2	17.5	-122.52	-261.8	-686.4	803.5	768.4	35.11	22.884		
5,000.0	4,829.7	4,866.8	4,731.5	18.7	17.9	-122.27	-270.7	-721.9	838.2	802.3	35.92	23.332		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch State BB07-660 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,100.0	4,921.3	4,960.5	4,817.7	19.1	18.3	-122.04	-279.5	-757.5	872.9	836.2	36.74	23.758		
5,200.0	5,012.8	5,054.2	4,904.0	19.5	18.7	-121.83	-288.4	-793.0	907.6	870.1	37.56	24.163		
5,300.0	5,104.3	5,148.0	4,990.3	20.0	19.1	-121.63	-297.2	-828.5	942.4	904.0	38.39	24.549		
5,400.0	5,195.8	5,241.7	5,076.6	20.4	19.5	-121.45	-306.1	-864.1	977.1	937.9	39.22	24.916		
5,500.0	5,287.4	5,335.4	5,162.8	20.9	19.9	-121.28	-315.0	-899.6	1,011.9	971.8	40.05	25.267		
5,600.0	5,378.9	5,429.1	5,249.1	21.3	20.4	-121.12	-323.8	-935.1	1,046.6	1,005.8	40.88	25.602		
5,700.0	5,470.4	5,522.9	5,335.4	21.8	20.8	-120.97	-332.7	-970.7	1,081.4	1,039.7	41.72	25.922		
5,800.0	5,562.0	5,616.6	5,421.7	22.2	21.2	-120.83	-341.5	-1,006.2	1,116.2	1,073.6	42.56	26.228		
5,900.0	5,653.5	5,710.3	5,507.9	22.7	21.6	-120.70	-350.4	-1,041.7	1,151.0	1,107.6	43.40	26.521		
6,000.0	5,745.0	5,804.0	5,594.2	23.1	22.1	-120.57	-359.3	-1,077.3	1,185.7	1,141.5	44.24	26.802		
6,100.0	5,836.6	5,902.2	5,680.5	23.6	22.5	-120.46	-368.1	-1,112.8	1,220.5	1,175.4	45.11	27.058		
6,200.0	5,928.1	6,008.5	5,766.8	24.0	23.0	-120.35	-377.0	-1,148.3	1,255.3	1,209.3	46.01	27.283		
6,278.6	6,000.0	6,065.1	5,834.5	24.4	23.2	-120.26	-383.9	-1,176.3	1,282.7	1,236.1	46.60	27.523		
6,290.0	6,010.4	6,075.8	5,844.3	24.4	23.3	-121.59	-384.9	-1,180.3	1,286.7	1,240.0	46.70	27.553		
6,300.0	6,019.5	6,085.1	5,852.9	24.5	23.3	-123.72	-385.8	-1,183.8	1,290.4	1,243.7	46.79	27.582		
6,350.0	6,065.8	6,142.0	5,904.9	24.7	23.6	-135.97	-391.0	-1,206.3	1,309.3	1,262.0	47.30	27.680		
6,400.0	6,113.0	6,200.4	5,958.9	24.9	23.9	-151.60	-395.8	-1,227.9	1,328.5	1,280.7	47.81	27.787		
6,450.0	6,160.7	6,260.7	6,016.9	25.1	24.1	-170.30	-400.9	-1,243.8	1,348.0	1,299.7	48.30	27.908		
6,500.0	6,208.5	6,322.5	6,077.7	25.3	24.3	170.44	-406.2	-1,252.9	1,367.4	1,318.7	48.76	28.044		
6,550.0	6,255.8	6,385.9	6,140.9	25.4	24.5	153.57	-411.7	-1,254.8	1,386.8	1,337.6	49.19	28.193		
6,600.0	6,302.5	6,450.9	6,205.3	25.6	24.7	140.21	-417.2	-1,248.8	1,405.7	1,356.1	49.59	28.349		
6,650.0	6,347.9	6,517.5	6,270.0	25.7	24.9	129.97	-422.7	-1,234.3	1,424.2	1,374.2	49.96	28.503		
6,700.0	6,391.6	6,585.4	6,333.6	25.9	25.0	122.02	-428.0	-1,211.2	1,441.9	1,391.5	50.33	28.650		
6,750.0	6,433.4	6,654.7	6,394.8	26.0	25.2	115.70	-433.0	-1,179.3	1,458.7	1,408.0	50.68	28.784		
6,800.0	6,472.8	6,724.8	6,452.0	26.1	25.4	110.54	-437.6	-1,139.0	1,474.4	1,423.4	51.01	28.904		
6,850.0	6,509.4	6,795.6	6,503.7	26.2	25.5	106.24	-441.7	-1,091.0	1,488.9	1,437.5	51.33	29.003		
6,900.0	6,543.0	6,866.4	6,548.5	26.3	25.7	102.58	-445.1	-1,036.4	1,502.0	1,450.3	51.65	29.079		
6,950.0	6,573.2	6,936.8	6,585.4	26.4	25.9	99.46	-447.8	-976.5	1,513.6	1,461.6	51.96	29.129		
7,000.0	6,599.8	7,006.3	6,613.7	26.5	26.0	96.77	-449.8	-913.1	1,523.6	1,471.3	52.26	29.154		
7,050.0	6,622.5	7,074.3	6,633.0	26.6	26.2	94.46	-450.9	-847.9	1,532.0	1,479.4	52.55	29.156		
7,100.0	6,641.1	7,140.6	6,643.5	26.7	26.3	92.50	-451.3	-782.6	1,538.7	1,485.9	52.81	29.136		
7,150.0	6,655.4	7,201.6	6,646.0	26.8	26.5	90.90	-451.0	-721.7	1,543.7	1,490.7	53.04	29.103		
7,200.0	6,665.4	7,250.5	6,646.0	26.9	26.6	89.83	-450.6	-672.7	1,547.3	1,494.0	53.26	29.050		
7,250.0	6,670.8	7,300.3	6,646.0	27.0	26.7	89.23	-450.2	-622.9	1,549.5	1,496.0	53.49	28.967		
7,285.7	6,672.0	7,336.0	6,646.0	27.1	26.8	89.08	-449.9	-587.2	1,550.2	1,496.5	53.68	28.878		
7,300.0	6,672.0	7,350.4	6,646.0	27.1	26.9	89.08	-449.8	-572.8	1,550.3	1,496.5	53.76	28.840		
7,400.0	6,672.0	7,450.6	6,646.0	27.3	27.2	89.08	-449.0	-472.6	1,551.2	1,496.8	54.35	28.539		
7,500.0	6,672.0	7,550.9	6,646.0	27.6	27.6	89.08	-448.1	-372.4	1,552.1	1,497.0	55.06	28.191		
7,600.0	6,672.0	7,651.1	6,646.0	28.0	28.1	89.08	-447.2	-272.1	1,552.9	1,497.1	55.86	27.800		
7,700.0	6,672.0	7,751.4	6,646.0	28.3	28.5	89.08	-446.4	-171.9	1,553.8	1,497.0	56.76	27.374		
7,800.0	6,672.0	7,851.6	6,646.0	28.8	29.1	89.08	-445.5	-71.7	1,554.6	1,496.9	57.76	26.917		
7,900.0	6,672.0	7,951.8	6,646.0	29.3	29.7	89.08	-444.5	28.6	1,555.5	1,496.6	58.84	26.436		
8,000.0	6,672.0	8,052.1	6,646.0	29.8	30.3	89.08	-443.6	128.8	1,556.3	1,496.3	60.01	25.936		
8,100.0	6,672.0	8,152.3	6,646.0	30.4	30.9	89.08	-442.7	229.1	1,557.1	1,495.9	61.25	25.422		
8,200.0	6,672.0	8,252.6	6,646.0	31.0	31.6	89.08	-441.7	329.3	1,557.9	1,495.3	62.57	24.899		
8,300.0	6,672.0	8,352.8	6,646.0	31.7	32.4	89.08	-440.7	429.5	1,558.7	1,494.8	63.96	24.371		
8,400.0	6,672.0	8,453.1	6,646.0	32.4	33.1	89.08	-439.7	529.8	1,559.5	1,494.1	65.41	23.842		
8,500.0	6,672.0	8,553.3	6,646.0	33.1	33.9	89.08	-438.7	630.0	1,560.3	1,493.4	66.92	23.314		
8,600.0	6,672.0	8,653.5	6,646.0	33.9	34.7	89.08	-437.7	730.3	1,561.1	1,492.6	68.50	22.791		
8,700.0	6,672.0	8,753.8	6,646.0	34.7	35.5	89.08	-436.6	830.5	1,561.9	1,491.7	70.12	22.274		
8,800.0	6,672.0	8,854.0	6,646.0	35.5	36.4	89.08	-435.6	930.7	1,562.6	1,490.8	71.79	21.766		
8,900.0	6,672.0	8,954.3	6,646.0	36.3	37.3	89.08	-434.5	1,031.0	1,563.4	1,489.9	73.51	21.267		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch State BB07-660 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
9,000.0	6,672.0	9,054.5	6,646.0	37.2	38.2	89.08	-433.4	1,131.2	1,564.1	1,488.8	75.27	20.779		
9,100.0	6,672.0	9,154.8	6,646.0	38.1	39.1	89.08	-432.3	1,231.5	1,564.9	1,487.8	77.08	20.303		
9,200.0	6,672.0	9,255.0	6,646.0	39.0	40.1	89.09	-431.2	1,331.7	1,565.6	1,486.7	78.91	19.839		
9,300.0	6,672.0	9,355.3	6,646.0	39.9	41.0	89.09	-430.0	1,431.9	1,566.3	1,485.5	80.79	19.388		
9,400.0	6,672.0	9,455.5	6,646.0	40.8	42.0	89.09	-428.9	1,532.2	1,567.0	1,484.3	82.69	18.950		
9,500.0	6,672.0	9,555.8	6,646.0	41.8	43.0	89.09	-427.7	1,632.4	1,567.7	1,483.1	84.63	18.524		
9,600.0	6,672.0	9,656.0	6,646.0	42.7	44.0	89.09	-426.5	1,732.7	1,568.4	1,481.8	86.59	18.112		
9,700.0	6,672.0	9,756.2	6,646.0	43.7	45.0	89.09	-425.3	1,832.9	1,569.1	1,480.5	88.58	17.713		
9,800.0	6,672.0	9,856.5	6,646.0	44.7	46.0	89.09	-424.1	1,933.1	1,569.8	1,479.2	90.60	17.327		
9,900.0	6,672.0	9,956.7	6,646.0	45.7	47.0	89.09	-422.9	2,033.4	1,570.4	1,477.8	92.64	16.953		
10,000.0	6,672.0	10,057.0	6,646.0	46.7	48.1	89.09	-421.6	2,133.6	1,571.1	1,476.4	94.70	16.591		
10,100.0	6,672.0	10,157.2	6,646.0	47.7	49.1	89.09	-420.3	2,233.8	1,571.8	1,475.0	96.77	16.242		
10,200.0	6,672.0	10,257.5	6,646.0	48.8	50.2	89.09	-419.0	2,334.1	1,572.4	1,473.5	98.87	15.903		
10,300.0	6,672.0	10,357.7	6,646.0	49.8	51.3	89.09	-417.7	2,434.3	1,573.0	1,472.1	100.99	15.577		
10,400.0	6,672.0	10,458.0	6,646.0	50.9	52.3	89.09	-416.4	2,534.6	1,573.7	1,470.6	103.12	15.261		
10,500.0	6,672.0	10,558.2	6,646.0	51.9	53.4	89.09	-415.1	2,634.8	1,574.3	1,469.0	105.27	14.955		
10,600.0	6,672.0	10,658.5	6,646.0	53.0	54.5	89.09	-413.8	2,735.0	1,574.9	1,467.5	107.43	14.660		
10,700.0	6,672.0	10,758.7	6,646.0	54.1	55.6	89.09	-412.4	2,835.3	1,575.5	1,465.9	109.60	14.374		
10,800.0	6,672.0	10,859.0	6,646.0	55.2	56.7	89.09	-411.0	2,935.5	1,576.1	1,464.3	111.79	14.098		
10,900.0	6,672.0	10,959.2	6,646.0	56.3	57.8	89.09	-409.6	3,035.8	1,576.7	1,462.7	113.99	13.831		
11,000.0	6,672.0	11,059.5	6,646.0	57.4	58.9	89.09	-408.2	3,136.0	1,577.3	1,461.1	116.21	13.573		
11,100.0	6,672.0	11,159.7	6,646.0	58.5	60.1	89.09	-406.8	3,236.2	1,577.8	1,459.4	118.43	13.323		
11,200.0	6,672.0	11,260.0	6,646.0	59.6	61.2	89.09	-405.3	3,336.5	1,578.4	1,457.7	120.66	13.081		
11,300.0	6,672.0	11,360.2	6,646.0	60.7	62.3	89.09	-403.9	3,436.7	1,579.0	1,456.1	122.91	12.847		
11,400.0	6,672.0	11,460.5	6,646.0	61.8	63.5	89.09	-402.4	3,537.0	1,579.5	1,454.3	125.16	12.620		
11,500.0	6,672.0	11,560.7	6,646.0	62.9	64.6	89.09	-400.9	3,637.2	1,580.0	1,452.6	127.42	12.400		
11,600.0	6,672.0	11,661.0	6,646.0	64.1	65.7	89.09	-399.4	3,737.4	1,580.6	1,450.9	129.69	12.188		
11,700.0	6,672.0	11,761.2	6,646.0	65.2	66.9	89.09	-397.9	3,837.7	1,581.1	1,449.1	131.96	11.981		
11,800.0	6,672.0	11,861.5	6,646.0	66.3	68.0	89.09	-396.4	3,937.9	1,581.6	1,447.3	134.25	11.781		
11,900.0	6,672.0	11,961.7	6,646.0	67.5	69.2	89.09	-394.8	4,038.1	1,582.1	1,445.6	136.54	11.587		
12,000.0	6,672.0	12,062.0	6,646.0	68.6	70.3	89.09	-393.2	4,138.4	1,582.6	1,443.8	138.84	11.399		
12,100.0	6,672.0	12,162.2	6,646.0	69.8	71.5	89.10	-391.6	4,238.6	1,583.1	1,441.9	141.14	11.216		
12,200.0	6,672.0	12,262.5	6,646.0	70.9	72.7	89.10	-390.0	4,338.9	1,583.6	1,440.1	143.45	11.039		
12,300.0	6,672.0	12,362.7	6,646.0	72.1	73.8	89.10	-388.4	4,439.1	1,584.0	1,438.3	145.77	10.867		
12,400.0	6,672.0	12,463.0	6,646.0	73.2	75.0	89.10	-386.8	4,539.3	1,584.5	1,436.4	148.09	10.700		
12,500.0	6,672.0	12,563.2	6,646.0	74.4	76.2	89.10	-385.1	4,639.6	1,584.9	1,434.5	150.41	10.537		
12,600.0	6,672.0	12,663.5	6,646.0	75.5	77.3	89.10	-383.5	4,739.8	1,585.4	1,432.6	152.75	10.379		
12,700.0	6,672.0	12,763.7	6,646.0	76.7	78.5	89.10	-381.8	4,840.0	1,585.8	1,430.7	155.08	10.226		
12,800.0	6,672.0	12,864.0	6,646.0	77.9	79.7	89.10	-380.1	4,940.3	1,586.3	1,428.8	157.42	10.076		
12,900.0	6,672.0	12,964.2	6,646.0	79.0	80.9	89.10	-378.4	5,040.5	1,586.7	1,426.9	159.77	9.931		
13,000.0	6,672.0	13,064.5	6,646.0	80.2	82.0	89.10	-376.7	5,140.7	1,587.1	1,425.0	162.12	9.790		
13,100.0	6,672.0	13,164.7	6,646.0	81.4	83.2	89.10	-374.9	5,241.0	1,587.5	1,423.0	164.47	9.652		
13,200.0	6,672.0	13,265.0	6,646.0	82.6	84.4	89.10	-373.2	5,341.2	1,587.9	1,421.1	166.83	9.518		
13,300.0	6,672.0	13,365.2	6,646.0	83.7	85.6	89.10	-371.4	5,441.5	1,588.3	1,419.1	169.19	9.388		
13,400.0	6,672.0	13,465.5	6,646.0	84.9	86.8	89.10	-369.6	5,541.7	1,588.6	1,417.1	171.55	9.260		
13,500.0	6,672.0	13,565.7	6,646.0	86.1	88.0	89.10	-367.8	5,641.9	1,589.0	1,415.1	173.92	9.137		
13,600.0	6,672.0	13,666.0	6,646.0	87.3	89.1	89.10	-366.0	5,742.2	1,589.4	1,413.1	176.29	9.016		
13,700.0	6,672.0	13,766.2	6,646.0	88.4	90.3	89.10	-364.1	5,842.4	1,589.7	1,411.1	178.66	8.898		
13,800.0	6,672.0	13,866.5	6,646.0	89.6	91.5	89.10	-362.3	5,942.6	1,590.1	1,409.0	181.04	8.783		
13,900.0	6,672.0	13,966.7	6,646.0	90.8	92.7	89.10	-360.4	6,042.9	1,590.4	1,407.0	183.42	8.671		
14,000.0	6,672.0	14,067.0	6,646.0	92.0	93.9	89.10	-358.5	6,143.1	1,590.7	1,404.9	185.80	8.561		
14,100.0	6,672.0	14,167.2	6,646.0	93.2	95.1	89.10	-356.6	6,243.3	1,591.1	1,402.9	188.19	8.455		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch State BB07-660 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
14,200.0	6,672.0	14,267.5	6,646.0	94.4	96.3	89.10	-354.7	6,343.6	1,591.4	1,400.8	190.57	8.350		
14,300.0	6,672.0	14,367.7	6,646.0	95.6	97.5	89.10	-352.7	6,443.8	1,591.7	1,398.7	192.96	8.249		
14,400.0	6,672.0	14,468.0	6,646.0	96.8	98.7	89.10	-350.8	6,544.0	1,592.0	1,396.6	195.36	8.149		
14,500.0	6,672.0	14,568.2	6,646.0	98.0	99.9	89.10	-348.8	6,644.3	1,592.3	1,394.5	197.75	8.052		
14,600.0	6,672.0	14,668.5	6,646.0	99.2	101.1	89.10	-346.8	6,744.5	1,592.5	1,392.4	200.15	7.957		
14,700.0	6,672.0	14,768.7	6,646.0	100.4	102.3	89.10	-344.8	6,844.7	1,592.8	1,390.3	202.55	7.864		
14,800.0	6,672.0	14,869.0	6,646.0	101.6	103.5	89.10	-342.8	6,945.0	1,593.1	1,388.1	204.95	7.773		
14,900.0	6,672.0	14,969.2	6,646.0	102.7	104.7	89.10	-340.8	7,045.2	1,593.3	1,386.0	207.35	7.684		
15,000.0	6,672.0	15,069.5	6,646.0	103.9	105.9	89.10	-338.8	7,145.4	1,593.6	1,383.8	209.75	7.597		
15,100.0	6,672.0	15,169.7	6,646.0	105.1	107.1	89.10	-336.7	7,245.7	1,593.8	1,381.6	212.16	7.512		
15,200.0	6,672.0	15,270.0	6,646.0	106.3	108.3	89.10	-334.6	7,345.9	1,594.0	1,379.5	214.57	7.429		
15,300.0	6,672.0	15,370.3	6,646.0	107.6	109.6	89.10	-332.5	7,446.1	1,594.2	1,377.3	216.98	7.347		
15,400.0	6,672.0	15,470.5	6,646.0	108.8	110.8	89.10	-330.4	7,546.3	1,594.4	1,375.1	219.39	7.268		
15,500.0	6,672.0	15,570.8	6,646.0	110.0	112.0	89.10	-328.3	7,646.6	1,594.7	1,372.8	221.80	7.190		
15,600.0	6,672.0	15,671.0	6,646.0	111.2	113.2	89.10	-326.1	7,746.8	1,594.8	1,370.6	224.22	7.113		
15,700.0	6,672.0	15,771.3	6,646.0	112.4	114.4	89.10	-324.0	7,847.0	1,595.0	1,368.4	226.63	7.038		
15,800.0	6,672.0	15,871.5	6,646.0	113.6	115.6	89.10	-321.8	7,947.3	1,595.2	1,366.2	229.05	6.964		
15,900.0	6,672.0	15,971.8	6,646.0	114.8	116.8	89.10	-319.6	8,047.5	1,595.4	1,363.9	231.47	6.892		
16,000.0	6,672.0	16,072.0	6,646.0	116.0	118.0	89.10	-317.4	8,147.7	1,595.5	1,361.6	233.89	6.822		
16,100.0	6,672.0	16,172.3	6,646.0	117.2	119.2	89.10	-315.2	8,247.9	1,595.7	1,359.4	236.31	6.753		
16,200.0	6,672.0	16,272.5	6,646.0	118.4	120.5	89.10	-313.0	8,348.2	1,595.8	1,357.1	238.73	6.685		
16,300.0	6,672.0	16,372.8	6,646.0	119.6	121.7	89.10	-310.7	8,448.4	1,596.0	1,354.8	241.16	6.618		
16,400.0	6,672.0	16,473.0	6,646.0	120.8	122.9	89.10	-308.4	8,548.6	1,596.1	1,352.5	243.58	6.553		
16,500.0	6,672.0	16,573.3	6,646.0	122.0	124.1	89.10	-306.1	8,648.9	1,596.2	1,350.2	246.01	6.488		
16,600.0	6,672.0	16,673.5	6,646.0	123.2	125.3	89.10	-303.8	8,749.1	1,596.3	1,347.9	248.44	6.426		
16,700.0	6,672.0	16,773.8	6,646.0	124.5	126.5	89.10	-301.5	8,849.3	1,596.4	1,345.6	250.86	6.364		
16,800.0	6,672.0	16,874.0	6,646.0	125.7	127.8	89.10	-299.2	8,949.5	1,596.5	1,343.2	253.29	6.303		
16,900.0	6,672.0	16,974.3	6,646.0	126.9	129.0	89.10	-296.8	9,049.8	1,596.6	1,340.9	255.72	6.243		
17,000.0	6,672.0	17,074.6	6,646.0	128.1	130.2	89.10	-294.5	9,150.0	1,596.7	1,338.5	258.16	6.185		
17,100.0	6,672.0	17,174.8	6,646.0	129.3	131.4	89.10	-292.1	9,250.2	1,596.8	1,336.2	260.59	6.128		
17,200.0	6,672.0	17,275.1	6,646.0	130.5	132.6	89.10	-289.7	9,350.4	1,596.8	1,333.8	263.02	6.071		
17,300.0	6,672.0	17,375.3	6,646.0	131.7	133.9	89.10	-287.3	9,450.7	1,596.9	1,331.4	265.46	6.016		
17,400.0	6,672.0	17,475.6	6,646.0	133.0	135.1	89.10	-284.9	9,550.9	1,596.9	1,329.0	267.89	5.961		
17,500.0	6,672.0	17,575.8	6,646.0	134.2	136.3	89.10	-282.4	9,651.1	1,596.9	1,326.6	270.33	5.907		
17,600.0	6,672.0	17,676.1	6,646.0	135.4	137.5	89.10	-280.0	9,751.3	1,597.0	1,324.2	272.76	5.855		
17,700.0	6,672.0	17,776.3	6,646.0	136.6	138.7	89.10	-277.5	9,851.6	1,597.0	1,321.8	275.20	5.803		
17,800.0	6,672.0	17,876.6	6,646.0	137.8	140.0	89.10	-275.0	9,951.8	1,597.0	1,319.4	277.64	5.752		
17,900.0	6,672.0	17,976.6	6,646.0	137.8	140.0	89.10	-275.0	9,951.8	1,597.0	1,319.4	277.64	5.752		
17,900.0	6,672.0	17,949.8	6,646.0	139.0	140.9	89.10	-273.2	10,025.0	1,597.2	1,317.5	279.72	5.710 SF		
18,000.0	6,672.0	17,949.8	6,646.0	140.3	140.9	89.10	-273.2	10,025.0	1,602.0	1,321.9	280.16	5.718		
18,100.0	6,672.0	17,949.8	6,646.0	141.5	140.9	89.10	-273.2	10,025.0	1,613.1	1,333.5	279.56	5.770		
18,200.0	6,672.0	17,949.8	6,646.0	142.7	140.9	89.10	-273.2	10,025.0	1,630.2	1,352.2	277.98	5.864		
18,300.0	6,672.0	17,949.8	6,646.0	143.9	140.9	89.10	-273.2	10,025.0	1,653.2	1,377.7	275.49	6.001		
18,342.5	6,672.0	17,949.8	6,646.0	144.4	140.9	89.10	-273.2	10,025.0	1,664.6	1,390.5	274.19	6.071		



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch State BB07-668 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	1.0	-1.0	0.0	0.0	-178.35	-69.2	-2.0	69.3					
100.0	100.0	101.0	99.0	0.1	0.1	-178.35	-69.2	-2.0	69.3	69.0	0.25	272.160		
200.0	200.0	201.0	199.0	0.5	0.5	-178.35	-69.2	-2.0	69.3	68.3	0.97	71.304		
300.0	300.0	301.0	299.0	0.8	0.8	-178.35	-69.2	-2.0	69.3	67.6	1.69	41.026		
400.0	400.0	401.0	399.0	1.2	1.2	-178.35	-69.2	-2.0	69.3	66.9	2.41	28.798		
500.0	500.0	501.0	499.0	1.6	1.6	-178.35	-69.2	-2.0	69.3	66.1	3.12	22.185		
600.0	600.0	601.0	599.0	1.9	1.9	-178.35	-69.2	-2.0	69.3	65.4	3.84	18.042		
700.0	700.0	701.0	699.0	2.3	2.3	-178.35	-69.2	-2.0	69.3	64.7	4.56	15.203		
800.0	800.0	801.0	799.0	2.6	2.6	-178.35	-69.2	-2.0	69.3	64.0	5.27	13.136		
900.0	900.0	901.0	899.0	3.0	3.0	-178.35	-69.2	-2.0	69.3	63.3	5.99	11.564		
1,000.0	1,000.0	1,001.0	999.0	3.4	3.4	-178.35	-69.2	-2.0	69.3	62.6	6.71	10.328		
1,100.0	1,100.0	1,101.0	1,099.0	3.7	3.7	-178.35	-69.2	-2.0	69.3	61.8	7.42	9.330		
1,200.0	1,200.0	1,201.0	1,199.0	4.1	4.1	-178.35	-69.2	-2.0	69.3	61.1	8.14	8.509		
1,300.0	1,300.0	1,301.0	1,299.0	4.4	4.4	-178.35	-69.2	-2.0	69.3	60.4	8.86	7.820		
1,400.0	1,400.0	1,401.0	1,399.0	4.8	4.8	-178.35	-69.2	-2.0	69.3	59.7	9.57	7.235		
1,500.0	1,500.0	1,501.0	1,499.0	5.1	5.1	-178.35	-69.2	-2.0	69.3	59.0	10.29	6.731		
1,600.0	1,600.0	1,601.0	1,599.0	5.5	5.5	-178.35	-69.2	-2.0	69.3	58.3	11.01	6.292		
1,700.0	1,700.0	1,701.0	1,699.0	5.9	5.9	-178.35	-69.2	-2.0	69.3	57.5	11.73	5.907		
1,800.0	1,800.0	1,801.0	1,799.0	6.2	6.2	-178.35	-69.2	-2.0	69.3	56.8	12.44	5.567		
1,900.0	1,900.0	1,901.0	1,899.0	6.6	6.6	-178.35	-69.2	-2.0	69.3	56.1	13.16	5.264		
2,000.0	2,000.0	2,001.0	1,999.0	6.9	6.9	-178.35	-69.2	-2.0	69.3	55.4	13.88	4.992		
2,100.0	2,100.0	2,101.0	2,099.0	7.3	7.3	-178.35	-69.2	-2.0	69.3	54.7	14.59	4.747		
2,200.0	2,200.0	2,201.0	2,199.0	7.7	7.7	-178.35	-69.2	-2.0	69.3	54.0	15.31	4.524 CC, ES		
2,300.0	2,300.0	2,301.0	2,299.0	8.0	8.0	-128.46	-69.2	-2.0	70.3	54.3	16.02	4.390		
2,400.0	2,399.8	2,398.8	2,398.8	8.4	8.4	-131.60	-69.2	-2.0	73.7	57.0	16.73	4.406		
2,500.0	2,499.5	2,498.9	2,498.9	8.7	8.7	-135.01	-69.1	-3.7	79.5	62.0	17.43	4.558		
2,600.0	2,598.7	2,599.1	2,599.0	9.1	9.1	-137.21	-68.8	-8.9	87.3	69.2	18.13	4.815		
2,700.0	2,697.5	2,699.3	2,698.8	9.4	9.4	-138.36	-68.3	-17.6	97.1	78.2	18.83	5.154		
2,800.0	2,795.6	2,799.5	2,798.2	9.8	9.8	-138.66	-67.5	-29.7	108.7	89.1	19.54	5.562		
2,900.0	2,893.1	2,899.5	2,897.0	10.1	10.1	-138.34	-66.6	-45.4	122.0	101.8	20.24	6.029		
3,000.0	2,989.6	2,999.4	2,995.0	10.5	10.5	-137.57	-65.4	-64.4	137.2	116.2	20.95	6.547		
3,100.0	3,085.3	3,099.0	3,092.1	10.9	10.8	-136.52	-64.1	-86.7	154.1	132.5	21.67	7.113		
3,200.0	3,179.8	3,198.4	3,188.1	11.2	11.2	-135.29	-62.5	-112.3	172.9	150.5	22.39	7.721		
3,300.0	3,273.2	3,297.4	3,282.8	11.6	11.5	-133.95	-60.7	-141.1	193.4	170.3	23.12	8.367		
3,387.5	3,353.8	3,383.6	3,364.4	11.9	11.9	-132.74	-59.0	-168.9	212.9	189.2	23.77	8.960		
3,400.0	3,365.2	3,395.9	3,376.0	12.0	11.9	-132.61	-58.8	-173.1	215.8	192.0	23.86	9.045		
3,500.0	3,456.8	3,494.3	3,467.9	12.4	12.3	-131.17	-56.6	-208.1	238.7	214.0	24.61	9.697		
3,600.0	3,548.3	3,608.1	3,558.0	12.8	12.7	-129.38	-54.3	-245.4	261.3	235.8	25.44	10.271		
3,700.0	3,639.8	3,689.0	3,647.5	13.2	13.0	-127.80	-52.1	-282.9	284.1	258.0	26.15	10.866		
3,800.0	3,731.4	3,786.1	3,737.1	13.6	13.4	-126.47	-49.8	-320.4	307.1	280.2	26.93	11.405		
3,900.0	3,822.9	3,883.1	3,826.6	14.0	13.8	-125.31	-47.5	-357.9	330.2	302.5	27.71	11.915		
4,000.0	3,914.4	3,980.2	3,916.1	14.4	14.2	-124.31	-45.2	-395.3	353.4	324.9	28.51	12.398		
4,100.0	4,005.9	4,077.3	4,005.7	14.8	14.6	-123.43	-42.9	-432.8	376.8	347.5	29.31	12.855		
4,200.0	4,097.5	4,174.4	4,095.2	15.2	15.0	-122.66	-40.6	-470.3	400.2	370.0	30.12	13.287		
4,300.0	4,189.0	4,271.5	4,184.7	15.6	15.4	-121.97	-38.3	-507.8	423.6	392.7	30.93	13.695		
4,400.0	4,280.5	4,368.6	4,274.3	16.1	15.8	-121.35	-36.0	-545.2	447.1	415.4	31.75	14.082		
4,500.0	4,372.1	4,465.7	4,363.8	16.5	16.2	-120.79	-33.7	-582.7	470.7	438.1	32.58	14.448		
4,600.0	4,463.6	4,562.8	4,453.4	16.9	16.6	-120.29	-31.4	-620.2	494.3	460.9	33.41	14.795		
4,700.0	4,555.1	4,659.9	4,542.9	17.4	17.0	-119.83	-29.1	-657.7	517.9	483.7	34.25	15.123		
4,800.0	4,646.7	4,757.0	4,632.4	17.8	17.5	-119.42	-26.8	-695.2	541.6	506.5	35.09	15.435		
4,900.0	4,738.2	4,854.0	4,722.0	18.2	17.9	-119.03	-24.6	-732.6	565.2	529.3	35.93	15.731		
5,000.0	4,829.7	4,951.1	4,811.5	18.7	18.3	-118.68	-22.3	-770.1	588.9	552.2	36.78	16.012		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch State BB07-668 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,100.0	4,921.3	5,048.2	4,901.0	19.1	18.7	-118.36	-20.0	-807.6	612.7	575.0	37.63	16.280		
5,200.0	5,012.8	5,145.3	4,990.6	19.5	19.2	-118.06	-17.7	-845.1	636.4	597.9	38.49	16.535		
5,300.0	5,104.3	5,242.4	5,080.1	20.0	19.6	-117.78	-15.4	-882.5	660.1	620.8	39.35	16.777		
5,400.0	5,195.8	5,339.5	5,169.6	20.4	20.0	-117.52	-13.1	-920.0	683.9	643.7	40.21	17.009		
5,500.0	5,287.4	5,436.6	5,259.2	20.9	20.5	-117.27	-10.8	-957.5	707.7	666.6	41.07	17.229		
5,600.0	5,378.9	5,533.7	5,348.7	21.3	20.9	-117.05	-8.5	-995.0	731.5	689.5	41.94	17.440		
5,700.0	5,470.4	5,630.8	5,438.3	21.8	21.3	-116.84	-6.2	-1,032.4	755.3	712.5	42.81	17.641		
5,800.0	5,562.0	5,727.8	5,527.8	22.2	21.8	-116.64	-3.9	-1,069.9	779.1	735.4	43.69	17.834		
5,900.0	5,653.5	5,824.9	5,617.3	22.7	22.2	-116.45	-1.6	-1,107.4	802.9	758.3	44.56	18.018		
6,000.0	5,745.0	5,922.0	5,706.9	23.1	22.6	-116.27	0.7	-1,144.9	826.7	781.3	45.44	18.194		
6,100.0	5,836.6	6,019.1	5,796.4	23.6	23.1	-116.11	3.0	-1,182.3	850.6	804.2	46.32	18.364		
6,200.0	5,928.1	6,165.0	5,933.5	24.0	23.7	-116.39	9.0	-1,230.8	871.7	824.1	47.55	18.332		
6,278.6	6,000.0	6,274.9	6,042.4	24.4	24.1	-118.17	14.5	-1,242.9	884.8	836.4	48.34	18.303		
6,290.0	6,010.4	6,289.8	6,057.3	24.4	24.2	-119.97	15.2	-1,242.9	886.6	838.2	48.44	18.302		
6,300.0	6,019.5	6,302.8	6,070.2	24.5	24.2	-122.17	15.9	-1,242.5	888.3	839.8	48.53	18.304		
6,350.0	6,065.8	6,365.2	6,132.2	24.7	24.4	-135.05	19.2	-1,236.3	897.1	848.1	48.93	18.333		
6,400.0	6,113.0	6,424.6	6,190.2	24.9	24.5	-151.45	22.4	-1,223.8	906.4	857.1	49.30	18.387		
6,450.0	6,160.7	6,481.2	6,243.8	25.1	24.7	-170.85	25.4	-1,206.1	916.2	866.6	49.64	18.459		
6,500.0	6,208.5	6,535.4	6,293.2	25.3	24.8	169.28	28.3	-1,183.9	926.5	876.5	49.95	18.547		
6,550.0	6,255.8	6,587.5	6,338.3	25.4	25.0	151.85	31.0	-1,158.1	937.1	886.8	50.25	18.647		
6,600.0	6,302.5	6,637.7	6,379.3	25.6	25.1	138.02	33.6	-1,129.2	947.8	897.3	50.53	18.757		
6,650.0	6,347.9	6,686.3	6,416.2	25.7	25.2	127.37	36.0	-1,097.7	958.7	907.9	50.79	18.874		
6,700.0	6,391.6	6,733.5	6,449.2	25.9	25.3	119.08	38.2	-1,064.0	969.5	918.5	51.04	18.997		
6,750.0	6,433.4	6,779.4	6,478.4	26.0	25.5	112.49	40.2	-1,028.7	980.2	928.9	51.26	19.122		
6,800.0	6,472.8	6,824.3	6,503.9	26.1	25.6	107.12	42.1	-991.8	990.5	939.1	51.46	19.247		
6,850.0	6,509.4	6,868.2	6,525.9	26.2	25.7	102.67	43.8	-953.9	1,000.4	948.8	51.65	19.368		
6,900.0	6,543.0	6,911.3	6,544.4	26.3	25.8	98.94	45.3	-915.0	1,009.8	957.9	51.82	19.484		
6,950.0	6,573.2	6,953.6	6,559.5	26.4	25.9	95.78	46.7	-875.5	1,018.4	966.4	51.98	19.591		
7,000.0	6,599.8	6,995.2	6,571.3	26.5	26.0	93.12	47.9	-835.6	1,026.3	974.2	52.13	19.686		
7,050.0	6,622.5	7,036.3	6,579.9	26.6	26.1	90.88	48.9	-795.5	1,033.3	981.0	52.28	19.766		
7,100.0	6,641.1	7,076.8	6,585.4	26.7	26.2	89.02	49.8	-755.4	1,039.3	986.9	52.42	19.828		
7,150.0	6,655.4	7,116.8	6,587.8	26.8	26.4	87.51	50.5	-715.4	1,044.4	991.8	52.56	19.871		
7,200.0	6,665.4	7,162.7	6,588.0	26.9	26.5	86.31	51.2	-669.6	1,048.2	995.4	52.71	19.884		
7,250.0	6,670.8	7,212.4	6,588.0	27.0	26.6	85.62	52.0	-619.9	1,050.4	997.4	52.91	19.851		
7,285.7	6,672.0	7,248.0	6,588.0	27.1	26.7	85.47	52.5	-584.3	1,050.9	997.8	53.09	19.796		
7,300.0	6,672.0	7,262.3	6,588.0	27.1	26.8	85.47	52.7	-570.0	1,050.9	997.7	53.16	19.769		
7,400.0	6,672.0	7,362.3	6,588.0	27.3	27.1	85.47	54.2	-470.0	1,051.1	997.4	53.74	19.558		
7,500.0	6,672.0	7,462.3	6,588.0	27.6	27.5	85.47	55.7	-370.0	1,051.3	996.9	54.44	19.313		
7,600.0	6,672.0	7,562.3	6,588.0	28.0	28.0	85.47	57.2	-270.0	1,051.6	996.3	55.23	19.040		
7,700.0	6,672.0	7,662.3	6,588.0	28.3	28.5	85.47	58.7	-170.0	1,051.8	995.7	56.12	18.742		
7,800.0	6,672.0	7,762.3	6,588.0	28.8	29.0	85.48	60.2	-70.0	1,052.0	994.9	57.11	18.423		
7,900.0	6,672.0	7,862.3	6,588.0	29.3	29.6	85.48	61.7	30.0	1,052.3	994.1	58.18	18.087		
8,000.0	6,672.0	7,962.3	6,588.0	29.8	30.2	85.48	63.2	130.0	1,052.6	993.2	59.34	17.738		
8,100.0	6,672.0	8,062.3	6,588.0	30.4	30.9	85.48	64.7	230.0	1,052.8	992.2	60.57	17.381		
8,200.0	6,672.0	8,162.3	6,588.0	31.0	31.6	85.48	66.3	329.9	1,053.1	991.2	61.89	17.017		
8,300.0	6,672.0	8,262.3	6,588.0	31.7	32.3	85.48	67.8	429.9	1,053.4	990.1	63.27	16.650		
8,400.0	6,672.0	8,362.3	6,588.0	32.4	33.0	85.48	69.3	529.9	1,053.7	989.0	64.71	16.282		
8,500.0	6,672.0	8,462.3	6,588.0	33.1	33.8	85.48	70.8	629.9	1,054.0	987.7	66.22	15.916		
8,600.0	6,672.0	8,562.3	6,588.0	33.9	34.6	85.48	72.3	729.9	1,054.3	986.5	67.78	15.553		
8,700.0	6,672.0	8,662.3	6,588.0	34.7	35.5	85.49	73.8	829.9	1,054.6	985.2	69.40	15.195		
8,800.0	6,672.0	8,762.3	6,588.0	35.5	36.3	85.49	75.3	929.9	1,054.9	983.8	71.07	14.843		
8,900.0	6,672.0	8,862.3	6,588.0	36.3	37.2	85.49	76.8	1,029.9	1,055.2	982.4	72.78	14.499		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch State BB07-668 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
9,000.0	6,672.0	8,962.3	6,588.0	37.2	38.1	85.49	78.3	1,129.8	1,055.6	981.0	74.54	14.162		
9,100.0	6,672.0	9,062.3	6,588.0	38.1	39.0	85.49	79.8	1,229.8	1,055.9	979.6	76.33	13.833		
9,200.0	6,672.0	9,162.3	6,588.0	39.0	40.0	85.49	81.3	1,329.8	1,056.2	978.1	78.17	13.513		
9,300.0	6,672.0	9,262.3	6,588.0	39.9	40.9	85.49	82.8	1,429.8	1,056.6	976.6	80.03	13.202		
9,400.0	6,672.0	9,362.3	6,588.0	40.8	41.9	85.50	84.3	1,529.8	1,057.0	975.0	81.93	12.900		
9,500.0	6,672.0	9,462.3	6,588.0	41.8	42.9	85.50	85.8	1,629.8	1,057.3	973.5	83.86	12.608		
9,600.0	6,672.0	9,562.3	6,588.0	42.7	43.9	85.50	87.3	1,729.8	1,057.7	971.9	85.82	12.324		
9,700.0	6,672.0	9,662.3	6,588.0	43.7	44.9	85.50	88.8	1,829.8	1,058.1	970.3	87.81	12.050		
9,800.0	6,672.0	9,762.3	6,588.0	44.7	45.9	85.50	90.3	1,929.8	1,058.5	968.7	89.82	11.785		
9,900.0	6,672.0	9,862.3	6,588.0	45.7	47.0	85.50	91.8	2,029.7	1,058.9	967.0	91.85	11.529		
10,000.0	6,672.0	9,962.3	6,588.0	46.7	48.0	85.51	93.3	2,129.7	1,059.3	965.4	93.90	11.281		
10,100.0	6,672.0	10,062.3	6,588.0	47.7	49.0	85.51	94.8	2,229.7	1,059.7	963.7	95.97	11.042		
10,200.0	6,672.0	10,162.3	6,588.0	48.8	50.1	85.51	96.3	2,329.7	1,060.1	962.1	98.07	10.810		
10,300.0	6,672.0	10,262.3	6,588.0	49.8	51.2	85.51	97.8	2,429.7	1,060.6	960.4	100.17	10.587		
10,400.0	6,672.0	10,362.3	6,588.0	50.9	52.2	85.51	99.3	2,529.7	1,061.0	958.7	102.30	10.371		
10,500.0	6,672.0	10,462.3	6,588.0	51.9	53.3	85.52	100.8	2,629.7	1,061.5	957.0	104.44	10.163		
10,600.0	6,672.0	10,562.3	6,588.0	53.0	54.4	85.52	102.3	2,729.7	1,061.9	955.3	106.60	9.962		
10,700.0	6,672.0	10,662.3	6,588.0	54.1	55.5	85.52	103.8	2,829.6	1,062.4	953.6	108.77	9.767		
10,800.0	6,672.0	10,762.3	6,588.0	55.2	56.6	85.52	105.3	2,929.6	1,062.8	951.9	110.95	9.579		
10,900.0	6,672.0	10,862.3	6,588.0	56.3	57.7	85.52	106.8	3,029.6	1,063.3	950.2	113.14	9.398		
11,000.0	6,672.0	10,962.3	6,588.0	57.4	58.8	85.53	108.3	3,129.6	1,063.8	948.4	115.35	9.222		
11,100.0	6,672.0	11,062.3	6,588.0	58.5	60.0	85.53	109.8	3,229.6	1,064.3	946.7	117.57	9.053		
11,200.0	6,672.0	11,162.3	6,588.0	59.6	61.1	85.53	111.3	3,329.6	1,064.8	945.0	119.79	8.888		
11,300.0	6,672.0	11,262.3	6,588.0	60.7	62.2	85.53	112.8	3,429.6	1,065.3	943.3	122.03	8.730		
11,400.0	6,672.0	11,362.3	6,588.0	61.8	63.3	85.53	114.3	3,529.6	1,065.8	941.5	124.28	8.576		
11,500.0	6,672.0	11,462.3	6,588.0	62.9	64.5	85.54	115.8	3,629.5	1,066.3	939.8	126.53	8.427		
11,600.0	6,672.0	11,562.3	6,588.0	64.1	65.6	85.54	117.3	3,729.5	1,066.8	938.1	128.79	8.283		
11,700.0	6,672.0	11,662.3	6,588.0	65.2	66.8	85.54	118.8	3,829.5	1,067.4	936.3	131.06	8.144		
11,800.0	6,672.0	11,762.3	6,588.0	66.3	67.9	85.54	120.3	3,929.5	1,067.9	934.6	133.34	8.009		
11,900.0	6,672.0	11,862.3	6,588.0	67.5	69.0	85.54	121.8	4,029.5	1,068.5	932.8	135.63	7.878		
12,000.0	6,672.0	11,962.3	6,588.0	68.6	70.2	85.55	123.3	4,129.5	1,069.0	931.1	137.92	7.751		
12,100.0	6,672.0	12,062.3	6,588.0	69.8	71.4	85.55	124.8	4,229.5	1,069.6	929.4	140.21	7.628		
12,200.0	6,672.0	12,162.3	6,588.0	70.9	72.5	85.55	126.3	4,329.5	1,070.2	927.7	142.52	7.509		
12,300.0	6,672.0	12,262.3	6,588.0	72.1	73.7	85.55	127.8	4,429.4	1,070.8	925.9	144.83	7.393		
12,400.0	6,672.0	12,362.3	6,588.0	73.2	74.8	85.56	129.3	4,529.4	1,071.3	924.2	147.14	7.281		
12,500.0	6,672.0	12,462.3	6,588.0	74.4	76.0	85.56	130.8	4,629.4	1,071.9	922.5	149.46	7.172		
12,600.0	6,672.0	12,562.3	6,588.0	75.5	77.2	85.56	132.3	4,729.4	1,072.5	920.8	151.79	7.066		
12,700.0	6,672.0	12,662.3	6,588.0	76.7	78.3	85.56	133.8	4,829.4	1,073.1	919.0	154.12	6.963		
12,800.0	6,672.0	12,762.3	6,588.0	77.9	79.5	85.57	135.3	4,929.4	1,073.8	917.3	156.45	6.863		
12,900.0	6,672.0	12,862.3	6,588.0	79.0	80.7	85.57	136.8	5,029.4	1,074.4	915.6	158.79	6.766		
13,000.0	6,672.0	12,962.3	6,588.0	80.2	81.9	85.57	138.3	5,129.3	1,075.0	913.9	161.13	6.672		
13,100.0	6,672.0	13,062.3	6,588.0	81.4	83.0	85.57	139.8	5,229.3	1,075.7	912.2	163.48	6.580		
13,200.0	6,672.0	13,162.3	6,588.0	82.6	84.2	85.58	141.3	5,329.3	1,076.3	910.5	165.83	6.491		
13,300.0	6,672.0	13,262.3	6,588.0	83.7	85.4	85.58	142.8	5,429.3	1,077.0	908.8	168.18	6.404		
13,400.0	6,672.0	13,362.3	6,588.0	84.9	86.6	85.58	144.3	5,529.3	1,077.6	907.1	170.54	6.319		
13,500.0	6,672.0	13,462.3	6,588.0	86.1	87.8	85.59	145.8	5,629.3	1,078.3	905.4	172.90	6.237		
13,600.0	6,672.0	13,562.3	6,588.0	87.3	89.0	85.59	147.3	5,729.3	1,079.0	903.7	175.26	6.156		
13,700.0	6,672.0	13,662.3	6,588.0	88.4	90.2	85.59	148.8	5,829.3	1,079.7	902.0	177.63	6.078		
13,800.0	6,672.0	13,762.2	6,588.0	89.6	91.3	85.59	150.3	5,929.2	1,080.4	900.4	180.00	6.002		
13,900.0	6,672.0	13,862.2	6,588.0	90.8	92.5	85.60	151.8	6,029.2	1,081.1	898.7	182.37	5.928		
14,000.0	6,672.0	13,962.2	6,588.0	92.0	93.7	85.60	153.3	6,129.2	1,081.8	897.0	184.75	5.855		
14,100.0	6,672.0	14,062.2	6,588.0	93.2	94.9	85.60	154.8	6,229.2	1,082.5	895.3	187.13	5.785		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch State BB07-668 - Original Drilling - Plan 1													Offset Site Error: 0.0 ft	
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
14,200.0	6,672.0	14,162.2	6,588.0	94.4	96.1	85.61	156.3	6,329.2	1,083.2	893.7	189.51	5.716		
14,300.0	6,672.0	14,262.2	6,588.0	95.6	97.3	85.61	157.8	6,429.2	1,083.9	892.0	191.89	5.649		
14,400.0	6,672.0	14,362.2	6,588.0	96.8	98.5	85.61	159.3	6,529.2	1,084.7	890.4	194.28	5.583		
14,500.0	6,672.0	14,462.2	6,588.0	98.0	99.7	85.61	160.8	6,629.1	1,085.4	888.7	196.67	5.519		
14,600.0	6,672.0	14,562.2	6,588.0	99.2	100.9	85.62	162.3	6,729.1	1,086.2	887.1	199.06	5.457		
14,700.0	6,672.0	14,662.2	6,588.0	100.4	102.1	85.62	163.8	6,829.1	1,086.9	885.5	201.45	5.396		
14,800.0	6,672.0	14,762.2	6,588.0	101.6	103.3	85.62	165.3	6,929.1	1,087.7	883.8	203.84	5.336		
14,900.0	6,672.0	14,862.2	6,588.0	102.7	104.5	85.63	166.8	7,029.1	1,088.5	882.2	206.24	5.278		
15,000.0	6,672.0	14,962.2	6,588.0	103.9	105.7	85.63	168.3	7,129.1	1,089.2	880.6	208.64	5.221		
15,100.0	6,672.0	15,062.2	6,588.0	105.1	106.9	85.63	169.8	7,229.1	1,090.0	879.0	211.04	5.165		
15,200.0	6,672.0	15,162.2	6,588.0	106.3	108.1	85.64	171.3	7,329.0	1,090.8	877.4	213.44	5.111		
15,300.0	6,672.0	15,262.2	6,588.0	107.6	109.3	85.64	172.8	7,429.0	1,091.6	875.8	215.84	5.058		
15,400.0	6,672.0	15,362.2	6,588.0	108.8	110.5	85.64	174.3	7,529.0	1,092.5	874.2	218.25	5.006		
15,500.0	6,672.0	15,462.2	6,588.0	110.0	111.7	85.65	175.8	7,629.0	1,093.3	872.6	220.65	4.955		
15,600.0	6,672.0	15,562.2	6,588.0	111.2	113.0	85.65	177.3	7,729.0	1,094.1	871.0	223.06	4.905		
15,700.0	6,672.0	15,662.2	6,588.0	112.4	114.2	85.65	178.8	7,829.0	1,094.9	869.5	225.47	4.856		
15,800.0	6,672.0	15,762.2	6,588.0	113.6	115.4	85.66	180.3	7,929.0	1,095.8	867.9	227.88	4.809		
15,900.0	6,672.0	15,862.2	6,588.0	114.8	116.6	85.66	181.8	8,028.9	1,096.6	866.3	230.29	4.762		
16,000.0	6,672.0	15,962.2	6,588.0	116.0	117.8	85.66	183.3	8,128.9	1,097.5	864.8	232.71	4.716		
16,100.0	6,672.0	16,062.2	6,588.0	117.2	119.0	85.67	184.8	8,228.9	1,098.3	863.2	235.12	4.671		
16,200.0	6,672.0	16,162.2	6,588.0	118.4	120.2	85.67	186.3	8,328.9	1,099.2	861.7	237.54	4.628		
16,300.0	6,672.0	16,262.2	6,588.0	119.6	121.4	85.67	187.8	8,428.9	1,100.1	860.1	239.96	4.585		
16,400.0	6,672.0	16,362.2	6,588.0	120.8	122.6	85.68	189.3	8,528.9	1,101.0	858.6	242.38	4.542		
16,500.0	6,672.0	16,462.2	6,588.0	122.0	123.9	85.68	190.8	8,628.8	1,101.9	857.1	244.80	4.501		
16,600.0	6,672.0	16,562.2	6,588.0	123.2	125.1	85.68	192.3	8,728.8	1,102.8	855.6	247.22	4.461		
16,700.0	6,672.0	16,662.2	6,588.0	124.5	126.3	85.69	193.8	8,828.8	1,103.7	854.1	249.64	4.421		
16,800.0	6,672.0	16,762.1	6,588.0	125.7	127.5	85.69	195.3	8,928.8	1,104.6	852.5	252.06	4.382		
16,900.0	6,672.0	16,862.1	6,588.0	126.9	128.7	85.69	196.8	9,028.8	1,105.5	851.1	254.49	4.344		
17,000.0	6,672.0	16,962.1	6,588.0	128.1	129.9	85.70	198.3	9,128.8	1,106.5	849.6	256.91	4.307		
17,100.0	6,672.0	17,062.1	6,588.0	129.3	131.2	85.70	199.8	9,228.8	1,107.4	848.1	259.34	4.270		
17,200.0	6,672.0	17,162.1	6,588.0	130.5	132.4	85.71	201.3	9,328.7	1,108.4	846.6	261.77	4.234		
17,300.0	6,672.0	17,262.1	6,588.0	131.7	133.6	85.71	202.8	9,428.7	1,109.3	845.1	264.20	4.199		
17,400.0	6,672.0	17,362.1	6,588.0	133.0	134.8	85.71	204.3	9,528.7	1,110.3	843.6	266.62	4.164		
17,500.0	6,672.0	17,462.1	6,588.0	134.2	136.0	85.72	205.8	9,628.7	1,111.2	842.2	269.06	4.130		
17,600.0	6,672.0	17,562.1	6,588.0	135.4	137.2	85.72	207.3	9,728.7	1,112.2	840.7	271.49	4.097		
17,700.0	6,672.0	17,662.1	6,588.0	136.6	138.5	85.72	208.8	9,828.7	1,113.2	839.3	273.92	4.064		
17,800.0	6,672.0	17,762.1	6,588.0	137.8	139.7	85.73	210.3	9,928.6	1,114.2	837.8	276.35	4.032		
17,900.0	6,672.0	17,855.0	6,588.0	139.0	140.8	85.73	211.4	10,021.5	1,115.6	836.9	278.68	4.003 SF		
18,000.0	6,672.0	17,858.3	6,588.0	140.3	140.9	85.73	211.4	10,024.8	1,121.4	842.8	278.62	4.025		
18,100.0	6,672.0	17,858.3	6,588.0	141.5	140.9	85.73	211.4	10,024.8	1,136.0	859.6	276.45	4.109		
18,200.0	6,672.0	17,858.3	6,588.0	142.7	140.9	85.73	211.4	10,024.8	1,159.1	886.7	272.41	4.255		
18,300.0	6,672.0	17,858.3	6,588.0	143.9	140.9	85.73	211.4	10,024.8	1,190.2	923.4	266.82	4.461		
18,342.5	6,672.0	17,858.3	6,588.0	144.4	140.9	85.73	211.4	10,024.8	1,205.7	941.6	264.06	4.566		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch State BB07-673 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	1.0	-1.0	0.0	0.0	-177.29	-47.4	-2.2	47.4					
100.0	100.0	101.0	99.0	0.1	0.1	-177.29	-47.4	-2.2	47.4	47.2	0.25	186.396		
200.0	200.0	201.0	199.0	0.5	0.5	-177.29	-47.4	-2.2	47.4	46.5	0.97	48.834		
300.0	300.0	301.0	299.0	0.8	0.8	-177.29	-47.4	-2.2	47.4	45.8	1.69	28.098		
400.0	400.0	401.0	399.0	1.2	1.2	-177.29	-47.4	-2.2	47.4	45.0	2.41	19.723		
500.0	500.0	501.0	499.0	1.6	1.6	-177.29	-47.4	-2.2	47.4	44.3	3.12	15.194		
600.0	600.0	601.0	599.0	1.9	1.9	-177.29	-47.4	-2.2	47.4	43.6	3.84	12.357		
700.0	700.0	701.0	699.0	2.3	2.3	-177.29	-47.4	-2.2	47.4	42.9	4.56	10.412		
800.0	800.0	801.0	799.0	2.6	2.6	-177.29	-47.4	-2.2	47.4	42.2	5.27	8.997		
900.0	900.0	901.0	899.0	3.0	3.0	-177.29	-47.4	-2.2	47.4	41.5	5.99	7.920		
1,000.0	1,000.0	1,001.0	999.0	3.4	3.4	-177.29	-47.4	-2.2	47.4	40.7	6.71	7.073		
1,100.0	1,100.0	1,101.0	1,099.0	3.7	3.7	-177.29	-47.4	-2.2	47.4	40.0	7.42	6.390		
1,200.0	1,200.0	1,201.0	1,199.0	4.1	4.1	-177.29	-47.4	-2.2	47.4	39.3	8.14	5.827		
1,300.0	1,300.0	1,301.0	1,299.0	4.4	4.4	-177.29	-47.4	-2.2	47.4	38.6	8.86	5.356		
1,400.0	1,400.0	1,401.0	1,399.0	4.8	4.8	-177.29	-47.4	-2.2	47.4	37.9	9.57	4.955		
1,500.0	1,500.0	1,501.0	1,499.0	5.1	5.1	-177.29	-47.4	-2.2	47.4	37.1	10.29	4.610		
1,600.0	1,600.0	1,601.0	1,599.0	5.5	5.5	-177.29	-47.4	-2.2	47.4	36.4	11.01	4.309		
1,700.0	1,700.0	1,701.0	1,699.0	5.9	5.9	-177.29	-47.4	-2.2	47.4	35.7	11.73	4.046		
1,800.0	1,800.0	1,801.0	1,799.0	6.2	6.2	-177.29	-47.4	-2.2	47.4	35.0	12.44	3.813		
1,900.0	1,900.0	1,901.0	1,899.0	6.6	6.6	-177.29	-47.4	-2.2	47.4	34.3	13.16	3.605		
2,000.0	2,000.0	2,001.0	1,999.0	6.9	6.9	-177.29	-47.4	-2.2	47.4	33.6	13.88	3.419		
2,100.0	2,100.0	2,101.0	2,099.0	7.3	7.3	-177.29	-47.4	-2.2	47.4	32.8	14.59	3.251		
2,200.0	2,200.0	2,201.0	2,199.0	7.7	7.7	-177.29	-47.4	-2.2	47.4	32.1	15.31	3.099 CC, ES		
2,300.0	2,300.0	2,301.0	2,299.0	8.0	8.0	-127.94	-47.4	-2.2	48.5	32.5	16.02	3.026		
2,400.0	2,399.8	2,401.2	2,398.8	8.4	8.4	-132.45	-47.4	-2.2	51.9	35.1	16.74	3.100		
2,500.0	2,499.5	2,501.5	2,498.5	8.7	8.7	-138.70	-47.4	-2.2	58.1	40.7	17.45	3.331		
2,600.0	2,598.7	2,597.7	2,597.7	9.1	9.1	-145.39	-47.4	-2.2	67.8	49.6	18.15	3.734		
2,700.0	2,697.5	2,698.2	2,698.2	9.4	9.4	-150.69	-46.9	-3.9	80.1	61.3	18.86	4.250		
2,800.0	2,795.6	2,799.1	2,798.9	9.8	9.8	-153.86	-45.5	-8.9	93.8	74.3	19.55	4.798		
2,900.0	2,893.1	2,900.4	2,899.8	10.1	10.1	-155.58	-43.0	-17.3	108.4	88.2	20.24	5.359		
3,000.0	2,989.6	3,002.0	3,000.7	10.5	10.5	-156.32	-39.5	-29.3	123.9	103.0	20.92	5.922		
3,100.0	3,085.3	3,104.0	3,101.4	10.9	10.9	-156.38	-35.0	-44.7	140.1	118.5	21.60	6.485		
3,200.0	3,179.8	3,206.2	3,201.7	11.2	11.2	-155.97	-29.5	-63.6	156.9	134.7	22.27	7.046		
3,300.0	3,273.2	3,308.7	3,301.5	11.6	11.6	-155.22	-23.0	-86.0	174.5	151.6	22.95	7.604		
3,387.5	3,353.8	3,398.7	3,388.3	11.9	11.9	-154.35	-16.4	-108.4	190.5	166.9	23.55	8.089		
3,400.0	3,365.2	3,411.5	3,400.7	12.0	12.0	-154.23	-15.4	-111.9	192.8	169.2	23.63	8.157		
3,500.0	3,456.8	3,514.8	3,499.3	12.4	12.3	-152.95	-6.9	-141.3	209.9	185.6	24.33	8.628		
3,600.0	3,548.3	3,618.6	3,597.3	12.8	12.7	-151.12	2.8	-174.3	224.8	199.8	25.05	8.976		
3,700.0	3,639.8	3,722.6	3,694.1	13.2	13.1	-148.82	13.4	-210.7	237.7	211.9	25.80	9.215		
3,800.0	3,731.4	3,825.2	3,788.3	13.6	13.5	-146.11	24.8	-249.9	249.0	222.4	26.60	9.360		
3,900.0	3,822.9	3,924.0	3,878.5	14.0	13.9	-143.55	36.0	-288.4	260.1	232.6	27.45	9.475		
4,000.0	3,914.4	4,022.7	3,968.7	14.4	14.3	-141.21	47.3	-327.0	271.7	243.4	28.31	9.599		
4,100.0	4,005.9	4,121.4	4,058.8	14.8	14.7	-139.05	58.5	-365.5	283.8	254.6	29.17	9.729		
4,200.0	4,097.5	4,220.1	4,149.0	15.2	15.1	-137.08	69.7	-404.1	296.2	266.1	30.03	9.863		
4,300.0	4,189.0	4,318.9	4,239.2	15.6	15.5	-135.26	81.0	-442.6	308.9	278.0	30.89	9.998		
4,400.0	4,280.5	4,417.6	4,329.4	16.1	15.9	-133.58	92.2	-481.2	321.9	290.1	31.76	10.135		
4,500.0	4,372.1	4,516.3	4,419.6	16.5	16.3	-132.04	103.4	-519.7	335.2	302.5	32.63	10.272		
4,600.0	4,463.6	4,615.0	4,509.8	16.9	16.7	-130.61	114.7	-558.3	348.7	315.2	33.50	10.407		
4,700.0	4,555.1	4,713.8	4,600.0	17.4	17.1	-129.30	125.9	-596.8	362.3	328.0	34.38	10.540		
4,800.0	4,646.7	4,812.5	4,690.2	17.8	17.6	-128.07	137.2	-635.4	376.2	341.0	35.25	10.671		
4,900.0	4,738.2	4,911.2	4,780.4	18.2	18.0	-126.94	148.4	-673.9	390.2	354.1	36.13	10.799		
5,000.0	4,829.7	5,009.9	4,870.6	18.7	18.4	-125.88	159.6	-712.5	404.4	367.4	37.02	10.925		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch State BB07-673 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,100.0	4,921.3	5,108.7	4,960.7	19.1	18.9	-124.89	170.9	-751.0	418.7	380.8	37.90	11.047		
5,200.0	5,012.8	5,207.4	5,050.9	19.5	19.3	-123.97	182.1	-789.6	433.1	394.3	38.79	11.166		
5,300.0	5,104.3	5,306.1	5,141.1	20.0	19.7	-123.11	193.3	-828.1	447.6	407.9	39.67	11.281		
5,400.0	5,195.8	5,404.8	5,231.3	20.4	20.2	-122.30	204.6	-866.7	462.2	421.6	40.57	11.393		
5,500.0	5,287.4	5,503.6	5,321.5	20.9	20.6	-121.54	215.8	-905.2	476.8	435.4	41.46	11.502		
5,600.0	5,378.9	5,602.3	5,411.7	21.3	21.1	-120.83	227.0	-943.8	491.6	449.2	42.35	11.607		
5,700.0	5,470.4	5,701.0	5,501.9	21.8	21.5	-120.16	238.3	-982.3	506.4	463.2	43.25	11.709		
5,800.0	5,562.0	5,800.3	5,592.1	22.2	22.0	-119.52	249.5	-1,020.9	521.3	477.2	44.15	11.808		
5,900.0	5,653.5	5,901.5	5,682.3	22.7	22.4	-118.92	260.8	-1,059.4	536.3	491.2	45.06	11.900		
6,000.0	5,745.0	6,002.8	5,772.4	23.1	22.9	-118.36	272.0	-1,098.0	551.3	505.3	45.98	11.990		
6,100.0	5,836.6	6,095.9	5,862.6	23.6	23.3	-117.82	283.2	-1,136.5	566.3	519.5	46.86	12.087		
6,200.0	5,928.1	6,221.3	5,978.3	24.0	23.9	-117.51	299.3	-1,182.1	579.7	531.8	47.89	12.106		
6,278.6	6,000.0	6,322.3	6,076.2	24.4	24.3	-119.03	314.0	-1,200.8	586.5	537.9	48.58	12.072		
6,290.0	6,010.4	6,336.4	6,090.1	24.4	24.3	-120.88	316.2	-1,201.9	587.4	538.7	48.67	12.068		
6,300.0	6,019.5	6,348.6	6,102.2	24.5	24.4	-123.02	318.0	-1,202.5	588.2	539.5	48.75	12.066		
6,350.0	6,065.8	6,408.3	6,161.1	24.7	24.6	-135.53	327.1	-1,201.7	592.7	543.6	49.12	12.067		
6,400.0	6,113.0	6,465.9	6,217.6	24.9	24.7	-151.60	336.0	-1,194.6	597.6	548.1	49.46	12.081		
6,450.0	6,160.7	6,521.5	6,271.0	25.1	24.9	-170.67	344.5	-1,181.9	602.8	553.0	49.80	12.106		
6,500.0	6,208.5	6,575.2	6,321.1	25.3	25.0	169.77	352.5	-1,164.3	608.4	558.3	50.13	12.138		
6,550.0	6,255.8	6,627.3	6,367.8	25.4	25.2	152.65	360.2	-1,142.5	614.3	563.8	50.45	12.176		
6,600.0	6,302.5	6,677.8	6,410.8	25.6	25.3	139.10	367.3	-1,117.1	620.4	569.7	50.77	12.221		
6,650.0	6,347.9	6,726.9	6,450.1	25.7	25.4	128.71	373.9	-1,088.5	626.8	575.7	51.08	12.271		
6,700.0	6,391.6	6,774.7	6,485.7	25.9	25.5	120.68	380.0	-1,057.2	633.2	581.8	51.37	12.327		
6,750.0	6,433.4	6,821.4	6,517.7	26.0	25.7	114.32	385.6	-1,023.7	639.7	588.0	51.64	12.388		
6,800.0	6,472.8	6,867.0	6,546.0	26.1	25.8	109.16	390.6	-988.3	646.1	594.2	51.88	12.452		
6,850.0	6,509.4	6,911.7	6,570.7	26.2	25.9	104.90	395.2	-951.3	652.3	600.2	52.10	12.518		
6,900.0	6,543.0	6,955.6	6,592.0	26.3	26.0	101.33	399.2	-913.1	658.2	605.9	52.31	12.584		
6,950.0	6,573.2	6,998.8	6,609.7	26.4	26.1	98.31	402.7	-874.0	663.9	611.4	52.49	12.648		
7,000.0	6,599.8	7,041.2	6,624.1	26.5	26.2	95.75	405.7	-834.1	669.1	616.4	52.65	12.707		
7,050.0	6,622.5	7,083.1	6,635.1	26.6	26.4	93.59	408.1	-793.8	673.8	621.0	52.81	12.759		
7,100.0	6,641.1	7,124.5	6,642.9	26.7	26.5	91.79	410.1	-753.2	677.9	624.9	52.95	12.801		
7,150.0	6,655.4	7,165.4	6,647.5	26.8	26.6	90.31	411.6	-712.6	681.4	628.3	53.10	12.832		
7,200.0	6,665.4	7,205.9	6,649.0	26.9	26.7	89.14	412.6	-672.1	684.2	630.9	53.24	12.850		
7,250.0	6,670.8	7,255.6	6,649.0	27.0	26.8	88.33	413.6	-622.5	685.9	632.5	53.42	12.839		
7,285.7	6,672.0	7,308.8	6,649.0	27.1	26.9	88.16	414.3	-586.9	686.2	632.6	53.63	12.795		
7,300.0	6,672.0	7,305.5	6,649.0	27.1	26.9	88.16	414.5	-572.5	686.2	632.5	53.65	12.790		
7,400.0	6,672.0	7,405.5	6,649.0	27.3	27.3	88.16	416.4	-472.6	686.0	631.8	54.22	12.651		
7,500.0	6,672.0	7,505.5	6,649.0	27.6	27.6	88.16	418.4	-372.6	685.8	630.9	54.90	12.491		
7,600.0	6,672.0	7,605.5	6,649.0	28.0	28.1	88.16	420.3	-272.6	685.6	629.9	55.69	12.312		
7,700.0	6,672.0	7,705.5	6,649.0	28.3	28.5	88.16	422.2	-172.7	685.5	628.9	56.57	12.118		
7,800.0	6,672.0	7,805.4	6,649.0	28.8	29.1	88.16	424.1	-72.7	685.3	627.8	57.54	11.910		
7,900.0	6,672.0	7,905.4	6,649.0	29.3	29.6	88.16	426.0	27.2	685.2	626.6	58.60	11.691		
8,000.0	6,672.0	8,005.4	6,649.0	29.8	30.2	88.16	427.9	127.2	685.0	625.3	59.75	11.465		
8,100.0	6,672.0	8,105.4	6,649.0	30.4	30.9	88.16	429.8	227.2	684.9	623.9	60.98	11.232		
8,200.0	6,672.0	8,205.4	6,649.0	31.0	31.6	88.16	431.7	327.1	684.8	622.5	62.28	10.996		
8,300.0	6,672.0	8,305.3	6,649.0	31.7	32.3	88.16	433.5	427.1	684.7	621.0	63.65	10.757		
8,400.0	6,672.0	8,405.3	6,649.0	32.4	33.0	88.16	435.4	527.1	684.6	619.5	65.08	10.518		
8,500.0	6,672.0	8,505.3	6,649.0	33.1	33.8	88.16	437.3	627.0	684.5	617.9	66.58	10.281		
8,600.0	6,672.0	8,605.3	6,649.0	33.9	34.6	88.16	439.2	727.0	684.4	616.3	68.14	10.045		
8,700.0	6,672.0	8,705.3	6,649.0	34.7	35.4	88.16	441.1	826.9	684.3	614.6	69.74	9.812		
8,800.0	6,672.0	8,805.2	6,649.0	35.5	36.3	88.16	442.9	926.9	684.3	612.9	71.40	9.584		
8,900.0	6,672.0	8,905.2	6,649.0	36.3	37.1	88.16	444.8	1,026.9	684.2	611.1	73.11	9.359		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch State BB07-673 - Original Drilling - Plan 1													Offset Site Error: 0.0 ft	
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
9,000.0	6,672.0	9,005.2	6,649.0		37.2	38.0	88.16	446.7	1,126.8	684.2	609.4	74.86	9.140	
9,100.0	6,672.0	9,105.2	6,649.0		38.1	38.9	88.16	448.5	1,226.8	684.2	607.5	76.65	8.927	
9,200.0	6,672.0	9,205.2	6,649.0		39.0	39.9	88.16	450.4	1,326.8	684.2	605.7	78.47	8.719	
9,284.9	6,672.0	9,310.0	6,649.0		39.7	40.9	88.16	452.0	1,411.6	684.2	603.9	80.24	8.526	
9,300.0	6,672.0	9,305.1	6,649.0		39.9	40.8	88.16	452.3	1,426.7	684.2	603.8	80.33	8.517	
9,400.0	6,672.0	9,405.1	6,649.0		40.8	41.8	88.16	454.1	1,526.7	684.2	602.0	82.23	8.321	
9,500.0	6,672.0	9,505.1	6,649.0		41.8	42.7	88.16	456.0	1,626.6	684.2	600.1	84.15	8.130	
9,600.0	6,672.0	9,605.1	6,649.0		42.7	43.7	88.16	457.8	1,726.6	684.2	598.1	86.11	7.946	
9,700.0	6,672.0	9,705.1	6,649.0		43.7	44.7	88.16	459.7	1,826.6	684.3	596.2	88.09	7.768	
9,800.0	6,672.0	9,805.0	6,649.0		44.7	45.7	88.16	461.5	1,926.5	684.3	594.2	90.09	7.596	
9,900.0	6,672.0	9,905.0	6,649.0		45.7	46.8	88.16	463.4	2,026.5	684.4	592.3	92.12	7.429	
10,000.0	6,672.0	10,005.0	6,649.0		46.7	47.8	88.16	465.2	2,126.5	684.5	590.3	94.17	7.268	
10,100.0	6,672.0	10,105.0	6,649.0		47.7	48.9	88.16	467.0	2,226.4	684.5	588.3	96.24	7.113	
10,200.0	6,672.0	10,205.0	6,649.0		48.8	49.9	88.16	468.9	2,326.4	684.6	586.3	98.33	6.963	
10,300.0	6,672.0	10,304.9	6,649.0		49.8	51.0	88.16	470.7	2,426.3	684.7	584.3	100.43	6.818	
10,400.0	6,672.0	10,404.9	6,649.0		50.9	52.0	88.16	472.5	2,526.3	684.8	582.3	102.56	6.678	
10,500.0	6,672.0	10,504.9	6,649.0		51.9	53.1	88.16	474.4	2,626.3	685.0	580.3	104.70	6.542	
10,600.0	6,672.0	10,604.9	6,649.0		53.0	54.2	88.16	476.2	2,726.2	685.1	578.3	106.85	6.412	
10,700.0	6,672.0	10,704.9	6,649.0		54.1	55.3	88.16	478.0	2,826.2	685.2	576.2	109.02	6.286	
10,800.0	6,672.0	10,804.8	6,649.0		55.2	56.4	88.16	479.8	2,926.2	685.4	574.2	111.20	6.164	
10,900.0	6,672.0	10,904.8	6,649.0		56.3	57.5	88.16	481.6	3,026.1	685.6	572.2	113.39	6.046	
11,000.0	6,672.0	11,004.8	6,649.0		57.4	58.6	88.16	483.4	3,126.1	685.7	570.1	115.60	5.932	
11,100.0	6,672.0	11,104.8	6,649.0		58.5	59.7	88.16	485.2	3,226.1	685.9	568.1	117.81	5.822	
11,200.0	6,672.0	11,204.7	6,649.0		59.6	60.8	88.16	487.0	3,326.0	686.1	566.1	120.04	5.716	
11,300.0	6,672.0	11,304.7	6,649.0		60.7	61.9	88.16	488.8	3,426.0	686.3	564.1	122.27	5.613	
11,400.0	6,672.0	11,404.7	6,649.0		61.8	63.1	88.16	490.6	3,525.9	686.5	562.0	124.52	5.514	
11,500.0	6,672.0	11,504.7	6,649.0		62.9	64.2	88.16	492.4	3,625.9	686.8	560.0	126.77	5.417	
11,600.0	6,672.0	11,604.7	6,649.0		64.1	65.3	88.16	494.2	3,725.9	687.0	558.0	129.03	5.324	
11,700.0	6,672.0	11,704.6	6,649.0		65.2	66.5	88.17	496.0	3,825.8	687.3	556.0	131.30	5.234	
11,800.0	6,672.0	11,804.6	6,649.0		66.3	67.6	88.17	497.8	3,925.8	687.5	553.9	133.58	5.147	
11,900.0	6,672.0	11,904.6	6,649.0		67.5	68.8	88.17	499.6	4,025.8	687.8	551.9	135.87	5.062	
12,000.0	6,672.0	12,004.6	6,649.0		68.6	69.9	88.17	501.4	4,125.7	688.1	549.9	138.16	4.980	
12,100.0	6,672.0	12,104.6	6,649.0		69.8	71.1	88.17	503.1	4,225.7	688.4	547.9	140.46	4.901	
12,200.0	6,672.0	12,204.5	6,649.0		70.9	72.2	88.17	504.9	4,325.7	688.7	545.9	142.76	4.824	
12,300.0	6,672.0	12,304.5	6,649.0		72.1	73.4	88.17	506.7	4,425.6	689.0	543.9	145.07	4.749	
12,400.0	6,672.0	12,404.5	6,649.0		73.2	74.5	88.17	508.5	4,525.6	689.3	541.9	147.38	4.677	
12,500.0	6,672.0	12,504.5	6,649.0		74.4	75.7	88.17	510.2	4,625.5	689.6	539.9	149.70	4.607	
12,600.0	6,672.0	12,604.5	6,649.0		75.5	76.9	88.17	512.0	4,725.5	690.0	537.9	152.03	4.538	
12,700.0	6,672.0	12,704.4	6,649.0		76.7	78.0	88.17	513.7	4,825.5	690.3	536.0	154.36	4.472	
12,800.0	6,672.0	12,804.4	6,649.0		77.9	79.2	88.17	515.5	4,925.4	690.7	534.0	156.70	4.408	
12,900.0	6,672.0	12,904.4	6,649.0		79.0	80.4	88.18	517.3	5,025.4	691.0	532.0	159.04	4.345	
13,000.0	6,672.0	13,004.4	6,649.0		80.2	81.6	88.18	519.0	5,125.4	691.4	530.1	161.38	4.285	
13,100.0	6,672.0	13,104.4	6,649.0		81.4	82.7	88.18	520.8	5,225.3	691.8	528.1	163.73	4.225	
13,200.0	6,672.0	13,204.3	6,649.0		82.6	83.9	88.18	522.5	5,325.3	692.2	526.2	166.08	4.168	
13,300.0	6,672.0	13,304.3	6,649.0		83.7	85.1	88.18	524.2	5,425.3	692.6	524.2	168.43	4.112	
13,400.0	6,672.0	13,404.3	6,649.0		84.9	86.3	88.18	526.0	5,525.2	693.1	522.3	170.79	4.058	
13,500.0	6,672.0	13,504.3	6,649.0		86.1	87.5	88.18	527.7	5,625.2	693.5	520.4	173.15	4.005	
13,600.0	6,672.0	13,604.3	6,649.0		87.3	88.6	88.18	529.5	5,725.1	694.0	518.4	175.52	3.954	
13,700.0	6,672.0	13,704.2	6,649.0		88.4	89.8	88.18	531.2	5,825.1	694.4	516.5	177.89	3.904	
13,800.0	6,672.0	13,804.2	6,649.0		89.6	91.0	88.19	532.9	5,925.1	694.9	514.6	180.26	3.855	
13,900.0	6,672.0	13,904.2	6,649.0		90.8	92.2	88.19	534.6	6,025.0	695.4	512.7	182.64	3.807	
14,000.0	6,672.0	14,004.2	6,649.0		92.0	93.4	88.19	536.4	6,125.0	695.8	510.8	185.01	3.761	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch State BB07-673 - Original Drilling - Plan 1													Offset Site Error: 0.0 ft	
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
14,100.0	6,672.0	14,104.1	6,649.0	93.2	94.6	88.19	538.1	6,225.0	696.3	509.0	187.39	3.716		
14,200.0	6,672.0	14,204.1	6,649.0	94.4	95.8	88.19	539.8	6,324.9	696.9	507.1	189.77	3.672		
14,300.0	6,672.0	14,304.1	6,649.0	95.6	97.0	88.19	541.5	6,424.9	697.4	505.2	192.16	3.629		
14,400.0	6,672.0	14,404.1	6,649.0	96.8	98.2	88.19	543.2	6,524.9	697.9	503.4	194.55	3.587		
14,500.0	6,672.0	14,504.1	6,649.0	98.0	99.4	88.19	544.9	6,624.8	698.4	501.5	196.94	3.547		
14,600.0	6,672.0	14,604.0	6,649.0	99.2	100.6	88.20	546.6	6,724.8	699.0	499.7	199.33	3.507		
14,700.0	6,672.0	14,704.0	6,649.0	100.4	101.8	88.20	548.3	6,824.7	699.6	497.8	201.72	3.468		
14,800.0	6,672.0	14,804.0	6,649.0	101.6	103.0	88.20	550.0	6,924.7	700.1	496.0	204.12	3.430		
14,900.0	6,672.0	14,904.0	6,649.0	102.7	104.2	88.20	551.7	7,024.7	700.7	494.2	206.52	3.393		
15,000.0	6,672.0	15,003.9	6,649.0	103.9	105.4	88.20	553.4	7,124.6	701.3	492.4	208.92	3.357		
15,100.0	6,672.0	15,103.9	6,649.0	105.1	106.6	88.20	555.1	7,224.6	701.9	490.6	211.32	3.322		
15,200.0	6,672.0	15,203.9	6,649.0	106.3	107.8	88.21	556.8	7,324.6	702.5	488.8	213.72	3.287		
15,300.0	6,672.0	15,303.9	6,649.0	107.6	109.0	88.21	558.5	7,424.5	703.1	487.0	216.13	3.253		
15,400.0	6,672.0	15,403.9	6,649.0	108.8	110.2	88.21	560.2	7,524.5	703.8	485.2	218.54	3.220		
15,500.0	6,672.0	15,503.8	6,649.0	110.0	111.4	88.21	561.8	7,624.5	704.4	483.5	220.94	3.188		
15,600.0	6,672.0	15,603.8	6,649.0	111.2	112.6	88.21	563.5	7,724.4	705.1	481.7	223.35	3.157		
15,700.0	6,672.0	15,703.8	6,649.0	112.4	113.8	88.21	565.2	7,824.4	705.7	480.0	225.77	3.126		
15,800.0	6,672.0	15,803.8	6,649.0	113.6	115.0	88.22	566.9	7,924.3	706.4	478.2	228.18	3.096		
15,900.0	6,672.0	15,903.7	6,649.0	114.8	116.2	88.22	568.5	8,024.3	707.1	476.5	230.59	3.066		
16,000.0	6,672.0	16,003.7	6,649.0	116.0	117.4	88.22	570.2	8,124.3	707.8	474.8	233.01	3.038		
16,100.0	6,672.0	16,103.7	6,649.0	117.2	118.6	88.22	571.8	8,224.2	708.5	473.1	235.43	3.009		
16,200.0	6,672.0	16,203.7	6,649.0	118.4	119.9	88.22	573.5	8,324.2	709.2	471.4	237.85	2.982		
16,300.0	6,672.0	16,303.7	6,649.0	119.6	121.1	88.22	575.2	8,424.2	709.9	469.7	240.27	2.955		
16,400.0	6,672.0	16,403.6	6,649.0	120.8	122.3	88.23	576.8	8,524.1	710.7	468.0	242.69	2.928		
16,500.0	6,672.0	16,503.6	6,649.0	122.0	123.5	88.23	578.5	8,624.1	711.4	466.3	245.11	2.903		
16,600.0	6,672.0	16,603.6	6,649.0	123.2	124.7	88.23	580.1	8,724.0	712.2	464.7	247.53	2.877		
16,700.0	6,672.0	16,703.6	6,649.0	124.5	125.9	88.23	581.7	8,824.0	713.0	463.0	249.96	2.852		
16,800.0	6,672.0	16,803.5	6,649.0	125.7	127.1	88.23	583.4	8,924.0	713.7	461.4	252.38	2.828		
16,900.0	6,672.0	16,903.5	6,649.0	126.9	128.4	88.24	585.0	9,023.9	714.5	459.7	254.81	2.804		
17,000.0	6,672.0	17,003.5	6,649.0	128.1	129.6	88.24	586.7	9,123.9	715.3	458.1	257.24	2.781		
17,100.0	6,672.0	17,103.5	6,649.0	129.3	130.8	88.24	588.3	9,223.9	716.1	456.5	259.67	2.758		
17,200.0	6,672.0	17,203.4	6,649.0	130.5	132.0	88.24	589.9	9,323.8	717.0	454.9	262.10	2.736		
17,300.0	6,672.0	17,303.4	6,649.0	131.7	133.2	88.24	591.5	9,423.8	717.8	453.3	264.53	2.714		
17,400.0	6,672.0	17,403.4	6,649.0	133.0	134.4	88.25	593.2	9,523.7	718.6	451.7	266.96	2.692		
17,500.0	6,672.0	17,503.4	6,649.0	134.2	135.6	88.25	594.8	9,623.7	719.5	450.1	269.39	2.671		
17,600.0	6,672.0	17,603.3	6,649.0	135.4	136.9	88.25	596.4	9,723.7	720.4	448.5	271.83	2.650		
17,700.0	6,672.0	17,703.3	6,649.0	136.6	138.1	88.25	598.0	9,823.6	721.2	447.0	274.26	2.630		
17,800.0	6,672.0	17,803.3	6,649.0	137.8	139.3	88.25	599.6	9,923.6	722.1	445.4	276.70	2.610		
17,900.0	6,672.0	17,903.3	6,649.0	139.0	140.5	88.26	601.2	10,023.6	723.0	443.9	279.13	2.590 SF		
18,000.0	6,672.0	17,902.7	6,649.0	140.3	140.5	88.26	601.2	10,023.0	730.9	453.5	277.39	2.635		
18,100.0	6,672.0	17,902.7	6,649.0	141.5	140.5	88.26	601.2	10,023.0	752.1	481.0	271.03	2.775		
18,200.0	6,672.0	17,902.7	6,649.0	142.7	140.5	88.26	601.2	10,023.0	785.5	524.4	261.08	3.009		
18,300.0	6,672.0	17,902.7	6,649.0	143.9	140.5	88.26	601.2	10,023.0	829.7	580.9	248.86	3.334		
18,342.5	6,672.0	17,902.7	6,649.0	144.4	140.5	88.26	601.2	10,023.0	851.4	608.1	243.29	3.499		



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch State BB07-678 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	179.34	-25.5	0.3	25.5					
100.0	100.0	100.0	100.0	0.1	0.1	179.34	-25.5	0.3	25.5	25.2	0.25	101.625		
200.0	200.0	200.0	200.0	0.5	0.5	179.34	-25.5	0.3	25.5	24.5	0.97	26.347		
300.0	300.0	300.0	300.0	0.8	0.8	179.34	-25.5	0.3	25.5	23.8	1.68	15.136		
400.0	400.0	400.0	400.0	1.2	1.2	179.34	-25.5	0.3	25.5	23.1	2.40	10.618		
500.0	500.0	500.0	500.0	1.6	1.6	179.34	-25.5	0.3	25.5	22.4	3.12	8.177		
600.0	600.0	600.0	600.0	1.9	1.9	179.34	-25.5	0.3	25.5	21.7	3.84	6.648		
700.0	700.0	700.0	700.0	2.3	2.3	179.34	-25.5	0.3	25.5	20.9	4.55	5.601		
800.0	800.0	800.0	800.0	2.6	2.6	179.34	-25.5	0.3	25.5	20.2	5.27	4.839		
900.0	900.0	900.0	900.0	3.0	3.0	179.34	-25.5	0.3	25.5	19.5	5.99	4.260		
1,000.0	1,000.0	1,000.0	1,000.0	3.4	3.4	179.34	-25.5	0.3	25.5	18.8	6.70	3.804		
1,100.0	1,100.0	1,100.0	1,100.0	3.7	3.7	179.34	-25.5	0.3	25.5	18.1	7.42	3.437		
1,200.0	1,200.0	1,200.0	1,200.0	4.1	4.1	179.34	-25.5	0.3	25.5	17.4	8.14	3.134		
1,300.0	1,300.0	1,300.0	1,300.0	4.4	4.4	179.34	-25.5	0.3	25.5	16.6	8.85	2.880		
1,400.0	1,400.0	1,400.0	1,400.0	4.8	4.8	179.34	-25.5	0.3	25.5	15.9	9.57	2.664		
1,500.0	1,500.0	1,500.0	1,500.0	5.1	5.1	179.34	-25.5	0.3	25.5	15.2	10.29	2.479		
1,600.0	1,600.0	1,600.0	1,600.0	5.5	5.5	179.34	-25.5	0.3	25.5	14.5	11.01	2.317		
1,700.0	1,700.0	1,700.0	1,700.0	5.9	5.9	179.34	-25.5	0.3	25.5	13.8	11.72	2.175		
1,800.0	1,800.0	1,800.0	1,800.0	6.2	6.2	179.34	-25.5	0.3	25.5	13.1	12.44	2.050		
1,900.0	1,900.0	1,900.0	1,900.0	6.6	6.6	179.34	-25.5	0.3	25.5	12.3	13.16	1.938		
2,000.0	2,000.0	2,000.0	2,000.0	6.9	6.9	179.34	-25.5	0.3	25.5	11.6	13.87	1.838		
2,100.0	2,100.0	2,100.0	2,100.0	7.3	7.3	179.34	-25.5	0.3	25.5	10.9	14.59	1.748		
2,200.0	2,200.0	2,200.0	2,200.0	7.7	7.7	179.34	-25.5	0.3	25.5	10.2	15.31	1.666 CC, ES		
2,300.0	2,300.0	2,300.0	2,300.0	8.0	8.0	-132.53	-25.5	0.3	26.6	10.6	16.02	1.663		
2,400.0	2,399.8	2,399.8	2,399.8	8.4	8.4	-139.75	-25.5	0.3	30.4	13.7	16.73	1.819		
2,500.0	2,499.5	2,500.3	2,500.3	8.7	8.7	-146.40	-24.8	-1.3	36.3	18.9	17.44	2.083		
2,600.0	2,598.7	2,601.0	2,600.9	9.1	9.1	-150.19	-22.5	-6.1	43.0	24.9	18.13	2.374		
2,700.0	2,697.5	2,702.0	2,701.4	9.4	9.4	-152.12	-18.8	-14.1	50.4	31.5	18.81	2.677		
2,800.0	2,795.6	2,803.1	2,801.8	9.8	9.8	-152.81	-13.5	-25.4	58.2	38.7	19.49	2.984		
2,900.0	2,893.1	2,904.4	2,901.8	10.1	10.1	-152.69	-6.8	-39.9	66.4	46.2	20.16	3.294		
3,000.0	2,989.6	3,005.9	3,001.4	10.5	10.5	-152.02	1.5	-57.6	75.1	54.2	20.82	3.605		
3,100.0	3,085.3	3,107.6	3,100.4	10.9	10.9	-150.97	11.2	-78.5	84.2	62.7	21.49	3.917		
3,200.0	3,179.8	3,209.4	3,198.7	11.2	11.2	-149.67	22.5	-102.7	93.8	71.6	22.16	4.231		
3,300.0	3,273.2	3,311.4	3,296.1	11.6	11.6	-148.20	35.3	-130.0	103.8	81.0	22.84	4.546		
3,387.5	3,353.8	3,400.8	3,380.5	11.9	11.9	-146.83	47.6	-156.5	113.0	89.6	23.44	4.823		
3,400.0	3,365.2	3,413.5	3,392.5	12.0	12.0	-146.63	49.5	-160.5	114.4	90.8	23.53	4.861		
3,500.0	3,456.8	3,515.9	3,487.9	12.4	12.4	-144.52	65.2	-194.2	123.7	99.4	24.24	5.102		
3,600.0	3,548.3	3,617.8	3,581.5	12.8	12.8	-141.52	82.2	-230.7	130.9	105.9	25.02	5.234		
3,700.0	3,639.8	3,717.3	3,672.4	13.2	13.2	-138.49	99.3	-267.4	137.8	111.9	25.88	5.324		
3,800.0	3,731.4	3,816.8	3,763.3	13.6	13.5	-135.76	116.4	-304.1	145.0	118.3	26.75	5.421		
3,900.0	3,822.9	3,916.4	3,854.2	14.0	13.9	-133.29	133.6	-340.8	152.5	124.9	27.61	5.523		
4,000.0	3,914.4	4,015.9	3,945.1	14.4	14.4	-131.06	150.7	-377.5	160.3	131.8	28.48	5.627		
4,100.0	4,005.9	4,115.4	4,036.0	14.8	14.8	-129.03	167.8	-414.2	168.2	138.9	29.35	5.732		
4,200.0	4,097.5	4,214.9	4,126.9	15.2	15.2	-127.19	184.9	-450.8	176.4	146.2	30.22	5.837		
4,300.0	4,189.0	4,314.4	4,217.9	15.6	15.6	-125.51	202.0	-487.5	184.7	153.6	31.10	5.941		
4,400.0	4,280.5	4,413.9	4,308.8	16.1	16.0	-123.98	219.1	-524.2	193.2	161.3	31.97	6.044		
4,500.0	4,372.1	4,513.4	4,399.7	16.5	16.4	-122.58	236.2	-560.9	201.8	169.0	32.85	6.144		
4,600.0	4,463.6	4,612.9	4,490.6	16.9	16.9	-121.29	253.3	-597.6	210.5	176.8	33.73	6.242		
4,700.0	4,555.1	4,712.5	4,581.5	17.4	17.3	-120.11	270.4	-634.3	219.4	184.7	34.61	6.338		
4,800.0	4,646.7	4,812.0	4,672.4	17.8	17.7	-119.01	287.5	-670.9	228.3	192.8	35.50	6.430		
4,900.0	4,738.2	4,911.5	4,763.3	18.2	18.2	-118.00	304.6	-707.6	237.2	200.8	36.38	6.520		
5,000.0	4,829.7	5,011.0	4,854.2	18.7	18.6	-117.07	321.7	-744.3	246.3	209.0	37.27	6.607		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch State BB07-678 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,100.0	4,921.3	5,110.5	4,945.1	19.1	19.1	-116.20	338.8	-781.0	255.4	217.2	38.16	6.692		
5,200.0	5,012.8	5,210.0	5,036.0	19.5	19.5	-115.39	355.9	-817.7	264.5	225.5	39.06	6.773		
5,300.0	5,104.3	5,309.5	5,126.9	20.0	19.9	-114.63	373.0	-854.4	273.7	233.8	39.95	6.852		
5,400.0	5,195.8	5,409.0	5,217.9	20.4	20.4	-113.92	390.1	-891.0	283.0	242.1	40.85	6.927		
5,500.0	5,287.4	5,508.6	5,308.8	20.9	20.8	-113.26	407.2	-927.7	292.3	250.5	41.75	7.001		
5,600.0	5,378.9	5,608.1	5,399.7	21.3	21.3	-112.64	424.3	-964.4	301.6	259.0	42.65	7.071		
5,700.0	5,470.4	5,707.6	5,490.6	21.8	21.7	-112.06	441.5	-1,001.1	311.0	267.4	43.56	7.139		
5,800.0	5,562.0	5,807.1	5,581.5	22.2	22.2	-111.51	458.6	-1,037.8	320.4	275.9	44.46	7.205		
5,900.0	5,653.5	5,906.6	5,672.4	22.7	22.7	-110.99	475.7	-1,074.5	329.8	284.4	45.37	7.269		
6,000.0	5,745.0	6,006.1	5,763.3	23.1	23.1	-110.50	492.8	-1,111.1	339.2	292.9	46.28	7.330		
6,100.0	5,836.6	6,106.6	5,855.1	23.6	23.6	-110.03	510.1	-1,148.2	348.7	301.5	47.19	7.388		
6,200.0	5,928.1	6,237.7	5,975.3	24.0	24.2	-109.87	537.4	-1,192.3	353.8	305.6	48.12	7.352		
6,278.6	6,000.0	6,339.3	6,073.2	24.4	24.6	-112.99	560.4	-1,205.4	351.5	303.0	48.57	7.238		
6,290.0	6,010.4	6,353.3	6,086.8	24.4	24.6	-115.24	563.6	-1,205.7	351.0	302.3	48.63	7.217		
6,300.0	6,019.5	6,365.5	6,098.6	24.5	24.6	-117.53	566.4	-1,205.6	350.5	301.9	48.67	7.202		
6,350.0	6,065.8	6,424.3	6,155.7	24.7	24.8	-130.88	580.0	-1,201.3	348.8	299.8	48.94	7.127		
6,400.0	6,113.0	6,480.7	6,209.5	24.9	25.0	-147.81	593.0	-1,191.1	347.6	298.4	49.24	7.060		
6,444.7	6,155.6	6,529.0	6,254.6	25.1	25.1	-165.59	604.0	-1,177.6	347.3	297.7	49.56	7.008		
6,450.0	6,160.7	6,534.7	6,259.8	25.1	25.1	-167.79	605.2	-1,175.7	347.3	297.7	49.60	7.002		
6,500.0	6,208.5	6,586.5	6,306.4	25.3	25.3	171.72	616.7	-1,156.0	347.8	297.8	50.01	6.955		
6,550.0	6,255.8	6,636.5	6,349.2	25.4	25.4	153.67	627.3	-1,132.6	349.2	298.8	50.44	6.923		
6,600.0	6,302.5	6,684.7	6,388.3	25.6	25.5	139.19	637.1	-1,106.2	351.5	300.6	50.87	6.910		
6,650.0	6,347.9	6,731.4	6,423.8	25.7	25.6	127.89	646.0	-1,077.1	354.6	303.3	51.25	6.919		
6,700.0	6,391.6	6,776.8	6,455.6	25.9	25.7	118.96	654.2	-1,045.9	358.4	306.8	51.56	6.950		
6,750.0	6,433.4	6,820.9	6,483.9	26.0	25.8	111.73	661.5	-1,013.0	362.7	311.0	51.79	7.004		
6,800.0	6,472.8	6,863.9	6,508.9	26.1	26.0	105.75	668.1	-978.5	367.6	315.7	51.93	7.079		
6,850.0	6,509.4	6,906.0	6,530.5	26.2	26.1	100.71	673.9	-942.9	372.8	320.8	51.99	7.171		
6,900.0	6,543.0	6,947.2	6,548.9	26.3	26.2	96.40	678.9	-906.4	378.2	326.2	51.97	7.277		
6,950.0	6,573.2	6,987.7	6,564.2	26.4	26.3	92.71	683.3	-869.2	383.7	331.7	51.90	7.392		
7,000.0	6,599.8	7,027.5	6,576.5	26.5	26.4	89.52	686.9	-831.5	389.1	337.2	51.81	7.510		
7,050.0	6,622.5	7,066.8	6,585.9	26.6	26.4	86.79	689.8	-793.5	394.3	342.6	51.70	7.626		
7,100.0	6,641.1	7,105.5	6,592.3	26.7	26.5	84.45	692.1	-755.4	399.2	347.6	51.60	7.736		
7,150.0	6,655.4	7,143.8	6,596.0	26.8	26.6	82.49	693.7	-717.3	403.7	352.2	51.53	7.834		
7,200.0	6,665.4	7,183.4	6,597.0	26.9	26.7	80.85	694.6	-677.7	407.7	356.2	51.50	7.918		
7,250.0	6,670.8	7,233.0	6,597.0	27.0	26.8	79.72	695.6	-628.1	410.2	358.7	51.52	7.963		
7,285.7	6,672.0	7,268.7	6,597.0	27.1	26.9	79.48	696.2	-592.5	410.8	359.1	51.64	7.954		
7,300.0	6,672.0	7,283.0	6,597.0	27.1	27.0	79.48	696.5	-578.1	410.7	359.0	51.70	7.944		
7,400.0	6,672.0	7,383.0	6,597.0	27.3	27.3	79.47	698.4	-478.1	410.6	358.4	52.22	7.862		
7,500.0	6,672.0	7,483.0	6,597.0	27.6	27.7	79.47	700.2	-378.2	410.4	357.6	52.85	7.766		
7,600.0	6,672.0	7,583.0	6,597.0	28.0	28.1	79.47	702.1	-278.2	410.3	356.7	53.59	7.656		
7,700.0	6,672.0	7,683.0	6,597.0	28.3	28.5	79.46	704.0	-178.2	410.2	355.7	54.42	7.536		
7,800.0	6,672.0	7,783.0	6,597.0	28.8	29.0	79.46	705.9	-78.2	410.0	354.7	55.35	7.407		
7,900.0	6,672.0	7,883.0	6,597.0	29.3	29.6	79.46	707.7	21.8	409.9	353.5	56.38	7.271		
8,000.0	6,672.0	7,983.1	6,597.0	29.8	30.2	79.45	709.6	121.8	409.8	352.3	57.49	7.128		
8,100.0	6,672.0	8,083.1	6,597.0	30.4	30.8	79.45	711.5	221.8	409.7	351.0	58.68	6.982		
8,200.0	6,672.0	8,183.1	6,597.0	31.0	31.5	79.45	713.4	321.8	409.6	349.6	59.95	6.832		
8,300.0	6,672.0	8,283.1	6,597.0	31.7	32.2	79.45	715.3	421.8	409.5	348.2	61.29	6.681		
8,400.0	6,672.0	8,383.1	6,597.0	32.4	33.0	79.44	717.1	521.7	409.4	346.7	62.69	6.530		
8,500.0	6,672.0	8,483.1	6,597.0	33.1	33.7	79.44	719.0	621.7	409.3	345.1	64.16	6.379		
8,600.0	6,672.0	8,583.1	6,597.0	33.9	34.5	79.44	720.9	721.7	409.2	343.5	65.69	6.229		
8,700.0	6,672.0	8,683.1	6,597.0	34.7	35.4	79.44	722.8	821.7	409.1	341.9	67.28	6.081		
8,800.0	6,672.0	8,783.1	6,597.0	35.5	36.2	79.44	724.7	921.7	409.1	340.1	68.91	5.936		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch State BB07-678 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
8,900.0	6,672.0	8,883.1	6,597.0	36.3	37.1	79.43	726.6	1,021.7	409.0	338.4	70.59	5.794		
9,000.0	6,672.0	8,983.1	6,597.0	37.2	38.0	79.43	728.5	1,121.7	408.9	336.6	72.32	5.655		
9,100.0	6,672.0	9,083.1	6,597.0	38.1	38.9	79.43	730.4	1,221.7	408.9	334.8	74.08	5.519		
9,200.0	6,672.0	9,183.1	6,597.0	39.0	39.8	79.43	732.3	1,321.6	408.8	332.9	75.89	5.387		
9,300.0	6,672.0	9,283.1	6,597.0	39.9	40.7	79.43	734.2	1,421.6	408.8	331.1	77.73	5.259		
9,400.0	6,672.0	9,383.1	6,597.0	40.8	41.7	79.43	736.1	1,521.6	408.8	329.2	79.60	5.135		
9,500.0	6,672.0	9,483.1	6,597.0	41.8	42.7	79.43	738.0	1,621.6	408.7	327.2	81.51	5.015		
9,600.0	6,672.0	9,583.2	6,597.0	42.7	43.7	79.43	739.9	1,721.6	408.7	325.3	83.44	4.898		
9,700.0	6,672.0	9,683.2	6,597.0	43.7	44.7	79.43	741.8	1,821.6	408.7	323.3	85.40	4.785		
9,800.0	6,672.0	9,783.2	6,597.0	44.7	45.7	79.43	743.7	1,921.6	408.7	321.3	87.39	4.677		
9,900.0	6,672.0	9,883.2	6,597.0	45.7	46.7	79.42	745.6	2,021.6	408.7	319.3	89.39	4.571		
9,964.8	6,672.0	9,947.9	6,597.0	46.4	47.4	79.42	746.9	2,086.3	408.7	318.0	90.71	4.505		
10,000.0	6,672.0	9,983.2	6,597.0	46.7	47.7	79.42	747.5	2,121.6	408.7	317.2	91.42	4.470		
10,100.0	6,672.0	10,083.2	6,597.0	47.7	48.8	79.42	749.5	2,221.5	408.7	315.2	93.47	4.372		
10,200.0	6,672.0	10,183.2	6,597.0	48.8	49.8	79.43	751.4	2,321.5	408.7	313.1	95.54	4.277		
10,300.0	6,672.0	10,283.2	6,597.0	49.8	50.9	79.43	753.3	2,421.5	408.7	311.1	97.63	4.186		
10,400.0	6,672.0	10,383.2	6,597.0	50.9	51.9	79.43	755.2	2,521.5	408.7	309.0	99.73	4.098		
10,500.0	6,672.0	10,483.2	6,597.0	51.9	53.0	79.43	757.1	2,621.5	408.7	306.9	101.85	4.013		
10,600.0	6,672.0	10,583.2	6,597.0	53.0	54.1	79.43	759.0	2,721.5	408.8	304.8	103.99	3.931		
10,700.0	6,672.0	10,683.2	6,597.0	54.1	55.2	79.43	761.0	2,821.5	408.8	302.7	106.14	3.852		
10,800.0	6,672.0	10,783.2	6,597.0	55.2	56.3	79.43	762.9	2,921.5	408.9	300.6	108.30	3.775		
10,900.0	6,672.0	10,883.2	6,597.0	56.3	57.4	79.43	764.8	3,021.4	408.9	298.4	110.47	3.702		
11,000.0	6,672.0	10,983.2	6,597.0	57.4	58.5	79.43	766.7	3,121.4	409.0	296.3	112.65	3.630		
11,100.0	6,672.0	11,083.2	6,597.0	58.5	59.6	79.43	768.7	3,221.4	409.0	294.2	114.85	3.561		
11,200.0	6,672.0	11,183.3	6,597.0	59.6	60.7	79.44	770.6	3,321.4	409.1	292.1	117.06	3.495		
11,300.0	6,672.0	11,283.3	6,597.0	60.7	61.9	79.44	772.5	3,421.4	409.2	289.9	119.27	3.431		
11,400.0	6,672.0	11,383.3	6,597.0	61.8	63.0	79.44	774.5	3,521.4	409.3	287.8	121.50	3.369		
11,500.0	6,672.0	11,483.3	6,597.0	62.9	64.1	79.44	776.4	3,621.4	409.3	285.6	123.73	3.308		
11,600.0	6,672.0	11,583.3	6,597.0	64.1	65.2	79.45	778.3	3,721.4	409.4	283.5	125.97	3.250		
11,700.0	6,672.0	11,683.3	6,597.0	65.2	66.4	79.45	780.3	3,821.3	409.5	281.3	128.22	3.194		
11,800.0	6,672.0	11,783.3	6,597.0	66.3	67.5	79.45	782.2	3,921.3	409.6	279.2	130.48	3.140		
11,900.0	6,672.0	11,883.3	6,597.0	67.5	68.7	79.45	784.2	4,021.3	409.8	277.0	132.74	3.087		
12,000.0	6,672.0	11,983.3	6,597.0	68.6	69.8	79.46	786.1	4,121.3	409.9	274.9	135.01	3.036		
12,100.0	6,672.0	12,083.3	6,597.0	69.8	71.0	79.46	788.0	4,221.3	410.0	272.7	137.29	2.986		
12,200.0	6,672.0	12,183.3	6,597.0	70.9	72.1	79.46	790.0	4,321.3	410.1	270.5	139.57	2.938		
12,300.0	6,672.0	12,283.3	6,597.0	72.1	73.3	79.47	791.9	4,421.3	410.3	268.4	141.86	2.892		
12,400.0	6,672.0	12,383.3	6,597.0	73.2	74.4	79.47	793.9	4,521.3	410.4	266.2	144.16	2.847		
12,500.0	6,672.0	12,483.3	6,597.0	74.4	75.6	79.47	795.8	4,621.2	410.5	264.1	146.46	2.803		
12,600.0	6,672.0	12,583.3	6,597.0	75.5	76.8	79.48	797.8	4,721.2	410.7	261.9	148.76	2.761		
12,700.0	6,672.0	12,683.4	6,597.0	76.7	77.9	79.48	799.7	4,821.2	410.8	259.8	151.07	2.719		
12,800.0	6,672.0	12,783.4	6,597.0	77.9	79.1	79.49	801.7	4,921.2	411.0	257.6	153.39	2.680		
12,900.0	6,672.0	12,883.4	6,597.0	79.0	80.3	79.49	803.7	5,021.2	411.2	255.5	155.71	2.641		
13,000.0	6,672.0	12,983.4	6,597.0	80.2	81.5	79.49	805.6	5,121.2	411.3	253.3	158.03	2.603		
13,100.0	6,672.0	13,083.4	6,597.0	81.4	82.6	79.50	807.6	5,221.2	411.5	251.2	160.36	2.566		
13,200.0	6,672.0	13,183.4	6,597.0	82.6	83.8	79.50	809.5	5,321.2	411.7	249.0	162.69	2.531		
13,300.0	6,672.0	13,283.4	6,597.0	83.7	85.0	79.51	811.5	5,421.1	411.9	246.9	165.02	2.496		
13,400.0	6,672.0	13,383.4	6,597.0	84.9	86.2	79.51	813.5	5,521.1	412.1	244.7	167.36	2.462		
13,500.0	6,672.0	13,483.4	6,597.0	86.1	87.4	79.52	815.4	5,621.1	412.3	242.6	169.70	2.430		
13,600.0	6,672.0	13,583.4	6,597.0	87.3	88.5	79.52	817.4	5,721.1	412.5	240.5	172.04	2.398		
13,700.0	6,672.0	13,683.4	6,597.0	88.4	89.7	79.53	819.4	5,821.1	412.7	238.3	174.39	2.367		
13,800.0	6,672.0	13,783.4	6,597.0	89.6	90.9	79.54	821.3	5,921.1	412.9	236.2	176.74	2.336		
13,900.0	6,672.0	13,883.4	6,597.0	90.8	92.1	79.54	823.3	6,021.1	413.2	234.1	179.10	2.307		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 07 - SLW Ranch State BB07-678 - Original Drilling - Plan 1													Offset Site Error:	0.0 ft
Survey Program: 0-2_MWD+IFR1+MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
14,000.0	6,672.0	13,983.4	6,597.0	92.0	93.3	79.55	825.3	6,121.1	413.4	231.9	181.45	2.278		
14,100.0	6,672.0	14,083.4	6,597.0	93.2	94.5	79.55	827.3	6,221.0	413.6	229.8	183.81	2.250		
14,200.0	6,672.0	14,183.4	6,597.0	94.4	95.7	79.56	829.2	6,321.0	413.9	227.7	186.17	2.223		
14,300.0	6,672.0	14,283.4	6,597.0	95.6	96.9	79.57	831.2	6,421.0	414.1	225.6	188.54	2.197		
14,400.0	6,672.0	14,383.5	6,597.0	96.8	98.1	79.57	833.2	6,521.0	414.4	223.5	190.91	2.171		
14,500.0	6,672.0	14,483.5	6,597.0	98.0	99.3	79.58	835.2	6,621.0	414.7	221.4	193.28	2.145		
14,600.0	6,672.0	14,583.5	6,597.0	99.2	100.5	79.59	837.2	6,721.0	414.9	219.3	195.65	2.121		
14,700.0	6,672.0	14,683.5	6,597.0	100.4	101.7	79.59	839.2	6,821.0	415.2	217.2	198.02	2.097		
14,800.0	6,672.0	14,783.5	6,597.0	101.6	102.9	79.60	841.1	6,920.9	415.5	215.1	200.40	2.073		
14,900.0	6,672.0	14,883.5	6,597.0	102.7	104.1	79.61	843.1	7,020.9	415.8	213.0	202.77	2.050		
15,000.0	6,672.0	14,983.5	6,597.0	103.9	105.3	79.61	845.1	7,120.9	416.0	210.9	205.15	2.028		
15,100.0	6,672.0	15,083.5	6,597.0	105.1	106.5	79.62	847.1	7,220.9	416.3	208.8	207.54	2.006		
15,200.0	6,672.0	15,183.5	6,597.0	106.3	107.7	79.63	849.1	7,320.9	416.6	206.7	209.92	1.985		
15,300.0	6,672.0	15,283.5	6,597.0	107.6	108.9	79.64	851.1	7,420.9	416.9	204.6	212.31	1.964		
15,400.0	6,672.0	15,383.5	6,597.0	108.8	110.1	79.65	853.1	7,520.9	417.3	202.6	214.69	1.944		
15,500.0	6,672.0	15,483.5	6,597.0	110.0	111.3	79.65	855.1	7,620.8	417.6	200.5	217.08	1.924		
15,600.0	6,672.0	15,583.5	6,597.0	111.2	112.5	79.66	857.1	7,720.8	417.9	198.4	219.47	1.904		
15,700.0	6,672.0	15,683.5	6,597.0	112.4	113.7	79.67	859.1	7,820.8	418.2	196.4	221.86	1.885		
15,800.0	6,672.0	15,783.5	6,597.0	113.6	114.9	79.68	861.1	7,920.8	418.6	194.3	224.26	1.866		
15,900.0	6,672.0	15,883.5	6,597.0	114.8	116.1	79.69	863.1	8,020.8	418.9	192.3	226.65	1.848		
16,000.0	6,672.0	15,983.6	6,597.0	116.0	117.3	79.70	865.1	8,120.8	419.3	190.2	229.05	1.830		
16,100.0	6,672.0	16,083.6	6,597.0	117.2	118.5	79.70	867.1	8,220.8	419.6	188.2	231.45	1.813		
16,200.0	6,672.0	16,183.6	6,597.0	118.4	119.7	79.71	869.1	8,320.7	420.0	186.1	233.85	1.796		
16,300.0	6,672.0	16,283.6	6,597.0	119.6	121.0	79.72	871.1	8,420.7	420.3	184.1	236.25	1.779		
16,400.0	6,672.0	16,383.6	6,597.0	120.8	122.2	79.73	873.2	8,520.7	420.7	182.1	238.65	1.763		
16,500.0	6,672.0	16,483.6	6,597.0	122.0	123.4	79.74	875.2	8,620.7	421.1	180.0	241.06	1.747		
16,600.0	6,672.0	16,583.6	6,597.0	123.2	124.6	79.75	877.2	8,720.7	421.5	178.0	243.46	1.731		
16,700.0	6,672.0	16,683.6	6,597.0	124.5	125.8	79.76	879.2	8,820.7	421.9	176.0	245.87	1.716		
16,800.0	6,672.0	16,783.6	6,597.0	125.7	127.0	79.77	881.2	8,920.7	422.3	174.0	248.27	1.701		
16,900.0	6,672.0	16,883.6	6,597.0	126.9	128.2	79.78	883.2	9,020.6	422.7	172.0	250.68	1.686		
17,000.0	6,672.0	16,983.6	6,597.0	128.1	129.5	79.79	885.3	9,120.6	423.1	170.0	253.09	1.672		
17,100.0	6,672.0	17,083.6	6,597.0	129.3	130.7	79.80	887.3	9,220.6	423.5	168.0	255.50	1.657		
17,200.0	6,672.0	17,183.6	6,597.0	130.5	131.9	79.81	889.3	9,320.6	423.9	166.0	257.91	1.644		
17,300.0	6,672.0	17,283.6	6,597.0	131.7	133.1	79.82	891.3	9,420.6	424.3	164.0	260.33	1.630		
17,400.0	6,672.0	17,383.6	6,597.0	133.0	134.3	79.83	893.4	9,520.6	424.8	162.0	262.74	1.617		
17,500.0	6,672.0	17,483.6	6,597.0	134.2	135.5	79.84	895.4	9,620.6	425.2	160.0	265.16	1.604		
17,600.0	6,672.0	17,583.6	6,597.0	135.4	136.8	79.85	897.4	9,720.5	425.6	158.1	267.57	1.591		
17,700.0	6,672.0	17,683.7	6,597.0	136.6	138.0	79.86	899.5	9,820.5	426.1	156.1	269.99	1.578		
17,800.0	6,672.0	17,783.7	6,597.0	137.8	139.2	79.87	901.5	9,920.5	426.5	154.1	272.41	1.566		
17,900.0	6,672.0	17,883.7	6,597.0	139.0	140.4	79.88	903.5	10,020.5	427.0	152.2	274.83	1.554 SF		
18,000.0	6,672.0	17,888.2	6,597.0	140.3	140.5	79.88	903.6	10,025.0	438.0	168.4	269.60	1.625		
18,100.0	6,672.0	17,888.2	6,597.0	141.5	140.5	79.88	903.6	10,025.0	470.5	217.4	253.09	1.859		
18,200.0	6,672.0	17,888.2	6,597.0	142.7	140.5	79.88	903.6	10,025.0	520.4	289.2	231.21	2.251		
18,300.0	6,672.0	17,888.2	6,597.0	143.9	140.5	79.88	903.6	10,025.0	583.4	374.6	208.87	2.793		
18,342.5	6,672.0	17,888.2	6,597.0	144.4	140.5	79.88	903.6	10,025.0	613.2	413.2	199.93	3.067		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 11-08 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 6926-2_Unknown													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	20.0	20.0	0.0	0.4	79.32	950.7	5,040.2	5,129.1					
100.0	100.0	120.0	120.0	0.1	2.4	79.32	950.7	5,040.2	5,129.1	5,126.5	2.53	2,030.782		
200.0	200.0	220.0	220.0	0.5	4.4	79.32	950.7	5,040.2	5,129.1	5,124.2	4.88	1,050.150		
300.0	300.0	320.0	320.0	0.8	6.4	79.32	950.7	5,040.2	5,129.1	5,121.8	7.24	708.181		
400.0	400.0	420.0	420.0	1.2	8.4	79.32	950.7	5,040.2	5,129.1	5,119.5	9.60	534.219		
500.0	500.0	520.0	520.0	1.6	10.4	79.32	950.7	5,040.2	5,129.1	5,117.1	11.96	428.869		
600.0	600.0	620.0	620.0	1.9	12.4	79.32	950.7	5,040.2	5,129.1	5,114.8	14.32	358.225		
700.0	700.0	720.0	720.0	2.3	14.4	79.32	950.7	5,040.2	5,129.1	5,112.4	16.68	307.563		
800.0	800.0	820.0	820.0	2.6	16.4	79.32	950.7	5,040.2	5,129.1	5,110.0	19.03	269.455		
900.0	900.0	920.0	920.0	3.0	18.4	79.32	950.7	5,040.2	5,129.1	5,107.7	21.39	239.750		
1,000.0	1,000.0	1,020.0	1,020.0	3.4	20.4	79.32	950.7	5,040.2	5,129.1	5,105.3	23.75	215.944		
1,100.0	1,100.0	1,120.0	1,120.0	3.7	22.4	79.32	950.7	5,040.2	5,129.1	5,103.0	26.11	196.438		
1,200.0	1,200.0	1,220.0	1,220.0	4.1	24.4	79.32	950.7	5,040.2	5,129.1	5,100.6	28.47	180.164		
1,300.0	1,300.0	1,320.0	1,320.0	4.4	26.4	79.32	950.7	5,040.2	5,129.1	5,098.2	30.83	166.381		
1,400.0	1,400.0	1,420.0	1,420.0	4.8	28.4	79.32	950.7	5,040.2	5,129.1	5,095.9	33.19	154.556		
1,500.0	1,500.0	1,520.0	1,520.0	5.1	30.4	79.32	950.7	5,040.2	5,129.1	5,093.5	35.54	144.301		
1,600.0	1,600.0	1,620.0	1,620.0	5.5	32.4	79.32	950.7	5,040.2	5,129.1	5,091.2	37.90	135.322		
1,700.0	1,700.0	1,720.0	1,720.0	5.9	34.4	79.32	950.7	5,040.2	5,129.1	5,088.8	40.26	127.395		
1,800.0	1,800.0	1,820.0	1,820.0	6.2	36.4	79.32	950.7	5,040.2	5,129.1	5,086.4	42.62	120.345		
1,900.0	1,900.0	1,920.0	1,920.0	6.6	38.4	79.32	950.7	5,040.2	5,129.1	5,084.1	44.98	114.035		
2,000.0	2,000.0	2,020.0	2,020.0	6.9	40.4	79.32	950.7	5,040.2	5,129.1	5,081.7	47.34	108.353		
2,100.0	2,100.0	2,120.0	2,120.0	7.3	42.4	79.32	950.7	5,040.2	5,129.1	5,079.4	49.70	103.211		
2,200.0	2,200.0	2,220.0	2,220.0	7.7	44.4	79.32	950.7	5,040.2	5,129.1	5,077.0	52.05	98.535		
2,300.0	2,300.0	2,320.0	2,320.0	8.0	46.4	130.32	950.7	5,040.2	5,130.2	5,075.8	54.41	94.291		
2,400.0	2,399.8	2,419.8	2,419.8	8.4	48.4	130.31	950.7	5,040.2	5,133.6	5,076.8	56.76	90.449		
2,500.0	2,499.5	2,519.5	2,519.5	8.7	50.4	130.30	950.7	5,040.2	5,139.2	5,080.1	59.10	86.959		
2,600.0	2,598.7	2,618.7	2,618.7	9.1	52.4	130.28	950.7	5,040.2	5,147.2	5,085.7	61.44	83.782		
2,700.0	2,697.5	2,717.5	2,717.5	9.4	54.3	130.25	950.7	5,040.2	5,157.3	5,093.6	63.76	80.886		
2,800.0	2,795.6	2,815.6	2,815.6	9.8	56.3	130.22	950.7	5,040.2	5,169.8	5,103.7	66.07	78.244		
2,900.0	2,893.1	2,913.1	2,913.1	10.1	58.3	130.18	950.7	5,040.2	5,184.5	5,116.2	68.37	75.829		
3,000.0	2,989.6	3,009.6	3,009.6	10.5	60.2	130.13	950.7	5,040.2	5,201.6	5,130.9	70.65	73.622		
3,100.0	3,085.3	3,105.3	3,105.3	10.9	62.1	130.07	950.7	5,040.2	5,220.9	5,148.0	72.91	71.602		
3,200.0	3,179.8	3,199.8	3,199.8	11.2	64.0	129.99	950.7	5,040.2	5,242.5	5,167.4	75.16	69.754		
3,300.0	3,273.2	3,293.2	3,293.2	11.6	65.9	129.90	950.7	5,040.2	5,266.4	5,189.1	77.38	68.062		
3,387.5	3,353.8	3,373.8	3,373.8	11.9	67.5	129.81	950.7	5,040.2	5,289.3	5,210.0	79.30	66.699		
3,400.0	3,365.2	3,385.2	3,385.2	12.0	67.7	129.85	950.7	5,040.2	5,292.7	5,213.1	79.57	66.512		
3,500.0	3,456.8	3,476.8	3,476.8	12.4	69.5	130.17	950.7	5,040.2	5,319.9	5,238.1	81.76	65.065		
3,600.0	3,548.3	3,568.3	3,568.3	12.8	71.4	130.48	950.7	5,040.2	5,347.3	5,263.3	83.96	63.692		
3,700.0	3,639.8	3,659.8	3,659.8	13.2	73.2	130.79	950.7	5,040.2	5,374.8	5,288.7	86.15	62.387		
3,800.0	3,731.4	3,751.4	3,751.4	13.6	75.0	131.10	950.7	5,040.2	5,402.5	5,314.2	88.35	61.146		
3,900.0	3,822.9	3,842.9	3,842.9	14.0	76.9	131.41	950.7	5,040.2	5,430.4	5,339.8	90.56	59.964		
4,000.0	3,914.4	3,934.4	3,934.4	14.4	78.7	131.71	950.7	5,040.2	5,458.4	5,365.7	92.77	58.839		
4,100.0	4,005.9	4,025.9	4,025.9	14.8	80.5	132.01	950.7	5,040.2	5,486.6	5,391.6	94.98	57.765		
4,200.0	4,097.5	4,117.5	4,117.5	15.2	82.3	132.31	950.7	5,040.2	5,514.9	5,417.7	97.20	56.740		
4,300.0	4,189.0	4,209.0	4,209.0	15.6	84.2	132.60	950.7	5,040.2	5,543.4	5,444.0	99.41	55.760		
4,400.0	4,280.5	4,300.5	4,300.5	16.1	86.0	132.89	950.7	5,040.2	5,572.0	5,470.4	101.63	54.824		
4,500.0	4,372.1	4,392.1	4,392.1	16.5	87.8	133.18	950.7	5,040.2	5,600.8	5,496.9	103.86	53.928		
4,600.0	4,463.6	4,483.6	4,483.6	16.9	89.7	133.46	950.7	5,040.2	5,629.7	5,523.6	106.08	53.069		
4,700.0	4,555.1	4,575.1	4,575.1	17.4	91.5	133.75	950.7	5,040.2	5,658.7	5,550.4	108.31	52.246		
4,800.0	4,646.7	4,666.7	4,666.7	17.8	93.3	134.03	950.7	5,040.2	5,687.9	5,577.3	110.54	51.457		
4,900.0	4,738.2	4,758.2	4,758.2	18.2	95.2	134.31	950.7	5,040.2	5,717.2	5,604.4	112.77	50.700		
5,000.0	4,829.7	4,849.7	4,849.7	18.7	97.0	134.58	950.7	5,040.2	5,746.6	5,631.6	115.00	49.972		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 11-08 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 6926-2_Unknown													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,100.0	4,921.3	4,941.3	4,941.3	19.1	98.8	134.85	950.7	5,040.2	5,776.2	5,659.0	117.23	49.273		
5,200.0	5,012.8	5,032.8	5,032.8	19.5	100.7	135.12	950.7	5,040.2	5,805.9	5,686.5	119.46	48.600		
5,300.0	5,104.3	5,124.3	5,124.3	20.0	102.5	135.39	950.7	5,040.2	5,835.7	5,714.0	121.70	47.953		
5,400.0	5,195.8	5,215.8	5,215.8	20.4	104.3	135.66	950.7	5,040.2	5,865.7	5,741.8	123.93	47.329		
5,500.0	5,287.4	5,307.4	5,307.4	20.9	106.1	135.92	950.7	5,040.2	5,895.8	5,769.6	126.17	46.728		
5,600.0	5,378.9	5,398.9	5,398.9	21.3	108.0	136.18	950.7	5,040.2	5,926.0	5,797.6	128.41	46.149		
5,700.0	5,470.4	5,490.4	5,490.4	21.8	109.8	136.44	950.7	5,040.2	5,956.3	5,825.6	130.65	45.590		
5,800.0	5,562.0	5,582.0	5,582.0	22.2	111.6	136.69	950.7	5,040.2	5,986.7	5,853.8	132.89	45.051		
5,900.0	5,653.5	5,673.5	5,673.5	22.7	113.5	136.95	950.7	5,040.2	6,017.3	5,882.2	135.13	44.530		
6,000.0	5,745.0	5,765.0	5,765.0	23.1	115.3	137.20	950.7	5,040.2	6,048.0	5,910.6	137.37	44.027		
6,100.0	5,836.6	5,856.6	5,856.6	23.6	117.1	137.44	950.7	5,040.2	6,078.7	5,939.1	139.61	43.540		
6,200.0	5,928.1	5,948.1	5,948.1	24.0	119.0	137.69	950.7	5,040.2	6,109.6	5,967.8	141.85	43.070		
6,278.6	6,000.0	6,020.0	6,020.0	24.4	120.4	137.88	950.7	5,040.2	6,134.0	5,990.3	143.62	42.711		
6,290.0	6,010.4	6,030.4	6,030.4	24.4	120.6	135.97	950.7	5,040.2	6,137.5	5,993.6	143.87	42.660		
6,300.0	6,019.5	6,039.5	6,039.5	24.5	120.8	134.28	950.7	5,040.2	6,140.6	5,996.5	144.09	42.615		
6,350.0	6,065.8	6,085.8	6,085.8	24.7	121.7	124.04	950.7	5,040.2	6,153.2	6,008.0	145.22	42.371		
6,400.0	6,113.0	6,133.0	6,133.0	24.9	122.7	110.28	950.7	5,040.2	6,161.1	6,014.8	146.36	42.096		
6,450.0	6,160.7	6,180.7	6,180.7	25.1	123.6	93.54	950.7	5,040.2	6,164.4	6,017.0	147.50	41.794		
6,500.0	6,208.5	6,228.5	6,228.5	25.3	124.6	76.30	950.7	5,040.2	6,163.0	6,014.4	148.62	41.468		
6,550.0	6,255.8	6,275.8	6,275.8	25.4	125.5	61.50	950.7	5,040.2	6,156.9	6,007.2	149.72	41.123		
6,600.0	6,302.5	6,322.5	6,322.5	25.6	126.4	50.24	950.7	5,040.2	6,146.2	5,995.4	150.79	40.760		
6,650.0	6,347.9	6,367.9	6,367.9	25.7	127.4	42.10	950.7	5,040.2	6,130.9	5,979.1	151.82	40.384		
6,700.0	6,391.6	6,411.6	6,411.6	25.9	128.2	36.27	950.7	5,040.2	6,111.3	5,958.5	152.79	39.998		
6,750.0	6,433.4	6,453.4	6,453.4	26.0	129.1	32.05	950.7	5,040.2	6,087.3	5,933.6	153.71	39.604		
6,800.0	6,472.8	6,492.8	6,492.8	26.1	129.9	28.99	950.7	5,040.2	6,059.4	5,904.9	154.56	39.205		
6,850.0	6,509.4	6,529.4	6,529.4	26.2	130.6	26.77	950.7	5,040.2	6,027.7	5,872.4	155.34	38.804		
6,900.0	6,543.0	6,563.0	6,563.0	26.3	131.3	25.20	950.7	5,040.2	5,992.5	5,836.5	156.04	38.403		
6,950.0	6,573.2	6,593.2	6,593.2	26.4	131.9	24.18	950.7	5,040.2	5,954.1	5,797.5	156.67	38.004		
7,000.0	6,599.8	6,619.8	6,619.8	26.5	132.4	23.65	950.7	5,040.2	5,912.9	5,755.7	157.21	37.611		
7,050.0	6,622.5	6,642.5	6,642.5	26.6	132.8	23.65	950.7	5,040.2	5,869.2	5,711.6	157.67	37.225		
7,100.0	6,641.1	6,661.1	6,661.1	26.7	133.2	24.32	950.7	5,040.2	5,823.5	5,665.4	158.04	36.849		
7,150.0	6,655.4	6,675.4	6,675.4	26.8	133.5	26.11	950.7	5,040.2	5,776.0	5,617.7	158.32	36.484		
7,200.0	6,665.4	6,685.4	6,685.4	26.9	133.7	30.43	950.7	5,040.2	5,727.3	5,568.8	158.51	36.132		
7,250.0	6,670.8	6,690.8	6,690.8	27.0	133.8	44.34	950.7	5,040.2	5,677.8	5,519.1	158.61	35.796		
7,285.7	6,672.0	6,692.0	6,692.0	27.1	133.8	90.00	950.7	5,040.2	5,642.2	5,483.5	158.64	35.566		
7,300.0	6,672.0	6,692.0	6,692.0	27.1	133.8	90.00	950.7	5,040.2	5,627.8	5,469.2	158.64	35.476		
7,400.0	6,672.0	6,692.0	6,692.0	27.3	133.8	90.00	950.7	5,040.2	5,527.9	5,369.3	158.64	34.847		
7,500.0	6,672.0	6,692.0	6,692.0	27.6	133.8	90.00	950.7	5,040.2	5,428.0	5,269.4	158.64	34.217		
7,600.0	6,672.0	6,692.0	6,692.0	28.0	133.8	90.00	950.7	5,040.2	5,328.2	5,169.5	158.64	33.587		
7,700.0	6,672.0	6,692.0	6,692.0	28.3	133.8	90.00	950.7	5,040.2	5,228.3	5,069.6	158.64	32.957		
7,800.0	6,672.0	6,692.0	6,692.0	28.8	133.8	90.00	950.7	5,040.2	5,128.4	4,969.7	158.65	32.326		
7,900.0	6,672.0	6,692.0	6,692.0	29.3	133.8	90.00	950.7	5,040.2	5,028.5	4,869.8	158.65	31.695		
8,000.0	6,672.0	6,692.0	6,692.0	29.8	133.8	90.00	950.7	5,040.2	4,928.6	4,770.0	158.66	31.064		
8,100.0	6,672.0	6,692.0	6,692.0	30.4	133.8	90.00	950.7	5,040.2	4,828.7	4,670.1	158.67	30.433		
8,200.0	6,672.0	6,692.0	6,692.0	31.0	133.8	90.00	950.7	5,040.2	4,728.9	4,570.2	158.68	29.802		
8,300.0	6,672.0	6,692.0	6,692.0	31.7	133.8	90.00	950.7	5,040.2	4,629.0	4,470.3	158.69	29.171		
8,400.0	6,672.0	6,692.0	6,692.0	32.4	133.8	90.00	950.7	5,040.2	4,529.2	4,370.5	158.70	28.539		
8,500.0	6,672.0	6,692.0	6,692.0	33.1	133.8	90.00	950.7	5,040.2	4,429.3	4,270.6	158.71	27.907		
8,600.0	6,672.0	6,692.0	6,692.0	33.9	133.8	90.00	950.7	5,040.2	4,329.5	4,170.8	158.73	27.276		
8,700.0	6,672.0	6,692.0	6,692.0	34.7	133.8	90.00	950.7	5,040.2	4,229.7	4,070.9	158.75	26.644		
8,800.0	6,672.0	6,692.0	6,692.0	35.5	133.8	90.00	950.7	5,040.2	4,129.8	3,971.1	158.77	26.012		
8,900.0	6,672.0	6,692.0	6,692.0	36.3	133.8	90.00	950.7	5,040.2	4,030.0	3,871.2	158.79	25.379		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 11-08 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 6926-2_Unknown													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
9,000.0	6,672.0	6,692.0	6,692.0	37.2	133.8	90.00	950.7	5,040.2	3,930.2	3,771.4	158.82	24.747		
9,100.0	6,672.0	6,692.0	6,692.0	38.1	133.8	90.00	950.7	5,040.2	3,830.5	3,671.6	158.84	24.115		
9,200.0	6,672.0	6,692.0	6,692.0	39.0	133.8	90.00	950.7	5,040.2	3,730.7	3,571.8	158.87	23.482		
9,300.0	6,672.0	6,692.0	6,692.0	39.9	133.8	90.00	950.7	5,040.2	3,630.9	3,472.0	158.90	22.850		
9,400.0	6,672.0	6,692.0	6,692.0	40.8	133.8	90.00	950.7	5,040.2	3,531.2	3,372.2	158.94	22.217		
9,500.0	6,672.0	6,692.0	6,692.0	41.8	133.8	90.00	950.7	5,040.2	3,431.4	3,272.4	158.98	21.585		
9,600.0	6,672.0	6,692.0	6,692.0	42.7	133.8	90.00	950.7	5,040.2	3,331.7	3,172.7	159.02	20.952		
9,700.0	6,672.0	6,692.0	6,692.0	43.7	133.8	90.00	950.7	5,040.2	3,232.0	3,072.9	159.06	20.319		
9,800.0	6,672.0	6,692.0	6,692.0	44.7	133.8	90.00	950.7	5,040.2	3,132.3	2,973.2	159.11	19.687		
9,900.0	6,672.0	6,692.0	6,692.0	45.7	133.8	90.00	950.7	5,040.2	3,032.7	2,873.5	159.16	19.054		
10,000.0	6,672.0	6,692.0	6,692.0	46.7	133.8	90.00	950.7	5,040.2	2,933.0	2,773.8	159.22	18.421		
10,100.0	6,672.0	6,692.0	6,692.0	47.7	133.8	90.00	950.7	5,040.2	2,833.4	2,674.1	159.28	17.788		
10,200.0	6,672.0	6,692.0	6,692.0	48.8	133.8	90.00	950.7	5,040.2	2,733.8	2,574.5	159.35	17.156		
10,300.0	6,672.0	6,692.0	6,692.0	49.8	133.8	90.00	950.7	5,040.2	2,634.3	2,474.9	159.43	16.523		
10,400.0	6,672.0	6,692.0	6,692.0	50.9	133.8	90.00	950.7	5,040.2	2,534.8	2,375.3	159.52	15.890		
10,500.0	6,672.0	6,692.0	6,692.0	51.9	133.8	90.00	950.7	5,040.2	2,435.3	2,275.7	159.61	15.258		
10,600.0	6,672.0	6,692.0	6,692.0	53.0	133.8	90.00	950.7	5,040.2	2,335.9	2,176.2	159.72	14.625		
10,700.0	6,672.0	6,692.0	6,692.0	54.1	133.8	90.00	950.7	5,040.2	2,236.5	2,076.7	159.83	13.993		
10,800.0	6,672.0	6,692.0	6,692.0	55.2	133.8	90.00	950.7	5,040.2	2,137.2	1,977.2	159.97	13.360		
10,900.0	6,672.0	6,692.0	6,692.0	56.3	133.8	90.00	950.7	5,040.2	2,038.0	1,877.8	160.12	12.728		
11,000.0	6,672.0	6,692.0	6,692.0	57.4	133.8	90.00	950.7	5,040.2	1,938.8	1,778.5	160.29	12.096		
11,100.0	6,672.0	6,692.0	6,692.0	58.5	133.8	90.00	950.7	5,040.2	1,839.7	1,679.2	160.48	11.463		
11,200.0	6,672.0	6,692.0	6,692.0	59.6	133.8	90.00	950.7	5,040.2	1,740.7	1,580.0	160.71	10.831		
11,300.0	6,672.0	6,692.0	6,692.0	60.7	133.8	90.00	950.7	5,040.2	1,641.9	1,480.9	160.98	10.200		
11,400.0	6,672.0	6,692.0	6,692.0	61.8	133.8	90.00	950.7	5,040.2	1,543.2	1,381.9	161.29	9.568		
11,500.0	6,672.0	6,692.0	6,692.0	62.9	133.8	90.00	950.7	5,040.2	1,444.7	1,283.0	161.66	8.936		
11,600.0	6,672.0	6,692.0	6,692.0	64.1	133.8	90.00	950.7	5,040.2	1,346.4	1,184.3	162.11	8.305		
11,700.0	6,672.0	6,692.0	6,692.0	65.2	133.8	90.00	950.7	5,040.2	1,248.4	1,085.7	162.66	7.675		
11,800.0	6,672.0	6,692.0	6,692.0	66.3	133.8	90.00	950.7	5,040.2	1,150.7	987.4	163.34	7.045		
11,900.0	6,672.0	6,692.0	6,692.0	67.5	133.8	90.00	950.7	5,040.2	1,053.5	889.3	164.19	6.416		
12,000.0	6,672.0	6,692.0	6,692.0	68.6	133.8	90.00	950.7	5,040.2	956.8	791.6	165.27	5.790		
12,100.0	6,672.0	6,692.0	6,692.0	69.8	133.8	90.00	950.7	5,040.2	860.9	694.3	166.67	5.165		
12,200.0	6,672.0	6,692.0	6,692.0	70.9	133.8	90.00	950.7	5,040.2	766.1	597.6	168.53	4.546		
12,300.0	6,672.0	6,692.0	6,692.0	72.1	133.8	90.00	950.7	5,040.2	672.7	501.7	171.03	3.934		
12,400.0	6,672.0	6,692.0	6,692.0	73.2	133.8	90.00	950.7	5,040.2	581.6	407.2	174.47	3.334		
12,500.0	6,672.0	6,692.0	6,692.0	74.4	133.8	90.00	950.7	5,040.2	494.0	314.7	179.28	2.755		
12,600.0	6,672.0	6,692.0	6,692.0	75.5	133.8	90.00	950.7	5,040.2	411.9	225.9	186.02	2.214		
12,700.0	6,672.0	6,692.0	6,692.0	76.7	133.8	90.00	950.7	5,040.2	339.7	144.6	195.13	1.741		
12,800.0	6,672.0	6,692.0	6,692.0	77.9	133.8	90.00	950.7	5,040.2	284.8	79.2	205.63	1.385 Level 3		
12,900.0	6,672.0	6,692.0	6,692.0	79.0	133.8	90.00	950.7	5,040.2	258.5	45.8	212.72	1.215 Level 3		
12,921.4	6,672.0	6,692.0	6,692.0	79.3	133.8	90.00	950.7	5,040.2	257.6	44.5	213.12	1.209 Level 3, CC, ES, SF		
13,000.0	6,672.0	6,692.0	6,692.0	80.2	133.8	90.00	950.7	5,040.2	269.3	58.8	210.57	1.279 Level 3		
13,100.0	6,672.0	6,692.0	6,692.0	81.4	133.8	90.00	950.7	5,040.2	313.5	111.8	201.66	1.554		
13,200.0	6,672.0	6,692.0	6,692.0	82.6	133.8	90.00	950.7	5,040.2	379.5	187.3	192.21	1.974		
13,300.0	6,672.0	6,692.0	6,692.0	83.7	133.8	90.00	950.7	5,040.2	458.0	273.2	184.73	2.479		
13,400.0	6,672.0	6,692.0	6,692.0	84.9	133.8	90.00	950.7	5,040.2	543.6	364.3	179.27	3.032		
13,500.0	6,672.0	6,692.0	6,692.0	86.1	133.8	90.00	950.7	5,040.2	633.4	458.1	175.32	3.613		
13,600.0	6,672.0	6,692.0	6,692.0	87.3	133.8	90.00	950.7	5,040.2	725.9	553.5	172.45	4.209		
13,700.0	6,672.0	6,692.0	6,692.0	88.4	133.8	90.00	950.7	5,040.2	820.2	649.9	170.32	4.816		
13,800.0	6,672.0	6,692.0	6,692.0	89.6	133.8	90.00	950.7	5,040.2	915.7	747.0	168.71	5.427		
13,900.0	6,672.0	6,692.0	6,692.0	90.8	133.8	90.00	950.7	5,040.2	1,012.0	844.5	167.48	6.043		
14,000.0	6,672.0	6,692.0	6,692.0	92.0	133.8	90.00	950.7	5,040.2	1,109.0	942.5	166.52	6.660		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 11-08 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 6926-2_Unknown													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
14,100.0	6,672.0	6,692.0	6,692.0	93.2	133.8	90.00	950.7	5,040.2	1,206.5	1,040.8	165.76	7.279		
14,200.0	6,672.0	6,692.0	6,692.0	94.4	133.8	90.00	950.7	5,040.2	1,304.4	1,139.3	165.15	7.898		
14,300.0	6,672.0	6,692.0	6,692.0	95.6	133.8	90.00	950.7	5,040.2	1,402.6	1,237.9	164.66	8.518		
14,400.0	6,672.0	6,692.0	6,692.0	96.8	133.8	90.00	950.7	5,040.2	1,501.0	1,336.7	164.27	9.138		
14,500.0	6,672.0	6,692.0	6,692.0	98.0	133.8	90.00	950.7	5,040.2	1,599.6	1,435.7	163.94	9.757		
14,600.0	6,672.0	6,692.0	6,692.0	99.2	133.8	90.00	950.7	5,040.2	1,698.4	1,534.7	163.68	10.377		
14,700.0	6,672.0	6,692.0	6,692.0	100.4	133.8	90.00	950.7	5,040.2	1,797.3	1,633.9	163.46	10.996		
14,800.0	6,672.0	6,692.0	6,692.0	101.6	133.8	90.00	950.7	5,040.2	1,896.4	1,733.1	163.28	11.614		
14,900.0	6,672.0	6,692.0	6,692.0	102.7	133.8	90.00	950.7	5,040.2	1,995.5	1,832.4	163.13	12.232		
15,000.0	6,672.0	6,692.0	6,692.0	103.9	133.8	90.00	950.7	5,040.2	2,094.7	1,931.7	163.01	12.850		
15,100.0	6,672.0	6,692.0	6,692.0	105.1	133.8	90.00	950.7	5,040.2	2,194.0	2,031.1	162.91	13.467		
15,200.0	6,672.0	6,692.0	6,692.0	106.3	133.8	90.00	950.7	5,040.2	2,293.3	2,130.5	162.83	14.084		
15,300.0	6,672.0	6,692.0	6,692.0	107.6	133.8	90.00	950.7	5,040.2	2,392.7	2,230.0	162.77	14.700		
15,400.0	6,672.0	6,692.0	6,692.0	108.8	133.8	90.00	950.7	5,040.2	2,492.2	2,329.5	162.72	15.316		
15,500.0	6,672.0	6,692.0	6,692.0	110.0	133.8	90.00	950.7	5,040.2	2,591.7	2,429.0	162.68	15.931		
15,600.0	6,672.0	6,692.0	6,692.0	111.2	133.8	90.00	950.7	5,040.2	2,691.2	2,528.6	162.65	16.546		
15,700.0	6,672.0	6,692.0	6,692.0	112.4	133.8	90.00	950.7	5,040.2	2,790.8	2,628.1	162.64	17.160		
15,800.0	6,672.0	6,692.0	6,692.0	113.6	133.8	90.00	950.7	5,040.2	2,890.4	2,727.7	162.63	17.773		
15,900.0	6,672.0	6,692.0	6,692.0	114.8	133.8	90.00	950.7	5,040.2	2,990.0	2,827.4	162.63	18.386		
16,000.0	6,672.0	6,692.0	6,692.0	116.0	133.8	90.00	950.7	5,040.2	3,089.6	2,927.0	162.63	18.998		
16,100.0	6,672.0	6,692.0	6,692.0	117.2	133.8	90.00	950.7	5,040.2	3,189.3	3,026.7	162.64	19.610		
16,200.0	6,672.0	6,692.0	6,692.0	118.4	133.8	90.00	950.7	5,040.2	3,289.0	3,126.4	162.66	20.221		
16,300.0	6,672.0	6,692.0	6,692.0	119.6	133.8	90.00	950.7	5,040.2	3,388.7	3,226.0	162.68	20.831		
16,400.0	6,672.0	6,692.0	6,692.0	120.8	133.8	90.00	950.7	5,040.2	3,488.5	3,325.7	162.70	21.441		
16,500.0	6,672.0	6,692.0	6,692.0	122.0	133.8	90.00	950.7	5,040.2	3,588.2	3,425.5	162.73	22.050		
16,600.0	6,672.0	6,692.0	6,692.0	123.2	133.8	90.00	950.7	5,040.2	3,688.0	3,525.2	162.76	22.658		
16,700.0	6,672.0	6,692.0	6,692.0	124.5	133.8	90.00	950.7	5,040.2	3,787.7	3,624.9	162.80	23.266		
16,800.0	6,672.0	6,692.0	6,692.0	125.7	133.8	90.00	950.7	5,040.2	3,887.5	3,724.7	162.84	23.873		
16,900.0	6,672.0	6,692.0	6,692.0	126.9	133.8	90.00	950.7	5,040.2	3,987.3	3,824.4	162.88	24.480		
17,000.0	6,672.0	6,692.0	6,692.0	128.1	133.8	90.00	950.7	5,040.2	4,087.1	3,924.2	162.93	25.086		
17,100.0	6,672.0	6,692.0	6,692.0	129.3	133.8	90.00	950.7	5,040.2	4,186.9	4,024.0	162.97	25.691		
17,200.0	6,672.0	6,692.0	6,692.0	130.5	133.8	90.00	950.7	5,040.2	4,286.8	4,123.7	163.02	26.296		
17,300.0	6,672.0	6,692.0	6,692.0	131.7	133.8	90.00	950.7	5,040.2	4,386.6	4,223.5	163.07	26.899		
17,400.0	6,672.0	6,692.0	6,692.0	133.0	133.8	90.00	950.7	5,040.2	4,486.4	4,323.3	163.13	27.503		
17,500.0	6,672.0	6,692.0	6,692.0	134.2	133.8	90.00	950.7	5,040.2	4,586.3	4,423.1	163.18	28.105		
17,600.0	6,672.0	6,692.0	6,692.0	135.4	133.8	90.00	950.7	5,040.2	4,686.1	4,522.9	163.24	28.707		
17,700.0	6,672.0	6,692.0	6,692.0	136.6	133.8	90.00	950.7	5,040.2	4,786.0	4,622.7	163.30	29.308		
17,800.0	6,672.0	6,692.0	6,692.0	137.8	133.8	90.00	950.7	5,040.2	4,885.9	4,722.5	163.36	29.909		
17,900.0	6,672.0	6,692.0	6,692.0	139.0	133.8	90.00	950.7	5,040.2	4,985.7	4,822.3	163.42	30.509		
18,000.0	6,672.0	6,692.0	6,692.0	140.3	133.8	90.00	950.7	5,040.2	5,085.6	4,922.1	163.48	31.108		
18,100.0	6,672.0	6,692.0	6,692.0	141.5	133.8	90.00	950.7	5,040.2	5,185.5	5,021.9	163.55	31.706		
18,200.0	6,672.0	6,692.0	6,692.0	142.7	133.8	90.00	950.7	5,040.2	5,285.4	5,121.8	163.61	32.304		
18,300.0	6,672.0	6,692.0	6,692.0	143.9	133.8	90.00	950.7	5,040.2	5,385.3	5,221.6	163.68	32.901		
18,342.5	6,672.0	6,692.0	6,692.0	144.4	133.8	90.00	950.7	5,040.2	5,427.7	5,264.0	163.71	33.154		



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 5519 08-34 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	75.1	75.1	0.0	0.1	113.09	-3,298.5	7,735.4	8,409.3					
100.0	100.0	172.4	172.4	0.1	0.4	113.09	-3,298.3	7,735.5	8,409.3	8,408.8	0.55	N/A		
200.0	200.0	277.8	277.8	0.5	0.8	113.09	-3,298.1	7,735.6	8,409.4	8,408.1	1.28	6,571.856		
300.0	300.0	391.6	391.6	0.8	1.2	113.09	-3,298.2	7,735.5	8,409.3	8,407.2	2.04	4,131.770		
400.0	400.0	481.0	481.0	1.2	1.5	113.09	-3,298.3	7,735.3	8,409.1	8,406.4	2.71	3,107.755		
462.1	462.1	538.1	538.1	1.4	1.7	113.09	-3,298.4	7,735.2	8,409.1	8,406.0	3.13	2,688.650		
500.0	500.0	573.9	573.9	1.6	1.8	113.10	-3,298.6	7,735.2	8,409.1	8,405.7	3.39	2,481.386		
600.0	600.0	676.6	676.6	1.9	2.2	113.10	-3,299.0	7,735.0	8,409.1	8,405.0	4.11	2,047.961		
700.0	700.0	790.7	790.7	2.3	2.6	113.10	-3,299.6	7,734.6	8,409.1	8,404.2	4.86	1,729.187		
800.0	800.0	892.0	892.0	2.6	2.9	113.11	-3,299.9	7,734.3	8,408.9	8,403.3	5.58	1,508.236		
900.0	900.0	984.3	984.3	3.0	3.3	113.11	-3,300.1	7,734.1	8,408.7	8,402.5	6.26	1,344.084		
1,000.0	1,000.0	1,079.3	1,079.3	3.4	3.6	113.11	-3,300.4	7,733.9	8,408.7	8,401.7	6.95	1,210.540		
1,100.0	1,100.0	1,179.2	1,179.2	3.7	3.9	113.11	-3,300.7	7,733.7	8,408.6	8,401.0	7.65	1,098.666		
1,165.5	1,165.5	1,241.5	1,241.5	3.9	4.2	113.11	-3,300.9	7,733.6	8,408.6	8,400.5	8.11	1,037.368		
1,200.0	1,200.0	1,273.4	1,273.4	4.1	4.3	113.11	-3,301.0	7,733.6	8,408.6	8,400.3	8.34	1,008.144		
1,300.0	1,300.0	1,376.2	1,376.2	4.4	4.6	113.12	-3,301.3	7,733.5	8,408.6	8,399.6	9.06	928.311		
1,353.2	1,353.2	1,429.2	1,429.2	4.6	4.8	113.12	-3,301.4	7,733.4	8,408.6	8,399.2	9.43	891.346		
1,400.0	1,400.0	1,473.3	1,473.3	4.8	5.0	113.12	-3,301.5	7,733.4	8,408.6	8,398.9	9.76	861.948		
1,500.0	1,500.0	1,572.7	1,572.7	5.1	5.3	113.12	-3,301.7	7,733.4	8,408.7	8,398.2	10.46	803.838		
1,600.0	1,600.0	1,673.5	1,673.5	5.5	5.7	113.12	-3,302.0	7,733.3	8,408.7	8,397.5	11.17	752.728		
1,700.0	1,700.0	1,780.3	1,780.3	5.9	6.1	113.12	-3,302.2	7,733.2	8,408.7	8,396.8	11.90	706.477		
1,800.0	1,800.0	1,893.7	1,893.7	6.2	6.4	113.12	-3,302.0	7,733.1	8,408.6	8,395.9	12.66	664.354		
1,900.0	1,900.0	1,996.8	1,996.8	6.6	6.8	113.12	-3,301.5	7,733.1	8,408.4	8,395.0	13.38	628.647		
2,000.0	2,000.0	2,128.3	2,128.3	6.9	7.3	113.12	-3,301.1	7,732.6	8,407.9	8,393.7	14.19	592.386		
2,100.0	2,100.0	2,228.7	2,228.7	7.3	7.6	113.12	-3,301.1	7,731.9	8,407.2	8,392.3	14.90	564.146		
2,200.0	2,200.0	2,320.9	2,320.9	7.7	7.9	113.12	-3,301.1	7,731.3	8,406.7	8,391.1	15.58	539.459		
2,215.5	2,215.5	2,335.4	2,335.3	7.7	8.0	164.12	-3,301.1	7,731.2	8,406.6	8,390.9	15.69	535.823		
2,300.0	2,300.0	2,417.4	2,417.4	8.0	8.3	164.12	-3,301.4	7,730.6	8,407.8	8,391.6	16.28	516.587		
2,400.0	2,399.8	2,532.3	2,532.2	8.4	8.7	164.11	-3,301.6	7,729.8	8,412.3	8,395.3	17.03	493.994		
2,500.0	2,499.5	2,640.8	2,640.8	8.7	9.1	164.09	-3,301.6	7,729.0	8,419.9	8,402.2	17.76	474.085		
2,600.0	2,598.7	2,738.9	2,738.9	9.1	9.4	164.05	-3,301.6	7,728.1	8,430.9	8,412.4	18.45	456.848		
2,700.0	2,697.5	2,836.3	2,836.3	9.4	9.7	164.01	-3,301.7	7,727.3	8,445.2	8,426.1	19.15	441.106		
2,800.0	2,795.6	2,932.9	2,932.9	9.8	10.1	163.95	-3,301.8	7,726.5	8,462.8	8,443.0	19.83	426.710		
2,900.0	2,893.1	3,020.5	3,020.5	10.1	10.4	163.87	-3,301.9	7,725.8	8,483.8	8,463.4	20.49	414.098		
3,000.0	2,989.6	3,112.7	3,112.7	10.5	10.7	163.78	-3,302.2	7,725.1	8,508.2	8,487.0	21.16	402.139		
3,100.0	3,085.3	3,196.7	3,196.6	10.9	11.0	163.67	-3,302.4	7,724.6	8,535.9	8,514.1	21.80	391.604		
3,200.0	3,179.8	3,540.0	3,539.8	11.2	12.2	163.68	-3,295.4	7,719.5	8,564.5	8,541.2	23.35	366.820		
3,300.0	3,273.2	3,619.9	3,619.7	11.6	12.5	163.54	-3,292.5	7,718.0	8,596.0	8,572.0	23.98	358.505		
3,387.5	3,353.8	3,696.2	3,695.9	11.9	12.8	163.40	-3,289.9	7,716.5	8,626.3	8,601.7	24.55	351.374		
3,400.0	3,365.2	3,706.2	3,705.8	12.0	12.8	163.41	-3,289.6	7,716.3	8,630.8	8,606.1	24.63	350.414		
3,500.0	3,456.8	3,782.0	3,781.6	12.4	13.1	163.46	-3,287.3	7,714.9	8,666.9	8,641.6	25.24	343.344		
3,600.0	3,548.3	3,857.5	3,857.0	12.8	13.3	163.51	-3,285.2	7,713.5	8,703.1	8,677.3	25.86	336.579		
3,700.0	3,639.8	3,927.9	3,927.5	13.2	13.6	163.56	-3,283.4	7,712.3	8,739.6	8,713.2	26.46	330.308		
3,800.0	3,731.4	4,000.0	3,999.5	13.6	13.8	163.61	-3,281.6	7,711.4	8,776.4	8,749.3	27.07	324.215		
3,900.0	3,822.9	4,068.6	4,068.1	14.0	14.1	163.65	-3,280.1	7,710.6	8,813.4	8,785.8	27.67	318.512		
4,000.0	3,914.4	4,159.5	4,158.9	14.4	14.4	163.72	-3,278.1	7,709.5	8,850.6	8,822.2	28.36	312.130		
4,100.0	4,005.9	4,240.3	4,239.8	14.8	14.7	163.77	-3,276.3	7,708.7	8,887.7	8,858.7	29.01	306.401		
4,200.0	4,097.5	4,310.4	4,309.8	15.2	14.9	163.82	-3,274.5	7,708.2	8,925.1	8,895.5	29.62	301.307		
4,300.0	4,189.0	4,394.7	4,394.1	15.6	15.2	163.86	-3,271.9	7,708.0	8,962.7	8,932.4	30.29	295.885		
4,400.0	4,280.5	4,495.0	4,494.3	16.1	15.6	163.92	-3,267.9	7,708.2	9,000.3	8,969.2	31.02	290.116		
4,500.0	4,372.1	4,578.5	4,577.7	16.5	15.9	163.95	-3,263.7	7,708.7	9,037.8	9,006.1	31.70	285.136		
4,600.0	4,463.6	4,699.7	4,698.6	16.9	16.3	163.99	-3,256.0	7,710.1	9,075.3	9,042.8	32.52	279.105		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 5519 08-34 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
4,700.0	4,555.1	4,814.7	4,813.4	17.4	16.7	164.02	-3,247.4	7,711.6	9,112.5	9,079.2	33.32	273.510		
4,800.0	4,646.7	4,916.9	4,915.2	17.8	17.1	164.05	-3,239.4	7,712.9	9,149.6	9,115.5	34.07	268.537		
4,900.0	4,738.2	5,002.6	5,000.7	18.2	17.4	164.07	-3,232.8	7,713.9	9,186.6	9,151.9	34.77	264.238		
5,000.0	4,829.7	5,060.0	5,057.8	18.7	17.6	164.08	-3,228.7	7,714.6	9,223.9	9,188.5	35.35	260.918		
5,100.0	4,921.3	5,123.6	5,121.3	19.1	17.8	164.10	-3,224.7	7,715.4	9,261.5	9,225.5	35.96	257.543		
5,200.0	5,012.8	5,200.0	5,197.6	19.5	18.1	164.13	-3,220.7	7,716.1	9,299.3	9,262.7	36.62	253.949		
5,300.0	5,104.3	5,259.8	5,257.4	20.0	18.3	164.16	-3,218.3	7,716.6	9,337.3	9,300.1	37.21	250.924		
5,400.0	5,195.8	5,318.4	5,315.9	20.4	18.5	164.19	-3,216.5	7,717.0	9,375.7	9,337.9	37.80	248.035		
5,500.0	5,287.4	5,374.1	5,371.6	20.9	18.7	164.22	-3,215.3	7,717.4	9,414.5	9,376.1	38.38	245.319		
5,600.0	5,378.9	5,438.1	5,435.6	21.3	18.9	164.26	-3,214.4	7,717.8	9,453.5	9,414.5	38.98	242.493		
5,700.0	5,470.4	5,510.8	5,508.3	21.8	19.1	164.31	-3,213.8	7,718.4	9,492.8	9,453.2	39.63	239.554		
5,800.0	5,562.0	5,592.2	5,589.7	22.2	19.4	164.36	-3,213.5	7,718.9	9,532.2	9,491.9	40.30	236.510		
5,900.0	5,653.5	5,674.6	5,672.1	22.7	19.7	164.42	-3,213.5	7,719.4	9,571.8	9,530.8	40.98	233.545		
6,000.0	5,745.0	5,757.4	5,754.9	23.1	20.0	164.48	-3,213.7	7,719.9	9,611.4	9,569.7	41.67	230.665		
6,100.0	5,836.6	5,855.2	5,852.7	23.6	20.3	164.55	-3,214.1	7,720.5	9,651.1	9,608.7	42.41	227.554		
6,200.0	5,928.1	5,952.2	5,949.8	24.0	20.7	164.62	-3,214.7	7,720.8	9,690.6	9,647.5	43.15	224.557		
6,278.6	6,000.0	6,022.5	6,020.0	24.4	20.9	164.67	-3,215.1	7,721.0	9,721.8	9,678.0	43.71	222.391		
6,290.0	6,010.4	6,033.5	6,031.1	24.4	20.9	162.72	-3,215.2	7,721.1	9,726.3	9,682.5	43.80	222.063		
6,300.0	6,019.5	6,043.3	6,040.8	24.5	21.0	160.80	-3,215.3	7,721.1	9,730.4	9,686.5	43.87	221.777		
6,350.0	6,065.8	6,092.4	6,089.9	24.7	21.2	149.56	-3,215.7	7,721.2	9,748.0	9,703.8	44.24	220.326		
6,400.0	6,113.0	6,400.0	6,172.0	24.9	22.2	135.13	-3,216.1	7,721.2	9,761.5	9,715.9	45.52	214.421		
6,450.0	6,160.7	6,232.3	6,229.8	25.1	21.6	117.90	-3,216.3	7,721.1	9,770.7	9,725.6	45.13	216.500		
6,500.0	6,208.5	6,259.4	6,256.9	25.3	21.7	100.34	-3,216.2	7,721.2	9,775.8	9,730.4	45.39	215.388		
6,550.0	6,255.8	6,300.0	6,297.5	25.4	21.9	85.43	-3,216.2	7,721.4	9,776.7	9,731.0	45.68	214.004		
6,600.0	6,302.5	6,322.2	6,319.8	25.6	22.0	74.21	-3,216.2	7,721.6	9,773.4	9,727.5	45.89	212.959		
6,650.0	6,347.9	6,367.2	6,364.7	25.7	22.1	66.36	-3,216.1	7,721.9	9,765.9	9,719.8	46.18	211.482		
6,700.0	6,391.6	6,432.6	6,430.1	25.9	22.3	61.07	-3,216.0	7,722.4	9,754.3	9,707.8	46.53	209.629		
6,750.0	6,433.4	6,524.1	6,521.6	26.0	22.7	57.72	-3,215.7	7,722.6	9,738.4	9,691.4	46.97	207.311		
6,800.0	6,472.8	6,572.4	6,569.9	26.1	22.8	55.66	-3,215.5	7,722.6	9,718.5	9,671.3	47.23	205.763		
6,850.0	6,509.4	6,617.4	6,614.9	26.2	23.0	54.73	-3,215.3	7,722.6	9,694.9	9,647.5	47.46	204.263		
6,900.0	6,543.0	6,600.0	6,597.5	26.3	22.9	54.50	-3,215.4	7,722.6	9,668.0	9,620.6	47.43	203.826		
6,950.0	6,573.2	6,634.9	6,632.4	26.4	23.0	55.40	-3,215.2	7,722.7	9,637.8	9,590.2	47.61	202.449		
7,000.0	6,599.8	6,646.8	6,644.3	26.5	23.1	57.10	-3,215.2	7,722.7	9,604.7	9,557.1	47.68	201.434		
7,050.0	6,622.5	6,657.1	6,654.6	26.6	23.1	59.75	-3,215.1	7,722.8	9,569.1	9,521.3	47.75	200.407		
7,100.0	6,641.1	6,665.6	6,663.1	26.7	23.1	63.47	-3,215.1	7,722.8	9,531.1	9,483.2	47.81	199.364		
7,150.0	6,655.4	6,672.3	6,669.8	26.8	23.2	68.42	-3,215.1	7,722.9	9,491.1	9,443.2	47.86	198.304		
7,200.0	6,665.4	6,677.0	6,674.5	26.9	23.2	74.77	-3,215.1	7,722.9	9,449.4	9,401.5	47.91	197.224		
7,250.0	6,670.8	6,700.0	6,697.5	27.0	23.3	82.86	-3,215.0	7,723.2	9,406.6	9,358.5	48.05	195.782		
7,285.7	6,672.0	6,700.0	6,697.5	27.1	23.3	89.35	-3,215.0	7,723.2	9,375.4	9,327.3	48.08	194.997		
7,300.0	6,672.0	6,700.0	6,697.5	27.1	23.3	89.35	-3,215.0	7,723.2	9,362.8	9,314.7	48.09	194.676		
7,400.0	6,672.0	6,700.0	6,697.5	27.3	23.3	89.35	-3,215.0	7,723.2	9,274.9	9,226.7	48.20	192.430		
7,500.0	6,672.0	6,700.0	6,697.5	27.6	23.3	89.35	-3,215.0	7,723.2	9,187.4	9,139.1	48.32	190.128		
7,600.0	6,672.0	6,700.0	6,697.5	28.0	23.3	89.35	-3,215.0	7,723.2	9,100.1	9,051.6	48.46	187.771		
7,700.0	6,672.0	6,700.0	6,697.5	28.3	23.3	89.35	-3,215.0	7,723.2	9,013.0	8,964.4	48.62	185.360		
7,800.0	6,672.0	6,700.0	6,697.5	28.8	23.3	89.35	-3,215.0	7,723.2	8,926.3	8,877.5	48.81	182.896		
7,900.0	6,672.0	6,700.0	6,697.5	29.3	23.3	89.35	-3,215.0	7,723.2	8,839.8	8,790.8	49.01	180.380		
8,000.0	6,672.0	6,700.0	6,697.5	29.8	23.3	89.35	-3,215.0	7,723.2	8,753.6	8,704.4	49.23	177.814		
8,100.0	6,672.0	6,700.0	6,697.5	30.4	23.3	89.35	-3,215.0	7,723.2	8,667.7	8,618.2	49.47	175.200		
8,200.0	6,672.0	6,700.0	6,697.5	31.0	23.3	89.35	-3,215.0	7,723.2	8,582.1	8,532.4	49.74	172.540		
8,300.0	6,672.0	6,700.0	6,697.5	31.7	23.3	89.35	-3,215.0	7,723.2	8,496.9	8,446.8	50.03	169.837		
8,400.0	6,672.0	6,729.3	6,668.2	32.4	23.4	88.98	-3,215.1	7,722.8	8,411.9	8,361.5	50.41	166.865		
8,500.0	6,672.0	6,728.1	6,669.4	33.1	23.4	88.99	-3,215.1	7,722.8	8,327.3	8,276.6	50.74	164.103		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 5519 08-34 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
8,600.0	6,672.0	6,726.9	6,670.7	33.9	23.4	89.01	-3,215.1	7,722.8	8,243.1	8,192.0	51.10	161.306		
8,700.0	6,672.0	6,725.6	6,671.9	34.7	23.4	89.02	-3,215.1	7,722.9	8,159.2	8,107.7	51.48	158.478		
8,800.0	6,672.0	6,724.4	6,673.1	35.5	23.4	89.04	-3,215.1	7,722.9	8,075.7	8,023.8	51.89	155.622		
8,900.0	6,672.0	6,723.1	6,674.4	36.3	23.3	89.06	-3,215.1	7,722.9	7,992.6	7,940.2	52.33	152.742		
9,000.0	6,672.0	6,721.9	6,675.6	37.2	23.3	89.07	-3,215.1	7,722.9	7,909.8	7,857.0	52.79	149.843		
9,100.0	6,672.0	6,720.7	6,676.9	38.1	23.3	89.09	-3,215.1	7,722.9	7,827.5	7,774.2	53.27	146.928		
9,200.0	6,672.0	6,719.4	6,678.1	39.0	23.3	89.10	-3,215.1	7,722.9	7,745.6	7,691.8	53.79	144.000		
9,300.0	6,672.0	6,718.2	6,679.4	39.9	23.3	89.12	-3,215.1	7,723.0	7,664.1	7,609.8	54.33	141.066		
9,400.0	6,672.0	6,716.9	6,680.6	40.8	23.3	89.14	-3,215.1	7,723.0	7,583.1	7,528.2	54.90	138.127		
9,500.0	6,672.0	6,715.7	6,681.8	41.8	23.3	89.15	-3,215.1	7,723.0	7,502.6	7,447.1	55.50	135.190		
9,600.0	6,672.0	6,714.5	6,683.1	42.7	23.3	89.17	-3,215.1	7,723.0	7,422.5	7,366.4	56.12	132.256		
9,700.0	6,672.0	6,713.2	6,684.3	43.7	23.3	89.18	-3,215.0	7,723.0	7,342.9	7,286.1	56.78	129.331		
9,800.0	6,672.0	6,712.0	6,685.6	44.7	23.3	89.20	-3,215.0	7,723.0	7,263.8	7,206.4	57.46	126.419		
9,900.0	6,672.0	6,710.7	6,686.8	45.7	23.3	89.22	-3,215.0	7,723.0	7,185.3	7,127.1	58.17	123.522		
10,000.0	6,672.0	6,709.5	6,688.0	46.7	23.3	89.23	-3,215.0	7,723.1	7,107.3	7,048.3	58.91	120.645		
10,100.0	6,672.0	6,708.2	6,689.3	47.7	23.3	89.25	-3,215.0	7,723.1	7,029.8	6,970.1	59.68	117.791		
10,200.0	6,672.0	6,707.0	6,690.5	48.8	23.3	89.26	-3,215.0	7,723.1	6,952.9	6,892.5	60.48	114.963		
10,300.0	6,672.0	6,705.8	6,691.8	49.8	23.3	89.28	-3,215.0	7,723.1	6,876.7	6,815.4	61.31	112.164		
10,400.0	6,672.0	6,704.5	6,693.0	50.9	23.3	89.30	-3,215.0	7,723.1	6,801.0	6,738.9	62.17	109.397		
10,500.0	6,672.0	6,703.3	6,694.3	51.9	23.3	89.31	-3,215.0	7,723.1	6,726.0	6,663.0	63.06	106.665		
10,600.0	6,672.0	6,702.0	6,695.5	53.0	23.3	89.33	-3,215.0	7,723.2	6,651.7	6,587.7	63.98	103.971		
10,700.0	6,672.0	6,700.8	6,696.7	54.1	23.3	89.34	-3,215.0	7,723.2	6,578.0	6,513.1	64.93	101.317		
10,800.0	6,672.0	6,700.5	6,698.0	55.2	23.3	89.36	-3,215.0	7,723.2	6,505.1	6,439.1	65.91	98.699		
10,900.0	6,672.0	6,701.7	6,699.2	56.3	23.3	89.38	-3,215.0	7,723.2	6,432.8	6,365.9	66.93	96.118		
11,000.0	6,672.0	6,703.0	6,700.5	57.4	23.3	89.39	-3,215.0	7,723.2	6,361.4	6,293.4	67.97	93.584		
11,100.0	6,672.0	6,704.2	6,701.7	58.5	23.3	89.41	-3,215.0	7,723.2	6,290.7	6,221.6	69.05	91.099		
11,200.0	6,672.0	6,705.4	6,702.9	59.6	23.3	89.42	-3,215.0	7,723.2	6,220.8	6,150.7	70.16	88.663		
11,300.0	6,672.0	6,706.7	6,704.2	60.7	23.3	89.44	-3,215.0	7,723.3	6,151.8	6,080.5	71.30	86.278		
11,400.0	6,672.0	6,707.9	6,705.4	61.8	23.3	89.46	-3,215.0	7,723.3	6,083.6	6,011.1	72.47	83.945		
11,500.0	6,672.0	6,709.2	6,706.7	62.9	23.3	89.47	-3,215.0	7,723.3	6,016.3	5,942.7	73.67	81.666		
11,600.0	6,672.0	6,710.4	6,707.9	64.1	23.3	89.49	-3,215.0	7,723.3	5,950.0	5,875.1	74.90	79.440		
11,700.0	6,672.0	6,711.7	6,709.2	65.2	23.3	89.50	-3,215.0	7,723.3	5,884.6	5,808.4	76.16	77.269		
11,800.0	6,672.0	6,712.9	6,710.4	66.3	23.3	89.52	-3,215.0	7,723.3	5,820.2	5,742.8	77.45	75.153		
11,900.0	6,672.0	6,714.1	6,711.6	67.5	23.3	89.53	-3,215.0	7,723.4	5,756.8	5,678.1	78.76	73.092		
12,000.0	6,672.0	6,715.4	6,712.9	68.6	23.3	89.55	-3,215.0	7,723.4	5,694.5	5,614.4	80.11	71.087		
12,100.0	6,672.0	6,716.6	6,714.1	69.8	23.3	89.57	-3,215.0	7,723.4	5,633.3	5,551.8	81.48	69.139		
12,200.0	6,672.0	6,717.9	6,715.4	70.9	23.3	89.58	-3,215.0	7,723.4	5,573.2	5,490.3	82.88	67.246		
12,300.0	6,672.0	6,719.1	6,716.6	72.1	23.3	89.60	-3,215.0	7,723.4	5,514.2	5,429.9	84.30	65.410		
12,400.0	6,672.0	6,720.3	6,717.8	73.2	23.3	89.61	-3,215.0	7,723.4	5,456.5	5,370.7	85.75	63.630		
12,500.0	6,672.0	6,721.6	6,719.1	74.4	23.3	89.63	-3,215.0	7,723.4	5,400.0	5,312.8	87.23	61.906		
12,600.0	6,672.0	6,722.8	6,720.3	75.5	23.3	89.65	-3,215.0	7,723.5	5,344.8	5,256.1	88.73	60.237		
12,700.0	6,672.0	6,724.1	6,721.6	76.7	23.4	89.66	-3,215.0	7,723.5	5,290.9	5,200.6	90.25	58.624		
12,800.0	6,672.0	6,725.3	6,722.8	77.9	23.4	89.68	-3,215.0	7,723.5	5,238.3	5,146.6	91.79	57.066		
12,900.0	6,672.0	6,726.6	6,724.1	79.0	23.4	89.69	-3,215.0	7,723.5	5,187.2	5,093.9	93.36	55.563		
13,000.0	6,672.0	6,727.8	6,725.3	80.2	23.4	89.71	-3,215.0	7,723.5	5,137.5	5,042.6	94.94	54.115		
13,100.0	6,672.0	6,729.0	6,726.5	81.4	23.4	89.73	-3,215.0	7,723.5	5,089.3	4,992.8	96.54	52.720		
13,200.0	6,672.0	6,730.3	6,727.8	82.6	23.4	89.74	-3,215.0	7,723.6	5,042.6	4,944.5	98.15	51.378		
13,300.0	6,672.0	6,731.5	6,729.0	83.7	23.4	89.76	-3,215.0	7,723.6	4,997.5	4,897.8	99.77	50.089		
13,400.0	6,672.0	6,732.8	6,730.3	84.9	23.4	89.77	-3,214.9	7,723.6	4,954.1	4,852.6	101.41	48.852		
13,500.0	6,672.0	6,734.0	6,731.5	86.1	23.4	89.79	-3,214.9	7,723.6	4,912.2	4,809.2	103.05	47.667		
13,600.0	6,672.0	6,735.2	6,732.8	87.3	23.4	89.81	-3,214.9	7,723.6	4,872.1	4,767.4	104.70	46.532		
13,700.0	6,672.0	6,736.5	6,734.0	88.4	23.4	89.82	-3,214.9	7,723.6	4,833.7	4,727.3	106.36	45.447		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 5519 08-34 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
13,800.0	6,672.0	6,737.7	6,735.2	89.6	23.4	89.84	-3,214.9	7,723.6	4,797.1	4,689.1	108.01	44.412		
13,900.0	6,672.0	6,739.0	6,736.5	90.8	23.4	89.85	-3,214.9	7,723.7	4,762.3	4,652.7	109.67	43.425		
14,000.0	6,672.0	6,740.2	6,737.7	92.0	23.4	89.87	-3,214.9	7,723.7	4,729.4	4,618.1	111.32	42.487		
14,100.0	6,672.0	6,741.5	6,739.0	93.2	23.4	89.88	-3,214.9	7,723.7	4,698.4	4,585.4	112.96	41.595		
14,200.0	6,672.0	6,742.7	6,740.2	94.4	23.4	89.90	-3,214.9	7,723.7	4,669.3	4,554.8	114.59	40.749		
14,300.0	6,672.0	6,743.9	6,741.4	95.6	23.4	89.92	-3,214.9	7,723.7	4,642.3	4,526.1	116.20	39.949		
14,400.0	6,672.0	6,745.2	6,742.7	96.8	23.4	89.93	-3,214.9	7,723.7	4,617.2	4,499.4	117.80	39.194		
14,500.0	6,672.0	6,746.4	6,743.9	98.0	23.4	89.95	-3,214.9	7,723.8	4,594.2	4,474.8	119.38	38.483		
14,600.0	6,672.0	6,747.7	6,745.2	99.2	23.4	89.96	-3,214.9	7,723.8	4,573.2	4,452.3	120.94	37.814		
14,700.0	6,672.0	6,748.9	6,746.4	100.4	23.4	89.98	-3,214.9	7,723.8	4,554.4	4,431.9	122.47	37.188		
14,800.0	6,672.0	6,750.2	6,747.7	101.6	23.4	90.00	-3,214.9	7,723.8	4,537.7	4,413.7	123.97	36.604		
14,900.0	6,672.0	6,751.4	6,748.9	102.7	23.4	90.01	-3,214.9	7,723.8	4,523.1	4,397.7	125.43	36.060		
15,000.0	6,672.0	6,752.6	6,750.1	103.9	23.5	90.03	-3,214.9	7,723.8	4,510.8	4,383.9	126.87	35.556		
15,100.0	6,672.0	6,753.9	6,751.4	105.1	23.5	90.04	-3,214.9	7,723.8	4,500.6	4,372.3	128.26	35.090		
15,200.0	6,672.0	6,755.1	6,752.6	106.3	23.5	90.06	-3,214.9	7,723.9	4,492.6	4,363.0	129.61	34.663		
15,300.0	6,672.0	6,756.4	6,753.9	107.6	23.5	90.08	-3,214.9	7,723.9	4,486.9	4,356.0	130.91	34.273		
15,400.0	6,672.0	6,757.6	6,755.1	108.8	23.5	90.09	-3,214.9	7,723.9	4,483.4	4,351.2	132.17	33.920		
15,500.0	6,672.0	6,758.9	6,756.4	110.0	23.5	90.11	-3,214.9	7,723.9	4,482.1	4,348.7	133.39	33.602		
15,507.0	6,672.0	6,758.9	6,756.4	110.0	23.5	90.11	-3,214.9	7,723.9	4,482.1	4,348.6	133.47	33.582 CC		
15,600.0	6,672.0	6,760.1	6,757.6	111.2	23.5	90.12	-3,214.9	7,723.9	4,483.1	4,348.5	134.55	33.320 ES		
15,700.0	6,672.0	6,761.3	6,758.8	112.4	23.5	90.14	-3,214.9	7,723.9	4,486.3	4,350.6	135.65	33.071		
15,800.0	6,672.0	6,762.6	6,760.1	113.6	23.5	90.15	-3,214.9	7,724.0	4,491.7	4,355.0	136.71	32.856		
15,900.0	6,672.0	6,763.8	6,761.3	114.8	23.5	90.17	-3,214.9	7,724.0	4,499.3	4,361.6	137.71	32.673		
16,000.0	6,672.0	6,765.1	6,762.6	116.0	23.5	90.19	-3,214.9	7,724.0	4,509.2	4,370.6	138.65	32.522		
16,100.0	6,672.0	6,766.3	6,763.8	117.2	23.5	90.20	-3,214.9	7,724.0	4,521.3	4,381.7	139.54	32.402		
16,200.0	6,672.0	6,767.6	6,765.0	118.4	23.5	90.22	-3,214.9	7,724.0	4,535.5	4,395.2	140.37	32.312		
16,300.0	6,672.0	6,768.8	6,766.3	119.6	23.5	90.23	-3,214.9	7,724.0	4,551.9	4,410.8	141.14	32.251		
16,400.0	6,672.0	6,770.0	6,767.5	120.8	23.5	90.25	-3,214.9	7,724.0	4,570.5	4,428.6	141.85	32.220		
16,500.0	6,672.0	6,771.3	6,768.8	122.0	23.5	90.27	-3,214.9	7,724.1	4,591.1	4,448.6	142.51	32.216 SF		
16,600.0	6,672.0	6,772.5	6,770.0	123.2	23.5	90.28	-3,214.9	7,724.1	4,613.9	4,470.7	143.11	32.240		
16,700.0	6,672.0	6,773.8	6,771.3	124.5	23.5	90.30	-3,214.9	7,724.1	4,638.6	4,495.0	143.66	32.290		
16,800.0	6,672.0	6,775.0	6,772.5	125.7	23.5	90.31	-3,214.9	7,724.1	4,665.4	4,521.3	144.15	32.366		
16,900.0	6,672.0	6,776.2	6,773.7	126.9	23.5	90.33	-3,214.9	7,724.1	4,694.2	4,549.7	144.58	32.467		
17,000.0	6,672.0	6,777.5	6,775.0	128.1	23.5	90.35	-3,214.9	7,724.1	4,725.0	4,580.0	144.97	32.593		
17,100.0	6,672.0	6,778.7	6,776.2	129.3	23.5	90.36	-3,214.8	7,724.2	4,757.6	4,612.3	145.30	32.743		
17,200.0	6,672.0	6,780.0	6,777.5	130.5	23.5	90.38	-3,214.8	7,724.2	4,792.1	4,646.6	145.59	32.916		
17,300.0	6,672.0	6,781.2	6,778.7	131.7	23.5	90.39	-3,214.8	7,724.2	4,828.5	4,682.7	145.82	33.112		
17,400.0	6,672.0	6,782.5	6,780.0	133.0	23.6	90.41	-3,214.8	7,724.2	4,866.6	4,720.6	146.02	33.329		
17,500.0	6,672.0	6,783.7	6,781.2	134.2	23.6	90.42	-3,214.8	7,724.2	4,906.5	4,760.4	146.16	33.568		
17,600.0	6,672.0	6,784.9	6,782.4	135.4	23.6	90.44	-3,214.8	7,724.2	4,948.1	4,801.9	146.27	33.828		
17,700.0	6,672.0	6,786.2	6,783.7	136.6	23.6	90.46	-3,214.8	7,724.2	4,991.4	4,845.1	146.34	34.109		
17,800.0	6,672.0	6,787.4	6,784.9	137.8	23.6	90.47	-3,214.8	7,724.3	5,036.3	4,889.9	146.37	34.409		
17,900.0	6,672.0	6,788.7	6,786.2	139.0	23.6	90.49	-3,214.8	7,724.3	5,082.7	4,936.4	146.36	34.728		
18,000.0	6,672.0	6,789.9	6,787.4	140.3	23.6	90.50	-3,214.8	7,724.3	5,130.7	4,984.4	146.32	35.066		
18,100.0	6,672.0	6,791.2	6,788.7	141.5	23.6	90.52	-3,214.8	7,724.3	5,180.2	5,034.0	146.25	35.421		
18,200.0	6,672.0	6,792.4	6,789.9	142.7	23.6	90.54	-3,214.8	7,724.3	5,231.1	5,085.0	146.14	35.795		
18,300.0	6,672.0	6,793.6	6,791.1	143.9	23.6	90.55	-3,214.8	7,724.3	5,283.5	5,137.5	146.01	36.185		
18,342.5	6,672.0	6,794.2	6,791.7	144.4	23.6	90.56	-3,214.8	7,724.3	5,306.1	5,160.2	145.95	36.356		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 5519 08-43 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	112.5	112.5	0.0	0.2	102.41	-1,996.2	9,073.2	9,290.4					
100.0	100.0	192.3	192.3	0.1	0.5	102.40	-1,995.6	9,073.0	9,290.0	9,289.3	0.63	N/A		
200.0	200.0	284.9	284.9	0.5	0.8	102.40	-1,994.9	9,072.9	9,289.7	9,288.4	1.31	7,098.407		
282.6	282.6	344.6	344.6	0.8	1.0	102.40	-1,994.3	9,073.0	9,289.6	9,287.7	1.81	5,121.947		
300.0	300.0	356.3	356.3	0.8	1.1	102.40	-1,994.1	9,073.0	9,289.6	9,287.6	1.92	4,845.659		
400.0	400.0	430.4	430.4	1.2	1.3	102.39	-1,993.3	9,073.4	9,289.8	9,287.2	2.54	3,663.793		
500.0	500.0	523.9	523.9	1.6	1.7	102.38	-1,992.1	9,074.0	9,290.2	9,287.0	3.22	2,883.421		
600.0	600.0	643.2	643.2	1.9	2.1	102.37	-1,990.3	9,074.8	9,290.5	9,286.5	4.00	2,323.278		
700.0	700.0	761.8	761.8	2.3	2.5	102.36	-1,988.7	9,075.2	9,290.6	9,285.8	4.77	1,946.808		
788.2	788.2	850.3	850.2	2.6	2.8	102.35	-1,987.8	9,075.4	9,290.6	9,285.2	5.40	1,721.426		
800.0	800.0	861.1	861.0	2.6	2.8	102.35	-1,987.7	9,075.4	9,290.6	9,285.1	5.48	1,696.292		
900.0	900.0	951.6	951.5	3.0	3.2	102.35	-1,986.9	9,075.7	9,290.6	9,284.5	6.15	1,510.395		
1,000.0	1,000.0	1,053.1	1,053.0	3.4	3.5	102.34	-1,985.8	9,076.1	9,290.8	9,283.9	6.86	1,353.609		
1,100.0	1,100.0	1,164.0	1,164.0	3.7	3.9	102.33	-1,984.5	9,076.4	9,290.8	9,283.2	7.61	1,220.938		
1,200.0	1,200.0	1,282.9	1,282.8	4.1	4.3	102.32	-1,983.0	9,076.6	9,290.7	9,282.3	8.38	1,108.257		
1,300.0	1,300.0	1,405.5	1,405.4	4.4	4.8	102.31	-1,981.5	9,076.5	9,290.3	9,281.2	9.17	1,013.156		
1,400.0	1,400.0	1,517.0	1,516.8	4.8	5.1	102.31	-1,980.2	9,076.2	9,289.8	9,279.9	9.92	936.754		
1,500.0	1,500.0	1,618.9	1,618.8	5.1	5.5	102.30	-1,979.1	9,075.8	9,289.2	9,278.6	10.63	873.752		
1,600.0	1,600.0	1,718.8	1,718.7	5.5	5.9	102.30	-1,978.2	9,075.3	9,288.6	9,277.2	11.34	819.205		
1,700.0	1,700.0	1,800.0	1,799.9	5.9	6.1	102.29	-1,977.6	9,075.0	9,288.0	9,276.1	11.98	775.280		
1,800.0	1,800.0	1,874.0	1,873.9	6.2	6.4	102.29	-1,977.2	9,074.9	9,287.7	9,275.1	12.60	737.301		
1,837.9	1,837.9	1,900.0	1,899.9	6.4	6.5	102.29	-1,977.0	9,074.9	9,287.7	9,274.9	12.82	724.282		
1,900.0	1,900.0	1,945.0	1,944.8	6.6	6.6	102.29	-1,976.8	9,075.0	9,287.8	9,274.6	13.20	703.481		
2,000.0	2,000.0	2,023.8	2,023.7	6.9	6.9	102.29	-1,976.5	9,075.3	9,288.1	9,274.3	13.84	671.306		
2,100.0	2,100.0	2,122.8	2,122.7	7.3	7.3	102.28	-1,976.1	9,075.8	9,288.5	9,274.0	14.54	638.860		
2,200.0	2,200.0	2,227.8	2,227.6	7.7	7.6	102.28	-1,975.6	9,076.4	9,289.0	9,273.7	15.26	608.572		
2,300.0	2,300.0	2,380.2	2,380.1	8.0	8.2	153.28	-1,976.1	9,076.4	9,290.6	9,274.5	16.15	575.268		
2,400.0	2,399.8	2,502.6	2,502.5	8.4	8.6	153.26	-1,977.6	9,075.7	9,295.0	9,278.0	16.93	549.056		
2,500.0	2,499.5	2,614.6	2,614.5	8.7	9.0	153.24	-1,979.2	9,074.7	9,302.2	9,284.6	17.67	526.400		
2,600.0	2,598.7	2,721.0	2,720.8	9.1	9.3	153.19	-1,980.6	9,073.8	9,312.5	9,294.1	18.39	506.295		
2,700.0	2,697.5	2,820.7	2,820.5	9.4	9.7	153.12	-1,981.9	9,072.8	9,325.9	9,306.8	19.09	488.482		
2,800.0	2,795.6	2,917.1	2,916.9	9.8	10.0	153.03	-1,983.2	9,071.9	9,342.3	9,322.5	19.78	472.386		
2,900.0	2,893.1	3,016.6	3,016.4	10.1	10.4	152.92	-1,984.3	9,071.0	9,361.8	9,341.4	20.47	457.287		
3,000.0	2,989.6	3,100.0	3,099.8	10.5	10.7	152.78	-1,985.2	9,070.2	9,384.3	9,363.2	21.11	444.527		
3,100.0	3,085.3	3,156.8	3,156.6	10.9	10.9	152.58	-1,985.7	9,069.8	9,410.2	9,388.5	21.65	434.554		
3,200.0	3,179.8	3,202.8	3,202.6	11.2	11.0	152.34	-1,986.0	9,069.8	9,439.5	9,417.4	22.16	425.983		
3,300.0	3,273.2	3,299.7	3,299.5	11.6	11.4	152.13	-1,987.1	9,070.0	9,472.1	9,449.2	22.84	414.651		
3,387.5	3,353.8	3,587.0	3,586.7	11.9	12.4	152.21	-1,992.3	9,066.4	9,501.8	9,477.6	24.16	393.284		
3,400.0	3,365.2	3,603.5	3,603.2	12.0	12.4	152.23	-1,992.5	9,066.0	9,506.1	9,481.8	24.26	391.795		
3,500.0	3,456.8	3,749.5	3,749.1	12.4	12.9	152.42	-1,994.5	9,062.3	9,540.3	9,515.2	25.12	379.753		
3,600.0	3,548.3	3,865.0	3,864.5	12.8	13.3	152.57	-1,996.0	9,058.9	9,574.3	9,548.4	25.88	369.941		
3,700.0	3,639.8	3,944.9	3,944.4	13.2	13.6	152.68	-1,997.1	9,056.5	9,608.1	9,581.6	26.52	362.324		
3,800.0	3,731.4	4,010.1	4,009.5	13.6	13.8	152.76	-1,998.2	9,054.6	9,642.3	9,615.2	27.11	355.714		
3,900.0	3,822.9	4,076.4	4,075.8	14.0	14.1	152.85	-1,999.6	9,052.9	9,676.7	9,649.0	27.70	349.299		
4,000.0	3,914.4	4,180.6	4,179.9	14.4	14.4	152.99	-2,002.0	9,050.2	9,711.3	9,682.9	28.44	341.482		
4,100.0	4,005.9	4,277.9	4,277.2	14.8	14.8	153.12	-2,004.3	9,047.4	9,745.8	9,716.7	29.15	334.293		
4,200.0	4,097.5	4,440.1	4,439.3	15.2	15.4	153.34	-2,008.7	9,042.2	9,780.0	9,749.9	30.11	324.850		
4,300.0	4,189.0	4,529.0	4,528.0	15.6	15.7	153.46	-2,011.1	9,038.9	9,813.8	9,783.0	30.80	318.653		
4,400.0	4,280.5	4,581.9	4,580.9	16.1	15.9	153.53	-2,012.9	9,037.0	9,848.0	9,816.6	31.36	314.019		
4,500.0	4,372.1	4,632.4	4,631.4	16.5	16.0	153.60	-2,014.8	9,035.4	9,882.5	9,850.6	31.92	309.633		
4,600.0	4,463.6	4,681.7	4,680.6	16.9	16.2	153.67	-2,016.9	9,033.9	9,917.5	9,885.0	32.47	305.448		
4,700.0	4,555.1	4,743.0	4,741.8	17.4	16.4	153.75	-2,019.6	9,032.4	9,952.9	9,919.8	33.07	301.000		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 5519 08-43 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
4,800.0	4,646.7	4,823.8	4,822.6	17.8	16.7	153.86	-2,022.9	9,030.5	9,988.5	9,954.8	33.74	296.068		
7,500.0	6,672.0	6,400.0	6,397.9	27.6	22.2	84.22	-2,057.1	9,049.4	9,956.2	9,909.3	46.82	212.664		
7,600.0	6,672.0	6,400.0	6,397.9	28.0	22.2	84.23	-2,057.1	9,049.4	9,862.0	9,815.1	46.88	210.364		
7,700.0	6,672.0	6,400.0	6,397.9	28.3	22.2	84.23	-2,057.1	9,049.4	9,768.0	9,721.0	46.95	208.029		
7,800.0	6,672.0	6,400.0	6,397.9	28.8	22.2	84.23	-2,057.1	9,049.4	9,674.1	9,627.0	47.04	205.658		
7,900.0	6,672.0	6,400.0	6,397.9	29.3	22.2	84.23	-2,057.1	9,049.4	9,580.3	9,533.2	47.14	203.251		
8,000.0	6,672.0	6,400.0	6,397.9	29.8	22.2	84.23	-2,057.1	9,049.4	9,486.6	9,439.4	47.24	200.809		
8,100.0	6,672.0	6,400.0	6,397.9	30.4	22.2	84.23	-2,057.1	9,049.4	9,393.1	9,345.8	47.36	198.332		
8,200.0	6,672.0	6,400.0	6,397.9	31.0	22.2	84.23	-2,057.1	9,049.4	9,299.8	9,252.3	47.49	195.819		
8,300.0	6,672.0	6,413.4	6,411.3	31.7	22.2	84.46	-2,057.2	9,049.9	9,206.5	9,158.8	47.70	193.025		
8,400.0	6,672.0	6,415.6	6,413.5	32.4	22.3	84.50	-2,057.3	9,049.9	9,113.4	9,065.5	47.86	190.407		
8,500.0	6,672.0	6,417.8	6,415.7	33.1	22.3	84.54	-2,057.3	9,050.0	9,020.5	8,972.4	48.04	187.756		
8,600.0	6,672.0	6,420.0	6,417.9	33.9	22.3	84.58	-2,057.3	9,050.1	8,927.7	8,879.4	48.24	185.073		
8,700.0	6,672.0	6,422.3	6,420.1	34.7	22.3	84.62	-2,057.3	9,050.2	8,835.0	8,786.6	48.45	182.359		
8,800.0	6,672.0	6,424.5	6,422.4	35.5	22.3	84.66	-2,057.3	9,050.2	8,742.6	8,693.9	48.67	179.616		
8,900.0	6,672.0	6,426.8	6,424.6	36.3	22.3	84.70	-2,057.4	9,050.3	8,650.3	8,601.4	48.91	176.845		
9,000.0	6,672.0	6,429.1	6,426.9	37.2	22.3	84.74	-2,057.4	9,050.4	8,558.1	8,509.0	49.17	174.047		
9,100.0	6,672.0	6,431.3	6,429.2	38.1	22.3	84.78	-2,057.4	9,050.5	8,466.2	8,416.8	49.45	171.224		
9,200.0	6,672.0	6,433.7	6,431.5	39.0	22.3	84.82	-2,057.4	9,050.6	8,374.5	8,324.7	49.74	168.378		
9,300.0	6,672.0	6,436.0	6,433.9	39.9	22.3	84.86	-2,057.4	9,050.6	8,282.9	8,232.8	50.04	165.510		
9,400.0	6,672.0	6,438.3	6,436.2	40.8	22.3	84.90	-2,057.5	9,050.7	8,191.5	8,141.2	50.37	162.622		
9,500.0	6,672.0	6,440.7	6,438.6	41.8	22.3	84.94	-2,057.5	9,050.8	8,100.4	8,049.7	50.72	159.716		
9,600.0	6,672.0	6,443.1	6,441.0	42.7	22.3	84.98	-2,057.5	9,050.9	8,009.4	7,958.3	51.08	156.795		
9,700.0	6,672.0	6,445.5	6,443.4	43.7	22.4	85.02	-2,057.5	9,051.0	7,918.7	7,867.2	51.47	153.860		
9,800.0	6,672.0	6,447.9	6,445.8	44.7	22.4	85.06	-2,057.6	9,051.1	7,828.2	7,776.3	51.87	150.914		
9,900.0	6,672.0	6,450.4	6,448.2	45.7	22.4	85.11	-2,057.6	9,051.1	7,737.9	7,685.6	52.30	147.960		
10,000.0	6,672.0	6,452.8	6,450.7	46.7	22.4	85.15	-2,057.6	9,051.2	7,647.9	7,595.2	52.74	144.999		
10,100.0	6,672.0	6,455.3	6,453.1	47.7	22.4	85.19	-2,057.6	9,051.3	7,558.2	7,505.0	53.21	142.034		
10,200.0	6,672.0	6,457.8	6,455.6	48.8	22.4	85.24	-2,057.7	9,051.4	7,468.7	7,415.0	53.71	139.067		
10,300.0	6,672.0	6,460.3	6,458.1	49.8	22.4	85.28	-2,057.7	9,051.5	7,379.4	7,325.2	54.22	136.101		
10,400.0	6,672.0	6,462.8	6,460.7	50.9	22.4	85.32	-2,057.7	9,051.6	7,290.5	7,235.7	54.76	133.139		
10,500.0	6,672.0	6,465.4	6,463.2	51.9	22.4	85.37	-2,057.7	9,051.7	7,201.8	7,146.5	55.32	130.184		
10,600.0	6,672.0	6,468.0	6,465.8	53.0	22.4	85.41	-2,057.8	9,051.8	7,113.5	7,057.6	55.91	127.236		
10,700.0	6,672.0	6,470.5	6,468.4	54.1	22.4	85.46	-2,057.8	9,051.9	7,025.5	6,968.9	56.52	124.300		
10,800.0	6,672.0	6,473.2	6,471.0	55.2	22.5	85.50	-2,057.8	9,052.0	6,937.7	6,880.6	57.16	121.378		
10,900.0	6,672.0	6,475.8	6,473.6	56.3	22.5	85.55	-2,057.9	9,052.1	6,850.4	6,792.6	57.82	118.471		
11,000.0	6,672.0	6,478.4	6,476.3	57.4	22.5	85.59	-2,057.9	9,052.2	6,763.4	6,704.8	58.52	115.583		
11,100.0	6,672.0	6,481.1	6,478.9	58.5	22.5	85.64	-2,057.9	9,052.3	6,676.7	6,617.5	59.23	112.716		
11,200.0	6,672.0	6,483.8	6,481.6	59.6	22.5	85.69	-2,057.9	9,052.4	6,590.4	6,530.5	59.98	109.872		
11,300.0	6,672.0	6,486.5	6,484.3	60.7	22.5	85.73	-2,058.0	9,052.5	6,504.6	6,443.8	60.76	107.053		
11,400.0	6,672.0	6,489.3	6,487.1	61.8	22.5	85.78	-2,058.0	9,052.6	6,419.1	6,357.5	61.57	104.262		
11,500.0	6,672.0	6,492.0	6,489.8	62.9	22.5	85.83	-2,058.0	9,052.7	6,334.1	6,271.7	62.40	101.501		
11,600.0	6,672.0	6,500.0	6,497.8	64.1	22.5	85.96	-2,058.1	9,053.0	6,249.5	6,186.2	63.30	98.726		
11,700.0	6,672.0	6,500.0	6,497.8	65.2	22.5	85.96	-2,058.1	9,053.0	6,165.3	6,101.1	64.19	96.055		
11,800.0	6,672.0	6,500.0	6,497.8	66.3	22.5	85.96	-2,058.1	9,053.0	6,081.7	6,016.6	65.10	93.418		
11,900.0	6,672.0	6,500.0	6,497.8	67.5	22.5	85.96	-2,058.1	9,053.0	5,998.5	5,932.5	66.05	90.817		
12,000.0	6,672.0	6,500.0	6,497.8	68.6	22.5	85.97	-2,058.1	9,053.0	5,915.9	5,848.9	67.03	88.253		
12,100.0	6,672.0	6,500.0	6,497.8	69.8	22.5	85.97	-2,058.1	9,053.0	5,833.9	5,765.8	68.05	85.729		
12,200.0	6,672.0	6,500.0	6,497.8	70.9	22.5	85.97	-2,058.1	9,053.0	5,752.4	5,683.3	69.10	83.244		
12,300.0	6,672.0	6,500.0	6,497.8	72.1	22.5	85.97	-2,058.1	9,053.0	5,671.5	5,601.3	70.19	80.802		
12,400.0	6,672.0	6,500.0	6,497.8	73.2	22.5	85.97	-2,058.1	9,053.0	5,591.2	5,519.9	71.31	78.403		
12,500.0	6,672.0	6,516.1	6,513.9	74.4	22.6	86.24	-2,058.3	9,053.6	5,511.5	5,439.0	72.57	75.949		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 5519 08-43 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
12,600.0	6,672.0	6,518.4	6,516.2	75.5	22.6	86.28	-2,058.3	9,053.7	5,432.6	5,358.8	73.78	73.631		
12,700.0	6,672.0	6,520.8	6,518.6	76.7	22.6	86.32	-2,058.4	9,053.8	5,354.3	5,279.3	75.03	71.359		
12,800.0	6,672.0	6,523.3	6,521.1	77.9	22.6	86.36	-2,058.4	9,053.9	5,276.8	5,200.5	76.32	69.137		
12,900.0	6,672.0	6,525.7	6,523.5	79.0	22.6	86.41	-2,058.4	9,054.0	5,200.1	5,122.4	77.66	66.964		
13,000.0	6,672.0	6,528.2	6,526.0	80.2	22.6	86.45	-2,058.5	9,054.1	5,124.1	5,045.1	79.03	64.841		
13,100.0	6,672.0	6,530.8	6,528.6	81.4	22.7	86.49	-2,058.5	9,054.2	5,049.0	4,968.6	80.44	62.769		
13,200.0	6,672.0	6,533.3	6,531.1	82.6	22.7	86.54	-2,058.5	9,054.4	4,974.8	4,892.9	81.89	60.748		
13,300.0	6,672.0	6,536.0	6,533.7	83.7	22.7	86.58	-2,058.6	9,054.5	4,901.5	4,818.1	83.39	58.780		
13,400.0	6,672.0	6,538.6	6,536.4	84.9	22.7	86.63	-2,058.6	9,054.6	4,829.2	4,744.2	84.92	56.864		
13,500.0	6,672.0	6,541.3	6,539.1	86.1	22.7	86.67	-2,058.6	9,054.7	4,757.8	4,671.3	86.50	55.001		
13,600.0	6,672.0	6,544.0	6,541.8	87.3	22.7	86.72	-2,058.7	9,054.8	4,687.5	4,599.4	88.13	53.192		
13,700.0	6,672.0	6,546.8	6,544.5	88.4	22.7	86.77	-2,058.7	9,054.9	4,618.4	4,528.6	89.79	51.436		
13,800.0	6,672.0	6,549.6	6,547.3	89.6	22.7	86.82	-2,058.8	9,055.1	4,550.3	4,458.8	91.49	49.734		
13,900.0	6,672.0	6,552.4	6,550.2	90.8	22.7	86.86	-2,058.8	9,055.2	4,483.5	4,390.2	93.24	48.085		
14,000.0	6,672.0	6,555.3	6,553.1	92.0	22.7	86.91	-2,058.8	9,055.3	4,417.9	4,322.9	95.03	46.491		
14,100.0	6,672.0	6,558.2	6,556.0	93.2	22.8	86.96	-2,058.9	9,055.5	4,353.6	4,256.8	96.85	44.951		
14,200.0	6,672.0	6,561.2	6,559.0	94.4	22.8	87.01	-2,058.9	9,055.6	4,290.7	4,192.0	98.72	43.464		
14,300.0	6,672.0	6,564.2	6,562.0	95.6	22.8	87.07	-2,059.0	9,055.7	4,229.3	4,128.6	100.62	42.031		
14,400.0	6,672.0	6,567.3	6,565.0	96.8	22.8	87.12	-2,059.0	9,055.9	4,169.3	4,066.7	102.56	40.653		
14,500.0	6,672.0	6,570.4	6,568.2	98.0	22.8	87.17	-2,059.1	9,056.0	4,110.9	4,006.4	104.53	39.327		
14,600.0	6,672.0	6,573.6	6,571.3	99.2	22.8	87.23	-2,059.1	9,056.2	4,054.1	3,947.6	106.53	38.055		
14,700.0	6,672.0	6,576.8	6,574.5	100.4	22.8	87.28	-2,059.2	9,056.3	3,999.0	3,890.5	108.56	36.836		
14,800.0	6,672.0	6,580.1	6,577.8	101.6	22.8	87.34	-2,059.2	9,056.5	3,945.7	3,835.1	110.62	35.670		
14,900.0	6,672.0	6,583.4	6,581.1	102.7	22.8	87.39	-2,059.3	9,056.6	3,894.2	3,781.5	112.69	34.556		
15,000.0	6,672.0	6,586.7	6,584.5	103.9	22.8	87.45	-2,059.3	9,056.8	3,844.7	3,729.9	114.79	33.494		
15,100.0	6,672.0	6,590.2	6,587.9	105.1	22.9	87.51	-2,059.4	9,057.0	3,797.1	3,680.2	116.90	32.483		
15,200.0	6,672.0	6,600.0	6,597.7	106.3	22.9	87.68	-2,059.5	9,057.5	3,751.6	3,632.6	119.05	31.513		
15,300.0	6,672.0	6,600.0	6,597.7	107.6	22.9	87.68	-2,059.5	9,057.5	3,708.2	3,587.1	121.14	30.610		
15,400.0	6,672.0	6,600.0	6,597.7	108.8	22.9	87.68	-2,059.5	9,057.5	3,667.1	3,543.9	123.24	29.757		
15,500.0	6,672.0	6,600.0	6,597.7	110.0	22.9	87.68	-2,059.5	9,057.5	3,628.2	3,502.9	125.32	28.953		
15,600.0	6,672.0	6,600.0	6,597.7	111.2	22.9	87.68	-2,059.5	9,057.5	3,591.8	3,464.4	127.38	28.197		
15,700.0	6,672.0	6,611.3	6,609.0	112.4	22.9	87.87	-2,059.8	9,058.0	3,557.7	3,428.2	129.49	27.474		
15,800.0	6,672.0	6,614.8	6,612.4	113.6	22.9	87.93	-2,059.8	9,058.2	3,526.2	3,394.6	131.52	26.810		
15,900.0	6,672.0	6,618.3	6,615.9	114.8	23.0	87.99	-2,059.9	9,058.4	3,497.2	3,363.7	133.52	26.193		
16,000.0	6,672.0	6,621.8	6,619.4	116.0	23.0	88.05	-2,060.0	9,058.5	3,470.9	3,335.4	135.46	25.622		
16,100.0	6,672.0	6,625.3	6,622.9	117.2	23.0	88.11	-2,060.0	9,058.7	3,447.3	3,309.9	137.36	25.097		
16,200.0	6,672.0	6,628.8	6,626.4	118.4	23.0	88.17	-2,060.1	9,058.9	3,426.4	3,287.2	139.19	24.616		
16,300.0	6,672.0	6,632.2	6,629.9	119.6	23.0	88.23	-2,060.2	9,059.1	3,408.4	3,267.4	140.96	24.180		
16,400.0	6,672.0	6,635.7	6,633.4	120.8	23.0	88.28	-2,060.2	9,059.3	3,393.2	3,250.5	142.64	23.788		
16,500.0	6,672.0	6,639.2	6,636.9	122.0	23.0	88.34	-2,060.3	9,059.4	3,380.9	3,236.6	144.25	23.437		
16,600.0	6,672.0	6,642.7	6,640.4	123.2	23.0	88.40	-2,060.4	9,059.6	3,371.5	3,225.7	145.77	23.129		
16,700.0	6,672.0	6,646.2	6,643.8	124.5	23.1	88.46	-2,060.5	9,059.8	3,365.1	3,217.9	147.19	22.862		
16,800.0	6,672.0	6,649.7	6,647.3	125.7	23.1	88.52	-2,060.6	9,060.0	3,361.6	3,213.1	148.52	22.635		
16,866.2	6,672.0	6,652.0	6,649.6	126.5	23.1	88.56	-2,060.6	9,060.1	3,361.0	3,211.6	149.34	22.506 CC		
16,900.0	6,672.0	6,653.2	6,650.8	126.9	23.1	88.58	-2,060.6	9,060.1	3,361.1	3,211.4	149.74	22.447 ES		
17,000.0	6,672.0	6,656.7	6,654.3	128.1	23.1	88.64	-2,060.7	9,060.3	3,363.6	3,212.8	150.85	22.298		
17,100.0	6,672.0	6,660.1	6,657.8	129.3	23.1	88.70	-2,060.8	9,060.5	3,369.1	3,217.2	151.85	22.186		
17,200.0	6,672.0	6,663.6	6,661.2	130.5	23.1	88.76	-2,060.9	9,060.7	3,377.5	3,224.8	152.75	22.112		
17,300.0	6,672.0	6,667.1	6,664.7	131.7	23.1	88.82	-2,061.0	9,060.8	3,388.9	3,235.3	153.53	22.073		
17,400.0	6,672.0	6,670.6	6,668.2	133.0	23.1	88.88	-2,061.1	9,061.0	3,403.1	3,248.9	154.20	22.070 SF		
17,500.0	6,672.0	6,674.1	6,671.7	134.2	23.2	88.94	-2,061.2	9,061.2	3,420.3	3,265.5	154.76	22.101		
17,600.0	6,672.0	6,677.5	6,675.1	135.4	23.2	89.00	-2,061.3	9,061.4	3,440.2	3,285.0	155.21	22.165		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> BB Section 08 - State 5519 08-43 - Original Drilling - Original Drilling - As Drilled												<b>Offset Site Error:</b>	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWSG												<b>Offset Well Error:</b>	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
17,700.0	6,672.0	6,727.2	6,670.4	136.6	23.3	88.92	-2,061.1	9,061.1	3,462.9	3,307.2	155.70	22.241	
17,800.0	6,672.0	6,722.2	6,675.4	137.8	23.3	89.00	-2,061.2	9,061.4	3,488.4	3,332.4	155.92	22.373	
17,900.0	6,672.0	6,717.2	6,680.3	139.0	23.3	89.08	-2,061.4	9,061.6	3,516.5	3,360.4	156.03	22.537	
18,000.0	6,672.0	6,712.3	6,685.3	140.3	23.3	89.17	-2,061.5	9,061.9	3,547.2	3,391.1	156.06	22.730	
18,100.0	6,672.0	6,707.3	6,690.2	141.5	23.3	89.25	-2,061.7	9,062.1	3,580.4	3,424.5	155.99	22.953	
18,200.0	6,672.0	6,702.4	6,695.2	142.7	23.3	89.34	-2,061.8	9,062.4	3,616.2	3,460.3	155.84	23.204	
18,300.0	6,672.0	6,702.6	6,700.1	143.9	23.3	89.42	-2,062.0	9,062.6	3,654.2	3,498.6	155.63	23.481	
18,342.5	6,672.0	6,704.7	6,702.2	144.4	23.3	89.46	-2,062.0	9,062.7	3,671.1	3,515.6	155.52	23.605	



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 5519 12-08 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
0.0	0.0	0.0	0.0	0.0	0.0	96.08	-535.8	5,032.4	5,060.9					
100.0	100.0	77.7	77.7	0.1	0.1	96.08	-535.7	5,032.7	5,061.2	5,061.0	0.26	N/A		
200.0	200.0	169.6	169.6	0.5	0.4	96.07	-535.3	5,033.5	5,062.0	5,061.1	0.90	5,595.867		
300.0	300.0	315.7	315.7	0.8	0.9	96.06	-534.3	5,034.1	5,062.4	5,060.6	1.77	2,853.007		
345.9	345.9	355.9	355.9	1.0	1.1	96.05	-534.0	5,034.1	5,062.4	5,060.3	2.08	2,434.535		
400.0	400.0	403.6	403.6	1.2	1.2	96.05	-533.5	5,034.2	5,062.4	5,059.9	2.44	2,074.735		
500.0	500.0	498.0	498.0	1.6	1.6	96.04	-532.5	5,034.5	5,062.6	5,059.4	3.13	1,617.782		
600.0	600.0	613.2	613.1	1.9	2.0	96.02	-531.1	5,034.7	5,062.7	5,058.8	3.89	1,301.032		
700.0	700.0	717.0	717.0	2.3	2.3	96.01	-529.9	5,034.8	5,062.6	5,058.0	4.61	1,097.601		
800.0	800.0	823.1	823.0	2.6	2.7	96.00	-529.0	5,034.6	5,062.4	5,057.0	5.34	947.901		
900.0	900.0	927.7	927.7	3.0	3.1	95.99	-528.2	5,034.4	5,062.1	5,056.0	6.06	834.783		
1,000.0	1,000.0	1,031.0	1,031.0	3.4	3.4	95.98	-527.4	5,034.1	5,061.7	5,054.9	6.78	746.281		
1,100.0	1,100.0	1,121.6	1,121.6	3.7	3.8	95.97	-526.6	5,033.9	5,061.3	5,053.9	7.46	678.734		
1,200.0	1,200.0	1,220.9	1,220.8	4.1	4.1	95.97	-526.0	5,033.7	5,061.2	5,053.0	8.16	620.104		
1,300.0	1,300.0	1,331.0	1,331.0	4.4	4.5	95.96	-525.4	5,033.4	5,060.8	5,051.9	8.90	568.343		
1,400.0	1,400.0	1,428.0	1,427.9	4.8	4.8	95.95	-524.7	5,033.1	5,060.4	5,050.8	9.60	527.058		
1,500.0	1,500.0	1,520.5	1,520.5	5.1	5.2	95.95	-524.2	5,032.8	5,060.1	5,049.8	10.28	492.093		
1,541.3	1,541.3	1,551.3	1,551.3	5.3	5.3	95.95	-524.2	5,032.8	5,060.0	5,049.5	10.54	480.166		
1,600.0	1,600.0	1,600.0	1,599.9	5.5	5.4	95.94	-524.0	5,032.9	5,060.1	5,049.2	10.92	463.454		
1,700.0	1,700.0	1,717.4	1,717.4	5.9	5.8	95.94	-523.8	5,033.1	5,060.2	5,048.6	11.69	433.005		
1,800.0	1,800.0	1,817.5	1,817.4	6.2	6.2	95.94	-523.8	5,032.9	5,060.1	5,047.7	12.39	408.273		
1,900.0	1,900.0	1,918.6	1,918.6	6.6	6.5	95.94	-523.8	5,032.8	5,060.0	5,046.9	13.11	386.091		
2,000.0	2,000.0	2,021.2	2,021.1	6.9	6.9	95.94	-523.7	5,032.6	5,059.8	5,045.9	13.82	366.058		
2,100.0	2,100.0	2,118.7	2,118.6	7.3	7.2	95.94	-523.3	5,032.4	5,059.6	5,045.0	14.52	348.425		
2,200.0	2,200.0	2,222.0	2,222.0	7.7	7.6	95.93	-522.9	5,032.3	5,059.4	5,044.2	15.24	331.970		
2,210.0	2,210.0	2,234.8	2,234.7	7.7	7.6	146.93	-522.9	5,032.3	5,059.4	5,044.1	15.32	330.238		
2,300.0	2,300.0	2,344.8	2,344.8	8.0	8.0	146.93	-522.9	5,031.7	5,060.4	5,044.4	16.02	315.796		
2,400.0	2,399.8	2,442.8	2,442.8	8.4	8.4	146.93	-523.2	5,030.9	5,064.0	5,047.3	16.72	302.905		
2,500.0	2,499.5	2,525.9	2,525.9	8.7	8.7	146.90	-523.1	5,030.5	5,070.8	5,053.5	17.36	292.101		
2,600.0	2,598.7	2,614.3	2,614.2	9.1	9.0	146.86	-523.2	5,030.4	5,080.9	5,062.9	18.02	281.972		
2,700.0	2,697.5	2,722.1	2,722.0	9.4	9.3	146.82	-523.0	5,030.1	5,093.8	5,075.1	18.75	271.741		
2,800.0	2,795.6	2,811.2	2,811.1	9.8	9.7	146.75	-523.0	5,030.0	5,109.7	5,090.3	19.41	263.316		
2,900.0	2,893.1	2,904.1	2,904.1	10.1	10.0	146.67	-523.1	5,029.9	5,128.5	5,108.5	20.08	255.436		
3,000.0	2,989.6	2,992.1	2,992.0	10.5	10.3	146.57	-523.4	5,029.9	5,150.4	5,129.7	20.73	248.439		
3,100.0	3,085.3	3,043.7	3,043.6	10.9	10.5	146.38	-523.8	5,030.1	5,175.7	5,154.4	21.25	243.504		
3,200.0	3,179.8	3,100.0	3,099.9	11.2	10.7	146.17	-524.2	5,031.0	5,204.6	5,182.8	21.79	238.823		
3,300.0	3,273.2	3,155.4	3,155.3	11.6	10.9	145.92	-524.7	5,032.2	5,237.1	5,214.8	22.33	234.579		
3,387.5	3,353.8	3,200.0	3,199.9	11.9	11.0	145.66	-525.1	5,033.3	5,268.2	5,245.4	22.78	231.304		
3,400.0	3,365.2	3,200.0	3,199.9	12.0	11.0	145.66	-525.1	5,033.3	5,272.8	5,250.0	22.82	231.082		
3,500.0	3,456.8	3,261.3	3,261.1	12.4	11.2	145.83	-526.0	5,035.2	5,310.3	5,286.9	23.37	227.253		
3,600.0	3,548.3	3,309.7	3,309.5	12.8	11.4	145.97	-527.2	5,037.1	5,348.6	5,324.7	23.87	224.066		
3,700.0	3,639.8	3,377.3	3,377.0	13.2	11.6	146.16	-529.1	5,040.2	5,387.5	5,363.1	24.45	220.353		
3,800.0	3,731.4	3,495.5	3,495.0	13.6	12.0	146.49	-532.5	5,045.6	5,426.6	5,401.4	25.23	215.112		
3,900.0	3,822.9	3,585.3	3,584.7	14.0	12.4	146.74	-535.0	5,049.3	5,465.5	5,439.6	25.90	211.024		
4,000.0	3,914.4	3,699.6	3,698.9	14.4	12.8	147.05	-538.0	5,053.9	5,504.2	5,477.5	26.67	206.377		
4,100.0	4,005.9	3,824.9	3,824.1	14.8	13.2	147.38	-540.6	5,058.3	5,542.6	5,515.1	27.49	201.633		
4,200.0	4,097.5	3,949.8	3,948.9	15.2	13.6	147.70	-542.9	5,061.7	5,580.2	5,551.9	28.31	197.125		
4,300.0	4,189.0	4,063.0	4,062.0	15.6	14.0	147.98	-545.1	5,064.5	5,617.7	5,588.6	29.09	193.143		
4,400.0	4,280.5	4,212.3	4,211.3	16.1	14.6	148.35	-547.5	5,067.0	5,654.5	5,624.5	30.01	188.442		
4,500.0	4,372.1	4,299.8	4,298.8	16.5	14.9	148.57	-549.2	5,067.9	5,691.0	5,660.3	30.69	185.424		
4,600.0	4,463.6	4,388.3	4,387.2	16.9	15.2	148.79	-551.2	5,068.9	5,727.6	5,696.2	31.38	182.510		
4,700.0	4,555.1	4,483.1	4,482.0	17.4	15.5	149.02	-553.8	5,069.9	5,764.3	5,732.2	32.10	179.571		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 5519 12-08 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
4,800.0	4,646.7	4,577.6	4,576.5	17.8	15.8	149.26	-557.3	5,070.6	5,801.0	5,768.1	32.82	176.751		
4,900.0	4,738.2	4,658.8	4,657.6	18.2	16.1	149.48	-561.1	5,071.1	5,837.7	5,804.3	33.49	174.316		
5,000.0	4,829.7	4,761.4	4,760.0	18.7	16.5	149.76	-567.0	5,071.5	5,874.7	5,840.5	34.25	171.541		
5,100.0	4,921.3	4,865.2	4,863.6	19.1	16.8	150.03	-572.1	5,071.8	5,911.4	5,876.4	35.01	168.851		
5,200.0	5,012.8	4,960.9	4,959.3	19.5	17.2	150.26	-575.8	5,072.1	5,948.1	5,912.4	35.74	166.423		
5,300.0	5,104.3	5,134.3	5,132.7	20.0	17.8	150.66	-580.1	5,072.1	5,984.4	5,947.6	36.78	162.692		
5,400.0	5,195.8	5,256.6	5,254.9	20.4	18.2	150.92	-581.1	5,071.1	6,019.6	5,982.0	37.62	160.001		
5,500.0	5,287.4	5,341.3	5,339.6	20.9	18.5	151.09	-581.1	5,070.4	6,054.8	6,016.5	38.31	158.031		
5,600.0	5,378.9	5,422.0	5,420.3	21.3	18.8	151.24	-580.3	5,070.1	6,090.2	6,051.2	38.99	156.198		
5,700.0	5,470.4	5,518.6	5,516.9	21.8	19.1	151.41	-579.2	5,069.7	6,125.7	6,085.9	39.73	154.177		
5,800.0	5,562.0	5,604.6	5,602.9	22.2	19.4	151.57	-578.2	5,069.5	6,161.2	6,120.8	40.43	152.389		
5,900.0	5,653.5	5,676.5	5,674.8	22.7	19.7	151.70	-577.7	5,069.4	6,197.0	6,155.9	41.07	150.876		
6,000.0	5,745.0	5,773.4	5,771.7	23.1	20.0	151.88	-576.9	5,069.4	6,233.0	6,191.2	41.82	149.047		
6,100.0	5,836.6	5,886.1	5,884.4	23.6	20.4	152.08	-575.7	5,069.1	6,268.8	6,226.2	42.63	147.050		
6,200.0	5,928.1	5,982.6	5,980.9	24.0	20.7	152.25	-574.8	5,068.7	6,304.4	6,261.1	43.38	145.342		
6,278.6	6,000.0	6,050.6	6,048.9	24.4	21.0	152.36	-574.2	5,068.4	6,332.5	6,288.5	43.93	144.146		
6,290.0	6,010.4	6,060.2	6,058.5	24.4	21.0	150.41	-574.1	5,068.3	6,336.6	6,292.6	44.01	143.978		
6,300.0	6,019.5	6,068.6	6,066.9	24.5	21.0	148.61	-574.0	5,068.3	6,340.2	6,296.1	44.08	143.833		
6,350.0	6,065.8	6,112.1	6,110.4	24.7	21.2	137.89	-573.7	5,068.1	6,355.5	6,311.1	44.43	143.049		
6,400.0	6,113.0	6,159.3	6,157.5	24.9	21.4	123.82	-573.3	5,068.0	6,366.5	6,321.7	44.79	142.154		
6,450.0	6,160.7	6,206.9	6,205.2	25.1	21.5	106.90	-573.0	5,067.8	6,372.9	6,327.8	45.14	141.194		
6,500.0	6,208.5	6,251.6	6,249.9	25.3	21.7	89.59	-572.6	5,067.6	6,374.8	6,329.3	45.46	140.225		
6,550.0	6,255.8	6,296.4	6,294.7	25.4	21.8	74.84	-572.2	5,067.5	6,372.1	6,326.4	45.77	139.214		
6,600.0	6,302.5	6,344.3	6,342.6	25.6	22.0	63.76	-571.7	5,067.4	6,365.0	6,318.9	46.08	138.128		
6,650.0	6,347.9	6,391.4	6,389.7	25.7	22.2	55.94	-571.1	5,067.3	6,353.4	6,307.0	46.37	137.019		
6,700.0	6,391.6	6,440.5	6,438.8	25.9	22.3	50.58	-570.4	5,067.2	6,337.4	6,290.7	46.65	135.854		
6,750.0	6,433.4	6,488.2	6,486.4	26.0	22.5	47.00	-569.7	5,067.1	6,317.1	6,270.2	46.91	134.675		
6,800.0	6,472.8	6,524.8	6,523.0	26.1	22.6	44.74	-569.1	5,067.0	6,292.9	6,245.7	47.10	133.597		
6,850.0	6,509.4	6,556.0	6,554.2	26.2	22.7	43.53	-568.6	5,066.9	6,264.8	6,217.6	47.26	132.548		
6,900.0	6,543.0	6,584.6	6,582.8	26.3	22.8	43.25	-568.2	5,066.9	6,233.3	6,185.9	47.40	131.493		
6,950.0	6,573.2	6,609.3	6,607.5	26.4	22.9	43.86	-568.0	5,066.9	6,198.6	6,151.0	47.52	130.444		
7,000.0	6,599.8	6,629.8	6,628.0	26.5	23.0	45.41	-567.8	5,066.8	6,160.9	6,113.3	47.61	129.405		
7,050.0	6,622.5	6,647.2	6,645.5	26.6	23.1	48.09	-567.7	5,066.8	6,120.6	6,073.0	47.68	128.360		
7,100.0	6,641.1	6,661.6	6,659.8	26.7	23.1	52.19	-567.6	5,066.8	6,078.1	6,030.4	47.74	127.307		
7,150.0	6,655.4	6,735.5	6,733.7	26.8	23.4	58.06	-567.5	5,066.8	6,033.8	5,985.7	48.00	125.690		
7,200.0	6,665.4	6,725.5	6,723.7	26.9	23.3	66.76	-567.5	5,066.8	5,987.9	5,939.9	47.98	124.790		
7,250.0	6,670.8	6,720.0	6,718.2	27.0	23.3	78.93	-567.5	5,066.8	5,941.0	5,893.0	47.98	123.817		
7,285.7	6,672.0	6,718.8	6,717.0	27.1	23.3	89.92	-567.5	5,066.8	5,907.1	5,859.1	47.99	123.078		
7,300.0	6,672.0	6,718.8	6,717.0	27.1	23.3	89.92	-567.5	5,066.8	5,893.4	5,845.4	48.00	122.775		
7,400.0	6,672.0	6,718.7	6,716.9	27.3	23.3	89.92	-567.5	5,066.8	5,798.1	5,750.0	48.05	120.661		
7,500.0	6,672.0	6,718.6	6,716.8	27.6	23.3	89.92	-567.5	5,066.8	5,702.9	5,654.8	48.11	118.532		
7,600.0	6,672.0	6,718.6	6,716.8	28.0	23.3	89.92	-567.5	5,066.8	5,607.9	5,559.7	48.18	116.387		
7,700.0	6,672.0	6,718.5	6,716.7	28.3	23.3	89.93	-567.5	5,066.8	5,513.1	5,464.8	48.26	114.225		
7,800.0	6,672.0	6,718.4	6,716.6	28.8	23.3	89.93	-567.5	5,066.8	5,418.4	5,370.1	48.36	112.048		
7,900.0	6,672.0	6,718.3	6,716.5	29.3	23.3	89.93	-567.5	5,066.8	5,324.0	5,275.5	48.46	109.855		
8,000.0	6,672.0	6,718.2	6,716.4	29.8	23.3	89.94	-567.5	5,066.8	5,229.8	5,181.2	48.58	107.645		
8,100.0	6,672.0	6,718.2	6,716.4	30.4	23.3	89.94	-567.5	5,066.8	5,135.7	5,087.0	48.72	105.418		
8,200.0	6,672.0	6,718.1	6,716.3	31.0	23.3	89.94	-567.5	5,066.8	5,042.0	4,993.1	48.87	103.176		
8,300.0	6,672.0	6,718.0	6,716.2	31.7	23.3	89.94	-567.5	5,066.8	4,948.4	4,899.4	49.03	100.917		
8,400.0	6,672.0	6,717.9	6,716.1	32.4	23.3	89.95	-567.5	5,066.8	4,855.2	4,806.0	49.22	98.642		
8,500.0	6,672.0	6,717.8	6,716.0	33.1	23.3	89.95	-567.5	5,066.8	4,762.2	4,712.8	49.42	96.352		
8,600.0	6,672.0	6,717.8	6,716.0	33.9	23.3	89.95	-567.5	5,066.8	4,669.5	4,619.8	49.65	94.047		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 5519 12-08 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
8,700.0	6,672.0	6,717.7	6,680.6	34.7	23.3	89.95	-567.5	5,066.8	4,577.1	4,527.2	49.90	91.727		
8,800.0	6,672.0	6,717.6	6,680.7	35.5	23.3	89.96	-567.5	5,066.8	4,485.0	4,434.9	50.17	89.394		
8,900.0	6,672.0	6,717.5	6,680.7	36.3	23.3	89.96	-567.5	5,066.8	4,393.3	4,342.9	50.47	87.048		
9,000.0	6,672.0	6,717.4	6,680.8	37.2	23.3	89.96	-567.5	5,066.8	4,302.0	4,251.2	50.80	84.691		
9,100.0	6,672.0	6,717.3	6,680.9	38.1	23.3	89.96	-567.5	5,066.8	4,211.1	4,159.9	51.15	82.324		
9,200.0	6,672.0	6,717.3	6,681.0	39.0	23.3	89.97	-567.5	5,066.8	4,120.5	4,069.0	51.54	79.948		
9,300.0	6,672.0	6,717.2	6,681.1	39.9	23.3	89.97	-567.5	5,066.8	4,030.5	3,978.5	51.96	77.565		
9,400.0	6,672.0	6,717.1	6,681.1	40.8	23.3	89.97	-567.5	5,066.8	3,940.9	3,888.5	52.42	75.178		
9,500.0	6,672.0	6,717.0	6,681.2	41.8	23.3	89.97	-567.5	5,066.8	3,851.8	3,798.9	52.92	72.788		
9,600.0	6,672.0	6,716.9	6,681.3	42.7	23.3	89.98	-567.5	5,066.8	3,763.3	3,709.9	53.46	70.399		
9,700.0	6,672.0	6,716.9	6,681.4	43.7	23.3	89.98	-567.5	5,066.8	3,675.4	3,621.4	54.04	68.012		
9,800.0	6,672.0	6,716.8	6,681.5	44.7	23.3	89.98	-567.5	5,066.8	3,588.1	3,533.5	54.67	65.632		
9,900.0	6,672.0	6,716.7	6,681.6	45.7	23.3	89.99	-567.5	5,066.8	3,501.5	3,446.2	55.35	63.260		
10,000.0	6,672.0	6,716.6	6,681.6	46.7	23.3	89.99	-567.5	5,066.8	3,415.7	3,359.6	56.08	60.902		
10,100.0	6,672.0	6,716.5	6,681.7	47.7	23.3	89.99	-567.5	5,066.8	3,330.6	3,273.7	56.87	58.560		
10,200.0	6,672.0	6,716.5	6,681.8	48.8	23.3	89.99	-567.5	5,066.8	3,246.4	3,188.7	57.72	56.239		
10,300.0	6,672.0	6,716.4	6,681.9	49.8	23.3	90.00	-567.5	5,066.8	3,163.1	3,104.5	58.64	53.943		
10,400.0	6,672.0	6,716.3	6,682.0	50.9	23.3	90.00	-567.5	5,066.8	3,080.8	3,021.2	59.62	51.677		
10,500.0	6,672.0	6,716.2	6,682.0	51.9	23.3	90.00	-567.5	5,066.8	2,999.6	2,938.9	60.67	49.445		
10,600.0	6,672.0	6,716.1	6,682.1	53.0	23.3	90.00	-567.5	5,066.8	2,919.6	2,857.8	61.79	47.251		
10,700.0	6,672.0	6,716.0	6,682.2	54.1	23.3	90.01	-567.5	5,066.8	2,840.8	2,777.8	62.99	45.102		
10,800.0	6,672.0	6,716.0	6,682.3	55.2	23.3	90.01	-567.5	5,066.8	2,763.4	2,699.1	64.26	43.000		
10,900.0	6,672.0	6,715.9	6,682.4	56.3	23.3	90.01	-567.5	5,066.8	2,687.5	2,621.9	65.62	40.953		
11,000.0	6,672.0	6,715.8	6,682.4	57.4	23.3	90.01	-567.5	5,066.8	2,613.2	2,546.2	67.07	38.964		
11,100.0	6,672.0	6,715.7	6,682.5	58.5	23.3	90.02	-567.5	5,066.8	2,540.8	2,472.2	68.60	37.038		
11,200.0	6,672.0	6,715.6	6,682.6	59.6	23.3	90.02	-567.5	5,066.8	2,470.2	2,400.0	70.22	35.180		
11,300.0	6,672.0	6,715.6	6,682.7	60.7	23.3	90.02	-567.5	5,066.8	2,401.7	2,329.8	71.92	33.395		
11,400.0	6,672.0	6,715.5	6,682.8	61.8	23.3	90.02	-567.5	5,066.8	2,335.5	2,261.8	73.71	31.687		
11,500.0	6,672.0	6,715.4	6,682.9	62.9	23.3	90.03	-567.5	5,066.8	2,271.8	2,196.3	75.57	30.061		
11,600.0	6,672.0	6,715.3	6,682.9	64.1	23.3	90.03	-567.5	5,066.8	2,210.8	2,133.3	77.52	28.520		
11,700.0	6,672.0	6,715.2	6,683.0	65.2	23.3	90.03	-567.5	5,066.8	2,152.7	2,073.2	79.53	27.068		
11,800.0	6,672.0	6,715.1	6,683.1	66.3	23.3	90.04	-567.5	5,066.8	2,097.8	2,016.2	81.60	25.708		
11,900.0	6,672.0	6,715.1	6,683.2	67.5	23.3	90.04	-567.5	5,066.8	2,046.3	1,962.6	83.72	24.443		
12,000.0	6,672.0	6,715.0	6,683.3	68.6	23.3	90.04	-567.5	5,066.8	1,998.5	1,912.6	85.86	23.276		
12,100.0	6,672.0	6,714.9	6,683.3	69.8	23.3	90.04	-567.5	5,066.8	1,954.6	1,866.6	88.01	22.209		
12,200.0	6,672.0	6,714.8	6,683.4	70.9	23.3	90.05	-567.5	5,066.8	1,915.0	1,824.9	90.15	21.243		
12,300.0	6,672.0	6,714.7	6,683.5	72.1	23.3	90.05	-567.5	5,066.8	1,879.9	1,787.6	92.24	20.380		
12,400.0	6,672.0	6,714.7	6,683.6	73.2	23.3	90.05	-567.5	5,066.8	1,849.5	1,755.2	94.26	19.621		
12,500.0	6,672.0	6,714.6	6,683.7	74.4	23.3	90.05	-567.5	5,066.8	1,824.1	1,727.9	96.19	18.964		
12,600.0	6,672.0	6,714.5	6,683.8	75.5	23.3	90.06	-567.5	5,066.8	1,803.9	1,706.0	97.98	18.411		
12,700.0	6,672.0	6,714.4	6,683.8	76.7	23.3	90.06	-567.5	5,066.8	1,789.1	1,689.5	99.62	17.960		
12,800.0	6,672.0	6,714.3	6,683.9	77.9	23.3	90.06	-567.5	5,066.8	1,779.8	1,678.8	101.07	17.610		
12,900.0	6,672.0	6,714.2	6,684.0	79.0	23.3	90.06	-567.5	5,066.8	1,776.1	1,673.8	102.32	17.360		
12,915.7	6,672.0	6,714.2	6,684.0	79.2	23.3	90.06	-567.5	5,066.8	1,776.1	1,673.6	102.49	17.329 CC, ES		
13,000.0	6,672.0	6,714.2	6,684.1	80.2	23.3	90.07	-567.5	5,066.8	1,778.1	1,674.7	103.34	17.206		
13,100.0	6,672.0	6,714.1	6,684.2	81.4	23.3	90.07	-567.5	5,066.8	1,785.6	1,681.5	104.14	17.147 SF		
13,200.0	6,672.0	6,714.0	6,684.2	82.6	23.3	90.07	-567.5	5,066.8	1,798.7	1,694.0	104.70	17.180		
13,300.0	6,672.0	6,713.9	6,684.3	83.7	23.3	90.08	-567.5	5,066.8	1,817.2	1,712.2	105.04	17.301		
13,400.0	6,672.0	6,713.8	6,684.4	84.9	23.3	90.08	-567.5	5,066.8	1,841.0	1,735.9	105.15	17.508		
13,500.0	6,672.0	6,713.8	6,684.5	86.1	23.3	90.08	-567.5	5,066.8	1,869.9	1,764.8	105.07	17.796		
13,600.0	6,672.0	6,713.7	6,684.6	87.3	23.3	90.08	-567.5	5,066.8	1,903.5	1,798.7	104.81	18.162		
13,700.0	6,672.0	6,713.6	6,684.7	88.4	23.3	90.09	-567.5	5,066.8	1,941.8	1,837.4	104.38	18.603		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 5519 12-08 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
13,800.0	6,672.0	6,713.5	6,684.7	89.6	23.3	90.09	-567.5	5,066.8	1,984.3	1,880.5	103.81	19.115		
13,900.0	6,672.0	6,713.4	6,684.8	90.8	23.3	90.09	-567.5	5,066.8	2,030.9	1,927.8	103.13	19.693		
14,000.0	6,672.0	6,713.3	6,684.9	92.0	23.3	90.09	-567.5	5,066.8	2,081.3	1,978.9	102.35	20.335		
14,100.0	6,672.0	6,713.3	6,685.0	93.2	23.3	90.10	-567.5	5,066.8	2,135.2	2,033.7	101.50	21.037		
14,200.0	6,672.0	6,713.2	6,685.1	94.4	23.3	90.10	-567.5	5,066.8	2,192.3	2,091.7	100.59	21.795		
14,300.0	6,672.0	6,713.1	6,685.1	95.6	23.3	90.10	-567.5	5,066.8	2,252.4	2,152.8	99.64	22.606		
14,400.0	6,672.0	6,713.0	6,685.2	96.8	23.3	90.10	-567.5	5,066.8	2,315.3	2,216.6	98.66	23.467		
14,500.0	6,672.0	6,712.9	6,685.3	98.0	23.3	90.11	-567.5	5,066.8	2,380.7	2,283.1	97.67	24.375		
14,600.0	6,672.0	6,712.9	6,685.4	99.2	23.3	90.11	-567.5	5,066.8	2,448.5	2,351.8	96.68	25.327		
14,700.0	6,672.0	6,712.8	6,685.5	100.4	23.3	90.11	-567.5	5,066.8	2,518.4	2,422.8	95.69	26.320		
14,800.0	6,672.0	6,712.7	6,685.6	101.6	23.3	90.11	-567.5	5,066.8	2,590.3	2,495.6	94.71	27.352		
14,900.0	6,672.0	6,712.6	6,685.6	102.7	23.3	90.12	-567.5	5,066.8	2,664.1	2,570.3	93.74	28.419		
15,000.0	6,672.0	6,712.5	6,685.7	103.9	23.3	90.12	-567.5	5,066.8	2,739.5	2,646.7	92.80	29.521		
15,100.0	6,672.0	6,712.4	6,685.8	105.1	23.3	90.12	-567.5	5,066.8	2,816.4	2,724.5	91.88	30.654		
15,200.0	6,672.0	6,712.4	6,685.9	106.3	23.3	90.13	-567.5	5,066.8	2,894.8	2,803.8	90.98	31.817		
15,300.0	6,672.0	6,712.3	6,686.0	107.6	23.3	90.13	-567.5	5,066.8	2,974.4	2,884.3	90.11	33.007		
15,400.0	6,672.0	6,712.2	6,686.0	108.8	23.3	90.13	-567.5	5,066.8	3,055.3	2,966.0	89.27	34.223		
15,500.0	6,672.0	6,712.1	6,686.1	110.0	23.3	90.13	-567.5	5,066.8	3,137.2	3,048.8	88.46	35.464		
15,600.0	6,672.0	6,712.0	6,686.2	111.2	23.3	90.14	-567.5	5,066.8	3,220.2	3,132.5	87.68	36.726		
15,700.0	6,672.0	6,712.0	6,686.3	112.4	23.3	90.14	-567.5	5,066.8	3,304.1	3,217.2	86.93	38.010		
15,800.0	6,672.0	6,711.9	6,686.4	113.6	23.3	90.14	-567.5	5,066.8	3,388.9	3,302.7	86.20	39.313		
15,900.0	6,672.0	6,711.8	6,686.5	114.8	23.3	90.14	-567.5	5,066.8	3,474.6	3,389.1	85.51	40.635		
16,000.0	6,672.0	6,711.7	6,686.5	116.0	23.3	90.15	-567.5	5,066.8	3,560.9	3,476.1	84.84	41.974		
16,100.0	6,672.0	6,711.6	6,686.6	117.2	23.3	90.15	-567.5	5,066.8	3,648.0	3,563.8	84.19	43.328		
16,200.0	6,672.0	6,711.5	6,686.7	118.4	23.3	90.15	-567.5	5,066.8	3,735.7	3,652.2	83.58	44.697		
16,300.0	6,672.0	6,711.5	6,686.8	119.6	23.3	90.15	-567.5	5,066.8	3,824.1	3,741.1	82.99	46.080		
16,400.0	6,672.0	6,711.4	6,686.9	120.8	23.3	90.16	-567.5	5,066.8	3,913.0	3,830.5	82.42	47.476		
16,500.0	6,672.0	6,711.3	6,686.9	122.0	23.3	90.16	-567.5	5,066.8	4,002.4	3,920.5	81.88	48.884		
16,600.0	6,672.0	6,711.2	6,687.0	123.2	23.3	90.16	-567.5	5,066.8	4,092.3	4,010.9	81.35	50.302		
16,700.0	6,672.0	6,711.1	6,687.1	124.5	23.3	90.17	-567.5	5,066.8	4,182.7	4,101.8	80.85	51.731		
16,800.0	6,672.0	6,711.1	6,687.2	125.7	23.3	90.17	-567.5	5,066.8	4,273.5	4,193.1	80.38	53.169		
16,900.0	6,672.0	6,711.0	6,687.3	126.9	23.3	90.17	-567.5	5,066.8	4,364.7	4,284.8	79.92	54.616		
17,000.0	6,672.0	6,710.9	6,687.4	128.1	23.3	90.17	-567.5	5,066.8	4,456.3	4,376.8	79.48	56.071		
17,100.0	6,672.0	6,710.8	6,687.4	129.3	23.3	90.18	-567.5	5,066.8	4,548.2	4,469.2	79.05	57.533		
17,200.0	6,672.0	6,710.7	6,687.5	130.5	23.3	90.18	-567.5	5,066.8	4,640.5	4,561.9	78.65	59.002		
17,300.0	6,672.0	6,710.6	6,687.6	131.7	23.3	90.18	-567.5	5,066.8	4,733.1	4,654.9	78.26	60.478		
17,400.0	6,672.0	6,710.6	6,687.7	133.0	23.3	90.18	-567.5	5,066.8	4,826.0	4,748.1	77.89	61.959		
17,500.0	6,672.0	6,710.5	6,687.8	134.2	23.3	90.19	-567.5	5,066.8	4,919.2	4,841.7	77.53	63.445		
17,600.0	6,672.0	6,710.4	6,687.8	135.4	23.3	90.19	-567.5	5,066.8	5,012.7	4,935.5	77.19	64.936		
17,700.0	6,672.0	6,710.3	6,687.9	136.6	23.3	90.19	-567.5	5,066.8	5,106.4	5,029.5	76.87	66.432		
17,800.0	6,672.0	6,710.2	6,688.0	137.8	23.3	90.19	-567.5	5,066.8	5,200.3	5,123.7	76.55	67.931		
17,900.0	6,672.0	6,710.2	6,688.1	139.0	23.3	90.20	-567.5	5,066.8	5,294.4	5,218.2	76.25	69.434		
18,000.0	6,672.0	6,710.1	6,688.2	140.3	23.3	90.20	-567.5	5,066.8	5,388.8	5,312.9	75.96	70.940		
18,100.0	6,672.0	6,710.0	6,688.3	141.5	23.3	90.20	-567.5	5,066.8	5,483.4	5,407.7	75.69	72.448		
18,200.0	6,672.0	6,709.9	6,688.3	142.7	23.3	90.21	-567.5	5,066.8	5,578.2	5,502.7	75.42	73.959		
18,300.0	6,672.0	6,709.8	6,688.4	143.9	23.3	90.21	-567.5	5,066.8	5,673.1	5,597.9	75.17	75.472		
18,342.5	6,672.0	6,709.8	6,688.5	144.4	23.3	90.21	-567.5	5,066.8	5,713.5	5,638.4	75.06	76.115		



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 5519 13-08 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 6981-2_Unknown													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	15.0	15.0	0.0	0.3	110.75	-1,884.5	4,972.9	5,318.0					
100.0	100.0	115.0	115.0	0.1	2.3	110.75	-1,884.5	4,972.9	5,318.0	5,315.6	2.43	2,192.398		
200.0	200.0	215.0	215.0	0.5	4.3	110.75	-1,884.5	4,972.9	5,318.0	5,313.2	4.78	1,111.595		
300.0	300.0	315.0	315.0	0.8	6.3	110.75	-1,884.5	4,972.9	5,318.0	5,310.9	7.14	744.549		
400.0	400.0	415.0	415.0	1.2	8.3	110.75	-1,884.5	4,972.9	5,318.0	5,308.5	9.50	559.728		
500.0	500.0	515.0	515.0	1.6	10.3	110.75	-1,884.5	4,972.9	5,318.0	5,306.2	11.86	448.417		
600.0	600.0	615.0	615.0	1.9	12.3	110.75	-1,884.5	4,972.9	5,318.0	5,303.8	14.22	374.034		
700.0	700.0	715.0	715.0	2.3	14.3	110.75	-1,884.5	4,972.9	5,318.0	5,301.4	16.58	320.817		
800.0	800.0	815.0	815.0	2.6	16.3	110.75	-1,884.5	4,972.9	5,318.0	5,299.1	18.93	280.857		
900.0	900.0	915.0	915.0	3.0	18.3	110.75	-1,884.5	4,972.9	5,318.0	5,296.7	21.29	249.749		
1,000.0	1,000.0	1,015.0	1,015.0	3.4	20.3	110.75	-1,884.5	4,972.9	5,318.0	5,294.4	23.65	224.845		
1,100.0	1,100.0	1,115.0	1,115.0	3.7	22.3	110.75	-1,884.5	4,972.9	5,318.0	5,292.0	26.01	204.458		
1,200.0	1,200.0	1,215.0	1,215.0	4.1	24.3	110.75	-1,884.5	4,972.9	5,318.0	5,289.6	28.37	187.460		
1,300.0	1,300.0	1,315.0	1,315.0	4.4	26.3	110.75	-1,884.5	4,972.9	5,318.0	5,287.3	30.73	173.071		
1,400.0	1,400.0	1,415.0	1,415.0	4.8	28.3	110.75	-1,884.5	4,972.9	5,318.0	5,284.9	33.09	160.734		
1,500.0	1,500.0	1,515.0	1,515.0	5.1	30.3	110.75	-1,884.5	4,972.9	5,318.0	5,282.6	35.44	150.039		
1,600.0	1,600.0	1,615.0	1,615.0	5.5	32.3	110.75	-1,884.5	4,972.9	5,318.0	5,280.2	37.80	140.678		
1,700.0	1,700.0	1,715.0	1,715.0	5.9	34.3	110.75	-1,884.5	4,972.9	5,318.0	5,277.9	40.16	132.417		
1,800.0	1,800.0	1,815.0	1,815.0	6.2	36.3	110.75	-1,884.5	4,972.9	5,318.0	5,275.5	42.52	125.072		
1,900.0	1,900.0	1,915.0	1,915.0	6.6	38.3	110.75	-1,884.5	4,972.9	5,318.0	5,273.1	44.88	118.499		
2,000.0	2,000.0	2,015.0	2,015.0	6.9	40.3	110.75	-1,884.5	4,972.9	5,318.0	5,270.8	47.24	112.583		
2,100.0	2,100.0	2,115.0	2,115.0	7.3	42.3	110.75	-1,884.5	4,972.9	5,318.0	5,268.4	49.60	107.229		
2,200.0	2,200.0	2,215.0	2,215.0	7.7	44.3	110.75	-1,884.5	4,972.9	5,318.0	5,266.1	51.95	102.361		
2,300.0	2,300.0	2,315.0	2,315.0	8.0	46.3	161.75	-1,884.5	4,972.9	5,319.7	5,265.4	54.31	97.954		
2,400.0	2,399.8	2,414.8	2,414.8	8.4	48.3	161.74	-1,884.5	4,972.9	5,324.6	5,268.0	56.66	93.980		
2,500.0	2,499.5	2,514.5	2,514.5	8.7	50.3	161.71	-1,884.5	4,972.9	5,332.9	5,273.9	59.00	90.387		
2,600.0	2,598.7	2,613.7	2,613.7	9.1	52.3	161.68	-1,884.5	4,972.9	5,344.5	5,283.2	61.34	87.134		
2,700.0	2,697.5	2,712.5	2,712.5	9.4	54.2	161.64	-1,884.5	4,972.9	5,359.4	5,295.7	63.66	84.186		
2,800.0	2,795.6	2,810.6	2,810.6	9.8	56.2	161.59	-1,884.5	4,972.9	5,377.5	5,311.5	65.97	81.510		
2,900.0	2,893.1	2,908.1	2,908.1	10.1	58.2	161.52	-1,884.5	4,972.9	5,398.9	5,330.6	68.27	79.082		
3,000.0	2,989.6	3,004.6	3,004.6	10.5	60.1	161.45	-1,884.5	4,972.9	5,423.5	5,353.0	70.55	76.877		
3,100.0	3,085.3	3,100.3	3,100.3	10.9	62.0	161.36	-1,884.5	4,972.9	5,451.4	5,378.5	72.81	74.874		
3,200.0	3,179.8	3,194.8	3,194.8	11.2	63.9	161.26	-1,884.5	4,972.9	5,482.4	5,407.3	75.04	73.056		
3,300.0	3,273.2	3,288.2	3,288.2	11.6	65.8	161.15	-1,884.5	4,972.9	5,516.5	5,439.3	77.26	71.406		
3,387.5	3,353.8	3,368.8	3,368.8	11.9	67.4	161.03	-1,884.5	4,972.9	5,549.0	5,469.8	79.17	70.089		
3,400.0	3,365.2	3,380.2	3,380.2	12.0	67.6	161.05	-1,884.5	4,972.9	5,553.8	5,474.3	79.44	69.908		
3,500.0	3,456.8	3,471.8	3,471.8	12.4	69.4	161.18	-1,884.5	4,972.9	5,592.2	5,510.6	81.62	68.517		
3,600.0	3,548.3	3,563.3	3,563.3	12.8	71.3	161.31	-1,884.5	4,972.9	5,630.7	5,546.9	83.80	67.195		
3,700.0	3,639.8	3,654.8	3,654.8	13.2	73.1	161.44	-1,884.5	4,972.9	5,669.1	5,583.2	85.98	65.937		
3,800.0	3,731.4	3,746.4	3,746.4	13.6	74.9	161.57	-1,884.5	4,972.9	5,707.6	5,619.5	88.17	64.738		
3,900.0	3,822.9	3,837.9	3,837.9	14.0	76.8	161.70	-1,884.5	4,972.9	5,746.2	5,655.8	90.36	63.594		
4,000.0	3,914.4	3,929.4	3,929.4	14.4	78.6	161.82	-1,884.5	4,972.9	5,784.7	5,692.2	92.55	62.503		
4,100.0	4,005.9	4,020.9	4,020.9	14.8	80.4	161.94	-1,884.5	4,972.9	5,823.3	5,728.6	94.75	61.460		
4,200.0	4,097.5	4,112.5	4,112.5	15.2	82.2	162.07	-1,884.5	4,972.9	5,861.9	5,765.0	96.95	60.463		
4,300.0	4,189.0	4,204.0	4,204.0	15.6	84.1	162.18	-1,884.5	4,972.9	5,900.6	5,801.4	99.15	59.509		
4,400.0	4,280.5	4,295.5	4,295.5	16.1	85.9	162.30	-1,884.5	4,972.9	5,939.2	5,837.8	101.36	58.595		
4,500.0	4,372.1	4,387.1	4,387.1	16.5	87.7	162.42	-1,884.5	4,972.9	5,977.9	5,874.3	103.57	57.718		
4,600.0	4,463.6	4,478.6	4,478.6	16.9	89.6	162.53	-1,884.5	4,972.9	6,016.6	5,910.8	105.78	56.877		
4,700.0	4,555.1	4,570.1	4,570.1	17.4	91.4	162.65	-1,884.5	4,972.9	6,055.3	5,947.3	107.99	56.070		
4,800.0	4,646.7	4,661.7	4,661.7	17.8	93.2	162.76	-1,884.5	4,972.9	6,094.0	5,983.8	110.21	55.294		
4,900.0	4,738.2	4,753.2	4,753.2	18.2	95.1	162.87	-1,884.5	4,972.9	6,132.8	6,020.3	112.43	54.549		
5,000.0	4,829.7	4,844.7	4,844.7	18.7	96.9	162.98	-1,884.5	4,972.9	6,171.5	6,056.9	114.65	53.831		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 5519 13-08 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 6981-2_Unknown													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,100.0	4,921.3	4,936.3	4,936.3	19.1	98.7	163.09	-1,884.5	4,972.9	6,210.3	6,093.5	116.87	53.140		
5,200.0	5,012.8	5,027.8	5,027.8	19.5	100.6	163.19	-1,884.5	4,972.9	6,249.1	6,130.0	119.09	52.474		
5,300.0	5,104.3	5,119.3	5,119.3	20.0	102.4	163.30	-1,884.5	4,972.9	6,288.0	6,166.6	121.31	51.832		
5,400.0	5,195.8	5,210.8	5,210.8	20.4	104.2	163.40	-1,884.5	4,972.9	6,326.8	6,203.3	123.54	51.213		
5,500.0	5,287.4	5,302.4	5,302.4	20.9	106.0	163.51	-1,884.5	4,972.9	6,365.7	6,239.9	125.77	50.615		
5,600.0	5,378.9	5,393.9	5,393.9	21.3	107.9	163.61	-1,884.5	4,972.9	6,404.6	6,276.6	127.99	50.038		
5,700.0	5,470.4	5,485.4	5,485.4	21.8	109.7	163.71	-1,884.5	4,972.9	6,443.4	6,313.2	130.22	49.480		
5,800.0	5,562.0	5,577.0	5,577.0	22.2	111.5	163.81	-1,884.5	4,972.9	6,482.4	6,349.9	132.45	48.941		
5,900.0	5,653.5	5,668.5	5,668.5	22.7	113.4	163.91	-1,884.5	4,972.9	6,521.3	6,386.6	134.68	48.419		
6,000.0	5,745.0	5,760.0	5,760.0	23.1	115.2	164.00	-1,884.5	4,972.9	6,560.2	6,423.3	136.92	47.914		
6,100.0	5,836.6	5,851.6	5,851.6	23.6	117.0	164.10	-1,884.5	4,972.9	6,599.2	6,460.1	139.15	47.425		
6,200.0	5,928.1	5,943.1	5,943.1	24.0	118.9	164.19	-1,884.5	4,972.9	6,638.2	6,496.8	141.38	46.951		
6,278.6	6,000.0	6,015.0	6,015.0	24.4	120.3	164.27	-1,884.5	4,972.9	6,668.8	6,525.7	143.14	46.590		
6,290.0	6,010.4	6,025.4	6,025.4	24.4	120.5	162.32	-1,884.5	4,972.9	6,673.3	6,529.9	143.39	46.538		
6,300.0	6,019.5	6,034.5	6,034.5	24.5	120.7	160.41	-1,884.5	4,972.9	6,677.3	6,533.7	143.62	46.493		
6,350.0	6,065.8	6,080.8	6,080.8	24.7	121.6	149.23	-1,884.5	4,972.9	6,694.7	6,549.9	144.74	46.253		
6,400.0	6,113.0	6,128.0	6,128.0	24.9	122.6	134.79	-1,884.5	4,972.9	6,708.0	6,562.1	145.88	45.984		
6,450.0	6,160.7	6,175.7	6,175.7	25.1	123.5	117.59	-1,884.5	4,972.9	6,717.1	6,570.1	147.01	45.690		
6,500.0	6,208.5	6,223.5	6,223.5	25.3	124.5	100.11	-1,884.5	4,972.9	6,722.1	6,573.9	148.14	45.376		
6,550.0	6,255.8	6,270.8	6,270.8	25.4	125.4	85.26	-1,884.5	4,972.9	6,727.7	6,573.5	149.25	45.043		
6,600.0	6,302.5	6,317.5	6,317.5	25.6	126.3	74.16	-1,884.5	4,972.9	6,719.1	6,568.8	150.33	44.696		
6,650.0	6,347.9	6,362.9	6,362.9	25.7	127.3	66.37	-1,884.5	4,972.9	6,711.3	6,559.9	151.36	44.338		
6,700.0	6,391.6	6,406.6	6,406.6	25.9	128.1	61.09	-1,884.5	4,972.9	6,699.4	6,547.0	152.35	43.972		
6,750.0	6,433.4	6,448.4	6,448.4	26.0	129.0	57.66	-1,884.5	4,972.9	6,683.4	6,530.1	153.29	43.601		
6,800.0	6,472.8	6,487.8	6,487.8	26.1	129.8	55.62	-1,884.5	4,972.9	6,663.6	6,509.4	154.16	43.226		
6,850.0	6,509.4	6,524.4	6,524.4	26.2	130.5	54.71	-1,884.5	4,972.9	6,640.2	6,485.2	154.96	42.850		
6,900.0	6,543.0	6,558.0	6,558.0	26.3	131.2	54.76	-1,884.5	4,972.9	6,613.3	6,457.6	155.69	42.477		
6,950.0	6,573.2	6,588.2	6,588.2	26.4	131.8	55.72	-1,884.5	4,972.9	6,583.2	6,426.8	156.35	42.106		
7,000.0	6,599.8	6,614.8	6,614.8	26.5	132.3	57.59	-1,884.5	4,972.9	6,550.2	6,393.3	156.92	41.742		
7,050.0	6,622.5	6,637.5	6,637.5	26.6	132.7	60.42	-1,884.5	4,972.9	6,514.6	6,357.2	157.42	41.385		
7,100.0	6,641.1	6,656.1	6,656.1	26.7	133.1	64.32	-1,884.5	4,972.9	6,476.7	6,318.9	157.83	41.037		
7,150.0	6,665.4	6,670.4	6,670.4	26.8	133.4	69.42	-1,884.5	4,972.9	6,436.8	6,278.7	158.15	40.701		
7,200.0	6,665.4	6,680.4	6,680.4	26.9	133.6	75.84	-1,884.5	4,972.9	6,395.4	6,237.0	158.39	40.377		
7,250.0	6,670.8	6,685.8	6,685.8	27.0	133.7	83.64	-1,884.5	4,972.9	6,352.7	6,194.2	158.55	40.068		
7,285.7	6,672.0	6,687.0	6,687.0	27.1	133.7	90.00	-1,884.5	4,972.9	6,321.8	6,163.2	158.61	39.858		
7,300.0	6,672.0	6,687.0	6,687.0	27.1	133.7	90.00	-1,884.5	4,972.9	6,309.3	6,150.6	158.62	39.775		
7,400.0	6,672.0	6,687.0	6,687.0	27.3	133.7	90.00	-1,884.5	4,972.9	6,222.2	6,063.4	158.74	39.197		
7,500.0	6,672.0	6,687.0	6,687.0	27.6	133.7	90.00	-1,884.5	4,972.9	6,135.5	5,976.6	158.88	38.618		
7,600.0	6,672.0	6,687.0	6,687.0	28.0	133.7	90.00	-1,884.5	4,972.9	6,049.2	5,890.2	159.04	38.037		
7,700.0	6,672.0	6,687.0	6,687.0	28.3	133.7	90.00	-1,884.5	4,972.9	5,963.4	5,804.1	159.22	37.454		
7,800.0	6,672.0	6,687.0	6,687.0	28.8	133.7	90.00	-1,884.5	4,972.9	5,878.0	5,718.5	159.42	36.870		
7,900.0	6,672.0	6,687.0	6,687.0	29.3	133.7	90.00	-1,884.5	4,972.9	5,793.1	5,633.4	159.66	36.284		
8,000.0	6,672.0	6,687.0	6,687.0	29.8	133.7	90.00	-1,884.5	4,972.9	5,708.6	5,548.7	159.92	35.697		
8,100.0	6,672.0	6,687.0	6,687.0	30.4	133.7	90.00	-1,884.5	4,972.9	5,624.7	5,464.5	160.21	35.109		
8,200.0	6,672.0	6,687.0	6,687.0	31.0	133.7	90.00	-1,884.5	4,972.9	5,541.3	5,380.8	160.52	34.520		
8,300.0	6,672.0	6,687.0	6,687.0	31.7	133.7	90.00	-1,884.5	4,972.9	5,458.5	5,297.7	160.87	33.931		
8,400.0	6,672.0	6,687.0	6,687.0	32.4	133.7	90.00	-1,884.5	4,972.9	5,376.3	5,215.1	161.25	33.341		
8,500.0	6,672.0	6,687.0	6,687.0	33.1	133.7	90.00	-1,884.5	4,972.9	5,294.7	5,133.0	161.67	32.750		
8,600.0	6,672.0	6,687.0	6,687.0	33.9	133.7	90.00	-1,884.5	4,972.9	5,213.7	5,051.6	162.12	32.160		
8,700.0	6,672.0	6,687.0	6,687.0	34.7	133.7	90.00	-1,884.5	4,972.9	5,133.5	4,970.9	162.61	31.570		
8,800.0	6,672.0	6,687.0	6,687.0	35.5	133.7	90.00	-1,884.5	4,972.9	5,053.9	4,890.8	163.13	30.981		
8,900.0	6,672.0	6,687.0	6,687.0	36.3	133.7	90.00	-1,884.5	4,972.9	4,975.1	4,811.4	163.69	30.393		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 5519 13-08 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 6981-2_Unknown													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
9,000.0	6,672.0	6,687.0	6,687.0	37.2	133.7	90.00	-1,884.5	4,972.9	4,897.0	4,732.7	164.29	29.807		
9,100.0	6,672.0	6,687.0	6,687.0	38.1	133.7	90.00	-1,884.5	4,972.9	4,819.8	4,654.8	164.93	29.222		
9,200.0	6,672.0	6,687.0	6,687.0	39.0	133.7	90.00	-1,884.5	4,972.9	4,743.4	4,577.8	165.62	28.641		
9,300.0	6,672.0	6,687.0	6,687.0	39.9	133.7	90.00	-1,884.5	4,972.9	4,667.9	4,501.5	166.34	28.062		
9,400.0	6,672.0	6,687.0	6,687.0	40.8	133.7	90.00	-1,884.5	4,972.9	4,593.3	4,426.2	167.11	27.487		
9,500.0	6,672.0	6,687.0	6,687.0	41.8	133.7	90.00	-1,884.5	4,972.9	4,519.8	4,351.8	167.92	26.916		
9,600.0	6,672.0	6,687.0	6,687.0	42.7	133.7	90.00	-1,884.5	4,972.9	4,447.3	4,278.5	168.78	26.349		
9,700.0	6,672.0	6,687.0	6,687.0	43.7	133.7	90.00	-1,884.5	4,972.9	4,375.8	4,206.1	169.68	25.788		
9,800.0	6,672.0	6,687.0	6,687.0	44.7	133.7	90.00	-1,884.5	4,972.9	4,305.5	4,134.9	170.63	25.233		
9,900.0	6,672.0	6,687.0	6,687.0	45.7	133.7	90.00	-1,884.5	4,972.9	4,236.4	4,064.8	171.62	24.685		
10,000.0	6,672.0	6,687.0	6,687.0	46.7	133.7	90.00	-1,884.5	4,972.9	4,168.6	3,996.0	172.66	24.144		
10,100.0	6,672.0	6,687.0	6,687.0	47.7	133.7	90.00	-1,884.5	4,972.9	4,102.1	3,928.4	173.74	23.610		
10,200.0	6,672.0	6,687.0	6,687.0	48.8	133.7	90.00	-1,884.5	4,972.9	4,037.0	3,862.1	174.87	23.086		
10,300.0	6,672.0	6,687.0	6,687.0	49.8	133.7	90.00	-1,884.5	4,972.9	3,973.3	3,797.3	176.04	22.570		
10,400.0	6,672.0	6,687.0	6,687.0	50.9	133.7	90.00	-1,884.5	4,972.9	3,911.2	3,733.9	177.26	22.065		
10,500.0	6,672.0	6,687.0	6,687.0	51.9	133.7	90.00	-1,884.5	4,972.9	3,850.6	3,672.1	178.52	21.570		
10,600.0	6,672.0	6,687.0	6,687.0	53.0	133.7	90.00	-1,884.5	4,972.9	3,791.8	3,612.0	179.82	21.087		
10,700.0	6,672.0	6,687.0	6,687.0	54.1	133.7	90.00	-1,884.5	4,972.9	3,734.7	3,553.5	181.16	20.615		
10,800.0	6,672.0	6,687.0	6,687.0	55.2	133.7	90.00	-1,884.5	4,972.9	3,679.4	3,496.9	182.54	20.157		
10,900.0	6,672.0	6,687.0	6,687.0	56.3	133.7	90.00	-1,884.5	4,972.9	3,626.1	3,442.1	183.95	19.712		
11,000.0	6,672.0	6,687.0	6,687.0	57.4	133.7	90.00	-1,884.5	4,972.9	3,574.7	3,389.3	185.40	19.281		
11,100.0	6,672.0	6,687.0	6,687.0	58.5	133.7	90.00	-1,884.5	4,972.9	3,525.5	3,338.6	186.88	18.865		
11,200.0	6,672.0	6,687.0	6,687.0	59.6	133.7	90.00	-1,884.5	4,972.9	3,478.4	3,290.1	188.38	18.465		
11,300.0	6,672.0	6,687.0	6,687.0	60.7	133.7	90.00	-1,884.5	4,972.9	3,433.7	3,243.8	189.90	18.081		
11,400.0	6,672.0	6,687.0	6,687.0	61.8	133.7	90.00	-1,884.5	4,972.9	3,391.2	3,199.8	191.45	17.714		
11,500.0	6,672.0	6,687.0	6,687.0	62.9	133.7	90.00	-1,884.5	4,972.9	3,351.3	3,158.3	193.00	17.364		
11,600.0	6,672.0	6,687.0	6,687.0	64.1	133.7	90.00	-1,884.5	4,972.9	3,313.9	3,119.3	194.56	17.032		
11,700.0	6,672.0	6,687.0	6,687.0	65.2	133.7	90.00	-1,884.5	4,972.9	3,279.1	3,083.0	196.13	16.719		
11,800.0	6,672.0	6,687.0	6,687.0	66.3	133.7	90.00	-1,884.5	4,972.9	3,247.0	3,049.3	197.69	16.425		
11,900.0	6,672.0	6,687.0	6,687.0	67.5	133.7	90.00	-1,884.5	4,972.9	3,217.7	3,018.5	199.23	16.151		
12,000.0	6,672.0	6,687.0	6,687.0	68.6	133.7	90.00	-1,884.5	4,972.9	3,191.3	2,990.6	200.76	15.896		
12,100.0	6,672.0	6,687.0	6,687.0	69.8	133.7	90.00	-1,884.5	4,972.9	3,167.9	2,965.6	202.27	15.662		
12,200.0	6,672.0	6,687.0	6,687.0	70.9	133.7	90.00	-1,884.5	4,972.9	3,147.5	2,943.7	203.75	15.448		
12,300.0	6,672.0	6,687.0	6,687.0	72.1	133.7	90.00	-1,884.5	4,972.9	3,130.1	2,924.9	205.19	15.255		
12,400.0	6,672.0	6,687.0	6,687.0	73.2	133.7	90.00	-1,884.5	4,972.9	3,115.8	2,909.3	206.58	15.083		
12,500.0	6,672.0	6,687.0	6,687.0	74.4	133.7	90.00	-1,884.5	4,972.9	3,104.7	2,896.8	207.92	14.932		
12,600.0	6,672.0	6,687.0	6,687.0	75.5	133.7	90.00	-1,884.5	4,972.9	3,096.9	2,887.7	209.21	14.803		
12,700.0	6,672.0	6,687.0	6,687.0	76.7	133.7	90.00	-1,884.5	4,972.9	3,092.2	2,881.8	210.44	14.694		
12,794.0	6,672.0	6,687.0	6,687.0	77.8	133.7	90.00	-1,884.5	4,972.9	3,090.8	2,879.2	211.53	14.612 CC		
12,800.0	6,672.0	6,687.0	6,687.0	77.9	133.7	90.00	-1,884.5	4,972.9	3,090.8	2,879.2	211.60	14.607 ES		
12,900.0	6,672.0	6,687.0	6,687.0	79.0	133.7	90.00	-1,884.5	4,972.9	3,092.6	2,879.9	212.68	14.541		
13,000.0	6,672.0	6,687.0	6,687.0	80.2	133.7	90.00	-1,884.5	4,972.9	3,097.6	2,883.9	213.70	14.496		
13,100.0	6,672.0	6,687.0	6,687.0	81.4	133.7	90.00	-1,884.5	4,972.9	3,105.9	2,891.3	214.63	14.471		
13,200.0	6,672.0	6,687.0	6,687.0	82.6	133.7	90.00	-1,884.5	4,972.9	3,117.4	2,901.9	215.49	14.467 SF		
13,300.0	6,672.0	6,687.0	6,687.0	83.7	133.7	90.00	-1,884.5	4,972.9	3,132.0	2,915.7	216.27	14.482		
13,400.0	6,672.0	6,687.0	6,687.0	84.9	133.7	90.00	-1,884.5	4,972.9	3,149.8	2,932.8	216.96	14.518		
13,500.0	6,672.0	6,687.0	6,687.0	86.1	133.7	90.00	-1,884.5	4,972.9	3,170.6	2,953.0	217.58	14.572		
13,600.0	6,672.0	6,687.0	6,687.0	87.3	133.7	90.00	-1,884.5	4,972.9	3,194.4	2,976.3	218.11	14.645		
13,700.0	6,672.0	6,687.0	6,687.0	88.4	133.7	90.00	-1,884.5	4,972.9	3,221.1	3,002.5	218.57	14.737		
13,800.0	6,672.0	6,687.0	6,687.0	89.6	133.7	90.00	-1,884.5	4,972.9	3,250.7	3,031.8	218.96	14.846		
13,900.0	6,672.0	6,687.0	6,687.0	90.8	133.7	90.00	-1,884.5	4,972.9	3,283.1	3,063.9	219.27	14.973		
14,000.0	6,672.0	6,687.0	6,687.0	92.0	133.7	90.00	-1,884.5	4,972.9	3,318.2	3,098.7	219.51	15.116		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 5519 13-08 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 6981-2_Unknown													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
14,100.0	6,672.0	6,687.0	6,687.0	93.2	133.7	90.00	-1,884.5	4,972.9	3,356.0	3,136.3	219.69	15.276		
14,200.0	6,672.0	6,687.0	6,687.0	94.4	133.7	90.00	-1,884.5	4,972.9	3,396.2	3,176.4	219.81	15.451		
14,300.0	6,672.0	6,687.0	6,687.0	95.6	133.7	90.00	-1,884.5	4,972.9	3,438.9	3,219.1	219.87	15.641		
14,400.0	6,672.0	6,687.0	6,687.0	96.8	133.7	90.00	-1,884.5	4,972.9	3,484.0	3,264.1	219.87	15.845		
14,500.0	6,672.0	6,687.0	6,687.0	98.0	133.7	90.00	-1,884.5	4,972.9	3,531.3	3,311.5	219.83	16.064		
14,600.0	6,672.0	6,687.0	6,687.0	99.2	133.7	90.00	-1,884.5	4,972.9	3,580.8	3,361.1	219.74	16.296		
14,700.0	6,672.0	6,687.0	6,687.0	100.4	133.7	90.00	-1,884.5	4,972.9	3,632.4	3,412.8	219.61	16.540		
14,800.0	6,672.0	6,687.0	6,687.0	101.6	133.7	90.00	-1,884.5	4,972.9	3,686.0	3,466.5	219.44	16.797		
14,900.0	6,672.0	6,687.0	6,687.0	102.7	133.7	90.00	-1,884.5	4,972.9	3,741.4	3,522.2	219.24	17.065		
15,000.0	6,672.0	6,687.0	6,687.0	103.9	133.7	90.00	-1,884.5	4,972.9	3,798.8	3,579.8	219.01	17.345		
15,100.0	6,672.0	6,687.0	6,687.0	105.1	133.7	90.00	-1,884.5	4,972.9	3,857.8	3,639.1	218.75	17.636		
15,200.0	6,672.0	6,687.0	6,687.0	106.3	133.7	90.00	-1,884.5	4,972.9	3,918.6	3,700.1	218.47	17.936		
15,300.0	6,672.0	6,687.0	6,687.0	107.6	133.7	90.00	-1,884.5	4,972.9	3,980.9	3,762.7	218.17	18.247		
15,400.0	6,672.0	6,687.0	6,687.0	108.8	133.7	90.00	-1,884.5	4,972.9	4,044.7	3,826.9	217.85	18.567		
15,500.0	6,672.0	6,687.0	6,687.0	110.0	133.7	90.00	-1,884.5	4,972.9	4,110.0	3,892.5	217.52	18.895		
15,600.0	6,672.0	6,687.0	6,687.0	111.2	133.7	90.00	-1,884.5	4,972.9	4,176.7	3,959.5	217.17	19.233		
15,700.0	6,672.0	6,687.0	6,687.0	112.4	133.7	90.00	-1,884.5	4,972.9	4,244.7	4,027.9	216.81	19.578		
15,800.0	6,672.0	6,687.0	6,687.0	113.6	133.7	90.00	-1,884.5	4,972.9	4,313.9	4,097.5	216.44	19.931		
15,900.0	6,672.0	6,687.0	6,687.0	114.8	133.7	90.00	-1,884.5	4,972.9	4,384.4	4,168.3	216.07	20.291		
16,000.0	6,672.0	6,687.0	6,687.0	116.0	133.7	90.00	-1,884.5	4,972.9	4,455.9	4,240.2	215.69	20.659		
16,100.0	6,672.0	6,687.0	6,687.0	117.2	133.7	90.00	-1,884.5	4,972.9	4,528.6	4,313.3	215.31	21.033		
16,200.0	6,672.0	6,687.0	6,687.0	118.4	133.7	90.00	-1,884.5	4,972.9	4,602.2	4,387.3	214.92	21.414		
16,300.0	6,672.0	6,687.0	6,687.0	119.6	133.7	90.00	-1,884.5	4,972.9	4,676.9	4,462.4	214.54	21.800		
16,400.0	6,672.0	6,687.0	6,687.0	120.8	133.7	90.00	-1,884.5	4,972.9	4,752.5	4,538.4	214.15	22.193		
16,500.0	6,672.0	6,687.0	6,687.0	122.0	133.7	90.00	-1,884.5	4,972.9	4,829.0	4,615.2	213.76	22.590		
16,600.0	6,672.0	6,687.0	6,687.0	123.2	133.7	90.00	-1,884.5	4,972.9	4,906.3	4,693.0	213.38	22.994		
16,700.0	6,672.0	6,687.0	6,687.0	124.5	133.7	90.00	-1,884.5	4,972.9	4,984.5	4,771.5	213.00	23.402		
16,800.0	6,672.0	6,687.0	6,687.0	125.7	133.7	90.00	-1,884.5	4,972.9	5,063.4	4,850.8	212.62	23.815		
16,900.0	6,672.0	6,687.0	6,687.0	126.9	133.7	90.00	-1,884.5	4,972.9	5,143.1	4,930.8	212.24	24.232		
17,000.0	6,672.0	6,687.0	6,687.0	128.1	133.7	90.00	-1,884.5	4,972.9	5,223.4	5,011.6	211.87	24.654		
17,100.0	6,672.0	6,687.0	6,687.0	129.3	133.7	90.00	-1,884.5	4,972.9	5,304.5	5,093.0	211.50	25.080		
17,200.0	6,672.0	6,687.0	6,687.0	130.5	133.7	90.00	-1,884.5	4,972.9	5,386.2	5,175.0	211.14	25.510		
17,300.0	6,672.0	6,687.0	6,687.0	131.7	133.7	90.00	-1,884.5	4,972.9	5,468.5	5,257.7	210.78	25.944		
17,400.0	6,672.0	6,687.0	6,687.0	133.0	133.7	90.00	-1,884.5	4,972.9	5,551.3	5,340.9	210.43	26.381		
17,500.0	6,672.0	6,687.0	6,687.0	134.2	133.7	90.00	-1,884.5	4,972.9	5,634.8	5,424.7	210.08	26.821		
17,600.0	6,672.0	6,687.0	6,687.0	135.4	133.7	90.00	-1,884.5	4,972.9	5,718.8	5,509.0	209.74	27.265		
17,700.0	6,672.0	6,687.0	6,687.0	136.6	133.7	90.00	-1,884.5	4,972.9	5,803.2	5,593.8	209.41	27.712		
17,800.0	6,672.0	6,687.0	6,687.0	137.8	133.7	90.00	-1,884.5	4,972.9	5,888.2	5,679.1	209.08	28.162		
17,900.0	6,672.0	6,687.0	6,687.0	139.0	133.7	90.00	-1,884.5	4,972.9	5,973.7	5,764.9	208.76	28.615		
18,000.0	6,672.0	6,687.0	6,687.0	140.3	133.7	90.00	-1,884.5	4,972.9	6,059.6	5,851.1	208.44	29.071		
18,100.0	6,672.0	6,687.0	6,687.0	141.5	133.7	90.00	-1,884.5	4,972.9	6,145.9	5,937.8	208.13	29.529		
18,200.0	6,672.0	6,687.0	6,687.0	142.7	133.7	90.00	-1,884.5	4,972.9	6,232.6	6,024.8	207.83	29.989		
18,300.0	6,672.0	6,687.0	6,687.0	143.9	133.7	90.00	-1,884.5	4,972.9	6,319.8	6,112.2	207.53	30.452		
18,342.5	6,672.0	6,687.0	6,687.0	144.4	133.7	90.00	-1,884.5	4,972.9	6,356.9	6,149.5	207.41	30.649		



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 5519 14-08 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWGS, 6600-2_Unknown													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis		Distance								Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
0.0	0.0	25.0	25.0	0.0	0.0	125.78	-3,535.6	4,905.8	6,047.1					
100.0	100.0	123.2	123.2	0.1	0.3	125.77	-3,534.8	4,906.6	6,047.3	6,046.9	0.39	N/A		
200.0	200.0	343.2	343.1	0.5	1.1	125.77	-3,533.2	4,904.2	6,045.5	6,044.0	1.53	3,946.393		
300.0	300.0	400.0	399.9	0.8	1.3	125.80	-3,535.2	4,902.0	6,044.2	6,042.1	2.11	2,865.335		
400.0	400.0	457.9	457.6	1.2	1.5	125.83	-3,538.2	4,899.5	6,043.6	6,040.9	2.71	2,232.080		
500.0	500.0	554.5	554.0	1.6	1.9	125.90	-3,543.2	4,895.3	6,043.1	6,039.6	3.46	1,747.738		
600.0	600.0	657.1	656.4	1.9	2.3	125.96	-3,548.7	4,890.8	6,042.7	6,038.5	4.21	1,434.431		
700.0	700.0	788.2	787.1	2.3	2.8	126.04	-3,554.8	4,885.2	6,042.0	6,036.9	5.05	1,195.517		
800.0	800.0	885.9	884.8	2.6	3.1	126.09	-3,558.7	4,881.2	6,041.0	6,035.3	5.76	1,048.464		
900.0	900.0	970.6	969.3	3.0	3.4	126.14	-3,562.2	4,877.8	6,040.2	6,033.8	6.42	940.719		
1,000.0	1,000.0	1,069.2	1,067.8	3.4	3.8	126.19	-3,566.2	4,874.1	6,039.6	6,032.4	7.13	847.424		
1,100.0	1,100.0	1,197.6	1,196.0	3.7	4.2	126.25	-3,570.9	4,869.3	6,038.7	6,030.8	7.93	761.092		
1,200.0	1,200.0	1,285.6	1,283.8	4.1	4.5	126.29	-3,573.7	4,866.1	6,037.7	6,029.1	8.60	702.212		
1,300.0	1,300.0	1,380.4	1,378.6	4.4	4.9	126.33	-3,576.5	4,863.0	6,036.8	6,027.5	9.28	650.231		
1,400.0	1,400.0	1,473.2	1,471.3	4.8	5.2	126.37	-3,579.1	4,860.3	6,036.0	6,026.1	9.96	605.917		
1,500.0	1,500.0	1,561.2	1,559.2	5.1	5.5	126.40	-3,581.3	4,857.9	6,035.4	6,024.8	10.62	568.183		
1,600.0	1,600.0	1,670.8	1,668.7	5.5	5.9	126.43	-3,583.9	4,855.3	6,034.9	6,023.5	11.36	531.425		
1,700.0	1,700.0	1,827.5	1,825.4	5.9	6.4	126.47	-3,586.1	4,851.5	6,033.8	6,021.5	12.25	492.565		
1,800.0	1,800.0	1,953.6	1,951.4	6.2	6.8	126.49	-3,586.5	4,848.3	6,031.9	6,018.9	13.04	462.638		
1,900.0	1,900.0	2,070.6	2,068.4	6.6	7.2	126.51	-3,586.3	4,845.2	6,029.7	6,015.9	13.80	437.054		
2,000.0	2,000.0	2,226.1	2,223.9	6.9	7.8	126.52	-3,584.9	4,840.9	6,027.0	6,012.3	14.69	410.406		
2,100.0	2,100.0	2,336.3	2,334.0	7.3	8.1	126.52	-3,582.9	4,837.7	6,023.5	6,008.1	15.42	390.593		
2,200.0	2,200.0	2,415.6	2,413.2	7.7	8.4	126.52	-3,581.2	4,835.7	6,020.3	6,004.2	16.05	375.011		
2,283.1	2,283.1	2,487.9	2,485.5	7.9	8.7	177.52	-3,579.7	4,834.2	6,019.0	6,002.4	16.60	362.630		
2,300.0	2,300.0	2,503.5	2,501.1	8.0	8.7	177.52	-3,579.3	4,833.9	6,019.1	6,002.3	16.71	360.169		
2,400.0	2,399.8	2,625.2	2,622.8	8.4	9.1	177.51	-3,576.2	4,831.6	6,021.3	6,003.8	17.48	344.414		
2,500.0	2,499.5	2,758.4	2,755.8	8.7	9.6	177.49	-3,572.0	4,828.8	6,026.4	6,008.1	18.29	329.437		
2,600.0	2,598.7	2,844.6	2,842.0	9.1	9.9	177.48	-3,569.3	4,826.8	6,034.8	6,015.9	18.94	318.548		
2,700.0	2,697.5	2,913.7	2,911.0	9.4	10.1	177.47	-3,567.6	4,825.2	6,047.2	6,027.6	19.54	309.513		
2,800.0	2,795.6	2,980.8	2,978.1	9.8	10.4	177.46	-3,566.2	4,823.9	6,063.5	6,043.3	20.12	301.320		
2,900.0	2,893.1	3,046.8	3,044.1	10.1	10.6	177.44	-3,565.1	4,822.8	6,083.7	6,063.0	20.70	293.859		
3,000.0	2,989.6	3,100.0	3,097.3	10.5	10.8	177.43	-3,564.4	4,822.1	6,107.9	6,086.6	21.24	287.611		
3,100.0	3,085.3	3,165.9	3,163.2	10.9	11.0	177.41	-3,563.8	4,821.5	6,136.0	6,114.2	21.81	281.306		
3,200.0	3,179.8	3,244.1	3,241.4	11.2	11.3	177.39	-3,563.5	4,821.3	6,168.0	6,145.5	22.43	274.985		
3,300.0	3,273.2	3,358.8	3,356.1	11.6	11.7	177.37	-3,562.9	4,820.7	6,203.1	6,179.9	23.18	267.643		
3,387.5	3,353.8	3,439.0	3,436.2	11.9	11.9	177.36	-3,562.9	4,819.8	6,236.3	6,212.6	23.76	262.483		
3,400.0	3,365.2	3,448.4	3,445.7	12.0	12.0	177.36	-3,562.9	4,819.6	6,241.2	6,217.4	23.84	261.832		
3,500.0	3,456.8	3,516.4	3,513.7	12.4	12.2	177.39	-3,563.7	4,818.5	6,280.9	6,256.4	24.41	257.263		
3,600.0	3,548.3	3,567.6	3,564.8	12.8	12.4	177.41	-3,564.7	4,817.6	6,321.0	6,296.0	24.93	253.510		
3,700.0	3,639.8	3,638.4	3,635.6	13.2	12.6	177.44	-3,566.5	4,816.7	6,361.6	6,336.1	25.53	249.205		
3,800.0	3,731.4	3,739.9	3,737.0	13.6	13.0	177.48	-3,568.8	4,815.5	6,402.2	6,376.0	26.24	244.003		
3,900.0	3,822.9	3,829.4	3,826.5	14.0	13.3	177.52	-3,571.1	4,814.2	6,442.8	6,415.9	26.91	239.428		
4,000.0	3,914.4	3,908.4	3,905.5	14.4	13.6	177.56	-3,573.3	4,813.0	6,483.5	6,455.9	27.54	235.384		
4,100.0	4,005.9	3,989.3	3,986.4	14.8	13.9	177.60	-3,575.5	4,812.0	6,524.3	6,496.1	28.19	231.449		
4,200.0	4,097.5	4,095.9	4,092.9	15.2	14.2	177.64	-3,578.3	4,810.8	6,565.1	6,536.2	28.93	226.902		
4,300.0	4,189.0	4,178.3	4,175.3	15.6	14.5	177.68	-3,580.7	4,809.5	6,605.9	6,576.3	29.59	223.244		
4,400.0	4,280.5	4,260.4	4,257.4	16.1	14.8	177.72	-3,583.3	4,808.3	6,646.8	6,616.5	30.25	219.739		
4,500.0	4,372.1	4,345.0	4,341.8	16.5	15.1	177.76	-3,586.0	4,807.1	6,687.8	6,656.9	30.92	216.310		
4,600.0	4,463.6	4,434.7	4,431.6	16.9	15.4	177.80	-3,588.6	4,806.2	6,728.8	6,697.2	31.61	212.878		
4,700.0	4,555.1	4,525.2	4,522.0	17.4	15.7	177.83	-3,590.9	4,805.5	6,769.9	6,737.6	32.30	209.563		
4,800.0	4,646.7	4,609.4	4,606.2	17.8	16.0	177.86	-3,593.0	4,804.9	6,811.0	6,778.1	32.98	206.535		
4,900.0	4,738.2	4,696.8	4,693.5	18.2	17.2	177.95	-3,594.3	4,799.2	6,849.2	6,814.6	34.60	197.951		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 5519 14-08 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWGS, 6600-2_Unknown													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,000.0	4,829.7	5,037.1	5,033.7	18.7	17.5	177.96	-3,592.9	4,797.2	6,887.2	6,851.9	35.35	194.853		
5,100.0	4,921.3	5,100.0	5,096.6	19.1	17.7	177.97	-3,591.9	4,795.8	6,925.1	6,889.2	35.95	192.643		
5,200.0	5,012.8	5,153.9	5,150.5	19.5	17.9	177.98	-3,591.3	4,794.8	6,963.5	6,927.0	36.51	190.704		
5,300.0	5,104.3	5,200.0	5,196.6	20.0	18.1	177.99	-3,591.2	4,794.3	7,002.7	6,965.7	37.05	189.008		
5,400.0	5,195.8	5,276.5	5,273.1	20.4	18.3	178.00	-3,591.2	4,793.7	7,042.3	7,004.6	37.70	186.776		
5,500.0	5,287.4	5,350.4	5,347.0	20.9	18.6	178.01	-3,591.2	4,793.1	7,082.0	7,043.7	38.35	184.667		
5,600.0	5,378.9	5,424.1	5,420.7	21.3	18.9	178.02	-3,591.1	4,792.9	7,122.0	7,083.0	39.00	182.639		
5,700.0	5,470.4	5,517.8	5,514.4	21.8	19.2	178.03	-3,590.6	4,793.0	7,162.1	7,122.3	39.72	180.306		
5,800.0	5,562.0	5,593.0	5,589.6	22.2	19.4	178.03	-3,590.0	4,793.3	7,202.2	7,161.8	40.37	178.389		
5,900.0	5,653.5	5,710.6	5,707.2	22.7	19.9	178.03	-3,589.0	4,793.9	7,242.3	7,201.1	41.20	175.785		
6,000.0	5,745.0	5,805.0	5,801.6	23.1	20.2	178.04	-3,588.0	4,794.2	7,282.3	7,240.3	41.93	173.664		
6,100.0	5,836.6	5,907.2	5,903.8	23.6	20.5	178.04	-3,587.0	4,794.4	7,322.1	7,279.4	42.70	171.480		
6,200.0	5,928.1	5,980.4	5,977.0	24.0	20.8	178.05	-3,586.4	4,794.5	7,362.0	7,318.6	43.35	169.839		
6,278.6	6,000.0	6,119.0	6,115.6	24.4	21.3	178.06	-3,585.3	4,794.2	7,393.2	7,349.0	44.19	167.295		
6,290.0	6,010.4	6,115.3	6,111.9	24.4	21.3	176.19	-3,585.4	4,794.2	7,397.8	7,353.6	44.22	167.303		
6,300.0	6,019.5	6,123.1	6,119.7	24.5	21.3	174.17	-3,585.3	4,794.2	7,401.8	7,357.6	44.29	167.140		
6,350.0	6,065.8	6,162.4	6,159.0	24.7	21.4	162.47	-3,585.1	4,793.9	7,420.0	7,375.4	44.62	166.309		
6,400.0	6,113.0	6,203.0	6,199.6	24.9	21.6	147.60	-3,584.9	4,793.7	7,434.7	7,389.7	44.94	165.418		
6,450.0	6,160.7	6,254.2	6,250.7	25.1	21.7	130.06	-3,584.6	4,793.3	7,445.8	7,400.5	45.31	164.329		
6,500.0	6,208.5	6,308.3	6,304.9	25.3	21.9	112.30	-3,584.2	4,793.0	7,453.2	7,407.5	45.68	163.165		
6,550.0	6,255.8	6,386.4	6,383.0	25.4	22.2	97.31	-3,583.7	4,792.3	7,456.8	7,410.6	46.14	161.624		
6,600.0	6,302.5	6,429.6	6,426.2	25.6	22.4	86.03	-3,583.5	4,791.8	7,456.5	7,410.0	46.44	160.573		
6,650.0	6,347.9	6,464.7	6,461.3	25.7	22.5	78.10	-3,583.3	4,791.3	7,452.5	7,405.8	46.69	159.617		
6,700.0	6,391.6	6,500.0	6,496.6	25.9	22.6	72.71	-3,583.2	4,791.0	7,444.9	7,397.9	46.93	158.631		
6,750.0	6,433.4	6,559.6	6,556.2	26.0	22.8	69.29	-3,583.0	4,790.2	7,433.7	7,386.5	47.21	157.449		
6,800.0	6,472.8	6,618.3	6,614.8	26.1	22.9	67.31	-3,582.9	4,789.3	7,418.9	7,371.4	47.48	156.250		
6,850.0	6,509.4	6,648.3	6,644.8	26.2	23.8	66.33	-3,582.8	4,788.8	7,400.8	7,352.4	48.44	152.784		
6,900.0	6,543.0	6,681.3	6,677.8	26.3	24.4	66.30	-3,582.7	4,788.2	7,379.6	7,330.4	49.15	150.141		
6,950.0	6,573.2	6,710.9	6,707.4	26.4	25.0	67.09	-3,582.7	4,787.7	7,355.5	7,305.7	49.79	147.726		
7,000.0	6,599.8	6,736.8	6,733.3	26.5	25.5	68.64	-3,582.6	4,787.3	7,328.7	7,278.3	50.36	145.534		
7,050.0	6,622.5	6,758.7	6,755.2	26.6	25.9	70.93	-3,582.6	4,786.9	7,299.5	7,248.6	50.85	143.558		
7,100.0	6,641.1	6,776.5	6,773.1	26.7	26.2	73.94	-3,582.5	4,786.6	7,268.1	7,216.8	51.26	141.794		
7,150.0	6,655.4	6,790.1	6,786.6	26.8	26.5	77.67	-3,582.5	4,786.4	7,234.9	7,183.3	51.59	140.238		
7,200.0	6,665.4	6,799.2	6,795.8	26.9	26.7	82.11	-3,582.5	4,786.3	7,200.1	7,148.2	51.84	138.887		
7,250.0	6,670.8	6,803.9	6,800.4	27.0	26.7	87.21	-3,582.5	4,786.2	7,164.0	7,112.0	52.01	137.738		
7,285.7	6,672.0	6,804.5	6,801.0	27.1	26.8	91.21	-3,582.5	4,786.2	7,137.7	7,085.6	52.08	137.041		
7,300.0	6,672.0	6,804.2	6,800.7	27.1	26.8	91.21	-3,582.5	4,786.2	7,127.0	7,074.9	52.11	136.781		
7,400.0	6,672.0	6,802.6	6,799.1	27.3	26.7	91.19	-3,582.5	4,786.2	7,053.1	7,000.9	52.27	134.946		
7,500.0	6,672.0	6,800.9	6,797.4	27.6	26.7	91.17	-3,582.5	4,786.2	6,979.9	6,927.4	52.46	133.051		
7,600.0	6,672.0	6,799.2	6,795.7	28.0	26.7	91.15	-3,582.5	4,786.3	6,907.3	6,854.6	52.69	131.098		
7,700.0	6,672.0	6,797.5	6,794.1	28.3	26.6	91.13	-3,582.5	4,786.3	6,835.4	6,782.4	52.95	129.090		
7,800.0	6,672.0	6,795.9	6,792.4	28.8	26.6	91.11	-3,582.5	4,786.3	6,764.2	6,711.0	53.25	127.030		
7,900.0	6,672.0	6,794.2	6,790.7	29.3	26.6	91.09	-3,582.5	4,786.3	6,693.8	6,640.2	53.58	124.922		
8,000.0	6,672.0	6,792.5	6,789.0	29.8	26.5	91.07	-3,582.5	4,786.4	6,624.1	6,570.2	53.96	122.770		
8,100.0	6,672.0	6,790.8	6,787.4	30.4	26.5	91.05	-3,582.5	4,786.4	6,555.3	6,500.9	54.37	120.579		
8,200.0	6,672.0	6,789.2	6,785.7	31.0	26.5	91.03	-3,582.5	4,786.4	6,487.2	6,432.4	54.81	118.353		
8,300.0	6,672.0	6,787.5	6,784.0	31.7	26.4	91.01	-3,582.5	4,786.5	6,420.0	6,364.7	55.30	116.099		
8,400.0	6,672.0	6,785.8	6,782.3	32.4	26.4	90.99	-3,582.5	4,786.5	6,353.6	6,297.8	55.82	113.822		
8,500.0	6,672.0	6,784.1	6,780.7	33.1	26.4	90.97	-3,582.5	4,786.5	6,288.2	6,231.8	56.38	111.527		
8,600.0	6,672.0	6,782.5	6,779.0	33.9	26.3	90.95	-3,582.5	4,786.5	6,223.7	6,166.7	56.98	109.221		
8,700.0	6,672.0	6,780.8	6,777.3	34.7	26.3	90.93	-3,582.5	4,786.6	6,160.1	6,102.5	57.62	106.909		
8,800.0	6,672.0	6,779.1	6,775.6	35.5	26.3	90.91	-3,582.5	4,786.6	6,097.5	6,039.2	58.29	104.597		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 5519 14-08 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWGS, 6600-2_Unknown													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis		Distance								Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
8,900.0	6,672.0	6,777.5	6,774.0	36.3	26.2	90.89	-3,582.5	4,786.6	6,035.9	5,976.9	59.01	102.291		
9,000.0	6,672.0	6,775.8	6,772.3	37.2	26.2	90.87	-3,582.5	4,786.7	5,975.4	5,915.6	59.76	99.996		
9,100.0	6,672.0	6,774.1	6,770.6	38.1	26.2	90.85	-3,582.5	4,786.7	5,915.9	5,855.4	60.54	97.717		
9,200.0	6,672.0	6,772.4	6,769.0	39.0	26.1	90.83	-3,582.5	4,786.7	5,857.6	5,796.2	61.36	95.460		
9,300.0	6,672.0	6,770.8	6,767.3	39.9	26.1	90.81	-3,582.5	4,786.7	5,800.4	5,738.1	62.22	93.228		
9,400.0	6,672.0	6,769.1	6,765.6	40.8	26.1	90.79	-3,582.5	4,786.8	5,744.3	5,681.2	63.11	91.027		
9,500.0	6,672.0	6,767.4	6,763.9	41.8	26.1	90.77	-3,582.5	4,786.8	5,689.5	5,625.5	64.03	88.860		
9,600.0	6,672.0	6,765.7	6,762.3	42.7	26.0	90.75	-3,582.6	4,786.8	5,636.0	5,571.0	64.98	86.731		
9,700.0	6,672.0	6,764.1	6,760.6	43.7	26.0	90.73	-3,582.6	4,786.8	5,583.7	5,517.7	65.97	84.644		
9,800.0	6,672.0	6,762.4	6,758.9	44.7	26.0	90.71	-3,582.6	4,786.9	5,532.7	5,465.7	66.98	82.601		
9,900.0	6,672.0	6,760.7	6,757.2	45.7	25.9	90.69	-3,582.6	4,786.9	5,483.1	5,415.1	68.02	80.605		
10,000.0	6,672.0	6,759.0	6,755.6	46.7	25.9	90.67	-3,582.6	4,786.9	5,434.9	5,365.8	69.09	78.658		
10,100.0	6,672.0	6,757.4	6,753.9	47.7	25.9	90.65	-3,582.6	4,787.0	5,388.1	5,317.9	70.19	76.763		
10,200.0	6,672.0	6,755.7	6,752.2	48.8	25.8	90.63	-3,582.6	4,787.0	5,342.8	5,271.5	71.31	74.921		
10,300.0	6,672.0	6,754.0	6,750.6	49.8	25.8	90.61	-3,582.6	4,787.0	5,299.0	5,226.5	72.46	73.134		
10,400.0	6,672.0	6,752.4	6,748.9	50.9	25.8	90.59	-3,582.6	4,787.0	5,256.7	5,183.1	73.62	71.402		
10,500.0	6,672.0	6,750.7	6,747.2	51.9	25.7	90.57	-3,582.6	4,787.1	5,216.0	5,141.2	74.81	69.727		
10,600.0	6,672.0	6,749.0	6,745.5	53.0	25.7	90.55	-3,582.6	4,787.1	5,176.9	5,100.9	76.01	68.110		
10,700.0	6,672.0	6,747.3	6,743.9	54.1	25.7	90.53	-3,582.6	4,787.1	5,139.5	5,062.3	77.23	66.551		
10,800.0	6,672.0	6,745.7	6,742.2	55.2	25.6	90.51	-3,582.6	4,787.2	5,103.8	5,025.3	78.46	65.050		
10,900.0	6,672.0	6,744.0	6,740.5	56.3	25.6	90.49	-3,582.6	4,787.2	5,069.8	4,990.1	79.70	63.607		
11,000.0	6,672.0	6,742.3	6,738.8	57.4	25.6	90.47	-3,582.6	4,787.2	5,037.6	4,956.6	80.96	62.223		
11,100.0	6,672.0	6,740.6	6,737.2	58.5	25.5	90.45	-3,582.6	4,787.2	5,007.1	4,924.9	82.22	60.897		
11,200.0	6,672.0	6,739.0	6,735.5	59.6	25.5	90.43	-3,582.6	4,787.3	4,978.5	4,895.0	83.49	59.630		
11,300.0	6,672.0	6,737.3	6,733.8	60.7	25.5	90.41	-3,582.6	4,787.3	4,951.8	4,867.0	84.76	58.419		
11,400.0	6,672.0	6,735.6	6,732.2	61.8	25.4	90.39	-3,582.6	4,787.3	4,926.9	4,840.9	86.04	57.266		
11,500.0	6,672.0	6,734.0	6,730.5	62.9	25.4	90.37	-3,582.6	4,787.4	4,904.0	4,816.7	87.31	56.169		
11,600.0	6,672.0	6,732.3	6,728.8	64.1	25.4	90.35	-3,582.6	4,787.4	4,883.0	4,794.4	88.58	55.128		
11,700.0	6,672.0	6,730.6	6,727.1	65.2	25.4	90.32	-3,582.6	4,787.4	4,864.0	4,774.2	89.84	54.142		
11,800.0	6,672.0	6,728.9	6,725.5	66.3	25.3	90.30	-3,582.6	4,787.4	4,847.0	4,755.9	91.09	53.210		
11,900.0	6,672.0	6,727.3	6,723.8	67.5	25.3	90.28	-3,582.6	4,787.5	4,832.0	4,739.7	92.34	52.330		
12,000.0	6,672.0	6,725.6	6,722.1	68.6	25.3	90.26	-3,582.6	4,787.5	4,819.0	4,725.5	93.57	51.504		
12,100.0	6,672.0	6,723.9	6,720.4	69.8	25.2	90.24	-3,582.6	4,787.5	4,808.1	4,713.3	94.78	50.728		
12,200.0	6,672.0	6,722.2	6,718.8	70.9	25.2	90.22	-3,582.7	4,787.5	4,799.3	4,703.3	95.98	50.003		
12,300.0	6,672.0	6,720.6	6,717.1	72.1	25.2	90.20	-3,582.7	4,787.6	4,792.5	4,695.4	97.16	49.327		
12,400.0	6,672.0	6,718.9	6,715.4	73.2	25.1	90.18	-3,582.7	4,787.6	4,787.8	4,689.5	98.31	48.699		
12,500.0	6,672.0	6,717.2	6,713.8	74.4	25.1	90.16	-3,582.7	4,787.6	4,785.2	4,685.8	99.45	48.118		
12,573.5	6,672.0	6,716.0	6,712.5	75.2	25.1	90.15	-3,582.7	4,787.7	4,784.7	4,684.4	100.26	47.721 CC		
12,600.0	6,672.0	6,715.6	6,712.1	75.5	25.1	90.14	-3,582.7	4,787.7	4,784.7	4,684.2	100.56	47.583 ES		
12,700.0	6,672.0	6,713.9	6,710.4	76.7	25.0	90.12	-3,582.7	4,787.7	4,786.4	4,684.7	101.64	47.093		
12,800.0	6,672.0	6,712.2	6,708.7	77.9	25.0	90.10	-3,582.7	4,787.7	4,790.1	4,687.4	102.69	46.647		
12,900.0	6,672.0	6,710.5	6,707.1	79.0	25.0	90.08	-3,582.7	4,787.7	4,795.8	4,692.1	103.71	46.244		
13,000.0	6,672.0	6,708.9	6,705.4	80.2	24.9	90.06	-3,582.7	4,787.8	4,803.7	4,699.0	104.70	45.882		
13,100.0	6,672.0	6,707.2	6,703.7	81.4	24.9	90.04	-3,582.7	4,787.8	4,813.7	4,708.0	105.65	45.561		
13,200.0	6,672.0	6,705.5	6,702.1	82.6	24.9	90.02	-3,582.7	4,787.8	4,825.7	4,719.1	106.58	45.279		
13,300.0	6,672.0	6,703.8	6,700.4	83.7	24.8	90.00	-3,582.7	4,787.9	4,839.7	4,732.2	107.46	45.036		
13,400.0	6,672.0	6,702.2	6,698.7	84.9	24.8	89.98	-3,582.7	4,787.9	4,855.8	4,747.5	108.32	44.830		
13,500.0	6,672.0	6,700.5	6,697.0	86.1	24.8	89.96	-3,582.7	4,787.9	4,873.8	4,764.7	109.13	44.660		
13,600.0	6,672.0	6,698.8	6,695.4	87.3	24.7	89.94	-3,582.7	4,787.9	4,893.9	4,784.0	109.91	44.526		
13,700.0	6,672.0	6,697.2	6,693.7	88.4	24.7	89.92	-3,582.7	4,788.0	4,915.9	4,805.3	110.66	44.426		
13,800.0	6,672.0	6,695.5	6,692.0	89.6	24.7	89.90	-3,582.7	4,788.0	4,939.9	4,828.5	111.36	44.359		
13,900.0	6,672.0	6,693.8	6,690.3	90.8	24.7	89.88	-3,582.7	4,788.0	4,965.7	4,853.7	112.03	44.325		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 5519 14-08 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWGS, 6600-2_Unknown													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre +N/-S	Centre +E/-W	Between Centres	Between Ellipses	Minimum Separation	Separation Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)			
14,000.0	6,672.0	6,692.1	6,688.7	92.0	24.6	89.86	-3,582.7	4,788.1	4,993.5	4,880.8	112.66	44.322 SF		
14,100.0	6,672.0	6,690.5	6,687.0	93.2	24.6	89.84	-3,582.7	4,788.1	5,023.1	4,909.8	113.26	44.349		
14,200.0	6,672.0	6,688.8	6,685.3	94.4	24.6	89.82	-3,582.7	4,788.1	5,054.4	4,940.6	113.82	44.406		
14,300.0	6,672.0	6,687.1	6,683.7	95.6	24.5	89.80	-3,582.7	4,788.1	5,087.6	4,973.3	114.35	44.492		
14,400.0	6,672.0	6,685.5	6,682.0	96.8	24.5	89.78	-3,582.7	4,788.2	5,122.5	5,007.7	114.84	44.605		
14,500.0	6,672.0	6,683.8	6,680.3	98.0	24.5	89.76	-3,582.7	4,788.2	5,159.2	5,043.9	115.30	44.746		
14,600.0	6,672.0	6,682.1	6,678.6	99.2	24.4	89.74	-3,582.7	4,788.2	5,197.5	5,081.7	115.72	44.913		
14,700.0	6,672.0	6,680.4	6,677.0	100.4	24.4	89.72	-3,582.7	4,788.3	5,237.4	5,121.3	116.12	45.105		
14,800.0	6,672.0	6,678.8	6,675.3	101.6	24.4	89.70	-3,582.7	4,788.3	5,278.9	5,162.4	116.48	45.322		
14,900.0	6,672.0	6,677.1	6,673.6	102.7	24.3	89.68	-3,582.8	4,788.3	5,322.0	5,205.2	116.81	45.562		
15,000.0	6,672.0	6,675.4	6,672.0	103.9	24.3	89.66	-3,582.8	4,788.3	5,366.6	5,249.5	117.11	45.826		
15,100.0	6,672.0	6,673.8	6,670.3	105.1	24.3	89.64	-3,582.8	4,788.4	5,412.7	5,295.3	117.38	46.112		
15,200.0	6,672.0	6,672.1	6,668.6	106.3	24.2	89.62	-3,582.8	4,788.4	5,460.3	5,342.6	117.63	46.419		
15,300.0	6,672.0	6,670.4	6,666.9	107.6	24.2	89.60	-3,582.8	4,788.4	5,509.2	5,391.4	117.85	46.748		
15,400.0	6,672.0	6,668.7	6,665.3	108.8	24.2	89.58	-3,582.8	4,788.4	5,559.6	5,441.5	118.04	47.097		
15,500.0	6,672.0	6,667.1	6,663.6	110.0	24.1	89.56	-3,582.8	4,788.5	5,611.2	5,493.0	118.22	47.466		
15,600.0	6,672.0	6,665.4	6,661.9	111.2	24.1	89.54	-3,582.8	4,788.5	5,664.2	5,545.8	118.36	47.854		
15,700.0	6,672.0	6,663.7	6,660.3	112.4	24.1	89.52	-3,582.8	4,788.5	5,718.4	5,600.0	118.49	48.261		
15,800.0	6,672.0	6,662.0	6,658.6	113.6	24.0	89.50	-3,582.8	4,788.6	5,773.9	5,655.3	118.60	48.685		
15,900.0	6,672.0	6,660.4	6,656.9	114.8	24.0	89.48	-3,582.8	4,788.6	5,830.6	5,711.9	118.68	49.127		
16,000.0	6,672.0	6,658.7	6,655.2	116.0	24.0	89.46	-3,582.8	4,788.6	5,888.4	5,769.6	118.75	49.586		
16,100.0	6,672.0	6,657.0	6,653.6	117.2	23.9	89.44	-3,582.8	4,788.6	5,947.3	5,828.5	118.80	50.061		
16,200.0	6,672.0	6,655.4	6,651.9	118.4	23.9	89.42	-3,582.8	4,788.7	6,007.4	5,888.5	118.83	50.553		
16,300.0	6,672.0	6,653.7	6,650.2	119.6	23.9	89.40	-3,582.8	4,788.7	6,068.4	5,949.6	118.85	51.059		
16,400.0	6,672.0	6,652.0	6,648.6	120.8	23.9	89.38	-3,582.8	4,788.7	6,130.6	6,011.7	118.85	51.580		
16,500.0	6,672.0	6,650.3	6,646.9	122.0	23.8	89.36	-3,582.8	4,788.8	6,193.7	6,074.8	118.84	52.116		
16,600.0	6,672.0	6,648.7	6,645.2	123.2	23.8	89.34	-3,582.8	4,788.8	6,257.8	6,139.0	118.82	52.666		
16,700.0	6,672.0	6,647.0	6,643.5	124.5	23.8	89.32	-3,582.8	4,788.8	6,322.8	6,204.0	118.78	53.230		
16,800.0	6,672.0	6,645.3	6,641.9	125.7	23.7	89.30	-3,582.8	4,788.8	6,388.7	6,270.0	118.74	53.806		
16,900.0	6,672.0	6,643.7	6,640.2	126.9	23.7	89.28	-3,582.8	4,788.9	6,455.5	6,336.9	118.68	54.396		
17,000.0	6,672.0	6,642.0	6,638.5	128.1	23.7	89.26	-3,582.8	4,788.9	6,523.2	6,404.6	118.61	54.997		
17,100.0	6,672.0	6,640.3	6,636.9	129.3	23.6	89.24	-3,582.8	4,788.9	6,591.7	6,473.2	118.53	55.611		
17,200.0	6,672.0	6,638.6	6,635.2	130.5	23.6	89.22	-3,582.8	4,789.0	6,661.0	6,542.5	118.45	56.237		
17,300.0	6,672.0	6,637.0	6,633.5	131.7	23.6	89.20	-3,582.8	4,789.0	6,731.1	6,612.7	118.35	56.873		
17,400.0	6,672.0	6,635.3	6,631.8	133.0	23.5	89.18	-3,582.8	4,789.0	6,801.9	6,683.6	118.25	57.521		
17,500.0	6,672.0	6,633.6	6,630.2	134.2	23.5	89.16	-3,582.9	4,789.0	6,873.4	6,755.3	118.14	58.179		
17,600.0	6,672.0	6,632.0	6,628.5	135.4	23.5	89.14	-3,582.9	4,789.1	6,945.7	6,827.7	118.03	58.848		
17,700.0	6,672.0	6,630.3	6,626.8	136.6	23.4	89.12	-3,582.9	4,789.1	7,018.6	6,900.7	117.91	59.527		
17,800.0	6,672.0	6,628.6	6,625.2	137.8	23.4	89.10	-3,582.9	4,789.1	7,092.3	6,974.5	117.78	60.215		
17,900.0	6,672.0	6,626.9	6,623.5	139.0	23.4	89.08	-3,582.9	4,789.1	7,166.5	7,048.9	117.65	60.913		
18,000.0	6,672.0	6,625.3	6,621.8	140.3	23.3	89.06	-3,582.9	4,789.2	7,241.4	7,123.9	117.52	61.620		
18,100.0	6,672.0	6,623.6	6,620.1	141.5	23.3	89.04	-3,582.9	4,789.2	7,316.9	7,199.5	117.38	62.336		
18,200.0	6,672.0	6,621.9	6,618.5	142.7	23.3	89.02	-3,582.9	4,789.2	7,392.9	7,275.7	117.24	63.061		
18,300.0	6,672.0	6,620.3	6,616.8	143.9	23.2	89.00	-3,582.9	4,789.3	7,469.6	7,352.5	117.09	63.794		
18,342.5	6,672.0	6,619.5	6,616.1	144.4	23.2	88.99	-3,582.9	4,789.3	7,502.3	7,385.3	117.03	64.108		



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 5519 21-08 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	44.4	44.4	0.0	0.1	84.72	578.9	6,267.0	6,293.8					
100.0	100.0	104.9	104.9	0.1	0.2	84.72	579.3	6,267.5	6,294.7	6,294.4	0.32	N/A		
200.0	200.0	260.1	260.1	0.5	0.7	84.71	580.2	6,268.4	6,295.2	6,294.0	1.22	5,154.663		
300.0	300.0	384.1	384.1	0.8	1.2	84.71	580.7	6,268.5	6,295.3	6,293.3	2.01	3,128.779		
400.0	400.0	499.8	499.7	1.2	1.6	84.70	581.1	6,268.2	6,295.1	6,292.3	2.77	2,270.124		
500.0	500.0	612.1	612.1	1.6	2.0	84.70	581.6	6,267.6	6,294.7	6,291.1	3.52	1,786.628		
600.0	600.0	729.0	728.9	1.9	2.4	84.69	582.2	6,266.8	6,294.0	6,289.7	4.29	1,467.238		
700.0	700.0	839.9	839.9	2.3	2.8	84.69	582.8	6,265.7	6,293.1	6,288.0	5.04	1,249.608		
800.0	800.0	940.7	940.6	2.6	3.1	84.68	583.4	6,264.7	6,292.1	6,286.3	5.75	1,094.883		
900.0	900.0	1,039.7	1,039.7	3.0	3.5	84.67	584.0	6,263.6	6,291.1	6,284.6	6.45	975.097		
1,000.0	1,000.0	1,139.7	1,139.7	3.4	3.8	84.67	584.7	6,262.6	6,290.1	6,282.9	7.16	878.487		
1,100.0	1,100.0	1,240.1	1,240.0	3.7	4.2	84.66	585.3	6,261.5	6,289.1	6,281.2	7.87	799.162		
1,200.0	1,200.0	1,336.6	1,336.5	4.1	4.5	84.65	585.9	6,260.5	6,288.2	6,279.6	8.57	734.081		
1,300.0	1,300.0	1,432.5	1,432.5	4.4	4.8	84.65	586.6	6,259.6	6,287.3	6,278.0	9.26	678.951		
1,400.0	1,400.0	1,534.2	1,534.1	4.8	5.2	84.64	587.2	6,258.7	6,286.4	6,276.4	9.97	630.259		
1,500.0	1,500.0	1,644.8	1,644.7	5.1	5.6	84.64	587.4	6,257.6	6,285.4	6,274.7	10.72	586.327		
1,600.0	1,600.0	1,748.6	1,748.5	5.5	5.9	84.64	587.3	6,256.4	6,284.3	6,272.9	11.44	549.249		
1,700.0	1,700.0	1,845.7	1,845.6	5.9	6.3	84.64	587.1	6,255.4	6,283.2	6,271.1	12.14	517.547		
1,800.0	1,800.0	1,950.6	1,950.5	6.2	6.7	84.64	586.9	6,254.2	6,282.1	6,269.3	12.87	488.272		
1,900.0	1,900.0	2,062.8	2,062.7	6.6	7.0	84.64	587.0	6,252.8	6,280.9	6,267.3	13.62	461.242		
2,000.0	2,000.0	2,166.3	2,166.2	6.9	7.4	84.63	587.3	6,251.3	6,279.5	6,265.1	14.34	437.945		
2,100.0	2,100.0	2,262.4	2,262.2	7.3	7.7	84.63	587.6	6,250.0	6,278.1	6,263.1	15.03	417.606		
2,200.0	2,200.0	2,363.3	2,363.2	7.7	8.1	84.62	587.9	6,248.6	6,276.8	6,261.0	15.75	398.632		
2,257.3	2,257.3	2,425.1	2,424.9	7.9	8.3	135.63	588.1	6,247.7	6,276.4	6,260.2	16.17	388.264		
2,300.0	2,300.0	2,472.7	2,472.5	8.0	8.5	135.64	588.1	6,247.0	6,276.6	6,260.1	16.48	380.780		
2,400.0	2,399.8	2,580.8	2,580.6	8.4	8.9	135.64	587.7	6,245.3	6,278.8	6,261.5	17.21	364.759		
2,500.0	2,499.5	2,683.1	2,682.9	8.7	9.2	135.64	586.9	6,243.7	6,283.3	6,265.4	17.92	350.578		
2,600.0	2,598.7	2,789.9	2,789.7	9.1	9.6	135.63	586.0	6,241.9	6,290.3	6,271.7	18.65	337.326		
2,700.0	2,697.5	2,879.3	2,879.1	9.4	9.9	135.60	585.2	6,240.4	6,299.9	6,280.5	19.31	326.227		
2,800.0	2,795.6	2,957.1	2,956.9	9.8	10.2	135.52	584.5	6,239.3	6,312.1	6,292.2	19.93	316.656		
2,900.0	2,893.1	3,036.4	3,036.2	10.1	10.5	135.43	583.8	6,238.5	6,327.2	6,306.6	20.56	307.732		
3,000.0	2,989.6	3,124.9	3,124.7	10.5	10.8	135.33	582.9	6,237.7	6,345.0	6,323.8	21.22	299.016		
3,100.0	3,085.3	3,218.9	3,218.6	10.9	11.1	135.23	581.8	6,236.9	6,365.3	6,343.4	21.90	290.681		
3,200.0	3,179.8	3,303.3	3,303.0	11.2	11.4	135.08	581.2	6,236.3	6,388.2	6,365.7	22.54	283.376		
3,300.0	3,273.2	3,385.9	3,385.6	11.6	11.7	134.90	581.4	6,235.8	6,413.8	6,390.6	23.18	276.657		
3,387.5	3,353.8	3,449.7	3,449.4	11.9	11.9	134.69	582.4	6,235.5	6,438.4	6,414.7	23.71	271.497		
3,400.0	3,365.2	3,458.5	3,458.2	12.0	11.9	134.71	582.6	6,235.4	6,442.1	6,418.3	23.79	270.788		
3,500.0	3,456.8	3,534.4	3,534.1	12.4	12.2	134.90	584.3	6,235.3	6,471.6	6,447.2	24.41	265.142		
3,600.0	3,548.3	3,619.8	3,619.5	12.8	12.5	135.10	586.3	6,235.2	6,501.4	6,476.3	25.06	259.381		
3,700.0	3,639.8	3,711.8	3,711.5	13.2	12.8	135.32	588.6	6,235.2	6,531.3	6,505.5	25.75	253.639		
3,800.0	3,731.4	3,809.4	3,809.0	13.6	13.2	135.55	591.0	6,235.1	6,561.2	6,534.8	26.46	247.964		
3,900.0	3,822.9	3,905.4	3,905.0	14.0	13.5	135.78	593.1	6,235.0	6,591.2	6,564.1	27.17	242.606		
4,000.0	3,914.4	4,006.3	4,005.9	14.4	13.8	136.02	594.9	6,234.7	6,621.2	6,593.3	27.90	237.335		
4,100.0	4,005.9	4,108.0	4,107.5	14.8	14.2	136.27	596.2	6,234.4	6,651.2	6,622.6	28.63	232.282		
4,200.0	4,097.5	4,194.6	4,194.2	15.2	14.5	136.48	597.1	6,234.1	6,681.2	6,651.9	29.32	227.887		
4,300.0	4,189.0	4,275.3	4,274.8	15.6	14.8	136.67	597.9	6,233.9	6,711.5	6,681.5	29.98	223.850		
4,400.0	4,280.5	4,370.8	4,370.4	16.1	15.1	136.90	598.7	6,233.8	6,741.9	6,711.2	30.70	219.580		
4,500.0	4,372.1	4,457.6	4,457.1	16.5	16.1	137.57	601.4	6,229.8	6,771.8	6,739.6	32.14	210.728		
4,600.0	4,463.6	4,542.1	4,541.6	16.9	16.4	137.73	602.0	6,227.7	6,799.8	6,767.0	32.77	207.500		
4,700.0	4,555.1	4,630.6	4,630.1	17.4	16.6	137.86	602.1	6,226.4	6,828.3	6,795.0	33.35	204.769		
4,800.0	4,646.7	4,717.9	4,717.4	17.8	16.8	138.04	601.8	6,224.9	6,857.4	6,823.4	34.01	201.617		
4,900.0	4,738.2	4,806.3	4,805.8	18.2	17.2	138.28	601.1	6,223.0	6,886.7	6,851.9	34.76	198.131		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 5519 21-08 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre		Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
							+N/-S (ft)	+E/-W (ft)						
5,000.0	4,829.7	5,052.2	5,051.6	18.7	17.5	138.51	600.3	6,221.0	6,915.9	6,880.4	35.50	194.835		
5,100.0	4,921.3	5,125.4	5,124.8	19.1	17.8	138.68	599.6	6,219.5	6,945.2	6,909.1	36.15	192.122		
5,200.0	5,012.8	5,179.9	5,179.2	19.5	18.0	138.81	599.1	6,218.7	6,975.1	6,938.4	36.73	189.889		
5,300.0	5,104.3	5,246.4	5,245.7	20.0	18.2	138.97	598.4	6,218.0	7,005.5	6,968.2	37.36	187.511		
5,400.0	5,195.8	5,323.5	5,322.9	20.4	18.5	139.15	597.6	6,217.4	7,036.3	6,998.3	38.03	185.020		
5,500.0	5,287.4	5,412.4	5,411.7	20.9	18.8	139.36	596.7	6,216.8	7,067.3	7,028.5	38.75	182.403		
5,600.0	5,378.9	5,521.1	5,520.4	21.3	19.1	139.61	595.6	6,215.9	7,098.2	7,058.7	39.54	179.524		
5,700.0	5,470.4	5,632.2	5,631.5	21.8	19.5	139.86	594.3	6,214.7	7,129.0	7,088.7	40.34	176.707		
5,800.0	5,562.0	5,718.6	5,717.9	22.2	19.8	140.06	593.6	6,213.7	7,159.8	7,118.7	41.05	174.403		
5,900.0	5,653.5	5,782.9	5,782.2	22.7	20.1	140.20	593.3	6,213.1	7,190.9	7,149.2	41.68	172.544		
6,000.0	5,745.0	5,859.1	5,858.4	23.1	20.3	140.37	593.3	6,212.7	7,222.4	7,180.1	42.35	170.557		
6,100.0	5,836.6	5,946.9	5,946.2	23.6	20.6	140.55	593.3	6,212.3	7,254.1	7,211.0	43.06	168.455		
6,200.0	5,928.1	6,200.0	6,077.7	24.0	21.5	140.83	593.8	6,211.3	7,285.6	7,241.2	44.38	164.161		
6,278.6	6,000.0	6,232.4	6,231.7	24.4	21.6	141.15	593.8	6,208.6	7,309.5	7,264.6	44.86	162.948		
6,290.0	6,010.4	6,243.4	6,242.7	24.4	21.7	139.25	593.8	6,208.4	7,313.0	7,268.0	44.94	162.713		
6,300.0	6,019.5	6,253.0	6,252.3	24.5	21.7	137.54	593.7	6,208.2	7,316.0	7,271.0	45.02	162.508		
6,350.0	6,065.8	6,301.8	6,301.0	24.7	21.9	127.20	593.4	6,207.1	7,328.3	7,282.9	45.39	161.439		
6,400.0	6,113.0	6,336.7	6,335.9	24.9	22.0	113.35	593.2	6,206.4	7,336.0	7,290.3	45.70	160.509		
6,450.0	6,160.7	6,372.3	6,371.6	25.1	22.1	96.54	592.8	6,205.7	7,339.1	7,293.1	46.01	159.518		
6,500.0	6,208.5	6,409.3	6,408.5	25.3	22.3	79.27	592.4	6,205.1	7,337.6	7,291.3	46.30	158.469		
6,550.0	6,255.8	6,450.6	6,449.8	25.4	22.4	64.47	591.8	6,204.4	7,331.4	7,284.8	46.60	157.329		
6,600.0	6,302.5	6,491.1	6,490.4	25.6	22.5	53.25	591.2	6,203.7	7,320.7	7,273.8	46.88	156.175		
6,650.0	6,347.9	6,529.1	6,528.3	25.7	22.7	45.17	590.5	6,203.1	7,305.5	7,258.4	47.12	155.031		
6,700.0	6,391.6	6,565.4	6,564.6	25.9	22.8	39.43	590.0	6,202.6	7,285.9	7,238.6	47.35	153.887		
6,750.0	6,433.4	6,600.0	6,599.2	26.0	22.9	35.35	589.5	6,202.1	7,262.2	7,214.6	47.55	152.742		
6,800.0	6,472.8	6,630.3	6,629.5	26.1	23.0	32.47	589.1	6,201.7	7,234.4	7,186.7	47.71	151.628		
6,850.0	6,509.4	6,658.6	6,657.8	26.2	23.1	30.48	588.8	6,201.4	7,203.0	7,155.1	47.86	150.516		
6,900.0	6,543.0	6,719.7	6,719.4	26.3	23.3	29.21	588.6	6,201.2	7,168.0	7,119.9	48.10	149.030		
6,950.0	6,573.2	6,710.1	6,709.3	26.4	23.3	28.64	588.4	6,201.0	7,130.0	7,081.9	48.09	148.273		
7,000.0	6,599.8	6,736.2	6,735.4	26.5	23.4	28.74	588.3	6,200.7	7,089.0	7,040.9	48.19	147.104		
7,050.0	6,622.5	6,758.5	6,757.7	26.6	23.5	29.63	588.2	6,200.5	7,045.6	6,997.4	48.27	145.953		
7,100.0	6,641.1	6,776.7	6,775.9	26.7	23.5	31.64	588.1	6,200.4	7,000.1	6,951.8	48.34	144.821		
7,150.0	6,655.4	6,790.6	6,789.8	26.8	23.6	35.58	588.0	6,200.3	6,952.9	6,904.5	48.38	143.711		
7,200.0	6,665.4	6,800.1	6,799.3	26.9	23.6	43.63	587.9	6,200.2	6,904.4	6,856.0	48.41	142.621		
7,250.0	6,670.8	6,805.2	6,804.3	27.0	23.6	63.23	587.9	6,200.1	6,855.1	6,806.7	48.43	141.555		
7,285.7	6,672.0	6,806.0	6,805.2	27.1	23.6	95.02	587.9	6,200.1	6,819.6	6,771.2	48.43	140.807		
7,300.0	6,672.0	6,805.9	6,805.1	27.1	23.6	95.01	587.9	6,200.1	6,805.4	6,756.9	48.43	140.510		
7,400.0	6,672.0	6,805.0	6,804.2	27.3	23.6	94.93	587.9	6,200.1	6,705.8	6,657.4	48.44	138.441		
7,500.0	6,672.0	6,804.2	6,803.3	27.6	23.6	94.84	587.9	6,200.2	6,606.2	6,557.8	48.44	136.367		
7,600.0	6,672.0	6,803.3	6,802.5	28.0	23.6	94.76	587.9	6,200.2	6,506.7	6,458.3	48.45	134.289		
7,700.0	6,672.0	6,802.4	6,801.6	28.3	23.6	94.68	587.9	6,200.2	6,407.2	6,358.7	48.46	132.206		
7,800.0	6,672.0	6,801.6	6,800.7	28.8	23.6	94.60	587.9	6,200.2	6,307.7	6,259.2	48.48	130.118		
7,900.0	6,672.0	6,800.7	6,799.9	29.3	23.6	94.52	587.9	6,200.2	6,208.2	6,159.7	48.49	128.026		
8,000.0	6,672.0	6,799.8	6,799.0	29.8	23.6	94.44	587.9	6,200.2	6,108.7	6,060.2	48.51	125.930		
8,100.0	6,672.0	6,799.0	6,798.2	30.4	23.6	94.36	587.9	6,200.2	6,009.3	5,960.8	48.53	123.829		
8,200.0	6,672.0	6,798.1	6,797.3	31.0	23.6	94.28	588.0	6,200.2	5,909.8	5,861.3	48.55	121.724		
8,300.0	6,672.0	6,797.3	6,796.4	31.7	23.6	94.20	588.0	6,200.2	5,810.4	5,761.9	48.58	119.615		
8,400.0	6,672.0	6,796.4	6,795.6	32.4	23.6	94.11	588.0	6,200.2	5,711.0	5,662.4	48.60	117.502		
8,500.0	6,672.0	6,795.5	6,794.7	33.1	23.6	94.03	588.0	6,200.2	5,611.7	5,563.0	48.63	115.384		
8,600.0	6,672.0	6,794.7	6,793.9	33.9	23.6	93.95	588.0	6,200.2	5,512.3	5,463.7	48.67	113.262		
8,700.0	6,672.0	6,793.8	6,793.0	34.7	23.6	93.87	588.0	6,200.2	5,413.0	5,364.3	48.71	111.136		
8,800.0	6,672.0	6,793.0	6,792.1	35.5	23.6	93.79	588.0	6,200.3	5,313.7	5,265.0	48.75	109.006		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 5519 21-08 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
8,900.0	6,672.0	6,792.1	6,791.3	36.3	23.6	93.72	588.0	6,200.3	5,214.5	5,165.7	48.79	106.872		
9,000.0	6,672.0	6,791.2	6,790.4	37.2	23.6	93.64	588.0	6,200.3	5,115.2	5,066.4	48.84	104.734		
9,100.0	6,672.0	6,790.4	6,789.5	38.1	23.6	93.56	588.0	6,200.3	5,016.0	4,967.1	48.89	102.591		
9,200.0	6,672.0	6,789.5	6,788.7	39.0	23.6	93.48	588.0	6,200.3	4,916.8	4,867.9	48.95	100.445		
9,300.0	6,672.0	6,788.6	6,787.8	39.9	23.6	93.40	588.0	6,200.3	4,817.7	4,768.7	49.01	98.294		
9,400.0	6,672.0	6,787.8	6,787.0	40.8	23.6	93.32	588.0	6,200.3	4,718.6	4,669.5	49.08	96.139		
9,500.0	6,672.0	6,786.9	6,786.1	41.8	23.6	93.24	588.0	6,200.3	4,619.5	4,570.4	49.15	93.981		
9,600.0	6,672.0	6,786.1	6,785.2	42.7	23.6	93.16	588.0	6,200.3	4,520.5	4,471.3	49.23	91.818		
9,700.0	6,672.0	6,785.2	6,784.4	43.7	23.6	93.08	588.0	6,200.3	4,421.5	4,372.2	49.32	89.650		
9,800.0	6,672.0	6,784.3	6,783.5	44.7	23.6	93.00	588.0	6,200.3	4,322.6	4,273.2	49.41	87.479		
9,900.0	6,672.0	6,783.5	6,782.6	45.7	23.6	92.92	588.0	6,200.3	4,223.8	4,174.2	49.51	85.303		
10,000.0	6,672.0	6,782.6	6,781.8	46.7	23.6	92.85	588.0	6,200.3	4,124.9	4,075.3	49.62	83.124		
10,100.0	6,672.0	6,781.7	6,780.9	47.7	23.6	92.77	588.0	6,200.3	4,026.2	3,976.4	49.74	80.939		
10,200.0	6,672.0	6,780.9	6,780.1	48.8	23.6	92.69	588.0	6,200.4	3,927.5	3,877.6	49.87	78.751		
10,300.0	6,672.0	6,780.0	6,779.2	49.8	23.6	92.61	588.1	6,200.4	3,828.9	3,778.8	50.01	76.558		
10,400.0	6,672.0	6,779.1	6,778.3	50.9	23.5	92.53	588.1	6,200.4	3,730.3	3,680.1	50.16	74.361		
10,500.0	6,672.0	6,778.3	6,777.5	51.9	23.5	92.45	588.1	6,200.4	3,631.8	3,581.5	50.33	72.159		
10,600.0	6,672.0	6,777.4	6,776.6	53.0	23.5	92.38	588.1	6,200.4	3,533.4	3,482.9	50.51	69.953		
10,700.0	6,672.0	6,776.6	6,775.7	54.1	23.5	92.30	588.1	6,200.4	3,435.2	3,384.4	50.71	67.743		
10,800.0	6,672.0	6,775.7	6,774.9	55.2	23.5	92.22	588.1	6,200.4	3,337.0	3,286.0	50.92	65.528		
10,900.0	6,672.0	6,774.8	6,774.0	56.3	23.5	92.14	588.1	6,200.4	3,238.9	3,187.7	51.16	63.309		
11,000.0	6,672.0	6,774.0	6,773.1	57.4	23.5	92.07	588.1	6,200.4	3,140.9	3,089.5	51.42	61.086		
11,100.0	6,672.0	6,773.1	6,772.3	58.5	23.5	91.99	588.1	6,200.4	3,043.1	2,991.4	51.70	58.859		
11,200.0	6,672.0	6,772.2	6,771.4	59.6	23.5	91.91	588.1	6,200.4	2,945.5	2,893.4	52.01	56.628		
11,300.0	6,672.0	6,771.4	6,770.6	60.7	23.5	91.83	588.1	6,200.4	2,848.0	2,795.6	52.36	54.395		
11,400.0	6,672.0	6,770.5	6,769.7	61.8	23.5	91.75	588.1	6,200.4	2,750.6	2,697.9	52.74	52.158		
11,500.0	6,672.0	6,769.7	6,768.8	62.9	23.5	91.68	588.1	6,200.4	2,653.5	2,600.3	53.16	49.919		
11,600.0	6,672.0	6,768.8	6,768.0	64.1	23.5	91.60	588.1	6,200.5	2,556.6	2,503.0	53.62	47.678		
11,700.0	6,672.0	6,767.9	6,767.1	65.2	23.5	91.52	588.1	6,200.5	2,459.9	2,405.8	54.14	45.438		
11,800.0	6,672.0	6,767.1	6,766.2	66.3	23.5	91.45	588.1	6,200.5	2,363.6	2,308.9	54.72	43.198		
11,900.0	6,672.0	6,766.2	6,765.4	67.5	23.5	91.37	588.1	6,200.5	2,267.5	2,212.2	55.36	40.960		
12,000.0	6,672.0	6,765.3	6,764.5	68.6	23.5	91.29	588.1	6,200.5	2,171.8	2,115.7	56.08	38.728		
12,100.0	6,672.0	6,764.5	6,763.6	69.8	23.5	91.21	588.1	6,200.5	2,076.5	2,019.6	56.89	36.502		
12,200.0	6,672.0	6,763.6	6,762.8	70.9	23.5	91.14	588.1	6,200.5	1,981.7	1,923.9	57.80	34.286		
12,300.0	6,672.0	6,762.7	6,761.9	72.1	23.5	91.06	588.1	6,200.5	1,887.4	1,828.6	58.83	32.083		
12,400.0	6,672.0	6,761.9	6,761.1	73.2	23.5	90.98	588.2	6,200.5	1,793.8	1,733.8	59.99	29.899		
12,500.0	6,672.0	6,761.0	6,760.2	74.4	23.5	90.91	588.2	6,200.5	1,700.8	1,639.5	61.32	27.739		
12,600.0	6,672.0	6,760.2	6,759.3	75.5	23.5	90.83	588.2	6,200.5	1,608.7	1,545.9	62.82	25.608		
12,700.0	6,672.0	6,759.3	6,758.5	76.7	23.5	90.75	588.2	6,200.5	1,517.6	1,453.1	64.54	23.515		
12,800.0	6,672.0	6,758.4	6,757.6	77.9	23.5	90.68	588.2	6,200.5	1,427.7	1,361.2	66.51	21.468		
12,900.0	6,672.0	6,757.6	6,756.7	79.0	23.5	90.60	588.2	6,200.6	1,339.3	1,270.5	68.76	19.477		
13,000.0	6,672.0	6,756.7	6,755.9	80.2	23.5	90.52	588.2	6,200.6	1,252.6	1,181.2	71.35	17.556		
13,100.0	6,672.0	6,755.8	6,755.0	81.4	23.5	90.45	588.2	6,200.6	1,168.0	1,093.7	74.32	15.716		
13,200.0	6,672.0	6,755.0	6,754.1	82.6	23.5	90.37	588.2	6,200.6	1,086.0	1,008.3	77.72	13.973		
13,300.0	6,672.0	6,754.1	6,753.3	83.7	23.5	90.29	588.2	6,200.6	1,007.3	925.7	81.61	12.344		
13,400.0	6,672.0	6,753.2	6,752.4	84.9	23.5	90.21	588.2	6,200.6	932.7	846.7	86.00	10.846		
13,500.0	6,672.0	6,752.4	6,751.6	86.1	23.5	90.14	588.2	6,200.6	863.3	772.4	90.89	9.499		
13,600.0	6,672.0	6,751.5	6,750.7	87.3	23.5	90.06	588.2	6,200.6	800.3	704.2	96.19	8.321		
13,700.0	6,672.0	6,750.6	6,749.8	88.4	23.4	89.98	588.2	6,200.6	745.6	643.9	101.69	7.331		
13,800.0	6,672.0	6,749.8	6,749.0	89.6	23.4	89.91	588.2	6,200.6	700.8	593.8	107.03	6.548		
13,900.0	6,672.0	6,748.9	6,748.1	90.8	23.4	89.83	588.2	6,200.6	668.2	556.5	111.66	5.984		
14,000.0	6,672.0	6,748.1	6,747.2	92.0	23.4	89.75	588.2	6,200.6	649.5	534.5	114.96	5.650		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 5519 21-08 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre		Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
							+N/-S (ft)	+E/-W (ft)						
14,073.3	6,672.0	6,747.4	6,746.6	92.9	23.4	89.70	588.2	6,200.6	645.3	529.1	116.22	5.552 CC, ES		
14,100.0	6,672.0	6,747.2	6,746.4	93.2	23.4	89.68	588.2	6,200.6	645.9	529.5	116.41	5.548 SF		
14,200.0	6,672.0	6,746.3	6,745.5	94.4	23.4	89.60	588.2	6,200.6	657.6	541.8	115.86	5.676		
14,300.0	6,672.0	6,745.5	6,744.6	95.6	23.4	89.52	588.2	6,200.7	684.0	570.5	113.53	6.025		
14,400.0	6,672.0	6,744.6	6,743.8	96.8	23.4	89.45	588.2	6,200.7	723.3	613.4	109.95	6.579		
14,500.0	6,672.0	6,743.7	6,742.9	98.0	23.4	89.37	588.2	6,200.7	773.7	668.0	105.70	7.320		
14,600.0	6,672.0	6,742.9	6,742.0	99.2	23.4	89.29	588.3	6,200.7	833.0	731.8	101.24	8.228		
14,700.0	6,672.0	6,742.0	6,741.2	100.4	23.4	89.22	588.3	6,200.7	899.6	802.7	96.89	9.285		
14,800.0	6,672.0	6,741.1	6,740.3	101.6	23.4	89.14	588.3	6,200.7	972.0	879.1	92.83	10.470		
14,900.0	6,672.0	6,740.3	6,739.5	102.7	23.4	89.06	588.3	6,200.7	1,048.9	959.7	89.13	11.767		
15,000.0	6,672.0	6,739.4	6,738.6	103.9	23.4	88.99	588.3	6,200.7	1,129.4	1,043.6	85.82	13.160		
15,100.0	6,672.0	6,738.5	6,737.7	105.1	23.4	88.91	588.3	6,200.7	1,212.8	1,130.0	82.87	14.635		
15,200.0	6,672.0	6,737.7	6,736.9	106.3	23.4	88.83	588.3	6,200.7	1,298.6	1,218.3	80.26	16.180		
15,300.0	6,672.0	6,736.8	6,736.0	107.6	23.4	88.76	588.3	6,200.7	1,386.3	1,308.3	77.95	17.784		
15,400.0	6,672.0	6,736.0	6,735.1	108.8	23.4	88.68	588.3	6,200.7	1,475.6	1,399.6	75.91	19.437		
15,500.0	6,672.0	6,735.1	6,734.3	110.0	23.4	88.60	588.3	6,200.7	1,566.1	1,492.0	74.11	21.133		
15,600.0	6,672.0	6,734.2	6,733.4	111.2	23.4	88.52	588.3	6,200.8	1,657.8	1,585.3	72.51	22.863		
15,700.0	6,672.0	6,733.4	6,732.5	112.4	23.4	88.45	588.3	6,200.8	1,750.3	1,679.2	71.08	24.623		
15,800.0	6,672.0	6,732.5	6,731.7	113.6	23.4	88.37	588.3	6,200.8	1,843.7	1,773.9	69.82	26.407		
15,900.0	6,672.0	6,731.6	6,730.8	114.8	23.4	88.29	588.3	6,200.8	1,937.7	1,869.0	68.68	28.211		
16,000.0	6,672.0	6,730.8	6,729.9	116.0	23.4	88.22	588.3	6,200.8	2,032.3	1,964.6	67.67	30.031		
16,100.0	6,672.0	6,729.9	6,729.1	117.2	23.4	88.14	588.3	6,200.8	2,127.3	2,060.6	66.76	31.865		
16,200.0	6,672.0	6,729.0	6,728.2	118.4	23.4	88.06	588.3	6,200.8	2,222.9	2,156.9	65.94	33.708		
16,300.0	6,672.0	6,728.2	6,727.3	119.6	23.4	87.98	588.3	6,200.8	2,318.8	2,253.5	65.21	35.560		
16,400.0	6,672.0	6,727.3	6,726.5	120.8	23.4	87.91	588.3	6,200.8	2,415.0	2,350.4	64.54	37.417		
16,500.0	6,672.0	6,726.4	6,725.6	122.0	23.4	87.83	588.3	6,200.8	2,511.5	2,447.6	63.94	39.279		
16,600.0	6,672.0	6,725.6	6,724.7	123.2	23.4	87.75	588.3	6,200.8	2,608.3	2,544.9	63.39	41.144		
16,700.0	6,672.0	6,724.7	6,723.9	124.5	23.4	87.67	588.4	6,200.8	2,705.3	2,642.4	62.90	43.011		
16,800.0	6,672.0	6,723.8	6,723.0	125.7	23.4	87.59	588.4	6,200.8	2,802.6	2,740.1	62.45	44.878		
16,900.0	6,672.0	6,723.0	6,722.2	126.9	23.4	87.52	588.4	6,200.8	2,900.0	2,837.9	62.04	46.744		
17,000.0	6,672.0	6,722.1	6,721.3	128.1	23.3	87.44	588.4	6,200.9	2,997.6	2,935.9	61.67	48.609		
17,100.0	6,672.0	6,721.2	6,720.4	129.3	23.3	87.36	588.4	6,200.9	3,095.3	3,034.0	61.33	50.473		
17,200.0	6,672.0	6,720.4	6,719.6	130.5	23.3	87.28	588.4	6,200.9	3,193.2	3,132.2	61.02	52.333		
17,300.0	6,672.0	6,719.5	6,718.7	131.7	23.3	87.20	588.4	6,200.9	3,291.2	3,230.5	60.73	54.191		
17,400.0	6,672.0	6,718.6	6,717.8	133.0	23.3	87.13	588.4	6,200.9	3,389.4	3,328.9	60.48	56.045		
17,500.0	6,672.0	6,717.8	6,717.0	134.2	23.3	87.05	588.4	6,200.9	3,487.6	3,427.4	60.24	57.895		
17,600.0	6,672.0	6,716.9	6,716.1	135.4	23.3	86.97	588.4	6,200.9	3,586.0	3,525.9	60.02	59.741		
17,700.0	6,672.0	6,720.6	6,719.8	136.6	23.3	87.30	588.4	6,200.9	3,684.4	3,624.6	59.82	61.588		
17,800.0	6,672.0	6,719.6	6,718.8	137.8	23.3	87.21	588.4	6,200.9	3,782.9	3,723.2	59.64	63.424		
17,900.0	6,672.0	6,718.6	6,717.8	139.0	23.3	87.12	588.4	6,200.9	3,881.5	3,822.0	59.48	65.255		
18,000.0	6,672.0	6,717.6	6,716.8	140.3	23.3	87.02	588.4	6,200.9	3,980.1	3,920.8	59.33	67.081		
18,100.0	6,672.0	6,716.6	6,715.7	141.5	23.3	86.93	588.4	6,200.9	4,078.9	4,019.7	59.20	68.902		
18,200.0	6,672.0	6,715.5	6,714.7	142.7	23.3	86.84	588.4	6,200.9	4,177.7	4,118.6	59.08	70.716		
18,300.0	6,672.0	6,714.4	6,713.6	143.9	23.3	86.74	588.4	6,200.9	4,276.5	4,217.6	58.97	72.525		
18,342.5	6,672.0	6,714.0	6,713.2	144.4	23.3	86.70	588.4	6,200.9	4,318.5	4,259.6	58.92	73.292		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 5519 23-08 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	95.5	95.5	0.0	0.2	106.65	-1,908.2	6,379.3	6,658.6					
100.0	100.0	193.7	193.7	0.1	0.5	106.65	-1,908.2	6,378.8	6,658.2	6,657.6	0.63	N/A		
200.0	200.0	297.2	297.2	0.5	0.9	106.66	-1,908.3	6,378.3	6,657.8	6,656.4	1.35	4,930.425		
300.0	300.0	411.1	411.1	0.8	1.3	106.66	-1,908.6	6,377.6	6,657.2	6,655.1	2.11	3,157.919		
400.0	400.0	518.4	518.4	1.2	1.6	106.67	-1,909.0	6,376.6	6,656.5	6,653.6	2.84	2,341.624		
500.0	500.0	620.4	620.4	1.6	2.0	106.67	-1,909.3	6,375.7	6,655.7	6,652.1	3.56	1,870.352		
600.0	600.0	719.4	719.4	1.9	2.3	106.68	-1,909.6	6,374.8	6,654.9	6,650.6	4.26	1,560.787		
700.0	700.0	826.0	826.0	2.3	2.7	106.68	-1,909.7	6,373.8	6,654.0	6,649.0	5.00	1,331.964		
800.0	800.0	924.9	924.9	2.6	3.1	106.68	-1,909.8	6,372.8	6,653.1	6,647.4	5.70	1,167.065		
900.0	900.0	1,026.7	1,026.7	3.0	3.4	106.68	-1,909.8	6,371.9	6,652.2	6,645.8	6.42	1,036.836		
1,000.0	1,000.0	1,129.6	1,129.6	3.4	3.8	106.69	-1,909.9	6,370.8	6,651.3	6,644.1	7.13	932.218		
1,100.0	1,100.0	1,221.8	1,221.7	3.7	4.1	106.69	-1,910.0	6,369.9	6,650.3	6,642.5	7.82	850.826		
1,200.0	1,200.0	1,312.3	1,312.3	4.1	4.4	106.69	-1,910.2	6,369.2	6,649.6	6,641.1	8.49	783.035		
1,300.0	1,300.0	1,413.0	1,413.0	4.4	4.8	106.70	-1,910.4	6,368.3	6,648.9	6,639.7	9.20	722.460		
1,400.0	1,400.0	1,504.3	1,504.2	4.8	5.1	106.70	-1,910.7	6,367.7	6,648.2	6,638.4	9.88	672.822		
1,500.0	1,500.0	1,597.1	1,597.0	5.1	5.4	106.71	-1,910.9	6,367.1	6,647.7	6,637.2	10.56	629.248		
1,600.0	1,600.0	1,684.6	1,684.5	5.5	5.7	106.71	-1,911.0	6,366.7	6,647.3	6,636.1	11.23	591.969		
1,700.0	1,700.0	1,781.1	1,781.0	5.9	6.1	106.71	-1,911.1	6,366.4	6,647.1	6,635.2	11.93	557.397		
1,800.0	1,800.0	1,910.2	1,910.2	6.2	6.5	106.72	-1,911.7	6,365.7	6,646.7	6,634.0	12.74	521.922		
1,900.0	1,900.0	2,114.7	2,114.5	6.6	7.2	106.74	-1,913.8	6,361.9	6,645.2	6,631.4	13.81	481.237		
2,000.0	2,000.0	2,225.4	2,225.3	6.9	7.6	106.76	-1,915.1	6,358.8	6,642.9	6,628.3	14.56	456.373		
2,100.0	2,100.0	2,348.9	2,348.6	7.3	8.1	106.78	-1,916.8	6,355.0	6,640.3	6,624.9	15.35	432.663		
2,200.0	2,200.0	2,447.1	2,446.8	7.7	8.4	106.81	-1,919.0	6,351.5	6,637.5	6,621.4	16.05	413.486		
2,278.0	2,278.0	2,511.7	2,511.3	7.9	8.6	157.84	-1,920.6	6,349.2	6,636.4	6,619.9	16.56	400.807		
2,300.0	2,300.0	2,527.4	2,527.0	8.0	8.7	157.85	-1,921.0	6,348.7	6,636.5	6,619.8	16.69	397.606		
2,400.0	2,399.8	2,600.0	2,599.5	8.4	8.9	157.86	-1,922.9	6,346.4	6,639.1	6,621.8	17.30	383.768		
2,500.0	2,499.5	2,682.1	2,681.6	8.7	9.2	157.86	-1,924.7	6,344.3	6,645.4	6,627.4	17.94	370.415		
2,600.0	2,598.7	2,772.4	2,771.9	9.1	9.5	157.84	-1,926.2	6,342.2	6,655.0	6,636.4	18.61	357.640		
2,700.0	2,697.5	2,858.2	2,857.7	9.4	9.9	157.80	-1,927.4	6,340.5	6,668.0	6,648.7	19.26	346.231		
2,800.0	2,795.6	2,940.0	2,939.4	9.8	10.1	157.73	-1,928.3	6,339.1	6,684.4	6,664.5	19.89	336.002		
2,900.0	2,893.1	3,019.0	3,018.4	10.1	10.4	157.65	-1,929.0	6,338.1	6,704.3	6,683.8	20.52	326.751		
3,000.0	2,989.6	3,093.8	3,093.2	10.5	10.7	157.53	-1,929.6	6,337.3	6,727.6	6,706.5	21.13	318.450		
3,100.0	3,085.3	3,158.0	3,157.4	10.9	10.9	157.39	-1,930.0	6,336.9	6,754.5	6,732.8	21.69	311.339		
3,200.0	3,179.8	3,226.7	3,226.1	11.2	11.1	157.23	-1,930.6	6,336.9	6,784.9	6,762.6	22.28	304.562		
3,300.0	3,273.2	3,307.2	3,306.6	11.6	11.4	157.05	-1,931.3	6,337.0	6,818.6	6,795.7	22.90	297.748		
3,387.5	3,353.8	3,379.8	3,379.2	11.9	11.7	156.89	-1,932.2	6,337.1	6,850.7	6,827.3	23.45	292.096		
3,400.0	3,365.2	3,390.1	3,389.5	12.0	11.7	156.91	-1,932.3	6,337.1	6,855.5	6,831.9	23.53	291.302		
3,500.0	3,456.8	3,477.4	3,476.7	12.4	12.0	157.04	-1,934.1	6,337.1	6,893.6	6,869.4	24.18	285.099		
3,600.0	3,548.3	3,562.8	3,562.2	12.8	12.3	157.18	-1,936.2	6,337.1	6,931.8	6,907.0	24.82	279.236		
3,700.0	3,639.8	3,651.0	3,650.3	13.2	12.6	157.32	-1,938.6	6,337.0	6,970.2	6,944.7	25.48	273.519		
3,800.0	3,731.4	3,748.9	3,748.2	13.6	13.0	157.48	-1,941.3	6,336.9	7,008.5	6,982.4	26.18	267.682		
3,900.0	3,822.9	3,847.8	3,847.1	14.0	13.3	157.64	-1,944.0	6,336.7	7,046.8	7,019.9	26.89	262.067		
4,000.0	3,914.4	3,938.1	3,937.3	14.4	13.6	157.78	-1,946.2	6,336.5	7,085.1	7,057.5	27.57	257.007		
4,100.0	4,005.9	4,000.0	3,999.2	14.8	13.8	157.87	-1,947.6	6,336.4	7,123.4	7,095.3	28.14	253.114		
4,200.0	4,097.5	4,059.2	4,058.4	15.2	14.1	157.96	-1,948.8	6,336.7	7,162.2	7,133.5	28.71	249.473		
4,300.0	4,189.0	4,100.0	4,099.2	15.6	14.2	158.02	-1,949.5	6,337.2	7,201.7	7,172.5	29.21	246.579		
4,400.0	4,280.5	4,147.0	4,146.2	16.1	14.4	158.08	-1,950.1	6,338.2	7,241.7	7,212.0	29.73	243.611		
4,500.0	4,372.1	4,200.0	4,199.1	16.5	14.5	158.15	-1,950.4	6,339.9	7,282.4	7,252.2	30.27	240.585		
4,600.0	4,463.6	4,231.9	4,231.1	16.9	14.7	158.19	-1,950.5	6,341.2	7,323.7	7,293.0	30.73	238.319		
4,700.0	4,555.1	4,274.6	4,273.7	17.4	14.8	158.23	-1,950.5	6,343.2	7,365.6	7,334.4	31.23	235.831		
4,800.0	4,646.7	4,323.5	4,322.5	17.8	15.0	158.29	-1,950.3	6,345.8	7,408.1	7,376.3	31.76	233.262		
4,900.0	4,738.2	4,381.7	4,380.6	18.2	15.2	158.35	-1,950.0	6,349.3	7,451.0	7,418.7	32.32	230.522		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

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<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 5519 23-08 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,000.0	4,829.7	4,449.6	4,448.3	18.7	15.4	158.42	-1,949.5	6,353.7	7,494.3	7,461.4	32.93	227.610		
5,100.0	4,921.3	4,561.2	4,559.7	19.1	15.8	158.53	-1,948.5	6,361.2	7,537.7	7,504.0	33.71	223.600		
5,200.0	5,012.8	4,931.1	4,928.7	19.5	17.1	158.82	-1,934.4	6,380.8	7,578.8	7,543.2	35.56	213.156		
5,300.0	5,104.3	5,061.8	5,059.3	20.0	17.6	158.92	-1,929.5	6,384.9	7,618.4	7,582.0	36.43	209.151		
5,400.0	5,195.8	5,208.0	5,205.4	20.4	18.1	159.06	-1,926.2	6,387.8	7,657.4	7,620.1	37.36	204.984		
5,500.0	5,287.4	5,331.7	5,329.1	20.9	18.5	159.19	-1,924.4	6,389.2	7,695.9	7,657.7	38.20	201.471		
5,600.0	5,378.9	5,442.6	5,440.0	21.3	18.9	159.31	-1,923.6	6,389.6	7,734.1	7,695.1	38.99	198.353		
5,700.0	5,470.4	5,534.9	5,532.3	21.8	19.2	159.41	-1,923.4	6,389.7	7,772.3	7,732.5	39.71	195.712		
5,800.0	5,562.0	5,623.3	5,620.7	22.2	19.5	159.51	-1,923.5	6,389.8	7,810.4	7,770.0	40.42	193.235		
5,900.0	5,653.5	5,703.9	5,701.3	22.7	19.8	159.61	-1,923.9	6,389.8	7,848.7	7,807.6	41.09	190.989		
6,000.0	5,745.0	5,783.9	5,781.3	23.1	20.1	159.70	-1,924.5	6,389.8	7,887.1	7,845.3	41.77	188.825		
6,100.0	5,836.6	5,867.9	5,865.2	23.6	20.4	159.80	-1,925.3	6,389.9	7,925.7	7,883.2	42.46	186.662		
6,200.0	5,928.1	5,953.1	5,950.5	24.0	20.7	159.90	-1,926.3	6,390.0	7,964.3	7,921.2	43.16	184.543		
6,278.6	6,000.0	6,018.5	6,015.9	24.4	20.9	159.97	-1,927.2	6,390.1	7,994.7	7,951.0	43.70	182.953		
6,290.0	6,010.4	6,027.4	6,024.8	24.4	20.9	158.01	-1,927.3	6,390.1	7,999.2	7,955.5	43.77	182.735		
6,300.0	6,019.5	6,035.2	6,032.6	24.5	20.9	156.13	-1,927.4	6,390.1	8,003.2	7,959.3	43.84	182.546		
6,350.0	6,065.8	6,074.7	6,072.0	24.7	21.1	145.08	-1,927.9	6,390.2	8,020.3	7,976.1	44.17	181.568		
6,400.0	6,113.0	6,121.2	6,118.5	24.9	21.2	130.75	-1,928.5	6,390.4	8,033.3	7,988.8	44.53	180.421		
6,450.0	6,160.7	6,178.9	6,176.3	25.1	21.4	113.65	-1,929.1	6,390.5	8,041.9	7,997.0	44.92	179.042		
6,500.0	6,208.5	6,250.0	6,247.3	25.3	21.7	96.27	-1,929.7	6,390.7	8,046.1	8,000.8	45.35	177.417		
6,550.0	6,255.8	6,329.9	6,327.2	25.4	22.0	81.52	-1,930.1	6,390.7	8,045.7	7,999.9	45.81	175.636		
6,600.0	6,302.5	6,516.0	6,513.3	25.6	22.6	70.78	-1,930.1	6,389.0	8,040.7	7,994.0	46.68	172.245		
6,650.0	6,347.9	6,650.0	6,578.1	25.7	23.1	63.07	-1,929.8	6,387.7	8,030.5	7,983.3	47.29	169.827		
6,700.0	6,391.6	6,600.0	6,597.3	25.9	22.9	57.73	-1,929.7	6,387.3	8,016.3	7,969.1	47.21	169.801		
6,750.0	6,433.4	6,634.5	6,631.8	26.0	23.0	54.26	-1,929.6	6,386.6	7,998.0	7,950.5	47.42	168.661		
6,800.0	6,472.8	6,648.8	6,646.1	26.1	23.1	52.10	-1,929.6	6,386.4	7,975.9	7,928.4	47.53	167.791		
6,850.0	6,509.4	6,662.0	6,659.3	26.2	23.1	51.04	-1,929.6	6,386.2	7,950.3	7,902.7	47.63	166.908		
6,900.0	6,543.0	6,700.0	6,697.3	26.3	23.3	51.08	-1,929.7	6,385.9	7,921.4	7,873.6	47.82	165.647		
6,950.0	6,573.2	6,700.0	6,697.3	26.4	23.3	51.84	-1,929.7	6,385.9	7,889.2	7,841.3	47.85	164.887		
7,000.0	6,599.8	6,713.9	6,683.4	26.5	23.3	53.42	-1,929.6	6,385.9	7,854.1	7,806.2	47.90	163.953		
7,050.0	6,622.5	6,708.5	6,705.8	26.6	23.3	56.30	-1,929.8	6,385.8	7,816.5	7,768.6	47.92	163.130		
7,100.0	6,641.1	6,726.8	6,724.1	26.7	23.4	60.40	-1,929.9	6,385.7	7,776.6	7,728.6	48.01	161.988		
7,150.0	6,655.4	6,740.8	6,738.2	26.8	23.4	65.98	-1,930.0	6,385.6	7,734.8	7,686.7	48.08	160.860		
7,200.0	6,665.4	6,750.5	6,747.8	26.9	23.4	73.29	-1,930.1	6,385.6	7,691.4	7,643.2	48.15	159.746		
7,250.0	6,670.8	6,755.7	6,753.0	27.0	23.5	82.54	-1,930.1	6,385.6	7,646.8	7,598.6	48.20	158.648		
7,285.7	6,672.0	6,756.7	6,754.0	27.1	23.5	90.29	-1,930.1	6,385.6	7,614.5	7,566.2	48.23	157.873		
7,300.0	6,672.0	6,756.6	6,753.9	27.1	23.5	90.29	-1,930.1	6,385.6	7,601.4	7,553.2	48.24	157.564		
7,400.0	6,672.0	6,756.1	6,753.4	27.3	23.5	90.28	-1,930.1	6,385.6	7,510.5	7,462.2	48.33	155.404		
7,500.0	6,672.0	6,755.5	6,752.8	27.6	23.5	90.27	-1,930.1	6,385.6	7,419.9	7,371.4	48.43	153.209		
7,600.0	6,672.0	6,755.0	6,752.3	28.0	23.5	90.26	-1,930.1	6,385.6	7,329.5	7,280.9	48.55	150.980		
7,700.0	6,672.0	6,754.4	6,751.8	28.3	23.5	90.25	-1,930.1	6,385.6	7,239.3	7,190.6	48.68	148.715		
7,800.0	6,672.0	6,753.9	6,751.2	28.8	23.5	90.24	-1,930.1	6,385.6	7,149.4	7,100.6	48.83	146.417		
7,900.0	6,672.0	6,753.4	6,750.7	29.3	23.4	90.23	-1,930.1	6,385.6	7,059.8	7,010.8	49.00	144.085		
8,000.0	6,672.0	6,752.8	6,750.1	29.8	23.4	90.22	-1,930.1	6,385.6	6,970.4	6,921.3	49.18	141.719		
8,100.0	6,672.0	6,752.3	6,749.6	30.4	23.4	90.21	-1,930.1	6,385.6	6,881.4	6,832.0	49.39	139.321		
8,200.0	6,672.0	6,751.7	6,749.0	31.0	23.4	90.20	-1,930.1	6,385.6	6,792.7	6,743.1	49.62	136.892		
8,300.0	6,672.0	6,751.2	6,748.5	31.7	23.4	90.19	-1,930.1	6,385.6	6,704.3	6,654.4	49.87	134.433		
8,400.0	6,672.0	6,750.6	6,748.0	32.4	23.4	90.18	-1,930.1	6,385.6	6,616.2	6,566.1	50.14	131.946		
8,500.0	6,672.0	6,750.1	6,747.4	33.1	23.4	90.17	-1,930.1	6,385.6	6,528.5	6,478.0	50.44	129.432		
8,600.0	6,672.0	6,749.6	6,746.9	33.9	23.4	90.16	-1,930.1	6,385.6	6,441.1	6,390.3	50.76	126.893		
8,700.0	6,672.0	6,749.0	6,746.3	34.7	23.4	90.15	-1,930.1	6,385.6	6,354.1	6,303.0	51.11	124.332		
8,800.0	6,672.0	6,748.5	6,745.8	35.5	23.4	90.14	-1,930.1	6,385.6	6,267.5	6,216.0	51.48	121.751		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 5519 23-08 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance								Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
8,900.0	6,672.0	6,747.9	6,745.2	36.3	23.4	90.13	-1,930.1	6,385.6	6,181.3	6,129.5	51.88	119.152		
9,000.0	6,672.0	6,747.4	6,744.7	37.2	23.4	90.12	-1,930.1	6,385.6	6,095.6	6,043.3	52.31	116.538		
9,100.0	6,672.0	6,746.8	6,744.2	38.1	23.4	90.11	-1,930.1	6,385.6	6,010.3	5,957.5	52.76	113.912		
9,200.0	6,672.0	6,746.3	6,743.6	39.0	23.4	90.10	-1,930.1	6,385.6	5,925.4	5,872.1	53.25	111.277		
9,300.0	6,672.0	6,745.8	6,743.1	39.9	23.4	90.09	-1,930.1	6,385.6	5,841.0	5,787.3	53.77	108.636		
9,400.0	6,672.0	6,745.2	6,742.5	40.8	23.4	90.08	-1,930.1	6,385.6	5,757.2	5,702.8	54.32	105.993		
9,500.0	6,672.0	6,744.7	6,742.0	41.8	23.4	90.07	-1,930.1	6,385.6	5,673.8	5,618.9	54.90	103.351		
9,600.0	6,672.0	6,744.1	6,741.5	42.7	23.4	90.06	-1,930.0	6,385.6	5,591.0	5,535.5	55.51	100.713		
9,700.0	6,672.0	6,743.6	6,740.9	43.7	23.4	90.05	-1,930.0	6,385.6	5,508.8	5,452.6	56.16	98.083		
9,800.0	6,672.0	6,743.1	6,740.4	44.7	23.4	90.04	-1,930.0	6,385.6	5,427.2	5,370.3	56.85	95.465		
9,900.0	6,672.0	6,742.5	6,739.8	45.7	23.4	90.03	-1,930.0	6,385.6	5,346.2	5,288.6	57.57	92.861		
10,000.0	6,672.0	6,742.0	6,739.3	46.7	23.4	90.02	-1,930.0	6,385.6	5,265.9	5,207.6	58.33	90.276		
10,100.0	6,672.0	6,741.4	6,738.7	47.7	23.4	90.01	-1,930.0	6,385.6	5,186.2	5,127.1	59.13	87.713		
10,200.0	6,672.0	6,740.9	6,738.2	48.8	23.4	90.00	-1,930.0	6,385.6	5,107.3	5,047.4	59.96	85.175		
10,300.0	6,672.0	6,740.3	6,737.6	49.8	23.4	89.99	-1,930.0	6,385.6	5,029.2	4,968.3	60.84	82.666		
10,400.0	6,672.0	6,739.8	6,737.1	50.9	23.4	89.98	-1,930.0	6,385.7	4,951.8	4,890.0	61.75	80.189		
10,500.0	6,672.0	6,739.2	6,736.6	51.9	23.4	89.97	-1,930.0	6,385.7	4,875.3	4,812.5	62.71	77.746		
10,600.0	6,672.0	6,738.7	6,736.0	53.0	23.4	89.96	-1,930.0	6,385.7	4,799.6	4,735.9	63.70	75.342		
10,700.0	6,672.0	6,738.2	6,735.5	54.1	23.4	89.95	-1,930.0	6,385.7	4,724.8	4,660.1	64.74	72.979		
10,800.0	6,672.0	6,737.6	6,734.9	55.2	23.4	89.94	-1,930.0	6,385.7	4,651.0	4,585.2	65.82	70.659		
10,900.0	6,672.0	6,737.1	6,734.4	56.3	23.4	89.93	-1,930.0	6,385.7	4,578.2	4,511.2	66.95	68.386		
11,000.0	6,672.0	6,736.5	6,733.8	57.4	23.4	89.92	-1,930.0	6,385.7	4,506.4	4,438.3	68.11	66.161		
11,100.0	6,672.0	6,736.0	6,733.3	58.5	23.4	89.91	-1,930.0	6,385.7	4,435.8	4,366.4	69.32	63.987		
11,200.0	6,672.0	6,735.4	6,732.8	59.6	23.4	89.91	-1,930.0	6,385.7	4,366.2	4,295.7	70.58	61.866		
11,300.0	6,672.0	6,734.9	6,732.2	60.7	23.4	89.90	-1,930.0	6,385.7	4,297.9	4,226.1	71.87	59.800		
11,400.0	6,672.0	6,734.4	6,731.7	61.8	23.4	89.89	-1,930.0	6,385.7	4,230.9	4,157.7	73.21	57.790		
11,500.0	6,672.0	6,733.8	6,731.1	62.9	23.4	89.88	-1,930.0	6,385.7	4,165.2	4,090.6	74.59	55.839		
11,600.0	6,672.0	6,733.3	6,730.6	64.1	23.4	89.87	-1,930.0	6,385.7	4,100.9	4,024.8	76.02	53.947		
11,700.0	6,672.0	6,732.7	6,730.0	65.2	23.4	89.86	-1,930.0	6,385.7	4,038.0	3,960.5	77.48	52.115		
11,800.0	6,672.0	6,732.2	6,729.5	66.3	23.4	89.85	-1,930.0	6,385.7	3,976.7	3,897.7	78.99	50.346		
11,900.0	6,672.0	6,731.6	6,729.0	67.5	23.4	89.84	-1,930.0	6,385.7	3,916.9	3,836.4	80.53	48.640		
12,000.0	6,672.0	6,731.1	6,728.4	68.6	23.4	89.83	-1,930.0	6,385.7	3,858.9	3,776.7	82.11	46.997		
12,100.0	6,672.0	6,730.6	6,727.9	69.8	23.4	89.82	-1,930.0	6,385.7	3,802.5	3,718.8	83.72	45.418		
12,200.0	6,672.0	6,730.0	6,727.3	70.9	23.4	89.81	-1,929.9	6,385.7	3,748.1	3,662.7	85.37	43.904		
12,300.0	6,672.0	6,729.5	6,726.8	72.1	23.4	89.80	-1,929.9	6,385.7	3,695.5	3,608.4	87.04	42.455		
12,400.0	6,672.0	6,728.9	6,726.2	73.2	23.4	89.79	-1,929.9	6,385.7	3,644.9	3,556.1	88.75	41.071		
12,500.0	6,672.0	6,728.4	6,725.7	74.4	23.4	89.78	-1,929.9	6,385.7	3,596.4	3,505.9	90.47	39.752		
12,600.0	6,672.0	6,727.8	6,725.1	75.5	23.4	89.77	-1,929.9	6,385.7	3,550.0	3,457.8	92.21	38.499		
12,700.0	6,672.0	6,727.3	6,724.6	76.7	23.4	89.76	-1,929.9	6,385.7	3,505.9	3,412.0	93.97	37.311		
12,800.0	6,672.0	6,726.7	6,724.1	77.9	23.4	89.75	-1,929.9	6,385.7	3,464.2	3,368.4	95.73	36.188		
12,900.0	6,672.0	6,726.2	6,723.5	79.0	23.4	89.74	-1,929.9	6,385.7	3,424.8	3,327.3	97.49	35.129		
13,000.0	6,672.0	6,725.7	6,723.0	80.2	23.4	89.73	-1,929.9	6,385.7	3,388.0	3,288.7	99.25	34.134		
13,100.0	6,672.0	6,725.1	6,722.4	81.4	23.4	89.72	-1,929.9	6,385.7	3,353.7	3,252.7	101.01	33.203		
13,200.0	6,672.0	6,724.6	6,721.9	82.6	23.3	89.71	-1,929.9	6,385.7	3,322.1	3,219.4	102.74	32.335		
13,300.0	6,672.0	6,724.0	6,721.3	83.7	23.3	89.70	-1,929.9	6,385.7	3,293.3	3,188.8	104.45	31.529		
13,400.0	6,672.0	6,723.5	6,720.8	84.9	23.3	89.69	-1,929.9	6,385.7	3,267.2	3,161.1	106.13	30.784		
13,500.0	6,672.0	6,722.9	6,720.2	86.1	23.3	89.68	-1,929.9	6,385.7	3,244.1	3,136.3	107.78	30.099		
13,600.0	6,672.0	6,722.4	6,719.7	87.3	23.3	89.67	-1,929.9	6,385.7	3,223.9	3,114.5	109.38	29.475		
13,700.0	6,672.0	6,721.8	6,719.2	88.4	23.3	89.66	-1,929.9	6,385.7	3,206.6	3,095.7	110.92	28.908		
13,800.0	6,672.0	6,721.3	6,718.6	89.6	23.3	89.65	-1,929.9	6,385.7	3,192.5	3,080.1	112.41	28.400		
13,900.0	6,672.0	6,720.8	6,718.1	90.8	23.3	89.64	-1,929.9	6,385.8	3,181.4	3,067.6	113.84	27.947		
14,000.0	6,672.0	6,720.2	6,717.5	92.0	23.3	89.63	-1,929.9	6,385.8	3,173.4	3,058.3	115.19	27.550		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 5519 23-08 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
14,100.0	6,672.0	6,719.7	6,717.0	93.2	23.3	89.62	-1,929.9	6,385.8	3,168.6	3,052.2	116.46	27.207		
14,200.0	6,672.0	6,719.1	6,716.4	94.4	23.3	89.61	-1,929.9	6,385.8	3,167.0	3,049.3	117.66	26.917		
14,202.2	6,672.0	6,719.1	6,716.4	94.4	23.3	89.61	-1,929.9	6,385.8	3,167.0	3,049.3	117.68	26.912 CC, ES		
14,300.0	6,672.0	6,718.6	6,715.9	95.6	23.3	89.60	-1,929.9	6,385.8	3,168.5	3,049.7	118.76	26.679		
14,400.0	6,672.0	6,718.0	6,715.3	96.8	23.3	89.59	-1,929.9	6,385.8	3,173.2	3,053.4	119.78	26.491		
14,500.0	6,672.0	6,717.5	6,714.8	98.0	23.3	89.58	-1,929.9	6,385.8	3,181.0	3,060.3	120.71	26.352		
14,600.0	6,672.0	6,716.9	6,714.2	99.2	23.3	89.57	-1,929.9	6,385.8	3,191.9	3,070.4	121.54	26.261		
14,700.0	6,672.0	6,716.4	6,713.7	100.4	23.3	89.56	-1,929.9	6,385.8	3,206.0	3,083.7	122.29	26.217 SF		
14,800.0	6,672.0	6,715.8	6,713.2	101.6	23.3	89.55	-1,929.9	6,385.8	3,223.0	3,100.1	122.93	26.218		
14,900.0	6,672.0	6,715.3	6,712.6	102.7	23.3	89.54	-1,929.8	6,385.8	3,243.1	3,119.6	123.49	26.263		
15,000.0	6,672.0	6,714.8	6,712.1	103.9	23.3	89.53	-1,929.8	6,385.8	3,266.2	3,142.2	123.95	26.350		
15,100.0	6,672.0	6,714.2	6,711.5	105.1	23.3	89.52	-1,929.8	6,385.8	3,292.1	3,167.7	124.33	26.479		
15,200.0	6,672.0	6,713.7	6,711.0	106.3	23.3	89.51	-1,929.8	6,385.8	3,320.8	3,196.2	124.62	26.647		
15,300.0	6,672.0	6,713.1	6,710.4	107.6	23.3	89.50	-1,929.8	6,385.8	3,352.3	3,227.5	124.83	26.855		
15,400.0	6,672.0	6,712.6	6,709.9	108.8	23.3	89.49	-1,929.8	6,385.8	3,386.4	3,261.5	124.96	27.100		
15,500.0	6,672.0	6,712.0	6,709.3	110.0	23.3	89.48	-1,929.8	6,385.8	3,423.2	3,298.1	125.02	27.381		
15,600.0	6,672.0	6,711.5	6,708.8	111.2	23.3	89.47	-1,929.8	6,385.8	3,462.4	3,337.4	125.01	27.697		
15,700.0	6,672.0	6,710.9	6,708.2	112.4	23.3	89.46	-1,929.8	6,385.8	3,504.1	3,379.1	124.93	28.047		
15,800.0	6,672.0	6,710.4	6,707.7	113.6	23.3	89.45	-1,929.8	6,385.8	3,548.1	3,423.3	124.80	28.430		
15,900.0	6,672.0	6,709.8	6,707.2	114.8	23.3	89.44	-1,929.8	6,385.8	3,594.3	3,469.7	124.61	28.844		
16,000.0	6,672.0	6,709.3	6,706.6	116.0	23.3	89.43	-1,929.8	6,385.8	3,642.7	3,518.4	124.37	29.289		
16,100.0	6,672.0	6,708.7	6,706.1	117.2	23.3	89.42	-1,929.8	6,385.8	3,693.2	3,569.1	124.09	29.763		
16,200.0	6,672.0	6,708.2	6,705.5	118.4	23.3	89.41	-1,929.8	6,385.8	3,745.7	3,622.0	123.76	30.265		
16,300.0	6,672.0	6,707.7	6,705.0	119.6	23.3	89.40	-1,929.8	6,385.8	3,800.1	3,676.7	123.40	30.795		
16,400.0	6,672.0	6,707.1	6,704.4	120.8	23.3	89.39	-1,929.8	6,385.8	3,856.4	3,733.4	123.01	31.351		
16,500.0	6,672.0	6,706.6	6,703.9	122.0	23.3	89.38	-1,929.8	6,385.8	3,914.3	3,791.8	122.58	31.932		
16,600.0	6,672.0	6,706.1	6,703.4	123.2	23.3	89.37	-1,929.8	6,385.8	3,974.0	3,851.9	122.14	32.537		
16,700.0	6,672.0	6,705.7	6,703.0	124.5	23.3	89.37	-1,929.8	6,385.8	4,035.3	3,913.6	121.67	33.166		
16,800.0	6,672.0	6,705.2	6,702.5	125.7	23.3	89.36	-1,929.8	6,385.8	4,098.1	3,976.9	121.18	33.818		
16,900.0	6,672.0	6,704.7	6,702.0	126.9	23.3	89.35	-1,929.8	6,385.8	4,162.3	4,041.7	120.68	34.491		
17,000.0	6,672.0	6,704.2	6,701.5	128.1	23.3	89.34	-1,929.8	6,385.8	4,228.0	4,107.8	120.16	35.185		
17,100.0	6,672.0	6,703.7	6,701.0	129.3	23.3	89.33	-1,929.8	6,385.8	4,295.0	4,175.3	119.64	35.899		
17,200.0	6,672.0	6,703.1	6,700.4	130.5	23.3	89.32	-1,929.8	6,385.8	4,363.2	4,244.1	119.11	36.633		
17,300.0	6,672.0	6,702.6	6,699.9	131.7	23.3	89.31	-1,929.8	6,385.8	4,432.7	4,314.1	118.57	37.385		
17,400.0	6,672.0	6,702.0	6,699.3	133.0	23.3	89.30	-1,929.8	6,385.9	4,503.3	4,385.3	118.03	38.155		
17,500.0	6,672.0	6,701.3	6,698.7	134.2	23.3	89.29	-1,929.8	6,385.9	4,575.0	4,457.5	117.48	38.943		
17,600.0	6,672.0	6,700.7	6,698.0	135.4	23.3	89.28	-1,929.7	6,385.9	4,647.8	4,530.9	116.93	39.747		
17,700.0	6,672.0	6,700.0	6,697.3	136.6	23.3	89.26	-1,929.7	6,385.9	4,721.6	4,605.2	116.39	40.567		
17,800.0	6,672.0	6,699.3	6,696.6	137.8	23.3	89.25	-1,929.7	6,385.9	4,796.3	4,680.4	115.85	41.402		
17,900.0	6,672.0	6,698.5	6,695.9	139.0	23.3	89.24	-1,929.7	6,385.9	4,871.9	4,756.6	115.31	42.252		
18,000.0	6,672.0	6,697.8	6,695.1	140.3	23.3	89.22	-1,929.7	6,385.9	4,948.4	4,833.7	114.77	43.117		
18,100.0	6,672.0	6,696.9	6,694.3	141.5	23.3	89.21	-1,929.7	6,385.9	5,025.8	4,911.5	114.24	43.995		
18,200.0	6,672.0	6,696.1	6,693.4	142.7	23.2	89.19	-1,929.7	6,385.9	5,103.9	4,990.2	113.71	44.886		
18,300.0	6,672.0	6,695.2	6,692.5	143.9	23.2	89.17	-1,929.7	6,385.9	5,182.8	5,069.6	113.19	45.790		
18,342.5	6,672.0	6,694.8	6,692.1	144.4	23.2	89.17	-1,929.7	6,385.9	5,216.5	5,103.5	112.97	46.177		



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 5519 24-08 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	170.2	170.2	0.0	0.4	118.88	-3,434.1	6,226.2	7,111.3					
100.0	100.0	243.4	243.4	0.1	0.7	118.87	-3,432.4	6,226.0	7,110.0	7,109.2	0.82	8,646.102		
200.0	200.0	300.0	299.9	0.5	0.9	118.86	-3,431.0	6,226.2	7,109.0	7,107.7	1.38	5,148.919		
237.9	237.9	300.0	299.9	0.6	0.9	118.86	-3,431.0	6,226.2	7,108.9	7,107.4	1.52	4,686.954		
300.0	300.0	300.0	299.9	0.8	0.9	118.86	-3,431.0	6,226.2	7,109.2	7,107.5	1.74	4,085.504		
400.0	400.0	344.8	344.7	1.2	1.1	118.85	-3,430.3	6,226.7	7,110.1	7,107.8	2.25	3,154.080		
500.0	500.0	400.0	399.9	1.6	1.3	118.85	-3,430.7	6,228.5	7,112.7	7,109.9	2.80	2,537.168		
600.0	600.0	400.0	399.9	1.9	1.3	118.85	-3,430.7	6,228.5	7,115.7	7,112.6	3.16	2,250.266		
700.0	700.0	421.0	420.9	2.3	1.3	118.85	-3,431.2	6,229.5	7,120.1	7,116.5	3.59	1,981.334		
800.0	800.0	528.6	528.3	2.6	1.7	118.84	-3,433.4	6,234.0	7,124.8	7,120.4	4.32	1,649.118		
900.0	900.0	614.6	614.3	3.0	2.1	118.84	-3,435.5	6,237.5	7,129.6	7,124.6	4.98	1,432.765		
1,000.0	1,000.0	726.3	725.8	3.4	2.5	118.85	-3,438.1	6,242.3	7,134.4	7,128.7	5.72	1,246.581		
1,100.0	1,100.0	864.8	864.2	3.7	3.0	118.84	-3,441.0	6,247.6	7,138.8	7,132.2	6.57	1,087.243		
1,200.0	1,200.0	965.1	964.4	4.1	3.3	118.85	-3,443.3	6,251.1	7,142.9	7,135.6	7.27	981.872		
1,300.0	1,300.0	1,080.3	1,079.5	4.4	3.7	118.85	-3,445.8	6,255.1	7,147.0	7,139.0	8.04	889.280		
1,400.0	1,400.0	1,212.5	1,211.6	4.8	4.2	118.85	-3,448.4	6,259.3	7,150.8	7,141.9	8.86	807.183		
1,500.0	1,500.0	1,357.3	1,356.4	5.1	4.7	118.86	-3,451.3	6,262.9	7,153.9	7,144.2	9.73	735.547		
1,600.0	1,600.0	1,516.4	1,515.4	5.5	5.2	118.86	-3,453.9	6,266.0	7,156.3	7,145.7	10.64	672.444		
1,700.0	1,700.0	1,598.5	1,597.5	5.9	5.5	118.87	-3,455.1	6,267.3	7,158.5	7,147.2	11.29	634.146		
1,800.0	1,800.0	1,722.8	1,721.7	6.2	5.9	118.87	-3,457.0	6,269.2	7,160.5	7,148.5	12.08	592.645		
1,900.0	1,900.0	1,800.0	1,798.9	6.6	6.2	118.88	-3,458.2	6,270.4	7,162.7	7,150.0	12.71	563.493		
2,000.0	2,000.0	1,881.4	1,880.3	6.9	6.5	118.88	-3,459.5	6,272.0	7,165.2	7,151.8	13.35	536.518		
2,100.0	2,100.0	2,021.3	2,020.2	7.3	7.0	118.88	-3,460.9	6,274.9	7,167.5	7,153.3	14.20	504.601		
2,200.0	2,200.0	2,150.5	2,149.4	7.7	7.4	118.88	-3,462.5	6,276.6	7,169.2	7,154.2	15.02	477.449		
2,300.0	2,300.0	2,262.5	2,261.3	8.0	7.8	169.89	-3,464.6	6,277.3	7,172.4	7,156.6	15.76	455.012		
2,400.0	2,399.8	2,360.1	2,358.9	8.4	8.1	169.89	-3,467.2	6,277.5	7,178.9	7,162.5	16.46	436.211		
2,500.0	2,499.5	2,464.1	2,462.8	8.7	8.5	169.89	-3,470.3	6,277.4	7,189.0	7,171.8	17.17	418.584		
2,600.0	2,598.7	2,576.5	2,575.1	9.1	8.9	169.88	-3,473.5	6,277.3	7,202.2	7,184.3	17.92	401.920		
2,700.0	2,697.5	2,724.7	2,723.4	9.4	9.4	169.88	-3,476.8	6,277.0	7,218.5	7,199.7	18.79	384.207		
2,800.0	2,795.6	2,834.0	2,832.6	9.8	9.8	169.86	-3,479.1	6,276.2	7,237.6	7,218.1	19.52	370.807		
2,900.0	2,893.1	2,943.7	2,942.3	10.1	10.2	169.84	-3,481.5	6,275.3	7,260.2	7,239.9	20.25	358.523		
3,000.0	2,989.6	3,061.2	3,059.7	10.5	10.6	169.82	-3,484.6	6,273.5	7,285.6	7,264.6	21.01	346.790		
3,100.0	3,085.3	3,166.6	3,165.1	10.9	10.9	169.78	-3,487.1	6,271.8	7,314.3	7,292.5	21.72	336.698		
3,200.0	3,179.8	3,335.2	3,333.7	11.2	11.5	169.76	-3,488.7	6,269.7	7,345.8	7,323.2	22.66	324.235		
3,300.0	3,273.2	3,533.5	3,531.9	11.6	12.2	169.75	-3,488.1	6,265.2	7,378.9	7,355.2	23.69	311.518		
3,387.5	3,353.8	3,600.0	3,598.4	11.9	12.5	169.68	-3,487.6	6,263.5	7,410.4	7,386.2	24.22	305.936		
3,400.0	3,365.2	3,610.7	3,609.1	12.0	12.5	169.68	-3,487.5	6,263.2	7,415.1	7,390.8	24.30	305.093		
3,500.0	3,456.8	3,717.7	3,716.1	12.4	12.9	169.75	-3,486.9	6,260.4	7,452.4	7,427.4	25.02	297.853		
3,600.0	3,548.3	3,792.2	3,790.5	12.8	13.1	169.80	-3,486.6	6,258.4	7,489.8	7,464.2	25.63	292.240		
3,700.0	3,639.8	3,848.2	3,846.5	13.2	13.3	169.84	-3,486.5	6,257.0	7,527.5	7,501.4	26.18	287.570		
3,800.0	3,731.4	3,902.4	3,900.7	13.6	13.5	169.88	-3,486.7	6,255.9	7,565.7	7,539.0	26.72	283.148		
3,900.0	3,822.9	3,976.5	3,974.8	14.0	13.8	169.93	-3,487.0	6,254.6	7,604.3	7,576.9	27.34	278.164		
4,000.0	3,914.4	4,051.6	4,049.9	14.4	14.0	169.98	-3,487.3	6,253.5	7,643.1	7,615.1	27.96	273.342		
4,100.0	4,005.9	4,124.3	4,122.5	14.8	14.3	170.03	-3,487.9	6,252.5	7,682.0	7,653.5	28.58	268.797		
4,200.0	4,097.5	4,191.7	4,189.9	15.2	14.5	170.07	-3,488.5	6,251.7	7,721.3	7,692.1	29.18	264.606		
4,300.0	4,189.0	4,274.5	4,272.8	15.6	14.8	170.13	-3,489.1	6,251.1	7,760.8	7,730.9	29.84	260.077		
4,400.0	4,280.5	4,356.2	4,354.4	16.1	15.1	170.18	-3,489.4	6,250.6	7,800.3	7,769.8	30.50	255.768		
4,500.0	4,372.1	4,432.6	4,430.9	16.5	15.4	170.22	-3,489.5	6,250.6	7,840.1	7,808.9	31.14	251.784		
4,600.0	4,463.6	4,500.0	4,498.3	16.9	15.6	170.25	-3,489.3	6,250.8	7,880.0	7,848.2	31.75	248.222		
4,700.0	4,555.1	4,537.0	4,535.3	17.4	15.7	170.27	-3,489.2	6,251.1	7,920.4	7,888.2	32.24	245.677		
4,800.0	4,646.7	4,571.6	4,569.9	17.8	15.8	170.29	-3,489.2	6,251.7	7,961.5	7,928.7	32.72	243.308		
4,900.0	4,738.2	4,600.0	4,598.2	18.2	15.9	170.30	-3,489.3	6,252.3	8,003.2	7,970.0	33.18	241.215		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
**Anticollision Report**

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 5519 24-08 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,000.0	4,829.7	4,666.4	4,664.6	18.7	16.2	170.33	-3,489.7	6,254.0	8,045.3	8,011.6	33.78	238.140		
5,100.0	4,921.3	4,719.9	4,718.1	19.1	16.4	170.36	-3,490.2	6,255.6	8,087.9	8,053.6	34.34	235.533		
5,200.0	5,012.8	4,769.1	4,767.2	19.5	16.5	170.38	-3,490.9	6,257.2	8,130.9	8,096.1	34.88	233.139		
5,300.0	5,104.3	4,833.9	4,832.0	20.0	16.8	170.41	-3,491.9	6,259.6	8,174.4	8,138.9	35.48	230.421		
5,400.0	5,195.8	5,122.8	5,120.7	20.4	17.8	170.57	-3,497.1	6,266.1	8,216.7	8,179.7	36.98	222.196		
5,500.0	5,287.4	5,225.0	5,222.9	20.9	18.1	170.63	-3,499.2	6,266.7	8,257.9	8,220.2	37.74	218.834		
5,600.0	5,378.9	5,287.2	5,285.2	21.3	18.3	170.67	-3,500.6	6,267.1	8,299.3	8,261.0	38.33	216.501		
5,700.0	5,470.4	5,359.9	5,357.8	21.8	18.6	170.72	-3,502.6	6,267.6	8,340.9	8,302.0	38.97	214.015		
5,800.0	5,562.0	5,429.8	5,427.6	22.2	18.8	170.76	-3,504.5	6,268.2	8,382.8	8,343.2	39.60	211.673		
5,900.0	5,653.5	5,500.0	5,497.8	22.7	19.1	170.81	-3,506.6	6,269.1	8,424.9	8,384.7	40.23	209.401		
6,000.0	5,745.0	5,588.7	5,586.5	23.1	19.4	170.86	-3,509.2	6,270.3	8,467.2	8,426.3	40.94	206.817		
6,100.0	5,836.6	5,651.3	5,649.0	23.6	19.6	170.90	-3,511.0	6,271.2	8,509.5	8,468.0	41.54	204.849		
6,200.0	5,928.1	5,713.9	5,711.6	24.0	19.8	170.94	-3,512.8	6,272.4	8,552.2	8,510.1	42.14	202.946		
6,278.6	6,000.0	5,784.4	5,782.1	24.4	20.1	170.98	-3,514.7	6,273.9	8,585.9	8,543.2	42.70	201.069		
6,290.0	6,010.4	5,794.6	5,792.3	24.4	20.1	169.03	-3,515.0	6,274.1	8,590.8	8,548.1	42.78	200.799		
6,300.0	6,019.5	5,803.6	5,801.3	24.5	20.1	167.03	-3,515.2	6,274.3	8,595.2	8,552.4	42.85	200.566		
6,350.0	6,065.8	5,832.4	5,830.1	24.7	20.2	155.44	-3,516.0	6,275.0	8,614.8	8,571.7	43.14	199.700		
6,400.0	6,113.0	5,863.1	5,860.7	24.9	20.4	140.65	-3,516.8	6,275.8	8,630.8	8,587.4	43.42	198.757		
6,450.0	6,160.7	5,900.0	5,897.6	25.1	20.5	123.15	-3,518.0	6,276.7	8,643.0	8,599.2	43.73	197.653		
6,500.0	6,208.5	5,900.0	5,897.6	25.3	20.5	105.32	-3,518.0	6,276.7	8,651.3	8,607.4	43.87	197.225		
6,550.0	6,255.8	5,939.9	5,937.4	25.4	20.6	90.21	-3,519.3	6,277.9	8,655.6	8,611.4	44.16	196.007		
6,600.0	6,302.5	5,961.6	5,959.1	25.6	20.7	78.83	-3,520.0	6,278.6	8,656.0	8,611.7	44.36	195.118		
6,650.0	6,347.9	6,000.0	5,997.5	25.7	20.8	70.82	-3,521.4	6,279.9	8,652.6	8,607.9	44.62	193.898		
6,700.0	6,391.6	6,009.6	6,007.1	25.9	20.9	65.23	-3,521.8	6,280.3	8,645.1	8,600.4	44.75	193.197		
6,750.0	6,433.4	6,067.3	6,064.7	26.0	21.1	61.64	-3,523.8	6,282.5	8,633.8	8,588.7	45.07	191.583		
6,800.0	6,472.8	6,800.0	6,099.9	26.1	23.6	59.37	-3,525.0	6,283.8	8,618.5	8,570.8	47.72	180.606		
6,850.0	6,509.4	6,130.7	6,128.0	26.2	21.3	58.16	-3,526.0	6,284.8	8,599.6	8,554.2	45.44	189.240		
6,900.0	6,543.0	6,150.5	6,147.7	26.3	21.4	57.84	-3,526.7	6,285.6	8,577.3	8,531.7	45.57	188.235		
6,950.0	6,573.2	6,168.4	6,165.7	26.4	21.4	58.33	-3,527.4	6,286.3	8,551.8	8,506.1	45.68	187.221		
7,000.0	6,599.8	6,184.4	6,181.6	26.5	21.5	59.61	-3,528.0	6,287.0	8,523.2	8,477.4	45.78	186.195		
7,050.0	6,622.5	6,200.0	6,197.2	26.6	21.5	61.69	-3,528.7	6,287.6	8,491.9	8,446.0	45.87	185.123		
7,100.0	6,641.1	6,200.0	6,197.2	26.7	21.5	64.51	-3,528.7	6,287.6	8,458.1	8,412.2	45.90	184.271		
7,150.0	6,655.4	6,200.0	6,197.2	26.8	21.5	68.24	-3,528.7	6,287.6	8,422.0	8,376.1	45.93	183.360		
7,200.0	6,665.4	6,200.0	6,197.2	26.9	21.5	72.96	-3,528.7	6,287.6	8,384.2	8,338.2	45.97	182.387		
7,250.0	6,670.8	6,200.0	6,197.2	27.0	21.5	78.75	-3,528.7	6,287.6	8,344.7	8,298.7	46.01	181.352		
7,285.7	6,672.0	6,200.0	6,197.2	27.1	21.5	83.55	-3,528.7	6,287.6	8,315.8	8,269.7	46.05	180.574		
7,300.0	6,672.0	6,200.0	6,197.2	27.1	21.5	83.55	-3,528.7	6,287.6	8,304.0	8,258.0	46.07	180.255		
7,400.0	6,672.0	6,200.0	6,197.2	27.3	21.5	83.55	-3,528.7	6,287.6	8,222.4	8,176.3	46.19	178.021		
7,500.0	6,672.0	6,200.0	6,197.2	27.6	21.5	83.55	-3,528.7	6,287.6	8,141.3	8,094.9	46.33	175.712		
7,600.0	6,672.0	6,200.0	6,197.2	28.0	21.5	83.55	-3,528.7	6,287.6	8,060.5	8,014.0	46.50	173.329		
7,700.0	6,672.0	6,228.2	6,225.3	28.3	21.6	83.89	-3,530.0	6,288.8	7,980.1	7,933.2	46.84	170.386		
7,800.0	6,672.0	6,229.9	6,227.0	28.8	21.6	83.91	-3,530.0	6,288.9	7,900.2	7,853.1	47.07	167.836		
7,900.0	6,672.0	6,231.6	6,228.8	29.3	21.6	83.93	-3,530.1	6,288.9	7,820.8	7,773.4	47.34	165.219		
8,000.0	6,672.0	6,233.4	6,230.5	29.8	21.7	83.95	-3,530.2	6,289.0	7,741.8	7,694.2	47.63	162.540		
8,100.0	6,672.0	6,235.2	6,232.3	30.4	21.7	83.97	-3,530.3	6,289.1	7,663.4	7,615.4	47.96	159.803		
8,200.0	6,672.0	6,237.0	6,234.1	31.0	21.7	83.99	-3,530.4	6,289.2	7,585.5	7,537.1	48.31	157.012		
8,300.0	6,672.0	6,238.8	6,235.9	31.7	21.7	84.02	-3,530.5	6,289.3	7,508.1	7,459.4	48.70	154.173		
8,400.0	6,672.0	6,240.6	6,237.7	32.4	21.7	84.04	-3,530.6	6,289.4	7,431.2	7,382.1	49.12	151.291		
8,500.0	6,672.0	6,242.5	6,239.6	33.1	21.7	84.06	-3,530.7	6,289.4	7,354.9	7,305.3	49.57	148.371		
8,600.0	6,672.0	6,244.3	6,241.4	33.9	21.7	84.08	-3,530.7	6,289.5	7,279.2	7,229.1	50.06	145.421		
8,700.0	6,672.0	6,246.2	6,243.3	34.7	21.7	84.11	-3,530.8	6,289.6	7,204.1	7,153.5	50.57	142.445		
8,800.0	6,672.0	6,248.1	6,245.2	35.5	21.7	84.13	-3,530.9	6,289.7	7,129.5	7,078.4	51.13	139.450		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 5519 24-08 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
8,900.0	6,672.0	6,250.0	6,247.1	36.3	21.7	84.15	-3,531.0	6,289.8	7,055.7	7,004.0	51.71	136.444		
9,000.0	6,672.0	6,252.0	6,249.1	37.2	21.7	84.18	-3,531.1	6,289.9	6,982.4	6,930.1	52.33	133.430		
9,100.0	6,672.0	6,253.9	6,251.0	38.1	21.7	84.20	-3,531.2	6,290.0	6,909.9	6,856.9	52.98	130.417		
9,200.0	6,672.0	6,255.9	6,253.0	39.0	21.7	84.23	-3,531.3	6,290.1	6,838.1	6,784.4	53.67	127.410		
9,300.0	6,672.0	6,257.9	6,255.0	39.9	21.7	84.25	-3,531.4	6,290.2	6,766.9	6,712.5	54.39	124.415		
9,400.0	6,672.0	6,260.0	6,257.0	40.8	21.7	84.28	-3,531.5	6,290.3	6,696.5	6,641.4	55.14	121.437		
9,500.0	6,672.0	6,262.0	6,259.1	41.8	21.8	84.30	-3,531.7	6,290.4	6,626.9	6,571.0	55.93	118.483		
9,600.0	6,672.0	6,264.1	6,261.1	42.7	21.8	84.33	-3,531.8	6,290.5	6,558.1	6,501.3	56.75	115.556		
9,700.0	6,672.0	6,266.2	6,263.2	43.7	21.8	84.35	-3,531.9	6,290.6	6,490.1	6,432.5	57.61	112.662		
9,800.0	6,672.0	6,268.3	6,265.3	44.7	21.8	84.38	-3,532.0	6,290.7	6,422.9	6,364.4	58.49	109.805		
9,900.0	6,672.0	6,270.4	6,267.4	45.7	21.8	84.40	-3,532.1	6,290.8	6,356.6	6,297.2	59.41	106.989		
10,000.0	6,672.0	6,272.6	6,269.6	46.7	21.8	84.43	-3,532.2	6,290.9	6,291.2	6,230.8	60.37	104.218		
10,100.0	6,672.0	6,274.7	6,271.8	47.7	21.8	84.45	-3,532.3	6,291.0	6,226.7	6,165.3	61.35	101.495		
10,200.0	6,672.0	6,300.0	6,297.0	48.8	21.9	84.76	-3,533.8	6,292.3	6,163.2	6,100.7	62.49	98.622		
10,300.0	6,672.0	6,300.0	6,297.0	49.8	21.9	84.76	-3,533.8	6,292.3	6,100.7	6,037.1	63.53	96.031		
10,400.0	6,672.0	6,300.0	6,297.0	50.9	21.9	84.76	-3,533.8	6,292.3	6,039.1	5,974.5	64.59	93.494		
10,500.0	6,672.0	6,300.0	6,297.0	51.9	21.9	84.76	-3,533.8	6,292.3	5,978.6	5,912.9	65.69	91.015		
10,600.0	6,672.0	6,300.0	6,297.0	53.0	21.9	84.76	-3,533.8	6,292.3	5,919.1	5,852.3	66.81	88.594		
10,700.0	6,672.0	6,300.0	6,297.0	54.1	21.9	84.76	-3,533.8	6,292.3	5,860.8	5,792.8	67.96	86.234		
10,800.0	6,672.0	6,300.0	6,297.0	55.2	21.9	84.76	-3,533.8	6,292.3	5,803.6	5,734.5	69.14	83.934		
10,900.0	6,672.0	6,300.0	6,297.0	56.3	21.9	84.76	-3,533.8	6,292.3	5,747.6	5,677.2	70.35	81.698		
11,000.0	6,672.0	6,300.0	6,297.0	57.4	21.9	84.76	-3,533.8	6,292.3	5,692.8	5,621.2	71.59	79.525		
11,100.0	6,672.0	6,300.0	6,297.0	58.5	21.9	84.76	-3,533.8	6,292.3	5,639.2	5,566.4	72.84	77.416		
11,200.0	6,672.0	6,300.0	6,297.0	59.6	21.9	84.76	-3,533.8	6,292.3	5,587.0	5,512.8	74.13	75.371		
11,300.0	6,672.0	6,300.0	6,297.0	60.7	21.9	84.76	-3,533.8	6,292.3	5,536.0	5,460.6	75.43	73.391		
11,400.0	6,672.0	6,300.0	6,297.0	61.8	21.9	84.76	-3,533.8	6,292.3	5,486.4	5,409.7	76.76	71.476		
11,500.0	6,672.0	6,300.0	6,297.0	62.9	21.9	84.76	-3,533.8	6,292.3	5,438.2	5,360.1	78.11	69.625		
11,600.0	6,672.0	6,300.0	6,297.0	64.1	21.9	84.76	-3,533.8	6,292.3	5,391.5	5,312.0	79.47	67.839		
11,700.0	6,672.0	6,300.0	6,297.0	65.2	21.9	84.76	-3,533.8	6,292.3	5,346.2	5,265.3	80.86	66.117		
11,800.0	6,672.0	6,300.0	6,297.0	66.3	21.9	84.76	-3,533.8	6,292.3	5,302.4	5,220.1	82.26	64.458		
11,900.0	6,672.0	6,300.0	6,297.0	67.5	21.9	84.76	-3,533.8	6,292.3	5,260.1	5,176.4	83.68	62.862		
12,000.0	6,672.0	6,300.0	6,297.0	68.6	21.9	84.76	-3,533.8	6,292.3	5,219.4	5,134.3	85.11	61.329		
12,100.0	6,672.0	6,300.0	6,297.0	69.8	21.9	84.76	-3,533.8	6,292.3	5,180.4	5,093.8	86.54	59.858		
12,200.0	6,672.0	6,324.7	6,321.6	70.9	22.0	85.06	-3,535.3	6,293.7	5,142.9	5,054.7	88.14	58.350		
12,300.0	6,672.0	6,327.4	6,324.2	72.1	22.0	85.09	-3,535.4	6,293.9	5,107.1	5,017.5	89.61	56.993		
12,400.0	6,672.0	6,330.1	6,326.9	73.2	22.0	85.12	-3,535.6	6,294.0	5,073.1	4,982.0	91.09	55.695		
12,500.0	6,672.0	6,332.8	6,329.7	74.4	22.0	85.15	-3,535.8	6,294.2	5,040.9	4,948.3	92.57	54.457		
12,600.0	6,672.0	6,335.7	6,332.5	75.5	22.0	85.19	-3,536.0	6,294.3	5,010.4	4,916.4	94.05	53.276		
12,700.0	6,672.0	6,338.5	6,335.3	76.7	22.0	85.22	-3,536.1	6,294.5	4,981.8	4,886.2	95.53	52.151		
12,800.0	6,672.0	6,341.4	6,338.2	77.9	22.0	85.26	-3,536.3	6,294.7	4,955.0	4,858.0	97.00	51.082		
12,900.0	6,672.0	6,344.4	6,341.2	79.0	22.0	85.29	-3,536.5	6,294.9	4,930.1	4,831.6	98.47	50.068		
13,000.0	6,672.0	6,347.4	6,344.2	80.2	22.1	85.33	-3,536.7	6,295.1	4,907.1	4,807.2	99.93	49.107		
13,100.0	6,672.0	6,350.5	6,347.3	81.4	22.1	85.37	-3,536.9	6,295.3	4,886.1	4,784.7	101.37	48.198		
13,200.0	6,672.0	6,353.6	6,350.4	82.6	22.1	85.40	-3,537.1	6,295.5	4,867.0	4,764.2	102.81	47.341		
13,300.0	6,672.0	6,356.8	6,353.6	83.7	22.1	85.44	-3,537.4	6,295.7	4,850.0	4,745.7	104.23	46.533		
13,400.0	6,672.0	6,360.1	6,356.8	84.9	22.1	85.48	-3,537.6	6,295.9	4,834.9	4,729.3	105.62	45.774		
13,500.0	6,672.0	6,363.4	6,360.1	86.1	22.1	85.52	-3,537.8	6,296.1	4,821.9	4,714.9	107.00	45.063		
13,600.0	6,672.0	6,366.8	6,363.5	87.3	22.1	85.56	-3,538.0	6,296.3	4,810.9	4,702.5	108.36	44.399		
13,700.0	6,672.0	6,370.2	6,366.9	88.4	22.1	85.60	-3,538.3	6,296.5	4,801.9	4,692.3	109.68	43.780		
13,800.0	6,672.0	6,373.7	6,370.4	89.6	22.2	85.64	-3,538.5	6,296.8	4,795.1	4,684.1	110.98	43.206		
13,900.0	6,672.0	6,377.3	6,374.0	90.8	22.2	85.69	-3,538.8	6,297.0	4,790.3	4,678.1	112.25	42.675		
14,000.0	6,672.0	6,381.0	6,377.6	92.0	22.2	85.73	-3,539.0	6,297.3	4,787.6	4,674.1	113.49	42.186		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 5519 24-08 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance								Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
14,079.6	6,672.0	6,400.0	6,396.5	93.0	22.2	85.96	-3,540.4	6,298.6	4,787.0	4,672.5	114.54	41.792	CC	
14,100.0	6,672.0	6,400.0	6,396.5	93.2	22.2	85.96	-3,540.4	6,298.6	4,787.1	4,672.3	114.78	41.705	ES	
14,200.0	6,672.0	6,400.0	6,396.5	94.4	22.2	85.96	-3,540.4	6,298.6	4,788.6	4,672.6	115.93	41.307		
14,300.0	6,672.0	6,400.0	6,396.5	95.6	22.2	85.96	-3,540.4	6,298.6	4,792.1	4,675.1	117.03	40.946		
14,400.0	6,672.0	6,400.0	6,396.5	96.8	22.2	85.96	-3,540.4	6,298.6	4,797.8	4,679.7	118.10	40.624		
14,500.0	6,672.0	6,500.7	6,496.8	98.0	22.6	87.16	-3,546.9	6,305.2	4,805.5	4,685.8	119.72	40.140		
14,600.0	6,672.0	6,511.4	6,507.5	99.2	22.6	87.29	-3,547.4	6,305.8	4,815.2	4,694.4	120.76	39.873		
14,700.0	6,672.0	6,520.7	6,516.7	100.4	22.7	87.40	-3,547.9	6,306.3	4,826.9	4,705.2	121.76	39.643		
14,800.0	6,672.0	6,528.8	6,524.8	101.6	22.7	87.50	-3,548.3	6,306.7	4,840.7	4,718.0	122.71	39.449		
14,900.0	6,672.0	6,536.0	6,532.0	102.7	22.7	87.58	-3,548.7	6,307.0	4,856.5	4,732.8	123.60	39.291		
15,000.0	6,672.0	6,542.3	6,538.3	103.9	22.8	87.66	-3,549.0	6,307.3	4,874.2	4,749.8	124.45	39.166		
15,100.0	6,672.0	6,548.1	6,544.0	105.1	22.8	87.73	-3,549.2	6,307.5	4,894.0	4,768.7	125.25	39.073		
15,200.0	6,672.0	6,553.2	6,549.2	106.3	22.8	87.79	-3,549.5	6,307.7	4,915.7	4,789.7	126.01	39.012		
15,300.0	6,672.0	6,557.8	6,553.8	107.6	22.8	87.84	-3,549.7	6,307.9	4,939.4	4,812.7	126.71	38.981		
15,400.0	6,672.0	6,562.1	6,558.0	108.8	22.8	87.89	-3,549.9	6,308.1	4,964.9	4,837.6	127.37	38.980	SF	
15,500.0	6,672.0	6,565.9	6,561.9	110.0	22.8	87.94	-3,550.1	6,308.2	4,992.4	4,864.4	127.99	39.007		
15,600.0	6,672.0	6,569.5	6,565.4	111.2	22.9	87.98	-3,550.2	6,308.3	5,021.7	4,893.1	128.56	39.061		
15,700.0	6,672.0	6,572.7	6,568.7	112.4	22.9	88.02	-3,550.4	6,308.4	5,052.8	4,923.7	129.09	39.142		
15,800.0	6,672.0	6,575.7	6,571.7	113.6	22.9	88.06	-3,550.5	6,308.5	5,085.6	4,956.1	129.57	39.249		
15,900.0	6,672.0	6,578.5	6,574.4	114.8	22.9	88.09	-3,550.6	6,308.6	5,120.3	4,990.2	130.02	39.381		
16,000.0	6,672.0	6,581.1	6,577.0	116.0	22.9	88.12	-3,550.7	6,308.7	5,156.6	5,026.2	130.42	39.538		
16,100.0	6,672.0	6,583.5	6,579.4	117.2	22.9	88.15	-3,550.8	6,308.7	5,194.6	5,063.8	130.79	39.718		
16,200.0	6,672.0	6,585.8	6,581.7	118.4	22.9	88.18	-3,550.9	6,308.8	5,234.3	5,103.2	131.12	39.920		
16,300.0	6,672.0	6,587.9	6,583.8	119.6	22.9	88.20	-3,551.0	6,308.8	5,275.5	5,144.1	131.41	40.145		
16,400.0	6,672.0	6,589.8	6,585.7	120.8	22.9	88.23	-3,551.1	6,308.9	5,318.4	5,186.7	131.67	40.392		
16,500.0	6,672.0	6,591.7	6,587.6	122.0	22.9	88.25	-3,551.2	6,308.9	5,362.7	5,230.8	131.89	40.659		
16,600.0	6,672.0	6,593.4	6,589.3	123.2	22.9	88.27	-3,551.2	6,309.0	5,408.6	5,276.5	132.09	40.947		
16,700.0	6,672.0	6,595.1	6,591.0	124.5	22.9	88.29	-3,551.3	6,309.0	5,455.9	5,323.6	132.25	41.254		
16,800.0	6,672.0	6,600.0	6,595.9	125.7	23.0	88.35	-3,551.5	6,309.1	5,504.6	5,372.2	132.40	41.575		
16,900.0	6,672.0	6,600.0	6,595.9	126.9	23.0	88.35	-3,551.5	6,309.1	5,554.7	5,422.2	132.50	41.922		
17,000.0	6,672.0	6,600.0	6,595.9	128.1	23.0	88.35	-3,551.5	6,309.1	5,606.1	5,473.6	132.57	42.287		
17,100.0	6,672.0	6,601.5	6,597.4	129.3	23.0	88.36	-3,551.6	6,309.1	5,658.9	5,526.2	132.63	42.667		
17,200.0	6,672.0	6,603.8	6,599.7	130.5	23.0	88.39	-3,551.7	6,309.2	5,712.9	5,580.2	132.67	43.062		
17,300.0	6,672.0	6,606.2	6,602.1	131.7	23.0	88.42	-3,551.8	6,309.2	5,768.1	5,635.5	132.68	43.473		
17,400.0	6,672.0	6,608.4	6,604.3	133.0	23.0	88.45	-3,551.8	6,309.3	5,824.6	5,691.9	132.68	43.900		
17,500.0	6,672.0	6,610.6	6,606.5	134.2	23.0	88.47	-3,551.9	6,309.3	5,882.2	5,749.5	132.65	44.343		
17,600.0	6,672.0	6,612.8	6,608.7	135.4	23.0	88.50	-3,552.0	6,309.4	5,940.9	5,808.3	132.61	44.800		
17,700.0	6,672.0	6,614.9	6,610.8	136.6	23.0	88.52	-3,552.1	6,309.4	6,000.8	5,868.2	132.55	45.272		
17,800.0	6,672.0	6,617.0	6,612.9	137.8	23.0	88.55	-3,552.2	6,309.4	6,061.7	5,929.2	132.47	45.758		
17,900.0	6,672.0	6,619.0	6,614.9	139.0	23.0	88.57	-3,552.3	6,309.5	6,123.6	5,991.2	132.38	46.258		
18,000.0	6,672.0	6,621.0	6,616.9	140.3	23.0	88.60	-3,552.3	6,309.5	6,186.5	6,054.3	132.27	46.771		
18,100.0	6,672.0	6,622.9	6,618.8	141.5	23.0	88.62	-3,552.4	6,309.5	6,250.4	6,118.3	132.15	47.296		
18,200.0	6,672.0	6,624.8	6,620.7	142.7	23.0	88.64	-3,552.5	6,309.6	6,315.3	6,183.3	132.02	47.834		
18,300.0	6,672.0	6,626.7	6,622.5	143.9	23.1	88.66	-3,552.5	6,309.6	6,381.0	6,249.2	131.88	48.385		
18,342.5	6,672.0	6,627.4	6,623.3	144.4	23.1	88.67	-3,552.6	6,309.6	6,409.2	6,277.4	131.82	48.622		



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 5519 31-08 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	30.2	30.2	0.0	0.1	84.13	788.3	7,662.3	7,702.8					
100.0	100.0	100.0	100.0	0.1	0.2	84.13	788.2	7,662.7	7,703.3	7,703.0	0.30	N/A		
200.0	200.0	214.3	214.3	0.5	0.6	84.13	787.5	7,663.5	7,703.9	7,702.8	1.06	7,256.387		
300.0	300.0	300.6	300.6	0.8	0.9	84.14	786.7	7,664.0	7,704.4	7,702.7	1.72	4,469.610		
400.0	400.0	399.9	399.9	1.2	1.2	84.15	785.4	7,664.8	7,705.1	7,702.6	2.43	3,168.325		
500.0	500.0	495.6	495.5	1.6	1.6	84.16	784.0	7,665.6	7,705.7	7,702.6	3.13	2,464.321		
600.0	600.0	595.0	595.0	1.9	1.9	84.17	782.4	7,666.4	7,706.4	7,702.6	3.83	2,009.630		
700.0	700.0	688.6	688.6	2.3	2.2	84.18	781.0	7,667.2	7,707.1	7,702.6	4.52	1,704.490		
800.0	800.0	768.6	768.6	2.6	2.5	84.19	779.8	7,668.1	7,708.0	7,702.9	5.16	1,493.686		
900.0	900.0	860.1	860.0	3.0	2.8	84.20	778.5	7,669.2	7,709.1	7,703.3	5.84	1,320.255		
1,000.0	1,000.0	956.5	956.3	3.4	3.2	84.21	777.2	7,670.5	7,710.3	7,703.8	6.53	1,179.875		
1,100.0	1,100.0	1,048.7	1,048.5	3.7	3.5	84.23	775.9	7,671.8	7,711.5	7,704.3	7.22	1,068.644		
1,200.0	1,200.0	1,142.8	1,142.6	4.1	3.8	84.24	774.5	7,673.2	7,712.9	7,705.0	7.90	975.791		
1,300.0	1,300.0	1,240.2	1,240.0	4.4	4.2	84.25	773.0	7,674.7	7,714.2	7,705.6	8.60	896.607		
1,400.0	1,400.0	1,336.0	1,335.8	4.8	4.5	84.26	771.5	7,676.2	7,715.7	7,706.4	9.30	829.825		
1,500.0	1,500.0	1,430.9	1,430.7	5.1	4.8	84.27	770.1	7,677.7	7,717.2	7,707.2	9.99	772.576		
1,600.0	1,600.0	1,524.8	1,524.5	5.5	5.2	84.28	768.5	7,679.4	7,718.7	7,708.0	10.68	722.979		
1,700.0	1,700.0	1,616.0	1,615.8	5.9	5.5	84.30	766.9	7,681.1	7,720.4	7,709.0	11.35	679.928		
1,800.0	1,800.0	1,705.1	1,704.8	6.2	5.8	84.31	764.9	7,682.9	7,722.2	7,710.1	12.03	642.130		
1,900.0	1,900.0	1,845.4	1,845.0	6.6	6.3	84.34	761.7	7,685.3	7,723.7	7,710.8	12.88	599.780		
2,000.0	2,000.0	1,980.4	1,980.0	6.9	6.8	84.37	758.3	7,687.3	7,724.9	7,711.2	13.71	563.438		
2,100.0	2,100.0	2,148.4	2,147.8	7.3	7.4	84.40	753.4	7,688.5	7,725.3	7,710.7	14.66	527.027		
2,200.0	2,200.0	2,331.0	2,330.4	7.7	8.0	84.45	746.7	7,688.1	7,724.7	7,709.1	15.66	493.361		
2,245.1	2,245.1	2,380.6	2,379.9	7.8	8.2	135.47	744.7	7,687.7	7,724.5	7,708.5	15.99	483.029		
2,300.0	2,300.0	2,434.5	2,433.8	8.0	8.4	135.49	742.3	7,687.4	7,724.8	7,708.5	16.38	471.700		
2,400.0	2,399.8	2,523.6	2,522.8	8.4	8.7	135.51	738.4	7,686.8	7,727.5	7,710.5	17.04	453.429		
2,500.0	2,499.5	2,607.5	2,606.6	8.7	9.0	135.50	734.8	7,686.4	7,732.9	7,715.2	17.69	437.157		
2,600.0	2,598.7	2,748.2	2,747.1	9.1	9.5	135.52	729.0	7,685.4	7,740.5	7,722.0	18.53	417.668		
2,700.0	2,697.5	2,852.4	2,851.3	9.4	9.8	135.50	724.5	7,684.4	7,750.4	7,731.1	19.25	402.640		
2,800.0	2,795.6	2,932.4	2,931.2	9.8	10.1	135.43	720.8	7,683.7	7,762.8	7,742.9	19.88	390.473		
2,900.0	2,893.1	3,000.0	2,998.7	10.1	10.4	135.31	717.7	7,683.4	7,778.1	7,757.7	20.47	380.011		
3,000.0	2,989.6	3,060.8	3,059.5	10.5	10.6	135.15	714.9	7,683.3	7,796.3	7,775.3	21.03	370.696		
3,100.0	3,085.3	3,123.4	3,121.9	10.9	10.8	134.97	711.9	7,683.5	7,817.4	7,795.8	21.60	361.907		
3,200.0	3,179.8	3,184.9	3,183.4	11.2	11.0	134.75	709.1	7,684.0	7,841.4	7,819.2	22.17	353.756		
3,300.0	3,273.2	3,237.6	3,236.1	11.6	11.2	134.47	706.6	7,684.6	7,868.2	7,845.5	22.70	346.606		
3,387.5	3,353.8	3,280.7	3,279.1	11.9	11.4	134.19	704.5	7,685.3	7,894.1	7,870.9	23.16	340.880		
3,400.0	3,365.2	3,300.0	3,298.4	12.0	11.4	134.24	703.5	7,685.7	7,898.0	7,874.7	23.27	339.382		
3,500.0	3,456.8	3,365.4	3,363.6	12.4	11.7	134.41	700.3	7,687.0	7,929.1	7,905.2	23.85	332.415		
3,600.0	3,548.3	3,453.9	3,452.0	12.8	12.0	134.63	695.7	7,688.9	7,960.3	7,935.8	24.52	324.605		
3,700.0	3,639.8	3,533.2	3,531.2	13.2	12.2	134.84	691.5	7,690.6	7,991.8	7,966.6	25.16	317.581		
3,800.0	3,731.4	3,600.0	3,597.9	13.6	12.5	135.01	687.7	7,692.3	8,023.5	7,997.8	25.76	311.427		
3,900.0	3,822.9	3,665.5	3,663.2	14.0	12.7	135.18	683.8	7,694.0	8,055.7	8,029.3	26.36	305.579		
4,000.0	3,914.4	3,726.3	3,723.9	14.4	12.9	135.33	679.8	7,695.9	8,088.2	8,061.3	26.95	300.170		
4,100.0	4,005.9	3,784.7	3,782.1	14.8	13.1	135.49	675.8	7,697.9	8,121.2	8,093.7	27.52	295.076		
4,200.0	4,097.5	3,851.8	3,849.0	15.2	13.4	135.66	670.9	7,700.4	8,154.7	8,126.5	28.14	289.835		
4,300.0	4,189.0	3,922.2	3,919.1	15.6	13.6	135.85	665.5	7,703.3	8,188.5	8,159.7	28.76	284.681		
4,400.0	4,280.5	3,992.9	3,989.5	16.1	13.9	136.04	659.8	7,706.3	8,222.6	8,193.2	29.40	279.725		
4,500.0	4,372.1	4,060.5	4,056.8	16.5	14.1	136.22	654.2	7,709.3	8,257.0	8,227.0	30.02	275.082		
4,600.0	4,463.6	4,129.7	4,125.7	16.9	14.4	136.40	648.2	7,712.6	8,291.8	8,261.1	30.65	270.569		
4,700.0	4,555.1	4,202.4	4,198.0	17.4	14.7	136.60	641.9	7,716.2	8,326.9	8,295.6	31.29	266.118		
4,800.0	4,646.7	4,291.4	4,286.6	17.8	15.0	136.83	634.3	7,720.6	8,362.2	8,330.2	32.00	261.315		
4,900.0	4,738.2	4,390.1	4,384.8	18.2	15.3	137.08	626.3	7,725.5	8,397.5	8,364.8	32.75	256.421		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 5519 31-08 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,000.0	4,829.7	4,522.2	4,516.4	18.7	15.8	137.42	616.3	7,731.5	8,432.7	8,399.1	33.63	250.748		
5,100.0	4,921.3	4,643.1	4,636.9	19.1	16.2	137.72	607.1	7,736.6	8,467.7	8,433.2	34.47	245.667		
5,200.0	5,012.8	4,767.0	4,760.3	19.5	16.7	138.02	598.0	7,741.1	8,502.3	8,467.0	35.32	240.734		
5,300.0	5,104.3	4,866.3	4,859.3	20.0	17.0	138.26	591.2	7,744.5	8,536.8	8,500.8	36.07	236.663		
5,400.0	5,195.8	4,946.2	4,939.0	20.4	17.3	138.45	585.9	7,747.3	8,571.5	8,534.7	36.75	233.240		
5,500.0	5,287.4	5,017.8	5,010.4	20.9	17.6	138.62	581.1	7,749.8	8,606.4	8,569.0	37.40	230.147		
5,600.0	5,378.9	5,089.4	5,081.8	21.3	17.8	138.78	576.3	7,752.5	8,641.6	8,603.5	38.04	227.163		
5,700.0	5,470.4	5,143.0	5,135.3	21.8	18.0	138.91	572.7	7,754.7	8,677.1	8,638.5	38.62	224.707		
5,800.0	5,562.0	5,200.0	5,192.1	22.2	18.2	139.04	568.9	7,757.3	8,713.2	8,673.9	39.20	222.262		
5,900.0	5,653.5	5,246.4	5,238.2	22.7	18.4	139.15	565.7	7,759.6	8,749.7	8,709.9	39.75	220.142		
6,000.0	5,745.0	5,300.0	5,291.7	23.1	18.6	139.27	562.1	7,762.4	8,786.6	8,746.3	40.32	217.934		
6,100.0	5,836.6	5,348.2	5,339.7	23.6	18.7	139.38	558.8	7,765.2	8,824.1	8,783.2	40.87	215.923		
6,200.0	5,928.1	5,400.0	5,391.3	24.0	18.9	139.50	555.2	7,768.4	8,862.0	8,820.6	41.43	213.904		
6,278.6	6,000.0	5,437.6	5,428.7	24.4	19.1	139.59	552.6	7,770.9	8,892.1	8,850.3	41.86	212.433		
6,290.0	6,010.4	5,443.6	5,434.7	24.4	19.1	137.55	552.2	7,771.3	8,896.5	8,854.6	41.92	212.210		
6,300.0	6,019.5	5,448.8	5,439.9	24.5	19.1	135.84	551.9	7,771.6	8,900.4	8,858.4	41.98	212.017		
6,350.0	6,065.8	5,475.5	5,466.4	24.7	19.2	125.47	550.0	7,773.4	8,916.9	8,874.6	42.26	211.011		
6,400.0	6,113.0	5,500.0	5,490.8	24.9	19.3	111.61	548.3	7,775.2	8,929.0	8,886.5	42.52	210.000		
6,450.0	6,160.7	5,536.0	5,526.6	25.1	19.4	94.79	545.9	7,777.8	8,936.6	8,893.7	42.82	208.705		
6,500.0	6,208.5	5,568.9	5,559.4	25.3	19.5	77.49	543.7	7,780.2	8,939.5	8,896.4	43.09	207.443		
6,550.0	6,255.8	5,600.0	5,590.3	25.4	19.7	62.61	541.8	7,782.6	8,937.8	8,894.5	43.35	206.201		
6,600.0	6,302.5	5,631.6	5,621.8	25.6	19.8	51.30	539.9	7,785.0	8,931.6	8,888.0	43.58	204.937		
6,650.0	6,347.9	5,660.9	5,651.0	25.7	19.9	43.11	538.2	7,787.4	8,920.7	8,876.9	43.79	203.708		
6,700.0	6,391.6	5,700.0	5,689.8	25.9	20.0	37.25	536.0	7,790.6	8,905.5	8,861.4	44.03	202.276		
6,750.0	6,433.4	5,700.0	5,689.8	26.0	20.0	32.91	536.0	7,790.6	8,885.9	8,841.8	44.08	201.600		
6,800.0	6,472.8	5,734.4	5,724.0	26.1	20.1	29.82	534.1	7,793.5	8,862.1	8,817.8	44.26	200.233		
6,850.0	6,509.4	5,754.1	5,743.6	26.2	20.2	27.53	533.0	7,795.2	8,834.4	8,790.1	44.36	199.136		
6,900.0	6,543.0	5,772.5	5,761.9	26.3	20.3	25.89	532.0	7,796.9	8,803.0	8,758.6	44.45	198.041		
6,950.0	6,573.2	5,800.0	5,789.3	26.4	20.4	24.80	530.6	7,799.4	8,768.2	8,723.6	44.57	196.747		
7,000.0	6,599.8	5,800.0	5,789.3	26.5	20.4	24.08	530.6	7,799.4	8,730.2	8,685.6	44.55	195.949		
7,050.0	6,622.5	5,800.0	5,789.3	26.6	20.4	23.80	530.6	7,799.4	8,689.4	8,644.8	44.53	195.117		
7,100.0	6,641.1	5,826.7	5,815.8	26.7	20.5	24.16	529.2	7,802.0	8,646.0	8,601.4	44.63	193.738		
7,150.0	6,655.4	5,835.3	5,824.3	26.8	20.5	25.13	528.7	7,802.8	8,600.5	8,555.9	44.64	192.664		
7,200.0	6,665.4	5,842.0	5,831.0	26.9	20.5	27.23	528.3	7,803.5	8,553.4	8,508.7	44.65	191.583		
7,250.0	6,670.8	5,846.8	5,835.8	27.0	20.5	31.77	528.1	7,804.0	8,504.9	8,460.2	44.65	190.493		
7,285.7	6,672.0	5,848.9	5,837.9	27.1	20.6	39.05	528.0	7,804.2	8,469.7	8,425.0	44.65	189.708		
7,300.0	6,672.0	5,849.6	5,838.6	27.1	20.6	39.08	528.0	7,804.3	8,455.5	8,410.8	44.65	189.392		
7,400.0	6,672.0	5,854.3	5,843.2	27.3	20.6	39.26	527.7	7,804.7	8,356.4	8,311.8	44.63	187.218		
7,500.0	6,672.0	5,859.0	5,848.0	27.6	20.6	39.45	527.5	7,805.2	8,257.3	8,212.7	44.63	185.035		
7,600.0	6,672.0	5,863.9	5,852.7	28.0	20.6	39.64	527.2	7,805.7	8,158.3	8,113.7	44.62	182.845		
7,700.0	6,672.0	5,868.7	5,857.6	28.3	20.6	39.83	527.0	7,806.2	8,059.3	8,014.6	44.61	180.647		
7,800.0	6,672.0	5,873.7	5,862.5	28.8	20.6	40.02	526.7	7,806.7	7,960.2	7,915.6	44.61	178.442		
7,900.0	6,672.0	5,878.7	5,867.4	29.3	20.7	40.22	526.4	7,807.2	7,861.2	7,816.6	44.61	176.228		
8,000.0	6,672.0	5,900.0	5,888.6	29.8	20.7	41.00	525.3	7,809.5	7,762.3	7,717.6	44.69	173.709		
8,100.0	6,672.0	5,900.0	5,888.6	30.4	20.7	41.02	525.3	7,809.5	7,663.3	7,618.7	44.66	171.575		
8,200.0	6,672.0	5,900.0	5,888.6	31.0	20.7	41.05	525.3	7,809.5	7,564.4	7,519.7	44.65	169.434		
8,300.0	6,672.0	5,900.0	5,888.6	31.7	20.7	41.07	525.3	7,809.5	7,465.5	7,420.8	44.63	167.286		
8,400.0	6,672.0	5,900.0	5,888.6	32.4	20.7	41.09	525.3	7,809.5	7,366.6	7,322.0	44.61	165.131		
8,500.0	6,672.0	5,900.0	5,888.6	33.1	20.7	41.11	525.3	7,809.5	7,267.7	7,223.1	44.60	162.969		
8,600.0	6,672.0	5,900.0	5,888.6	33.9	20.7	41.13	525.3	7,809.5	7,168.9	7,124.3	44.58	160.801		
8,700.0	6,672.0	5,921.0	5,909.5	34.7	20.8	41.92	524.3	7,811.8	7,070.0	7,025.4	44.68	158.247		
8,800.0	6,672.0	5,926.7	5,915.1	35.5	20.8	42.15	524.0	7,812.4	6,971.2	6,926.6	44.70	155.965		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 5519 31-08 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
8,900.0	6,672.0	5,932.4	5,920.8	36.3	20.9	42.38	523.7	7,813.1	6,872.5	6,827.8	44.72	153.675		
9,000.0	6,672.0	5,938.2	5,926.5	37.2	20.9	42.62	523.4	7,813.7	6,773.7	6,729.0	44.75	151.378		
9,100.0	6,672.0	5,944.0	5,932.3	38.1	20.9	42.86	523.1	7,814.4	6,675.0	6,630.3	44.78	149.073		
9,200.0	6,672.0	5,950.0	5,938.2	39.0	20.9	43.11	522.8	7,815.1	6,576.4	6,531.5	44.81	146.761		
9,300.0	6,672.0	5,956.0	5,944.2	39.9	20.9	43.36	522.5	7,815.8	6,477.7	6,432.9	44.85	144.441		
9,400.0	6,672.0	5,962.2	5,950.3	40.8	21.0	43.61	522.2	7,816.5	6,379.1	6,334.2	44.89	142.113		
9,500.0	6,672.0	5,968.4	5,956.5	41.8	21.0	43.87	521.9	7,817.2	6,280.5	6,235.6	44.93	139.777		
9,600.0	6,672.0	5,974.7	5,962.8	42.7	21.0	44.14	521.6	7,817.9	6,181.9	6,137.0	44.98	137.434		
9,700.0	6,672.0	5,981.1	5,969.1	43.7	21.0	44.41	521.3	7,818.7	6,083.4	6,038.4	45.03	135.083		
9,800.0	6,672.0	6,000.0	5,987.9	44.7	21.1	45.19	520.4	7,821.0	5,985.0	5,939.8	45.16	132.522		
9,900.0	6,672.0	6,000.0	5,987.9	45.7	21.1	45.21	520.4	7,821.0	5,886.5	5,841.3	45.19	130.265		
10,000.0	6,672.0	6,001.9	5,989.7	46.7	21.1	45.30	520.3	7,821.2	5,788.1	5,742.9	45.23	127.969		
10,100.0	6,672.0	6,014.6	6,002.4	47.7	21.2	45.84	519.7	7,822.8	5,689.8	5,644.4	45.34	125.494		
10,200.0	6,672.0	6,027.4	6,015.0	48.8	21.2	46.39	519.2	7,824.3	5,591.4	5,546.0	45.45	123.014		
10,300.0	6,672.0	6,040.2	6,027.7	49.8	21.2	46.95	518.6	7,825.9	5,493.1	5,447.6	45.57	120.531		
10,400.0	6,672.0	6,052.9	6,040.4	50.9	21.3	47.51	518.0	7,827.4	5,394.9	5,349.2	45.70	118.044		
10,500.0	6,672.0	6,065.7	6,053.0	51.9	21.3	48.09	517.5	7,829.0	5,296.6	5,250.8	45.84	115.553		
10,600.0	6,672.0	6,078.5	6,065.7	53.0	21.4	48.67	517.0	7,830.5	5,198.5	5,152.5	45.98	113.059		
10,700.0	6,672.0	6,091.3	6,078.4	54.1	21.4	49.26	516.5	7,832.1	5,100.3	5,054.2	46.13	110.561		
10,800.0	6,672.0	6,106.8	6,093.8	55.2	21.5	49.98	515.8	7,834.0	5,002.2	4,955.9	46.31	108.021		
10,900.0	6,672.0	6,127.7	6,114.5	56.3	21.6	50.97	515.0	7,836.5	4,904.1	4,857.6	46.53	105.405		
11,000.0	6,672.0	6,147.9	6,134.5	57.4	21.6	51.96	514.3	7,838.9	4,806.1	4,759.3	46.75	102.797		
11,100.0	6,672.0	6,167.6	6,154.1	58.5	21.7	52.94	513.5	7,841.2	4,708.1	4,661.1	46.99	100.198		
11,200.0	6,672.0	6,186.7	6,173.0	59.6	21.8	53.92	512.8	7,843.4	4,610.1	4,562.9	47.23	97.607		
11,300.0	6,672.0	6,205.3	6,191.5	60.7	21.9	54.89	512.1	7,845.5	4,512.2	4,464.7	47.48	95.023		
11,400.0	6,672.0	6,217.6	6,203.7	61.8	21.9	55.55	511.6	7,846.9	4,414.3	4,366.6	47.71	92.518		
11,500.0	6,672.0	6,231.1	6,217.1	62.9	22.0	56.28	511.0	7,848.4	4,316.5	4,268.5	47.96	89.997		
11,600.0	6,672.0	6,244.4	6,230.3	64.1	22.0	57.01	510.5	7,849.9	4,218.8	4,170.5	48.23	87.477		
11,700.0	6,672.0	6,257.5	6,243.3	65.2	22.0	57.74	509.9	7,851.3	4,121.1	4,072.6	48.51	84.957		
11,800.0	6,672.0	6,270.4	6,256.2	66.3	22.1	58.47	509.3	7,852.7	4,023.5	3,974.7	48.81	82.438		
11,900.0	6,672.0	6,283.2	6,268.8	67.5	22.1	59.21	508.7	7,854.1	3,926.0	3,876.9	49.12	79.920		
12,000.0	6,672.0	6,295.8	6,281.3	68.6	22.2	59.94	508.1	7,855.5	3,828.6	3,779.2	49.46	77.403		
12,100.0	6,672.0	6,308.6	6,294.1	69.8	22.2	60.70	507.5	7,856.8	3,731.3	3,681.5	49.83	74.883		
12,200.0	6,672.0	6,321.5	6,306.9	70.9	22.3	61.47	506.9	7,858.2	3,634.1	3,583.9	50.22	72.363		
12,300.0	6,672.0	6,334.4	6,319.7	72.1	22.3	62.24	506.3	7,859.6	3,537.1	3,486.4	50.64	69.846		
12,400.0	6,672.0	6,347.0	6,332.3	73.2	22.4	63.02	505.7	7,860.9	3,440.1	3,389.1	51.09	67.332		
12,500.0	6,672.0	6,359.6	6,344.7	74.4	22.4	63.79	505.2	7,862.3	3,343.4	3,291.8	51.58	64.823		
12,600.0	6,672.0	6,372.0	6,357.1	75.5	22.5	64.57	504.6	7,863.6	3,246.7	3,194.6	52.10	62.319		
12,700.0	6,672.0	6,384.4	6,369.3	76.7	22.5	65.35	504.1	7,864.8	3,150.3	3,097.6	52.66	59.821		
12,800.0	6,672.0	6,396.6	6,381.5	77.9	22.6	66.12	503.5	7,866.1	3,054.0	3,000.7	53.27	57.331		
12,900.0	6,672.0	6,408.7	6,393.5	79.0	22.6	66.90	503.0	7,867.4	2,957.9	2,904.0	53.93	54.850		
13,000.0	6,672.0	6,416.7	6,401.5	80.2	22.6	67.43	502.7	7,868.2	2,862.1	2,807.5	54.61	52.412		
13,100.0	6,672.0	6,426.5	6,411.3	81.4	22.7	68.07	502.2	7,869.2	2,766.5	2,711.1	55.36	49.969		
13,200.0	6,672.0	6,436.4	6,421.1	82.6	22.7	68.72	501.8	7,870.2	2,671.2	2,615.0	56.19	47.540		
13,300.0	6,672.0	6,446.3	6,430.9	83.7	22.7	69.37	501.4	7,871.3	2,576.3	2,519.2	57.09	45.125		
13,400.0	6,672.0	6,456.3	6,440.8	84.9	22.8	70.04	501.0	7,872.3	2,481.6	2,423.6	58.08	42.729		
13,500.0	6,672.0	6,466.3	6,450.7	86.1	22.8	70.71	500.6	7,873.4	2,387.4	2,328.3	59.16	40.355		
13,600.0	6,672.0	6,476.3	6,460.7	87.3	22.8	71.39	500.1	7,874.4	2,293.7	2,233.3	60.35	38.006		
13,700.0	6,672.0	6,486.4	6,470.7	88.4	22.9	72.07	499.7	7,875.5	2,200.4	2,138.8	61.66	35.686		
13,800.0	6,672.0	6,496.5	6,480.8	89.6	22.9	72.76	499.3	7,876.6	2,107.7	2,044.6	63.10	33.401		
13,900.0	6,672.0	6,509.0	6,493.1	90.8	23.0	73.62	498.8	7,877.9	2,015.7	1,951.0	64.72	31.145		
14,000.0	6,672.0	6,522.3	6,506.4	92.0	23.0	74.54	498.3	7,879.3	1,924.4	1,857.9	66.52	28.932		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 5519 31-08 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
14,100.0	6,672.0	6,535.4	6,519.4	93.2	23.1	75.45	497.8	7,880.6	1,833.9	1,765.4	68.50	26.772		
14,200.0	6,672.0	6,548.2	6,532.1	94.4	23.1	76.35	497.3	7,881.9	1,744.4	1,673.7	70.70	24.673		
14,300.0	6,672.0	6,560.7	6,544.6	95.6	23.2	77.23	496.8	7,883.2	1,656.0	1,582.9	73.14	22.642		
14,400.0	6,672.0	6,573.0	6,556.8	96.8	23.2	78.10	496.4	7,884.4	1,569.0	1,493.1	75.85	20.685		
14,500.0	6,672.0	6,585.0	6,568.7	98.0	23.2	78.96	496.0	7,885.6	1,483.4	1,404.6	78.87	18.810		
14,600.0	6,672.0	6,596.7	6,580.4	99.2	23.3	79.80	495.6	7,886.8	1,399.8	1,317.6	82.22	17.024		
14,700.0	6,672.0	6,609.1	6,592.7	100.4	23.3	80.69	495.2	7,888.0	1,318.3	1,232.3	85.96	15.336		
14,800.0	6,672.0	6,621.3	6,604.9	101.6	23.4	81.57	494.8	7,889.1	1,239.5	1,149.4	90.11	13.755		
14,900.0	6,672.0	6,633.1	6,616.6	102.7	23.4	82.42	494.5	7,890.2	1,163.8	1,069.1	94.68	12.291		
15,000.0	6,672.0	6,644.4	6,627.8	103.9	23.5	83.24	494.1	7,891.2	1,091.9	992.2	99.69	10.953		
15,100.0	6,672.0	6,655.2	6,638.6	105.1	23.5	84.03	493.8	7,892.2	1,024.7	919.6	105.10	9.750		
15,200.0	6,672.0	6,665.6	6,649.0	106.3	23.5	84.79	493.6	7,893.1	963.1	852.3	110.83	8.690		
15,300.0	6,672.0	6,675.7	6,659.0	107.6	23.6	85.52	493.3	7,894.0	908.3	791.6	116.72	7.782		
15,400.0	6,672.0	6,685.3	6,668.6	108.8	23.6	86.23	493.1	7,894.8	861.5	739.0	122.52	7.032		
15,500.0	6,672.0	6,694.7	6,677.9	110.0	23.6	86.91	492.8	7,895.6	824.2	696.4	127.86	6.446		
15,600.0	6,672.0	6,703.7	6,686.9	111.2	23.7	87.57	492.6	7,896.3	797.7	665.4	132.32	6.029		
15,700.0	6,672.0	6,712.3	6,695.5	112.4	23.7	88.20	492.4	7,897.0	783.0	647.6	135.45	5.781		
15,766.5	6,672.0	6,716.7	6,699.9	113.2	23.7	88.52	492.3	7,897.4	780.2	643.6	136.63	5.711 CC, ES		
15,800.0	6,672.0	6,719.4	6,702.6	113.6	23.7	88.72	492.2	7,897.6	780.9	644.0	136.93	5.703 SF		
15,900.0	6,672.0	6,727.5	6,710.6	114.8	23.8	89.31	492.0	7,898.2	791.5	654.8	136.70	5.790		
16,000.0	6,672.0	6,735.5	6,718.6	116.0	23.8	89.90	491.8	7,898.9	814.2	679.3	134.87	6.037		
16,100.0	6,672.0	6,743.6	6,726.7	117.2	23.8	90.49	491.7	7,899.5	848.1	716.3	131.79	6.436		
16,200.0	6,672.0	6,751.6	6,734.7	118.4	23.8	91.08	491.5	7,900.2	891.9	764.1	127.85	6.976		
16,300.0	6,672.0	6,759.7	6,742.7	119.6	23.9	91.66	491.3	7,900.9	944.3	820.8	123.46	7.649		
16,400.0	6,672.0	6,767.7	6,750.7	120.8	23.9	92.25	491.1	7,901.5	1,003.8	884.9	118.90	8.442		
16,500.0	6,672.0	6,775.8	6,758.7	122.0	23.9	92.84	490.9	7,902.2	1,069.4	955.0	114.42	9.346		
16,600.0	6,672.0	6,783.9	6,766.8	123.2	24.0	93.43	490.7	7,902.8	1,139.9	1,029.8	110.13	10.350		
16,700.0	6,672.0	6,791.9	6,774.8	124.5	24.0	94.01	490.5	7,903.5	1,214.5	1,108.4	106.13	11.444		
16,800.0	6,672.0	6,800.0	6,782.8	125.7	24.0	94.59	490.3	7,904.1	1,292.5	1,190.1	102.43	12.618		
16,900.0	6,672.0	6,808.0	6,790.8	126.9	24.1	95.18	490.1	7,904.8	1,373.3	1,274.3	99.05	13.865		
17,000.0	6,672.0	6,816.1	6,798.9	128.1	24.1	95.76	489.9	7,905.4	1,456.5	1,360.5	95.97	15.176		
17,100.0	6,672.0	6,824.1	6,806.9	129.3	24.1	96.34	489.7	7,906.1	1,541.6	1,448.4	93.18	16.545		
17,200.0	6,672.0	6,832.2	6,814.9	130.5	24.1	96.92	489.5	7,906.7	1,628.4	1,537.7	90.65	17.964		
17,300.0	6,672.0	6,840.2	6,822.9	131.7	24.2	97.50	489.4	7,907.4	1,716.5	1,628.2	88.36	19.428		
17,400.0	6,672.0	6,848.3	6,831.0	133.0	24.2	98.07	489.2	7,908.0	1,805.9	1,719.6	86.28	20.931		
17,500.0	6,672.0	6,856.3	6,839.0	134.2	24.2	98.65	489.0	7,908.7	1,896.3	1,811.9	84.40	22.469		
17,600.0	6,672.0	6,864.4	6,847.0	135.4	24.3	99.22	488.8	7,909.3	1,987.6	1,904.9	82.69	24.038		
17,700.0	6,672.0	6,872.4	6,855.0	136.6	24.3	99.79	488.6	7,910.0	2,079.7	1,998.6	81.13	25.633		
17,800.0	6,672.0	6,880.5	6,863.1	137.8	24.3	100.36	488.4	7,910.6	2,172.4	2,092.7	79.72	27.251		
17,900.0	6,672.0	6,888.5	6,871.1	139.0	24.4	100.92	488.2	7,911.3	2,265.8	2,187.3	78.43	28.889		
18,000.0	6,672.0	6,896.6	6,879.1	140.3	24.4	101.49	488.0	7,912.0	2,359.6	2,282.4	77.25	30.544		
18,100.0	6,672.0	6,904.6	6,887.1	141.5	24.4	102.05	487.8	7,912.6	2,453.9	2,377.8	76.18	32.213		
18,200.0	6,672.0	6,912.7	6,895.1	142.7	24.4	102.61	487.6	7,913.3	2,548.7	2,473.5	75.19	33.895		
18,300.0	6,672.0	6,920.7	6,903.2	143.9	24.5	103.17	487.4	7,913.9	2,643.8	2,569.5	74.29	35.587		
18,342.5	6,672.0	6,924.1	6,906.6	144.4	24.5	103.40	487.4	7,914.2	2,684.3	2,610.3	73.93	36.308		



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 5519 32-08 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
0.0	0.0	78.1	78.1	0.0	0.1	94.51	-597.2	7,578.4	7,601.9					
100.0	100.0	183.9	183.9	0.1	0.5	94.51	-597.5	7,578.5	7,602.0	7,601.4	0.59	N/A		
200.0	200.0	290.6	290.6	0.5	0.8	94.51	-597.7	7,578.5	7,602.0	7,600.7	1.32	5,739.705		
300.0	300.0	420.4	420.4	0.8	1.3	94.51	-597.8	7,578.2	7,601.8	7,599.6	2.14	3,559.375		
400.0	400.0	515.0	515.0	1.2	1.6	94.51	-597.8	7,577.8	7,601.4	7,598.6	2.83	2,690.727		
500.0	500.0	615.3	615.3	1.6	2.0	94.51	-597.8	7,577.5	7,601.1	7,597.5	3.53	2,150.446		
600.0	600.0	718.8	718.8	1.9	2.3	94.51	-597.8	7,577.1	7,600.7	7,596.4	4.26	1,786.070		
700.0	700.0	815.1	815.1	2.3	2.7	94.51	-597.7	7,576.7	7,600.3	7,595.4	4.95	1,535.053		
800.0	800.0	918.3	918.3	2.6	3.0	94.51	-597.6	7,576.3	7,599.9	7,594.3	5.67	1,340.119		
900.0	900.0	1,017.5	1,017.5	3.0	3.4	94.51	-597.2	7,576.0	7,599.5	7,593.2	6.38	1,191.745		
1,000.0	1,000.0	1,116.2	1,116.2	3.4	3.7	94.50	-596.7	7,575.6	7,599.2	7,592.1	7.08	1,073.207		
1,100.0	1,100.0	1,214.5	1,214.5	3.7	4.1	94.50	-596.1	7,575.3	7,598.8	7,591.0	7.78	976.343		
1,200.0	1,200.0	1,313.0	1,313.0	4.1	4.4	94.49	-595.2	7,575.1	7,598.5	7,590.0	8.49	895.444		
1,300.0	1,300.0	1,411.5	1,411.5	4.4	4.8	94.49	-594.3	7,574.8	7,598.1	7,588.9	9.19	826.912		
1,400.0	1,400.0	1,513.2	1,513.2	4.8	5.1	94.48	-593.4	7,574.6	7,597.8	7,587.9	9.90	767.258		
1,500.0	1,500.0	1,608.2	1,608.1	5.1	5.4	94.47	-592.5	7,574.3	7,597.5	7,586.9	10.59	717.236		
1,600.0	1,600.0	1,702.3	1,702.3	5.5	5.8	94.47	-591.8	7,574.2	7,597.3	7,586.0	11.28	673.523		
1,700.0	1,700.0	1,806.9	1,806.9	5.9	6.1	94.46	-591.0	7,574.0	7,597.1	7,585.1	12.00	632.891		
1,800.0	1,800.0	1,904.7	1,904.6	6.2	6.5	94.46	-590.3	7,573.9	7,596.8	7,584.1	12.70	598.006		
1,900.0	1,900.0	2,008.7	2,008.7	6.6	6.9	94.45	-589.5	7,573.7	7,596.6	7,583.2	13.43	565.833		
2,000.0	2,000.0	2,101.4	2,101.3	6.9	7.2	94.45	-588.9	7,573.5	7,596.4	7,582.3	14.11	538.460		
2,100.0	2,100.0	2,193.3	2,193.3	7.3	7.5	94.44	-588.3	7,573.4	7,596.3	7,581.5	14.79	513.713		
2,155.3	2,155.3	2,243.3	2,243.3	7.5	7.7	94.44	-588.1	7,573.4	7,596.2	7,581.1	15.16	501.090		
2,200.0	2,200.0	2,283.7	2,283.6	7.7	7.8	94.44	-587.9	7,573.5	7,596.2	7,580.8	15.46	491.338		
2,300.0	2,300.0	2,379.5	2,379.4	8.0	8.1	145.42	-587.4	7,573.6	7,597.8	7,581.6	16.15	470.476		
2,400.0	2,399.8	2,478.1	2,478.0	8.4	8.5	145.39	-586.9	7,573.7	7,602.2	7,585.4	16.84	451.329		
2,500.0	2,499.5	2,573.6	2,573.6	8.7	8.8	145.34	-586.5	7,573.9	7,609.5	7,592.0	17.53	434.140		
2,600.0	2,598.7	2,670.0	2,670.0	9.1	9.2	145.27	-586.0	7,574.2	7,619.8	7,601.6	18.21	418.349		
2,700.0	2,697.5	2,766.5	2,766.4	9.4	9.5	145.18	-585.5	7,574.4	7,632.9	7,614.0	18.90	403.874		
2,800.0	2,795.6	2,870.1	2,870.0	9.8	9.9	145.08	-584.9	7,574.7	7,648.9	7,629.3	19.61	390.074		
2,900.0	2,893.1	2,965.3	2,965.2	10.1	10.2	144.95	-584.5	7,574.9	7,667.7	7,647.4	20.29	377.932		
3,000.0	2,989.6	3,114.8	3,114.8	10.5	10.7	144.86	-583.8	7,574.9	7,689.1	7,667.9	21.16	363.399		
3,100.0	3,085.3	3,147.2	3,147.2	10.9	10.8	144.62	-583.8	7,575.0	7,713.3	7,691.7	21.62	356.810		
3,200.0	3,179.8	3,200.0	3,199.9	11.2	11.0	144.36	-583.8	7,575.4	7,741.0	7,718.8	22.15	349.540		
3,300.0	3,273.2	3,239.3	3,239.2	11.6	11.2	144.04	-583.8	7,575.9	7,771.9	7,749.3	22.63	343.504		
3,387.5	3,353.8	3,300.0	3,299.9	11.9	11.4	143.78	-584.0	7,577.0	7,801.7	7,778.6	23.14	337.174		
3,400.0	3,365.2	3,300.0	3,299.9	12.0	11.4	143.78	-584.0	7,577.0	7,806.1	7,783.0	23.18	336.733		
3,500.0	3,456.8	3,334.5	3,334.4	12.4	11.5	143.85	-584.1	7,577.9	7,841.9	7,818.3	23.64	331.717		
3,600.0	3,548.3	3,378.3	3,378.2	12.8	11.6	143.93	-584.2	7,579.2	7,878.3	7,854.1	24.14	326.422		
3,700.0	3,639.8	3,439.0	3,438.9	13.2	11.8	144.04	-584.2	7,581.3	7,915.2	7,890.5	24.69	320.520		
3,800.0	3,731.4	3,519.5	3,519.3	13.6	12.1	144.18	-584.3	7,584.3	7,952.3	7,927.0	25.33	313.941		
3,900.0	3,822.9	3,611.4	3,611.2	14.0	12.5	144.35	-584.5	7,587.8	7,989.6	7,963.6	26.01	307.139		
4,000.0	3,914.4	3,707.0	3,706.6	14.4	12.8	144.52	-584.6	7,591.4	8,026.9	8,000.2	26.71	300.490		
4,100.0	4,005.9	3,797.2	3,796.8	14.8	13.1	144.68	-584.7	7,594.7	8,064.2	8,036.8	27.40	294.360		
4,200.0	4,097.5	3,893.6	3,893.2	15.2	13.4	144.85	-584.8	7,598.2	8,101.5	8,073.4	28.11	288.254		
4,300.0	4,189.0	4,022.3	4,021.7	15.6	13.9	145.07	-585.1	7,602.6	8,138.6	8,109.7	28.94	281.223		
4,400.0	4,280.5	4,157.4	4,156.9	16.1	14.4	145.31	-585.3	7,606.5	8,175.4	8,145.6	29.80	274.316		
4,500.0	4,372.1	4,355.9	4,355.3	16.5	15.1	145.64	-585.2	7,610.4	8,211.4	8,180.5	30.91	265.676		
4,600.0	4,463.6	4,468.1	4,467.5	16.9	15.5	145.83	-584.8	7,611.6	8,246.6	8,214.9	31.69	260.226		
4,700.0	4,555.1	4,536.3	4,535.7	17.4	15.7	145.94	-584.6	7,612.4	8,281.9	8,249.6	32.31	256.334		
4,800.0	4,646.7	4,600.0	4,599.4	17.8	15.9	146.05	-584.7	7,613.4	8,317.6	8,284.7	32.91	252.724		
4,900.0	4,738.2	4,642.9	4,642.3	18.2	16.1	146.12	-584.9	7,614.2	8,353.8	8,320.3	33.44	249.846		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 5519 32-08 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,000.0	4,829.7	4,700.0	4,699.3	18.7	16.3	146.21	-585.4	7,615.6	8,390.4	8,356.4	34.01	246.680		
5,100.0	4,921.3	4,765.2	4,764.5	19.1	16.5	146.32	-586.1	7,617.3	8,427.5	8,392.9	34.62	243.406		
5,200.0	5,012.8	4,858.8	4,858.1	19.5	16.8	146.48	-587.3	7,619.9	8,464.7	8,429.4	35.34	239.489		
5,300.0	5,104.3	4,983.4	4,982.6	20.0	17.3	146.69	-589.0	7,623.1	8,501.8	8,465.6	36.19	234.923		
5,400.0	5,195.8	5,096.7	5,095.9	20.4	17.6	146.88	-590.7	7,625.5	8,538.5	8,501.5	36.99	230.820		
5,500.0	5,287.4	5,191.4	5,190.6	20.9	18.0	147.04	-592.2	7,627.4	8,575.2	8,537.5	37.72	227.320		
5,600.0	5,378.9	5,341.0	5,340.1	21.3	18.5	147.29	-594.4	7,629.8	8,611.7	8,573.0	38.67	222.689		
5,700.0	5,470.4	5,507.4	5,506.4	21.8	19.1	147.56	-596.6	7,631.2	8,647.4	8,607.7	39.69	217.896		
5,800.0	5,562.0	5,586.2	5,585.3	22.2	19.4	147.68	-597.5	7,631.6	8,682.9	8,642.6	40.36	215.138		
5,900.0	5,653.5	5,648.0	5,647.1	22.7	19.6	147.78	-598.1	7,632.1	8,718.7	8,677.7	40.97	212.823		
6,000.0	5,745.0	5,700.0	5,699.1	23.1	19.8	147.86	-598.6	7,632.7	8,754.8	8,713.3	41.53	210.784		
6,100.0	5,836.6	5,765.8	5,764.9	23.6	20.0	147.96	-599.1	7,633.7	8,791.3	8,749.1	42.16	208.538		
6,200.0	5,928.1	5,825.0	5,824.0	24.0	20.2	148.05	-599.4	7,634.8	8,828.2	8,785.4	42.75	206.496		
6,278.6	6,000.0	5,870.6	5,869.7	24.4	20.3	148.12	-599.7	7,635.8	8,857.4	8,814.2	43.22	204.956		
6,290.0	6,010.4	5,877.2	5,876.2	24.4	20.4	146.12	-599.7	7,636.0	8,861.7	8,818.4	43.28	204.735		
6,300.0	6,019.5	5,883.0	5,882.0	24.5	20.4	144.34	-599.8	7,636.1	8,865.4	8,822.1	43.34	204.543		
6,350.0	6,065.8	5,900.0	5,899.0	24.7	20.4	133.67	-599.9	7,636.6	8,881.5	8,838.0	43.58	203.784		
6,400.0	6,113.0	5,933.0	5,932.0	24.9	20.6	119.63	-600.0	7,637.5	8,893.3	8,849.4	43.88	202.667		
6,450.0	6,160.7	5,966.7	5,965.7	25.1	20.6	102.66	-600.1	7,638.2	8,900.6	8,856.5	44.13	201.679		
6,500.0	6,208.5	6,000.0	5,999.0	25.3	20.8	85.32	-600.3	7,639.8	8,903.5	8,859.0	44.45	200.294		
6,550.0	6,255.8	6,000.0	5,999.0	25.4	20.8	70.40	-600.3	7,639.8	8,901.7	8,857.1	44.58	199.691		
6,600.0	6,302.5	6,000.0	5,999.0	25.6	20.8	59.11	-600.3	7,639.8	8,895.6	8,850.9	44.69	199.072		
6,650.0	6,347.9	6,581.8	6,580.4	25.7	22.8	52.43	-609.2	7,646.8	8,884.1	8,837.0	47.13	188.503		
6,700.0	6,391.6	6,615.8	6,614.4	25.9	22.9	46.91	-609.5	7,646.2	8,866.5	8,819.1	47.35	187.264		
6,750.0	6,433.4	6,647.9	6,646.6	26.0	23.1	43.14	-609.7	7,645.7	8,844.6	8,797.1	47.54	186.043		
6,800.0	6,472.8	6,627.8	6,627.0	26.1	23.3	40.64	-609.9	7,645.3	8,818.8	8,770.9	47.88	184.182		
6,850.0	6,509.4	6,708.4	6,707.0	26.2	23.3	39.22	-610.0	7,644.8	8,789.3	8,741.4	47.87	183.619		
6,900.0	6,543.0	6,741.5	6,740.1	26.3	23.4	38.69	-610.0	7,644.4	8,756.2	8,708.1	48.02	182.337		
6,950.0	6,573.2	6,771.1	6,769.8	26.4	23.5	39.01	-610.1	7,644.0	8,719.8	8,671.7	48.15	181.085		
7,000.0	6,599.8	6,797.1	6,795.8	26.5	23.6	40.26	-610.2	7,643.7	8,680.6	8,632.3	48.26	179.862		
7,050.0	6,622.5	6,819.2	6,817.8	26.6	23.7	42.64	-610.2	7,643.4	8,638.8	8,590.4	48.35	178.668		
7,100.0	6,641.1	6,837.2	6,835.8	26.7	23.7	46.55	-610.3	7,643.1	8,594.8	8,546.4	48.42	177.500		
7,150.0	6,655.4	6,850.9	6,849.5	26.8	23.8	52.76	-610.3	7,642.9	8,549.0	8,500.5	48.47	176.360		
7,200.0	6,665.4	6,860.2	6,858.8	26.9	23.8	62.59	-610.4	7,642.8	8,501.8	8,453.3	48.51	175.246		
7,250.0	6,670.8	6,865.0	6,863.6	27.0	23.8	78.05	-610.4	7,642.8	8,453.7	8,405.1	48.54	174.157		
7,285.7	6,672.0	6,865.7	6,864.3	27.1	23.8	93.23	-610.4	7,642.7	8,419.0	8,370.4	48.55	173.394		
7,300.0	6,672.0	6,865.5	6,864.1	27.1	23.8	93.22	-610.4	7,642.7	8,405.0	8,356.4	48.56	173.091		
7,400.0	6,672.0	6,864.2	6,862.8	27.3	23.8	93.18	-610.4	7,642.8	8,307.5	8,258.9	48.59	170.980		
7,500.0	6,672.0	6,862.9	6,861.5	27.6	23.8	93.14	-610.4	7,642.8	8,210.1	8,161.4	48.62	168.855		
7,600.0	6,672.0	6,861.5	6,860.2	28.0	23.8	93.09	-610.4	7,642.8	8,112.7	8,064.0	48.66	166.716		
7,700.0	6,672.0	6,860.2	6,858.8	28.3	23.8	93.05	-610.4	7,642.8	8,015.4	7,966.6	48.71	164.562		
7,800.0	6,672.0	6,858.9	6,857.5	28.8	23.8	93.01	-610.4	7,642.8	7,918.1	7,869.3	48.76	162.393		
7,900.0	6,672.0	6,857.6	6,856.2	29.3	23.8	92.97	-610.3	7,642.9	7,820.9	7,772.1	48.82	160.210		
8,000.0	6,672.0	6,856.2	6,854.9	29.8	23.8	92.93	-610.3	7,642.9	7,723.8	7,674.9	48.88	158.012		
8,100.0	6,672.0	6,854.9	6,853.5	30.4	23.8	92.89	-610.3	7,642.9	7,626.8	7,577.9	48.95	155.799		
8,200.0	6,672.0	6,853.6	6,852.2	31.0	23.8	92.84	-610.3	7,642.9	7,529.9	7,480.8	49.03	153.571		
8,300.0	6,672.0	6,852.3	6,850.9	31.7	23.8	92.80	-610.3	7,642.9	7,433.0	7,383.9	49.12	151.329		
8,400.0	6,672.0	6,851.0	6,849.6	32.4	23.8	92.76	-610.3	7,642.9	7,336.2	7,287.0	49.21	149.072		
8,500.0	6,672.0	6,849.6	6,848.2	33.1	23.8	92.72	-610.3	7,643.0	7,239.5	7,190.2	49.32	146.799		
8,600.0	6,672.0	6,848.3	6,846.9	33.9	23.8	92.68	-610.3	7,643.0	7,142.9	7,093.5	49.43	144.512		
8,700.0	6,672.0	6,847.0	6,845.6	34.7	23.8	92.64	-610.3	7,643.0	7,046.4	6,996.9	49.55	142.211		
8,800.0	6,672.0	6,845.7	6,844.3	35.5	23.7	92.59	-610.3	7,643.0	6,950.0	6,900.4	49.68	139.894		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 5519 32-08 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
8,900.0	6,672.0	6,844.3	6,843.0	36.3	23.7	92.55	-610.3	7,643.0	6,853.7	6,803.9	49.82	137.564		
9,000.0	6,672.0	6,843.0	6,841.6	37.2	23.7	92.51	-610.3	7,643.0	6,757.6	6,707.6	49.97	135.219		
9,100.0	6,672.0	6,841.7	6,840.3	38.1	23.7	92.47	-610.3	7,643.1	6,661.5	6,611.3	50.14	132.860		
9,200.0	6,672.0	6,840.4	6,839.0	39.0	23.7	92.43	-610.3	7,643.1	6,565.5	6,515.2	50.32	130.487		
9,300.0	6,672.0	6,839.0	6,837.7	39.9	23.7	92.39	-610.3	7,643.1	6,469.7	6,419.2	50.50	128.101		
9,400.0	6,672.0	6,837.7	6,836.3	40.8	23.7	92.35	-610.3	7,643.1	6,374.0	6,323.3	50.71	125.702		
9,500.0	6,672.0	6,836.4	6,835.0	41.8	23.7	92.31	-610.3	7,643.1	6,278.5	6,227.5	50.92	123.291		
9,600.0	6,672.0	6,835.1	6,833.7	42.7	23.7	92.26	-610.3	7,643.1	6,183.0	6,131.9	51.16	120.868		
9,700.0	6,672.0	6,833.8	6,832.4	43.7	23.7	92.22	-610.3	7,643.2	6,087.8	6,036.4	51.40	118.433		
9,800.0	6,672.0	6,832.4	6,831.0	44.7	23.7	92.18	-610.3	7,643.2	5,992.7	5,941.0	51.67	115.988		
9,900.0	6,672.0	6,831.1	6,829.7	45.7	23.7	92.14	-610.3	7,643.2	5,897.7	5,845.8	51.95	113.533		
10,000.0	6,672.0	6,829.8	6,828.4	46.7	23.7	92.10	-610.3	7,643.2	5,802.9	5,750.7	52.25	111.068		
10,100.0	6,672.0	6,828.5	6,827.1	47.7	23.7	92.06	-610.3	7,643.2	5,708.3	5,655.8	52.57	108.595		
10,200.0	6,672.0	6,827.1	6,825.7	48.8	23.7	92.02	-610.3	7,643.3	5,613.9	5,561.0	52.90	106.116		
10,300.0	6,672.0	6,825.8	6,824.4	49.8	23.7	91.98	-610.3	7,643.3	5,519.7	5,466.5	53.26	103.629		
10,400.0	6,672.0	6,824.5	6,823.1	50.9	23.7	91.94	-610.3	7,643.3	5,425.7	5,372.1	53.65	101.138		
10,500.0	6,672.0	6,823.2	6,821.8	51.9	23.7	91.90	-610.3	7,643.3	5,331.9	5,277.9	54.05	98.643		
10,600.0	6,672.0	6,821.8	6,820.5	53.0	23.7	91.85	-610.3	7,643.3	5,238.4	5,183.9	54.48	96.146		
10,700.0	6,672.0	6,820.5	6,819.1	54.1	23.7	91.81	-610.3	7,643.3	5,145.1	5,090.2	54.94	93.648		
10,800.0	6,672.0	6,819.2	6,817.8	55.2	23.7	91.77	-610.2	7,643.4	5,052.1	4,996.6	55.43	91.150		
10,900.0	6,672.0	6,817.9	6,816.5	56.3	23.7	91.73	-610.2	7,643.4	4,959.3	4,903.4	55.94	88.654		
11,000.0	6,672.0	6,816.5	6,815.2	57.4	23.6	91.69	-610.2	7,643.4	4,866.8	4,810.3	56.48	86.162		
11,100.0	6,672.0	6,815.2	6,813.8	58.5	23.6	91.65	-610.2	7,643.4	4,774.6	4,717.6	57.06	83.676		
11,200.0	6,672.0	6,813.9	6,812.5	59.6	23.6	91.61	-610.2	7,643.4	4,682.8	4,625.1	57.67	81.198		
11,300.0	6,672.0	6,812.6	6,811.2	60.7	23.6	91.57	-610.2	7,643.4	4,591.3	4,533.0	58.32	78.729		
11,400.0	6,672.0	6,811.2	6,809.9	61.8	23.6	91.53	-610.2	7,643.5	4,500.2	4,441.2	59.00	76.271		
11,500.0	6,672.0	6,809.9	6,808.5	62.9	23.6	91.49	-610.2	7,643.5	4,409.4	4,349.7	59.73	73.828		
11,600.0	6,672.0	6,808.6	6,807.2	64.1	23.6	91.45	-610.2	7,643.5	4,319.1	4,258.6	60.49	71.400		
11,700.0	6,672.0	6,807.3	6,805.9	65.2	23.6	91.41	-610.2	7,643.5	4,229.2	4,167.9	61.30	68.991		
11,800.0	6,672.0	6,806.0	6,804.6	66.3	23.6	91.36	-610.2	7,643.5	4,139.7	4,077.6	62.16	66.602		
11,900.0	6,672.0	6,804.6	6,803.2	67.5	23.6	91.32	-610.2	7,643.6	4,050.8	3,987.7	63.06	64.237		
12,000.0	6,672.0	6,803.3	6,801.9	68.6	23.6	91.28	-610.2	7,643.6	3,962.4	3,898.3	64.02	61.897		
12,100.0	6,672.0	6,802.0	6,800.6	69.8	23.6	91.24	-610.2	7,643.6	3,874.5	3,809.5	65.02	59.586		
12,200.0	6,672.0	6,800.7	6,799.3	70.9	23.6	91.20	-610.2	7,643.6	3,787.3	3,721.2	66.09	57.305		
12,300.0	6,672.0	6,799.3	6,798.0	72.1	23.6	91.16	-610.2	7,643.6	3,700.7	3,633.5	67.22	55.057		
12,400.0	6,672.0	6,798.0	6,796.6	73.2	23.6	91.12	-610.2	7,643.6	3,614.8	3,546.4	68.40	52.845		
12,500.0	6,672.0	6,796.7	6,795.3	74.4	23.6	91.08	-610.2	7,643.7	3,529.7	3,460.0	69.66	50.672		
12,600.0	6,672.0	6,795.4	6,794.0	75.5	23.6	91.04	-610.2	7,643.7	3,445.3	3,374.3	70.98	48.540		
12,700.0	6,672.0	6,794.0	6,792.7	76.7	23.6	91.00	-610.2	7,643.7	3,361.8	3,289.4	72.37	46.451		
12,800.0	6,672.0	6,792.7	6,791.3	77.9	23.6	90.96	-610.2	7,643.7	3,279.3	3,205.4	73.84	44.409		
12,900.0	6,672.0	6,791.4	6,790.0	79.0	23.6	90.92	-610.2	7,643.7	3,197.7	3,122.3	75.39	42.416		
13,000.0	6,672.0	6,790.1	6,788.7	80.2	23.6	90.88	-610.2	7,643.7	3,117.2	3,040.2	77.02	40.474		
13,100.0	6,672.0	6,788.7	6,787.4	81.4	23.6	90.84	-610.2	7,643.8	3,037.9	2,959.2	78.73	38.587		
13,200.0	6,672.0	6,787.4	6,786.0	82.6	23.5	90.80	-610.2	7,643.8	2,959.9	2,879.3	80.53	36.755		
13,300.0	6,672.0	6,786.1	6,784.7	83.7	23.5	90.76	-610.2	7,643.8	2,883.2	2,800.8	82.42	34.982		
13,400.0	6,672.0	6,784.8	6,783.4	84.9	23.5	90.71	-610.2	7,643.8	2,807.9	2,723.5	84.40	33.270		
13,500.0	6,672.0	6,783.4	6,782.1	86.1	23.5	90.67	-610.2	7,643.8	2,734.3	2,647.8	86.47	31.621		
13,600.0	6,672.0	6,782.1	6,780.7	87.3	23.5	90.63	-610.2	7,643.8	2,662.4	2,573.8	88.64	30.037		
13,700.0	6,672.0	6,780.8	6,779.4	88.4	23.5	90.59	-610.1	7,643.9	2,592.4	2,501.5	90.90	28.520		
13,800.0	6,672.0	6,779.5	6,778.1	89.6	23.5	90.55	-610.1	7,643.9	2,524.4	2,431.1	93.24	27.073		
13,900.0	6,672.0	6,778.1	6,776.8	90.8	23.5	90.51	-610.1	7,643.9	2,458.5	2,362.9	95.68	25.696		
14,000.0	6,672.0	6,776.8	6,775.4	92.0	23.5	90.47	-610.1	7,643.9	2,395.1	2,296.9	98.19	24.391		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 5519 32-08 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
14,100.0	6,672.0	6,775.5	6,774.1	93.2	23.5	90.43	-610.1	7,643.9	2,334.2	2,233.4	100.78	23.161		
14,200.0	6,672.0	6,774.2	6,772.8	94.4	23.5	90.39	-610.1	7,644.0	2,276.1	2,172.7	103.44	22.005		
14,300.0	6,672.0	6,772.8	6,771.5	95.6	23.5	90.35	-610.1	7,644.0	2,221.0	2,114.8	106.14	20.926		
14,400.0	6,672.0	6,771.5	6,770.1	96.8	23.5	90.31	-610.1	7,644.0	2,169.1	2,060.2	108.87	19.923		
14,500.0	6,672.0	6,770.2	6,768.8	98.0	23.5	90.27	-610.1	7,644.0	2,120.6	2,009.0	111.62	18.999		
14,600.0	6,672.0	6,768.9	6,767.5	99.2	23.5	90.23	-610.1	7,644.0	2,075.9	1,961.5	114.35	18.153		
14,700.0	6,672.0	6,767.6	6,766.2	100.4	23.5	90.19	-610.1	7,644.0	2,035.0	1,918.0	117.05	17.386		
14,800.0	6,672.0	6,766.2	6,764.8	101.6	23.5	90.15	-610.1	7,644.1	1,998.4	1,878.7	119.67	16.699		
14,900.0	6,672.0	6,764.9	6,763.5	102.7	23.5	90.11	-610.1	7,644.1	1,966.2	1,844.0	122.20	16.090		
15,000.0	6,672.0	6,763.6	6,762.2	103.9	23.5	90.07	-610.1	7,644.1	1,938.6	1,814.0	124.59	15.560		
15,100.0	6,672.0	6,762.3	6,760.9	105.1	23.5	90.03	-610.1	7,644.1	1,915.9	1,789.1	126.81	15.109		
15,200.0	6,672.0	6,760.9	6,759.6	106.3	23.5	89.99	-610.1	7,644.1	1,898.1	1,769.3	128.82	14.735		
15,300.0	6,672.0	6,759.6	6,758.2	107.6	23.4	89.95	-610.1	7,644.1	1,885.5	1,754.9	130.60	14.437		
15,400.0	6,672.0	6,758.3	6,756.9	108.8	23.4	89.91	-610.1	7,644.2	1,878.2	1,746.1	132.12	14.216		
15,487.9	6,672.0	6,757.1	6,755.7	109.8	23.4	89.87	-610.1	7,644.2	1,876.1	1,742.9	133.23	14.082 CC		
15,500.0	6,672.0	6,757.0	6,755.6	110.0	23.4	89.87	-610.1	7,644.2	1,876.2	1,742.8	133.36	14.068 ES		
15,600.0	6,672.0	6,755.6	6,754.3	111.2	23.4	89.82	-610.1	7,644.2	1,879.5	1,745.2	134.31	13.994		
15,700.0	6,672.0	6,754.3	6,752.9	112.4	23.4	89.78	-610.1	7,644.2	1,888.1	1,753.1	134.96	13.990 SF		
15,800.0	6,672.0	6,753.0	6,751.6	113.6	23.4	89.74	-610.1	7,644.2	1,901.9	1,766.6	135.32	14.056		
15,900.0	6,672.0	6,751.7	6,750.3	114.8	23.4	89.70	-610.1	7,644.2	1,920.9	1,785.5	135.38	14.189		
16,000.0	6,672.0	6,750.3	6,749.0	116.0	23.4	89.66	-610.1	7,644.3	1,944.8	1,809.7	135.19	14.387		
16,100.0	6,672.0	6,749.0	6,747.6	117.2	23.4	89.62	-610.1	7,644.3	1,973.6	1,838.8	134.74	14.648		
16,200.0	6,672.0	6,747.7	6,746.3	118.4	23.4	89.58	-610.1	7,644.3	2,006.9	1,872.8	134.07	14.969		
16,300.0	6,672.0	6,746.4	6,745.0	119.6	23.4	89.54	-610.1	7,644.3	2,044.5	1,911.3	133.20	15.350		
16,400.0	6,672.0	6,745.0	6,743.7	120.8	23.4	89.50	-610.1	7,644.3	2,086.3	1,954.2	132.16	15.786		
16,500.0	6,672.0	6,743.7	6,742.3	122.0	23.4	89.46	-610.1	7,644.4	2,132.0	2,001.0	130.99	16.276		
16,600.0	6,672.0	6,742.4	6,741.0	123.2	23.4	89.42	-610.0	7,644.4	2,181.3	2,051.6	129.70	16.818		
16,700.0	6,672.0	6,741.1	6,739.7	124.5	23.4	89.38	-610.0	7,644.4	2,234.0	2,105.7	128.32	17.409		
16,800.0	6,672.0	6,739.7	6,738.4	125.7	23.4	89.34	-610.0	7,644.4	2,289.9	2,163.0	126.88	18.048		
16,900.0	6,672.0	6,738.4	6,737.0	126.9	23.4	89.30	-610.0	7,644.4	2,348.7	2,223.3	125.39	18.731		
17,000.0	6,672.0	6,737.1	6,735.7	128.1	23.4	89.26	-610.0	7,644.4	2,410.2	2,286.3	123.87	19.457		
17,100.0	6,672.0	6,735.8	6,734.4	129.3	23.4	89.22	-610.0	7,644.5	2,474.3	2,351.9	122.34	20.224		
17,200.0	6,672.0	6,734.4	6,733.1	130.5	23.4	89.18	-610.0	7,644.5	2,540.6	2,419.8	120.81	21.029		
17,300.0	6,672.0	6,733.1	6,731.7	131.7	23.4	89.14	-610.0	7,644.5	2,609.1	2,489.8	119.29	21.872		
17,400.0	6,672.0	6,731.8	6,730.4	133.0	23.4	89.10	-610.0	7,644.5	2,679.6	2,561.9	117.79	22.749		
17,500.0	6,672.0	6,730.5	6,729.1	134.2	23.3	89.06	-610.0	7,644.5	2,752.0	2,635.7	116.31	23.660		
17,600.0	6,672.0	6,729.1	6,727.8	135.4	23.3	89.01	-610.0	7,644.5	2,826.0	2,711.1	114.87	24.602		
17,700.0	6,672.0	6,727.8	6,726.4	136.6	23.3	88.97	-610.0	7,644.6	2,901.6	2,788.1	113.46	25.574		
17,800.0	6,672.0	6,726.5	6,725.1	137.8	23.3	88.93	-610.0	7,644.6	2,978.6	2,866.5	112.09	26.575		
17,900.0	6,672.0	6,725.2	6,723.8	139.0	23.3	88.89	-610.0	7,644.6	3,057.0	2,946.2	110.75	27.602		
18,000.0	6,672.0	6,723.8	6,722.5	140.3	23.3	88.85	-610.0	7,644.6	3,136.6	3,027.1	109.46	28.655		
18,100.0	6,672.0	6,722.5	6,721.1	141.5	23.3	88.81	-610.0	7,644.6	3,217.3	3,109.1	108.21	29.732		
18,200.0	6,672.0	6,721.2	6,719.8	142.7	23.3	88.77	-610.0	7,644.7	3,299.2	3,192.1	107.01	30.831		
18,300.0	6,672.0	6,719.9	6,718.5	143.9	23.3	88.73	-610.0	7,644.7	3,381.9	3,276.1	105.84	31.952		
18,342.5	6,672.0	6,719.3	6,717.9	144.4	23.3	88.71	-610.0	7,644.7	3,417.4	3,312.0	105.36	32.435		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 5519 33-08 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	65.2	65.2	0.0	0.1	103.92	-1,903.8	7,680.1	7,912.6					
100.0	100.0	166.3	166.3	0.1	0.4	103.92	-1,903.8	7,680.5	7,913.0	7,912.4	0.53	N/A		
200.0	200.0	302.1	302.1	0.5	0.9	103.93	-1,904.6	7,680.4	7,913.1	7,911.7	1.37	5,790.326		
300.0	300.0	474.1	474.1	0.8	1.5	103.94	-1,906.3	7,678.3	7,911.9	7,909.6	2.33	3,397.398		
400.0	400.0	611.5	611.4	1.2	2.0	103.95	-1,907.4	7,676.3	7,910.7	7,907.5	3.17	2,496.926		
500.0	500.0	683.9	683.8	1.6	2.2	103.96	-1,907.9	7,675.2	7,909.4	7,905.6	3.78	2,092.592		
600.0	600.0	782.6	782.6	1.9	2.6	103.97	-1,908.6	7,673.9	7,908.2	7,903.7	4.48	1,763.885		
700.0	700.0	898.6	898.5	2.3	3.0	103.97	-1,909.2	7,672.2	7,906.9	7,901.7	5.25	1,506.837		
800.0	800.0	1,016.0	1,015.9	2.6	3.4	103.98	-1,909.3	7,670.3	7,905.4	7,899.3	6.02	1,314.061		
900.0	900.0	1,088.5	1,088.4	3.0	3.6	103.98	-1,909.2	7,669.2	7,903.9	7,897.3	6.63	1,192.492		
1,000.0	1,000.0	1,000.0	1,199.9	3.4	3.3	103.98	-1,909.2	7,667.7	7,902.5	7,895.9	6.68	1,183.405		
1,100.0	1,100.0	1,273.8	1,273.7	3.7	4.3	103.98	-1,909.2	7,666.6	7,901.2	7,893.2	7.99	988.469		
1,200.0	1,200.0	1,377.3	1,377.2	4.1	4.6	103.99	-1,909.2	7,665.6	7,900.2	7,891.5	8.71	906.593		
1,300.0	1,300.0	1,483.4	1,483.3	4.4	5.0	103.99	-1,909.3	7,664.3	7,899.1	7,889.6	9.44	836.412		
1,400.0	1,400.0	1,560.1	1,559.9	4.8	5.3	103.99	-1,909.6	7,663.3	7,898.0	7,887.9	10.07	784.243		
1,500.0	1,500.0	1,640.1	1,640.0	5.1	5.6	104.00	-1,910.2	7,662.6	7,897.2	7,886.5	10.71	737.411		
1,600.0	1,600.0	1,731.5	1,731.3	5.5	5.9	104.00	-1,910.9	7,661.8	7,896.7	7,885.3	11.39	693.463		
1,700.0	1,700.0	1,823.0	1,822.9	5.9	6.2	104.01	-1,911.5	7,661.2	7,896.2	7,884.1	12.07	654.431		
1,800.0	1,800.0	1,914.9	1,914.7	6.2	6.5	104.01	-1,911.9	7,660.8	7,895.8	7,883.1	12.74	619.523		
1,900.0	1,900.0	2,042.1	2,041.9	6.6	7.0	104.01	-1,911.9	7,660.1	7,895.3	7,881.7	13.55	582.735		
2,000.0	2,000.0	2,138.6	2,138.5	6.9	7.3	104.01	-1,911.4	7,659.5	7,894.6	7,880.3	14.24	554.203		
2,100.0	2,100.0	2,221.7	2,221.6	7.3	7.6	104.01	-1,911.0	7,659.2	7,894.1	7,879.2	14.89	530.011		
2,200.0	2,200.0	2,301.0	2,300.9	7.7	7.9	104.01	-1,910.8	7,659.0	7,893.8	7,878.3	15.53	508.296		
2,204.9	2,204.9	2,306.4	2,306.3	7.7	7.9	155.01	-1,910.8	7,659.0	7,893.8	7,878.2	15.57	507.109		
2,300.0	2,300.0	2,410.2	2,410.0	8.0	8.3	155.00	-1,910.5	7,658.8	7,895.2	7,878.9	16.27	485.367		
2,400.0	2,399.8	2,491.7	2,491.5	8.4	8.5	154.97	-1,910.5	7,658.8	7,899.8	7,882.9	16.90	467.368		
2,500.0	2,499.5	2,583.8	2,583.6	8.7	8.9	154.93	-1,910.5	7,658.8	7,907.7	7,890.1	17.57	449.946		
2,600.0	2,598.7	2,677.6	2,677.5	9.1	9.2	154.87	-1,910.7	7,658.8	7,918.8	7,900.6	18.25	433.881		
2,700.0	2,697.5	2,771.9	2,771.8	9.4	9.5	154.80	-1,910.9	7,658.9	7,933.2	7,914.3	18.93	419.123		
2,800.0	2,795.6	2,873.7	2,873.5	9.8	9.9	154.71	-1,911.2	7,659.0	7,950.7	7,931.0	19.63	405.025		
2,900.0	2,893.1	2,981.8	2,981.6	10.1	10.3	154.61	-1,911.4	7,659.1	7,971.2	7,950.8	20.35	391.623		
3,000.0	2,989.6	3,077.5	3,077.3	10.5	10.6	154.48	-1,911.6	7,659.0	7,994.7	7,973.7	21.03	380.075		
3,100.0	3,085.3	3,165.1	3,164.9	10.9	10.9	154.32	-1,911.8	7,659.0	8,021.3	7,999.6	21.69	369.892		
3,200.0	3,179.8	3,240.7	3,240.6	11.2	11.2	154.14	-1,912.2	7,659.1	8,051.1	8,028.8	22.29	361.139		
3,300.0	3,273.2	3,310.4	3,310.2	11.6	11.4	153.92	-1,913.0	7,659.2	8,084.2	8,061.4	22.88	353.332		
3,387.5	3,353.8	3,380.1	3,380.0	11.9	11.6	153.72	-1,914.4	7,659.4	8,115.8	8,092.4	23.42	346.461		
3,400.0	3,365.2	3,390.0	3,389.8	12.0	11.7	153.73	-1,914.7	7,659.4	8,120.5	8,097.0	23.50	345.496		
3,500.0	3,456.8	3,471.4	3,471.2	12.4	12.0	153.86	-1,916.8	7,659.5	8,158.0	8,133.9	24.13	338.079		
3,600.0	3,548.3	3,565.3	3,565.0	12.8	12.3	154.00	-1,918.9	7,659.9	8,195.7	8,170.8	24.81	330.377		
3,700.0	3,639.8	3,655.0	3,654.8	13.2	12.6	154.13	-1,920.7	7,660.2	8,233.3	8,207.8	25.47	323.215		
3,800.0	3,731.4	3,738.9	3,738.6	13.6	12.9	154.25	-1,922.6	7,660.5	8,271.0	8,244.9	26.12	316.634		
3,900.0	3,822.9	3,828.0	3,827.7	14.0	13.2	154.38	-1,924.5	7,660.9	8,308.8	8,282.0	26.79	310.109		
4,000.0	3,914.4	3,920.7	3,920.4	14.4	13.5	154.51	-1,926.3	7,661.3	8,346.6	8,319.1	27.48	303.720		
4,100.0	4,005.9	3,987.5	3,987.2	14.8	13.8	154.61	-1,927.6	7,661.8	8,384.6	8,356.5	28.08	298.630		
4,200.0	4,097.5	4,078.6	4,078.2	15.2	14.1	154.73	-1,929.5	7,662.5	8,422.8	8,394.0	28.76	292.815		
4,300.0	4,189.0	4,174.5	4,174.1	15.6	14.4	154.87	-1,931.4	7,663.2	8,461.0	8,431.5	29.47	287.068		
4,400.0	4,280.5	4,263.2	4,262.8	16.1	14.7	154.99	-1,932.9	7,663.9	8,499.1	8,469.0	30.16	281.815		
4,500.0	4,372.1	4,340.5	4,340.1	16.5	15.0	155.09	-1,933.9	7,664.6	8,537.4	8,506.6	30.80	277.169		
4,600.0	4,463.6	4,423.1	4,422.7	16.9	15.3	155.19	-1,935.0	7,665.7	8,575.9	8,544.5	31.47	272.528		
4,700.0	4,555.1	4,572.9	4,572.5	17.4	15.8	155.38	-1,936.5	7,667.1	8,614.2	8,581.8	32.39	265.944		
4,800.0	4,646.7	4,674.3	4,673.9	17.8	16.2	155.51	-1,937.3	7,667.6	8,652.0	8,618.9	33.13	261.129		
4,900.0	4,738.2	4,857.2	4,856.8	18.2	16.8	155.75	-1,940.0	7,667.1	8,689.3	8,655.1	34.19	254.163		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 5519 33-08 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,000.0	4,829.7	4,935.9	4,935.4	18.7	17.1	155.85	-1,942.0	7,666.2	8,726.2	8,691.4	34.85	250.396		
5,100.0	4,921.3	5,000.0	4,999.5	19.1	17.3	155.94	-1,943.4	7,665.8	8,726.5	8,728.1	35.46	247.160		
5,200.0	5,012.8	5,056.3	5,055.8	19.5	17.5	156.01	-1,944.4	7,665.7	8,801.1	8,765.1	36.03	244.247		
5,300.0	5,104.3	5,128.9	5,128.4	20.0	17.8	156.10	-1,945.1	7,666.0	8,839.1	8,802.4	36.67	241.017		
5,400.0	5,195.8	5,345.1	5,344.6	20.4	18.5	156.35	-1,946.8	7,665.6	8,876.5	8,838.6	37.87	234.386		
5,500.0	5,287.4	5,400.0	5,399.5	20.9	18.7	156.42	-1,947.1	7,665.2	8,913.4	8,874.9	38.45	231.833		
5,600.0	5,378.9	5,447.9	5,447.4	21.3	18.9	156.47	-1,947.2	7,665.0	8,950.7	8,911.7	39.00	229.531		
5,700.0	5,470.4	5,500.0	5,499.5	21.8	19.1	156.53	-1,947.5	7,665.3	8,988.6	8,949.1	39.56	227.217		
5,800.0	5,562.0	5,844.8	5,844.2	22.2	20.3	156.88	-1,942.9	7,664.2	9,025.6	8,984.3	41.27	218.708		
5,900.0	5,653.5	5,900.0	5,899.4	22.7	20.5	156.94	-1,942.7	7,663.1	9,061.2	9,019.4	41.85	216.511		
6,000.0	5,745.0	5,948.3	5,947.6	23.1	20.6	157.00	-1,943.2	7,662.2	9,097.3	9,054.9	42.41	214.523		
6,100.0	5,836.6	6,000.0	5,999.3	23.6	20.8	157.06	-1,944.2	7,661.3	9,134.0	9,091.0	42.98	212.537		
6,200.0	5,928.1	6,033.3	6,032.7	24.0	20.9	157.10	-1,945.1	7,660.9	9,171.1	9,127.6	43.47	210.972		
6,278.6	6,000.0	6,066.0	6,065.4	24.4	21.0	157.14	-1,945.9	7,660.7	9,200.6	9,156.7	43.88	209.658		
6,290.0	6,010.4	6,070.8	6,070.1	24.4	21.1	155.17	-1,946.0	7,660.7	9,205.0	9,161.1	43.94	209.470		
6,300.0	6,019.5	6,074.9	6,074.2	24.5	21.1	153.31	-1,946.1	7,660.6	9,208.8	9,164.8	44.00	209.307		
6,350.0	6,065.8	6,100.0	6,099.3	24.7	21.2	142.35	-1,946.7	7,660.6	9,225.5	9,181.2	44.27	208.386		
6,400.0	6,113.0	6,134.4	6,133.7	24.9	21.3	128.09	-1,947.6	7,660.6	9,237.9	9,193.3	44.58	207.239		
6,450.0	6,160.7	6,177.6	6,176.8	25.1	21.4	111.02	-1,948.6	7,660.6	9,246.0	9,201.1	44.91	205.888		
6,500.0	6,208.5	6,218.9	6,218.2	25.3	21.6	93.60	-1,949.5	7,660.6	9,249.7	9,204.4	45.22	204.543		
6,550.0	6,255.8	6,257.9	6,257.2	25.4	21.7	78.76	-1,950.4	7,660.7	9,248.9	9,203.4	45.51	203.224		
6,600.0	6,302.5	6,296.4	6,295.6	25.6	21.8	67.61	-1,951.2	7,660.9	9,243.7	9,197.9	45.78	201.905		
6,650.0	6,347.9	6,348.6	6,347.8	25.7	22.0	59.77	-1,952.2	7,661.1	9,234.1	9,188.0	46.09	200.333		
6,700.0	6,391.6	6,400.6	6,399.8	25.9	22.2	54.41	-1,953.0	7,661.3	9,220.2	9,173.8	46.39	198.762		
6,750.0	6,433.4	6,440.0	6,439.2	26.0	22.3	50.81	-1,953.6	7,661.5	9,202.1	9,155.4	46.62	197.403		
6,800.0	6,472.8	6,477.3	6,476.5	26.1	22.5	48.58	-1,954.2	7,661.6	9,179.9	9,133.1	46.82	196.069		
6,850.0	6,509.4	6,510.6	6,509.8	26.2	22.6	47.42	-1,954.8	7,661.7	9,154.0	9,107.0	47.00	194.786		
6,900.0	6,543.0	6,538.7	6,537.9	26.3	22.7	47.20	-1,955.4	7,661.9	9,124.5	9,077.4	47.14	193.569		
6,950.0	6,573.2	6,564.0	6,563.2	26.4	22.8	47.86	-1,955.8	7,662.0	9,091.7	9,044.5	47.26	192.371		
7,000.0	6,599.8	6,586.4	6,585.6	26.5	22.9	49.46	-1,956.2	7,662.1	9,055.9	9,008.6	47.37	191.190		
7,050.0	6,622.5	6,605.9	6,605.1	26.6	22.9	52.11	-1,956.6	7,662.2	9,017.5	8,970.0	47.46	190.019		
7,100.0	6,641.1	6,622.6	6,621.8	26.7	23.0	56.04	-1,956.9	7,662.3	8,976.7	8,929.1	47.53	188.851		
7,150.0	6,655.4	6,635.6	6,634.8	26.8	23.0	61.57	-1,957.2	7,662.4	8,933.9	8,886.3	47.60	187.699		
7,200.0	6,665.4	6,644.7	6,643.9	26.9	23.1	69.16	-1,957.3	7,662.4	8,889.4	8,841.8	47.65	186.563		
7,250.0	6,670.8	6,649.9	6,649.1	27.0	23.1	79.23	-1,957.4	7,662.5	8,843.8	8,796.1	47.69	185.442		
7,285.7	6,672.0	6,651.1	6,650.3	27.1	23.1	88.02	-1,957.5	7,662.5	8,810.7	8,763.0	47.72	184.650		
7,300.0	6,672.0	6,651.2	6,650.3	27.1	23.1	88.02	-1,957.5	7,662.5	8,797.4	8,749.7	47.73	184.334		
7,400.0	6,672.0	6,651.7	6,650.9	27.3	23.1	88.03	-1,957.5	7,662.5	8,704.3	8,656.5	47.79	182.129		
7,500.0	6,672.0	6,652.2	6,651.4	27.6	23.1	88.04	-1,957.5	7,662.5	8,611.4	8,563.5	47.87	179.891		
7,600.0	6,672.0	6,652.7	6,651.9	28.0	23.1	88.05	-1,957.5	7,662.5	8,518.7	8,470.7	47.96	177.618		
7,700.0	6,672.0	6,653.3	6,652.5	28.3	23.1	88.06	-1,957.5	7,662.5	8,426.1	8,378.0	48.06	175.312		
7,800.0	6,672.0	6,653.8	6,653.0	28.8	23.1	88.07	-1,957.5	7,662.5	8,333.7	8,285.5	48.18	172.971		
7,900.0	6,672.0	6,654.3	6,653.5	29.3	23.1	88.08	-1,957.5	7,662.5	8,241.4	8,193.1	48.31	170.596		
8,000.0	6,672.0	6,654.9	6,654.1	29.8	23.1	88.09	-1,957.5	7,662.5	8,149.4	8,100.9	48.45	168.189		
8,100.0	6,672.0	6,655.4	6,654.6	30.4	23.1	88.10	-1,957.5	7,662.5	8,057.6	8,008.9	48.61	165.748		
8,200.0	6,672.0	6,655.9	6,655.1	31.0	23.1	88.11	-1,957.6	7,662.5	7,965.9	7,917.1	48.79	163.274		
8,300.0	6,672.0	6,656.5	6,655.7	31.7	23.1	88.12	-1,957.6	7,662.5	7,874.5	7,825.5	48.98	160.769		
8,400.0	6,672.0	6,657.0	6,656.2	32.4	23.1	88.13	-1,957.6	7,662.5	7,783.2	7,734.0	49.19	158.234		
8,500.0	6,672.0	6,657.5	6,656.7	33.1	23.1	88.14	-1,957.6	7,662.5	7,692.2	7,642.8	49.41	155.669		
8,600.0	6,672.0	6,658.1	6,657.3	33.9	23.1	88.15	-1,957.6	7,662.5	7,601.4	7,551.8	49.66	153.075		
8,700.0	6,672.0	6,658.6	6,657.8	34.7	23.1	88.16	-1,957.6	7,662.5	7,510.9	7,461.0	49.92	150.455		
8,800.0	6,672.0	6,659.2	6,658.3	35.5	23.1	88.17	-1,957.6	7,662.5	7,420.6	7,370.4	50.20	147.809		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 5519 33-08 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
8,900.0	6,672.0	6,659.7	6,658.9	36.3	23.1	88.18	-1,957.6	7,662.5	7,330.6	7,280.1	50.51	145.139		
9,000.0	6,672.0	6,660.2	6,659.4	37.2	23.1	88.19	-1,957.6	7,662.5	7,240.8	7,190.0	50.83	142.448		
9,100.0	6,672.0	6,660.8	6,660.0	38.1	23.1	88.20	-1,957.6	7,662.5	7,151.3	7,100.1	51.18	139.737		
9,200.0	6,672.0	6,661.3	6,660.5	39.0	23.1	88.21	-1,957.7	7,662.5	7,062.1	7,010.5	51.54	137.008		
9,300.0	6,672.0	6,661.9	6,661.1	39.9	23.1	88.22	-1,957.7	7,662.6	6,973.2	6,921.2	51.94	134.264		
9,400.0	6,672.0	6,662.4	6,661.6	40.8	23.1	88.23	-1,957.7	7,662.6	6,884.6	6,832.2	52.35	131.508		
9,500.0	6,672.0	6,663.0	6,662.1	41.8	23.1	88.24	-1,957.7	7,662.6	6,796.3	6,743.5	52.79	128.740		
9,600.0	6,672.0	6,663.5	6,662.7	42.7	23.1	88.25	-1,957.7	7,662.6	6,708.3	6,655.0	53.26	125.965		
9,700.0	6,672.0	6,664.0	6,663.2	43.7	23.1	88.26	-1,957.7	7,662.6	6,620.7	6,566.9	53.75	123.185		
9,800.0	6,672.0	6,664.6	6,663.8	44.7	23.1	88.27	-1,957.7	7,662.6	6,533.4	6,479.2	54.26	120.403		
9,900.0	6,672.0	6,665.1	6,664.3	45.7	23.1	88.28	-1,957.7	7,662.6	6,446.6	6,391.7	54.81	117.621		
10,000.0	6,672.0	6,665.7	6,664.9	46.7	23.1	88.29	-1,957.7	7,662.6	6,360.1	6,304.7	55.38	114.843		
10,100.0	6,672.0	6,666.2	6,665.4	47.7	23.1	88.30	-1,957.8	7,662.6	6,274.0	6,218.0	55.98	112.070		
10,200.0	6,672.0	6,666.8	6,666.0	48.8	23.1	88.31	-1,957.8	7,662.6	6,188.3	6,131.7	56.61	109.307		
10,300.0	6,672.0	6,667.3	6,666.5	49.8	23.1	88.32	-1,957.8	7,662.6	6,103.1	6,045.8	57.28	106.556		
10,400.0	6,672.0	6,667.9	6,667.1	50.9	23.1	88.33	-1,957.8	7,662.6	6,018.3	5,960.3	57.97	103.820		
10,500.0	6,672.0	6,668.4	6,667.6	51.9	23.1	88.34	-1,957.8	7,662.6	5,934.0	5,875.3	58.69	101.102		
10,600.0	6,672.0	6,669.0	6,668.2	53.0	23.1	88.35	-1,957.8	7,662.6	5,850.2	5,790.8	59.45	98.404		
10,700.0	6,672.0	6,669.5	6,668.7	54.1	23.1	88.36	-1,957.8	7,662.6	5,767.0	5,706.7	60.24	95.730		
10,800.0	6,672.0	6,670.1	6,669.3	55.2	23.2	88.37	-1,957.8	7,662.6	5,684.3	5,623.2	61.07	93.082		
10,900.0	6,672.0	6,670.6	6,669.8	56.3	23.2	88.38	-1,957.8	7,662.6	5,602.1	5,540.2	61.93	90.462		
11,000.0	6,672.0	6,671.2	6,670.4	57.4	23.2	88.39	-1,957.9	7,662.6	5,520.5	5,457.7	62.82	87.874		
11,100.0	6,672.0	6,671.8	6,670.9	58.5	23.2	88.40	-1,957.9	7,662.6	5,439.6	5,375.8	63.76	85.319		
11,200.0	6,672.0	6,672.3	6,671.5	59.6	23.2	88.41	-1,957.9	7,662.6	5,359.3	5,294.6	64.73	82.801		
11,300.0	6,672.0	6,672.9	6,672.1	60.7	23.2	88.42	-1,957.9	7,662.6	5,279.7	5,213.9	65.73	80.321		
11,400.0	6,672.0	6,673.4	6,672.6	61.8	23.2	88.43	-1,957.9	7,662.6	5,200.8	5,134.0	66.78	77.881		
11,500.0	6,672.0	6,674.0	6,673.2	62.9	23.2	88.44	-1,957.9	7,662.6	5,122.6	5,054.7	67.86	75.483		
11,600.0	6,672.0	6,674.5	6,673.7	64.1	23.2	88.45	-1,957.9	7,662.6	5,045.2	4,976.2	68.99	73.130		
11,700.0	6,672.0	6,675.1	6,674.3	65.2	23.2	88.46	-1,957.9	7,662.6	4,968.6	4,898.5	70.16	70.823		
11,800.0	6,672.0	6,675.7	6,674.9	66.3	23.2	88.47	-1,957.9	7,662.6	4,892.9	4,821.5	71.36	68.564		
11,900.0	6,672.0	6,676.2	6,675.4	67.5	23.2	88.48	-1,958.0	7,662.6	4,818.1	4,745.4	72.61	66.354		
12,000.0	6,672.0	6,676.8	6,676.0	68.6	23.2	88.49	-1,958.0	7,662.6	4,744.2	4,670.3	73.90	64.194		
12,100.0	6,672.0	6,677.4	6,676.5	69.8	23.2	88.50	-1,958.0	7,662.7	4,671.2	4,596.0	75.24	62.087		
12,200.0	6,672.0	6,677.9	6,677.1	70.9	23.2	88.51	-1,958.0	7,662.7	4,599.3	4,522.7	76.61	60.033		
12,300.0	6,672.0	6,678.5	6,677.7	72.1	23.2	88.52	-1,958.0	7,662.7	4,528.5	4,450.4	78.03	58.034		
12,400.0	6,672.0	6,679.1	6,678.2	73.2	23.2	88.53	-1,958.0	7,662.7	4,458.8	4,379.3	79.49	56.089		
12,500.0	6,672.0	6,679.6	6,678.8	74.4	23.2	88.54	-1,958.0	7,662.7	4,390.2	4,309.2	81.00	54.201		
12,600.0	6,672.0	6,680.2	6,679.4	75.5	23.2	88.55	-1,958.0	7,662.7	4,322.9	4,240.4	82.55	52.370		
12,700.0	6,672.0	6,680.8	6,679.9	76.7	23.2	88.56	-1,958.0	7,662.7	4,256.9	4,172.8	84.13	50.596		
12,800.0	6,672.0	6,681.3	6,680.5	77.9	23.2	88.57	-1,958.1	7,662.7	4,192.3	4,106.5	85.77	48.881		
12,900.0	6,672.0	6,681.9	6,681.1	79.0	23.2	88.58	-1,958.1	7,662.7	4,129.0	4,041.6	87.44	47.224		
13,000.0	6,672.0	6,682.5	6,681.7	80.2	23.2	88.59	-1,958.1	7,662.7	4,067.2	3,978.1	89.14	45.625		
13,100.0	6,672.0	6,683.0	6,682.2	81.4	23.2	88.60	-1,958.1	7,662.7	4,007.0	3,916.1	90.89	44.086		
13,200.0	6,672.0	6,683.6	6,682.8	82.6	23.2	88.61	-1,958.1	7,662.7	3,948.4	3,855.8	92.67	42.606		
13,300.0	6,672.0	6,684.2	6,683.4	83.7	23.2	88.62	-1,958.1	7,662.7	3,891.5	3,797.0	94.49	41.185		
13,400.0	6,672.0	6,684.8	6,683.9	84.9	23.2	88.63	-1,958.1	7,662.7	3,836.4	3,740.1	96.33	39.824		
13,500.0	6,672.0	6,685.3	6,684.5	86.1	23.2	88.64	-1,958.1	7,662.7	3,783.1	3,684.9	98.21	38.522		
13,600.0	6,672.0	6,685.9	6,685.1	87.3	23.2	88.65	-1,958.1	7,662.7	3,731.8	3,631.7	100.10	37.279		
13,700.0	6,672.0	6,686.5	6,685.7	88.4	23.2	88.66	-1,958.2	7,662.7	3,682.4	3,580.4	102.02	36.095		
13,800.0	6,672.0	6,687.1	6,686.2	89.6	23.2	88.67	-1,958.2	7,662.7	3,635.1	3,531.2	103.95	34.970		
13,900.0	6,672.0	6,687.6	6,686.8	90.8	23.2	88.68	-1,958.2	7,662.7	3,590.1	3,484.2	105.89	33.902		
14,000.0	6,672.0	6,688.2	6,687.4	92.0	23.2	88.69	-1,958.2	7,662.7	3,547.2	3,439.4	107.84	32.893		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 5519 33-08 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
14,100.0	6,672.0	6,688.8	6,688.0	93.2	23.2	88.70	-1,958.2	7,662.7	3,506.7	3,396.9	109.79	31.941		
14,200.0	6,672.0	6,689.4	6,688.6	94.4	23.2	88.71	-1,958.2	7,662.7	3,468.6	3,356.9	111.73	31.046		
14,300.0	6,672.0	6,690.0	6,689.1	95.6	23.2	88.72	-1,958.2	7,662.7	3,433.0	3,319.4	113.65	30.206		
14,400.0	6,672.0	6,690.5	6,689.7	96.8	23.2	88.73	-1,958.2	7,662.7	3,400.0	3,284.5	115.56	29.423		
14,500.0	6,672.0	6,691.1	6,690.3	98.0	23.2	88.74	-1,958.2	7,662.7	3,369.7	3,252.2	117.43	28.694		
14,600.0	6,672.0	6,691.7	6,690.9	99.2	23.2	88.75	-1,958.3	7,662.7	3,342.0	3,222.8	119.27	28.020		
14,700.0	6,672.0	6,692.3	6,691.5	100.4	23.2	88.76	-1,958.3	7,662.7	3,317.2	3,196.1	121.07	27.398		
14,800.0	6,672.0	6,692.9	6,692.1	101.6	23.2	88.78	-1,958.3	7,662.8	3,295.2	3,172.4	122.82	26.830		
14,900.0	6,672.0	6,693.5	6,692.7	102.7	23.2	88.79	-1,958.3	7,662.8	3,276.1	3,151.6	124.51	26.313		
15,000.0	6,672.0	6,694.1	6,693.2	103.9	23.2	88.80	-1,958.3	7,662.8	3,260.0	3,133.9	126.13	25.847		
15,100.0	6,672.0	6,694.6	6,693.8	105.1	23.2	88.81	-1,958.3	7,662.8	3,246.9	3,119.2	127.68	25.430		
15,200.0	6,672.0	6,695.2	6,694.4	106.3	23.2	88.82	-1,958.3	7,662.8	3,236.9	3,107.7	129.15	25.063		
15,300.0	6,672.0	6,695.8	6,695.0	107.6	23.2	88.83	-1,958.3	7,662.8	3,229.9	3,099.4	130.53	24.744		
15,400.0	6,672.0	6,696.4	6,695.6	108.8	23.2	88.84	-1,958.4	7,662.8	3,226.0	3,094.2	131.83	24.472		
15,475.2	6,672.0	6,696.9	6,696.0	109.7	23.2	88.85	-1,958.4	7,662.8	3,225.1	3,092.4	132.74	24.297 CC		
15,500.0	6,672.0	6,697.0	6,696.2	110.0	23.2	88.85	-1,958.4	7,662.8	3,225.2	3,092.2	133.02	24.245 ES		
15,600.0	6,672.0	6,697.6	6,696.8	111.2	23.2	88.86	-1,958.4	7,662.8	3,227.5	3,093.4	134.12	24.064		
15,700.0	6,672.0	6,698.2	6,697.4	112.4	23.2	88.87	-1,958.4	7,662.8	3,233.0	3,097.8	135.12	23.926		
15,800.0	6,672.0	6,698.8	6,698.0	113.6	23.3	88.88	-1,958.4	7,662.8	3,241.5	3,105.5	136.01	23.832		
15,900.0	6,672.0	6,699.4	6,698.6	114.8	23.3	88.89	-1,958.4	7,662.8	3,253.0	3,116.2	136.80	23.779		
16,000.0	6,672.0	6,700.0	6,699.2	116.0	23.3	88.90	-1,958.4	7,662.8	3,267.6	3,130.2	137.49	23.767 SF		
16,100.0	6,672.0	6,700.6	6,699.8	117.2	23.3	88.91	-1,958.4	7,662.8	3,285.2	3,147.2	138.07	23.794		
16,200.0	6,672.0	6,701.3	6,700.5	118.4	23.3	88.92	-1,958.4	7,662.8	3,305.8	3,167.2	138.54	23.861		
16,300.0	6,672.0	6,702.0	6,701.1	119.6	23.3	88.94	-1,958.5	7,662.8	3,329.2	3,190.2	138.92	23.964		
16,400.0	6,672.0	6,702.6	6,701.8	120.8	23.3	88.95	-1,958.5	7,662.8	3,355.4	3,216.2	139.20	24.105		
16,500.0	6,672.0	6,703.3	6,702.5	122.0	23.3	88.96	-1,958.5	7,662.8	3,384.4	3,245.0	139.39	24.280		
16,600.0	6,672.0	6,704.0	6,703.2	123.2	23.3	88.97	-1,958.5	7,662.8	3,416.1	3,276.6	139.49	24.490		
16,700.0	6,672.0	6,704.7	6,703.8	124.5	23.3	88.98	-1,958.5	7,662.8	3,450.4	3,310.9	139.50	24.733		
16,800.0	6,672.0	6,705.3	6,704.5	125.7	23.3	89.00	-1,958.5	7,662.8	3,487.2	3,347.8	139.44	25.009		
16,900.0	6,672.0	6,706.0	6,705.2	126.9	23.3	89.01	-1,958.5	7,662.8	3,526.5	3,387.2	139.30	25.316		
17,000.0	6,672.0	6,706.7	6,705.9	128.1	23.3	89.02	-1,958.6	7,662.8	3,568.2	3,429.1	139.09	25.654		
17,100.0	6,672.0	6,707.4	6,706.6	129.3	23.3	89.03	-1,958.6	7,662.9	3,612.2	3,473.3	138.82	26.021		
17,200.0	6,672.0	6,708.1	6,707.3	130.5	23.3	89.05	-1,958.6	7,662.9	3,658.3	3,519.9	138.49	26.416		
17,300.0	6,672.0	6,708.8	6,708.0	131.7	23.3	89.06	-1,958.6	7,662.9	3,706.7	3,568.6	138.11	26.839		
17,400.0	6,672.0	6,709.5	6,708.7	133.0	23.3	89.07	-1,958.6	7,662.9	3,757.0	3,619.3	137.68	27.288		
17,500.0	6,672.0	6,710.2	6,709.4	134.2	23.3	89.08	-1,958.6	7,662.9	3,809.3	3,672.1	137.21	27.764		
17,600.0	6,672.0	6,710.9	6,710.1	135.4	23.3	89.10	-1,958.6	7,662.9	3,863.6	3,726.9	136.70	28.264		
17,700.0	6,672.0	6,711.7	6,710.8	136.6	23.3	89.11	-1,958.7	7,662.9	3,919.6	3,783.4	136.15	28.788		
17,800.0	6,672.0	6,712.4	6,711.6	137.8	23.3	89.12	-1,958.7	7,662.9	3,977.3	3,841.7	135.58	29.336		
17,900.0	6,672.0	6,713.1	6,712.3	139.0	23.3	89.13	-1,958.7	7,662.9	4,036.7	3,901.7	134.98	29.906		
18,000.0	6,672.0	6,713.8	6,713.0	140.3	23.3	89.15	-1,958.7	7,662.9	4,097.7	3,963.4	134.36	30.498		
18,100.0	6,672.0	6,714.6	6,713.7	141.5	23.3	89.16	-1,958.7	7,662.9	4,160.2	4,026.5	133.73	31.110		
18,200.0	6,672.0	6,715.3	6,714.5	142.7	23.3	89.17	-1,958.7	7,662.9	4,224.2	4,091.1	133.07	31.743		
18,300.0	6,672.0	6,716.0	6,715.2	143.9	23.3	89.19	-1,958.7	7,662.9	4,289.5	4,157.1	132.41	32.396		
18,342.5	6,672.0	6,716.4	6,715.5	144.4	23.3	89.19	-1,958.7	7,662.9	4,317.7	4,185.6	132.13	32.679		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 5519 41-08 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	62.0	62.0	0.0	0.1	83.72	973.5	8,843.5	8,897.0					
100.0	100.0	159.3	159.3	0.1	0.4	83.72	974.0	8,843.6	8,897.1	8,896.6	0.51	N/A		
200.0	200.0	297.2	297.2	0.5	0.9	83.71	975.1	8,843.4	8,897.0	8,895.7	1.35	6,584.503		
261.2	261.2	329.2	329.2	0.7	1.0	83.70	975.7	8,843.3	8,896.9	8,895.2	1.69	5,279.903		
300.0	300.0	348.3	348.3	0.8	1.0	83.70	976.1	8,843.2	8,897.0	8,895.1	1.89	4,701.737		
400.0	400.0	400.0	400.0	1.2	1.2	83.69	977.3	8,843.4	8,897.5	8,895.0	2.44	3,652.326		
500.0	500.0	462.4	462.4	1.6	1.5	83.68	979.2	8,843.8	8,898.5	8,895.5	3.02	2,945.453		
600.0	600.0	542.2	542.1	1.9	1.8	83.66	981.9	8,844.6	8,899.8	8,896.2	3.67	2,426.618		
700.0	700.0	646.0	645.8	2.3	2.1	83.64	985.6	8,845.7	8,901.2	8,896.8	4.40	2,023.615		
800.0	800.0	756.3	756.0	2.6	2.5	83.62	989.6	8,846.7	8,902.5	8,897.4	5.15	1,728.213		
900.0	900.0	861.3	860.9	3.0	2.9	83.59	993.6	8,847.5	8,903.8	8,897.9	5.88	1,513.290		
1,000.0	1,000.0	968.7	968.3	3.4	3.3	83.57	997.7	8,848.3	8,904.9	8,898.3	6.62	1,344.455		
1,100.0	1,100.0	1,079.0	1,078.5	3.7	3.7	83.54	1,002.0	8,849.0	8,906.0	8,898.6	7.37	1,208.035		
1,200.0	1,200.0	1,183.2	1,182.7	4.1	4.0	83.52	1,005.9	8,849.6	8,907.0	8,898.9	8.10	1,099.815		
1,300.0	1,300.0	1,284.3	1,283.6	4.4	4.4	83.49	1,009.7	8,850.1	8,907.9	8,899.1	8.81	1,010.821		
1,400.0	1,400.0	1,385.0	1,384.3	4.8	4.7	83.47	1,013.3	8,850.7	8,908.9	8,899.3	9.52	935.345		
1,500.0	1,500.0	1,488.3	1,487.5	5.1	5.1	83.45	1,016.9	8,851.2	8,909.8	8,899.5	10.24	869.701		
1,600.0	1,600.0	1,591.4	1,590.5	5.5	5.5	83.43	1,020.2	8,851.7	8,910.7	8,899.7	10.96	812.779		
1,700.0	1,700.0	1,724.8	1,723.9	5.9	5.9	83.40	1,023.9	8,852.2	8,911.3	8,899.5	11.79	756.089		
1,800.0	1,800.0	1,820.5	1,819.5	6.2	6.3	83.39	1,026.0	8,852.4	8,911.8	8,899.4	12.48	714.291		
1,900.0	1,900.0	1,900.0	1,899.1	6.6	6.5	83.38	1,027.4	8,852.8	8,912.5	8,899.4	13.11	679.798		
2,000.0	2,000.0	1,992.9	1,991.9	6.9	6.9	83.37	1,028.6	8,853.4	8,913.3	8,899.5	13.79	646.337		
2,100.0	2,100.0	2,089.9	2,089.0	7.3	7.2	83.37	1,029.3	8,854.2	8,914.2	8,899.7	14.49	615.402		
2,200.0	2,200.0	2,187.1	2,186.2	7.7	7.5	83.37	1,029.6	8,855.1	8,915.1	8,899.9	15.18	587.265		
2,300.0	2,300.0	2,281.6	2,280.7	8.0	7.9	134.35	1,029.5	8,856.0	8,917.3	8,901.4	15.86	562.122		
2,400.0	2,399.8	2,379.6	2,378.6	8.4	8.2	134.31	1,029.0	8,857.0	8,921.9	8,905.4	16.56	538.924		
2,500.0	2,499.5	2,485.3	2,484.3	8.7	8.6	134.25	1,028.0	8,858.2	8,929.0	8,911.7	17.27	516.922		
2,600.0	2,598.7	2,586.8	2,585.8	9.1	8.9	134.18	1,026.8	8,859.2	8,938.4	8,920.4	17.98	497.232		
2,700.0	2,697.5	2,708.1	2,707.1	9.4	9.3	134.11	1,025.3	8,860.4	8,950.2	8,931.4	18.75	477.397		
2,800.0	2,795.6	2,823.3	2,822.3	9.8	9.7	134.02	1,023.8	8,861.2	8,964.1	8,944.6	19.50	459.750		
2,900.0	2,893.1	2,941.2	2,940.2	10.1	10.1	133.92	1,022.3	8,861.8	8,980.3	8,960.1	20.26	443.331		
3,000.0	2,989.6	3,060.8	3,059.7	10.5	10.6	133.81	1,020.5	8,862.1	8,998.7	8,977.7	21.02	428.076		
3,100.0	3,085.3	3,161.3	3,160.3	10.9	10.9	133.65	1,018.8	8,862.2	9,019.3	8,997.6	21.72	415.244		
3,200.0	3,179.8	3,252.9	3,251.8	11.2	11.2	133.46	1,017.2	8,862.3	9,042.3	9,019.9	22.39	403.870		
3,300.0	3,273.2	3,329.1	3,328.0	11.6	11.5	133.21	1,016.0	8,862.4	9,067.8	9,044.8	23.01	394.154		
3,387.5	3,353.8	3,382.0	3,381.0	11.9	11.7	132.94	1,015.3	8,862.6	9,092.3	9,068.8	23.50	386.936		
3,400.0	3,365.2	3,389.6	3,388.5	12.0	11.7	132.96	1,015.2	8,862.7	9,095.9	9,072.4	23.57	385.924		
3,500.0	3,456.8	3,443.9	3,442.8	12.4	11.9	133.07	1,014.9	8,863.1	9,125.4	9,101.3	24.11	378.473		
3,600.0	3,548.3	3,500.0	3,498.9	12.8	12.1	133.17	1,014.9	8,863.7	9,155.3	9,130.6	24.66	371.215		
3,700.0	3,639.8	3,564.3	3,563.2	13.2	12.3	133.30	1,015.5	8,864.6	9,185.6	9,160.3	25.25	363.805		
3,800.0	3,731.4	3,639.6	3,638.5	13.6	12.6	133.43	1,016.7	8,865.8	9,216.2	9,190.3	25.88	356.145		
3,900.0	3,822.9	3,723.5	3,722.4	14.0	12.9	133.58	1,018.4	8,867.1	9,246.9	9,220.4	26.54	348.395		
4,000.0	3,914.4	3,809.6	3,808.4	14.4	13.2	133.73	1,020.4	8,868.6	9,277.9	9,250.6	27.22	340.881		
4,100.0	4,005.9	3,901.4	3,900.2	14.8	13.5	133.89	1,022.6	8,870.1	9,308.9	9,280.9	27.92	333.444		
4,200.0	4,097.5	3,961.6	3,960.3	15.2	13.7	134.00	1,024.1	8,871.2	9,340.1	9,311.6	28.50	327.679		
4,300.0	4,189.0	4,021.0	4,019.7	15.6	13.9	134.10	1,025.4	8,872.6	9,371.7	9,342.6	29.09	322.168		
4,400.0	4,280.5	4,078.4	4,077.1	16.1	14.1	134.20	1,026.5	8,874.0	9,403.7	9,374.0	29.67	316.951		
4,500.0	4,372.1	4,139.7	4,138.3	16.5	14.3	134.31	1,027.3	8,875.9	9,436.1	9,405.8	30.26	311.788		
4,600.0	4,463.6	4,200.0	4,198.6	16.9	14.5	134.42	1,027.9	8,877.8	9,468.8	9,437.9	30.86	306.856		
4,700.0	4,555.1	4,268.7	4,267.2	17.4	14.8	134.55	1,028.2	8,880.3	9,501.9	9,470.4	31.48	301.809		
4,800.0	4,646.7	4,800.0	4,387.8	17.8	16.6	134.77	1,028.4	8,884.6	9,534.9	9,501.1	33.74	282.582		
4,900.0	4,738.2	4,453.5	4,452.0	18.2	15.4	134.88	1,028.6	8,886.7	9,567.9	9,535.0	32.92	290.654		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 5519 41-08 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,000.0	4,829.7	4,500.0	4,498.4	18.7	15.6	134.97	1,028.8	8,888.6	9,601.5	9,568.0	33.46	286.926		
5,100.0	4,921.3	4,527.8	4,526.2	19.1	15.7	135.02	1,029.0	8,889.8	9,635.7	9,601.7	33.94	283.938		
5,200.0	5,012.8	4,561.3	4,559.7	19.5	15.8	135.08	1,029.2	8,891.5	9,670.4	9,636.0	34.43	280.875		
5,300.0	5,104.3	4,600.0	4,598.3	20.0	15.9	135.14	1,029.5	8,893.7	9,705.8	9,670.9	34.94	277.766		
5,400.0	5,195.8	4,670.3	4,668.5	20.4	16.2	135.27	1,029.6	8,898.0	9,741.6	9,706.0	35.58	273.801		
5,500.0	5,287.4	4,855.0	4,852.9	20.9	16.8	135.61	1,028.0	8,908.6	9,777.1	9,740.5	36.67	266.647		
5,600.0	5,378.9	5,051.3	5,048.9	21.3	17.5	135.97	1,025.4	8,917.7	9,811.8	9,774.0	37.80	259.565		
5,700.0	5,470.4	5,247.2	5,244.7	21.8	18.2	136.32	1,023.8	8,924.5	9,845.3	9,806.4	38.93	252.876		
5,800.0	5,562.0	5,333.6	5,331.1	22.2	18.5	136.47	1,023.5	8,927.1	9,878.6	9,839.0	39.64	249.200		
5,900.0	5,653.5	5,410.2	5,407.6	22.7	18.8	136.60	1,023.2	8,929.4	9,912.1	9,871.8	40.31	245.889		
6,000.0	5,745.0	5,485.1	5,482.5	23.1	19.0	136.73	1,022.9	8,931.9	9,945.8	9,904.8	40.98	242.723		
6,100.0	5,836.6	5,558.1	5,555.4	23.6	19.3	136.86	1,022.6	8,934.4	9,979.7	9,938.1	41.63	239.707		
6,200.0	5,928.2	5,630.0	5,627.3	24.1	19.6	137.00	1,022.3	8,936.9	10,013.6	9,971.4	42.31	236.682		
6,300.0	6,019.7	5,701.9	5,699.2	24.6	19.9	137.14	1,022.0	8,939.4	10,047.5	10,003.3	43.00	233.657		
6,400.0	6,111.3	5,773.8	5,771.1	25.1	20.2	137.28	1,021.7	8,941.9	10,081.4	10,037.2	43.69	230.632		
6,500.0	6,202.8	5,845.7	5,843.0	25.6	20.5	137.42	1,021.4	8,944.4	10,115.3	10,071.1	44.38	227.607		
6,600.0	6,294.3	5,917.6	5,914.9	26.1	20.8	137.56	1,021.1	8,946.9	10,149.2	10,105.0	45.07	224.582		
6,700.0	6,385.8	5,989.5	5,986.8	26.6	21.1	137.70	1,020.8	8,949.4	10,183.1	10,138.9	45.76	221.557		
6,800.0	6,477.3	6,061.4	6,058.7	27.1	21.4	137.84	1,020.5	8,951.9	10,217.0	10,172.8	46.45	218.532		
6,900.0	6,568.8	6,133.3	6,130.6	27.6	21.7	137.98	1,020.2	8,954.4	10,250.9	10,206.7	47.14	215.507		
7,000.0	6,660.3	6,205.2	6,202.5	28.1	22.0	138.12	1,019.9	8,956.9	10,284.8	10,240.6	47.83	212.482		
7,100.0	6,751.8	6,277.1	6,274.4	28.6	22.3	138.26	1,019.6	8,959.4	10,318.7	10,274.5	48.52	209.457		
7,200.0	6,843.3	6,349.0	6,346.3	29.1	22.6	138.40	1,019.3	8,961.9	10,352.6	10,308.4	49.21	206.432		
7,300.0	6,934.8	6,420.9	6,418.2	29.6	22.9	138.54	1,019.0	8,964.4	10,386.5	10,342.3	49.90	203.407		
7,400.0	7,026.3	6,492.8	6,490.1	30.1	23.2	138.68	1,018.7	8,966.9	10,420.4	10,376.2	50.59	200.382		
7,500.0	7,117.8	6,564.7	6,562.0	30.6	23.5	138.82	1,018.4	8,969.4	10,454.3	10,410.1	51.28	197.357		
7,600.0	7,209.3	6,636.6	6,633.9	31.1	23.8	138.96	1,018.1	8,971.9	10,488.2	10,443.9	51.97	194.332		
7,700.0	7,300.8	6,708.5	6,705.8	31.6	24.1	139.10	1,017.8	8,974.4	10,522.1	10,477.8	52.66	191.307		
7,800.0	7,392.3	6,780.4	6,777.7	32.1	24.4	139.24	1,017.5	8,976.9	10,556.0	10,511.7	53.35	188.282		
7,900.0	7,483.8	6,852.3	6,849.6	32.6	24.7	139.38	1,017.2	8,979.4	10,589.9	10,545.6	54.04	185.257		
8,000.0	7,575.3	6,924.2	6,921.5	33.1	25.0	139.52	1,016.9	8,981.9	10,623.8	10,579.5	54.73	182.232		
8,100.0	7,666.8	6,996.1	6,993.4	33.6	25.3	139.66	1,016.6	8,984.4	10,657.7	10,613.4	55.42	179.207		
8,200.0	7,758.3	7,068.0	7,065.3	34.1	25.6	139.80	1,016.3	8,986.9	10,691.6	10,647.3	56.11	176.182		
8,300.0	7,849.8	7,139.9	7,137.2	34.6	25.9	139.94	1,016.0	8,989.4	10,725.5	10,681.2	56.80	173.157		
8,400.0	7,941.3	7,211.8	7,209.1	35.1	26.2	140.08	1,015.7	8,991.9	10,759.4	10,715.1	57.49	170.132		
8,500.0	8,032.8	7,283.7	7,281.0	35.6	26.5	140.22	1,015.4	8,994.4	10,793.3	10,749.0	58.18	167.107		
8,600.0	8,124.3	7,355.6	7,352.9	36.1	26.8	140.36	1,015.1	8,996.9	10,827.2	10,782.9	58.87	164.082		
8,700.0	8,215.8	7,427.5	7,424.8	36.6	27.1	140.50	1,014.8	8,999.4	10,861.1	10,816.8	59.56	161.057		
8,800.0	8,307.3	7,499.4	7,496.7	37.1	27.4	140.64	1,014.5	9,001.9	10,895.0	10,850.7	60.25	158.032		
8,900.0	8,398.8	7,571.3	7,568.6	37.6	27.7	140.78	1,014.2	9,004.4	10,928.9	10,884.6	60.94	155.007		
9,000.0	8,490.3	7,643.2	7,640.5	38.1	28.0	140.92	1,013.9	9,006.9	10,962.8	10,918.5	61.63	151.982		
9,100.0	8,581.8	7,715.1	7,712.4	38.6	28.3	141.06	1,013.6	9,009.4	11,000.0	10,952.4	62.32	148.957		
9,200.0	8,673.3	7,787.0	7,784.3	39.1	28.6	141.20	1,013.3	9,011.9	11,033.9	10,986.3	63.01	145.932		
9,300.0	8,764.8	7,858.9	7,856.2	39.6	28.9	141.34	1,013.0	9,014.4	11,067.8	11,020.2	63.70	142.907		
9,400.0	8,856.3	7,930.8	7,928.1	40.1	29.2	141.48	1,012.7	9,016.9	11,101.7	11,054.1	64.39	139.882		
9,500.0	8,947.8	8,002.7	8,000.0	40.6	29.5	141.62	1,012.4	9,019.4	11,135.6	11,088.0	65.08	136.857		
9,600.0	9,039.3	8,074.6	8,071.9	41.1	29.8	141.76	1,012.1	9,021.9	11,169.5	11,121.9	65.77	133.832		
9,700.0	9,130.8	8,146.5	8,143.8	41.6	30.1	141.90	1,011.8	9,024.4	11,203.4	11,155.8	66.46	130.807		
9,800.0	9,222.3	8,218.4	8,215.7	42.1	30.4	142.04	1,011.5	9,026.9	11,237.3	11,189.7	67.15	127.782		
9,900.0	9,313.8	8,290.3	8,287.6	42.6	30.7	142.18	1,011.2	9,029.4	11,271.2	11,223.6	67.84	124.757		
10,000.0	9,405.3	8,362.2	8,359.5	43.1	31.0	142.32	1,010.9	9,031.9	11,305.1	11,257.5	68.53	121.732		
10,100.0	9,496.8	8,434.1	8,431.4	43.6	31.3	142.46	1,010.6	9,034.4	11,339.0	11,291.4	69.22	118.707		
10,200.0	9,588.3	8,506.0	8,503.3	44.1	31.6	142.60	1,010.3	9,036.9	11,372.9	11,325.3	69.91	115.682		
10,300.0	9,679.8	8,577.9	8,575.2	44.6	31.9	142.74	1,010.0	9,039.4	11,406.8	11,359.2	70.60	112.657		
10,400.0	9,771.3	8,649.8	8,647.1	45.1	32.2	142.88	1,009.7	9,041.9	11,440.7	11,393.1	71.29	109.632		
10,500.0	9,862.8	8,721.7	8,719.0	45.6	32.5	143.02	1,009.4	9,044.4	11,474.6	11,427.0	71.98	106.607		
10,600.0	9,954.3	8,793.6	8,790.9	46.1	32.8	143.16	1,009.1	9,046.9	11,508.5	11,460.9	72.67	103.582		
10,700.0	10,045.8	8,865.5	8,862.8	46.6	33.1	143.30	1,008.8	9,049.4	11,542.4	11,494.8	73.36	100.557		
10,800.0	10,137.3	8,937.4	8,934.7	47.1	33.4	143.44	1,008.5	9,051.9	11,576.3	11,528.7	74.05	97.532		
10,900.0	10,228.8	9,009.3	9,006.6	47.6	33.7	143.58	1,008.2	9,054.4	11,610.2	11,562.6	74.74	94.507		
11,000.0	10,320.3	9,081.2	9,078.5	48.1	34.0	143.72	1,007.9	9,056.9	11,644.1	11,596.5	75.43	91.482		
11,100.0	10,411.8	9,153.1	9,150.4	48.6	34.3	143.86	1,007.6	9,059.4	11,678.0	11,630.4	76.12	88.457		
11,200.0	10,503.3	9,225.0	9,222.3	49.1	34.6	144.00	1,007.3	9,061.9	11,711.9	11,664.3	76.81	85.432		
11,300.0	10,594.8	9,296.9	9,294.2	49.6	34.9	144.14	1,007.0	9,064.4	11,745.8	11,698.2	77.50	82.407		
11,400.0	10,686.3	9,368.8	9,366.1	50.1	35.2	144.28	1,006.7	9,066.9	11,779.7	11,732.1	78.19	79.382		
11,500.0	10,777.8	9,440.7	9,438.0	50.6	35.5	144.42	1,006.4	9,069.4	11,813.6	11,766.0	78.88	76.357		
11,600.0	10,869.3	9,512.6	9,509.9	51.1	35.8	144.56	1,006.1	9,071.9	11,847.5	11,799.9	79.57	73.332		
11,700.0	10,960.8	9,584.5	9,581.8	51.6	36.1	144.70	1,005.8	9,074.4	11,881.4	11,833.8	80.26	70.307		
11,800.0	11,052.3	9,656.4	9,653.7	52.1	36.4	144.84	1,005.5	9,076.9	11,915.3	11,867.7	80.95	67.282		
11,900.0	11,143.8	9,728.3	9,725.6	52.6	36.7	144.98	1,005.2	9,079.4	11,949.2	11,901.6	81.64	64.257		
12,000.0	11,235.3	9,800.2	9,797.5	53.1	37.0	145.12	1,004.9	9,081.9	11,983.1	11,935.5	82.33	61.232		
12,100.0	11,326.8	9,872.1	9,869.4	53.6	37.3	145.26	1,004.6	9,084.4	12,017.0	11,969.4	83.02	58.207		
12,200.0	11,418.3	9,944.0	9,941.3	54.1	37.6	145.40</								



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 5519 41-08 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
10,200.0	6,672.0	6,758.8	6,755.8	48.8	23.5	93.60	1,029.9	8,955.8	6,643.1	6,594.4	48.69	136.447		
10,300.0	6,672.0	6,758.6	6,755.6	49.8	23.5	93.55	1,029.9	8,955.8	6,543.1	6,494.4	48.72	134.311		
10,400.0	6,672.0	6,758.5	6,755.4	50.9	23.5	93.50	1,029.9	8,955.8	6,443.2	6,394.5	48.75	132.173		
10,500.0	6,672.0	6,758.3	6,755.2	51.9	23.5	93.45	1,029.8	8,955.8	6,343.3	6,294.5	48.78	130.035		
10,600.0	6,672.0	6,758.1	6,755.1	53.0	23.5	93.40	1,029.8	8,955.8	6,243.4	6,194.6	48.82	127.896		
10,700.0	6,672.0	6,757.9	6,754.9	54.1	23.5	93.35	1,029.8	8,955.8	6,143.5	6,094.6	48.85	125.756		
10,800.0	6,672.0	6,757.7	6,754.7	55.2	23.5	93.31	1,029.8	8,955.8	6,043.6	5,994.7	48.89	123.616		
10,900.0	6,672.0	6,757.5	6,754.5	56.3	23.5	93.26	1,029.8	8,955.8	5,943.6	5,894.7	48.93	121.475		
11,000.0	6,672.0	6,757.3	6,754.3	57.4	23.5	93.21	1,029.8	8,955.8	5,843.7	5,794.8	48.97	119.333		
11,100.0	6,672.0	6,757.1	6,754.1	58.5	23.5	93.16	1,029.8	8,955.8	5,743.8	5,694.8	49.01	117.192		
11,200.0	6,672.0	6,757.0	6,753.9	59.6	23.5	93.11	1,029.8	8,955.8	5,643.9	5,594.9	49.06	115.050		
11,300.0	6,672.0	6,756.8	6,753.7	60.7	23.5	93.07	1,029.8	8,955.8	5,544.0	5,494.9	49.10	112.908		
11,400.0	6,672.0	6,756.6	6,753.6	61.8	23.5	93.02	1,029.8	8,955.8	5,444.2	5,395.0	49.15	110.765		
11,500.0	6,672.0	6,756.4	6,753.4	62.9	23.5	92.98	1,029.8	8,955.8	5,344.3	5,295.1	49.20	108.623		
11,600.0	6,672.0	6,756.2	6,753.2	64.1	23.5	92.93	1,029.8	8,955.8	5,244.4	5,195.1	49.25	106.481		
11,700.0	6,672.0	6,756.0	6,753.0	65.2	23.5	92.88	1,029.8	8,955.8	5,144.5	5,095.2	49.31	104.339		
11,800.0	6,672.0	6,755.8	6,752.8	66.3	23.5	92.84	1,029.8	8,955.8	5,044.6	4,995.3	49.36	102.198		
11,900.0	6,672.0	6,755.6	6,752.6	67.5	23.5	92.79	1,029.8	8,955.8	4,944.8	4,895.4	49.42	100.056		
12,000.0	6,672.0	6,755.5	6,752.4	68.6	23.5	92.75	1,029.8	8,955.8	4,844.9	4,795.4	49.48	97.915		
12,100.0	6,672.0	6,755.3	6,752.2	69.8	23.5	92.70	1,029.8	8,955.8	4,745.1	4,695.5	49.54	95.775		
12,200.0	6,672.0	6,755.1	6,752.1	70.9	23.5	92.66	1,029.8	8,955.8	4,645.2	4,595.6	49.61	93.635		
12,300.0	6,672.0	6,754.9	6,751.9	72.1	23.5	92.61	1,029.8	8,955.8	4,545.4	4,495.7	49.68	91.495		
12,400.0	6,672.0	6,754.7	6,751.7	73.2	23.5	92.57	1,029.8	8,955.8	4,445.5	4,395.8	49.75	89.356		
12,500.0	6,672.0	6,754.5	6,751.5	74.4	23.5	92.52	1,029.8	8,955.8	4,345.7	4,295.9	49.83	87.218		
12,600.0	6,672.0	6,754.3	6,751.3	75.5	23.5	92.48	1,029.8	8,955.8	4,245.9	4,196.0	49.90	85.081		
12,700.0	6,672.0	6,754.2	6,751.1	76.7	23.5	92.44	1,029.8	8,955.8	4,146.1	4,096.1	49.99	82.944		
12,800.0	6,672.0	6,754.0	6,750.9	77.9	23.5	92.39	1,029.8	8,955.8	4,046.3	3,996.2	50.07	80.808		
12,900.0	6,672.0	6,753.8	6,750.8	79.0	23.5	92.35	1,029.8	8,955.8	3,946.5	3,896.4	50.16	78.672		
13,000.0	6,672.0	6,753.6	6,750.6	80.2	23.5	92.31	1,029.8	8,955.8	3,846.7	3,796.5	50.26	76.538		
13,100.0	6,672.0	6,753.4	6,750.4	81.4	23.5	92.26	1,029.8	8,955.8	3,747.0	3,696.6	50.36	74.404		
13,200.0	6,672.0	6,753.2	6,750.2	82.6	23.5	92.22	1,029.8	8,955.8	3,647.2	3,596.8	50.47	72.271		
13,300.0	6,672.0	6,753.0	6,750.0	83.7	23.5	92.18	1,029.8	8,955.8	3,547.5	3,496.9	50.58	70.138		
13,400.0	6,672.0	6,752.9	6,749.8	84.9	23.5	92.14	1,029.8	8,955.8	3,447.8	3,397.1	50.70	68.006		
13,500.0	6,672.0	6,752.7	6,749.6	86.1	23.5	92.09	1,029.8	8,955.8	3,348.1	3,297.3	50.82	65.875		
13,600.0	6,672.0	6,752.5	6,749.5	87.3	23.5	92.05	1,029.8	8,955.8	3,248.4	3,197.5	50.96	63.744		
13,700.0	6,672.0	6,752.3	6,749.3	88.4	23.5	92.01	1,029.8	8,955.8	3,148.8	3,097.6	51.10	61.614		
13,800.0	6,672.0	6,752.1	6,749.1	89.6	23.5	91.97	1,029.8	8,955.8	3,049.1	2,997.9	51.26	59.484		
13,900.0	6,672.0	6,751.9	6,748.9	90.8	23.5	91.93	1,029.8	8,955.8	2,949.5	2,898.1	51.43	57.355		
14,000.0	6,672.0	6,751.7	6,748.7	92.0	23.5	91.89	1,029.8	8,955.8	2,849.9	2,798.3	51.61	55.225		
14,100.0	6,672.0	6,751.6	6,748.5	93.2	23.5	91.84	1,029.8	8,955.8	2,750.4	2,698.6	51.80	53.096		
14,200.0	6,672.0	6,751.4	6,748.3	94.4	23.5	91.80	1,029.8	8,955.8	2,650.9	2,598.8	52.01	50.966		
14,300.0	6,672.0	6,751.2	6,748.2	95.6	23.5	91.76	1,029.8	8,955.8	2,551.4	2,499.1	52.24	48.837		
14,400.0	6,672.0	6,751.0	6,748.0	96.8	23.5	91.72	1,029.8	8,955.8	2,451.9	2,399.5	52.50	46.707		
14,500.0	6,672.0	6,750.8	6,747.8	98.0	23.5	91.68	1,029.8	8,955.8	2,352.6	2,299.8	52.78	44.576		
14,600.0	6,672.0	6,750.6	6,747.6	99.2	23.5	91.64	1,029.7	8,955.8	2,253.2	2,200.1	53.09	42.445		
14,700.0	6,672.0	6,750.5	6,747.4	100.4	23.5	91.60	1,029.7	8,955.8	2,154.0	2,100.5	53.43	40.313		
14,800.0	6,672.0	6,750.3	6,747.2	101.6	23.5	91.56	1,029.7	8,955.8	2,054.8	2,001.0	53.82	38.180		
14,900.0	6,672.0	6,750.1	6,747.1	102.7	23.5	91.52	1,029.7	8,955.8	1,955.7	1,901.4	54.26	36.046		
15,000.0	6,672.0	6,749.9	6,746.9	103.9	23.5	91.48	1,029.7	8,955.8	1,856.6	1,801.9	54.75	33.911		
15,100.0	6,672.0	6,749.7	6,746.7	105.1	23.5	91.44	1,029.7	8,955.8	1,757.7	1,702.4	55.32	31.776		
15,200.0	6,672.0	6,749.5	6,746.5	106.3	23.5	91.40	1,029.7	8,955.8	1,659.0	1,603.0	55.97	29.640		
15,300.0	6,672.0	6,749.4	6,746.3	107.6	23.5	91.36	1,029.7	8,955.8	1,560.4	1,503.6	56.73	27.505		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 5519 41-08 - Original Drilling - Original Drilling - As Drilled											Offset Site Error:		0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWSG											Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)		
15,400.0	6,672.0	6,749.2	6,746.1	108.8	23.5	91.32	1,029.7	8,955.8	1,461.9	1,404.3	57.62	25.373	
15,500.0	6,672.0	6,749.0	6,746.0	110.0	23.5	91.28	1,029.7	8,955.8	1,363.7	1,305.1	58.67	23.244	
15,600.0	6,672.0	6,748.8	6,745.8	111.2	23.5	91.24	1,029.7	8,955.8	1,265.8	1,205.9	59.93	21.123	
15,700.0	6,672.0	6,748.6	6,745.6	112.4	23.5	91.20	1,029.7	8,955.8	1,168.3	1,106.8	61.45	19.013	
15,800.0	6,672.0	6,748.4	6,745.4	113.6	23.5	91.16	1,029.7	8,955.8	1,071.2	1,007.9	63.31	16.920	
15,900.0	6,672.0	6,748.3	6,745.2	114.8	23.5	91.12	1,029.7	8,955.8	974.7	909.1	65.61	14.855	
16,000.0	6,672.0	6,748.1	6,745.0	116.0	23.5	91.08	1,029.7	8,955.8	879.0	810.4	68.52	12.828	
16,100.0	6,672.0	6,747.9	6,744.9	117.2	23.5	91.04	1,029.7	8,955.8	784.3	712.1	72.22	10.859	
16,200.0	6,672.0	6,747.7	6,744.7	118.4	23.5	91.00	1,029.7	8,955.8	691.2	614.1	77.04	8.971	
16,300.0	6,672.0	6,747.5	6,744.5	119.6	23.5	90.96	1,029.7	8,955.8	600.2	516.8	83.41	7.196	
16,400.0	6,672.0	6,747.3	6,744.3	120.8	23.5	90.92	1,029.7	8,955.8	512.7	420.7	91.95	5.575	
16,500.0	6,672.0	6,747.2	6,744.1	122.0	23.5	90.88	1,029.7	8,955.8	430.6	327.2	103.45	4.163	
16,600.0	6,672.0	6,747.0	6,744.0	123.2	23.5	90.85	1,029.7	8,955.8	357.8	239.3	118.45	3.021	
16,700.0	6,672.0	6,746.8	6,743.8	124.5	23.5	90.81	1,029.7	8,955.8	301.0	165.4	135.59	2.220	
16,800.0	6,672.0	6,746.6	6,743.6	125.7	23.5	90.77	1,029.7	8,955.8	270.5	122.3	148.21	1.825	
16,837.0	6,672.0	6,746.5	6,743.5	126.1	23.5	90.75	1,029.7	8,955.8	268.0	118.4	149.62	1.791	CC, ES, SF
16,900.0	6,672.0	6,746.4	6,743.4	126.9	23.5	90.73	1,029.7	8,955.8	275.3	128.4	146.92	1.874	
17,000.0	6,672.0	6,746.2	6,743.2	128.1	23.5	90.69	1,029.7	8,955.8	313.7	180.4	133.31	2.353	
17,100.0	6,672.0	6,746.1	6,743.0	129.3	23.5	90.65	1,029.7	8,955.8	375.5	258.4	117.08	3.207	
17,200.0	6,672.0	6,745.9	6,742.9	130.5	23.4	90.61	1,029.7	8,955.8	451.2	347.8	103.40	4.364	
17,300.0	6,672.0	6,745.7	6,742.7	131.7	23.4	90.57	1,029.7	8,955.8	535.0	442.0	92.98	5.754	
17,400.0	6,672.0	6,745.5	6,742.5	133.0	23.4	90.53	1,029.7	8,955.8	623.6	538.4	85.21	7.318	
17,500.0	6,672.0	6,745.3	6,742.3	134.2	23.4	90.50	1,029.7	8,955.8	715.2	635.8	79.39	9.009	
17,600.0	6,672.0	6,745.2	6,742.1	135.4	23.4	90.46	1,029.7	8,955.8	808.8	733.8	74.95	10.790	
17,700.0	6,672.0	6,745.0	6,742.0	136.6	23.4	90.42	1,029.7	8,955.8	903.7	832.2	71.53	12.634	
17,800.0	6,672.0	6,744.8	6,741.8	137.8	23.4	90.38	1,029.7	8,955.8	999.7	930.8	68.85	14.520	
17,900.0	6,672.0	6,744.6	6,741.6	139.0	23.4	90.34	1,029.7	8,955.8	1,096.3	1,029.6	66.71	16.434	
18,000.0	6,672.0	6,744.4	6,741.4	140.3	23.4	90.30	1,029.7	8,955.8	1,193.6	1,128.6	64.99	18.365	
18,100.0	6,672.0	6,744.3	6,741.2	141.5	23.4	90.26	1,029.7	8,955.8	1,291.2	1,227.6	63.60	20.304	
18,200.0	6,672.0	6,744.1	6,741.1	142.7	23.4	90.23	1,029.7	8,955.8	1,389.2	1,326.8	62.45	22.246	
18,300.0	6,672.0	6,743.9	6,740.9	143.9	23.4	90.19	1,029.7	8,955.8	1,487.5	1,426.0	61.50	24.187	
18,342.5	6,672.0	6,743.8	6,740.8	144.4	23.4	90.17	1,029.7	8,955.8	1,529.3	1,468.1	61.14	25.010	



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 5519 42-08 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	99.1	99.1	0.0	0.2	92.81	-442.1	9,007.6	9,018.5					
100.0	100.0	173.1	173.1	0.1	0.4	92.81	-442.4	9,007.3	9,018.2	9,017.6	0.56	N/A		
200.0	200.0	290.3	290.3	0.5	0.8	92.82	-443.1	9,007.1	9,018.0	9,016.7	1.33	6,800.902		
300.0	300.0	393.4	393.4	0.8	1.2	92.82	-443.9	9,006.6	9,017.6	9,015.6	2.05	4,409.250		
400.0	400.0	501.8	501.8	1.2	1.6	92.83	-444.9	9,006.1	9,017.2	9,014.4	2.78	3,239.887		
500.0	500.0	620.4	620.4	1.6	2.0	92.83	-445.8	9,005.4	9,016.6	9,013.1	3.56	2,535.116		
600.0	600.0	714.4	714.4	1.9	2.3	92.84	-446.8	9,004.7	9,016.0	9,011.7	4.24	2,124.307		
700.0	700.0	801.8	801.7	2.3	2.6	92.85	-447.7	9,004.2	9,015.4	9,010.5	4.91	1,836.666		
800.0	800.0	942.1	942.1	2.6	3.1	92.86	-449.5	9,003.0	9,014.6	9,008.9	5.76	1,565.408		
900.0	900.0	1,042.0	1,041.9	3.0	3.5	92.87	-450.7	9,002.0	9,013.7	9,007.2	6.47	1,393.782		
1,000.0	1,000.0	1,172.1	1,172.0	3.4	3.9	92.88	-452.4	9,000.6	9,012.7	9,005.4	7.28	1,237.803		
1,100.0	1,100.0	1,308.7	1,308.6	3.7	4.4	92.89	-454.4	8,998.5	9,011.2	9,003.1	8.12	1,109.965		
1,200.0	1,200.0	1,385.3	1,385.2	4.1	4.7	92.90	-455.3	8,997.3	9,009.7	9,000.9	8.75	1,030.232		
1,300.0	1,300.0	1,471.3	1,471.2	4.4	5.0	92.90	-456.3	8,996.1	9,008.3	8,998.9	9.40	957.827		
1,400.0	1,400.0	1,562.9	1,562.8	4.8	5.3	92.91	-457.2	8,994.9	9,007.1	8,997.1	10.08	893.211		
1,500.0	1,500.0	1,652.6	1,652.5	5.1	5.6	92.92	-458.1	8,993.9	9,006.0	8,995.3	10.76	837.268		
1,600.0	1,600.0	1,740.3	1,740.1	5.5	5.9	92.92	-458.8	8,993.0	9,005.0	8,993.6	11.42	788.430		
1,700.0	1,700.0	1,829.2	1,829.0	5.9	6.2	92.92	-459.4	8,992.2	9,004.2	8,992.1	12.09	744.715		
1,800.0	1,800.0	1,919.7	1,919.5	6.2	6.6	92.93	-459.9	8,991.5	9,003.5	8,990.7	12.77	705.275		
1,900.0	1,900.0	2,011.8	2,011.6	6.6	6.9	92.93	-460.2	8,990.9	9,002.8	8,989.4	13.45	669.534		
2,000.0	2,000.0	2,111.5	2,111.3	6.9	7.2	92.93	-460.4	8,990.3	9,002.2	8,988.1	14.15	636.032		
2,100.0	2,100.0	2,265.3	2,265.1	7.3	7.8	92.93	-460.7	8,989.0	9,001.5	8,986.4	15.05	598.105		
2,200.0	2,200.0	2,409.7	2,409.5	7.7	8.3	92.93	-459.8	8,986.9	9,000.0	8,984.1	15.91	565.549		
2,259.3	2,259.3	2,468.3	2,468.0	7.9	8.5	143.93	-459.3	8,986.0	8,999.5	8,983.1	16.33	551.126		
2,300.0	2,300.0	2,509.7	2,509.5	8.0	8.6	143.93	-459.0	8,985.3	8,999.7	8,983.1	16.62	541.540		
2,400.0	2,399.8	2,610.2	2,609.9	8.4	9.0	143.92	-458.4	8,983.6	9,002.3	8,984.9	17.32	519.706		
2,500.0	2,499.5	2,722.0	2,721.7	8.7	9.4	143.89	-457.9	8,981.7	9,007.5	8,989.5	18.06	498.638		
2,600.0	2,598.7	2,820.4	2,820.1	9.1	9.7	143.84	-457.5	8,979.9	9,015.6	8,996.8	18.76	480.588		
2,700.0	2,697.5	2,916.6	2,916.3	9.4	10.0	143.77	-457.1	8,978.2	9,026.5	9,007.0	19.45	464.172		
2,800.0	2,795.6	3,003.5	3,003.2	9.8	10.4	143.66	-456.7	8,976.7	9,040.2	9,020.1	20.10	449.762		
2,900.0	2,893.1	3,111.0	3,110.7	10.1	10.7	143.55	-456.3	8,974.9	9,056.8	9,036.0	20.83	434.892		
3,000.0	2,989.6	3,178.3	3,177.9	10.5	11.0	143.38	-456.4	8,973.9	9,076.3	9,054.9	21.41	423.936		
3,100.0	3,085.3	3,233.7	3,233.4	10.9	11.2	143.17	-456.9	8,973.1	9,098.9	9,076.9	21.95	414.501		
3,200.0	3,179.8	3,300.0	3,299.7	11.2	11.4	142.94	-457.6	8,972.7	9,124.7	9,102.2	22.53	404.991		
3,300.0	3,273.2	3,300.0	3,299.7	11.6	11.4	142.57	-457.6	8,972.7	9,153.8	9,130.9	22.87	400.169		
3,387.5	3,353.8	3,343.1	3,342.7	11.9	11.5	142.28	-458.2	8,972.7	9,181.9	9,158.5	23.33	393.616		
3,400.0	3,365.2	3,346.6	3,346.3	12.0	11.6	142.29	-458.2	8,972.7	9,186.1	9,162.7	23.38	392.845		
3,500.0	3,456.8	3,400.0	3,399.6	12.4	11.7	142.38	-458.7	8,973.5	9,220.2	9,196.3	23.91	385.565		
3,600.0	3,548.3	3,400.0	3,399.6	12.8	11.7	142.38	-458.7	8,973.5	9,254.8	9,230.6	24.25	381.565		
3,700.0	3,639.8	3,443.5	3,443.1	13.2	11.9	142.45	-459.0	8,974.5	9,290.1	9,265.4	24.75	375.296		
3,800.0	3,731.4	3,500.0	3,499.6	13.6	12.1	142.54	-459.2	8,976.3	9,326.0	9,300.7	25.30	368.569		
3,900.0	3,822.9	3,537.8	3,537.4	14.0	12.2	142.60	-459.3	8,977.7	9,362.4	9,336.6	25.79	363.069		
4,000.0	3,914.4	3,608.0	3,607.5	14.4	12.5	142.71	-459.3	8,980.3	9,399.1	9,372.7	26.39	356.144		
4,100.0	4,005.9	3,692.5	3,692.0	14.8	12.8	142.85	-459.3	8,983.7	9,435.9	9,408.9	27.05	348.812		
4,200.0	4,097.5	3,758.5	3,757.9	15.2	13.0	142.95	-459.2	8,986.4	9,472.9	9,445.3	27.65	342.651		
4,300.0	4,189.0	3,825.4	3,824.7	15.6	13.2	143.05	-459.1	8,989.3	9,510.3	9,482.0	28.25	336.697		
4,400.0	4,280.5	3,897.2	3,896.5	16.1	13.5	143.16	-459.2	8,992.5	9,547.8	9,519.0	28.87	330.761		
4,500.0	4,372.1	3,956.2	3,955.4	16.5	13.7	143.26	-459.4	8,995.3	9,585.7	9,556.3	29.44	325.602		
4,600.0	4,463.6	4,017.5	4,016.6	16.9	13.9	143.35	-459.6	8,998.5	9,623.9	9,593.9	30.02	320.546		
4,700.0	4,555.1	4,087.7	4,086.7	17.4	14.1	143.46	-459.8	9,002.2	9,662.3	9,631.7	30.64	315.326		
4,800.0	4,646.7	4,173.8	4,172.7	17.8	14.4	143.59	-459.9	9,007.0	9,701.0	9,669.6	31.32	309.694		
4,900.0	4,738.2	4,401.8	4,400.4	18.2	15.2	143.95	-462.8	9,017.5	9,738.9	9,706.4	32.55	299.156		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 5519 42-08 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,000.0	4,829.7	4,775.2	4,773.6	18.7	16.6	144.53	-469.5	9,027.3	9,775.7	9,741.4	34.34	284.689		
5,100.0	4,921.3	4,918.7	4,917.0	19.1	17.1	144.77	-474.2	9,028.0	9,810.3	9,775.0	35.25	278.299		
5,200.0	5,012.8	4,996.3	4,994.6	19.5	17.3	144.90	-476.6	9,028.3	9,844.8	9,808.9	35.92	274.109		
5,300.0	5,104.3	5,271.0	5,269.2	20.0	18.3	145.30	-479.4	9,026.6	9,877.7	9,840.4	37.33	264.636		
5,400.0	5,195.8	5,324.9	5,323.2	20.4	18.5	145.38	-478.8	9,026.2	9,910.9	9,872.9	37.91	261.458		
5,500.0	5,287.4	5,369.8	5,368.0	20.9	18.6	145.44	-478.1	9,026.1	9,944.5	9,906.0	38.45	258.620		
5,600.0	5,378.9	5,418.1	5,416.4	21.3	18.8	145.50	-477.1	9,026.2	9,978.5	9,939.5	39.01	255.790		
7,050.0	6,622.5	6,670.2	6,668.2	26.6	23.1	37.94	-468.6	9,040.5	9,989.1	9,941.3	47.79	208.999		
7,100.0	6,641.1	6,680.2	6,678.2	26.7	23.2	41.08	-468.4	9,040.6	9,944.7	9,896.9	47.83	207.920		
7,150.0	6,655.4	6,700.0	6,698.0	26.8	23.2	46.49	-468.0	9,040.7	9,988.6	9,850.7	47.90	206.639		
7,200.0	6,665.4	6,712.5	6,685.5	26.9	23.3	55.24	-468.3	9,040.6	9,851.0	9,803.1	47.94	205.496		
7,250.0	6,670.8	6,706.6	6,691.3	27.0	23.3	71.09	-468.2	9,040.7	9,802.5	9,754.5	47.92	204.553		
7,285.7	6,672.0	6,705.2	6,692.8	27.1	23.3	88.77	-468.1	9,040.7	9,767.4	9,719.5	47.92	203.815		
7,300.0	6,672.0	6,705.1	6,692.9	27.1	23.3	88.77	-468.1	9,040.7	9,753.3	9,705.4	47.93	203.509		
7,400.0	6,672.0	6,704.4	6,693.6	27.3	23.3	88.80	-468.1	9,040.7	9,655.0	9,607.0	47.94	201.384		
7,500.0	6,672.0	6,703.6	6,694.3	27.6	23.3	88.82	-468.1	9,040.7	9,556.6	9,508.6	47.96	199.245		
7,600.0	6,672.0	6,702.9	6,695.1	28.0	23.3	88.85	-468.1	9,040.7	9,458.3	9,410.3	47.99	197.093		
7,700.0	6,672.0	6,702.2	6,695.8	28.3	23.3	88.87	-468.1	9,040.7	9,360.0	9,312.0	48.02	194.928		
7,800.0	6,672.0	6,701.5	6,696.5	28.8	23.3	88.90	-468.1	9,040.7	9,261.8	9,213.7	48.05	192.749		
7,900.0	6,672.0	6,700.7	6,697.2	29.3	23.3	88.92	-468.0	9,040.7	9,163.5	9,115.5	48.09	190.558		
8,000.0	6,672.0	6,700.0	6,698.0	29.8	23.2	88.94	-468.0	9,040.7	9,065.4	9,017.2	48.13	188.352		
8,100.0	6,672.0	6,700.7	6,698.7	30.4	23.3	88.97	-468.0	9,040.7	8,967.3	8,919.1	48.18	186.114		
8,200.0	6,672.0	6,701.5	6,699.4	31.0	23.3	88.99	-468.0	9,040.7	8,869.2	8,820.9	48.24	183.863		
8,300.0	6,672.0	6,702.2	6,700.2	31.7	23.3	89.02	-468.0	9,040.7	8,771.1	8,722.8	48.30	181.599		
8,400.0	6,672.0	6,702.9	6,700.9	32.4	23.3	89.04	-468.0	9,040.7	8,673.1	8,624.8	48.37	179.321		
8,500.0	6,672.0	6,703.6	6,701.6	33.1	23.3	89.07	-468.0	9,040.7	8,575.2	8,526.8	48.44	177.031		
8,600.0	6,672.0	6,704.4	6,702.3	33.9	23.3	89.09	-467.9	9,040.7	8,477.3	8,428.8	48.52	174.728		
8,700.0	6,672.0	6,705.1	6,703.1	34.7	23.3	89.11	-467.9	9,040.7	8,379.5	8,330.9	48.60	172.412		
8,800.0	6,672.0	6,705.8	6,703.8	35.5	23.3	89.14	-467.9	9,040.7	8,281.7	8,233.0	48.69	170.083		
8,900.0	6,672.0	6,706.6	6,704.5	36.3	23.3	89.16	-467.9	9,040.8	8,184.0	8,135.2	48.79	167.741		
9,000.0	6,672.0	6,707.3	6,705.3	37.2	23.3	89.19	-467.9	9,040.8	8,086.3	8,037.4	48.89	165.386		
9,100.0	6,672.0	6,708.0	6,706.0	38.1	23.3	89.21	-467.9	9,040.8	7,988.7	7,939.7	49.00	163.019		
9,200.0	6,672.0	6,708.8	6,706.7	39.0	23.3	89.24	-467.9	9,040.8	7,891.1	7,842.0	49.12	160.640		
9,300.0	6,672.0	6,709.5	6,707.5	39.9	23.3	89.26	-467.8	9,040.8	7,793.6	7,744.4	49.25	158.247		
9,400.0	6,672.0	6,710.2	6,708.2	40.8	23.3	89.28	-467.8	9,040.8	7,696.2	7,646.8	49.38	155.843		
9,500.0	6,672.0	6,710.9	6,708.9	41.8	23.3	89.31	-467.8	9,040.8	7,598.8	7,549.3	49.53	153.427		
9,600.0	6,672.0	6,711.7	6,709.6	42.7	23.3	89.33	-467.8	9,040.8	7,501.5	7,451.9	49.68	150.999		
9,700.0	6,672.0	6,712.4	6,710.4	43.7	23.3	89.36	-467.8	9,040.8	7,404.3	7,354.5	49.84	148.559		
9,800.0	6,672.0	6,713.1	6,711.1	44.7	23.3	89.38	-467.8	9,040.8	7,307.2	7,257.2	50.01	146.108		
9,900.0	6,672.0	6,713.9	6,711.8	45.7	23.3	89.40	-467.8	9,040.8	7,210.1	7,159.9	50.19	143.646		
10,000.0	6,672.0	6,714.6	6,712.6	46.7	23.3	89.43	-467.7	9,040.8	7,113.2	7,062.8	50.39	141.174		
10,100.0	6,672.0	6,715.3	6,713.3	47.7	23.3	89.45	-467.7	9,040.8	7,016.3	6,965.7	50.59	138.691		
10,200.0	6,672.0	6,716.1	6,714.0	48.8	23.3	89.48	-467.7	9,040.8	6,919.5	6,868.7	50.80	136.199		
10,300.0	6,672.0	6,716.8	6,714.8	49.8	23.3	89.50	-467.7	9,040.8	6,822.8	6,771.8	51.03	133.697		
10,400.0	6,672.0	6,717.5	6,715.5	50.9	23.3	89.53	-467.7	9,040.8	6,726.2	6,674.9	51.27	131.187		
10,500.0	6,672.0	6,718.3	6,716.2	51.9	23.3	89.55	-467.7	9,040.8	6,629.7	6,578.2	51.53	128.668		
10,600.0	6,672.0	6,719.0	6,717.0	53.0	23.3	89.57	-467.7	9,040.8	6,533.3	6,481.5	51.79	126.142		
10,700.0	6,672.0	6,719.7	6,717.7	54.1	23.3	89.60	-467.6	9,040.8	6,437.0	6,384.9	52.08	123.609		
10,800.0	6,672.0	6,720.5	6,718.4	55.2	23.3	89.62	-467.6	9,040.9	6,340.9	6,288.5	52.37	121.070		
10,900.0	6,672.0	6,721.2	6,719.2	56.3	23.3	89.65	-467.6	9,040.9	6,244.8	6,192.1	52.69	118.525		
11,000.0	6,672.0	6,721.9	6,719.9	57.4	23.3	89.67	-467.6	9,040.9	6,148.9	6,095.9	53.02	115.976		
11,100.0	6,672.0	6,722.7	6,720.6	58.5	23.3	89.69	-467.6	9,040.9	6,053.1	5,999.8	53.37	113.422		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 5519 42-08 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
11,200.0	6,672.0	6,723.4	6,721.4	59.6	23.3	89.72	-467.6	9,040.9	5,957.5	5,903.8	53.74	110.866		
11,300.0	6,672.0	6,724.1	6,722.1	60.7	23.3	89.74	-467.6	9,040.9	5,862.0	5,807.9	54.12	108.309		
11,400.0	6,672.0	6,724.9	6,722.8	61.8	23.3	89.77	-467.6	9,040.9	5,766.7	5,712.1	54.53	105.750		
11,500.0	6,672.0	6,725.6	6,723.6	62.9	23.3	89.79	-467.5	9,040.9	5,671.5	5,616.5	54.96	103.192		
11,600.0	6,672.0	6,726.3	6,724.3	64.1	23.3	89.81	-467.5	9,040.9	5,576.5	5,521.1	55.41	100.635		
11,700.0	6,672.0	6,727.1	6,725.0	65.2	23.3	89.84	-467.5	9,040.9	5,481.7	5,425.8	55.89	98.081		
11,800.0	6,672.0	6,727.8	6,725.8	66.3	23.3	89.86	-467.5	9,040.9	5,387.0	5,330.7	56.39	95.531		
11,900.0	6,672.0	6,728.5	6,726.5	67.5	23.3	89.89	-467.5	9,040.9	5,292.6	5,235.7	56.92	92.986		
12,000.0	6,672.0	6,729.3	6,727.2	68.6	23.4	89.91	-467.5	9,040.9	5,198.4	5,140.9	57.47	90.448		
12,100.0	6,672.0	6,730.0	6,728.0	69.8	23.4	89.93	-467.5	9,040.9	5,104.4	5,046.3	58.06	87.919		
12,200.0	6,672.0	6,730.7	6,728.7	70.9	23.4	89.96	-467.4	9,040.9	5,010.6	4,952.0	58.67	85.399		
12,300.0	6,672.0	6,731.5	6,729.4	72.1	23.4	89.98	-467.4	9,040.9	4,917.1	4,857.8	59.32	82.890		
12,400.0	6,672.0	6,732.2	6,730.2	73.2	23.4	90.01	-467.4	9,040.9	4,823.9	4,763.9	60.00	80.395		
12,500.0	6,672.0	6,732.9	6,730.9	74.4	23.4	90.03	-467.4	9,040.9	4,730.9	4,670.2	60.72	77.915		
12,600.0	6,672.0	6,733.7	6,731.6	75.5	23.4	90.05	-467.4	9,040.9	4,638.2	4,576.8	61.47	75.451		
12,700.0	6,672.0	6,734.4	6,732.4	76.7	23.4	90.08	-467.4	9,040.9	4,545.9	4,483.6	62.27	73.005		
12,800.0	6,672.0	6,735.1	6,733.1	77.9	23.4	90.10	-467.4	9,041.0	4,453.8	4,390.7	63.10	70.580		
12,900.0	6,672.0	6,735.9	6,733.8	79.0	23.4	90.13	-467.3	9,041.0	4,362.2	4,298.2	63.98	68.176		
13,000.0	6,672.0	6,736.6	6,734.6	80.2	23.4	90.15	-467.3	9,041.0	4,270.9	4,206.0	64.91	65.797		
13,100.0	6,672.0	6,737.4	6,735.3	81.4	23.4	90.17	-467.3	9,041.0	4,180.0	4,114.1	65.88	63.444		
13,200.0	6,672.0	6,738.1	6,736.1	82.6	23.4	90.20	-467.3	9,041.0	4,089.5	4,022.6	66.91	61.118		
13,300.0	6,672.0	6,738.8	6,736.8	83.7	23.4	90.22	-467.3	9,041.0	3,999.5	3,931.5	67.99	58.823		
13,400.0	6,672.0	6,739.6	6,737.5	84.9	23.4	90.24	-467.3	9,041.0	3,910.0	3,840.8	69.13	56.559		
13,500.0	6,672.0	6,740.3	6,738.3	86.1	23.4	90.27	-467.3	9,041.0	3,820.9	3,750.6	70.33	54.330		
13,600.0	6,672.0	6,741.0	6,739.0	87.3	23.4	90.29	-467.2	9,041.0	3,732.5	3,660.9	71.59	52.137		
13,700.0	6,672.0	6,741.8	6,739.7	88.4	23.4	90.32	-467.2	9,041.0	3,644.7	3,571.7	72.92	49.982		
13,800.0	6,672.0	6,742.5	6,740.5	89.6	23.4	90.34	-467.2	9,041.0	3,557.5	3,483.2	74.32	47.867		
13,900.0	6,672.0	6,743.2	6,741.2	90.8	23.4	90.36	-467.2	9,041.0	3,471.0	3,395.2	75.79	45.795		
14,000.0	6,672.0	6,744.0	6,741.9	92.0	23.4	90.39	-467.2	9,041.0	3,385.2	3,307.9	77.35	43.767		
14,100.0	6,672.0	6,744.7	6,742.7	93.2	23.4	90.41	-467.2	9,041.0	3,300.3	3,221.3	78.98	41.786		
14,200.0	6,672.0	6,745.5	6,743.4	94.4	23.4	90.44	-467.2	9,041.0	3,216.2	3,135.5	80.70	39.853		
14,300.0	6,672.0	6,746.2	6,744.2	95.6	23.4	90.46	-467.1	9,041.0	3,133.1	3,050.5	82.51	37.971		
14,400.0	6,672.0	6,746.9	6,744.9	96.8	23.4	90.48	-467.1	9,041.0	3,050.9	2,966.5	84.42	36.142		
14,500.0	6,672.0	6,747.7	6,745.6	98.0	23.4	90.51	-467.1	9,041.0	2,969.9	2,883.5	86.42	34.366		
14,600.0	6,672.0	6,748.4	6,746.4	99.2	23.4	90.53	-467.1	9,041.0	2,890.1	2,801.6	88.52	32.647		
14,700.0	6,672.0	6,749.1	6,747.1	100.4	23.4	90.56	-467.1	9,041.0	2,811.5	2,720.8	90.73	30.987		
14,800.0	6,672.0	6,749.9	6,747.8	101.6	23.4	90.58	-467.1	9,041.1	2,734.4	2,641.4	93.05	29.386		
14,900.0	6,672.0	6,750.6	6,748.6	102.7	23.4	90.60	-467.1	9,041.1	2,658.8	2,563.3	95.48	27.846		
15,000.0	6,672.0	6,751.4	6,749.3	103.9	23.4	90.63	-467.0	9,041.1	2,584.9	2,486.9	98.02	26.370		
15,100.0	6,672.0	6,752.1	6,750.1	105.1	23.4	90.65	-467.0	9,041.1	2,512.8	2,412.1	100.67	24.959		
15,200.0	6,672.0	6,752.8	6,750.8	106.3	23.4	90.68	-467.0	9,041.1	2,442.6	2,339.2	103.44	23.614		
15,300.0	6,672.0	6,753.6	6,751.5	107.6	23.4	90.70	-467.0	9,041.1	2,374.6	2,268.3	106.31	22.337		
15,400.0	6,672.0	6,754.3	6,752.3	108.8	23.4	90.72	-467.0	9,041.1	2,308.9	2,199.6	109.28	21.129		
15,500.0	6,672.0	6,755.1	6,753.0	110.0	23.4	90.75	-467.0	9,041.1	2,245.8	2,133.4	112.34	19.990		
15,600.0	6,672.0	6,755.8	6,753.8	111.2	23.4	90.77	-467.0	9,041.1	2,185.4	2,069.9	115.49	18.923		
15,700.0	6,672.0	6,756.5	6,754.5	112.4	23.4	90.79	-466.9	9,041.1	2,128.0	2,009.3	118.70	17.928		
15,800.0	6,672.0	6,757.3	6,755.2	113.6	23.4	90.82	-466.9	9,041.1	2,073.9	1,951.9	121.95	17.006		
15,900.0	6,672.0	6,758.0	6,756.0	114.8	23.5	90.84	-466.9	9,041.1	2,023.3	1,898.0	125.22	16.158		
16,000.0	6,672.0	6,758.8	6,756.7	116.0	23.5	90.87	-466.9	9,041.1	1,976.4	1,847.9	128.48	15.383		
16,100.0	6,672.0	6,759.5	6,757.5	117.2	23.5	90.89	-466.9	9,041.1	1,933.6	1,801.9	131.69	14.683		
16,200.0	6,672.0	6,760.2	6,758.2	118.4	23.5	90.91	-466.9	9,041.1	1,895.1	1,760.3	134.81	14.058		
16,300.0	6,672.0	6,761.0	6,758.9	119.6	23.5	90.94	-466.9	9,041.1	1,861.2	1,723.4	137.80	13.507		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> BB Section 08 - State 5519 42-08 - Original Drilling - Original Drilling - As Drilled												Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWSG												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
16,400.0	6,672.0	6,761.7	6,759.7	120.8	23.5	90.96	-466.9	9,041.1	1,832.1	1,691.5	140.61	13.030	
16,500.0	6,672.0	6,762.5	6,760.4	122.0	23.5	90.99	-466.8	9,041.1	1,808.1	1,664.9	143.19	12.627	
16,600.0	6,672.0	6,763.2	6,761.2	123.2	23.5	91.01	-466.8	9,041.1	1,789.4	1,643.9	145.51	12.298	
16,700.0	6,672.0	6,763.9	6,761.9	124.5	23.5	91.03	-466.8	9,041.2	1,776.2	1,628.7	147.51	12.041	
16,800.0	6,672.0	6,764.7	6,762.6	125.7	23.5	91.06	-466.8	9,041.2	1,768.5	1,619.3	149.17	11.856	
16,886.0	6,672.0	6,765.3	6,763.3	126.7	23.5	91.08	-466.8	9,041.2	1,766.4	1,616.1	150.30	11.753 CC	
16,900.0	6,672.0	6,765.4	6,763.4	126.9	23.5	91.08	-466.8	9,041.2	1,766.5	1,616.0	150.46	11.741 ES	
17,000.0	6,672.0	6,766.2	6,764.1	128.1	23.5	91.11	-466.8	9,041.2	1,770.1	1,618.7	151.35	11.695 SF	
17,100.0	6,672.0	6,766.9	6,764.9	129.3	23.5	91.13	-466.8	9,041.2	1,779.3	1,627.5	151.86	11.717	
17,200.0	6,672.0	6,767.7	6,765.6	130.5	23.5	91.15	-466.7	9,041.2	1,794.1	1,642.1	151.98	11.805	
17,300.0	6,672.0	6,768.4	6,766.3	131.7	23.5	91.18	-466.7	9,041.2	1,814.3	1,662.6	151.74	11.957	
17,400.0	6,672.0	6,769.1	6,767.1	133.0	23.5	91.20	-466.7	9,041.2	1,839.8	1,688.6	151.16	12.171	
17,500.0	6,672.0	6,769.9	6,767.8	134.2	23.5	91.23	-466.7	9,041.2	1,870.2	1,719.9	150.27	12.446	
17,600.0	6,672.0	6,770.6	6,768.6	135.4	23.5	91.25	-466.7	9,041.2	1,905.4	1,756.3	149.11	12.779	
17,700.0	6,672.0	6,771.4	6,769.3	136.6	23.5	91.28	-466.7	9,041.2	1,945.2	1,797.4	147.72	13.168	
17,800.0	6,672.0	6,772.1	6,770.1	137.8	23.5	91.30	-466.7	9,041.2	1,989.1	1,843.0	146.15	13.611	
17,900.0	6,672.0	6,772.8	6,770.8	139.0	23.5	91.32	-466.6	9,041.2	2,037.1	1,892.7	144.42	14.106	
18,000.0	6,672.0	6,773.6	6,771.5	140.3	23.5	91.35	-466.6	9,041.2	2,088.7	1,946.2	142.57	14.650	
18,100.0	6,672.0	6,774.3	6,772.3	141.5	23.5	91.37	-466.6	9,041.2	2,143.8	2,003.2	140.64	15.243	
18,200.0	6,672.0	6,775.1	6,773.0	142.7	23.5	91.40	-466.6	9,041.2	2,202.0	2,063.4	138.66	15.881	
18,300.0	6,672.0	6,775.8	6,773.8	143.9	23.5	91.42	-466.6	9,041.2	2,263.2	2,126.6	136.64	16.563	
18,342.5	6,672.0	6,776.1	6,774.1	144.4	23.5	91.43	-466.6	9,041.2	2,290.0	2,154.2	135.79	16.865	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 5519 44-08 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	62.7	62.7	0.0	0.1	110.40	-3,317.4	8,922.0	9,518.9					
100.0	100.0	151.8	151.8	0.1	0.4	110.40	-3,317.6	8,922.3	9,519.2	9,518.7	0.48	N/A		
200.0	200.0	252.1	252.1	0.5	0.7	110.40	-3,317.6	8,922.6	9,519.5	9,518.3	1.19	7,986.232		
300.0	300.0	363.3	363.3	0.8	1.1	110.39	-3,317.2	8,923.1	9,519.8	9,517.8	1.94	4,908.618		
400.0	400.0	468.1	468.1	1.2	1.5	110.39	-3,316.9	8,923.4	9,519.9	9,517.3	2.66	3,573.474		
500.0	500.0	557.5	557.5	1.6	1.8	110.39	-3,316.6	8,923.7	9,520.1	9,516.8	3.33	2,854.794		
600.0	600.0	648.2	648.1	1.9	2.1	110.39	-3,316.4	8,924.1	9,520.5	9,516.5	4.01	2,373.982		
700.0	700.0	752.4	752.4	2.3	2.5	110.38	-3,316.1	8,924.6	9,520.8	9,516.1	4.73	2,011.458		
800.0	800.0	864.0	864.0	2.6	2.9	110.38	-3,315.6	8,925.1	9,521.1	9,515.6	5.48	1,736.787		
900.0	900.0	960.8	960.8	3.0	3.2	110.38	-3,315.2	8,925.4	9,521.3	9,515.1	6.18	1,540.985		
1,000.0	1,000.0	1,051.0	1,051.0	3.4	3.5	110.37	-3,315.0	8,925.8	9,521.6	9,514.7	6.85	1,389.552		
1,100.0	1,100.0	1,153.5	1,153.5	3.7	3.9	110.37	-3,314.6	8,926.3	9,521.9	9,514.4	7.57	1,257.974		
1,200.0	1,200.0	1,268.8	1,268.8	4.1	4.3	110.37	-3,314.1	8,926.8	9,522.1	9,513.8	8.33	1,143.043		
1,300.0	1,300.0	1,371.1	1,371.1	4.4	4.6	110.36	-3,313.7	8,927.1	9,522.3	9,513.2	9.05	1,052.665		
1,400.0	1,400.0	1,486.7	1,486.7	4.8	5.0	110.36	-3,313.1	8,927.4	9,522.3	9,512.5	9.81	970.887		
1,500.0	1,500.0	1,584.6	1,584.6	5.1	5.4	110.36	-3,312.7	8,927.5	9,522.3	9,511.8	10.51	906.225		
1,523.4	1,523.4	1,606.8	1,606.8	5.2	5.5	110.36	-3,312.6	8,927.5	9,522.3	9,511.6	10.67	892.544		
1,600.0	1,600.0	1,669.7	1,669.6	5.5	5.7	110.36	-3,312.4	8,927.6	9,522.3	9,511.2	11.16	853.042		
1,700.0	1,700.0	1,777.3	1,777.3	5.9	6.1	110.35	-3,312.2	8,927.9	9,522.5	9,510.6	11.90	800.401		
1,800.0	1,800.0	1,859.3	1,859.3	6.2	6.3	110.35	-3,312.1	8,928.0	9,522.6	9,510.1	12.54	759.257		
1,900.0	1,900.0	1,942.2	1,942.1	6.6	6.6	110.36	-3,312.4	8,928.2	9,523.0	9,509.8	13.19	721.979		
2,000.0	2,000.0	2,028.5	2,028.4	6.9	6.9	110.36	-3,312.7	8,928.5	9,523.5	9,509.6	13.85	687.585		
2,100.0	2,100.0	2,100.9	2,100.9	7.3	7.2	110.36	-3,313.2	8,928.9	9,524.2	9,509.7	14.46	658.552		
2,200.0	2,200.0	2,185.3	2,185.3	7.7	7.5	110.36	-3,314.0	8,929.5	9,525.1	9,510.0	15.12	630.129		
2,300.0	2,300.0	2,300.1	2,300.1	8.0	7.9	161.36	-3,315.4	8,930.2	9,527.7	9,511.9	15.87	600.243		
2,400.0	2,399.8	2,403.5	2,403.5	8.4	8.2	161.34	-3,316.8	8,930.6	9,533.6	9,517.0	16.59	574.764		
2,500.0	2,499.5	2,511.0	2,511.0	8.7	8.6	161.30	-3,318.4	8,930.9	9,542.6	9,525.3	17.31	551.136		
2,600.0	2,598.7	2,649.3	2,649.3	9.1	9.1	161.27	-3,320.3	8,931.0	9,554.7	9,536.5	18.15	526.463		
2,700.0	2,697.5	2,752.8	2,752.7	9.4	9.5	161.21	-3,321.6	8,930.8	9,569.8	9,550.9	18.86	507.412		
2,800.0	2,795.6	2,850.6	2,850.5	9.8	9.8	161.13	-3,322.7	8,930.7	9,588.2	9,568.6	19.55	490.440		
2,900.0	2,893.1	2,959.0	2,958.9	10.1	10.2	161.04	-3,323.9	8,930.5	9,609.8	9,589.5	20.28	473.936		
3,000.0	2,989.6	3,055.3	3,055.2	10.5	10.5	160.93	-3,324.8	8,930.3	9,634.4	9,613.5	20.96	459.676		
3,100.0	3,085.3	3,148.1	3,148.0	10.9	10.8	160.80	-3,325.6	8,930.2	9,662.4	9,640.8	21.63	446.728		
3,200.0	3,179.8	3,238.3	3,238.2	11.2	11.1	160.65	-3,326.4	8,930.1	9,693.5	9,671.2	22.29	434.892		
3,300.0	3,273.2	3,314.0	3,313.9	11.6	11.4	160.47	-3,327.4	8,930.0	9,727.9	9,705.0	22.90	424.839		
3,387.5	3,353.8	3,371.2	3,371.0	11.9	11.6	160.29	-3,328.6	8,929.9	9,760.6	9,737.2	23.40	417.154		
3,400.0	3,365.2	3,379.3	3,379.1	12.0	11.6	160.30	-3,328.8	8,929.9	9,765.5	9,742.0	23.47	416.068		
3,500.0	3,456.8	3,500.0	3,486.8	12.4	12.1	160.41	-3,332.1	8,929.3	9,804.3	9,780.1	24.24	404.504		
3,600.0	3,548.3	3,596.2	3,595.9	12.8	12.4	160.53	-3,335.7	8,928.3	9,842.9	9,818.0	24.92	394.912		
3,700.0	3,639.8	3,728.5	3,728.1	13.2	12.9	160.66	-3,339.8	8,926.9	9,881.3	9,855.6	25.74	383.821		
3,800.0	3,731.4	3,800.0	3,799.7	13.6	13.1	160.74	-3,341.9	8,926.0	9,919.7	9,893.3	26.35	376.461		
3,900.0	3,822.9	3,874.1	3,873.7	14.0	13.4	160.81	-3,344.1	8,925.4	9,958.3	9,931.3	26.97	369.269		
4,000.0	3,914.4	3,947.6	3,947.2	14.4	13.6	160.89	-3,346.1	8,924.9	9,997.0	9,969.5	27.59	362.396		
8,000.0	6,672.0	6,658.6	6,656.6	29.8	23.1	88.79	-3,398.1	8,965.3	9,934.5	9,885.7	48.86	203.323		
8,100.0	6,672.0	6,659.3	6,657.3	30.4	23.1	88.80	-3,398.1	8,965.3	9,846.4	9,797.3	49.07	200.647		
8,200.0	6,672.0	6,660.0	6,658.1	31.0	23.1	88.81	-3,398.1	8,965.3	9,758.5	9,709.1	49.30	197.922		
8,300.0	6,672.0	6,660.7	6,658.8	31.7	23.1	88.82	-3,398.1	8,965.3	9,670.8	9,621.2	49.56	195.152		
8,400.0	6,672.0	6,661.5	6,659.5	32.4	23.1	88.83	-3,398.1	8,965.3	9,583.3	9,533.5	49.83	192.337		
8,500.0	6,672.0	6,662.2	6,660.2	33.1	23.1	88.84	-3,398.1	8,965.3	9,496.1	9,446.0	50.12	189.482		
8,600.0	6,672.0	6,662.9	6,660.9	33.9	23.1	88.85	-3,398.1	8,965.3	9,409.2	9,358.7	50.43	186.588		
8,700.0	6,672.0	6,663.6	6,661.6	34.7	23.1	88.85	-3,398.1	8,965.3	9,322.5	9,271.7	50.76	183.659		
8,800.0	6,672.0	6,664.3	6,662.4	35.5	23.1	88.86	-3,398.1	8,965.3	9,236.1	9,185.0	51.11	180.697		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 5519 44-08 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
8,900.0	6,672.0	6,665.0	6,663.1	36.3	23.1	88.87	-3,398.1	8,965.3	9,150.0	9,098.5	51.49	177.707		
9,000.0	6,672.0	6,665.8	6,663.8	37.2	23.1	88.88	-3,398.1	8,965.3	9,064.1	9,012.2	51.89	174.691		
9,100.0	6,672.0	6,666.5	6,664.5	38.1	23.1	88.89	-3,398.1	8,965.3	8,978.6	8,926.3	52.31	171.653		
9,200.0	6,672.0	6,667.2	6,665.2	39.0	23.1	88.90	-3,398.1	8,965.3	8,893.4	8,840.6	52.75	168.596		
9,300.0	6,672.0	6,667.9	6,666.0	39.9	23.2	88.91	-3,398.1	8,965.3	8,808.4	8,755.2	53.22	165.525		
9,400.0	6,672.0	6,668.7	6,666.7	40.8	23.2	88.92	-3,398.1	8,965.4	8,723.9	8,670.2	53.70	162.442		
9,500.0	6,672.0	6,669.4	6,667.4	41.8	23.2	88.93	-3,398.1	8,965.4	8,639.6	8,585.4	54.22	159.352		
9,600.0	6,672.0	6,670.1	6,668.1	42.7	23.2	88.94	-3,398.1	8,965.4	8,555.7	8,500.9	54.75	156.258		
9,700.0	6,672.0	6,670.8	6,668.9	43.7	23.2	88.94	-3,398.1	8,965.4	8,472.1	8,416.8	55.31	153.164		
9,800.0	6,672.0	6,671.6	6,669.6	44.7	23.2	88.95	-3,398.1	8,965.4	8,388.9	8,333.0	55.90	150.073		
9,900.0	6,672.0	6,672.3	6,670.3	45.7	23.2	88.96	-3,398.2	8,965.4	8,306.1	8,249.6	56.51	146.989		
10,000.0	6,672.0	6,673.0	6,671.0	46.7	23.2	88.97	-3,398.2	8,965.4	8,223.7	8,166.5	57.14	143.915		
10,100.0	6,672.0	6,727.8	6,670.2	47.7	23.4	88.96	-3,398.2	8,965.4	8,141.6	8,083.6	57.99	140.400		
10,200.0	6,672.0	6,727.0	6,671.0	48.8	23.4	88.97	-3,398.2	8,965.4	8,060.0	8,001.3	58.67	137.383		
10,300.0	6,672.0	6,726.2	6,671.8	49.8	23.4	88.98	-3,398.2	8,965.4	7,978.8	7,919.4	59.37	134.385		
10,400.0	6,672.0	6,725.4	6,672.6	50.9	23.4	88.99	-3,398.2	8,965.4	7,898.0	7,837.9	60.10	131.409		
10,500.0	6,672.0	6,724.7	6,673.4	51.9	23.3	89.00	-3,398.2	8,965.4	7,817.7	7,756.8	60.86	128.456		
10,600.0	6,672.0	6,723.9	6,674.2	53.0	23.3	89.01	-3,398.2	8,965.4	7,737.8	7,676.2	61.64	125.531		
10,700.0	6,672.0	6,723.1	6,675.0	54.1	23.3	89.02	-3,398.2	8,965.4	7,658.4	7,596.0	62.45	122.635		
10,800.0	6,672.0	6,722.3	6,675.7	55.2	23.3	89.03	-3,398.2	8,965.4	7,579.6	7,516.3	63.28	119.772		
10,900.0	6,672.0	6,721.5	6,676.5	56.3	23.3	89.04	-3,398.2	8,965.4	7,501.2	7,437.0	64.14	116.942		
11,000.0	6,672.0	6,720.7	6,677.3	57.4	23.3	89.05	-3,398.2	8,965.4	7,423.3	7,358.3	65.03	114.148		
11,100.0	6,672.0	6,719.9	6,678.1	58.5	23.3	89.06	-3,398.2	8,965.4	7,346.0	7,280.1	65.95	111.392		
11,200.0	6,672.0	6,719.2	6,678.9	59.6	23.3	89.07	-3,398.2	8,965.4	7,269.2	7,202.3	66.89	108.676		
11,300.0	6,672.0	6,718.4	6,679.7	60.7	23.3	89.08	-3,398.2	8,965.5	7,193.1	7,125.2	67.86	106.001		
11,400.0	6,672.0	6,717.6	6,680.5	61.8	23.3	89.09	-3,398.2	8,965.5	7,117.5	7,048.6	68.85	103.370		
11,500.0	6,672.0	6,716.8	6,681.3	62.9	23.3	89.10	-3,398.2	8,965.5	7,042.5	6,972.6	69.88	100.782		
11,600.0	6,672.0	6,716.0	6,682.0	64.1	23.3	89.11	-3,398.2	8,965.5	6,968.2	6,897.2	70.93	98.240		
11,700.0	6,672.0	6,715.2	6,682.8	65.2	23.3	89.12	-3,398.2	8,965.5	6,894.5	6,822.5	72.01	95.744		
11,800.0	6,672.0	6,714.4	6,683.6	66.3	23.3	89.13	-3,398.2	8,965.5	6,821.5	6,748.3	73.12	93.295		
11,900.0	6,672.0	6,713.7	6,684.4	67.5	23.3	89.14	-3,398.2	8,965.5	6,749.1	6,674.9	74.25	90.895		
12,000.0	6,672.0	6,712.9	6,685.2	68.6	23.3	89.15	-3,398.3	8,965.5	6,677.5	6,602.1	75.42	88.544		
12,100.0	6,672.0	6,712.1	6,686.0	69.8	23.3	89.16	-3,398.3	8,965.5	6,606.7	6,530.1	76.61	86.242		
12,200.0	6,672.0	6,711.3	6,686.8	70.9	23.3	89.17	-3,398.3	8,965.5	6,536.6	6,458.8	77.83	83.991		
12,300.0	6,672.0	6,710.5	6,687.5	72.1	23.3	89.18	-3,398.3	8,965.5	6,467.3	6,388.2	79.07	81.790		
12,400.0	6,672.0	6,709.7	6,688.3	73.2	23.3	89.19	-3,398.3	8,965.5	6,398.8	6,318.5	80.35	79.640		
12,500.0	6,672.0	6,708.9	6,689.1	74.4	23.3	89.19	-3,398.3	8,965.5	6,331.2	6,249.6	81.65	77.541		
12,600.0	6,672.0	6,708.2	6,689.9	75.5	23.3	89.20	-3,398.3	8,965.5	6,264.4	6,181.5	82.98	75.494		
12,700.0	6,672.0	6,707.4	6,690.7	76.7	23.3	89.21	-3,398.3	8,965.5	6,198.6	6,114.2	84.34	73.498		
12,800.0	6,672.0	6,706.6	6,691.5	77.9	23.3	89.22	-3,398.3	8,965.5	6,133.7	6,047.9	85.72	71.553		
12,900.0	6,672.0	6,705.8	6,692.3	79.0	23.3	89.23	-3,398.3	8,965.6	6,069.7	5,982.5	87.13	69.660		
13,000.0	6,672.0	6,705.0	6,693.0	80.2	23.3	89.24	-3,398.3	8,965.6	6,006.7	5,918.1	88.57	67.818		
13,100.0	6,672.0	6,704.2	6,693.8	81.4	23.3	89.25	-3,398.3	8,965.6	5,944.7	5,854.7	90.03	66.028		
13,200.0	6,672.0	6,703.4	6,694.6	82.6	23.3	89.26	-3,398.3	8,965.6	5,883.8	5,792.3	91.52	64.288		
13,300.0	6,672.0	6,702.7	6,695.4	83.7	23.3	89.27	-3,398.3	8,965.6	5,824.0	5,731.0	93.04	62.599		
13,400.0	6,672.0	6,701.9	6,696.2	84.9	23.3	89.28	-3,398.3	8,965.6	5,765.3	5,670.7	94.57	60.961		
13,500.0	6,672.0	6,701.1	6,697.0	86.1	23.3	89.29	-3,398.3	8,965.6	5,707.8	5,611.6	96.13	59.372		
13,600.0	6,672.0	6,700.3	6,697.8	87.3	23.3	89.30	-3,398.3	8,965.6	5,651.4	5,553.7	97.72	57.834		
13,700.0	6,672.0	6,700.5	6,698.5	88.4	23.3	89.31	-3,398.3	8,965.6	5,596.3	5,496.9	99.33	56.343		
13,800.0	6,672.0	6,701.3	6,699.3	89.6	23.3	89.32	-3,398.3	8,965.6	5,542.4	5,441.4	100.96	54.899		
13,900.0	6,672.0	6,702.1	6,700.1	90.8	23.3	89.33	-3,398.4	8,965.6	5,489.8	5,387.2	102.60	53.505		
14,000.0	6,672.0	6,702.9	6,700.9	92.0	23.3	89.34	-3,398.4	8,965.6	5,438.6	5,334.3	104.27	52.158		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 5519 44-08 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
14,100.0	6,672.0	6,703.7	6,701.7	93.2	23.3	89.35	-3,398.4	8,965.6	5,388.7	5,282.8	105.95	50.860		
14,200.0	6,672.0	6,704.4	6,702.5	94.4	23.3	89.36	-3,398.4	8,965.6	5,340.3	5,232.6	107.65	49.608		
14,300.0	6,672.0	6,705.2	6,703.2	95.6	23.3	89.37	-3,398.4	8,965.6	5,293.3	5,183.9	109.36	48.403		
14,400.0	6,672.0	6,706.0	6,704.0	96.8	23.3	89.38	-3,398.4	8,965.6	5,247.8	5,136.7	111.08	47.244		
14,500.0	6,672.0	6,706.8	6,704.8	98.0	23.3	89.39	-3,398.4	8,965.7	5,203.8	5,091.0	112.81	46.130		
14,600.0	6,672.0	6,707.6	6,705.6	99.2	23.3	89.40	-3,398.4	8,965.7	5,161.4	5,046.9	114.54	45.061		
14,700.0	6,672.0	6,708.4	6,706.4	100.4	23.3	89.41	-3,398.4	8,965.7	5,120.6	5,004.3	116.28	44.036		
14,800.0	6,672.0	6,709.1	6,707.2	101.6	23.3	89.42	-3,398.4	8,965.7	5,081.5	4,963.5	118.02	43.054		
14,900.0	6,672.0	6,709.9	6,708.0	102.7	23.3	89.43	-3,398.4	8,965.7	5,044.0	4,924.3	119.77	42.116		
15,000.0	6,672.0	6,710.7	6,708.7	103.9	23.3	89.44	-3,398.4	8,965.7	5,008.3	4,886.8	121.50	41.219		
15,100.0	6,672.0	6,711.5	6,709.5	105.1	23.3	89.44	-3,398.4	8,965.7	4,974.3	4,851.1	123.24	40.364		
15,200.0	6,672.0	6,712.3	6,710.3	106.3	23.3	89.45	-3,398.4	8,965.7	4,942.1	4,817.2	124.96	39.550		
15,300.0	6,672.0	6,713.1	6,711.1	107.6	23.3	89.46	-3,398.4	8,965.7	4,911.8	4,785.1	126.67	38.776		
15,400.0	6,672.0	6,713.9	6,711.9	108.8	23.3	89.47	-3,398.4	8,965.7	4,883.3	4,754.9	128.37	38.041		
15,500.0	6,672.0	6,714.6	6,712.7	110.0	23.3	89.48	-3,398.4	8,965.7	4,856.7	4,726.7	130.05	37.346		
15,600.0	6,672.0	6,715.4	6,713.4	111.2	23.3	89.49	-3,398.4	8,965.7	4,832.1	4,700.4	131.71	36.688		
15,700.0	6,672.0	6,716.2	6,714.2	112.4	23.3	89.50	-3,398.4	8,965.7	4,809.4	4,676.1	133.34	36.068		
15,800.0	6,672.0	6,717.0	6,715.0	113.6	23.3	89.51	-3,398.5	8,965.7	4,788.7	4,653.7	134.95	35.485		
15,900.0	6,672.0	6,717.8	6,715.8	114.8	23.3	89.52	-3,398.5	8,965.7	4,770.0	4,633.5	136.53	34.938		
16,000.0	6,672.0	6,718.6	6,716.6	116.0	23.3	89.53	-3,398.5	8,965.7	4,753.4	4,615.3	138.07	34.427		
16,100.0	6,672.0	6,719.3	6,717.4	117.2	23.3	89.54	-3,398.5	8,965.8	4,738.8	4,599.2	139.58	33.950		
16,200.0	6,672.0	6,720.1	6,718.1	118.4	23.3	89.55	-3,398.5	8,965.8	4,726.3	4,585.2	141.05	33.507		
16,300.0	6,672.0	6,720.9	6,718.9	119.6	23.3	89.56	-3,398.5	8,965.8	4,715.9	4,573.4	142.48	33.098		
16,400.0	6,672.0	6,721.7	6,719.7	120.8	23.3	89.57	-3,398.5	8,965.8	4,707.6	4,563.7	143.87	32.722		
16,500.0	6,672.0	6,722.5	6,720.5	122.0	23.3	89.58	-3,398.5	8,965.8	4,701.4	4,556.2	145.21	32.377		
16,600.0	6,672.0	6,723.3	6,721.3	123.2	23.3	89.59	-3,398.5	8,965.8	4,697.3	4,550.8	146.50	32.064		
16,700.0	6,672.0	6,724.0	6,722.1	124.5	23.3	89.60	-3,398.5	8,965.8	4,695.4	4,547.7	147.74	31.783		
16,739.9	6,672.0	6,724.4	6,722.4	124.9	23.3	89.60	-3,398.5	8,965.8	4,695.2	4,547.0	148.21	31.679 CC		
16,800.0	6,672.0	6,724.8	6,722.9	125.7	23.3	89.61	-3,398.5	8,965.8	4,695.6	4,546.7	148.92	31.531 ES		
16,900.0	6,672.0	6,725.6	6,723.6	126.9	23.4	89.62	-3,398.5	8,965.8	4,698.0	4,547.9	150.05	31.309		
17,000.0	6,672.0	6,726.4	6,724.4	128.1	23.4	89.63	-3,398.5	8,965.8	4,702.5	4,551.3	151.13	31.115		
17,100.0	6,672.0	6,727.2	6,725.2	129.3	23.4	89.64	-3,398.5	8,965.8	4,709.1	4,556.9	152.15	30.950		
17,200.0	6,672.0	6,728.0	6,726.0	130.5	23.4	89.65	-3,398.5	8,965.8	4,717.8	4,564.7	153.11	30.813		
17,300.0	6,672.0	6,728.7	6,726.8	131.7	23.4	89.66	-3,398.5	8,965.8	4,728.6	4,574.6	154.01	30.703		
17,400.0	6,672.0	6,729.5	6,727.5	133.0	23.4	89.67	-3,398.5	8,965.8	4,741.6	4,586.7	154.86	30.619		
17,500.0	6,672.0	6,730.3	6,728.3	134.2	23.4	89.67	-3,398.5	8,965.8	4,756.6	4,600.9	155.64	30.561		
17,600.0	6,672.0	6,731.1	6,729.1	135.4	23.4	89.68	-3,398.5	8,965.8	4,773.6	4,617.3	156.37	30.528		
17,700.0	6,672.0	6,731.9	6,729.9	136.6	23.4	89.69	-3,398.6	8,965.9	4,792.7	4,635.7	157.04	30.520 SF		
17,800.0	6,672.0	6,732.7	6,730.7	137.8	23.4	89.70	-3,398.6	8,965.9	4,813.8	4,656.2	157.64	30.536		
17,900.0	6,672.0	6,733.4	6,731.5	139.0	23.4	89.71	-3,398.6	8,965.9	4,836.9	4,678.7	158.19	30.576		
18,000.0	6,672.0	6,734.2	6,732.2	140.3	23.4	89.72	-3,398.6	8,965.9	4,861.9	4,703.3	158.69	30.638		
18,100.0	6,672.0	6,735.0	6,733.0	141.5	23.4	89.73	-3,398.6	8,965.9	4,888.9	4,729.8	159.13	30.723		
18,200.0	6,672.0	6,735.8	6,733.8	142.7	23.4	89.74	-3,398.6	8,965.9	4,917.8	4,758.3	159.51	30.830		
18,300.0	6,672.0	6,736.6	6,734.6	143.9	23.4	89.75	-3,398.6	8,965.9	4,948.5	4,788.6	159.84	30.958		
18,342.5	6,672.0	6,736.9	6,734.9	144.4	23.4	89.76	-3,398.6	8,965.9	4,962.1	4,802.1	159.97	31.019		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 5519 8A - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	56.5	56.5	0.0	0.1	107.67	-2,597.7	8,153.3	8,557.2					
100.0	100.0	135.5	135.5	0.1	0.3	107.67	-2,597.6	8,153.8	8,557.8	8,557.3	0.43	N/A		
200.0	200.0	228.7	228.7	0.5	0.6	107.67	-2,597.4	8,154.5	8,558.4	8,557.2	1.11	7,701.117		
300.0	300.0	300.7	300.7	0.8	0.9	107.66	-2,597.0	8,155.3	8,559.2	8,557.5	1.72	4,967.946		
400.0	400.0	383.8	383.8	1.2	1.2	107.66	-2,596.4	8,156.4	8,560.3	8,557.9	2.37	3,606.616		
500.0	500.0	471.1	471.1	1.6	1.5	107.65	-2,596.0	8,157.7	8,561.6	8,558.6	3.04	2,817.712		
600.0	600.0	576.9	576.9	1.9	1.9	107.65	-2,595.5	8,159.4	8,562.9	8,559.2	3.77	2,272.592		
700.0	700.0	677.1	677.1	2.3	2.2	107.64	-2,595.0	8,160.9	8,564.2	8,559.7	4.48	1,912.776		
800.0	800.0	755.8	755.7	2.6	2.5	107.64	-2,594.9	8,162.0	8,565.6	8,560.5	5.11	1,675.849		
900.0	900.0	865.8	865.7	3.0	2.9	107.63	-2,594.5	8,164.0	8,567.2	8,561.3	5.86	1,463.213		
1,000.0	1,000.0	964.5	964.4	3.4	3.2	107.63	-2,594.3	8,165.5	8,568.5	8,562.0	6.56	1,306.346		
1,100.0	1,100.0	1,082.2	1,082.1	3.7	3.6	107.62	-2,594.3	8,167.2	8,570.0	8,562.6	7.33	1,169.132		
1,200.0	1,200.0	1,176.9	1,176.8	4.1	4.0	107.62	-2,594.2	8,168.4	8,571.2	8,563.2	8.02	1,068.702		
1,300.0	1,300.0	1,282.8	1,282.6	4.4	4.3	107.62	-2,594.3	8,169.8	8,572.5	8,563.7	8.75	979.776		
1,400.0	1,400.0	1,436.7	1,436.6	4.8	4.9	107.61	-2,593.8	8,171.3	8,573.2	8,563.6	9.65	888.710		
1,500.0	1,500.0	1,526.0	1,525.9	5.1	5.2	107.61	-2,593.4	8,172.0	8,573.9	8,563.6	10.32	831.004		
1,600.0	1,600.0	1,652.3	1,652.2	5.5	5.6	107.60	-2,593.1	8,172.9	8,574.5	8,563.4	11.12	771.236		
1,700.0	1,700.0	1,767.6	1,767.5	5.9	6.0	107.60	-2,592.9	8,173.3	8,574.8	8,562.9	11.88	721.815		
1,800.0	1,800.0	1,864.9	1,864.8	6.2	6.4	107.60	-2,592.8	8,173.6	8,575.0	8,562.4	12.58	681.736		
1,900.0	1,900.0	1,943.0	1,942.9	6.6	6.6	107.60	-2,592.6	8,173.9	8,575.4	8,562.2	13.21	649.162		
2,000.0	2,000.0	2,021.4	2,021.3	6.9	6.9	107.60	-2,592.8	8,174.5	8,576.1	8,562.2	13.84	619.539		
2,100.0	2,100.0	2,132.1	2,132.0	7.3	7.3	107.60	-2,593.1	8,175.1	8,576.7	8,562.1	14.59	587.881		
2,200.0	2,200.0	2,206.2	2,206.1	7.7	7.6	107.60	-2,593.3	8,175.6	8,577.5	8,562.3	15.21	564.041		
2,300.0	2,300.0	2,286.0	2,285.9	8.0	7.8	158.58	-2,593.5	8,176.5	8,580.1	8,564.3	15.84	541.621		
2,400.0	2,399.8	2,418.0	2,417.8	8.4	8.3	158.55	-2,593.5	8,177.9	8,586.1	8,569.4	16.66	515.496		
2,500.0	2,499.5	2,466.6	2,466.4	8.7	8.5	158.49	-2,593.5	8,178.5	8,595.3	8,578.2	17.18	500.395		
2,600.0	2,598.7	2,626.3	2,626.2	9.1	9.0	158.45	-2,594.1	8,180.2	8,607.9	8,589.8	18.09	475.900		
2,700.0	2,697.5	2,700.0	2,699.8	9.4	9.3	158.37	-2,594.3	8,180.8	8,623.3	8,604.6	18.69	461.273		
2,800.0	2,795.6	2,859.5	2,859.3	9.8	9.8	158.30	-2,594.1	8,181.5	8,641.2	8,621.6	19.60	440.888		
2,900.0	2,893.1	2,956.6	2,956.4	10.1	10.2	158.19	-2,593.9	8,181.9	8,662.6	8,642.3	20.29	427.032		
3,000.0	2,989.6	3,032.4	3,032.2	10.5	10.4	158.06	-2,594.3	8,182.0	8,687.0	8,666.1	20.90	415.718		
3,100.0	3,085.3	3,079.0	3,078.8	10.9	10.6	157.87	-2,594.6	8,182.3	8,715.0	8,693.6	21.40	407.187		
3,200.0	3,179.8	3,242.1	3,241.9	11.2	11.2	157.76	-2,594.6	8,183.2	8,745.8	8,723.5	22.32	391.842		
3,300.0	3,273.2	3,300.0	3,299.8	11.6	11.4	157.54	-2,594.4	8,183.6	8,779.8	8,756.9	22.86	383.985		
3,387.5	3,353.8	3,340.5	3,340.3	11.9	11.5	157.31	-2,594.2	8,184.1	8,812.3	8,789.0	23.31	378.122		
3,400.0	3,365.2	3,347.4	3,347.2	12.0	11.5	157.32	-2,594.1	8,184.2	8,817.2	8,793.8	23.37	377.225		
3,500.0	3,456.8	3,405.6	3,405.4	12.4	11.8	157.38	-2,593.6	8,185.3	8,856.1	8,832.2	23.92	370.293		
3,600.0	3,548.3	3,525.9	3,525.6	12.8	12.2	157.49	-2,591.5	8,187.6	8,895.0	8,870.3	24.69	360.298		
3,700.0	3,639.8	3,607.1	3,606.8	13.2	12.5	157.56	-2,589.9	8,189.3	8,933.8	8,908.5	25.32	352.801		
3,800.0	3,731.4	3,718.6	3,718.3	13.6	12.9	157.66	-2,588.0	8,191.3	8,972.6	8,946.6	26.07	344.153		
3,900.0	3,822.9	3,790.9	3,790.6	14.0	13.1	157.73	-2,587.0	8,192.6	9,011.5	8,984.8	26.68	337.741		
4,000.0	3,914.4	3,858.8	3,858.4	14.4	13.3	157.79	-2,586.3	8,193.9	9,050.5	9,023.3	27.28	331.788		
4,100.0	4,005.9	3,919.8	3,919.4	14.8	13.6	157.85	-2,585.6	8,195.2	9,089.9	9,062.0	27.85	326.368		
4,200.0	4,097.5	3,971.0	3,970.6	15.2	13.7	157.90	-2,585.2	8,196.5	9,129.6	9,101.2	28.39	321.573		
4,300.0	4,189.0	4,044.7	4,044.3	15.6	14.0	157.97	-2,584.8	8,198.6	9,169.7	9,140.7	29.02	316.030		
4,400.0	4,280.5	4,130.0	4,129.5	16.1	14.3	158.05	-2,584.4	8,201.0	9,209.8	9,180.1	29.69	310.242		
4,500.0	4,372.1	4,200.0	4,199.5	16.5	14.5	158.11	-2,584.3	8,203.0	9,250.2	9,219.9	30.30	305.276		
4,600.0	4,463.6	4,282.4	4,281.8	16.9	14.8	158.19	-2,584.3	8,205.6	9,290.7	9,259.7	30.96	300.041		
4,700.0	4,555.1	4,382.3	4,381.7	17.4	15.2	158.29	-2,584.4	8,208.5	9,331.1	9,299.4	31.70	294.379		
4,800.0	4,646.7	4,508.6	4,508.0	17.8	15.6	158.41	-2,584.5	8,212.0	9,371.4	9,338.9	32.53	288.049		
4,900.0	4,738.2	4,619.5	4,618.9	18.2	16.0	158.51	-2,584.9	8,214.6	9,411.5	9,378.1	33.31	282.509		
5,000.0	4,829.7	5,000.0	4,758.7	18.7	17.3	158.64	-2,585.2	8,217.5	9,451.3	9,416.3	35.05	269.652		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 5519 8A - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,100.0	4,921.3	4,913.6	4,912.9	19.1	17.0	158.78	-2,584.5	8,219.7	9,490.2	9,455.1	35.16	269.939		
5,200.0	5,012.8	4,986.9	4,986.2	19.5	17.3	158.85	-2,584.0	8,220.7	9,529.2	9,493.4	35.80	266.188		
5,300.0	5,104.3	5,097.1	5,096.4	20.0	17.7	158.95	-2,584.0	8,222.0	9,568.2	9,531.7	36.58	261.541		
5,400.0	5,195.8	5,159.2	5,158.5	20.4	17.9	159.01	-2,584.3	8,222.6	9,607.3	9,570.1	37.18	258.367		
5,500.0	5,287.4	5,227.8	5,227.1	20.9	18.1	159.07	-2,585.1	8,223.4	9,646.6	9,608.8	37.81	255.129		
5,600.0	5,378.9	5,312.7	5,312.0	21.3	18.4	159.16	-2,586.5	8,224.3	9,686.1	9,647.6	38.50	251.577		
5,700.0	5,470.4	5,394.6	5,393.8	21.8	18.7	159.24	-2,587.9	8,225.2	9,725.7	9,686.5	39.18	248.223		
5,800.0	5,562.0	5,463.8	5,463.0	22.2	19.0	159.31	-2,588.9	8,226.2	9,765.4	9,725.6	39.81	245.290		
5,900.0	5,653.5	5,537.5	5,536.7	22.7	19.2	159.38	-2,590.0	8,227.4	9,805.3	9,764.9	40.46	242.343		
6,000.0	5,745.0	5,620.4	5,619.6	23.1	19.5	159.46	-2,591.1	8,228.8	9,845.4	9,804.3	41.15	239.275		
6,100.0	5,836.6	6,100.0	5,765.5	23.6	21.2	159.59	-2,592.8	8,231.1	9,885.3	9,842.0	43.26	228.533		
6,200.0	5,928.1	5,951.4	5,950.5	24.0	20.7	159.76	-2,593.8	8,232.8	9,924.3	9,881.1	43.18	229.826		
6,278.6	6,000.0	6,085.1	6,084.2	24.4	21.1	159.87	-2,593.9	8,233.3	9,954.5	9,910.5	44.00	226.264		
6,290.0	6,010.4	6,104.3	6,103.4	24.4	21.2	157.92	-2,593.9	8,233.3	9,959.0	9,914.8	44.11	225.761		
6,300.0	6,019.5	6,120.6	6,119.7	24.5	21.3	156.05	-2,593.8	8,233.3	9,962.8	9,918.6	44.21	225.335		
6,350.0	6,065.8	6,775.1	6,773.8	24.7	23.5	145.73	-2,583.9	8,215.2	9,978.5	9,931.6	46.88	212.842		
6,400.0	6,113.0	6,823.0	6,821.6	24.9	23.7	131.51	-2,582.6	8,212.5	9,988.1	9,940.9	47.24	211.419		
6,450.0	6,160.7	6,871.2	6,869.7	25.1	23.9	114.50	-2,581.4	8,209.7	9,993.4	9,945.8	47.60	209.961		
6,500.0	6,208.5	6,919.2	6,917.6	25.3	24.0	97.17	-2,580.1	8,207.0	9,994.3	9,946.4	47.94	208.489		
6,550.0	6,255.8	6,966.5	6,964.8	25.4	24.2	82.45	-2,578.8	8,204.4	9,990.9	9,942.6	48.26	207.019		
6,600.0	6,302.5	7,012.8	7,011.0	25.6	24.4	71.45	-2,577.6	8,201.7	9,983.1	9,934.5	48.56	205.564		
6,650.0	6,347.9	7,012.0	7,010.2	25.7	24.4	63.65	-2,577.6	8,201.8	9,971.1	9,922.4	48.68	204.841		
6,700.0	6,391.6	7,012.0	7,010.2	25.9	24.4	58.35	-2,577.6	8,201.8	9,955.2	9,906.4	48.78	204.100		
6,750.0	6,433.4	7,012.0	7,010.2	26.0	24.4	54.86	-2,577.6	8,201.8	9,935.4	9,886.6	48.86	203.352		
6,800.0	6,472.8	7,012.0	7,010.2	26.1	24.4	52.77	-2,577.6	8,201.8	9,912.0	9,863.1	48.93	202.595		
6,850.0	6,509.4	7,012.0	7,010.2	26.2	24.4	51.79	-2,577.6	8,201.8	9,885.0	9,836.1	48.98	201.824		
6,900.0	6,543.0	7,012.0	7,010.2	26.3	24.4	51.80	-2,577.6	8,201.8	9,854.8	9,805.8	49.02	201.036		
6,950.0	6,573.2	7,012.0	7,010.2	26.4	24.4	52.74	-2,577.6	8,201.8	9,821.6	9,772.5	49.05	200.223		
7,000.0	6,599.8	7,012.0	7,010.2	26.5	24.4	54.67	-2,577.6	8,201.8	9,785.6	9,736.5	49.08	199.383		
7,050.0	6,622.5	7,012.0	7,010.2	26.6	24.4	57.70	-2,577.6	8,201.8	9,747.1	9,698.0	49.10	198.508		
7,100.0	6,641.1	7,012.0	7,010.2	26.7	24.4	62.03	-2,577.6	8,201.8	9,706.4	9,657.3	49.12	197.596		
7,150.0	6,655.4	7,012.0	7,010.2	26.8	24.4	67.94	-2,577.6	8,201.8	9,664.0	9,614.8	49.15	196.642		
7,200.0	6,665.4	7,012.0	7,010.2	26.9	24.4	75.72	-2,577.6	8,201.8	9,620.0	9,570.9	49.17	195.643		
7,250.0	6,670.8	7,012.0	7,010.2	27.0	24.4	85.56	-2,577.6	8,201.8	9,575.0	9,525.8	49.20	194.597		
7,285.7	6,672.0	7,012.0	7,010.2	27.1	24.4	93.75	-2,577.6	8,201.8	9,542.5	9,493.3	49.23	193.822		
7,300.0	6,672.0	7,012.0	7,010.2	27.1	24.4	93.75	-2,577.6	8,201.8	9,529.4	9,480.1	49.25	193.506		
7,400.0	6,672.0	7,012.0	7,010.2	27.3	24.4	93.75	-2,577.6	8,201.8	9,437.9	9,388.6	49.34	191.294		
7,500.0	6,672.0	7,012.0	7,010.2	27.6	24.4	93.75	-2,577.6	8,201.8	9,346.7	9,297.2	49.44	189.043		
7,600.0	6,672.0	7,012.0	7,010.2	28.0	24.4	93.75	-2,577.6	8,201.8	9,255.6	9,206.0	49.56	186.751		
7,700.0	6,672.0	7,012.0	7,010.2	28.3	24.4	93.75	-2,577.6	8,201.8	9,164.7	9,115.0	49.69	184.421		
7,800.0	6,672.0	7,012.0	7,010.2	28.8	24.4	93.75	-2,577.6	8,201.8	9,074.0	9,024.1	49.84	182.051		
7,900.0	6,672.0	7,012.0	7,010.2	29.3	24.4	93.75	-2,577.6	8,201.8	8,983.5	8,933.5	50.01	179.643		
8,000.0	6,672.0	7,012.0	7,010.2	29.8	24.4	93.75	-2,577.6	8,201.8	8,893.2	8,843.0	50.19	177.198		
8,100.0	6,672.0	7,012.0	7,010.2	30.4	24.4	93.75	-2,577.6	8,201.8	8,803.1	8,752.7	50.38	174.717		
8,200.0	6,672.0	7,012.0	7,010.2	31.0	24.4	93.75	-2,577.6	8,201.8	8,713.2	8,662.6	50.60	172.200		
8,300.0	6,672.0	7,012.0	7,010.2	31.7	24.4	93.75	-2,577.6	8,201.8	8,623.6	8,572.7	50.83	169.649		
8,400.0	6,672.0	7,012.0	7,010.2	32.4	24.4	93.75	-2,577.6	8,201.8	8,534.1	8,483.1	51.08	167.066		
8,500.0	6,672.0	7,012.0	7,010.2	33.1	24.4	93.75	-2,577.6	8,201.8	8,445.0	8,393.6	51.35	164.452		
8,600.0	6,672.0	7,012.0	7,010.2	33.9	24.4	93.75	-2,577.6	8,201.8	8,356.1	8,304.4	51.64	161.809		
8,700.0	6,672.0	7,012.0	7,010.2	34.7	24.4	93.75	-2,577.6	8,201.8	8,267.4	8,215.5	51.95	159.139		
8,800.0	6,672.0	7,012.0	7,010.2	35.5	24.4	93.75	-2,577.6	8,201.8	8,179.0	8,126.7	52.28	156.444		
8,900.0	6,672.0	7,012.0	7,010.2	36.3	24.4	93.75	-2,577.6	8,201.8	8,090.9	8,038.2	52.63	153.727		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 5519 8A - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
9,000.0	6,672.0	7,012.0	7,010.2	37.2	24.4	93.75	-2,577.6	8,201.8	8,003.0	7,950.0	53.00	150.990		
9,100.0	6,672.0	7,012.0	7,010.2	38.1	24.4	93.74	-2,577.6	8,201.8	7,915.5	7,862.1	53.40	148.235		
9,200.0	6,672.0	7,012.0	7,010.2	39.0	24.4	93.74	-2,577.6	8,201.8	7,828.2	7,774.4	53.82	145.466		
9,300.0	6,672.0	7,012.0	7,010.2	39.9	24.4	93.74	-2,577.6	8,201.8	7,741.3	7,687.1	54.26	142.683		
9,400.0	6,672.0	7,012.0	7,010.2	40.8	24.4	93.74	-2,577.6	8,201.8	7,654.7	7,600.0	54.72	139.892		
9,500.0	6,672.0	7,012.0	7,010.2	41.8	24.4	93.74	-2,577.6	8,201.8	7,568.4	7,513.2	55.21	137.093		
9,600.0	6,672.0	7,012.0	7,010.2	42.7	24.4	93.74	-2,577.6	8,201.8	7,482.5	7,426.8	55.72	134.291		
9,700.0	6,672.0	7,012.0	7,010.2	43.7	24.4	93.74	-2,577.6	8,201.8	7,396.9	7,340.7	56.26	131.488		
9,800.0	6,672.0	7,012.0	7,010.2	44.7	24.4	93.74	-2,577.6	8,201.8	7,311.7	7,254.9	56.82	128.686		
9,900.0	6,672.0	7,012.0	7,010.2	45.7	24.4	93.74	-2,577.6	8,201.8	7,226.9	7,169.5	57.41	125.889		
10,000.0	6,672.0	7,012.0	7,010.2	46.7	24.4	93.74	-2,577.6	8,201.8	7,142.5	7,084.4	58.02	123.100		
10,100.0	6,672.0	7,012.0	7,010.2	47.7	24.4	93.74	-2,577.6	8,201.8	7,058.5	6,999.8	58.66	120.321		
10,200.0	6,672.0	7,012.0	7,010.2	48.8	24.4	93.74	-2,577.6	8,201.8	6,974.9	6,915.5	59.33	117.555		
10,300.0	6,672.0	7,012.0	7,010.2	49.8	24.4	93.74	-2,577.6	8,201.8	6,891.7	6,831.7	60.03	114.806		
10,400.0	6,672.0	7,012.0	7,010.2	50.9	24.4	93.74	-2,577.6	8,201.8	6,809.0	6,748.3	60.75	112.074		
10,500.0	6,672.0	7,012.0	7,010.2	51.9	24.4	93.74	-2,577.6	8,201.8	6,726.8	6,665.3	61.51	109.364		
10,600.0	6,672.0	7,012.0	7,010.2	53.0	24.4	93.74	-2,577.6	8,201.8	6,645.1	6,582.8	62.29	106.678		
10,700.0	6,672.0	7,012.0	7,010.2	54.1	24.4	93.74	-2,577.6	8,201.8	6,563.9	6,500.8	63.10	104.017		
10,800.0	6,672.0	7,012.0	7,010.2	55.2	24.4	93.74	-2,577.6	8,201.8	6,483.2	6,419.3	63.95	101.385		
10,900.0	6,672.0	7,012.0	7,010.2	56.3	24.4	93.74	-2,577.6	8,201.8	6,403.1	6,338.3	64.82	98.783		
11,000.0	6,672.0	7,012.0	7,010.2	57.4	24.4	93.74	-2,577.6	8,201.8	6,323.5	6,257.8	65.72	96.214		
11,100.0	6,672.0	7,012.0	7,010.2	58.5	24.4	93.74	-2,577.6	8,201.8	6,244.5	6,177.9	66.66	93.680		
11,200.0	6,672.0	7,012.0	7,010.2	59.6	24.4	93.74	-2,577.6	8,201.8	6,166.2	6,098.6	67.63	91.182		
11,300.0	6,672.0	7,012.0	7,010.2	60.7	24.4	93.74	-2,577.6	8,201.8	6,088.5	6,019.8	68.62	88.722		
11,400.0	6,672.0	7,012.0	7,010.2	61.8	24.4	93.73	-2,577.6	8,201.8	6,011.4	5,941.8	69.66	86.302		
11,500.0	6,672.0	7,012.0	7,010.2	62.9	24.4	93.73	-2,577.6	8,201.8	5,935.1	5,864.3	70.72	83.924		
11,600.0	6,672.0	7,012.0	7,010.2	64.1	24.4	93.73	-2,577.6	8,201.8	5,859.4	5,787.6	71.82	81.588		
11,700.0	6,672.0	7,012.0	7,010.2	65.2	24.4	93.73	-2,577.6	8,201.8	5,784.5	5,711.6	72.95	79.297		
11,800.0	6,672.0	7,012.0	7,010.2	66.3	24.4	93.73	-2,577.6	8,201.8	5,710.4	5,636.3	74.11	77.050		
11,900.0	6,672.0	7,012.0	7,010.2	67.5	24.4	93.73	-2,577.6	8,201.8	5,637.1	5,561.8	75.31	74.850		
12,000.0	6,672.0	7,012.0	7,010.2	68.6	24.4	93.73	-2,577.6	8,201.8	5,564.6	5,488.0	76.54	72.698		
12,100.0	6,672.0	7,012.0	7,010.2	69.8	24.4	93.73	-2,577.6	8,201.8	5,493.0	5,415.1	77.81	70.594		
12,200.0	6,672.0	7,012.0	7,010.2	70.9	24.4	93.73	-2,577.6	8,201.8	5,422.2	5,343.1	79.11	68.539		
12,300.0	6,672.0	7,012.0	7,010.2	72.1	24.4	93.73	-2,577.6	8,201.8	5,352.5	5,272.0	80.45	66.534		
12,400.0	6,672.0	7,012.0	7,010.2	73.2	24.4	93.73	-2,577.6	8,201.8	5,283.7	5,201.9	81.82	64.579		
12,500.0	6,672.0	7,012.0	7,010.2	74.4	24.4	93.73	-2,577.6	8,201.8	5,215.9	5,132.7	83.22	62.675		
12,600.0	6,672.0	7,012.0	7,010.2	75.5	24.4	93.73	-2,577.6	8,201.8	5,149.2	5,064.5	84.66	60.822		
12,700.0	6,672.0	7,012.0	7,010.2	76.7	24.4	93.73	-2,577.6	8,201.8	5,083.5	4,997.4	86.13	59.021		
12,800.0	6,672.0	7,012.0	7,010.2	77.9	24.4	93.73	-2,577.6	8,201.8	5,019.0	4,931.4	87.64	57.271		
12,900.0	6,672.0	7,042.2	7,040.3	79.0	24.5	94.18	-2,576.8	8,200.1	4,955.7	4,866.3	89.34	55.472		
13,000.0	6,672.0	7,036.6	7,034.7	80.2	24.5	94.09	-2,577.0	8,200.4	4,893.6	4,802.7	90.88	53.850		
13,100.0	6,672.0	7,031.0	7,029.2	81.4	24.5	94.01	-2,577.1	8,200.7	4,832.8	4,740.4	92.44	52.278		
13,200.0	6,672.0	7,025.4	7,023.6	82.6	24.4	93.93	-2,577.3	8,201.0	4,773.4	4,679.3	94.04	50.757		
13,300.0	6,672.0	7,019.8	7,018.0	83.7	24.4	93.85	-2,577.4	8,201.3	4,715.3	4,619.6	95.67	49.287		
13,400.0	6,672.0	7,014.2	7,012.4	84.9	24.4	93.76	-2,577.6	8,201.7	4,658.7	4,561.3	97.33	47.867		
13,500.0	6,672.0	7,008.6	7,006.8	86.1	24.4	93.68	-2,577.7	8,202.0	4,603.5	4,504.5	99.01	46.497		
13,600.0	6,672.0	7,003.0	7,001.3	87.3	24.4	93.60	-2,577.8	8,202.3	4,549.8	4,449.1	100.71	45.178		
13,700.0	6,672.0	6,997.5	6,995.7	88.4	24.3	93.51	-2,578.0	8,202.6	4,497.7	4,395.3	102.43	43.909		
13,800.0	6,672.0	6,991.9	6,990.1	89.6	24.3	93.43	-2,578.1	8,202.9	4,447.3	4,343.1	104.18	42.690		
13,900.0	6,672.0	6,986.3	6,984.5	90.8	24.3	93.35	-2,578.3	8,203.2	4,398.6	4,292.6	105.94	41.520		
14,000.0	6,672.0	6,980.7	6,979.0	92.0	24.3	93.27	-2,578.4	8,203.6	4,351.6	4,243.9	107.71	40.400		
14,100.0	6,672.0	6,975.1	6,973.4	93.2	24.2	93.18	-2,578.6	8,203.9	4,306.4	4,196.9	109.50	39.329		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 5519 8A - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre +N/-S	Centre +E/-W	Between Centres	Between Ellipses	Minimum Separation	Separation Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)			
14,200.0	6,672.0	6,969.5	6,967.8	94.4	24.2	93.10	-2,578.7	8,204.2	4,263.1	4,151.8	111.29	38.306		
14,300.0	6,672.0	6,963.9	6,962.2	95.6	24.2	93.02	-2,578.9	8,204.5	4,221.7	4,108.6	113.09	37.331		
14,400.0	6,672.0	6,958.3	6,956.6	96.8	24.2	92.93	-2,579.0	8,204.8	4,182.3	4,067.4	114.88	36.404		
14,500.0	6,672.0	6,952.7	6,951.1	98.0	24.2	92.85	-2,579.2	8,205.1	4,145.0	4,028.3	116.68	35.525		
14,600.0	6,672.0	6,947.2	6,945.5	99.2	24.1	92.77	-2,579.3	8,205.5	4,109.7	3,991.2	118.46	34.692		
14,700.0	6,672.0	6,941.6	6,939.9	100.4	24.1	92.69	-2,579.5	8,205.8	4,076.6	3,956.3	120.23	33.905		
14,800.0	6,672.0	6,936.0	6,934.3	101.6	24.1	92.60	-2,579.6	8,206.1	4,045.6	3,923.6	121.99	33.164		
14,900.0	6,672.0	6,930.4	6,928.8	102.7	24.1	92.52	-2,579.8	8,206.4	4,017.0	3,893.2	123.72	32.468		
15,000.0	6,672.0	6,924.8	6,923.2	103.9	24.1	92.44	-2,579.9	8,206.7	3,990.6	3,865.2	125.43	31.816		
15,100.0	6,672.0	6,919.2	6,917.6	105.1	24.0	92.35	-2,580.1	8,207.0	3,966.6	3,839.5	127.10	31.207		
15,200.0	6,672.0	6,913.6	6,912.0	106.3	24.0	92.27	-2,580.2	8,207.3	3,944.9	3,816.2	128.74	30.642		
15,300.0	6,672.0	6,908.1	6,906.5	107.6	24.0	92.19	-2,580.4	8,207.7	3,925.7	3,795.4	130.34	30.119		
15,400.0	6,672.0	6,902.5	6,900.9	108.8	24.0	92.11	-2,580.5	8,208.0	3,909.0	3,777.1	131.89	29.638		
15,500.0	6,672.0	6,896.9	6,895.3	110.0	24.0	92.02	-2,580.7	8,208.3	3,894.7	3,761.3	133.39	29.198		
15,600.0	6,672.0	6,891.3	6,889.8	111.2	23.9	91.94	-2,580.8	8,208.6	3,883.0	3,748.2	134.83	28.798		
15,700.0	6,672.0	6,885.7	6,884.2	112.4	23.9	91.86	-2,581.0	8,208.9	3,873.8	3,737.6	136.22	28.438		
15,800.0	6,672.0	6,880.1	6,878.6	113.6	23.9	91.77	-2,581.1	8,209.2	3,867.2	3,729.7	137.54	28.116		
15,900.0	6,672.0	6,874.6	6,873.0	114.8	23.9	91.69	-2,581.3	8,209.6	3,863.2	3,724.4	138.80	27.832		
16,000.0	6,672.0	6,869.0	6,867.5	116.0	23.9	91.61	-2,581.4	8,209.9	3,861.7	3,721.7	139.99	27.586		
16,006.1	6,672.0	6,868.6	6,867.1	116.1	23.9	91.60	-2,581.4	8,209.9	3,861.7	3,721.6	140.06	27.572 CC, ES		
16,100.0	6,672.0	6,863.4	6,861.9	117.2	23.8	91.53	-2,581.6	8,210.2	3,862.8	3,721.7	141.10	27.376		
16,200.0	6,672.0	6,857.8	6,856.3	118.4	23.8	91.44	-2,581.7	8,210.5	3,866.6	3,724.4	142.14	27.202		
16,300.0	6,672.0	6,852.2	6,850.7	119.6	23.8	91.36	-2,581.9	8,210.8	3,872.9	3,729.8	143.11	27.062		
16,400.0	6,672.0	6,846.6	6,845.2	120.8	23.8	91.28	-2,582.0	8,211.1	3,881.7	3,737.7	144.00	26.957		
16,500.0	6,672.0	6,841.1	6,839.6	122.0	23.8	91.20	-2,582.2	8,211.4	3,893.2	3,748.3	144.81	26.885		
16,600.0	6,672.0	6,835.5	6,834.0	123.2	23.7	91.11	-2,582.3	8,211.8	3,907.1	3,761.6	145.54	26.846		
16,700.0	6,672.0	6,829.9	6,828.5	124.5	23.7	91.03	-2,582.5	8,212.1	3,923.5	3,777.3	146.19	26.839 SF		
16,800.0	6,672.0	6,824.3	6,822.9	125.7	23.7	90.95	-2,582.6	8,212.4	3,942.4	3,795.7	146.76	26.863		
16,900.0	6,672.0	6,818.7	6,817.3	126.9	23.7	90.87	-2,582.8	8,212.7	3,963.8	3,816.5	147.26	26.917		
17,000.0	6,672.0	6,813.1	6,811.7	128.1	23.7	90.78	-2,582.9	8,213.0	3,987.5	3,839.8	147.68	27.001		
17,100.0	6,672.0	6,807.6	6,806.2	129.3	23.7	90.70	-2,583.1	8,213.3	4,013.6	3,865.6	148.03	27.113		
17,200.0	6,672.0	6,802.0	6,800.6	130.5	23.6	90.62	-2,583.2	8,213.7	4,042.0	3,893.7	148.31	27.254		
17,300.0	6,672.0	6,796.4	6,795.0	131.7	23.6	90.53	-2,583.4	8,214.0	4,072.7	3,924.1	148.52	27.422		
17,400.0	6,672.0	6,790.8	6,789.5	133.0	23.6	90.45	-2,583.5	8,214.3	4,105.5	3,956.9	148.66	27.616		
17,500.0	6,672.0	6,785.2	6,783.9	134.2	23.6	90.37	-2,583.6	8,214.6	4,140.5	3,991.8	148.74	27.837		
17,600.0	6,672.0	6,779.7	6,778.3	135.4	23.6	90.29	-2,583.8	8,214.9	4,177.6	4,028.9	148.76	28.083		
17,700.0	6,672.0	6,774.1	6,772.8	136.6	23.5	90.20	-2,583.9	8,215.2	4,216.8	4,068.1	148.72	28.353		
17,800.0	6,672.0	6,768.5	6,767.2	137.8	23.5	90.12	-2,584.1	8,215.5	4,257.9	4,109.3	148.63	28.648		
17,900.0	6,672.0	6,762.9	6,761.6	139.0	23.5	90.04	-2,584.2	8,215.9	4,301.0	4,152.5	148.49	28.965		
18,000.0	6,672.0	6,757.3	6,756.0	140.3	23.5	89.96	-2,584.4	8,216.2	4,346.0	4,197.7	148.30	29.305		
18,100.0	6,672.0	6,751.8	6,750.5	141.5	23.5	89.87	-2,584.5	8,216.5	4,392.7	4,244.7	148.07	29.667		
18,200.0	6,672.0	6,746.2	6,744.9	142.7	23.4	89.79	-2,584.7	8,216.8	4,441.3	4,293.5	147.79	30.051		
18,300.0	6,672.0	6,740.6	6,739.3	143.9	23.4	89.71	-2,584.8	8,217.1	4,491.5	4,344.0	147.48	30.455		
18,342.5	6,672.0	6,738.2	6,737.0	144.4	23.4	89.67	-2,584.9	8,217.3	4,513.3	4,366.0	147.34	30.633		



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 5519 8D - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
0.0	0.0	41.9	41.9	0.0	0.1	88.60	138.5	5,681.8	5,683.5					
100.0	100.0	129.4	129.4	0.1	0.3	88.60	139.0	5,681.9	5,683.7	5,683.3	0.40	N/A		
200.0	200.0	219.9	219.9	0.5	0.6	88.59	139.7	5,682.3	5,684.1	5,683.0	1.08	5,257.673		
300.0	300.0	321.2	321.2	0.8	1.0	88.59	140.3	5,682.8	5,684.6	5,682.8	1.79	3,169.214		
400.0	400.0	426.7	426.7	1.2	1.3	88.58	140.5	5,683.2	5,685.0	5,682.5	2.52	2,255.390		
500.0	500.0	527.8	527.8	1.6	1.7	88.58	141.0	5,683.6	5,685.3	5,682.1	3.23	1,758.920		
600.0	600.0	620.5	620.4	1.9	2.0	88.58	141.2	5,684.0	5,685.8	5,681.9	3.91	1,452.315		
700.0	700.0	719.9	719.9	2.3	2.3	88.58	141.3	5,684.4	5,686.3	5,681.6	4.62	1,230.357		
800.0	800.0	818.1	818.1	2.6	2.7	88.57	141.6	5,685.0	5,686.8	5,681.5	5.32	1,068.188		
900.0	900.0	935.6	935.6	3.0	3.1	88.57	142.0	5,685.3	5,687.1	5,681.0	6.09	933.370		
1,000.0	1,000.0	1,026.2	1,026.2	3.4	3.4	88.57	142.2	5,685.6	5,687.4	5,680.6	6.77	840.282		
1,100.0	1,100.0	1,139.6	1,139.6	3.7	3.8	88.57	142.4	5,685.9	5,687.7	5,680.2	7.52	755.999		
1,200.0	1,200.0	1,249.3	1,249.3	4.1	4.2	88.56	142.5	5,685.9	5,687.7	5,679.4	8.26	688.277		
1,300.0	1,300.0	1,352.1	1,352.1	4.4	4.6	88.56	142.7	5,685.9	5,687.7	5,678.7	8.98	633.380		
1,400.0	1,400.0	1,449.9	1,449.9	4.8	4.9	88.56	143.2	5,685.8	5,687.6	5,677.9	9.68	587.618		
1,420.8	1,420.8	1,468.8	1,468.8	4.9	5.0	88.56	143.3	5,685.8	5,687.6	5,677.8	9.82	579.221		
1,500.0	1,500.0	1,541.8	1,541.8	5.1	5.2	88.55	143.7	5,685.8	5,687.6	5,677.3	10.36	549.095		
1,600.0	1,600.0	1,637.4	1,637.4	5.5	5.6	88.55	144.2	5,686.0	5,687.8	5,676.7	11.05	514.718		
1,700.0	1,700.0	1,740.7	1,740.6	5.9	5.9	88.54	144.7	5,686.1	5,688.0	5,676.2	11.77	483.281		
1,800.0	1,800.0	1,847.5	1,847.5	6.2	6.3	88.54	145.2	5,686.2	5,688.0	5,675.5	12.50	455.019		
1,900.0	1,900.0	1,955.5	1,955.5	6.6	6.7	88.53	145.6	5,686.1	5,688.0	5,674.8	13.24	429.750		
2,000.0	2,000.0	2,059.2	2,059.1	6.9	7.0	88.53	146.1	5,685.9	5,687.8	5,673.8	13.96	407.572		
2,087.9	2,087.9	2,136.0	2,135.9	7.3	7.3	88.52	146.5	5,685.8	5,687.7	5,673.1	14.54	391.218		
2,100.0	2,100.0	2,145.4	2,145.3	7.3	7.3	88.52	146.5	5,685.8	5,687.7	5,673.1	14.61	389.182		
2,200.0	2,200.0	2,234.9	2,234.9	7.7	7.7	88.52	147.2	5,686.0	5,687.9	5,672.6	15.29	372.112		
2,300.0	2,300.0	2,340.2	2,340.1	8.0	8.0	139.50	148.1	5,686.1	5,689.3	5,673.3	16.01	355.405		
2,400.0	2,399.8	2,431.0	2,431.0	8.4	8.3	139.47	149.0	5,686.3	5,693.5	5,676.9	16.68	341.404		
2,500.0	2,499.5	2,527.4	2,527.3	8.7	8.7	139.42	149.8	5,686.6	5,700.5	5,683.2	17.36	328.289		
2,600.0	2,598.7	2,629.9	2,629.9	9.1	9.0	139.37	150.8	5,686.8	5,710.1	5,692.0	18.07	315.946		
2,700.0	2,697.5	2,720.0	2,720.0	9.4	9.4	139.29	151.6	5,687.2	5,722.4	5,703.7	18.74	305.408		
2,800.0	2,795.6	2,835.9	2,835.8	9.8	9.8	139.23	152.8	5,687.5	5,737.2	5,717.7	19.49	294.359		
2,900.0	2,893.1	2,935.3	2,935.2	10.1	10.1	139.14	153.7	5,687.6	5,754.6	5,734.4	20.19	285.078		
3,000.0	2,989.6	3,035.2	3,035.1	10.5	10.5	139.03	155.0	5,687.6	5,774.5	5,753.6	20.88	276.516		
3,100.0	3,085.3	3,126.9	3,126.8	10.9	10.8	138.89	156.3	5,687.6	5,797.0	5,775.5	21.55	268.986		
3,200.0	3,179.8	3,208.8	3,208.7	11.2	11.1	138.72	157.3	5,687.8	5,822.3	5,800.1	22.19	262.440		
3,300.0	3,273.2	3,300.0	3,299.9	11.6	11.4	138.54	158.9	5,688.1	5,850.3	5,827.5	22.85	255.994		
3,387.5	3,353.8	3,416.1	3,416.0	11.9	11.8	138.45	162.1	5,688.2	5,876.7	5,853.2	23.57	249.331		
3,400.0	3,365.2	3,429.0	3,428.9	12.0	11.8	138.48	162.4	5,688.1	5,880.6	5,856.9	23.66	248.544		
3,500.0	3,456.8	3,533.5	3,533.4	12.4	12.2	138.74	164.6	5,687.7	5,911.6	5,887.2	24.38	242.490		
3,600.0	3,548.3	3,648.9	3,648.7	12.8	12.6	139.03	166.8	5,687.0	5,942.4	5,917.3	25.14	236.364		
3,700.0	3,639.8	3,754.3	3,754.1	13.2	13.0	139.30	168.3	5,685.9	5,973.0	5,947.1	25.87	230.865		
3,800.0	3,731.4	3,839.2	3,839.0	13.6	13.3	139.51	169.5	5,685.0	6,003.6	5,977.1	26.53	226.257		
3,900.0	3,822.9	3,913.6	3,913.4	14.0	13.5	139.69	170.3	5,684.3	6,034.5	6,007.3	27.16	222.167		
4,000.0	3,914.4	3,972.2	3,972.0	14.4	13.7	139.84	171.0	5,684.1	6,065.9	6,038.2	27.73	218.714		
4,100.0	4,005.9	4,049.6	4,049.3	14.8	14.0	140.03	172.1	5,684.2	6,097.9	6,069.5	28.38	214.880		
4,200.0	4,097.5	4,147.2	4,146.9	15.2	14.4	140.26	173.7	5,684.3	6,129.9	6,100.8	29.10	210.653		
4,300.0	4,189.0	4,234.9	4,234.6	15.6	14.7	140.47	175.1	5,684.3	6,161.9	6,132.2	29.79	206.867		
4,400.0	4,280.5	4,308.6	4,308.3	16.1	14.9	140.65	176.2	5,684.4	6,194.3	6,163.9	30.42	203.599		
4,500.0	4,372.1	4,388.8	4,388.6	16.5	15.2	140.83	177.4	5,684.8	6,227.0	6,195.9	31.09	200.305		
4,600.0	4,463.6	4,483.6	4,483.3	16.9	15.5	141.05	179.1	5,685.4	6,259.8	6,228.0	31.81	196.798		
4,700.0	4,555.1	4,588.2	4,587.9	17.4	15.9	141.29	181.0	5,685.8	6,292.5	6,260.0	32.57	193.209		
4,800.0	4,646.7	4,719.4	4,719.0	17.8	16.4	141.58	183.2	5,685.9	6,325.1	6,291.7	33.43	189.189		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 5519 8D - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
4,900.0	4,738.2	4,866.5	4,866.2	18.2	16.9	141.92	185.1	5,684.5	6,356.7	6,322.3	34.36	185.007		
5,000.0	4,829.7	4,959.4	4,959.0	18.7	17.2	142.13	186.2	5,683.4	6,388.2	6,353.1	35.08	182.099		
5,100.0	4,921.3	5,087.2	5,086.8	19.1	17.6	142.41	187.5	5,681.6	6,419.7	6,383.7	35.94	178.632		
5,200.0	5,012.8	5,171.8	5,171.4	19.5	17.9	142.60	188.1	5,680.1	6,450.9	6,414.2	36.63	176.100		
5,300.0	5,104.3	5,260.1	5,259.7	20.0	18.2	142.80	188.9	5,678.7	6,482.3	6,444.9	37.34	173.597		
5,400.0	5,195.8	5,333.0	5,332.6	20.4	18.5	142.95	189.7	5,677.6	6,513.9	6,475.9	37.99	171.454		
5,500.0	5,287.4	5,400.0	5,399.6	20.9	18.7	143.10	190.4	5,676.9	6,546.0	6,507.3	38.62	169.497		
5,600.0	5,378.9	5,487.2	5,486.8	21.3	19.0	143.29	191.1	5,676.3	6,578.4	6,539.0	39.33	167.273		
5,700.0	5,470.4	5,591.6	5,591.2	21.8	19.4	143.51	191.8	5,675.3	6,610.7	6,570.6	40.10	164.841		
5,800.0	5,562.0	5,663.1	5,662.6	22.2	19.7	143.66	192.4	5,674.6	6,643.1	6,602.4	40.75	163.021		
5,900.0	5,653.5	5,742.7	5,742.2	22.7	19.9	143.83	192.9	5,674.2	6,675.9	6,634.5	41.43	161.139		
6,000.0	5,745.0	5,855.6	5,855.1	23.1	20.3	144.07	192.9	5,673.4	6,708.8	6,666.6	42.24	158.815		
6,100.0	5,836.6	5,970.5	5,970.0	23.6	20.7	144.32	193.2	5,672.1	6,741.3	6,698.2	43.07	156.536		
6,200.0	5,928.1	6,056.7	6,056.3	24.0	21.0	144.50	193.2	5,671.0	6,773.8	6,730.0	43.77	154.743		
6,278.6	6,000.0	6,114.8	6,114.3	24.4	21.2	144.62	193.1	5,670.3	6,799.4	6,755.1	44.29	153.513		
6,290.0	6,010.4	6,121.6	6,121.2	24.4	21.3	142.69	193.1	5,670.3	6,803.2	6,758.8	44.36	153.359		
6,300.0	6,019.5	6,127.7	6,127.2	24.5	21.3	140.94	193.1	5,670.2	6,806.5	6,762.1	44.42	153.225		
6,350.0	6,065.8	6,158.1	6,157.6	24.7	21.4	130.46	192.9	5,670.0	6,820.2	6,775.5	44.72	152.512		
6,400.0	6,113.0	6,189.0	6,188.5	24.9	21.5	116.53	192.6	5,669.8	6,829.5	6,784.5	45.01	151.732		
6,450.0	6,160.7	6,225.8	6,225.3	25.1	21.6	99.70	192.0	5,669.6	6,834.3	6,788.9	45.32	150.814		
6,500.0	6,208.5	6,265.5	6,265.0	25.3	21.8	82.43	191.2	5,669.4	6,834.4	6,788.8	45.62	149.810		
6,550.0	6,255.8	6,306.0	6,305.5	25.4	21.9	67.65	190.1	5,669.3	6,829.9	6,784.0	45.91	148.761		
6,600.0	6,302.5	6,354.4	6,353.9	25.6	22.1	56.51	188.6	5,669.1	6,820.9	6,774.7	46.22	147.574		
6,650.0	6,347.9	6,401.5	6,400.9	25.7	22.2	48.55	187.0	5,668.9	6,807.3	6,760.8	46.51	146.377		
6,700.0	6,391.6	6,441.9	6,441.3	25.9	22.4	42.96	185.6	5,668.7	6,789.2	6,742.5	46.75	145.239		
6,750.0	6,433.4	6,480.6	6,480.0	26.0	22.5	39.06	184.4	5,668.5	6,767.0	6,720.0	46.96	144.095		
6,800.0	6,472.8	6,551.8	6,551.2	26.1	22.7	36.57	182.1	5,668.1	6,740.7	6,693.4	47.30	142.517		
6,850.0	6,509.4	6,618.6	6,617.9	26.2	23.0	35.07	179.9	5,667.4	6,710.3	6,662.7	47.60	140.973		
6,900.0	6,543.0	6,650.8	6,650.1	26.3	23.1	34.27	178.9	5,666.9	6,676.3	6,628.5	47.75	139.823		
6,950.0	6,573.2	6,680.1	6,679.4	26.4	23.2	34.25	177.9	5,666.5	6,639.1	6,591.2	47.88	138.673		
7,000.0	6,599.8	6,705.8	6,705.1	26.5	23.3	35.06	177.1	5,666.2	6,599.1	6,551.1	47.98	137.533		
7,050.0	6,622.5	6,727.7	6,726.9	26.6	23.4	36.90	176.3	5,665.9	6,556.5	6,508.4	48.07	136.405		
7,100.0	6,641.1	6,745.4	6,744.6	26.7	23.4	40.17	175.7	5,665.7	6,511.7	6,463.6	48.13	135.290		
7,150.0	6,655.4	6,758.9	6,758.2	26.8	23.5	45.74	175.3	5,665.5	6,465.2	6,417.0	48.18	134.190		
7,200.0	6,665.4	6,768.1	6,767.3	26.9	23.5	55.45	175.0	5,665.4	6,417.4	6,369.1	48.21	133.105		
7,250.0	6,670.8	6,772.9	6,772.1	27.0	23.5	73.08	174.8	5,665.3	6,368.6	6,320.4	48.23	132.037		
7,285.7	6,672.0	6,773.5	6,772.7	27.1	23.5	92.92	174.8	5,665.3	6,333.5	6,285.2	48.24	131.286		
7,300.0	6,672.0	6,773.3	6,772.5	27.1	23.5	92.91	174.8	5,665.3	6,319.3	6,271.1	48.24	130.986		
7,400.0	6,672.0	6,771.9	6,771.1	27.3	23.5	92.83	174.9	5,665.3	6,220.7	6,172.4	48.26	128.902		
7,500.0	6,672.0	6,770.5	6,769.7	27.6	23.5	92.76	174.9	5,665.3	6,122.1	6,073.8	48.28	126.810		
7,600.0	6,672.0	6,769.1	6,768.3	28.0	23.5	92.68	175.0	5,665.4	6,023.6	5,975.3	48.30	124.711		
7,700.0	6,672.0	6,767.7	6,767.0	28.3	23.5	92.60	175.0	5,665.4	5,925.1	5,876.8	48.33	122.605		
7,800.0	6,672.0	6,766.4	6,765.6	28.8	23.5	92.52	175.0	5,665.4	5,826.6	5,778.3	48.36	120.491		
7,900.0	6,672.0	6,765.0	6,764.2	29.3	23.5	92.45	175.1	5,665.4	5,728.3	5,679.9	48.39	118.370		
8,000.0	6,672.0	6,763.6	6,762.8	29.8	23.5	92.37	175.1	5,665.4	5,629.9	5,581.5	48.43	116.241		
8,100.0	6,672.0	6,762.2	6,761.4	30.4	23.5	92.29	175.2	5,665.4	5,531.7	5,483.2	48.48	114.104		
8,200.0	6,672.0	6,760.8	6,760.0	31.0	23.5	92.21	175.2	5,665.5	5,433.5	5,385.0	48.53	111.960		
8,300.0	6,672.0	6,759.4	6,758.6	31.7	23.5	92.13	175.3	5,665.5	5,335.4	5,286.8	48.59	109.808		
8,400.0	6,672.0	6,758.0	6,757.2	32.4	23.5	92.06	175.3	5,665.5	5,237.3	5,188.7	48.65	107.648		
8,500.0	6,672.0	6,756.6	6,755.8	33.1	23.5	91.98	175.4	5,665.5	5,139.3	5,090.6	48.72	105.481		
8,600.0	6,672.0	6,755.2	6,754.5	33.9	23.4	91.90	175.4	5,665.5	5,041.4	4,992.6	48.80	103.305		
8,700.0	6,672.0	6,753.8	6,753.1	34.7	23.4	91.83	175.5	5,665.6	4,943.6	4,894.7	48.89	101.121		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 5519 8D - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
8,800.0	6,672.0	6,752.5	6,751.7	35.5	23.4	91.75	175.5	5,665.6	4,845.9	4,796.9	48.98	98.930		
8,900.0	6,672.0	6,751.1	6,750.3	36.3	23.4	91.67	175.6	5,665.6	4,748.3	4,699.2	49.09	96.730		
9,000.0	6,672.0	6,749.7	6,748.9	37.2	23.4	91.59	175.6	5,665.6	4,650.7	4,601.5	49.20	94.521		
9,100.0	6,672.0	6,748.3	6,747.5	38.1	23.4	91.52	175.6	5,665.6	4,553.3	4,504.0	49.33	92.305		
9,200.0	6,672.0	6,746.9	6,746.1	39.0	23.4	91.44	175.7	5,665.7	4,456.0	4,406.5	49.47	90.081		
9,300.0	6,672.0	6,745.5	6,744.7	39.9	23.4	91.36	175.7	5,665.7	4,358.8	4,309.2	49.62	87.848		
9,400.0	6,672.0	6,744.1	6,743.3	40.8	23.4	91.29	175.8	5,665.7	4,261.8	4,212.0	49.78	85.607		
9,500.0	6,672.0	6,742.7	6,741.9	41.8	23.4	91.21	175.8	5,665.7	4,164.9	4,114.9	49.96	83.358		
9,600.0	6,672.0	6,741.3	6,740.5	42.7	23.4	91.13	175.9	5,665.7	4,068.1	4,018.0	50.16	81.101		
9,700.0	6,672.0	6,739.9	6,739.1	43.7	23.4	91.05	175.9	5,665.7	3,971.5	3,921.1	50.38	78.837		
9,800.0	6,672.0	6,738.5	6,737.8	44.7	23.4	90.98	176.0	5,665.8	3,875.1	3,824.5	50.61	76.565		
9,900.0	6,672.0	6,737.1	6,736.4	45.7	23.4	90.90	176.0	5,665.8	3,778.9	3,728.0	50.87	74.286		
10,000.0	6,672.0	6,735.7	6,735.0	46.7	23.4	90.82	176.1	5,665.8	3,682.8	3,631.7	51.15	72.000		
10,100.0	6,672.0	6,734.3	6,733.6	47.7	23.4	90.75	176.1	5,665.8	3,587.0	3,535.6	51.46	69.708		
10,200.0	6,672.0	6,732.9	6,732.2	48.8	23.4	90.67	176.2	5,665.8	3,491.5	3,439.7	51.79	67.411		
10,300.0	6,672.0	6,731.6	6,730.8	49.8	23.4	90.59	176.2	5,665.9	3,396.1	3,344.0	52.16	65.109		
10,400.0	6,672.0	6,730.2	6,729.4	50.9	23.4	90.52	176.2	5,665.9	3,301.1	3,248.5	52.56	62.803		
10,500.0	6,672.0	6,728.8	6,728.0	51.9	23.4	90.44	176.3	5,665.9	3,206.4	3,153.4	53.00	60.495		
10,600.0	6,672.0	6,727.4	6,726.6	53.0	23.4	90.36	176.3	5,665.9	3,112.0	3,058.5	53.48	58.186		
10,700.0	6,672.0	6,726.0	6,725.2	54.1	23.3	90.29	176.4	5,665.9	3,017.9	2,963.9	54.01	55.877		
10,800.0	6,672.0	6,724.6	6,723.8	55.2	23.3	90.21	176.4	5,665.9	2,924.3	2,869.7	54.59	53.570		
10,900.0	6,672.0	6,723.2	6,722.4	56.3	23.3	90.13	176.5	5,666.0	2,831.1	2,775.9	55.22	51.267		
11,000.0	6,672.0	6,721.8	6,721.0	57.4	23.3	90.06	176.5	5,666.0	2,738.4	2,682.5	55.92	48.972		
11,100.0	6,672.0	6,720.4	6,719.6	58.5	23.3	89.98	176.6	5,666.0	2,646.2	2,589.5	56.68	46.686		
11,200.0	6,672.0	6,719.0	6,718.2	59.6	23.3	89.90	176.6	5,666.0	2,554.6	2,497.1	57.52	44.413		
11,300.0	6,672.0	6,717.6	6,716.8	60.7	23.3	89.83	176.7	5,666.0	2,463.6	2,405.2	58.44	42.157		
11,400.0	6,672.0	6,716.2	6,715.4	61.8	23.3	89.75	176.7	5,666.1	2,373.4	2,314.0	59.45	39.922		
11,500.0	6,672.0	6,714.8	6,714.0	62.9	23.3	89.67	176.8	5,666.1	2,284.0	2,223.5	60.56	37.712		
11,600.0	6,672.0	6,713.4	6,712.6	64.1	23.3	89.60	176.8	5,666.1	2,195.5	2,133.8	61.79	35.533		
11,700.0	6,672.0	6,712.0	6,711.2	65.2	23.3	89.52	176.9	5,666.1	2,108.1	2,045.0	63.13	33.391		
11,800.0	6,672.0	6,710.6	6,709.8	66.3	23.3	89.44	176.9	5,666.1	2,021.8	1,957.2	64.61	31.290		
11,900.0	6,672.0	6,709.2	6,708.4	67.5	23.3	89.37	176.9	5,666.2	1,936.9	1,870.6	66.24	29.239		
12,000.0	6,672.0	6,707.8	6,707.0	68.6	23.3	89.29	177.0	5,666.2	1,853.4	1,785.4	68.03	27.244		
12,100.0	6,672.0	6,706.4	6,705.6	69.8	23.3	89.21	177.0	5,666.2	1,771.7	1,701.7	69.99	25.313		
12,200.0	6,672.0	6,705.0	6,704.2	70.9	23.3	89.14	177.1	5,666.2	1,691.9	1,619.8	72.14	23.454		
12,300.0	6,672.0	6,703.6	6,702.8	72.1	23.3	89.06	177.1	5,666.2	1,614.4	1,539.9	74.48	21.675		
12,400.0	6,672.0	6,702.2	6,701.4	73.2	23.3	88.98	177.2	5,666.2	1,539.5	1,462.5	77.03	19.986		
12,500.0	6,672.0	6,700.8	6,700.0	74.4	23.3	88.91	177.2	5,666.3	1,467.6	1,387.8	79.78	18.394		
12,600.0	6,672.0	6,699.4	6,698.6	75.5	23.3	88.83	177.3	5,666.3	1,399.1	1,316.4	82.74	16.910		
12,700.0	6,672.0	6,698.0	6,697.2	76.7	23.2	88.75	177.3	5,666.3	1,334.7	1,248.8	85.88	15.540		
12,800.0	6,672.0	6,696.6	6,695.8	77.9	23.2	88.67	177.4	5,666.3	1,274.8	1,185.6	89.18	14.295		
12,900.0	6,672.0	6,695.2	6,694.4	79.0	23.2	88.60	177.4	5,666.3	1,220.2	1,127.7	92.57	13.182		
13,000.0	6,672.0	6,693.8	6,693.0	80.2	23.2	88.52	177.5	5,666.4	1,171.7	1,075.7	95.98	12.207		
13,100.0	6,672.0	6,692.4	6,691.6	81.4	23.2	88.44	177.5	5,666.4	1,129.9	1,030.6	99.30	11.378		
13,200.0	6,672.0	6,691.0	6,690.2	82.6	23.2	88.37	177.5	5,666.4	1,095.6	993.2	102.41	10.699		
13,300.0	6,672.0	6,689.6	6,688.8	83.7	23.2	88.29	177.6	5,666.4	1,069.7	964.6	105.15	10.173		
13,400.0	6,672.0	6,688.2	6,687.4	84.9	23.2	88.21	177.6	5,666.4	1,052.7	945.3	107.40	9.802		
13,500.0	6,672.0	6,686.8	6,686.0	86.1	23.2	88.14	177.7	5,666.5	1,045.0	936.0	109.02	9.585		
13,530.6	6,672.0	6,686.3	6,685.6	86.4	23.2	88.11	177.7	5,666.5	1,044.6	935.2	109.38	9.550 CC, ES		
13,600.0	6,672.0	6,685.4	6,684.6	87.3	23.2	88.06	177.7	5,666.5	1,046.9	936.9	109.94	9.522 SF		
13,700.0	6,672.0	6,684.0	6,683.2	88.4	23.2	87.98	177.8	5,666.5	1,058.2	948.1	110.15	9.607		
13,800.0	6,672.0	6,682.6	6,681.8	89.6	23.2	87.91	177.8	5,666.5	1,078.8	969.1	109.68	9.836		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State 5519 8D - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
13,900.0	6,672.0	6,681.2	6,680.4	90.8	23.2	87.83	177.9	5,666.5	1,108.0	999.4	108.61	10.201		
14,000.0	6,672.0	6,679.8	6,679.0	92.0	23.2	87.75	177.9	5,666.5	1,145.2	1,038.2	107.07	10.696		
14,100.0	6,672.0	6,678.4	6,677.6	93.2	23.2	87.67	178.0	5,666.6	1,189.8	1,084.6	105.19	11.311		
14,200.0	6,672.0	6,676.9	6,676.2	94.4	23.2	87.60	178.0	5,666.6	1,240.8	1,137.7	103.07	12.038		
14,300.0	6,672.0	6,675.5	6,674.8	95.6	23.2	87.52	178.1	5,666.6	1,297.5	1,196.7	100.82	12.869		
14,400.0	6,672.0	6,674.1	6,673.4	96.8	23.2	87.44	178.1	5,666.6	1,359.2	1,260.7	98.53	13.794		
14,500.0	6,672.0	6,672.7	6,672.0	98.0	23.2	87.37	178.2	5,666.6	1,425.3	1,329.0	96.26	14.806		
14,600.0	6,672.0	6,671.3	6,670.6	99.2	23.2	87.29	178.2	5,666.7	1,495.1	1,401.1	94.05	15.897		
14,700.0	6,672.0	6,669.9	6,669.2	100.4	23.2	87.21	178.2	5,666.7	1,568.3	1,476.3	91.93	17.060		
14,800.0	6,672.0	6,668.5	6,667.8	101.6	23.1	87.13	178.3	5,666.7	1,644.2	1,554.3	89.91	18.287		
14,900.0	6,672.0	6,667.1	6,666.4	102.7	23.1	87.06	178.3	5,666.7	1,722.6	1,634.6	88.01	19.573		
15,000.0	6,672.0	6,665.7	6,665.0	103.9	23.1	86.98	178.4	5,666.7	1,803.2	1,717.0	86.23	20.912		
15,100.0	6,672.0	6,664.3	6,663.6	105.1	23.1	86.90	178.4	5,666.8	1,885.6	1,801.1	84.56	22.298		
15,200.0	6,672.0	6,662.9	6,662.2	106.3	23.1	86.82	178.5	5,666.8	1,969.7	1,886.7	83.01	23.727		
15,300.0	6,672.0	6,661.5	6,660.8	107.6	23.1	86.75	178.5	5,666.8	2,055.2	1,973.6	81.57	25.195		
15,400.0	6,672.0	6,660.1	6,659.3	108.8	23.1	86.67	178.6	5,666.8	2,141.9	2,061.7	80.23	26.696		
15,500.0	6,672.0	6,658.7	6,657.9	110.0	23.1	86.59	178.6	5,666.8	2,229.8	2,150.8	78.99	28.229		
15,600.0	6,672.0	6,657.3	6,656.5	111.2	23.1	86.51	178.7	5,666.8	2,318.6	2,240.8	77.83	29.790		
15,700.0	6,672.0	6,655.8	6,655.1	112.4	23.1	86.43	178.7	5,666.9	2,408.4	2,331.6	76.76	31.374		
15,800.0	6,672.0	6,654.4	6,653.7	113.6	23.1	86.36	178.8	5,666.9	2,498.9	2,423.1	75.77	32.981		
15,900.0	6,672.0	6,653.0	6,652.3	114.8	23.1	86.28	178.8	5,666.9	2,590.1	2,515.2	74.84	34.608		
16,000.0	6,672.0	6,651.6	6,650.9	116.0	23.1	86.20	178.9	5,666.9	2,681.9	2,607.9	73.98	36.252		
16,100.0	6,672.0	6,650.2	6,649.5	117.2	23.1	86.12	178.9	5,666.9	2,774.3	2,701.2	73.18	37.911		
16,200.0	6,672.0	6,648.8	6,648.1	118.4	23.1	86.04	179.0	5,667.0	2,867.2	2,794.8	72.43	39.584		
16,300.0	6,672.0	6,647.4	6,646.7	119.6	23.1	85.97	179.0	5,667.0	2,960.6	2,888.9	71.74	41.269		
16,400.0	6,672.0	6,646.0	6,645.3	120.8	23.1	85.89	179.0	5,667.0	3,054.4	2,983.3	71.12	42.947		
16,500.0	6,672.0	6,655.4	6,643.9	122.0	23.1	85.81	179.1	5,667.0	3,148.6	3,078.1	70.53	44.644		
16,600.0	6,672.0	6,656.8	6,642.4	123.2	23.1	85.73	179.1	5,667.0	3,243.1	3,173.2	69.97	46.349		
16,700.0	6,672.0	6,658.3	6,641.0	124.5	23.1	85.65	179.2	5,667.1	3,338.0	3,268.5	69.46	48.059		
16,800.0	6,672.0	6,659.7	6,639.6	125.7	23.1	85.57	179.2	5,667.1	3,433.1	3,364.2	68.97	49.775		
16,900.0	6,672.0	6,661.1	6,638.2	126.9	23.1	85.50	179.3	5,667.1	3,528.6	3,460.0	68.52	51.496		
17,000.0	6,672.0	6,662.5	6,636.8	128.1	23.1	85.42	179.3	5,667.1	3,624.2	3,556.1	68.10	53.219		
17,100.0	6,672.0	6,663.9	6,635.4	129.3	23.1	85.34	179.4	5,667.1	3,720.1	3,652.4	67.71	54.945		
17,200.0	6,672.0	6,665.3	6,634.0	130.5	23.1	85.26	179.4	5,667.1	3,816.2	3,748.9	67.34	56.673		
17,300.0	6,672.0	6,666.7	6,632.6	131.7	23.1	85.18	179.5	5,667.2	3,912.5	3,845.5	66.99	58.402		
17,400.0	6,672.0	6,668.1	6,631.2	133.0	23.1	85.10	179.5	5,667.2	4,009.0	3,942.4	66.67	60.132		
17,500.0	6,672.0	6,669.6	6,629.7	134.2	23.2	85.02	179.6	5,667.2	4,105.7	4,039.3	66.37	61.862		
17,600.0	6,672.0	6,671.0	6,628.3	135.4	23.2	84.94	179.6	5,667.2	4,202.5	4,136.4	66.09	63.592		
17,700.0	6,672.0	6,672.4	6,626.9	136.6	23.2	84.86	179.7	5,667.2	4,299.5	4,233.6	65.82	65.321		
17,800.0	6,672.0	6,673.8	6,625.5	137.8	23.2	84.78	179.7	5,667.3	4,396.6	4,331.0	65.57	67.048		
17,900.0	6,672.0	6,675.2	6,624.1	139.0	23.2	84.70	179.7	5,667.3	4,493.8	4,428.4	65.34	68.774		
18,000.0	6,672.0	6,623.9	6,623.2	140.3	23.0	84.66	179.8	5,667.3	4,591.1	4,526.2	64.94	70.700		
18,100.0	6,672.0	6,622.6	6,621.9	141.5	23.0	84.58	179.8	5,667.3	4,688.6	4,623.9	64.73	72.438		
18,200.0	6,672.0	6,621.2	6,620.5	142.7	23.0	84.50	179.9	5,667.3	4,786.2	4,721.6	64.53	74.174		
18,300.0	6,672.0	6,619.8	6,619.1	143.9	23.0	84.42	179.9	5,667.3	4,883.8	4,819.5	64.34	75.908		
18,342.5	6,672.0	6,619.2	6,618.5	144.4	23.0	84.39	179.9	5,667.4	4,925.3	4,861.1	64.26	76.644		



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State Lease 5519 22-08 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
0.0	0.0	62.8	62.8	0.0	0.1	92.18	-246.0	6,460.4	6,465.1					
100.0	100.0	216.4	216.4	0.1	0.6	92.18	-246.2	6,460.1	6,465.0	6,464.3	0.71	9,133.867		
200.0	200.0	325.6	325.6	0.5	1.0	92.18	-246.0	6,459.3	6,464.2	6,462.8	1.45	4,464.097		
300.0	300.0	423.9	423.9	0.8	1.3	92.18	-246.1	6,458.5	6,463.4	6,461.3	2.15	3,005.938		
400.0	400.0	522.6	522.6	1.2	1.7	92.19	-246.4	6,457.7	6,462.6	6,459.8	2.85	2,264.065		
500.0	500.0	630.7	630.7	1.6	2.0	92.19	-246.8	6,456.8	6,461.8	6,458.2	3.59	1,798.937		
600.0	600.0	737.8	737.8	1.9	2.4	92.19	-247.2	6,455.7	6,460.8	6,456.4	4.33	1,493.574		
700.0	700.0	838.3	838.3	2.3	2.8	92.20	-247.6	6,454.6	6,459.7	6,454.7	5.04	1,282.615		
800.0	800.0	930.4	930.3	2.6	3.1	92.20	-248.1	6,453.7	6,458.7	6,453.0	5.72	1,129.640		
900.0	900.0	1,015.2	1,015.1	3.0	3.4	92.21	-248.5	6,453.0	6,457.9	6,451.5	6.37	1,013.333		
1,000.0	1,000.0	1,108.6	1,108.6	3.4	3.7	92.21	-248.9	6,452.4	6,457.3	6,450.2	7.06	914.802		
1,100.0	1,100.0	1,215.7	1,215.7	3.7	4.1	92.22	-249.5	6,451.7	6,456.7	6,448.9	7.79	828.620		
1,200.0	1,200.0	1,327.7	1,327.6	4.1	4.5	92.22	-250.5	6,450.7	6,455.9	6,447.3	8.54	755.725		
1,300.0	1,300.0	1,430.3	1,430.2	4.4	4.8	92.23	-251.6	6,449.8	6,455.0	6,445.7	9.26	697.052		
1,400.0	1,400.0	1,529.7	1,529.6	4.8	5.2	92.24	-252.6	6,448.8	6,454.0	6,444.1	9.97	647.539		
1,500.0	1,500.0	1,624.1	1,624.0	5.1	5.5	92.25	-253.5	6,448.0	6,453.2	6,442.5	10.66	605.598		
1,600.0	1,600.0	1,721.6	1,721.5	5.5	5.9	92.26	-254.2	6,447.2	6,452.4	6,441.0	11.36	568.202		
1,700.0	1,700.0	1,812.3	1,812.2	5.9	6.2	92.26	-254.7	6,446.5	6,451.6	6,439.6	12.03	536.217		
1,800.0	1,800.0	1,891.0	1,890.9	6.2	6.5	92.27	-255.1	6,446.1	6,451.2	6,438.5	12.67	509.358		
1,900.0	1,900.0	1,971.5	1,971.4	6.6	6.7	92.27	-255.3	6,446.0	6,451.0	6,437.7	13.30	484.888		
1,901.9	1,901.9	1,973.0	1,972.9	6.6	6.7	92.27	-255.3	6,446.0	6,451.0	6,437.7	13.32	484.443		
2,000.0	2,000.0	2,062.7	2,062.6	6.9	7.1	92.27	-255.6	6,446.0	6,451.1	6,437.1	13.98	461.467		
2,100.0	2,100.0	2,175.8	2,175.7	7.3	7.4	92.27	-255.8	6,446.1	6,451.2	6,436.5	14.73	437.908		
2,200.0	2,200.0	2,300.4	2,300.3	7.7	7.9	92.27	-256.0	6,445.8	6,450.9	6,435.4	15.53	415.494		
2,216.2	2,216.2	2,320.6	2,320.5	7.7	8.0	143.28	-256.0	6,445.7	6,450.9	6,435.2	15.65	412.096		
2,300.0	2,300.0	2,393.8	2,393.7	8.0	8.2	143.28	-256.6	6,445.4	6,451.9	6,435.7	16.21	398.083		
2,400.0	2,399.8	2,462.9	2,462.8	8.4	8.5	143.26	-257.5	6,445.2	6,456.0	6,439.2	16.80	384.295		
2,500.0	2,499.5	2,552.7	2,552.6	8.7	8.8	143.22	-258.7	6,445.5	6,463.3	6,445.8	17.46	370.103		
2,600.0	2,598.7	2,659.8	2,659.7	9.1	9.1	143.18	-259.7	6,445.6	6,473.2	6,455.1	18.19	355.933		
2,700.0	2,697.5	2,757.8	2,757.7	9.4	9.5	143.11	-260.2	6,445.8	6,486.0	6,467.1	18.88	343.587		
2,800.0	2,795.6	2,856.9	2,856.8	9.8	9.8	143.03	-260.6	6,445.9	6,501.5	6,481.9	19.57	332.208		
2,900.0	2,893.1	2,945.3	2,945.2	10.1	10.1	142.91	-261.0	6,446.0	6,519.8	6,499.6	20.23	322.356		
3,000.0	2,989.6	3,025.5	3,025.3	10.5	10.4	142.76	-261.2	6,446.4	6,541.1	6,520.2	20.85	313.711		
3,100.0	3,085.3	3,107.8	3,107.7	10.9	10.7	142.59	-261.1	6,446.9	6,565.4	6,543.9	21.48	305.604		
3,200.0	3,179.8	3,184.8	3,184.7	11.2	11.0	142.38	-260.9	6,447.6	6,592.6	6,570.5	22.10	298.350		
3,300.0	3,273.2	3,258.2	3,258.0	11.6	11.2	142.14	-260.3	6,448.5	6,622.7	6,600.0	22.70	291.782		
3,387.5	3,353.8	3,322.9	3,322.8	11.9	11.4	141.89	-259.4	6,449.4	6,651.6	6,628.3	23.23	286.383		
3,400.0	3,365.2	3,332.7	3,332.5	12.0	11.5	141.91	-259.3	6,449.6	6,655.8	6,632.5	23.30	285.601		
3,500.0	3,456.8	3,414.0	3,413.8	12.4	11.8	142.08	-257.2	6,451.1	6,690.2	6,666.3	23.94	279.512		
3,600.0	3,548.3	3,514.5	3,514.2	12.8	12.1	142.27	-253.5	6,453.0	6,724.6	6,700.0	24.64	272.888		
3,700.0	3,639.8	3,591.2	3,590.8	13.2	12.4	142.41	-250.0	6,454.5	6,759.2	6,733.9	25.27	267.495		
3,800.0	3,731.4	3,707.2	3,706.6	13.6	12.8	142.61	-243.5	6,456.9	6,793.7	6,767.6	26.05	260.832		
3,900.0	3,822.9	3,816.4	3,815.6	14.0	13.2	142.79	-236.8	6,458.8	6,827.9	6,801.1	26.80	254.728		
4,000.0	3,914.4	3,905.5	3,904.5	14.4	13.5	142.93	-231.2	6,460.2	6,862.2	6,834.7	27.49	249.612		
4,100.0	4,005.9	3,983.8	3,982.6	14.8	13.8	143.06	-226.3	6,461.6	6,896.6	6,868.4	28.14	245.083		
4,200.0	4,097.5	4,086.3	4,084.9	15.2	14.1	143.22	-220.3	6,463.5	6,931.1	6,902.2	28.88	239.978		
4,300.0	4,189.0	4,196.9	4,195.4	15.6	14.5	143.41	-214.7	6,465.1	6,965.4	6,935.7	29.66	234.869		
4,400.0	4,280.5	4,326.8	4,325.2	16.1	15.0	143.63	-209.6	6,466.4	6,999.3	6,968.8	30.50	229.453		
4,500.0	4,372.1	4,431.3	4,429.6	16.5	15.3	143.82	-206.7	6,467.0	7,033.0	7,001.8	31.26	225.002		
4,600.0	4,463.6	4,539.6	4,537.9	16.9	15.7	144.02	-204.1	6,467.3	7,066.6	7,034.6	32.03	220.640		
4,700.0	4,555.1	4,639.4	4,637.6	17.4	16.1	144.21	-201.9	6,467.4	7,100.1	7,067.3	32.77	216.679		
4,800.0	4,646.7	4,723.3	4,721.5	17.8	16.4	144.37	-200.5	6,467.3	7,133.5	7,100.1	33.45	213.263		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State Lease 5519 22-08 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
4,900.0	4,738.2	4,783.4	4,781.7	18.2	16.6	144.48	-199.9	6,467.5	7,167.4	7,133.4	34.04	210.548		
5,000.0	4,829.7	4,850.3	4,848.6	18.7	16.8	144.61	-199.6	6,467.9	7,201.7	7,167.0	34.66	207.783		
5,100.0	4,921.3	4,932.3	4,930.6	19.1	17.1	144.77	-199.6	6,468.6	7,236.3	7,201.0	35.34	204.782		
5,200.0	5,012.8	5,109.0	5,107.3	19.5	17.7	145.12	-200.4	6,469.2	7,270.7	7,234.3	36.38	199.848		
5,300.0	5,104.3	5,236.4	5,234.7	20.0	18.2	145.38	-201.7	6,468.3	7,304.0	7,266.8	37.24	196.146		
5,400.0	5,195.8	5,329.8	5,328.0	20.4	18.5	145.56	-202.7	6,467.4	7,337.3	7,299.4	37.97	193.266		
5,500.0	5,287.4	5,427.4	5,425.6	20.9	18.8	145.75	-203.7	6,466.4	7,370.6	7,331.9	38.71	190.406		
5,600.0	5,378.9	5,524.5	5,522.7	21.3	19.2	145.94	-204.6	6,465.4	7,403.9	7,364.5	39.45	187.658		
5,700.0	5,470.4	5,620.0	5,618.2	21.8	19.5	146.13	-205.4	6,464.3	7,437.2	7,397.0	40.19	185.034		
5,800.0	5,562.0	5,694.3	5,692.5	22.2	19.7	146.27	-205.8	6,463.6	7,470.7	7,429.8	40.85	182.875		
5,900.0	5,653.5	5,798.4	5,796.6	22.7	20.1	146.46	-206.1	6,462.6	7,504.2	7,462.6	41.63	180.276		
6,000.0	5,745.0	5,841.9	5,840.1	23.1	20.3	146.54	-206.0	6,462.3	7,538.1	7,495.9	42.16	178.786		
6,100.0	5,836.6	5,900.0	5,898.2	23.6	20.5	146.64	-205.7	6,462.5	7,572.6	7,529.8	42.76	177.114		
6,200.0	5,928.1	6,424.2	6,422.1	24.0	22.3	147.50	-197.3	6,450.4	7,605.8	7,560.6	45.17	168.381		
6,278.6	6,000.0	6,554.9	6,552.6	24.4	22.7	147.70	-193.6	6,443.2	7,628.7	7,582.7	45.97	165.955		
6,290.0	6,010.4	6,579.9	6,577.4	24.4	22.8	145.85	-192.9	6,441.7	7,632.0	7,585.9	46.11	165.528		
6,300.0	6,019.5	6,601.8	6,599.4	24.5	22.9	144.12	-192.2	6,440.3	7,634.8	7,588.6	46.23	165.155		
6,350.0	6,065.8	6,672.9	6,670.2	24.7	23.2	133.65	-189.8	6,435.7	7,646.2	7,599.5	46.69	163.779		
6,400.0	6,113.0	6,773.8	6,723.4	24.9	23.5	119.75	-187.9	6,432.2	7,652.9	7,605.6	47.24	162.011		
6,450.0	6,160.7	6,774.5	6,771.6	25.1	23.5	102.93	-186.2	6,429.0	7,654.9	7,607.5	47.43	161.408		
6,500.0	6,208.5	6,822.6	6,819.5	25.3	23.7	85.71	-184.4	6,425.9	7,652.4	7,604.6	47.77	160.196		
6,550.0	6,255.8	6,870.0	6,866.7	25.4	23.8	71.00	-182.7	6,422.7	7,645.2	7,597.1	48.09	158.966		
6,600.0	6,302.5	6,916.2	6,912.9	25.6	24.0	59.94	-181.1	6,419.7	7,633.5	7,585.1	48.40	157.731		
6,650.0	6,347.9	6,961.0	6,957.5	25.7	24.2	52.11	-179.5	6,416.7	7,617.3	7,568.6	48.67	156.497		
6,700.0	6,391.6	7,003.9	7,000.3	25.9	24.3	46.69	-177.9	6,413.9	7,596.8	7,547.9	48.93	155.272		
6,750.0	6,433.4	7,044.4	7,040.7	26.0	24.5	43.04	-176.4	6,411.2	7,572.2	7,523.1	49.15	154.059		
6,800.0	6,472.8	7,082.3	7,078.5	26.1	24.6	40.72	-175.1	6,408.7	7,543.8	7,494.4	49.35	152.860		
6,850.0	6,509.4	7,080.0	7,076.2	26.2	24.6	39.29	-175.2	6,408.9	7,511.8	7,462.4	49.39	152.104		
6,900.0	6,543.0	7,080.0	7,076.2	26.3	24.6	38.79	-175.2	6,408.9	7,476.6	7,427.2	49.42	151.299		
6,950.0	6,573.2	7,080.0	7,076.2	26.4	24.6	39.18	-175.2	6,408.9	7,438.5	7,389.0	49.43	150.470		
7,000.0	6,599.8	7,080.0	7,076.2	26.5	24.6	40.56	-175.2	6,408.9	7,397.7	7,348.3	49.45	149.614		
7,050.0	6,622.5	7,080.0	7,076.2	26.6	24.6	43.20	-175.2	6,408.9	7,354.7	7,305.2	49.45	148.729		
7,100.0	6,641.1	7,080.0	7,076.2	26.7	24.6	47.62	-175.2	6,408.9	7,309.6	7,260.2	49.45	147.814		
7,150.0	6,655.4	7,080.0	7,076.2	26.8	24.6	54.83	-175.2	6,408.9	7,263.0	7,213.6	49.45	146.866		
7,200.0	6,665.4	7,080.0	7,076.2	26.9	24.6	66.67	-175.2	6,408.9	7,215.2	7,165.8	49.46	145.887		
7,250.0	6,670.8	7,080.0	7,076.2	27.0	24.6	85.58	-175.2	6,408.9	7,166.6	7,117.2	49.47	144.875		
7,285.7	6,672.0	7,080.0	7,076.2	27.1	24.6	103.43	-175.2	6,408.9	7,131.7	7,082.2	49.48	144.134		
7,300.0	6,672.0	7,080.0	7,076.2	27.1	24.6	103.43	-175.2	6,408.9	7,117.7	7,068.2	49.49	143.833		
7,400.0	6,672.0	7,080.0	7,076.2	27.3	24.6	103.43	-175.2	6,408.9	7,019.8	6,970.2	49.53	141.735		
7,500.0	6,672.0	7,080.0	7,076.2	27.6	24.6	103.42	-175.2	6,408.9	6,921.9	6,872.3	49.57	139.627		
7,600.0	6,672.0	7,080.0	7,076.2	28.0	24.6	103.42	-175.2	6,408.9	6,824.1	6,774.5	49.63	137.510		
7,700.0	6,672.0	7,080.0	7,076.2	28.3	24.6	103.42	-175.2	6,408.9	6,726.4	6,676.7	49.68	135.383		
7,800.0	6,672.0	7,080.0	7,076.2	28.8	24.6	103.41	-175.2	6,408.9	6,628.7	6,579.0	49.75	133.246		
7,900.0	6,672.0	7,080.0	7,076.2	29.3	24.6	103.41	-175.2	6,408.9	6,531.1	6,481.3	49.82	131.099		
8,000.0	6,672.0	7,080.0	7,076.2	29.8	24.6	103.40	-175.2	6,408.9	6,433.6	6,383.7	49.90	128.942		
8,100.0	6,672.0	7,080.0	7,076.2	30.4	24.6	103.40	-175.2	6,408.9	6,336.2	6,286.2	49.98	126.776		
8,200.0	6,672.0	7,080.0	7,076.2	31.0	24.6	103.39	-175.2	6,408.9	6,238.9	6,188.8	50.07	124.599		
8,300.0	6,672.0	7,080.0	7,076.2	31.7	24.6	103.39	-175.2	6,408.9	6,141.6	6,091.4	50.17	122.413		
8,400.0	6,672.0	7,080.0	7,076.2	32.4	24.6	103.38	-175.2	6,408.9	6,044.4	5,994.1	50.28	120.217		
8,500.0	6,672.0	7,080.0	7,076.2	33.1	24.6	103.38	-175.2	6,408.9	5,947.3	5,897.0	50.40	118.011		
8,600.0	6,672.0	7,080.0	7,076.2	33.9	24.6	103.38	-175.2	6,408.9	5,850.4	5,799.9	50.52	115.796		
8,700.0	6,672.0	7,080.0	7,076.2	34.7	24.6	103.37	-175.2	6,408.9	5,753.5	5,702.8	50.66	113.571		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State Lease 5519 22-08 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
8,800.0	6,672.0	7,080.0	7,076.2	35.5	24.6	103.37	-175.2	6,408.9	5,656.7	5,605.9	50.81	111.336		
8,900.0	6,672.0	7,080.0	7,076.2	36.3	24.6	103.37	-175.2	6,408.9	5,560.1	5,509.1	50.97	109.092		
9,000.0	6,672.0	7,080.0	7,076.2	37.2	24.6	103.36	-175.2	6,408.9	5,463.6	5,412.4	51.14	106.839		
9,100.0	6,672.0	7,080.0	7,076.2	38.1	24.6	103.36	-175.2	6,408.9	5,367.2	5,315.9	51.32	104.577		
9,200.0	6,672.0	7,080.0	7,076.2	39.0	24.6	103.35	-175.2	6,408.9	5,270.9	5,219.4	51.52	102.307		
9,300.0	6,672.0	7,080.0	7,076.2	39.9	24.6	103.35	-175.2	6,408.9	5,174.8	5,123.1	51.73	100.028		
9,400.0	6,672.0	7,080.0	7,076.2	40.8	24.6	103.35	-175.2	6,408.9	5,078.9	5,026.9	51.96	97.741		
9,500.0	6,672.0	7,111.3	7,107.4	41.8	24.7	104.55	-174.0	6,406.8	4,983.0	4,930.6	52.38	95.139		
9,600.0	6,672.0	7,104.8	7,100.9	42.7	24.7	104.30	-174.3	6,407.2	4,887.4	4,834.8	52.61	92.905		
9,700.0	6,672.0	7,098.2	7,094.4	43.7	24.7	104.04	-174.5	6,407.7	4,792.0	4,739.1	52.86	90.663		
9,800.0	6,672.0	7,091.7	7,087.9	44.7	24.7	103.79	-174.7	6,408.1	4,696.7	4,643.6	53.12	88.413		
9,900.0	6,672.0	7,085.2	7,081.4	45.7	24.6	103.53	-175.0	6,408.5	4,601.7	4,548.3	53.41	86.156		
10,000.0	6,672.0	7,078.7	7,074.9	46.7	24.6	103.28	-175.2	6,409.0	4,506.9	4,453.2	53.72	83.893		
10,100.0	6,672.0	7,072.2	7,068.4	47.7	24.6	103.02	-175.4	6,409.4	4,412.3	4,358.2	54.06	81.625		
10,200.0	6,672.0	7,065.6	7,061.9	48.8	24.6	102.76	-175.7	6,409.8	4,317.9	4,263.5	54.41	79.352		
10,300.0	6,672.0	7,059.1	7,055.4	49.8	24.5	102.51	-175.9	6,410.3	4,223.8	4,169.0	54.80	77.075		
10,400.0	6,672.0	7,052.6	7,048.9	50.9	24.5	102.25	-176.1	6,410.7	4,129.9	4,074.7	55.22	74.795		
10,500.0	6,672.0	7,046.1	7,042.4	51.9	24.5	101.99	-176.4	6,411.1	4,036.4	3,980.7	55.66	72.515		
10,600.0	6,672.0	7,039.5	7,035.9	53.0	24.5	101.74	-176.6	6,411.5	3,943.1	3,887.0	56.14	70.234		
10,700.0	6,672.0	7,033.0	7,029.4	54.1	24.4	101.48	-176.9	6,412.0	3,850.2	3,793.5	56.66	67.954		
10,800.0	6,672.0	7,026.5	7,022.9	55.2	24.4	101.22	-177.1	6,412.4	3,757.6	3,700.4	57.21	65.677		
10,900.0	6,672.0	7,020.0	7,016.4	56.3	24.4	100.96	-177.3	6,412.8	3,665.4	3,607.6	57.81	63.406		
11,000.0	6,672.0	7,013.5	7,009.8	57.4	24.4	100.70	-177.6	6,413.3	3,573.6	3,515.2	58.45	61.141		
11,100.0	6,672.0	7,007.0	7,003.3	58.5	24.3	100.45	-177.8	6,413.7	3,482.3	3,423.2	59.14	58.884		
11,200.0	6,672.0	7,000.4	6,996.8	59.6	24.3	100.19	-178.0	6,414.1	3,391.4	3,331.6	59.88	56.640		
11,300.0	6,672.0	6,993.9	6,990.3	60.7	24.3	99.93	-178.3	6,414.6	3,301.1	3,240.4	60.67	54.408		
11,400.0	6,672.0	6,987.4	6,983.8	61.8	24.3	99.67	-178.5	6,415.0	3,211.3	3,149.8	61.53	52.194		
11,500.0	6,672.0	6,980.9	6,977.4	62.9	24.3	99.41	-178.7	6,415.4	3,122.2	3,059.7	62.45	49.999		
11,600.0	6,672.0	6,974.4	6,970.9	64.1	24.2	99.15	-179.0	6,415.8	3,033.7	2,970.2	63.43	47.826		
11,700.0	6,672.0	6,967.8	6,964.4	65.2	24.2	98.89	-179.2	6,416.3	2,945.9	2,881.4	64.49	45.679		
11,800.0	6,672.0	6,961.3	6,957.9	66.3	24.2	98.63	-179.4	6,416.7	2,858.9	2,793.3	65.63	43.561		
11,900.0	6,672.0	6,954.8	6,951.4	67.5	24.2	98.37	-179.7	6,417.1	2,772.8	2,705.9	66.85	41.476		
12,000.0	6,672.0	6,948.3	6,944.9	68.6	24.1	98.11	-179.9	6,417.6	2,687.6	2,619.5	68.17	39.428		
12,100.0	6,672.0	6,941.8	6,938.4	69.8	24.1	97.85	-180.1	6,418.0	2,603.5	2,533.9	69.57	37.420		
12,200.0	6,672.0	6,935.3	6,931.9	70.9	24.1	97.59	-180.4	6,418.4	2,520.5	2,449.5	71.09	35.458		
12,300.0	6,672.0	6,928.7	6,925.4	72.1	24.1	97.33	-180.6	6,418.9	2,438.8	2,366.1	72.70	33.545		
12,400.0	6,672.0	6,922.2	6,918.9	73.2	24.0	97.07	-180.9	6,419.3	2,358.5	2,284.1	74.44	31.685		
12,500.0	6,672.0	6,915.7	6,912.4	74.4	24.0	96.81	-181.1	6,419.7	2,279.7	2,203.5	76.29	29.883		
12,600.0	6,672.0	6,909.2	6,905.9	75.5	24.0	96.55	-181.3	6,420.1	2,202.7	2,124.4	78.27	28.144		
12,700.0	6,672.0	6,902.7	6,899.4	76.7	24.0	96.29	-181.6	6,420.6	2,127.5	2,047.2	80.37	26.472		
12,800.0	6,672.0	6,896.2	6,892.9	77.9	23.9	96.03	-181.8	6,421.0	2,054.5	1,971.9	82.60	24.871		
12,900.0	6,672.0	6,889.7	6,886.4	79.0	23.9	95.77	-182.0	6,421.4	1,983.7	1,898.8	84.97	23.347		
13,000.0	6,672.0	6,883.1	6,879.9	80.2	23.9	95.51	-182.3	6,421.9	1,915.6	1,828.1	87.46	21.902		
13,100.0	6,672.0	6,876.6	6,873.4	81.4	23.9	95.25	-182.5	6,422.3	1,850.3	1,760.3	90.07	20.543		
13,200.0	6,672.0	6,870.1	6,866.9	82.6	23.8	94.98	-182.7	6,422.7	1,788.3	1,695.5	92.79	19.272		
13,300.0	6,672.0	6,863.6	6,860.4	83.7	23.8	94.72	-183.0	6,423.1	1,729.8	1,634.2	95.60	18.094		
13,400.0	6,672.0	6,857.1	6,853.9	84.9	23.8	94.46	-183.2	6,423.6	1,675.2	1,576.7	98.48	17.011		
13,500.0	6,672.0	6,850.6	6,847.4	86.1	23.8	94.20	-183.4	6,424.0	1,624.9	1,523.5	101.38	16.028		
13,600.0	6,672.0	6,844.1	6,840.9	87.3	23.8	93.94	-183.7	6,424.4	1,579.3	1,475.0	104.27	15.146		
13,700.0	6,672.0	6,837.6	6,834.4	88.4	23.7	93.68	-183.9	6,424.9	1,538.8	1,431.7	107.10	14.368		
13,800.0	6,672.0	6,831.1	6,827.9	89.6	23.7	93.42	-184.1	6,425.3	1,504.0	1,394.1	109.81	13.696		
13,900.0	6,672.0	6,824.5	6,821.5	90.8	23.7	93.16	-184.4	6,425.7	1,475.0	1,362.7	112.33	13.131		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 08 - State Lease 5519 22-08 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
14,000.0	6,672.0	6,818.0	6,815.0	92.0	23.7	92.90	-184.6	6,426.2	1,452.3	1,337.7	114.60	12.673		
14,100.0	6,672.0	6,811.5	6,808.5	93.2	23.6	92.63	-184.8	6,426.6	1,436.3	1,319.7	116.56	12.322		
14,200.0	6,672.0	6,805.0	6,802.0	94.4	23.6	92.37	-185.1	6,427.0	1,427.1	1,308.9	118.15	12.078		
14,282.6	6,672.0	6,799.6	6,796.6	95.4	23.6	92.16	-185.3	6,427.4	1,424.7	1,305.5	119.16	11.956 CC		
14,300.0	6,672.0	6,798.5	6,795.5	95.6	23.6	92.11	-185.3	6,427.4	1,424.8	1,305.5	119.34	11.939 ES		
14,400.0	6,672.0	6,792.0	6,789.0	96.8	23.6	91.85	-185.6	6,427.9	1,429.5	1,309.4	120.09	11.903 SF		
14,500.0	6,672.0	6,785.5	6,782.5	98.0	23.5	91.59	-185.8	6,428.3	1,441.1	1,320.7	120.42	11.968		
14,600.0	6,672.0	6,779.0	6,776.0	99.2	23.5	91.33	-186.0	6,428.7	1,459.5	1,339.2	120.32	12.130		
14,700.0	6,672.0	6,772.5	6,769.5	100.4	23.5	91.07	-186.3	6,429.2	1,484.4	1,364.5	119.84	12.386		
14,800.0	6,672.0	6,766.0	6,763.0	101.6	23.5	90.81	-186.5	6,429.6	1,515.4	1,396.4	119.03	12.732		
14,900.0	6,672.0	6,759.4	6,756.5	102.7	23.5	90.54	-186.7	6,430.0	1,552.3	1,434.4	117.92	13.164		
15,000.0	6,672.0	6,752.9	6,750.1	103.9	23.4	90.28	-187.0	6,430.4	1,594.6	1,478.0	116.58	13.678		
15,100.0	6,672.0	6,746.4	6,743.6	105.1	23.4	90.02	-187.2	6,430.9	1,641.9	1,526.8	115.06	14.270		
15,200.0	6,672.0	6,739.9	6,737.0	106.3	23.4	89.76	-187.4	6,431.3	1,693.7	1,580.3	113.41	14.935		
15,300.0	6,672.0	6,733.3	6,730.5	107.6	23.4	89.50	-187.7	6,431.7	1,749.7	1,638.1	111.67	15.668		
15,400.0	6,672.0	6,726.8	6,724.0	108.8	23.3	89.24	-187.9	6,432.2	1,809.5	1,699.6	109.89	16.467		
15,500.0	6,672.0	6,720.2	6,717.4	110.0	23.3	88.97	-188.1	6,432.6	1,872.7	1,764.6	108.09	17.326		
15,600.0	6,672.0	6,713.6	6,710.8	111.2	23.3	88.71	-188.4	6,433.0	1,939.0	1,832.7	106.30	18.242		
15,700.0	6,672.0	6,707.1	6,704.4	112.4	23.3	88.45	-188.6	6,433.5	2,008.1	1,903.6	104.53	19.210		
15,800.0	6,672.0	6,700.4	6,697.7	113.6	23.3	88.18	-188.9	6,433.9	2,079.7	1,976.8	102.81	20.229		
15,900.0	6,672.0	6,693.7	6,691.0	114.8	23.2	87.91	-189.1	6,434.4	2,153.5	2,052.3	101.14	21.293		
16,000.0	6,672.0	6,687.1	6,684.4	116.0	23.2	87.65	-189.3	6,434.8	2,229.3	2,129.8	99.52	22.400		
16,100.0	6,672.0	6,680.5	6,677.8	117.2	23.2	87.38	-189.6	6,435.2	2,307.0	2,209.0	97.98	23.547		
16,200.0	6,672.0	6,673.9	6,671.3	118.4	23.2	87.12	-189.8	6,435.7	2,386.3	2,289.8	96.49	24.730		
16,300.0	6,672.0	6,667.4	6,664.8	119.6	23.1	86.86	-190.0	6,436.1	2,467.1	2,372.0	95.08	25.948		
16,400.0	6,672.0	6,661.0	6,658.3	120.8	23.1	86.61	-190.2	6,436.5	2,549.3	2,455.6	93.73	27.198		
16,500.0	6,672.0	6,654.6	6,652.0	122.0	23.1	86.35	-190.5	6,436.9	2,632.7	2,540.2	92.45	28.478		
16,600.0	6,672.0	6,648.2	6,645.6	123.2	23.1	86.10	-190.7	6,437.3	2,717.2	2,625.9	91.23	29.784		
16,700.0	6,672.0	6,641.9	6,639.3	124.5	23.0	85.85	-190.9	6,437.7	2,802.7	2,712.6	90.07	31.116		
16,800.0	6,672.0	6,635.6	6,633.1	125.7	23.0	85.60	-191.1	6,438.1	2,889.1	2,800.1	88.97	32.471		
16,900.0	6,672.0	6,629.4	6,626.8	126.9	23.0	85.35	-191.3	6,438.5	2,976.4	2,888.4	87.93	33.848		
17,000.0	6,672.0	6,623.2	6,620.7	128.1	23.0	85.10	-191.5	6,438.9	3,064.4	2,977.5	86.95	35.245		
17,100.0	6,672.0	6,617.1	6,614.6	129.3	23.0	84.86	-191.7	6,439.3	3,153.1	3,067.1	86.01	36.660		
17,200.0	6,672.0	6,611.0	6,608.5	130.5	22.9	84.62	-191.9	6,439.7	3,242.5	3,157.4	85.12	38.093		
17,300.0	6,672.0	6,604.9	6,602.4	131.7	22.9	84.38	-192.1	6,440.1	3,332.5	3,248.2	84.28	39.540		
17,400.0	6,672.0	6,599.0	6,596.6	133.0	22.9	84.14	-192.3	6,440.5	3,423.0	3,339.6	83.48	41.003		
17,500.0	6,672.0	6,593.9	6,591.4	134.2	22.9	83.94	-192.4	6,440.8	3,514.1	3,431.4	82.73	42.478		
17,600.0	6,672.0	6,588.8	6,586.3	135.4	22.9	83.73	-192.6	6,441.1	3,605.6	3,523.6	82.01	43.966		
17,700.0	6,672.0	6,583.7	6,581.3	136.6	22.8	83.53	-192.7	6,441.4	3,697.5	3,616.2	81.33	45.465		
17,800.0	6,672.0	6,578.7	6,576.3	137.8	22.8	83.34	-192.9	6,441.7	3,789.9	3,709.2	80.68	46.974		
17,900.0	6,672.0	6,573.8	6,571.4	139.0	22.8	83.14	-193.0	6,442.0	3,882.6	3,802.5	80.07	48.492		
18,000.0	6,672.0	6,568.9	6,566.5	140.3	22.8	82.95	-193.2	6,442.3	3,975.7	3,896.2	79.48	50.019		
18,100.0	6,672.0	6,564.1	6,561.7	141.5	22.8	82.76	-193.3	6,442.6	4,069.1	3,990.1	78.93	51.553		
18,200.0	6,672.0	6,559.3	6,556.9	142.7	22.8	82.57	-193.5	6,442.9	4,162.8	4,084.3	78.40	53.095		
18,300.0	6,672.0	6,554.6	6,552.2	143.9	22.7	82.38	-193.6	6,443.2	4,256.7	4,178.8	77.90	54.643		
18,342.5	6,672.0	6,552.6	6,550.2	144.4	22.7	82.30	-193.7	6,443.3	4,296.7	4,219.0	77.70	55.302		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 09 - 70 Ranch 11-09 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWGS, 6700-2_Unknown													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
8,500.0	6,672.0	6,343.8	6,343.0	33.1	22.0	15.83	1,181.7	10,514.7	9,909.5	9,863.0	46.50	213.096		
8,600.0	6,672.0	6,344.7	6,343.8	33.9	22.0	15.95	1,181.7	10,514.7	9,809.6	9,763.1	46.50	210.958		
8,700.0	6,672.0	6,345.6	6,344.7	34.7	22.0	16.08	1,181.8	10,514.8	9,709.7	9,663.2	46.50	208.816		
8,800.0	6,672.0	6,346.4	6,345.6	35.5	22.0	16.20	1,181.8	10,514.8	9,609.8	9,563.3	46.50	206.669		
8,900.0	6,672.0	6,347.3	6,346.5	36.3	22.0	16.32	1,181.8	10,514.9	9,509.9	9,463.4	46.50	204.519		
9,000.0	6,672.0	6,348.2	6,347.4	37.2	22.0	16.45	1,181.8	10,514.9	9,410.0	9,363.5	46.50	202.365		
9,100.0	6,672.0	6,349.2	6,348.3	38.1	22.0	16.57	1,181.8	10,514.9	9,310.1	9,263.6	46.50	200.208		
9,200.0	6,672.0	6,350.1	6,349.2	39.0	22.0	16.70	1,181.8	10,515.0	9,210.2	9,163.7	46.51	198.047		
9,300.0	6,672.0	6,351.1	6,350.2	39.9	22.0	16.82	1,181.8	10,515.0	9,110.3	9,063.8	46.51	195.882		
9,400.0	6,672.0	6,352.0	6,351.2	40.8	22.0	16.94	1,181.8	10,515.1	9,010.4	8,963.9	46.51	193.715		
9,500.0	6,672.0	6,353.0	6,352.2	41.8	22.0	17.07	1,181.8	10,515.1	8,910.5	8,864.0	46.52	191.544		
9,600.0	6,672.0	6,354.0	6,353.2	42.7	22.0	17.19	1,181.9	10,515.2	8,810.7	8,764.1	46.53	189.370		
9,700.0	6,672.0	6,355.1	6,354.2	43.7	22.0	17.31	1,181.9	10,515.2	8,710.8	8,664.2	46.53	187.193		
9,800.0	6,672.0	6,356.1	6,355.2	44.7	22.0	17.44	1,181.9	10,515.3	8,610.9	8,564.4	46.54	185.013		
9,900.0	6,672.0	6,357.2	6,356.3	45.7	22.0	17.56	1,181.9	10,515.3	8,511.0	8,464.5	46.55	182.831		
10,000.0	6,672.0	6,358.3	6,357.4	46.7	22.0	17.69	1,181.9	10,515.4	8,411.1	8,364.6	46.56	180.646		
10,100.0	6,672.0	6,359.4	6,358.5	47.7	22.0	17.81	1,181.9	10,515.4	8,311.3	8,264.7	46.57	178.459		
10,200.0	6,672.0	6,360.5	6,359.6	48.8	22.1	17.94	1,181.9	10,515.5	8,211.4	8,164.8	46.58	176.269		
10,300.0	6,672.0	6,361.6	6,360.7	49.8	22.1	18.07	1,182.0	10,515.5	8,111.5	8,064.9	46.60	174.077		
10,400.0	6,672.0	6,362.8	6,361.9	50.9	22.1	18.19	1,182.0	10,515.6	8,011.7	7,965.1	46.61	171.883		
10,500.0	6,672.0	6,364.0	6,363.1	51.9	22.1	18.32	1,182.0	10,515.6	7,911.8	7,865.2	46.63	169.687		
10,600.0	6,672.0	6,400.0	6,399.0	53.0	22.2	20.04	1,182.4	10,517.7	7,812.3	7,765.4	46.82	166.870		
10,700.0	6,672.0	6,400.0	6,399.0	54.1	22.2	20.12	1,182.4	10,517.7	7,712.4	7,665.6	46.83	164.696		
10,800.0	6,672.0	6,400.0	6,399.0	55.2	22.2	20.20	1,182.4	10,517.7	7,612.5	7,565.7	46.84	162.520		
10,900.0	6,672.0	6,400.0	6,399.0	56.3	22.2	20.28	1,182.4	10,517.7	7,512.6	7,465.8	46.85	160.343		
11,000.0	6,672.0	6,400.0	6,399.0	57.4	22.2	20.36	1,182.4	10,517.7	7,412.8	7,365.9	46.87	158.165		
11,100.0	6,672.0	6,400.0	6,399.0	58.5	22.2	20.44	1,182.4	10,517.7	7,312.9	7,266.0	46.88	155.986		
11,200.0	6,672.0	6,400.0	6,399.0	59.6	22.2	20.51	1,182.4	10,517.7	7,213.0	7,166.2	46.90	153.807		
11,300.0	6,672.0	6,400.0	6,399.0	60.7	22.2	20.59	1,182.4	10,517.7	7,113.2	7,066.3	46.91	151.626		
11,400.0	6,672.0	6,400.0	6,399.0	61.8	22.2	20.66	1,182.4	10,517.7	7,013.3	6,966.4	46.93	149.445		
11,500.0	6,672.0	6,400.0	6,399.0	62.9	22.2	20.74	1,182.4	10,517.7	6,913.5	6,866.5	46.95	147.263		
11,600.0	6,672.0	6,400.0	6,399.0	64.1	22.2	20.81	1,182.4	10,517.7	6,813.7	6,766.7	46.96	145.080		
11,700.0	6,672.0	6,400.0	6,399.0	65.2	22.2	20.88	1,182.4	10,517.7	6,713.8	6,666.8	46.98	142.898		
11,800.0	6,672.0	6,400.0	6,399.0	66.3	22.2	20.95	1,182.4	10,517.7	6,614.0	6,567.0	47.00	140.715		
11,900.0	6,672.0	6,400.0	6,399.0	67.5	22.2	21.02	1,182.4	10,517.7	6,514.2	6,467.1	47.02	138.531		
12,000.0	6,672.0	6,400.0	6,399.0	68.6	22.2	21.08	1,182.4	10,517.7	6,414.3	6,367.3	47.04	136.348		
12,100.0	6,672.0	6,400.0	6,399.0	69.8	22.2	21.15	1,182.4	10,517.7	6,314.5	6,267.4	47.07	134.165		
12,200.0	6,672.0	6,400.0	6,399.0	70.9	22.2	21.21	1,182.4	10,517.7	6,214.7	6,167.6	47.09	131.981		
12,300.0	6,672.0	6,400.0	6,399.0	72.1	22.2	21.28	1,182.4	10,517.7	6,114.9	6,067.8	47.11	129.798		
12,400.0	6,672.0	6,400.0	6,399.0	73.2	22.2	21.34	1,182.4	10,517.7	6,015.1	5,968.0	47.13	127.616		
12,500.0	6,672.0	6,400.0	6,399.0	74.4	22.2	21.40	1,182.4	10,517.7	5,915.3	5,868.2	47.16	125.433		
12,600.0	6,672.0	6,400.0	6,399.0	75.5	22.2	21.46	1,182.4	10,517.7	5,815.5	5,768.3	47.18	123.251		
12,700.0	6,672.0	6,400.0	6,399.0	76.7	22.2	21.52	1,182.4	10,517.7	5,715.8	5,668.5	47.21	121.070		
12,800.0	6,672.0	6,400.0	6,399.0	77.9	22.2	21.58	1,182.4	10,517.7	5,616.0	5,568.8	47.24	118.889		
12,900.0	6,672.0	6,400.0	6,399.0	79.0	22.2	21.64	1,182.4	10,517.7	5,516.2	5,469.0	47.26	116.709		
13,000.0	6,672.0	6,400.0	6,399.0	80.2	22.2	21.69	1,182.4	10,517.7	5,416.5	5,369.2	47.29	114.529		
13,100.0	6,672.0	6,400.0	6,399.0	81.4	22.2	21.75	1,182.4	10,517.7	5,316.7	5,269.4	47.32	112.350		
13,200.0	6,672.0	6,400.0	6,399.0	82.6	22.2	21.80	1,182.4	10,517.7	5,217.0	5,169.7	47.35	110.172		
13,300.0	6,672.0	6,400.0	6,399.0	83.7	22.2	21.86	1,182.4	10,517.7	5,117.3	5,069.9	47.38	107.995		
13,400.0	6,672.0	6,400.0	6,399.0	84.9	22.2	21.91	1,182.4	10,517.7	5,017.6	4,970.2	47.42	105.819		
13,500.0	6,672.0	6,421.4	6,420.4	86.1	22.3	23.17	1,182.7	10,519.1	4,917.8	4,870.2	47.58	103.354		
13,600.0	6,672.0	6,424.8	6,423.8	87.3	22.3	23.43	1,182.7	10,519.4	4,818.1	4,770.4	47.64	101.138		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 09 - 70 Ranch 11-09 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWGS, 6700-2_Unknown													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre +N/-S	Centre +E/-W	Between Centres	Between Ellipses	Minimum Separation	Separation Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)			
13,700.0	6,672.0	6,428.4	6,427.3	88.4	22.3	23.69	1,182.8	10,519.6	4,718.4	4,670.7	47.70	98.924		
13,800.0	6,672.0	6,432.0	6,430.9	89.6	22.3	23.97	1,182.8	10,519.9	4,618.7	4,570.9	47.76	96.711		
13,900.0	6,672.0	6,435.7	6,434.6	90.8	22.3	24.25	1,182.9	10,520.1	4,519.0	4,471.2	47.82	94.500		
14,000.0	6,672.0	6,439.4	6,438.4	92.0	22.3	24.54	1,182.9	10,520.4	4,419.3	4,371.4	47.88	92.291		
14,100.0	6,672.0	6,443.3	6,442.2	93.2	22.3	24.84	1,183.0	10,520.7	4,319.6	4,271.7	47.95	90.084		
14,200.0	6,672.0	6,447.2	6,446.1	94.4	22.4	25.15	1,183.1	10,521.0	4,220.0	4,171.9	48.02	87.879		
14,300.0	6,672.0	6,451.2	6,450.2	95.6	22.4	25.48	1,183.1	10,521.3	4,120.3	4,072.2	48.09	85.676		
14,400.0	6,672.0	6,455.4	6,454.3	96.8	22.4	25.81	1,183.2	10,521.6	4,020.6	3,972.5	48.17	83.475		
14,500.0	6,672.0	6,459.6	6,458.5	98.0	22.4	26.16	1,183.3	10,521.9	3,921.0	3,872.8	48.24	81.277		
14,600.0	6,672.0	6,463.9	6,462.8	99.2	22.4	26.52	1,183.4	10,522.2	3,821.4	3,773.1	48.32	79.081		
14,700.0	6,672.0	6,468.3	6,467.2	100.4	22.4	26.90	1,183.5	10,522.6	3,721.8	3,673.4	48.41	76.887		
14,800.0	6,672.0	6,472.8	6,471.7	101.6	22.5	27.29	1,183.6	10,523.0	3,622.1	3,573.7	48.49	74.696		
14,900.0	6,672.0	6,477.5	6,476.3	102.7	22.5	27.70	1,183.7	10,523.3	3,522.6	3,474.0	48.58	72.507		
15,000.0	6,672.0	6,482.2	6,481.1	103.9	22.5	28.12	1,183.8	10,523.7	3,423.0	3,374.3	48.68	70.321		
15,100.0	6,672.0	6,500.0	6,498.7	105.1	22.5	29.69	1,184.2	10,525.2	3,323.4	3,274.6	48.86	68.015		
15,200.0	6,672.0	6,500.0	6,498.7	106.3	22.5	29.73	1,184.2	10,525.2	3,223.9	3,174.9	48.93	65.884		
15,300.0	6,672.0	6,500.0	6,498.7	107.6	22.5	29.77	1,184.2	10,525.2	3,124.3	3,075.3	49.01	63.753		
15,400.0	6,672.0	6,513.7	6,512.4	108.8	22.6	31.11	1,184.6	10,526.3	3,024.8	2,975.6	49.18	61.504		
15,500.0	6,672.0	6,539.6	6,538.3	110.0	22.7	33.93	1,185.1	10,528.4	2,925.2	2,875.8	49.45	59.155		
15,600.0	6,672.0	6,561.9	6,560.4	111.2	22.8	36.78	1,185.5	10,530.0	2,825.6	2,775.9	49.71	56.843		
15,700.0	6,672.0	6,581.2	6,579.7	112.4	22.8	39.62	1,185.7	10,531.3	2,726.0	2,676.0	49.96	54.562		
15,800.0	6,672.0	6,598.2	6,596.6	113.6	22.9	42.45	1,185.9	10,532.4	2,626.3	2,576.1	50.21	52.309		
15,900.0	6,672.0	6,613.6	6,612.1	114.8	22.9	45.32	1,186.0	10,533.4	2,526.7	2,476.2	50.46	50.075		
16,000.0	6,672.0	6,627.4	6,625.9	116.0	23.0	48.16	1,186.1	10,534.2	2,427.0	2,376.3	50.71	47.861		
16,100.0	6,672.0	6,639.8	6,638.2	117.2	23.0	50.92	1,186.2	10,534.8	2,327.4	2,276.4	50.97	45.665		
16,200.0	6,672.0	6,650.9	6,649.3	118.4	23.1	53.61	1,186.3	10,535.4	2,227.7	2,176.5	51.23	43.484		
16,300.0	6,672.0	6,660.9	6,659.3	119.6	23.1	56.21	1,186.3	10,535.9	2,128.1	2,076.6	51.51	41.317		
16,400.0	6,672.0	6,670.1	6,668.4	120.8	23.1	58.72	1,186.4	10,536.3	2,028.4	1,976.6	51.80	39.162		
16,500.0	6,672.0	6,678.4	6,676.7	122.0	23.2	61.13	1,186.5	10,536.7	1,928.8	1,876.7	52.11	37.017		
16,600.0	6,672.0	6,686.0	6,684.4	123.2	23.2	63.44	1,186.5	10,537.0	1,829.2	1,776.8	52.44	34.881		
16,700.0	6,672.0	6,693.1	6,691.4	124.5	23.2	65.65	1,186.6	10,537.3	1,729.6	1,676.8	52.81	32.752		
16,800.0	6,672.0	6,699.5	6,697.9	125.7	23.3	67.75	1,186.6	10,537.5	1,630.1	1,576.9	53.22	30.629		
16,900.0	6,672.0	6,705.5	6,703.9	126.9	23.3	69.76	1,186.7	10,537.7	1,530.6	1,476.9	53.69	28.510		
17,000.0	6,672.0	6,711.1	6,709.4	128.1	23.3	71.67	1,186.7	10,537.9	1,431.2	1,377.0	54.22	26.396		
17,100.0	6,672.0	6,716.3	6,714.6	129.3	23.3	73.48	1,186.7	10,538.1	1,331.9	1,277.0	54.84	24.285		
17,200.0	6,672.0	6,715.0	6,713.3	130.5	23.4	73.03	1,186.7	10,538.1	1,232.6	1,177.1	55.52	22.200		
17,300.0	6,672.0	6,718.8	6,717.1	131.7	23.4	74.38	1,186.8	10,538.2	1,133.5	1,077.1	56.41	20.094		
17,400.0	6,672.0	6,722.6	6,720.9	133.0	23.4	75.75	1,186.8	10,538.4	1,034.5	977.0	57.51	17.990		
17,500.0	6,672.0	6,726.4	6,724.7	134.2	23.4	77.13	1,186.8	10,538.5	935.8	876.9	58.90	15.888		
17,600.0	6,672.0	6,730.2	6,728.6	135.4	23.5	78.53	1,186.9	10,538.7	837.3	776.6	60.70	13.793		
17,700.0	6,672.0	6,734.1	6,732.4	136.6	23.5	79.93	1,186.9	10,538.8	739.2	676.1	63.10	11.714		
17,800.0	6,672.0	6,737.9	6,736.2	137.8	23.5	81.35	1,186.9	10,539.0	641.7	575.2	66.40	9.663		
17,900.0	6,672.0	6,741.7	6,740.0	139.0	23.6	82.78	1,186.9	10,539.1	545.0	473.9	71.11	7.665		
18,000.0	6,672.0	6,745.5	6,743.8	140.3	23.6	84.22	1,187.0	10,539.3	449.8	371.7	78.10	5.759		
18,100.0	6,672.0	6,749.3	6,747.6	141.5	23.6	85.67	1,187.0	10,539.4	357.1	268.1	89.06	4.010		
18,200.0	6,672.0	6,753.1	6,751.4	142.7	23.6	87.12	1,187.0	10,539.5	269.7	162.6	107.11	2.518		
18,300.0	6,672.0	6,757.0	6,755.3	143.9	23.7	88.57	1,187.1	10,539.7	194.8	58.2	136.54	1.426 Level 3		
18,342.5	6,672.0	6,758.6	6,756.9	144.4	23.7	89.19	1,187.1	10,539.8	170.9	19.2	151.65	1.127 Level 2, CC, ES, SF		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 09 - 70 Ranch 22-09 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWGS, 6480-2_Unknown													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
9,600.0	6,672.0	6,577.6	6,576.2	42.7	23.4	83.52	-256.6	11,589.8	9,975.9	9,927.0	48.94	203.846		
9,700.0	6,672.0	6,579.2	6,577.7	43.7	23.4	83.58	-256.6	11,589.8	9,877.2	9,828.2	49.03	201.437		
9,800.0	6,672.0	6,580.7	6,579.2	44.7	23.5	83.64	-256.6	11,589.8	9,778.6	9,729.4	49.13	199.019		
9,900.0	6,672.0	6,582.2	6,580.7	45.7	23.5	83.69	-256.6	11,589.8	9,679.9	9,630.7	49.24	196.592		
10,000.0	6,672.0	6,583.7	6,582.2	46.7	23.5	83.75	-256.7	11,589.9	9,581.3	9,531.9	49.35	194.158		
10,100.0	6,672.0	6,585.2	6,583.7	47.7	23.5	83.81	-256.7	11,589.9	9,482.7	9,433.2	49.46	191.715		
10,200.0	6,672.0	6,586.7	6,585.2	48.8	23.5	83.86	-256.7	11,589.9	9,384.1	9,334.6	49.58	189.264		
10,300.0	6,672.0	6,588.2	6,586.7	49.8	23.5	83.92	-256.8	11,589.9	9,285.6	9,235.9	49.71	186.805		
10,400.0	6,672.0	6,589.7	6,588.2	50.9	23.6	83.98	-256.8	11,590.0	9,187.1	9,137.3	49.84	184.338		
10,500.0	6,672.0	6,591.2	6,589.7	51.9	23.6	84.03	-256.8	11,590.0	9,088.7	9,038.7	49.98	181.864		
10,600.0	6,672.0	6,592.7	6,591.2	53.0	23.6	84.09	-256.9	11,590.0	8,990.3	8,940.1	50.12	179.383		
10,700.0	6,672.0	6,594.2	6,592.7	54.1	23.6	84.14	-256.9	11,590.0	8,891.9	8,841.6	50.27	176.894		
10,800.0	6,672.0	6,595.8	6,594.3	55.2	23.6	84.20	-256.9	11,590.1	8,793.5	8,743.1	50.42	174.399		
10,900.0	6,672.0	6,597.3	6,595.8	56.3	23.6	84.26	-256.9	11,590.1	8,695.2	8,644.6	50.58	171.897		
11,000.0	6,672.0	6,598.8	6,597.3	57.4	23.6	84.31	-257.0	11,590.1	8,596.9	8,546.2	50.75	169.388		
11,100.0	6,672.0	6,600.3	6,598.8	58.5	23.7	84.37	-257.0	11,590.1	8,498.7	8,447.8	50.93	166.874		
11,200.0	6,672.0	6,601.8	6,600.3	59.6	23.7	84.42	-257.0	11,590.2	8,400.5	8,349.4	51.11	164.353		
11,300.0	6,672.0	6,603.3	6,601.8	60.7	23.7	84.48	-257.1	11,590.2	8,302.4	8,251.1	51.30	161.827		
11,400.0	6,672.0	6,604.8	6,603.3	61.8	23.7	84.54	-257.1	11,590.2	8,204.3	8,152.8	51.50	159.296		
11,500.0	6,672.0	6,606.3	6,604.8	62.9	23.7	84.59	-257.1	11,590.2	8,106.3	8,054.5	51.71	156.759		
11,600.0	6,672.0	6,607.8	6,606.3	64.1	23.7	84.65	-257.1	11,590.2	8,008.3	7,956.3	51.93	154.218		
11,700.0	6,672.0	6,609.3	6,607.8	65.2	23.7	84.70	-257.2	11,590.3	7,910.3	7,858.2	52.15	151.673		
11,800.0	6,672.0	6,610.8	6,609.3	66.3	23.8	84.76	-257.2	11,590.3	7,812.4	7,760.0	52.39	149.124		
11,900.0	6,672.0	6,612.3	6,610.8	67.5	23.8	84.81	-257.2	11,590.3	7,714.6	7,661.9	52.63	146.572		
12,000.0	6,672.0	6,613.8	6,612.3	68.6	23.8	84.87	-257.3	11,590.3	7,616.8	7,563.9	52.89	144.016		
12,100.0	6,672.0	6,615.3	6,613.8	69.8	23.8	84.93	-257.3	11,590.4	7,519.1	7,465.9	53.15	141.458		
12,200.0	6,672.0	6,616.8	6,615.3	70.9	23.8	84.98	-257.3	11,590.4	7,421.4	7,368.0	53.43	138.898		
12,300.0	6,672.0	6,618.4	6,616.8	72.1	23.8	85.04	-257.3	11,590.4	7,323.8	7,270.1	53.72	136.336		
12,400.0	6,672.0	6,619.9	6,618.4	73.2	23.8	85.09	-257.4	11,590.4	7,226.3	7,172.3	54.02	133.773		
12,500.0	6,672.0	6,621.4	6,619.9	74.4	23.9	85.15	-257.4	11,590.5	7,128.8	7,074.5	54.33	131.210		
12,600.0	6,672.0	6,622.9	6,621.4	75.5	23.9	85.20	-257.4	11,590.5	7,031.5	6,976.8	54.66	128.646		
12,700.0	6,672.0	6,624.4	6,622.9	76.7	23.9	85.26	-257.5	11,590.5	6,934.2	6,879.2	55.00	126.083		
12,800.0	6,672.0	6,625.9	6,624.4	77.9	23.9	85.31	-257.5	11,590.5	6,836.9	6,781.6	55.35	123.522		
12,900.0	6,672.0	6,627.4	6,625.9	79.0	23.9	85.37	-257.5	11,590.5	6,739.8	6,684.1	55.72	120.962		
13,000.0	6,672.0	6,628.9	6,627.4	80.2	23.9	85.42	-257.6	11,590.6	6,642.7	6,586.6	56.10	118.404		
13,100.0	6,672.0	6,630.4	6,628.9	81.4	24.0	85.48	-257.6	11,590.6	6,545.8	6,489.3	56.50	115.850		
13,200.0	6,672.0	6,631.9	6,630.4	82.6	24.0	85.53	-257.6	11,590.6	6,448.9	6,392.0	56.92	113.300		
13,300.0	6,672.0	6,633.4	6,631.9	83.7	24.0	85.58	-257.6	11,590.6	6,352.1	6,294.7	57.35	110.755		
13,400.0	6,672.0	6,634.9	6,633.4	84.9	24.0	85.64	-257.7	11,590.7	6,255.4	6,197.6	57.81	108.215		
13,500.0	6,672.0	6,636.4	6,634.9	86.1	24.0	85.69	-257.7	11,590.7	6,158.9	6,100.6	58.28	105.681		
13,600.0	6,672.0	6,637.9	6,636.4	87.3	24.0	85.75	-257.7	11,590.7	6,062.4	6,003.6	58.77	103.155		
13,700.0	6,672.0	6,639.4	6,637.9	88.4	24.0	85.80	-257.8	11,590.7	5,966.1	5,906.8	59.28	100.636		
13,800.0	6,672.0	6,640.9	6,639.4	89.6	24.1	85.86	-257.8	11,590.8	5,869.9	5,810.0	59.82	98.127		
13,900.0	6,672.0	6,642.4	6,640.9	90.8	24.1	85.91	-257.8	11,590.8	5,773.8	5,713.4	60.38	95.627		
14,000.0	6,672.0	6,643.9	6,642.4	92.0	24.1	85.97	-257.8	11,590.8	5,677.8	5,616.9	60.96	93.138		
14,100.0	6,672.0	6,645.4	6,643.9	93.2	24.1	86.02	-257.9	11,590.8	5,582.0	5,520.5	61.57	90.661		
14,200.0	6,672.0	6,646.9	6,645.4	94.4	24.1	86.07	-257.9	11,590.9	5,486.4	5,424.2	62.21	88.197		
14,300.0	6,672.0	6,648.4	6,646.9	95.6	24.1	86.13	-257.9	11,590.9	5,390.9	5,328.0	62.87	85.746		
14,400.0	6,672.0	6,649.9	6,648.4	96.8	24.1	86.18	-258.0	11,590.9	5,295.6	5,232.0	63.56	83.311		
14,500.0	6,672.0	6,651.4	6,649.9	98.0	24.2	86.24	-258.0	11,590.9	5,200.5	5,136.2	64.29	80.892		
14,600.0	6,672.0	6,652.9	6,651.4	99.2	24.2	86.29	-258.0	11,590.9	5,105.5	5,040.5	65.05	78.490		
14,700.0	6,672.0	6,654.4	6,652.9	100.4	24.2	86.34	-258.0	11,591.0	5,010.7	4,944.9	65.84	76.106		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 09 - 70 Ranch 22-09 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS, 6480-2_Unknown													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
14,800.0	6,672.0	6,655.9	6,654.4	101.6	24.2	86.40	-258.1	11,591.0	4,916.2	4,849.5	66.67	73.742		
14,900.0	6,672.0	6,657.4	6,655.9	102.7	24.2	86.45	-258.1	11,591.0	4,821.9	4,754.3	67.53	71.399		
15,000.0	6,672.0	6,659.0	6,657.4	103.9	24.2	86.51	-258.1	11,591.0	4,727.8	4,659.3	68.44	69.078		
15,100.0	6,672.0	6,660.5	6,658.9	105.1	24.2	86.56	-258.2	11,591.1	4,633.9	4,564.6	69.39	66.780		
15,200.0	6,672.0	6,662.0	6,660.4	106.3	24.3	86.61	-258.2	11,591.1	4,540.4	4,470.0	70.39	64.507		
15,300.0	6,672.0	6,663.5	6,661.9	107.6	24.3	86.67	-258.2	11,591.1	4,447.1	4,375.7	71.43	62.260		
15,400.0	6,672.0	6,665.0	6,663.4	108.8	24.3	86.72	-258.3	11,591.1	4,354.1	4,281.6	72.52	60.040		
15,500.0	6,672.0	6,666.5	6,664.9	110.0	24.3	86.78	-258.3	11,591.2	4,261.4	4,187.8	73.66	57.849		
15,600.0	6,672.0	6,668.0	6,666.4	111.2	24.3	86.83	-258.3	11,591.2	4,169.1	4,094.2	74.87	55.688		
15,700.0	6,672.0	6,669.5	6,667.9	112.4	24.3	86.88	-258.3	11,591.2	4,077.1	4,001.0	76.13	53.558		
15,800.0	6,672.0	6,671.0	6,669.4	113.6	24.3	86.94	-258.4	11,591.2	3,985.6	3,908.1	77.45	51.461		
15,900.0	6,672.0	6,672.5	6,670.9	114.8	24.4	86.99	-258.4	11,591.2	3,894.4	3,815.6	78.84	49.398		
16,000.0	6,672.0	6,674.0	6,672.4	116.0	24.4	87.04	-258.4	11,591.3	3,803.7	3,723.4	80.30	47.371		
16,100.0	6,672.0	6,675.5	6,673.9	117.2	24.4	87.10	-258.5	11,591.3	3,713.5	3,631.6	81.83	45.381		
16,200.0	6,672.0	6,677.0	6,675.4	118.4	24.4	87.15	-258.5	11,591.3	3,623.7	3,540.3	83.44	43.429		
16,300.0	6,672.0	6,678.5	6,676.9	119.6	24.4	87.20	-258.5	11,591.3	3,534.6	3,449.4	85.13	41.518		
16,400.0	6,672.0	6,680.0	6,678.4	120.8	24.4	87.26	-258.5	11,591.4	3,446.0	3,359.1	86.92	39.647		
16,500.0	6,672.0	6,681.5	6,679.9	122.0	24.5	87.31	-258.6	11,591.4	3,358.1	3,269.3	88.79	37.820		
16,600.0	6,672.0	6,683.0	6,681.4	123.2	24.5	87.36	-258.6	11,591.4	3,270.9	3,180.1	90.77	36.036		
16,700.0	6,672.0	6,684.5	6,682.9	124.5	24.5	87.42	-258.6	11,591.4	3,184.4	3,091.6	92.84	34.299		
16,800.0	6,672.0	6,686.0	6,684.4	125.7	24.5	87.47	-258.7	11,591.5	3,098.8	3,003.7	95.03	32.608		
16,900.0	6,672.0	6,687.5	6,685.9	126.9	24.5	87.52	-258.7	11,591.5	3,014.0	2,916.7	97.33	30.965		
17,000.0	6,672.0	6,689.0	6,687.4	128.1	24.5	87.58	-258.7	11,591.5	2,930.2	2,830.4	99.76	29.373		
17,100.0	6,672.0	6,690.5	6,688.9	129.3	24.5	87.63	-258.7	11,591.5	2,847.4	2,745.1	102.31	27.832		
17,200.0	6,672.0	6,692.0	6,690.4	130.5	24.6	87.68	-258.8	11,591.5	2,765.8	2,660.8	104.99	26.343		
17,300.0	6,672.0	6,693.4	6,691.9	131.7	24.6	87.74	-258.8	11,591.6	2,685.5	2,577.7	107.82	24.908		
17,400.0	6,672.0	6,694.9	6,693.4	133.0	24.6	87.79	-258.8	11,591.6	2,606.5	2,495.7	110.78	23.528		
17,500.0	6,672.0	6,696.4	6,694.9	134.2	24.6	87.84	-258.9	11,591.6	2,529.0	2,415.1	113.90	22.204		
17,600.0	6,672.0	6,697.9	6,696.4	135.4	24.6	87.90	-258.9	11,591.6	2,453.1	2,336.0	117.16	20.938		
17,700.0	6,672.0	6,699.4	6,697.9	136.6	24.6	87.95	-258.9	11,591.7	2,379.0	2,258.5	120.58	19.730		
17,800.0	6,672.0	6,700.9	6,699.4	137.8	24.6	88.00	-258.9	11,591.7	2,306.9	2,182.8	124.15	18.582		
17,900.0	6,672.0	6,702.4	6,700.9	139.0	24.7	88.05	-259.0	11,591.7	2,237.0	2,109.1	127.86	17.495		
18,000.0	6,672.0	6,703.9	6,702.4	140.3	24.7	88.11	-259.0	11,591.7	2,169.3	2,037.6	131.72	16.469		
18,100.0	6,672.0	6,705.4	6,703.9	141.5	24.7	88.16	-259.0	11,591.8	2,104.3	1,968.6	135.70	15.507		
18,200.0	6,672.0	6,706.9	6,705.4	142.7	24.7	88.21	-259.1	11,591.8	2,042.1	1,902.3	139.80	14.607		
18,300.0	6,672.0	6,708.4	6,706.9	143.9	24.7	88.27	-259.1	11,591.8	1,983.0	1,839.0	143.99	13.772		
18,342.5	6,672.0	6,709.1	6,707.5	144.4	24.7	88.29	-259.1	11,591.8	1,958.9	1,813.2	145.78	13.437	CC, ES, SF	



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 09 - 70 Ranch 31-09 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWGS; 7335-2_Unknown													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
10,700.0	6,672.0	6,145.5	6,143.8	54.1	21.3	44.00	790.1	12,748.4	9,959.0	9,913.1	45.98	216.581		
10,800.0	6,672.0	6,150.4	6,148.6	55.2	21.3	44.27	790.2	12,748.7	9,859.4	9,813.4	46.03	214.194		
10,900.0	6,672.0	6,155.2	6,153.5	56.3	21.3	44.54	790.2	12,749.0	9,759.7	9,713.7	46.08	211.805		
11,000.0	6,672.0	6,160.1	6,158.4	57.4	21.3	44.82	790.2	12,749.3	9,660.1	9,613.9	46.13	209.412		
11,100.0	6,672.0	6,165.1	6,163.3	58.5	21.4	45.10	790.3	12,749.6	9,560.4	9,514.2	46.18	207.017		
11,200.0	6,672.0	6,170.0	6,168.3	59.6	21.4	45.39	790.3	12,749.9	9,460.8	9,414.6	46.24	204.619		
11,300.0	6,672.0	6,175.0	6,173.2	60.7	21.4	45.67	790.3	12,750.2	9,361.2	9,314.9	46.29	202.218		
11,400.0	6,672.0	6,180.0	6,178.2	61.8	21.4	45.96	790.4	12,750.5	9,261.5	9,215.2	46.35	199.815		
11,500.0	6,672.0	6,185.0	6,183.2	62.9	21.4	46.26	790.5	12,750.8	9,161.9	9,115.5	46.41	197.409		
11,600.0	6,672.0	6,190.1	6,188.3	64.1	21.5	46.55	790.5	12,751.1	9,062.3	9,015.8	46.47	195.001		
11,700.0	6,672.0	6,195.1	6,193.3	65.2	21.5	46.85	790.6	12,751.4	8,962.7	8,916.1	46.54	192.591		
11,800.0	6,672.0	6,200.2	6,198.4	66.3	21.5	47.15	790.6	12,751.7	8,863.0	8,816.4	46.60	190.180		
11,900.0	6,672.0	6,205.2	6,203.4	67.5	21.5	47.45	790.7	12,752.0	8,763.4	8,716.8	46.67	187.769		
12,000.0	6,672.0	6,210.2	6,208.4	68.6	21.5	47.75	790.8	12,752.3	8,663.8	8,617.1	46.74	185.357		
12,100.0	6,672.0	6,215.2	6,213.4	69.8	21.5	48.05	790.8	12,752.6	8,564.3	8,517.4	46.81	182.943		
12,200.0	6,672.0	6,220.3	6,218.4	70.9	21.6	48.36	790.9	12,752.9	8,464.7	8,417.8	46.89	180.529		
12,300.0	6,672.0	6,225.3	6,223.5	72.1	21.6	48.67	790.9	12,753.2	8,365.1	8,318.1	46.97	178.112		
12,400.0	6,672.0	6,230.4	6,228.6	73.2	21.6	48.98	791.0	12,753.6	8,265.5	8,218.5	47.04	175.695		
12,500.0	6,672.0	6,235.5	6,233.7	74.4	21.6	49.30	791.1	12,753.9	8,166.0	8,118.8	47.13	173.277		
12,600.0	6,672.0	6,240.6	6,238.8	75.5	21.6	49.62	791.1	12,754.2	8,066.4	8,019.2	47.21	170.858		
12,700.0	6,672.0	6,245.8	6,243.9	76.7	21.6	49.94	791.2	12,754.5	7,966.8	7,919.5	47.30	168.439		
12,800.0	6,672.0	6,250.9	6,249.0	77.9	21.7	50.26	791.2	12,754.8	7,867.3	7,819.9	47.39	166.019		
12,900.0	6,672.0	6,256.1	6,254.2	79.0	21.7	50.59	791.3	12,755.1	7,767.8	7,720.3	47.48	163.598		
13,000.0	6,672.0	6,261.3	6,259.4	80.2	21.7	50.92	791.3	12,755.5	7,668.2	7,620.7	47.58	161.177		
13,100.0	6,672.0	6,266.5	6,264.6	81.4	21.7	51.26	791.4	12,755.8	7,568.7	7,521.1	47.68	158.756		
13,200.0	6,672.0	6,271.8	6,269.8	82.6	21.7	51.60	791.5	12,756.1	7,469.2	7,421.4	47.78	156.334		
13,300.0	6,672.0	6,277.0	6,275.1	83.7	21.8	51.94	791.5	12,756.4	7,369.7	7,321.8	47.88	153.913		
13,400.0	6,672.0	6,282.3	6,280.3	84.9	21.8	52.29	791.6	12,756.8	7,270.2	7,222.2	47.99	151.492		
13,500.0	6,672.0	6,287.6	6,285.6	86.1	21.8	52.64	791.6	12,757.1	7,170.8	7,122.7	48.10	149.070		
13,600.0	6,672.0	6,292.9	6,290.9	87.3	21.8	52.99	791.7	12,757.4	7,071.3	7,023.1	48.22	146.650		
13,700.0	6,672.0	6,298.3	6,296.3	88.4	21.8	53.35	791.7	12,757.8	6,971.8	6,923.5	48.34	144.229		
13,800.0	6,672.0	6,300.0	6,298.0	89.6	21.8	53.48	791.7	12,757.9	6,872.4	6,823.9	48.44	141.869		
13,900.0	6,672.0	6,300.0	6,298.0	90.8	21.8	53.50	791.7	12,757.9	6,773.0	6,724.4	48.54	139.536		
14,000.0	6,672.0	6,300.0	6,298.0	92.0	21.8	53.53	791.7	12,757.9	6,673.6	6,624.9	48.64	137.201		
14,100.0	6,672.0	6,314.7	6,312.7	93.2	21.9	54.48	791.9	12,758.8	6,574.1	6,525.3	48.83	134.634		
14,200.0	6,672.0	6,318.8	6,316.8	94.4	21.9	54.77	791.9	12,759.1	6,474.7	6,425.8	48.96	132.236		
14,300.0	6,672.0	6,323.0	6,320.9	95.6	21.9	55.06	791.9	12,759.4	6,375.4	6,326.3	49.10	129.839		
14,400.0	6,672.0	6,327.2	6,325.1	96.8	21.9	55.35	792.0	12,759.6	6,276.0	6,226.8	49.25	127.441		
14,500.0	6,672.0	6,331.5	6,329.4	98.0	22.0	55.65	792.0	12,759.9	6,176.7	6,127.3	49.40	125.044		
14,600.0	6,672.0	6,335.8	6,333.7	99.2	22.0	55.96	792.1	12,760.2	6,077.4	6,027.8	49.55	122.646		
14,700.0	6,672.0	6,340.2	6,338.1	100.4	22.0	56.27	792.1	12,760.5	5,978.1	5,928.3	49.71	120.249		
14,800.0	6,672.0	6,344.6	6,342.5	101.6	22.0	56.59	792.2	12,760.8	5,878.8	5,828.9	49.88	117.852		
14,900.0	6,672.0	6,349.1	6,347.0	102.7	22.0	56.91	792.2	12,761.1	5,779.5	5,729.5	50.06	115.456		
15,000.0	6,672.0	6,353.6	6,351.5	103.9	22.0	57.23	792.3	12,761.4	5,680.3	5,630.0	50.24	113.060		
15,100.0	6,672.0	6,358.2	6,356.1	105.1	22.0	57.56	792.3	12,761.7	5,581.0	5,530.6	50.43	110.665		
15,200.0	6,672.0	6,362.8	6,360.7	106.3	22.1	57.90	792.4	12,762.0	5,481.9	5,431.2	50.63	108.271		
15,300.0	6,672.0	6,367.5	6,365.4	107.6	22.1	58.24	792.5	12,762.4	5,382.7	5,331.8	50.84	105.878		
15,400.0	6,672.0	6,372.3	6,370.2	108.8	22.1	58.59	792.5	12,762.7	5,283.5	5,232.5	51.06	103.485		
15,500.0	6,672.0	6,377.1	6,375.0	110.0	22.1	58.95	792.6	12,763.0	5,184.4	5,133.1	51.28	101.094		
15,600.0	6,672.0	6,382.0	6,379.9	111.2	22.1	59.31	792.7	12,763.4	5,085.3	5,033.8	51.52	98.704		
15,700.0	6,672.0	6,387.0	6,384.8	112.4	22.1	59.68	792.7	12,763.7	4,986.3	4,934.5	51.77	96.316		
15,800.0	6,672.0	6,392.0	6,389.8	113.6	22.2	60.05	792.8	12,764.1	4,887.2	4,835.2	52.03	93.929		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 09 - 70 Ranch 31-09 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWSSG, 7335-2_Unknown													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
15,900.0	6,672.0	6,400.0	6,397.8	114.8	22.2	60.64	792.9	12,764.7	4,788.2	4,735.9	52.32	91.513		
16,000.0	6,672.0	6,400.0	6,397.8	116.0	22.2	60.65	792.9	12,764.7	4,689.3	4,636.7	52.58	89.184		
16,100.0	6,672.0	6,400.0	6,397.8	117.2	22.2	60.67	792.9	12,764.7	4,590.4	4,537.5	52.85	86.855		
16,200.0	6,672.0	6,400.0	6,397.8	118.4	22.2	60.68	792.9	12,764.7	4,491.5	4,438.4	53.14	84.526		
16,300.0	6,672.0	6,400.0	6,397.8	119.6	22.2	60.70	792.9	12,764.7	4,392.7	4,339.3	53.44	82.197		
16,400.0	6,672.0	6,400.0	6,397.8	120.8	22.2	60.71	792.9	12,764.7	4,293.9	4,240.2	53.76	79.868		
16,500.0	6,672.0	6,420.2	6,417.9	122.0	22.3	62.21	793.2	12,766.2	4,195.1	4,140.9	54.23	77.362		
16,600.0	6,672.0	6,424.2	6,421.9	123.2	22.3	62.52	793.2	12,766.5	4,096.5	4,041.9	54.61	75.007		
16,700.0	6,672.0	6,428.3	6,425.9	124.5	22.3	62.84	793.3	12,766.8	3,997.9	3,942.8	55.03	72.655		
16,800.0	6,672.0	6,432.4	6,430.1	125.7	22.3	63.16	793.3	12,767.1	3,899.3	3,843.8	55.46	70.306		
16,900.0	6,672.0	6,436.7	6,434.3	126.9	22.3	63.50	793.4	12,767.5	3,800.8	3,744.9	55.93	67.961		
17,000.0	6,672.0	6,441.0	6,438.7	128.1	22.3	63.84	793.4	12,767.8	3,702.4	3,646.0	56.42	65.621		
17,100.0	6,672.0	6,445.5	6,443.1	129.3	22.4	64.19	793.5	12,768.2	3,604.1	3,547.1	56.95	63.286		
17,200.0	6,672.0	6,450.0	6,447.7	130.5	22.4	64.56	793.5	12,768.6	3,505.8	3,448.3	57.51	60.957		
17,300.0	6,672.0	6,454.7	6,452.3	131.7	22.4	64.93	793.5	12,769.0	3,407.7	3,349.6	58.12	58.634		
17,400.0	6,672.0	6,459.5	6,457.1	133.0	22.4	65.31	793.6	12,769.4	3,309.6	3,250.9	58.77	56.319		
17,500.0	6,672.0	6,464.4	6,461.9	134.2	22.4	65.71	793.6	12,769.8	3,211.7	3,152.2	59.46	54.013		
17,600.0	6,672.0	6,469.4	6,466.9	135.4	22.4	66.11	793.7	12,770.2	3,113.8	3,053.6	60.21	51.717		
17,700.0	6,672.0	6,474.6	6,472.1	136.6	22.5	66.53	793.7	12,770.7	3,016.1	2,955.1	61.02	49.432		
17,800.0	6,672.0	6,479.8	6,477.3	137.8	22.5	66.96	793.7	12,771.2	2,918.6	2,856.7	61.89	47.159		
17,900.0	6,672.0	6,485.2	6,482.7	139.0	22.5	67.41	793.7	12,771.6	2,821.2	2,758.4	62.83	44.902		
18,000.0	6,672.0	6,500.0	6,497.4	140.3	22.6	68.62	793.8	12,773.0	2,724.0	2,660.1	63.91	42.621		
18,100.0	6,672.0	18,100.0	6,544.5	141.5	63.7	72.64	793.8	12,776.5	2,626.5	2,520.5	105.97	24.786 SF		
18,200.0	6,672.0	6,609.6	6,606.7	142.7	22.9	78.20	793.8	12,780.8	2,529.9	2,462.9	67.01	37.754		
18,300.0	6,672.0	6,618.2	6,615.3	143.9	23.0	78.99	793.8	12,781.2	2,433.0	2,364.6	68.37	35.586		
18,342.5	6,672.0	6,621.7	6,618.8	144.4	23.0	79.32	793.8	12,781.4	2,391.9	2,322.9	68.98	34.674 CC, ES		



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 09 - 70 Ranch 41-09 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWGS, 6650-2_Unknown													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis		Distance								Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
12,200.0	6,672.0	6,662.9	6,662.2	70.9	23.2	80.42	944.5	14,251.1	9,941.0	9,892.0	49.02	202.806		
12,300.0	6,672.0	6,663.7	6,663.0	72.1	23.2	80.54	944.5	14,251.1	9,841.1	9,792.1	49.08	200.529		
12,400.0	6,672.0	6,664.5	6,663.9	73.2	23.2	80.66	944.5	14,251.1	9,741.2	9,692.1	49.14	198.252		
12,500.0	6,672.0	6,665.3	6,664.7	74.4	23.2	80.77	944.5	14,251.1	9,641.4	9,592.2	49.20	195.975		
12,600.0	6,672.0	6,666.2	6,665.5	75.5	23.2	80.89	944.5	14,251.1	9,541.5	9,492.2	49.26	193.697		
12,700.0	6,672.0	6,667.0	6,666.3	76.7	23.2	81.00	944.5	14,251.1	9,441.6	9,392.3	49.32	191.420		
12,800.0	6,672.0	6,667.8	6,667.2	77.9	23.2	81.11	944.5	14,251.1	9,341.7	9,292.3	49.39	189.142		
12,900.0	6,672.0	6,668.6	6,668.0	79.0	23.2	81.23	944.5	14,251.1	9,241.8	9,192.4	49.46	186.865		
13,000.0	6,672.0	6,669.5	6,668.8	80.2	23.2	81.34	944.5	14,251.1	9,142.0	9,092.4	49.53	184.588		
13,100.0	6,672.0	6,670.3	6,669.7	81.4	23.2	81.45	944.6	14,251.1	9,042.1	8,992.5	49.60	182.312		
13,200.0	6,672.0	6,671.1	6,670.5	82.6	23.2	81.57	944.6	14,251.1	8,942.2	8,892.6	49.67	180.036		
13,300.0	6,672.0	6,672.0	6,671.3	83.7	23.2	81.68	944.6	14,251.1	8,842.4	8,792.6	49.74	177.761		
13,400.0	6,672.0	6,672.8	6,672.1	84.9	23.2	81.79	944.6	14,251.1	8,742.5	8,692.7	49.82	175.487		
13,500.0	6,672.0	6,673.6	6,673.0	86.1	23.2	81.90	944.6	14,251.1	8,642.7	8,592.8	49.90	173.213		
13,600.0	6,672.0	6,674.4	6,673.8	87.3	23.2	82.01	944.6	14,251.2	8,542.8	8,492.8	49.98	170.940		
13,700.0	6,672.0	6,675.3	6,674.6	88.4	23.2	82.12	944.6	14,251.2	8,443.0	8,392.9	50.06	168.668		
13,800.0	6,672.0	6,676.1	6,675.4	89.6	23.3	82.23	944.6	14,251.2	8,343.1	8,293.0	50.14	166.398		
13,900.0	6,672.0	6,676.9	6,676.3	90.8	23.3	82.34	944.6	14,251.2	8,243.3	8,193.1	50.22	164.128		
14,000.0	6,672.0	6,677.8	6,677.1	92.0	23.3	82.45	944.6	14,251.2	8,143.5	8,093.1	50.31	161.860		
14,100.0	6,672.0	6,678.6	6,677.9	93.2	23.3	82.56	944.7	14,251.2	8,043.6	7,993.2	50.40	159.593		
14,200.0	6,672.0	6,679.4	6,678.8	94.4	23.3	82.67	944.7	14,251.2	7,943.8	7,893.3	50.49	157.328		
14,300.0	6,672.0	6,680.2	6,679.6	95.6	23.3	82.78	944.7	14,251.2	7,844.0	7,793.4	50.59	155.064		
14,400.0	6,672.0	6,681.1	6,680.4	96.8	23.3	82.89	944.7	14,251.2	7,744.2	7,693.5	50.68	152.802		
14,500.0	6,672.0	6,681.9	6,681.2	98.0	23.3	83.00	944.7	14,251.2	7,644.4	7,593.6	50.78	150.541		
14,600.0	6,672.0	6,682.7	6,682.1	99.2	23.3	83.10	944.7	14,251.2	7,544.5	7,493.7	50.88	148.282		
14,700.0	6,672.0	6,683.6	6,682.9	100.4	23.3	83.21	944.7	14,251.2	7,444.7	7,393.8	50.98	146.025		
14,800.0	6,672.0	6,684.4	6,683.7	101.6	23.3	83.32	944.7	14,251.2	7,345.0	7,293.9	51.09	143.770		
14,900.0	6,672.0	6,685.2	6,684.6	102.7	23.3	83.42	944.7	14,251.2	7,245.2	7,194.0	51.20	141.516		
15,000.0	6,672.0	6,686.0	6,685.4	103.9	23.3	83.53	944.7	14,251.2	7,145.4	7,094.1	51.31	139.264		
15,100.0	6,672.0	6,686.9	6,686.2	105.1	23.3	83.64	944.8	14,251.3	7,045.6	6,994.2	51.42	137.015		
15,200.0	6,672.0	6,687.7	6,687.0	106.3	23.3	83.74	944.8	14,251.3	6,945.8	6,894.3	51.54	134.767		
15,300.0	6,672.0	6,688.5	6,687.9	107.6	23.3	83.85	944.8	14,251.3	6,846.1	6,794.4	51.66	132.522		
15,400.0	6,672.0	6,689.4	6,688.7	108.8	23.4	83.95	944.8	14,251.3	6,746.3	6,694.5	51.78	130.279		
15,500.0	6,672.0	6,690.2	6,689.5	110.0	23.4	84.06	944.8	14,251.3	6,646.6	6,594.7	51.91	128.038		
15,600.0	6,672.0	6,691.0	6,690.4	111.2	23.4	84.16	944.8	14,251.3	6,546.8	6,494.8	52.04	125.799		
15,700.0	6,672.0	6,691.8	6,691.2	112.4	23.4	84.27	944.8	14,251.3	6,447.1	6,394.9	52.18	123.562		
15,800.0	6,672.0	6,692.7	6,692.0	113.6	23.4	84.37	944.8	14,251.3	6,347.4	6,295.1	52.32	121.328		
15,900.0	6,672.0	6,693.5	6,692.8	114.8	23.4	84.48	944.8	14,251.3	6,247.7	6,195.2	52.46	119.096		
16,000.0	6,672.0	6,694.3	6,693.7	116.0	23.4	84.58	944.8	14,251.3	6,148.0	6,095.4	52.61	116.866		
16,100.0	6,672.0	6,695.2	6,694.5	117.2	23.4	84.68	944.9	14,251.3	6,048.3	5,995.5	52.76	114.639		
16,200.0	6,672.0	6,696.0	6,695.3	118.4	23.4	84.79	944.9	14,251.3	5,948.6	5,895.7	52.92	112.414		
16,300.0	6,672.0	6,696.8	6,696.2	119.6	23.4	84.89	944.9	14,251.3	5,849.0	5,795.9	53.08	110.192		
16,400.0	6,672.0	6,697.7	6,697.0	120.8	23.4	84.99	944.9	14,251.3	5,749.3	5,696.0	53.25	107.972		
16,500.0	6,672.0	6,698.5	6,697.8	122.0	23.4	85.10	944.9	14,251.3	5,649.7	5,596.2	53.42	105.754		
16,600.0	6,672.0	6,699.3	6,698.7	123.2	23.4	85.20	944.9	14,251.3	5,550.0	5,496.4	53.60	103.539		
16,700.0	6,672.0	6,700.1	6,699.5	124.5	23.4	85.30	944.9	14,251.4	5,450.4	5,396.6	53.79	101.327		
16,800.0	6,672.0	6,701.0	6,700.3	125.7	23.4	85.40	944.9	14,251.4	5,350.8	5,296.8	53.98	99.117		
16,900.0	6,672.0	6,701.8	6,701.1	126.9	23.4	85.50	944.9	14,251.4	5,251.2	5,197.0	54.19	96.909		
17,000.0	6,672.0	6,702.6	6,702.0	128.1	23.4	85.61	944.9	14,251.4	5,151.7	5,097.3	54.40	94.704		
17,100.0	6,672.0	6,703.5	6,702.8	129.3	23.5	85.71	944.9	14,251.4	5,052.1	4,997.5	54.62	92.502		
17,200.0	6,672.0	6,704.3	6,703.6	130.5	23.5	85.81	945.0	14,251.4	4,952.6	4,897.7	54.84	90.302		
17,300.0	6,672.0	6,705.1	6,704.5	131.7	23.5	85.91	945.0	14,251.4	4,853.1	4,798.0	55.08	88.105		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> BB Section 09 - 70 Ranch 41-09 - Original Drilling - Original Drilling - As Drilled												<b>Offset Site Error:</b>	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWSG, 6650-2_Unknown												<b>Offset Well Error:</b>	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
17,400.0	6,672.0	6,706.0	6,705.3	133.0	23.5	86.01	945.0	14,251.4	4,753.6	4,698.2	55.33	85.911	
17,500.0	6,672.0	6,706.8	6,706.1	134.2	23.5	86.11	945.0	14,251.4	4,654.1	4,598.5	55.59	83.719	
17,600.0	6,672.0	6,707.6	6,707.0	135.4	23.5	86.21	945.0	14,251.4	4,554.7	4,498.8	55.87	81.530	
17,700.0	6,672.0	6,708.4	6,707.8	136.6	23.5	86.31	945.0	14,251.4	4,455.2	4,399.1	56.15	79.343	
17,800.0	6,672.0	6,709.3	6,708.6	137.8	23.5	86.41	945.0	14,251.4	4,355.9	4,299.4	56.45	77.160	
17,900.0	6,672.0	6,710.1	6,709.5	139.0	23.5	86.51	945.0	14,251.4	4,256.5	4,199.7	56.77	74.979	
18,000.0	6,672.0	6,710.9	6,710.3	140.3	23.5	86.61	945.0	14,251.4	4,157.2	4,100.1	57.10	72.802	
18,100.0	6,672.0	6,711.8	6,711.1	141.5	23.5	86.71	945.0	14,251.4	4,057.9	4,000.4	57.45	70.627	
18,200.0	6,672.0	6,712.6	6,711.9	142.7	23.5	86.81	945.1	14,251.5	3,958.6	3,900.8	57.83	68.456	
18,300.0	6,672.0	6,713.4	6,712.8	143.9	23.5	86.91	945.1	14,251.5	3,859.4	3,801.2	58.22	66.288	
18,342.5	6,672.0	6,713.8	6,713.1	144.4	23.5	86.95	945.1	14,251.5	3,817.3	3,758.9	58.40	65.369 CC, ES, SF	



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 09 - 70 Ranch 44-09 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWGS, 6650-2_Unknown													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis		Distance								Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
13,100.0	6,672.0	6,515.5	6,514.8	81.4	22.6	87.37	-2,917.2	14,276.4	9,961.5	9,896.0	65.56	151.952		
13,200.0	6,672.0	6,517.2	6,516.4	82.6	22.6	87.40	-2,917.2	14,276.5	9,871.6	9,805.3	66.27	148.962		
13,300.0	6,672.0	6,518.8	6,518.0	83.7	22.6	87.42	-2,917.2	14,276.5	9,781.8	9,714.8	67.00	146.001		
13,400.0	6,672.0	6,520.4	6,519.6	84.9	22.6	87.44	-2,917.2	14,276.5	9,692.2	9,624.5	67.74	143.070		
13,500.0	6,672.0	6,522.1	6,521.3	86.1	22.6	87.46	-2,917.2	14,276.6	9,602.9	9,534.3	68.51	140.168		
13,600.0	6,672.0	6,523.7	6,523.0	87.3	22.6	87.48	-2,917.2	14,276.6	9,513.7	9,444.4	69.29	137.298		
13,700.0	6,672.0	6,525.4	6,524.6	88.4	22.6	87.51	-2,917.2	14,276.7	9,424.8	9,354.7	70.09	134.459		
13,800.0	6,672.0	6,527.1	6,526.3	89.6	22.6	87.53	-2,917.2	14,276.7	9,336.1	9,265.2	70.91	131.652		
13,900.0	6,672.0	6,528.8	6,528.0	90.8	22.7	87.55	-2,917.2	14,276.7	9,247.6	9,175.8	71.75	128.878		
14,000.0	6,672.0	6,530.5	6,529.8	92.0	22.7	87.58	-2,917.2	14,276.8	9,159.4	9,086.8	72.61	126.137		
14,100.0	6,672.0	6,532.3	6,531.5	93.2	22.7	87.60	-2,917.1	14,276.8	9,071.4	8,997.9	73.49	123.431		
14,200.0	6,672.0	6,534.0	6,533.2	94.4	22.7	87.62	-2,917.1	14,276.9	8,983.7	8,909.3	74.39	120.758		
14,300.0	6,672.0	6,535.8	6,535.0	95.6	22.7	87.65	-2,917.1	14,276.9	8,896.2	8,820.9	75.31	118.121		
14,400.0	6,672.0	6,537.5	6,536.8	96.8	22.7	87.67	-2,917.1	14,277.0	8,809.0	8,732.8	76.26	115.518		
14,500.0	6,672.0	6,539.3	6,538.6	98.0	22.7	87.69	-2,917.1	14,277.0	8,722.1	8,644.9	77.22	112.952		
14,600.0	6,672.0	6,541.1	6,540.4	99.2	22.7	87.72	-2,917.1	14,277.1	8,635.5	8,557.3	78.20	110.421		
14,700.0	6,672.0	6,543.0	6,542.2	100.4	22.7	87.74	-2,917.1	14,277.1	8,549.1	8,469.9	79.21	107.927		
14,800.0	6,672.0	6,544.8	6,544.0	101.6	22.7	87.77	-2,917.1	14,277.2	8,463.1	8,382.9	80.24	105.469		
14,900.0	6,672.0	6,546.6	6,545.9	102.7	22.7	87.79	-2,917.1	14,277.2	8,377.4	8,296.1	81.30	103.048		
15,000.0	6,672.0	6,548.5	6,547.7	103.9	22.7	87.82	-2,917.1	14,277.3	8,292.0	8,209.6	82.37	100.664		
15,100.0	6,672.0	6,550.4	6,549.6	105.1	22.7	87.84	-2,917.1	14,277.3	8,206.9	8,123.5	83.47	98.318		
15,200.0	6,672.0	6,552.3	6,551.5	106.3	22.7	87.87	-2,917.0	14,277.3	8,122.2	8,037.6	84.60	96.008		
15,300.0	6,672.0	6,554.2	6,553.4	107.6	22.7	87.89	-2,917.0	14,277.4	8,037.9	7,952.1	85.75	93.737		
15,400.0	6,672.0	6,556.1	6,555.3	108.8	22.7	87.92	-2,917.0	14,277.5	7,953.9	7,866.9	86.93	91.503		
15,500.0	6,672.0	6,558.1	6,557.3	110.0	22.8	87.94	-2,917.0	14,277.5	7,870.2	7,782.1	88.13	89.306		
15,600.0	6,672.0	6,560.0	6,559.2	111.2	22.8	87.97	-2,917.0	14,277.6	7,787.0	7,697.7	89.35	87.148		
15,700.0	6,672.0	6,562.0	6,561.2	112.4	22.8	88.00	-2,917.0	14,277.6	7,704.2	7,613.6	90.61	85.027		
15,800.0	6,672.0	6,564.0	6,563.2	113.6	22.8	88.02	-2,917.0	14,277.7	7,621.8	7,529.9	91.89	82.944		
15,900.0	6,672.0	6,566.0	6,565.2	114.8	22.8	88.05	-2,917.0	14,277.7	7,539.8	7,446.6	93.20	80.899		
16,000.0	6,672.0	6,568.0	6,567.2	116.0	22.8	88.08	-2,917.0	14,277.8	7,458.3	7,363.7	94.54	78.892		
16,100.0	6,672.0	6,570.1	6,569.3	117.2	22.8	88.10	-2,916.9	14,277.8	7,377.2	7,281.3	95.90	76.922		
16,200.0	6,672.0	6,572.1	6,571.3	118.4	22.8	88.13	-2,916.9	14,277.9	7,296.6	7,199.3	97.30	74.991		
16,300.0	6,672.0	6,574.2	6,573.4	119.6	22.8	88.16	-2,916.9	14,277.9	7,216.5	7,117.7	98.72	73.097		
16,400.0	6,672.0	6,576.3	6,575.5	120.8	22.8	88.19	-2,916.9	14,278.0	7,136.8	7,036.7	100.18	71.240		
16,500.0	6,672.0	6,578.4	6,577.6	122.0	22.8	88.21	-2,916.9	14,278.1	7,057.8	6,956.1	101.67	69.421		
16,600.0	6,672.0	6,580.6	6,579.8	123.2	22.8	88.24	-2,916.9	14,278.1	6,979.2	6,876.0	103.18	67.640		
16,700.0	6,672.0	6,582.7	6,581.9	124.5	22.8	88.27	-2,916.9	14,278.2	6,901.2	6,796.5	104.73	65.895		
16,800.0	6,672.0	6,584.9	6,584.1	125.7	22.8	88.30	-2,916.9	14,278.2	6,823.8	6,717.5	106.31	64.188		
16,900.0	6,672.0	6,587.1	6,586.3	126.9	22.9	88.33	-2,916.9	14,278.3	6,747.0	6,639.1	107.92	62.518		
17,000.0	6,672.0	6,589.3	6,588.5	128.1	22.9	88.36	-2,916.8	14,278.4	6,670.8	6,561.2	109.57	60.884		
17,100.0	6,672.0	6,591.6	6,590.8	129.3	22.9	88.39	-2,916.8	14,278.4	6,595.2	6,484.0	111.24	59.287		
17,200.0	6,672.0	6,593.8	6,593.0	130.5	22.9	88.42	-2,916.8	14,278.5	6,520.4	6,407.4	112.95	57.727		
17,300.0	6,672.0	6,596.1	6,595.3	131.7	22.9	88.45	-2,916.8	14,278.6	6,446.1	6,331.4	114.70	56.202		
17,400.0	6,672.0	6,600.0	6,599.2	133.0	22.9	88.50	-2,916.8	14,278.7	6,372.6	6,256.2	116.48	54.710		
17,500.0	6,672.0	6,600.8	6,600.0	134.2	22.9	88.51	-2,916.8	14,278.7	6,299.9	6,181.6	118.28	53.261		
17,600.0	6,672.0	6,603.4	6,602.6	135.4	22.9	88.55	-2,916.8	14,278.8	6,227.9	6,107.7	120.13	51.844		
17,700.0	6,672.0	6,606.0	6,605.2	136.6	22.9	88.58	-2,916.8	14,278.8	6,156.7	6,034.7	122.01	50.461		
17,800.0	6,672.0	6,608.6	6,607.8	137.8	22.9	88.61	-2,916.7	14,278.9	6,086.3	5,962.3	123.92	49.115		
17,900.0	6,672.0	6,611.2	6,610.4	139.0	22.9	88.65	-2,916.7	14,279.0	6,016.7	5,890.8	125.86	47.803		
18,000.0	6,672.0	6,613.7	6,612.9	140.3	22.9	88.68	-2,916.7	14,279.1	5,948.0	5,820.2	127.84	46.526		
18,100.0	6,672.0	6,616.2	6,615.4	141.5	23.0	88.71	-2,916.7	14,279.1	5,880.2	5,750.4	129.85	45.283		
18,200.0	6,672.0	6,618.7	6,617.9	142.7	23.0	88.75	-2,916.7	14,279.2	5,813.4	5,681.5	131.90	44.075		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> BB Section 09 - 70 Ranch 44-09 - Original Drilling - Original Drilling - As Drilled												<b>Offset Site Error:</b>	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWSG, 6650-2_Unknown												<b>Offset Well Error:</b>	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
18,300.0	6,672.0	6,621.1	6,620.3	143.9	23.0	88.78	-2,916.7	14,279.3	5,747.5	5,613.5	133.97	42.900	
18,342.5	6,672.0	6,622.1	6,621.3	144.4	23.0	88.79	-2,916.7	14,279.3	5,719.8	5,584.9	134.86	42.411	CC, ES, SF



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 09 - 70 Ranch USX BB09-05 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis		Distance								Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
8,300.0	6,672.0	6,500.0	6,498.5	31.7	22.6	81.06	-354.8	10,293.1	9,991.4	9,944.1	47.34	211.070		
8,400.0	6,672.0	6,500.0	6,498.5	32.4	22.6	81.06	-354.8	10,293.1	9,892.8	9,845.5	47.38	208.815		
8,500.0	6,672.0	6,500.0	6,498.5	33.1	22.6	81.06	-354.8	10,293.1	9,794.3	9,746.9	47.42	206.548		
8,600.0	6,672.0	6,532.9	6,531.4	33.9	22.7	82.19	-355.7	10,293.6	9,695.6	9,648.0	47.61	203.636		
8,700.0	6,672.0	6,533.5	6,532.0	34.7	22.7	82.21	-355.7	10,293.6	9,597.1	9,549.4	47.67	201.335		
8,800.0	6,672.0	6,534.1	6,532.5	35.5	22.7	82.23	-355.7	10,293.6	9,498.6	9,450.9	47.73	199.022		
8,900.0	6,672.0	6,534.6	6,533.1	36.3	22.7	82.26	-355.7	10,293.6	9,400.2	9,352.4	47.79	196.696		
9,000.0	6,672.0	6,535.2	6,533.7	37.2	22.7	82.28	-355.8	10,293.6	9,301.8	9,253.9	47.86	194.359		
9,100.0	6,672.0	6,535.8	6,534.3	38.1	22.7	82.31	-355.8	10,293.6	9,203.5	9,155.5	47.93	192.009		
9,200.0	6,672.0	6,536.5	6,534.9	39.0	22.7	82.33	-355.8	10,293.7	9,105.1	9,057.1	48.01	189.646		
9,300.0	6,672.0	6,537.1	6,535.6	39.9	22.7	82.35	-355.8	10,293.7	9,006.8	8,958.8	48.09	187.272		
9,400.0	6,672.0	6,537.7	6,536.2	40.8	22.7	82.38	-355.8	10,293.7	8,908.6	8,860.4	48.18	184.886		
9,500.0	6,672.0	6,538.4	6,536.9	41.8	22.7	82.40	-355.8	10,293.7	8,810.4	8,762.1	48.28	182.487		
9,600.0	6,672.0	6,539.0	6,537.5	42.7	22.7	82.43	-355.9	10,293.7	8,712.2	8,663.9	48.38	180.077		
9,700.0	6,672.0	6,539.7	6,538.2	43.7	22.7	82.45	-355.9	10,293.7	8,614.1	8,565.6	48.49	177.655		
9,800.0	6,672.0	6,540.4	6,538.9	44.7	22.7	82.48	-355.9	10,293.7	8,516.1	8,467.5	48.60	175.221		
9,900.0	6,672.0	6,541.1	6,539.6	45.7	22.7	82.51	-355.9	10,293.8	8,418.0	8,369.3	48.72	172.776		
10,000.0	6,672.0	6,541.8	6,540.3	46.7	22.7	82.53	-355.9	10,293.8	8,320.1	8,271.2	48.85	170.320		
10,100.0	6,672.0	6,542.5	6,541.0	47.7	22.7	82.56	-355.9	10,293.8	8,222.1	8,173.1	48.98	167.852		
10,200.0	6,672.0	6,543.2	6,541.7	48.8	22.7	82.59	-355.9	10,293.8	8,124.3	8,075.1	49.13	165.373		
10,300.0	6,672.0	6,544.0	6,542.5	49.8	22.7	82.62	-356.0	10,293.8	8,026.4	7,977.2	49.28	162.884		
10,400.0	6,672.0	6,544.7	6,543.2	50.9	22.7	82.65	-356.0	10,293.8	7,928.7	7,879.2	49.44	160.384		
10,500.0	6,672.0	6,545.5	6,544.0	51.9	22.7	82.67	-356.0	10,293.9	7,831.0	7,781.4	49.60	157.875		
10,600.0	6,672.0	6,546.3	6,544.8	53.0	22.7	82.70	-356.0	10,293.9	7,733.3	7,683.5	49.78	155.355		
10,700.0	6,672.0	6,547.1	6,545.6	54.1	22.7	82.73	-356.0	10,293.9	7,635.7	7,585.8	49.96	152.825		
10,800.0	6,672.0	6,548.0	6,546.4	55.2	22.7	82.76	-356.1	10,293.9	7,538.2	7,488.1	50.16	150.287		
10,900.0	6,672.0	6,548.8	6,547.3	56.3	22.7	82.79	-356.1	10,293.9	7,440.8	7,390.4	50.36	147.740		
11,000.0	6,672.0	6,549.7	6,548.1	57.4	22.7	82.83	-356.1	10,294.0	7,343.4	7,292.8	50.58	145.184		
11,100.0	6,672.0	6,550.5	6,549.0	58.5	22.7	82.86	-356.1	10,294.0	7,246.1	7,195.3	50.81	142.620		
11,200.0	6,672.0	6,551.4	6,549.9	59.6	22.7	82.89	-356.1	10,294.0	7,148.8	7,097.8	51.05	140.049		
11,300.0	6,672.0	6,552.4	6,550.8	60.7	22.7	82.92	-356.1	10,294.0	7,051.7	7,000.4	51.30	137.471		
11,400.0	6,672.0	6,553.3	6,551.8	61.8	22.7	82.96	-356.2	10,294.0	6,954.6	6,903.1	51.56	134.887		
11,500.0	6,672.0	6,554.2	6,552.7	62.9	22.7	82.99	-356.2	10,294.1	6,857.6	6,805.8	51.84	132.297		
11,600.0	6,672.0	6,555.2	6,553.7	64.1	22.7	83.03	-356.2	10,294.1	6,760.7	6,708.6	52.13	129.702		
11,700.0	6,672.0	6,556.2	6,554.7	65.2	22.8	83.06	-356.2	10,294.1	6,663.9	6,611.5	52.43	127.102		
11,800.0	6,672.0	6,557.2	6,555.7	66.3	22.8	83.10	-356.2	10,294.1	6,567.2	6,514.5	52.75	124.499		
11,900.0	6,672.0	6,558.3	6,556.8	67.5	22.8	83.14	-356.3	10,294.2	6,470.6	6,417.5	53.08	121.892		
12,000.0	6,672.0	6,559.3	6,557.8	68.6	22.8	83.18	-356.3	10,294.2	6,374.1	6,320.7	53.44	119.284		
12,100.0	6,672.0	6,560.4	6,558.9	69.8	22.8	83.21	-356.3	10,294.2	6,277.7	6,223.9	53.81	116.674		
12,200.0	6,672.0	6,561.6	6,560.0	70.9	22.8	83.25	-356.3	10,294.3	6,181.4	6,127.3	54.19	114.064		
12,300.0	6,672.0	6,562.7	6,561.2	72.1	22.8	83.29	-356.4	10,294.3	6,085.3	6,030.7	54.60	111.454		
12,400.0	6,672.0	6,563.9	6,562.4	73.2	22.8	83.34	-356.4	10,294.3	5,989.3	5,934.2	55.03	108.846		
12,500.0	6,672.0	6,565.1	6,563.6	74.4	22.8	83.38	-356.4	10,294.4	5,893.4	5,837.9	55.47	106.241		
12,600.0	6,672.0	6,566.3	6,564.8	75.5	22.8	83.42	-356.4	10,294.4	5,797.6	5,741.7	55.94	103.639		
12,700.0	6,672.0	6,567.6	6,566.0	76.7	22.8	83.47	-356.4	10,294.4	5,702.0	5,645.6	56.43	101.042		
12,800.0	6,672.0	6,568.9	6,567.3	77.9	22.8	83.51	-356.5	10,294.5	5,606.6	5,549.6	56.95	98.451		
12,900.0	6,672.0	6,570.2	6,568.7	79.0	22.8	83.56	-356.5	10,294.5	5,511.3	5,453.8	57.49	95.867		
13,000.0	6,672.0	6,571.5	6,570.0	80.2	22.8	83.60	-356.5	10,294.6	5,416.2	5,358.1	58.06	93.292		
13,100.0	6,672.0	6,572.9	6,571.4	81.4	22.8	83.65	-356.5	10,294.6	5,321.3	5,262.6	58.65	90.727		
13,200.0	6,672.0	6,574.4	6,572.8	82.6	22.8	83.70	-356.6	10,294.6	5,226.5	5,167.2	59.28	88.173		
13,300.0	6,672.0	6,575.8	6,574.3	83.7	22.8	83.75	-356.6	10,294.7	5,132.0	5,072.1	59.93	85.631		
13,400.0	6,672.0	6,577.4	6,575.8	84.9	22.8	83.81	-356.6	10,294.7	5,037.7	4,977.0	60.62	83.104		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 09 - 70 Ranch USX BB09-05 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
13,500.0	6,672.0	6,578.9	6,577.4	86.1	22.8	83.86	-356.6	10,294.8	4,943.6	4,882.2	61.34	80.592		
13,600.0	6,672.0	6,600.0	6,598.5	87.3	22.9	84.57	-357.0	10,295.6	4,849.8	4,787.5	62.23	77.933		
13,700.0	6,672.0	6,600.0	6,598.5	88.4	22.9	84.57	-357.0	10,295.6	4,756.1	4,693.1	63.02	75.476		
13,800.0	6,672.0	6,600.0	6,598.5	89.6	22.9	84.58	-357.0	10,295.6	4,662.8	4,599.0	63.84	73.039		
13,900.0	6,672.0	6,600.0	6,598.5	90.8	22.9	84.58	-357.0	10,295.6	4,569.7	4,505.0	64.71	70.623		
14,000.0	6,672.0	6,600.0	6,598.5	92.0	22.9	84.58	-357.0	10,295.6	4,476.9	4,411.3	65.61	68.231		
14,100.0	6,672.0	6,600.0	6,598.5	93.2	22.9	84.58	-357.0	10,295.6	4,384.5	4,317.9	66.57	65.863		
14,200.0	6,672.0	6,600.0	6,598.5	94.4	22.9	84.58	-357.0	10,295.6	4,292.4	4,224.8	67.57	63.521		
14,300.0	6,672.0	6,600.0	6,598.5	95.6	22.9	84.58	-357.0	10,295.6	4,200.6	4,132.0	68.63	61.207		
14,400.0	6,672.0	6,600.0	6,598.5	96.8	22.9	84.58	-357.0	10,295.6	4,109.3	4,039.5	69.74	58.924		
14,500.0	6,672.0	6,600.0	6,598.5	98.0	22.9	84.58	-357.0	10,295.6	4,018.3	3,947.4	70.91	56.671		
14,600.0	6,672.0	6,600.0	6,598.5	99.2	22.9	84.58	-357.0	10,295.6	3,927.8	3,855.7	72.13	54.453		
14,700.0	6,672.0	6,602.6	6,601.1	100.4	22.9	84.67	-357.0	10,295.7	3,837.8	3,764.4	73.44	52.255		
14,800.0	6,672.0	6,606.4	6,604.9	101.6	22.9	84.80	-357.0	10,295.8	3,748.3	3,673.5	74.83	50.091		
14,900.0	6,672.0	6,610.3	6,608.8	102.7	22.9	84.93	-357.1	10,296.0	3,659.3	3,583.0	76.29	47.966		
15,000.0	6,672.0	6,614.3	6,612.7	103.9	23.0	85.07	-357.1	10,296.1	3,570.9	3,493.1	77.82	45.884		
15,100.0	6,672.0	6,618.4	6,616.8	105.1	23.0	85.21	-357.2	10,296.3	3,483.1	3,403.7	79.44	43.846		
15,200.0	6,672.0	6,622.6	6,621.0	106.3	23.0	85.35	-357.2	10,296.5	3,396.1	3,314.9	81.14	41.854		
15,300.0	6,672.0	6,626.8	6,625.3	107.6	23.0	85.49	-357.2	10,296.6	3,309.7	3,226.8	82.93	39.909		
15,400.0	6,672.0	6,631.2	6,629.6	108.8	23.0	85.64	-357.3	10,296.8	3,224.1	3,139.3	84.82	38.013		
15,500.0	6,672.0	6,635.7	6,634.1	110.0	23.0	85.80	-357.3	10,297.0	3,139.4	3,052.6	86.80	36.168		
15,600.0	6,672.0	6,640.3	6,638.7	111.2	23.0	85.95	-357.3	10,297.2	3,055.6	2,966.7	88.89	34.375		
15,700.0	6,672.0	6,645.0	6,643.4	112.4	23.1	86.11	-357.3	10,297.4	2,972.8	2,881.7	91.09	32.637		
15,800.0	6,672.0	6,649.8	6,648.2	113.6	23.1	86.28	-357.4	10,297.6	2,891.0	2,797.6	93.40	30.954		
15,900.0	6,672.0	6,654.8	6,653.2	114.8	23.1	86.44	-357.4	10,297.9	2,810.5	2,714.7	95.83	29.328		
16,000.0	6,672.0	6,659.9	6,658.3	116.0	23.1	86.62	-357.4	10,298.1	2,731.2	2,632.8	98.38	27.762		
16,100.0	6,672.0	6,665.1	6,663.5	117.2	23.1	86.79	-357.4	10,298.3	2,653.4	2,552.3	101.06	26.255		
16,200.0	6,672.0	6,670.5	6,668.9	118.4	23.2	86.97	-357.4	10,298.6	2,577.0	2,473.2	103.87	24.810		
16,300.0	6,672.0	6,676.0	6,674.4	119.6	23.2	87.16	-357.3	10,298.8	2,502.3	2,395.5	106.81	23.427		
16,400.0	6,672.0	6,681.7	6,680.0	120.8	23.2	87.35	-357.3	10,299.1	2,429.5	2,319.6	109.89	22.109		
16,500.0	6,672.0	6,687.5	6,685.8	122.0	23.2	87.55	-357.3	10,299.4	2,358.6	2,245.5	113.09	20.855		
16,600.0	6,672.0	6,693.5	6,691.8	123.2	23.2	87.75	-357.2	10,299.7	2,289.9	2,173.5	116.42	19.668		
16,700.0	6,672.0	6,699.6	6,698.0	124.5	23.3	87.96	-357.2	10,300.0	2,223.5	2,103.7	119.88	18.548		
16,800.0	6,672.0	6,706.0	6,704.3	125.7	23.3	88.18	-357.1	10,300.3	2,159.8	2,036.3	123.44	17.497		
16,900.0	6,672.0	6,712.5	6,710.8	126.9	23.3	88.40	-357.1	10,300.6	2,098.8	1,971.7	127.10	16.514		
17,000.0	6,672.0	6,719.2	6,717.6	128.1	23.3	88.63	-357.0	10,301.0	2,041.0	1,910.1	130.83	15.600		
17,100.0	6,672.0	6,719.8	6,718.1	129.3	23.3	88.64	-357.0	10,301.0	1,986.5	1,851.9	134.56	14.763		
17,200.0	6,672.0	6,724.8	6,723.1	130.5	23.3	88.81	-357.0	10,301.2	1,935.6	1,797.2	138.34	13.991		
17,300.0	6,672.0	6,729.8	6,728.1	131.7	23.4	88.98	-356.9	10,301.5	1,888.6	1,746.5	142.10	13.291		
17,400.0	6,672.0	6,734.8	6,733.1	133.0	23.4	89.16	-356.9	10,301.7	1,845.9	1,700.1	145.79	12.662		
17,500.0	6,672.0	6,739.8	6,738.1	134.2	23.4	89.33	-356.8	10,302.0	1,807.6	1,658.3	149.35	12.103		
17,600.0	6,672.0	6,744.8	6,743.1	135.4	23.4	89.50	-356.8	10,302.2	1,774.2	1,621.5	152.74	11.616		
17,700.0	6,672.0	6,749.9	6,748.1	136.6	23.4	89.67	-356.8	10,302.5	1,745.9	1,590.0	155.89	11.200		
17,800.0	6,672.0	6,754.9	6,753.2	137.8	23.5	89.84	-356.7	10,302.7	1,722.9	1,564.2	158.74	10.854		
17,900.0	6,672.0	6,759.9	6,758.2	139.0	23.5	90.01	-356.7	10,303.0	1,705.5	1,544.3	161.24	10.578		
18,000.0	6,672.0	6,764.9	6,763.2	140.3	23.5	90.18	-356.6	10,303.2	1,693.8	1,530.5	163.33	10.370		
18,100.0	6,672.0	6,769.9	6,768.2	141.5	23.5	90.35	-356.6	10,303.5	1,687.9	1,523.0	164.99	10.231		
18,149.1	6,672.0	6,772.4	6,770.7	142.1	23.5	90.43	-356.6	10,303.6	1,687.2	1,521.6	165.63	10.187 CC, ES		
18,200.0	6,672.0	6,774.9	6,773.2	142.7	23.5	90.52	-356.5	10,303.7	1,688.0	1,521.8	166.17	10.158		
18,300.0	6,672.0	6,780.0	6,778.2	143.9	23.5	90.69	-356.5	10,304.0	1,693.9	1,527.1	166.87	10.151 SF		
18,342.5	6,672.0	6,782.1	6,780.3	144.4	23.5	90.76	-356.5	10,304.1	1,698.2	1,531.2	167.03	10.168		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 09 - 70 Ranch USX BB09-07 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
11,000.0	6,672.0	6,655.4	6,655.0	57.4	23.1	87.53	-326.3	12,929.2	9,929.0	9,879.0	50.05	198.376		
11,100.0	6,672.0	6,656.7	6,656.2	58.5	23.1	87.57	-326.3	12,929.3	9,830.5	9,780.3	50.20	195.839		
11,200.0	6,672.0	6,657.9	6,657.5	59.6	23.1	87.61	-326.3	12,929.3	9,732.0	9,681.7	50.35	193.295		
11,300.0	6,672.0	6,659.1	6,658.7	60.7	23.1	87.65	-326.3	12,929.3	9,633.6	9,583.0	50.50	190.745		
11,400.0	6,672.0	6,660.3	6,659.8	61.8	23.1	87.69	-326.3	12,929.3	9,535.1	9,484.5	50.67	188.189		
11,500.0	6,672.0	6,661.5	6,661.0	62.9	23.1	87.73	-326.3	12,929.3	9,436.7	9,385.9	50.84	185.626		
11,600.0	6,672.0	6,662.6	6,662.1	64.1	23.1	87.77	-326.4	12,929.3	9,338.4	9,287.4	51.01	183.058		
11,700.0	6,672.0	6,663.7	6,663.2	65.2	23.1	87.81	-326.4	12,929.3	9,240.1	9,188.9	51.20	180.485		
11,800.0	6,672.0	6,664.7	6,664.3	66.3	23.1	87.85	-326.4	12,929.3	9,141.8	9,090.4	51.39	177.906		
11,900.0	6,672.0	6,665.8	6,665.3	67.5	23.1	87.88	-326.4	12,929.3	9,043.5	8,992.0	51.58	175.322		
12,000.0	6,672.0	6,666.8	6,666.3	68.6	23.1	87.92	-326.4	12,929.3	8,945.3	8,893.5	51.79	172.735		
12,100.0	6,672.0	6,667.8	6,667.3	69.8	23.1	87.95	-326.4	12,929.3	8,847.2	8,795.2	52.00	170.143		
12,200.0	6,672.0	6,668.8	6,668.3	70.9	23.1	87.99	-326.4	12,929.3	8,749.1	8,696.8	52.22	167.547		
12,300.0	6,672.0	6,669.7	6,669.3	72.1	23.1	88.02	-326.4	12,929.3	8,651.0	8,598.5	52.45	164.947		
12,400.0	6,672.0	6,670.7	6,670.2	73.2	23.1	88.05	-326.4	12,929.3	8,553.0	8,500.3	52.68	162.345		
12,500.0	6,672.0	6,671.6	6,671.1	74.4	23.1	88.08	-326.4	12,929.3	8,455.0	8,402.0	52.93	159.740		
12,600.0	6,672.0	6,672.5	6,672.0	75.5	23.1	88.12	-326.5	12,929.3	8,357.0	8,303.9	53.18	157.133		
12,700.0	6,672.0	6,673.4	6,672.9	76.7	23.1	88.15	-326.5	12,929.3	8,259.2	8,205.7	53.45	154.524		
12,800.0	6,672.0	6,674.2	6,673.8	77.9	23.1	88.18	-326.5	12,929.3	8,161.3	8,107.6	53.72	151.914		
12,900.0	6,672.0	6,675.1	6,674.6	79.0	23.1	88.20	-326.5	12,929.4	8,063.6	8,009.6	54.01	149.303		
13,000.0	6,672.0	6,675.9	6,675.5	80.2	23.1	88.23	-326.5	12,929.4	7,965.9	7,911.6	54.30	146.692		
13,100.0	6,672.0	6,676.7	6,676.3	81.4	23.1	88.26	-326.5	12,929.4	7,868.2	7,813.6	54.61	144.080		
13,200.0	6,672.0	6,677.5	6,677.1	82.6	23.1	88.29	-326.5	12,929.4	7,770.6	7,715.7	54.93	141.470		
13,300.0	6,672.0	6,678.3	6,677.9	83.7	23.1	88.32	-326.5	12,929.4	7,673.1	7,617.8	55.26	138.860		
13,400.0	6,672.0	6,679.1	6,678.6	84.9	23.1	88.34	-326.5	12,929.4	7,575.6	7,520.0	55.60	136.253		
13,500.0	6,672.0	6,679.8	6,679.4	86.1	23.1	88.37	-326.5	12,929.4	7,478.2	7,422.3	55.95	133.648		
13,600.0	6,672.0	6,680.6	6,680.1	87.3	23.2	88.39	-326.5	12,929.4	7,380.9	7,324.6	56.32	131.046		
13,700.0	6,672.0	6,681.3	6,680.8	88.4	23.2	88.42	-326.5	12,929.4	7,283.6	7,226.9	56.71	128.447		
13,800.0	6,672.0	6,682.0	6,681.6	89.6	23.2	88.44	-326.6	12,929.4	7,186.5	7,129.4	57.10	125.853		
13,900.0	6,672.0	6,682.7	6,682.2	90.8	23.2	88.47	-326.6	12,929.4	7,089.4	7,031.9	57.51	123.263		
14,000.0	6,672.0	6,683.4	6,682.9	92.0	23.2	88.49	-326.6	12,929.4	6,992.4	6,934.4	57.94	120.680		
14,100.0	6,672.0	6,684.1	6,683.6	93.2	23.2	88.51	-326.6	12,929.4	6,895.5	6,837.1	58.39	118.102		
14,200.0	6,672.0	6,684.7	6,684.3	94.4	23.2	88.54	-326.6	12,929.4	6,798.6	6,739.8	58.85	115.532		
14,300.0	6,672.0	6,685.4	6,684.9	95.6	23.2	88.56	-326.6	12,929.4	6,701.9	6,642.6	59.32	112.969		
14,400.0	6,672.0	6,686.0	6,685.6	96.8	23.2	88.58	-326.6	12,929.4	6,605.2	6,545.4	59.82	110.415		
14,500.0	6,672.0	6,686.7	6,686.2	98.0	23.2	88.60	-326.6	12,929.4	6,508.7	6,448.4	60.34	107.870		
14,600.0	6,672.0	6,687.3	6,686.8	99.2	23.2	88.62	-326.6	12,929.4	6,412.3	6,351.4	60.87	105.336		
14,700.0	6,672.0	6,687.9	6,687.4	100.4	23.2	88.64	-326.6	12,929.4	6,316.0	6,254.5	61.43	102.812		
14,800.0	6,672.0	6,688.5	6,688.0	101.6	23.2	88.66	-326.6	12,929.4	6,219.8	6,157.8	62.01	100.300		
14,900.0	6,672.0	6,689.1	6,688.6	102.7	23.2	88.68	-326.6	12,929.4	6,123.7	6,061.1	62.61	97.801		
15,000.0	6,672.0	6,689.6	6,689.2	103.9	23.2	88.70	-326.6	12,929.4	6,027.8	5,964.5	63.24	95.315		
15,100.0	6,672.0	6,690.2	6,689.7	105.1	23.2	88.72	-326.6	12,929.4	5,932.0	5,868.1	63.89	92.844		
15,200.0	6,672.0	6,690.8	6,690.3	106.3	23.2	88.74	-326.6	12,929.4	5,836.3	5,771.7	64.57	90.388		
15,300.0	6,672.0	6,691.3	6,690.8	107.6	23.2	88.76	-326.6	12,929.4	5,740.8	5,675.5	65.27	87.948		
15,400.0	6,672.0	6,691.9	6,691.4	108.8	23.2	88.78	-326.6	12,929.4	5,645.5	5,579.4	66.01	85.526		
15,500.0	6,672.0	6,692.4	6,691.9	110.0	23.2	88.80	-326.7	12,929.4	5,550.3	5,483.5	66.77	83.122		
15,600.0	6,672.0	6,692.9	6,692.4	111.2	23.2	88.81	-326.7	12,929.4	5,455.3	5,387.7	67.57	80.737		
15,700.0	6,672.0	6,693.4	6,693.0	112.4	23.2	88.83	-326.7	12,929.4	5,360.4	5,292.0	68.40	78.372		
15,800.0	6,672.0	6,693.9	6,693.5	113.6	23.2	88.85	-326.7	12,929.4	5,265.8	5,196.5	69.26	76.029		
15,900.0	6,672.0	6,694.4	6,694.0	114.8	23.2	88.86	-326.7	12,929.4	5,171.4	5,101.2	70.16	73.707		
16,000.0	6,672.0	6,694.9	6,694.5	116.0	23.2	88.88	-326.7	12,929.4	5,077.2	5,006.1	71.10	71.410		
16,100.0	6,672.0	6,695.4	6,694.9	117.2	23.2	88.90	-326.7	12,929.4	4,983.2	4,911.1	72.08	69.136		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 09 - 70 Ranch USX BB09-07 - Original Drilling - Original Drilling - As Drilled											Offset Site Error:		0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWSG											Offset Well Error:		0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
16,200.0	6,672.0	6,695.9	6,695.4	118.4	23.2	88.91	-326.7	12,929.4	4,889.4	4,816.3	73.10	66.888		
16,300.0	6,672.0	6,696.4	6,695.9	119.6	23.2	88.93	-326.7	12,929.4	4,795.9	4,721.8	74.16	64.666		
16,400.0	6,672.0	6,696.8	6,696.4	120.8	23.2	88.95	-326.7	12,929.4	4,702.7	4,627.4	75.28	62.472		
16,500.0	6,672.0	6,697.3	6,696.8	122.0	23.2	88.96	-326.7	12,929.4	4,609.8	4,533.4	76.44	60.307		
16,600.0	6,672.0	6,697.7	6,697.3	123.2	23.2	88.98	-326.7	12,929.4	4,517.2	4,439.5	77.65	58.172		
16,700.0	6,672.0	6,698.2	6,697.7	124.5	23.2	88.99	-326.7	12,929.4	4,424.9	4,345.9	78.92	56.067		
16,800.0	6,672.0	6,698.6	6,698.1	125.7	23.2	89.01	-326.7	12,929.4	4,332.9	4,252.7	80.25	53.995		
16,900.0	6,672.0	6,699.0	6,698.6	126.9	23.2	89.02	-326.7	12,929.5	4,241.3	4,159.7	81.63	51.955		
17,000.0	6,672.0	6,699.5	6,699.0	128.1	23.2	89.03	-326.7	12,929.5	4,150.1	4,067.0	83.08	49.950		
17,100.0	6,672.0	6,699.9	6,699.4	129.3	23.2	89.05	-326.7	12,929.5	4,059.3	3,974.7	84.60	47.981		
17,200.0	6,672.0	6,700.3	6,699.8	130.5	23.2	89.06	-326.7	12,929.5	3,969.0	3,882.8	86.19	46.047		
17,300.0	6,672.0	6,700.7	6,700.2	131.7	23.2	89.08	-326.7	12,929.5	3,879.1	3,791.3	87.86	44.152		
17,400.0	6,672.0	6,701.1	6,700.6	133.0	23.2	89.09	-326.7	12,929.5	3,789.8	3,700.2	89.60	42.295		
17,500.0	6,672.0	6,701.5	6,701.0	134.2	23.2	89.10	-326.7	12,929.5	3,701.0	3,609.6	91.43	40.478		
17,600.0	6,672.0	6,701.9	6,701.4	135.4	23.2	89.12	-326.7	12,929.5	3,612.8	3,519.4	93.35	38.702		
17,700.0	6,672.0	6,702.3	6,701.8	136.6	23.2	89.13	-326.8	12,929.5	3,525.2	3,429.9	95.36	36.967		
17,800.0	6,672.0	6,702.6	6,702.2	137.8	23.2	89.14	-326.8	12,929.5	3,438.3	3,340.9	97.47	35.276		
17,900.0	6,672.0	6,703.0	6,702.5	139.0	23.2	89.15	-326.8	12,929.5	3,352.2	3,252.5	99.68	33.629		
18,000.0	6,672.0	6,703.4	6,702.9	140.3	23.2	89.17	-326.8	12,929.5	3,266.8	3,164.8	102.00	32.028		
18,100.0	6,672.0	6,703.7	6,703.3	141.5	23.2	89.18	-326.8	12,929.5	3,182.3	3,077.9	104.43	30.472		
18,200.0	6,672.0	6,704.1	6,703.6	142.7	23.2	89.19	-326.8	12,929.5	3,098.7	2,991.7	106.99	28.964		
18,300.0	6,672.0	6,704.5	6,704.0	143.9	23.2	89.20	-326.8	12,929.5	3,016.1	2,906.5	109.66	27.503		
18,342.5	6,672.0	6,704.6	6,704.1	144.4	23.2	89.21	-326.8	12,929.5	2,981.4	2,870.5	110.84	26.898	CC, ES, SF	



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 09 - 70 Ranch USX BB09-08 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
12,300.0	6,672.0	6,710.3	6,706.6	72.1	23.3	89.49	-435.2	14,232.2	9,953.3	9,900.9	52.34	190.174		
12,400.0	6,672.0	6,710.4	6,706.7	73.2	23.3	89.49	-435.2	14,232.2	9,855.0	9,802.5	52.54	187.559		
12,500.0	6,672.0	6,710.6	6,706.9	74.4	23.3	89.50	-435.2	14,232.2	9,756.8	9,704.0	52.76	184.940		
12,600.0	6,672.0	6,710.7	6,707.1	75.5	23.3	89.50	-435.2	14,232.2	9,658.6	9,605.6	52.98	182.318		
12,700.0	6,672.0	6,710.9	6,707.2	76.7	23.3	89.51	-435.2	14,232.2	9,560.4	9,507.2	53.20	179.692		
12,800.0	6,672.0	6,711.0	6,707.4	77.9	23.3	89.51	-435.2	14,232.2	9,462.3	9,408.9	53.44	177.064		
12,900.0	6,672.0	6,711.2	6,707.5	79.0	23.3	89.52	-435.2	14,232.2	9,364.3	9,310.6	53.68	174.434		
13,000.0	6,672.0	6,711.3	6,707.7	80.2	23.3	89.52	-435.2	14,232.2	9,266.2	9,212.3	53.94	171.801		
13,100.0	6,672.0	6,711.5	6,707.8	81.4	23.3	89.53	-435.2	14,232.2	9,168.2	9,114.0	54.20	169.167		
13,200.0	6,672.0	6,711.6	6,708.0	82.6	23.3	89.53	-435.2	14,232.2	9,070.3	9,015.8	54.47	166.533		
13,300.0	6,672.0	6,711.8	6,708.1	83.7	23.3	89.54	-435.2	14,232.2	8,972.4	8,917.7	54.74	163.898		
13,400.0	6,672.0	6,711.9	6,708.3	84.9	23.3	89.54	-435.2	14,232.2	8,874.6	8,819.5	55.03	161.262		
13,500.0	6,672.0	6,712.1	6,708.4	86.1	23.3	89.55	-435.2	14,232.2	8,776.8	8,721.4	55.33	158.628		
13,600.0	6,672.0	6,712.2	6,708.6	87.3	23.3	89.55	-435.2	14,232.3	8,679.0	8,623.4	55.64	155.994		
13,700.0	6,672.0	6,712.4	6,708.7	88.4	23.3	89.56	-435.2	14,232.3	8,581.3	8,525.4	55.95	153.362		
13,800.0	6,672.0	6,712.5	6,708.9	89.6	23.3	89.56	-435.2	14,232.3	8,483.7	8,427.4	56.28	150.731		
13,900.0	6,672.0	6,712.7	6,709.0	90.8	23.3	89.57	-435.2	14,232.3	8,386.1	8,329.5	56.62	148.104		
14,000.0	6,672.0	6,712.8	6,709.2	92.0	23.3	89.57	-435.2	14,232.3	8,288.6	8,231.6	56.97	145.479		
14,100.0	6,672.0	6,713.0	6,709.3	93.2	23.3	89.58	-435.2	14,232.3	8,191.1	8,133.8	57.34	142.858		
14,200.0	6,672.0	6,713.1	6,709.5	94.4	23.3	89.58	-435.2	14,232.3	8,093.7	8,036.0	57.71	140.241		
14,300.0	6,672.0	6,713.3	6,709.6	95.6	23.3	89.58	-435.2	14,232.3	7,996.4	7,938.3	58.10	137.630		
14,400.0	6,672.0	6,713.4	6,709.8	96.8	23.3	89.59	-435.2	14,232.3	7,899.2	7,840.7	58.50	135.023		
14,500.0	6,672.0	6,713.6	6,709.9	98.0	23.3	89.59	-435.2	14,232.3	7,802.0	7,743.1	58.92	132.423		
14,600.0	6,672.0	6,713.7	6,710.1	99.2	23.3	89.60	-435.2	14,232.3	7,704.9	7,645.5	59.35	129.829		
14,700.0	6,672.0	6,713.9	6,710.2	100.4	23.3	89.60	-435.2	14,232.3	7,607.8	7,548.0	59.79	127.243		
14,800.0	6,672.0	6,714.0	6,710.4	101.6	23.3	89.61	-435.2	14,232.3	7,510.9	7,450.6	60.25	124.664		
14,900.0	6,672.0	6,714.2	6,710.5	102.7	23.3	89.61	-435.2	14,232.3	7,414.0	7,353.3	60.72	122.094		
15,000.0	6,672.0	6,714.3	6,710.7	103.9	23.3	89.62	-435.2	14,232.3	7,317.2	7,256.0	61.21	119.534		
15,100.0	6,672.0	6,714.5	6,710.8	105.1	23.3	89.62	-435.2	14,232.3	7,220.5	7,158.8	61.72	116.983		
15,200.0	6,672.0	6,714.6	6,711.0	106.3	23.3	89.63	-435.2	14,232.3	7,123.9	7,061.7	62.25	114.443		
15,300.0	6,672.0	6,714.8	6,711.1	107.6	23.3	89.63	-435.2	14,232.3	7,027.4	6,964.6	62.79	111.915		
15,400.0	6,672.0	6,715.0	6,711.3	108.8	23.3	89.64	-435.2	14,232.3	6,931.0	6,867.6	63.36	109.398		
15,500.0	6,672.0	6,715.1	6,711.4	110.0	23.3	89.64	-435.2	14,232.3	6,834.7	6,770.7	63.94	106.894		
15,600.0	6,672.0	6,715.3	6,711.6	111.2	23.3	89.65	-435.2	14,232.3	6,738.5	6,674.0	64.54	104.404		
15,700.0	6,672.0	6,715.4	6,711.7	112.4	23.3	89.65	-435.2	14,232.3	6,642.4	6,577.2	65.17	101.928		
15,800.0	6,672.0	6,715.6	6,711.9	113.6	23.3	89.66	-435.2	14,232.3	6,546.5	6,480.6	65.82	99.467		
15,900.0	6,672.0	6,715.7	6,712.0	114.8	23.3	89.66	-435.2	14,232.3	6,450.6	6,384.1	66.49	97.022		
16,000.0	6,672.0	6,715.9	6,712.2	116.0	23.3	89.67	-435.2	14,232.3	6,354.9	6,287.7	67.18	94.594		
16,100.0	6,672.0	6,716.0	6,712.3	117.2	23.3	89.67	-435.2	14,232.3	6,259.4	6,191.5	67.90	92.183		
16,200.0	6,672.0	6,716.2	6,712.5	118.4	23.3	89.67	-435.2	14,232.3	6,163.9	6,095.3	68.65	89.790		
16,300.0	6,672.0	6,716.3	6,712.6	119.6	23.3	89.68	-435.2	14,232.3	6,068.7	5,999.2	69.42	87.416		
16,400.0	6,672.0	6,716.5	6,712.8	120.8	23.3	89.68	-435.2	14,232.3	5,973.5	5,903.3	70.23	85.062		
16,500.0	6,672.0	6,716.6	6,712.9	122.0	23.3	89.69	-435.2	14,232.3	5,878.6	5,807.5	71.06	82.728		
16,600.0	6,672.0	6,716.8	6,713.1	123.2	23.3	89.69	-435.2	14,232.3	5,783.8	5,711.9	71.92	80.416		
16,700.0	6,672.0	6,716.9	6,713.2	124.5	23.3	89.70	-435.2	14,232.3	5,689.2	5,616.4	72.82	78.126		
16,800.0	6,672.0	6,717.1	6,713.4	125.7	23.3	89.70	-435.2	14,232.3	5,594.8	5,521.1	73.75	75.859		
16,900.0	6,672.0	6,717.2	6,713.5	126.9	23.3	89.71	-435.2	14,232.3	5,500.6	5,425.9	74.72	73.616		
17,000.0	6,672.0	6,717.4	6,713.7	128.1	23.3	89.71	-435.2	14,232.3	5,406.6	5,330.9	75.73	71.398		
17,100.0	6,672.0	6,717.5	6,713.8	129.3	23.3	89.72	-435.2	14,232.3	5,312.8	5,236.1	76.77	69.205		
17,200.0	6,672.0	6,717.7	6,714.0	130.5	23.3	89.72	-435.2	14,232.3	5,219.3	5,141.4	77.86	67.038		
17,300.0	6,672.0	6,717.8	6,714.1	131.7	23.3	89.73	-435.2	14,232.3	5,126.0	5,047.0	78.98	64.899		
17,400.0	6,672.0	6,718.0	6,714.3	133.0	23.3	89.73	-435.2	14,232.3	5,033.0	4,952.8	80.16	62.788		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b>												<b>Offset Site Error:</b>	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWSG												<b>Offset Well Error:</b>	0.0 ft
<b>Reference</b>		<b>Offset</b>		<b>Semi Major Axis</b>			<b>Distance</b>						<b>Warning</b>
<b>Measured Depth (ft)</b>	<b>Vertical Depth (ft)</b>	<b>Measured Depth (ft)</b>	<b>Vertical Depth (ft)</b>	<b>Reference (ft)</b>	<b>Offset (ft)</b>	<b>Highside Toolface (°)</b>	<b>Offset Wellbore Centre +N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Between Centres (ft)</b>	<b>Between Ellipses (ft)</b>	<b>Minimum Separation (ft)</b>	<b>Separation Factor</b>	
17,500.0	6,672.0	6,718.1	6,714.4	134.2	23.3	89.74	-435.2	14,232.3	4,940.2	4,858.8	81.38	60.706	
17,600.0	6,672.0	6,718.3	6,714.6	135.4	23.3	89.74	-435.2	14,232.3	4,847.7	4,765.1	82.65	58.654	
17,700.0	6,672.0	6,718.4	6,714.7	136.6	23.3	89.75	-435.2	14,232.3	4,755.6	4,671.6	83.97	56.632	
17,800.0	6,672.0	6,718.6	6,714.9	137.8	23.3	89.75	-435.2	14,232.3	4,663.7	4,578.4	85.35	54.641	
17,900.0	6,672.0	6,718.7	6,715.0	139.0	23.3	89.75	-435.2	14,232.3	4,572.2	4,485.5	86.79	52.683	
18,000.0	6,672.0	6,718.9	6,715.2	140.3	23.3	89.76	-435.2	14,232.3	4,481.1	4,392.8	88.28	50.759	
18,100.0	6,672.0	6,719.0	6,715.3	141.5	23.3	89.76	-435.2	14,232.3	4,390.4	4,300.5	89.84	48.868	
18,200.0	6,672.0	6,719.2	6,715.5	142.7	23.3	89.77	-435.2	14,232.3	4,300.1	4,208.6	91.47	47.011	
18,300.0	6,672.0	6,719.3	6,715.6	143.9	23.3	89.77	-435.2	14,232.3	4,210.2	4,117.0	93.16	45.191	
18,342.5	6,672.0	6,719.4	6,715.7	144.4	23.3	89.78	-435.2	14,232.3	4,172.2	4,078.3	93.91	44.429	CC, ES, SF

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 09 - 70 Ranch USX BB09-09 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
12,600.0	6,672.0	6,721.6	6,721.1	75.5	23.3	90.08	-1,701.8	14,264.3	9,982.5	9,924.5	58.03	172.018		
12,700.0	6,672.0	6,721.7	6,721.2	76.7	23.3	90.08	-1,701.8	14,264.3	9,887.5	9,829.0	58.47	169.104		
12,800.0	6,672.0	6,721.9	6,721.4	77.9	23.3	90.08	-1,701.8	14,264.3	9,792.6	9,733.7	58.92	166.197		
12,900.0	6,672.0	6,722.0	6,721.5	79.0	23.3	90.08	-1,701.8	14,264.3	9,697.8	9,638.4	59.39	163.299		
13,000.0	6,672.0	6,722.1	6,721.6	80.2	23.3	90.08	-1,701.8	14,264.3	9,603.1	9,543.3	59.87	160.411		
13,100.0	6,672.0	6,722.2	6,721.7	81.4	23.3	90.09	-1,701.8	14,264.3	9,508.6	9,448.2	60.36	157.534		
13,200.0	6,672.0	6,722.3	6,721.8	82.6	23.3	90.09	-1,701.8	14,264.3	9,414.1	9,353.3	60.87	154.668		
13,300.0	6,672.0	6,722.5	6,721.9	83.7	23.3	90.09	-1,701.8	14,264.3	9,319.8	9,258.4	61.39	151.816		
13,400.0	6,672.0	6,722.6	6,722.1	84.9	23.3	90.09	-1,701.8	14,264.3	9,225.6	9,163.7	61.93	148.976		
13,500.0	6,672.0	6,722.7	6,722.2	86.1	23.3	90.10	-1,701.8	14,264.3	9,131.5	9,069.0	62.48	146.152		
13,600.0	6,672.0	6,722.8	6,722.3	87.3	23.3	90.10	-1,701.8	14,264.3	9,037.5	8,974.5	63.05	143.343		
13,700.0	6,672.0	6,722.9	6,722.4	88.4	23.3	90.10	-1,701.8	14,264.3	8,943.7	8,880.1	63.63	140.550		
13,800.0	6,672.0	6,723.1	6,722.5	89.6	23.3	90.10	-1,701.8	14,264.3	8,850.0	8,785.8	64.24	137.775		
13,900.0	6,672.0	6,723.2	6,722.7	90.8	23.3	90.10	-1,701.8	14,264.3	8,756.5	8,691.6	64.85	135.017		
14,000.0	6,672.0	6,723.3	6,722.8	92.0	23.3	90.11	-1,701.8	14,264.3	8,663.1	8,597.6	65.49	132.279		
14,100.0	6,672.0	6,723.4	6,722.9	93.2	23.3	90.11	-1,701.8	14,264.3	8,569.9	8,503.7	66.15	129.560		
14,200.0	6,672.0	6,723.5	6,723.0	94.4	23.3	90.11	-1,701.8	14,264.3	8,476.8	8,410.0	66.82	126.862		
14,300.0	6,672.0	6,723.6	6,723.1	95.6	23.3	90.11	-1,701.8	14,264.3	8,383.9	8,316.3	67.51	124.186		
14,400.0	6,672.0	6,723.8	6,723.3	96.8	23.3	90.11	-1,701.8	14,264.3	8,291.1	8,222.9	68.22	121.531		
14,500.0	6,672.0	6,723.9	6,723.4	98.0	23.3	90.12	-1,701.8	14,264.3	8,198.5	8,129.6	68.95	118.900		
14,600.0	6,672.0	6,724.0	6,723.5	99.2	23.3	90.12	-1,701.8	14,264.3	8,106.1	8,036.4	69.71	116.292		
14,700.0	6,672.0	6,724.1	6,723.6	100.4	23.3	90.12	-1,701.8	14,264.3	8,013.9	7,943.4	70.48	113.708		
14,800.0	6,672.0	6,724.2	6,723.7	101.6	23.3	90.12	-1,701.8	14,264.3	7,921.9	7,850.6	71.27	111.150		
14,900.0	6,672.0	6,724.4	6,723.8	102.7	23.3	90.13	-1,701.8	14,264.3	7,830.0	7,758.0	72.09	108.617		
15,000.0	6,672.0	6,724.5	6,724.0	103.9	23.3	90.13	-1,701.8	14,264.3	7,738.4	7,665.5	72.93	106.111		
15,100.0	6,672.0	6,724.6	6,724.1	105.1	23.3	90.13	-1,701.8	14,264.3	7,647.0	7,573.2	73.79	103.631		
15,200.0	6,672.0	6,724.7	6,724.2	106.3	23.3	90.13	-1,701.8	14,264.3	7,555.8	7,481.1	74.68	101.180		
15,300.0	6,672.0	6,724.8	6,724.3	107.6	23.3	90.13	-1,701.8	14,264.3	7,464.9	7,389.3	75.59	98.756		
15,400.0	6,672.0	6,725.0	6,724.4	108.8	23.3	90.14	-1,701.8	14,264.3	7,374.1	7,297.6	76.53	96.362		
15,500.0	6,672.0	6,725.1	6,724.6	110.0	23.3	90.14	-1,701.8	14,264.3	7,283.7	7,206.2	77.49	93.996		
15,600.0	6,672.0	6,725.2	6,724.7	111.2	23.3	90.14	-1,701.8	14,264.3	7,193.4	7,115.0	78.48	91.661		
15,700.0	6,672.0	6,725.3	6,724.8	112.4	23.3	90.14	-1,701.8	14,264.3	7,103.5	7,024.0	79.50	89.356		
15,800.0	6,672.0	6,725.4	6,724.9	113.6	23.3	90.15	-1,701.8	14,264.3	7,013.8	6,933.3	80.54	87.082		
15,900.0	6,672.0	6,725.6	6,725.0	114.8	23.3	90.15	-1,701.8	14,264.3	6,924.4	6,842.8	81.62	84.839		
16,000.0	6,672.0	6,725.7	6,725.2	116.0	23.3	90.15	-1,701.8	14,264.3	6,835.3	6,752.6	82.72	82.628		
16,100.0	6,672.0	6,725.8	6,725.3	117.2	23.3	90.15	-1,701.8	14,264.3	6,746.5	6,662.7	83.86	80.449		
16,200.0	6,672.0	6,725.9	6,725.4	118.4	23.3	90.15	-1,701.8	14,264.3	6,658.1	6,573.0	85.03	78.303		
16,300.0	6,672.0	6,726.0	6,725.5	119.6	23.3	90.16	-1,701.8	14,264.3	6,569.9	6,483.7	86.23	76.190		
16,400.0	6,672.0	6,726.2	6,725.7	120.8	23.3	90.16	-1,701.8	14,264.3	6,482.1	6,394.7	87.47	74.110		
16,500.0	6,672.0	6,726.3	6,725.8	122.0	23.3	90.16	-1,701.8	14,264.3	6,394.7	6,306.0	88.74	72.064		
16,600.0	6,672.0	6,726.4	6,725.9	123.2	23.3	90.16	-1,701.8	14,264.3	6,307.7	6,217.6	90.04	70.052		
16,700.0	6,672.0	6,726.5	6,726.0	124.5	23.3	90.17	-1,701.8	14,264.3	6,221.0	6,129.6	91.39	68.075		
16,800.0	6,672.0	6,726.7	6,726.1	125.7	23.3	90.17	-1,701.8	14,264.3	6,134.8	6,042.0	92.77	66.132		
16,900.0	6,672.0	6,726.8	6,726.3	126.9	23.3	90.17	-1,701.8	14,264.3	6,049.0	5,954.8	94.19	64.224		
17,000.0	6,672.0	6,726.9	6,726.4	128.1	23.3	90.17	-1,701.8	14,264.3	5,963.6	5,868.0	95.65	62.351		
17,100.0	6,672.0	6,727.0	6,726.5	129.3	23.3	90.17	-1,701.8	14,264.3	5,878.7	5,781.6	97.15	60.514		
17,200.0	6,672.0	6,727.1	6,726.6	130.5	23.3	90.18	-1,701.8	14,264.3	5,794.3	5,695.6	98.69	58.712		
17,300.0	6,672.0	6,727.3	6,726.7	131.7	23.3	90.18	-1,701.8	14,264.3	5,710.4	5,610.1	100.28	56.946		
17,400.0	6,672.0	6,727.4	6,726.9	133.0	23.3	90.18	-1,701.8	14,264.3	5,627.0	5,525.1	101.91	55.216		
17,500.0	6,672.0	6,727.5	6,727.0	134.2	23.3	90.18	-1,701.8	14,264.3	5,544.2	5,440.6	103.59	53.523		
17,600.0	6,672.0	6,727.6	6,727.1	135.4	23.3	90.19	-1,701.8	14,264.3	5,461.9	5,356.6	105.31	51.866		
17,700.0	6,672.0	6,727.7	6,727.2	136.6	23.3	90.19	-1,701.8	14,264.3	5,380.3	5,273.2	107.08	50.245		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> BB Section 09 - 70 Ranch USX BB09-09 - Original Drilling - Original Drilling - As Drilled												<b>Offset Site Error:</b>	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWSG												<b>Offset Well Error:</b>	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
17,800.0	6,672.0	6,727.9	6,727.4	137.8	23.3	90.19	-1,701.8	14,264.3	5,299.3	5,190.4	108.90	48.661	
17,900.0	6,672.0	6,728.0	6,727.5	139.0	23.3	90.19	-1,701.8	14,264.3	5,218.9	5,108.2	110.77	47.114	
18,000.0	6,672.0	6,728.1	6,727.6	140.3	23.3	90.19	-1,701.8	14,264.3	5,139.3	5,026.6	112.70	45.603	
18,100.0	6,672.0	6,728.2	6,727.7	141.5	23.3	90.20	-1,701.8	14,264.3	5,060.4	4,945.7	114.67	44.130	
18,200.0	6,672.0	6,728.4	6,727.8	142.7	23.3	90.20	-1,701.8	14,264.3	4,982.2	4,865.5	116.70	42.693	
18,300.0	6,672.0	6,728.5	6,728.0	143.9	23.3	90.20	-1,701.8	14,264.3	4,904.8	4,786.1	118.78	41.294	
18,342.5	6,672.0	6,728.5	6,728.0	144.4	23.3	90.20	-1,701.8	14,264.3	4,872.2	4,752.6	119.68	40.711	CC, ES, SF



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 09 - 70 Ranch USX BB09-10 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
11,300.0	6,672.0	6,704.3	6,702.3	60.7	23.3	89.45	-1,608.0	12,941.0	9,925.5	9,871.4	54.05	183.635		
11,400.0	6,672.0	6,704.7	6,702.8	61.8	23.3	89.46	-1,608.0	12,941.0	9,830.1	9,775.7	54.39	180.738		
11,500.0	6,672.0	6,705.1	6,703.2	62.9	23.3	89.46	-1,608.0	12,941.0	9,734.9	9,680.1	54.74	177.838		
11,600.0	6,672.0	6,705.6	6,703.6	64.1	23.3	89.47	-1,608.0	12,941.0	9,639.7	9,584.6	55.10	174.937		
11,700.0	6,672.0	6,706.0	6,704.0	65.2	23.3	89.48	-1,608.0	12,941.0	9,544.6	9,489.2	55.48	172.036		
11,800.0	6,672.0	6,706.4	6,704.5	66.3	23.3	89.49	-1,608.0	12,941.0	9,449.7	9,393.8	55.87	169.136		
11,900.0	6,672.0	6,706.8	6,704.9	67.5	23.3	89.50	-1,608.0	12,941.0	9,354.8	9,298.6	56.27	166.239		
12,000.0	6,672.0	6,707.2	6,705.3	68.6	23.3	89.51	-1,608.0	12,941.0	9,260.1	9,203.4	56.69	163.344		
12,100.0	6,672.0	6,707.7	6,705.7	69.8	23.3	89.51	-1,608.0	12,941.0	9,165.5	9,108.3	57.12	160.454		
12,200.0	6,672.0	6,708.1	6,706.1	70.9	23.3	89.52	-1,608.0	12,941.0	9,070.9	9,013.4	57.57	157.570		
12,300.0	6,672.0	6,700.0	6,698.1	72.1	23.3	89.37	-1,608.0	12,941.0	8,976.6	8,918.6	57.98	154.810		
12,400.0	6,672.0	6,700.0	6,698.1	73.2	23.3	89.37	-1,608.0	12,941.0	8,882.3	8,823.8	58.46	151.944		
12,500.0	6,672.0	6,700.0	6,698.1	74.4	23.3	89.37	-1,608.0	12,941.0	8,788.2	8,729.2	58.95	149.085		
12,600.0	6,672.0	6,700.0	6,698.1	75.5	23.3	89.37	-1,608.0	12,941.0	8,694.2	8,634.7	59.45	146.237		
12,700.0	6,672.0	6,700.0	6,698.1	76.7	23.3	89.37	-1,608.0	12,941.0	8,600.3	8,540.3	59.97	143.400		
12,800.0	6,672.0	6,700.0	6,698.1	77.9	23.3	89.37	-1,608.0	12,941.0	8,506.6	8,446.1	60.51	140.574		
12,900.0	6,672.0	6,700.0	6,698.1	79.0	23.3	89.37	-1,608.0	12,941.0	8,413.0	8,351.9	61.07	137.762		
13,000.0	6,672.0	6,700.0	6,698.1	80.2	23.3	89.37	-1,608.0	12,941.0	8,319.6	8,258.0	61.64	134.964		
13,100.0	6,672.0	6,700.0	6,698.1	81.4	23.3	89.37	-1,608.0	12,941.0	8,226.3	8,164.1	62.23	132.182		
13,200.0	6,672.0	6,700.0	6,698.1	82.6	23.3	89.37	-1,608.0	12,941.0	8,133.2	8,070.4	62.85	129.416		
13,300.0	6,672.0	6,700.0	6,698.1	83.7	23.3	89.37	-1,608.0	12,941.0	8,040.3	7,976.8	63.48	126.667		
13,400.0	6,672.0	6,700.0	6,698.1	84.9	23.3	89.37	-1,608.0	12,941.0	7,947.5	7,883.4	64.13	123.937		
13,500.0	6,672.0	6,700.0	6,698.1	86.1	23.3	89.37	-1,608.0	12,941.0	7,855.0	7,790.2	64.80	121.227		
13,600.0	6,672.0	6,700.0	6,698.1	87.3	23.3	89.37	-1,608.0	12,941.0	7,762.6	7,697.1	65.49	118.537		
13,700.0	6,672.0	6,700.0	6,698.1	88.4	23.3	89.37	-1,608.0	12,941.0	7,670.4	7,604.2	66.20	115.869		
13,800.0	6,672.0	6,700.0	6,698.1	89.6	23.3	89.37	-1,608.0	12,941.0	7,578.4	7,511.5	66.93	113.223		
13,900.0	6,672.0	6,700.0	6,698.1	90.8	23.3	89.37	-1,608.0	12,941.0	7,486.6	7,418.9	67.69	110.601		
14,000.0	6,672.0	6,700.0	6,698.1	92.0	23.3	89.37	-1,608.0	12,941.0	7,395.0	7,326.6	68.47	108.003		
14,100.0	6,672.0	6,700.0	6,698.1	93.2	23.3	89.37	-1,608.0	12,941.0	7,303.7	7,234.4	69.27	105.431		
14,200.0	6,672.0	6,700.0	6,698.1	94.4	23.3	89.37	-1,608.0	12,941.0	7,212.6	7,142.5	70.10	102.884		
14,300.0	6,672.0	6,700.0	6,698.1	95.6	23.3	89.37	-1,608.0	12,941.0	7,121.7	7,050.7	70.96	100.365		
14,400.0	6,672.0	6,711.5	6,709.6	96.8	23.3	89.59	-1,607.9	12,941.1	7,031.1	6,959.2	71.90	97.784		
14,500.0	6,672.0	6,711.9	6,709.9	98.0	23.3	89.60	-1,607.9	12,941.1	6,940.7	6,867.9	72.81	95.322		
14,600.0	6,672.0	6,712.2	6,710.3	99.2	23.3	89.60	-1,607.9	12,941.1	6,850.6	6,776.9	73.75	92.889		
14,700.0	6,672.0	6,712.5	6,710.6	100.4	23.3	89.61	-1,607.9	12,941.1	6,760.8	6,686.1	74.72	90.486		
14,800.0	6,672.0	6,712.9	6,710.9	101.6	23.3	89.62	-1,607.9	12,941.1	6,671.3	6,595.6	75.71	88.115		
14,900.0	6,672.0	6,713.2	6,711.3	102.7	23.3	89.62	-1,607.9	12,941.1	6,582.1	6,505.4	76.74	85.775		
15,000.0	6,672.0	6,713.6	6,711.6	103.9	23.3	89.63	-1,607.9	12,941.1	6,493.2	6,415.4	77.79	83.467		
15,100.0	6,672.0	6,713.9	6,712.0	105.1	23.3	89.64	-1,607.9	12,941.1	6,404.6	6,325.8	78.88	81.193		
15,200.0	6,672.0	6,714.2	6,712.3	106.3	23.3	89.64	-1,607.9	12,941.1	6,316.4	6,236.4	80.00	78.952		
15,300.0	6,672.0	6,714.6	6,712.7	107.6	23.3	89.65	-1,607.9	12,941.1	6,228.6	6,147.4	81.16	76.745		
15,400.0	6,672.0	6,715.0	6,713.0	108.8	23.3	89.66	-1,607.9	12,941.1	6,141.1	6,058.7	82.35	74.573		
15,500.0	6,672.0	6,715.3	6,713.4	110.0	23.3	89.66	-1,607.9	12,941.1	6,054.0	5,970.4	83.58	72.436		
15,600.0	6,672.0	6,715.7	6,713.7	111.2	23.3	89.67	-1,607.9	12,941.1	5,967.3	5,882.5	84.84	70.335		
15,700.0	6,672.0	6,716.0	6,714.1	112.4	23.3	89.68	-1,607.9	12,941.1	5,881.1	5,794.9	86.14	68.271		
15,800.0	6,672.0	6,716.4	6,714.5	113.6	23.3	89.68	-1,607.9	12,941.1	5,795.3	5,707.8	87.49	66.243		
15,900.0	6,672.0	6,716.8	6,714.8	114.8	23.3	89.69	-1,607.9	12,941.1	5,709.9	5,621.1	88.87	64.252		
16,000.0	6,672.0	6,717.1	6,715.2	116.0	23.3	89.70	-1,607.9	12,941.1	5,625.1	5,534.8	90.29	62.298		
16,100.0	6,672.0	6,717.5	6,715.6	117.2	23.3	89.71	-1,607.9	12,941.1	5,540.7	5,449.0	91.76	60.383		
16,200.0	6,672.0	6,717.9	6,716.0	118.4	23.3	89.71	-1,607.9	12,941.1	5,456.9	5,363.6	93.27	58.506		
16,300.0	6,672.0	6,718.3	6,716.3	119.6	23.3	89.72	-1,607.9	12,941.1	5,373.7	5,278.8	94.83	56.668		
16,400.0	6,672.0	6,718.7	6,716.7	120.8	23.3	89.73	-1,607.9	12,941.1	5,291.0	5,194.6	96.43	54.868		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> BB Section 09 - 70 Ranch USX BB09-10 - Original Drilling - Original Drilling - As Drilled												<b>Offset Site Error:</b>	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWSG												<b>Offset Well Error:</b>	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
16,500.0	6,672.0	6,719.1	6,717.1	122.0	23.3	89.73	-1,607.9	12,941.1	5,208.9	5,110.8	98.08	53.108	
16,600.0	6,672.0	6,719.5	6,717.5	123.2	23.3	89.74	-1,607.9	12,941.1	5,127.5	5,027.7	99.78	51.387	
16,700.0	6,672.0	6,719.9	6,717.9	124.5	23.3	89.75	-1,607.9	12,941.1	5,046.8	4,945.2	101.53	49.706	
16,800.0	6,672.0	6,720.3	6,718.3	125.7	23.3	89.76	-1,607.9	12,941.1	4,966.7	4,863.4	103.33	48.065	
16,900.0	6,672.0	6,720.7	6,718.7	126.9	23.3	89.77	-1,607.9	12,941.1	4,887.4	4,782.2	105.19	46.464	
17,000.0	6,672.0	6,721.1	6,719.1	128.1	23.3	89.77	-1,607.9	12,941.1	4,808.9	4,701.8	107.09	44.904	
17,100.0	6,672.0	6,721.5	6,719.5	129.3	23.3	89.78	-1,607.9	12,941.1	4,731.2	4,622.1	109.05	43.384	
17,200.0	6,672.0	6,721.9	6,719.9	130.5	23.3	89.79	-1,607.9	12,941.1	4,654.3	4,543.3	111.07	41.904	
17,300.0	6,672.0	6,722.3	6,720.4	131.7	23.3	89.80	-1,607.9	12,941.1	4,578.4	4,465.3	113.14	40.466	
17,400.0	6,672.0	6,722.7	6,720.8	133.0	23.3	89.81	-1,607.9	12,941.1	4,503.4	4,388.1	115.27	39.068	
17,500.0	6,672.0	6,723.2	6,721.2	134.2	23.3	89.81	-1,607.9	12,941.1	4,429.4	4,311.9	117.46	37.711	
17,600.0	6,672.0	6,723.6	6,721.6	135.4	23.3	89.82	-1,607.9	12,941.1	4,356.4	4,236.7	119.70	36.395	
17,700.0	6,672.0	6,724.0	6,722.1	136.6	23.3	89.83	-1,607.9	12,941.1	4,284.5	4,162.5	122.00	35.120	
17,800.0	6,672.0	6,724.5	6,722.5	137.8	23.3	89.84	-1,607.9	12,941.1	4,213.8	4,089.5	124.35	33.885	
17,900.0	6,672.0	6,724.9	6,723.0	139.0	23.3	89.85	-1,607.9	12,941.1	4,144.3	4,017.5	126.77	32.692	
18,000.0	6,672.0	6,725.4	6,723.4	140.3	23.3	89.86	-1,607.9	12,941.1	4,076.1	3,946.8	129.23	31.540	
18,100.0	6,672.0	6,725.8	6,723.9	141.5	23.3	89.86	-1,607.9	12,941.1	4,009.2	3,877.4	131.76	30.429	
18,200.0	6,672.0	6,726.3	6,724.3	142.7	23.3	89.87	-1,607.9	12,941.1	3,943.7	3,809.3	134.33	29.358	
18,300.0	6,672.0	6,726.7	6,724.8	143.9	23.4	89.88	-1,607.9	12,941.1	3,879.7	3,742.7	136.95	28.329	
18,342.5	6,672.0	6,726.9	6,725.0	144.4	23.4	89.89	-1,607.9	12,941.1	3,852.9	3,714.9	138.08	27.904	CC, ES, SF



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 09 - 70 Ranch USX BB09-11 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,000.0	6,672.0	6,670.9	6,669.9	46.7	23.1	88.33	-1,727.4	11,639.8	9,951.1	9,900.0	51.17	194.459		
10,100.0	6,672.0	6,672.5	6,671.5	47.7	23.1	88.36	-1,727.4	11,639.8	9,856.0	9,804.6	51.44	191.613		
10,200.0	6,672.0	6,674.1	6,673.1	48.8	23.1	88.39	-1,727.4	11,639.8	9,761.0	9,709.3	51.71	188.754		
10,300.0	6,672.0	6,675.7	6,674.8	49.8	23.1	88.42	-1,727.4	11,639.8	9,666.1	9,614.1	52.00	185.884		
10,400.0	6,672.0	6,677.3	6,676.4	50.9	23.1	88.45	-1,727.4	11,639.8	9,571.3	9,519.0	52.30	183.003		
10,500.0	6,672.0	6,678.9	6,677.9	51.9	23.2	88.48	-1,727.3	11,639.9	9,476.6	9,424.0	52.61	180.114		
10,600.0	6,672.0	6,680.5	6,679.5	53.0	23.2	88.51	-1,727.3	11,639.9	9,382.1	9,329.1	52.94	177.216		
10,700.0	6,672.0	6,682.1	6,681.1	54.1	23.2	88.54	-1,727.3	11,639.9	9,287.6	9,234.3	53.28	174.312		
10,800.0	6,672.0	6,683.6	6,682.6	55.2	23.2	88.57	-1,727.3	11,639.9	9,193.3	9,139.6	53.64	171.403		
10,900.0	6,672.0	6,685.1	6,684.2	56.3	23.2	88.60	-1,727.3	11,639.9	9,099.0	9,045.0	54.00	168.489		
11,000.0	6,672.0	6,686.7	6,685.7	57.4	23.2	88.63	-1,727.3	11,639.9	9,005.0	8,950.6	54.39	165.573		
11,100.0	6,672.0	6,688.2	6,687.2	58.5	23.2	88.66	-1,727.3	11,640.0	8,911.0	8,856.2	54.78	162.656		
11,200.0	6,672.0	6,689.7	6,688.7	59.6	23.2	88.69	-1,727.3	11,640.0	8,817.2	8,762.0	55.20	159.739		
11,300.0	6,672.0	6,691.2	6,690.2	60.7	23.2	88.71	-1,727.2	11,640.0	8,723.5	8,667.9	55.63	156.824		
11,400.0	6,672.0	6,692.6	6,691.7	61.8	23.2	88.74	-1,727.2	11,640.0	8,629.9	8,573.9	56.07	153.911		
11,500.0	6,672.0	6,694.1	6,693.1	62.9	23.2	88.77	-1,727.2	11,640.0	8,536.6	8,480.0	56.53	151.003		
11,600.0	6,672.0	6,695.6	6,694.6	64.1	23.2	88.80	-1,727.2	11,640.0	8,443.3	8,386.3	57.01	148.101		
11,700.0	6,672.0	6,697.0	6,696.0	65.2	23.2	88.82	-1,727.2	11,640.1	8,350.2	8,292.7	57.51	145.206		
11,800.0	6,672.0	6,698.5	6,697.5	66.3	23.2	88.85	-1,727.2	11,640.1	8,257.3	8,199.3	58.02	142.319		
11,900.0	6,672.0	6,699.9	6,698.9	67.5	23.2	88.88	-1,727.2	11,640.1	8,164.6	8,106.0	58.55	139.443		
12,000.0	6,672.0	6,701.3	6,700.3	68.6	23.2	88.91	-1,727.2	11,640.1	8,072.0	8,012.9	59.10	136.578		
12,100.0	6,672.0	6,702.7	6,701.7	69.8	23.2	88.93	-1,727.2	11,640.1	7,979.6	7,920.0	59.67	133.726		
12,200.0	6,672.0	6,704.1	6,703.1	70.9	23.2	88.96	-1,727.1	11,640.1	7,887.4	7,827.2	60.26	130.888		
12,300.0	6,672.0	6,705.5	6,704.5	72.1	23.2	88.98	-1,727.1	11,640.1	7,795.4	7,734.6	60.87	128.066		
12,400.0	6,672.0	6,706.8	6,705.9	73.2	23.3	89.01	-1,727.1	11,640.2	7,703.6	7,642.1	61.50	125.261		
12,500.0	6,672.0	6,708.2	6,707.2	74.4	23.3	89.03	-1,727.1	11,640.2	7,612.0	7,549.9	62.15	122.474		
12,600.0	6,672.0	6,709.6	6,708.6	75.5	23.3	89.06	-1,727.1	11,640.2	7,520.7	7,457.8	62.83	119.706		
12,700.0	6,672.0	6,710.9	6,709.9	76.7	23.3	89.09	-1,727.1	11,640.2	7,429.5	7,366.0	63.52	116.960		
12,800.0	6,672.0	6,712.2	6,711.3	77.9	23.3	89.11	-1,727.1	11,640.2	7,338.6	7,274.4	64.24	114.236		
12,900.0	6,672.0	6,713.6	6,712.6	79.0	23.3	89.14	-1,727.1	11,640.2	7,247.9	7,182.9	64.98	111.535		
13,000.0	6,672.0	6,714.9	6,713.9	80.2	23.3	89.16	-1,727.1	11,640.2	7,157.5	7,091.8	65.75	108.858		
13,100.0	6,672.0	6,716.2	6,715.2	81.4	23.3	89.18	-1,727.0	11,640.3	7,067.3	7,000.8	66.54	106.208		
13,200.0	6,672.0	6,717.5	6,716.5	82.6	23.3	89.21	-1,727.0	11,640.3	6,977.5	6,910.1	67.36	103.584		
13,300.0	6,672.0	6,718.8	6,717.8	83.7	23.3	89.23	-1,727.0	11,640.3	6,887.8	6,819.6	68.20	100.988		
13,400.0	6,672.0	6,720.0	6,719.1	84.9	23.3	89.26	-1,727.0	11,640.3	6,798.5	6,729.5	69.08	98.421		
13,500.0	6,672.0	6,710.0	6,709.0	86.1	23.3	89.07	-1,727.1	11,640.2	6,709.5	6,639.6	69.91	95.972		
13,600.0	6,672.0	6,710.7	6,709.7	87.3	23.3	89.08	-1,727.1	11,640.2	6,620.8	6,550.0	70.84	93.467		
13,700.0	6,672.0	6,711.4	6,710.4	88.4	23.3	89.10	-1,727.1	11,640.2	6,532.5	6,460.7	71.79	90.994		
13,800.0	6,672.0	6,712.2	6,711.2	89.6	23.3	89.11	-1,727.1	11,640.2	6,444.5	6,371.7	72.77	88.554		
13,900.0	6,672.0	6,712.9	6,711.9	90.8	23.3	89.12	-1,727.1	11,640.2	6,356.8	6,283.0	73.79	86.147		
14,000.0	6,672.0	6,713.7	6,712.7	92.0	23.3	89.14	-1,727.1	11,640.2	6,269.5	6,194.7	74.84	83.774		
14,100.0	6,672.0	6,714.4	6,713.4	93.2	23.3	89.15	-1,727.1	11,640.3	6,182.6	6,106.7	75.92	81.436		
14,200.0	6,672.0	6,715.2	6,714.2	94.4	23.3	89.17	-1,727.1	11,640.3	6,096.1	6,019.1	77.04	79.134		
14,300.0	6,672.0	6,716.0	6,715.0	95.6	23.3	89.18	-1,727.0	11,640.3	6,010.1	5,931.9	78.19	76.869		
14,400.0	6,672.0	6,716.8	6,715.8	96.8	23.3	89.20	-1,727.0	11,640.3	5,924.4	5,845.1	79.37	74.642		
14,500.0	6,672.0	6,717.6	6,716.6	98.0	23.3	89.21	-1,727.0	11,640.3	5,839.3	5,758.7	80.59	72.452		
14,600.0	6,672.0	6,718.4	6,717.4	99.2	23.3	89.23	-1,727.0	11,640.3	5,754.6	5,672.7	81.86	70.301		
14,700.0	6,672.0	6,719.3	6,718.3	100.4	23.3	89.24	-1,727.0	11,640.3	5,670.4	5,587.3	83.16	68.190		
14,800.0	6,672.0	6,720.1	6,719.1	101.6	23.3	89.26	-1,727.0	11,640.3	5,586.8	5,502.3	84.50	66.118		
14,900.0	6,672.0	6,721.0	6,720.0	102.7	23.3	89.28	-1,727.0	11,640.3	5,503.6	5,417.8	85.88	64.087		
15,000.0	6,672.0	6,721.8	6,720.9	103.9	23.3	89.29	-1,727.0	11,640.4	5,421.1	5,333.8	87.30	62.097		
15,100.0	6,672.0	6,722.7	6,721.8	105.1	23.3	89.31	-1,727.0	11,640.4	5,339.2	5,250.4	88.77	60.148		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 09 - 70 Ranch USX BB09-11 - Original Drilling - Original Drilling - As Drilled											Offset Site Error:		0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWSG											Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance					Warning	
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)		
15,200.0	6,672.0	6,723.7	6,722.7	106.3	23.3	89.33	-1,727.0	11,640.4	5,257.9	5,167.6	90.28	58.241	
15,300.0	6,672.0	6,724.6	6,723.6	107.6	23.3	89.34	-1,727.0	11,640.4	5,177.2	5,085.4	91.83	56.376	
15,400.0	6,672.0	6,725.5	6,724.5	108.8	23.3	89.36	-1,727.0	11,640.4	5,097.3	5,003.8	93.44	54.553	
15,500.0	6,672.0	6,726.5	6,725.5	110.0	23.3	89.38	-1,727.0	11,640.4	5,018.1	4,923.0	95.09	52.774	
15,600.0	6,672.0	6,727.4	6,726.5	111.2	23.3	89.40	-1,727.0	11,640.4	4,939.6	4,842.8	96.78	51.037	
15,700.0	6,672.0	6,757.0	6,722.0	112.4	23.4	89.31	-1,727.0	11,640.4	4,861.9	4,763.3	98.62	49.301	
15,800.0	6,672.0	6,755.4	6,723.6	113.6	23.4	89.34	-1,727.0	11,640.4	4,785.1	4,684.7	100.41	47.657	
15,900.0	6,672.0	6,753.8	6,725.2	114.8	23.4	89.37	-1,727.0	11,640.4	4,709.1	4,606.8	102.24	46.057	
16,000.0	6,672.0	6,752.2	6,726.8	116.0	23.4	89.40	-1,727.0	11,640.4	4,634.0	4,529.9	104.13	44.500	
16,100.0	6,672.0	6,750.6	6,728.5	117.2	23.4	89.43	-1,726.9	11,640.5	4,560.0	4,453.9	106.08	42.988	
16,200.0	6,672.0	6,748.9	6,730.1	118.4	23.4	89.46	-1,726.9	11,640.5	4,486.9	4,378.8	108.07	41.519	
16,300.0	6,672.0	6,747.3	6,731.7	119.6	23.4	89.49	-1,726.9	11,640.5	4,414.9	4,304.7	110.11	40.094	
16,400.0	6,672.0	6,745.7	6,733.3	120.8	23.4	89.52	-1,726.9	11,640.5	4,344.0	4,231.7	112.21	38.713	
16,500.0	6,672.0	6,744.1	6,734.9	122.0	23.4	89.55	-1,726.9	11,640.6	4,274.2	4,159.9	114.36	37.376	
16,600.0	6,672.0	6,742.4	6,736.6	123.2	23.4	89.58	-1,726.9	11,640.6	4,205.7	4,089.2	116.56	36.083	
16,700.0	6,672.0	6,740.8	6,738.2	124.5	23.4	89.61	-1,726.9	11,640.6	4,138.5	4,019.7	118.80	34.835	
16,800.0	6,672.0	6,740.8	6,739.8	125.7	23.4	89.64	-1,726.8	11,640.6	4,072.6	3,951.5	121.11	33.629	
16,900.0	6,672.0	6,742.4	6,741.4	126.9	23.4	89.67	-1,726.8	11,640.7	4,008.2	3,884.7	123.46	32.465	
17,000.0	6,672.0	6,744.0	6,743.1	128.1	23.4	89.70	-1,726.8	11,640.7	3,945.2	3,819.3	125.86	31.346	
17,100.0	6,672.0	6,745.7	6,744.7	129.3	23.4	89.73	-1,726.8	11,640.7	3,883.8	3,755.5	128.30	30.271	
17,200.0	6,672.0	6,747.3	6,746.3	130.5	23.4	89.76	-1,726.8	11,640.7	3,824.0	3,693.2	130.78	29.240	
17,300.0	6,672.0	6,748.9	6,747.9	131.7	23.4	89.79	-1,726.8	11,640.8	3,766.0	3,632.7	133.29	28.253	
17,400.0	6,672.0	6,750.5	6,749.5	133.0	23.4	89.82	-1,726.8	11,640.8	3,709.7	3,573.9	135.84	27.309	
17,500.0	6,672.0	6,752.2	6,751.2	134.2	23.4	89.85	-1,726.8	11,640.8	3,655.3	3,516.9	138.41	26.409	
17,600.0	6,672.0	6,753.8	6,752.8	135.4	23.4	89.88	-1,726.7	11,640.8	3,602.9	3,461.9	141.00	25.552	
17,700.0	6,672.0	6,755.4	6,754.4	136.6	23.4	89.92	-1,726.7	11,640.9	3,552.5	3,408.9	143.61	24.738	
17,800.0	6,672.0	6,757.0	6,756.0	137.8	23.4	89.95	-1,726.7	11,640.9	3,504.2	3,358.0	146.22	23.966	
17,900.0	6,672.0	6,758.7	6,757.7	139.0	23.4	89.98	-1,726.7	11,640.9	3,458.2	3,309.4	148.83	23.236	
18,000.0	6,672.0	6,760.3	6,759.3	140.3	23.4	90.01	-1,726.7	11,641.0	3,414.5	3,263.1	151.43	22.549	
18,100.0	6,672.0	6,761.9	6,760.9	141.5	23.4	90.04	-1,726.7	11,641.0	3,373.2	3,219.2	154.01	21.903	
18,200.0	6,672.0	6,763.5	6,762.5	142.7	23.5	90.07	-1,726.7	11,641.0	3,334.4	3,177.8	156.56	21.298	
18,300.0	6,672.0	6,765.2	6,764.2	143.9	23.5	90.10	-1,726.6	11,641.0	3,298.2	3,139.1	159.07	20.734	
18,342.5	6,672.0	6,765.8	6,764.8	144.4	23.5	90.11	-1,726.6	11,641.0	3,283.6	3,123.5	160.12	20.507 CC, ES, SF	



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 09 - 70 Ranch USX BB09-15 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
11,600.0	6,672.0	6,750.0	6,747.0	64.1	23.5	90.18	-3,169.3	12,683.7	9,969.3	9,908.2	61.06	163.273		
11,700.0	6,672.0	6,750.2	6,747.2	65.2	23.5	90.18	-3,169.3	12,683.7	9,880.3	9,818.6	61.68	160.179		
11,800.0	6,672.0	6,750.4	6,747.4	66.3	23.5	90.18	-3,169.3	12,683.7	9,791.5	9,729.2	62.32	157.105		
11,900.0	6,672.0	6,750.6	6,747.6	67.5	23.5	90.18	-3,169.3	12,683.7	9,703.0	9,640.0	62.98	154.054		
12,000.0	6,672.0	6,750.8	6,747.8	68.6	23.5	90.19	-3,169.3	12,683.7	9,614.7	9,551.1	63.66	151.026		
12,100.0	6,672.0	6,751.0	6,748.0	69.8	23.5	90.19	-3,169.3	12,683.7	9,526.7	9,462.3	64.36	148.022		
12,200.0	6,672.0	6,751.2	6,748.2	70.9	23.5	90.19	-3,169.3	12,683.7	9,438.8	9,373.8	65.08	145.045		
12,300.0	6,672.0	6,751.4	6,748.4	72.1	23.5	90.19	-3,169.3	12,683.7	9,351.3	9,285.4	65.81	142.096		
12,400.0	6,672.0	6,751.6	6,748.6	73.2	23.5	90.20	-3,169.3	12,683.7	9,263.9	9,197.4	66.56	139.175		
12,500.0	6,672.0	6,751.8	6,748.8	74.4	23.5	90.20	-3,169.2	12,683.7	9,176.9	9,109.5	67.34	136.283		
12,600.0	6,672.0	6,752.0	6,749.0	75.5	23.5	90.20	-3,169.2	12,683.7	9,090.1	9,022.0	68.13	133.422		
12,700.0	6,672.0	6,752.2	6,749.2	76.7	23.5	90.20	-3,169.2	12,683.7	9,003.6	8,934.6	68.94	130.593		
12,800.0	6,672.0	6,752.4	6,749.4	77.9	23.5	90.21	-3,169.2	12,683.7	8,917.4	8,847.6	69.78	127.797		
12,900.0	6,672.0	6,752.6	6,749.6	79.0	23.5	90.21	-3,169.2	12,683.7	8,831.4	8,760.8	70.63	125.033		
13,000.0	6,672.0	6,752.8	6,749.8	80.2	23.5	90.21	-3,169.2	12,683.7	8,745.8	8,674.3	71.51	122.304		
13,100.0	6,672.0	6,753.0	6,750.0	81.4	23.5	90.22	-3,169.2	12,683.7	8,660.5	8,588.1	72.41	119.610		
13,200.0	6,672.0	6,753.2	6,750.2	82.6	23.5	90.22	-3,169.2	12,683.7	8,575.5	8,502.2	73.33	116.952		
13,300.0	6,672.0	6,753.4	6,750.4	83.7	23.5	90.22	-3,169.2	12,683.7	8,490.9	8,416.6	74.27	114.329		
13,400.0	6,672.0	6,753.6	6,750.6	84.9	23.5	90.22	-3,169.2	12,683.7	8,406.5	8,331.3	75.23	111.744		
13,500.0	6,672.0	6,753.8	6,750.8	86.1	23.5	90.23	-3,169.2	12,683.7	8,322.6	8,246.4	76.22	109.195		
13,600.0	6,672.0	6,754.0	6,751.1	87.3	23.5	90.23	-3,169.2	12,683.7	8,239.0	8,161.7	77.23	106.685		
13,700.0	6,672.0	6,754.2	6,751.3	88.4	23.5	90.23	-3,169.2	12,683.7	8,155.7	8,077.5	78.26	104.213		
13,800.0	6,672.0	6,754.4	6,751.5	89.6	23.5	90.23	-3,169.2	12,683.7	8,072.9	7,993.6	79.32	101.779		
13,900.0	6,672.0	6,754.6	6,751.7	90.8	23.5	90.24	-3,169.2	12,683.7	7,990.4	7,910.0	80.40	99.385		
14,000.0	6,672.0	6,754.8	6,751.9	92.0	23.5	90.24	-3,169.2	12,683.7	7,908.4	7,826.9	81.51	97.029		
14,100.0	6,672.0	6,755.1	6,752.1	93.2	23.5	90.24	-3,169.2	12,683.7	7,826.8	7,744.1	82.64	94.713		
14,200.0	6,672.0	6,755.3	6,752.3	94.4	23.5	90.24	-3,169.2	12,683.7	7,745.6	7,661.8	83.79	92.437		
14,300.0	6,672.0	6,755.5	6,752.5	95.6	23.5	90.25	-3,169.2	12,683.7	7,664.9	7,579.9	84.98	90.201		
14,400.0	6,672.0	6,755.7	6,752.7	96.8	23.5	90.25	-3,169.2	12,683.7	7,584.6	7,498.4	86.18	88.005		
14,500.0	6,672.0	6,755.9	6,752.9	98.0	23.5	90.25	-3,169.2	12,683.7	7,504.8	7,417.4	87.42	85.849		
14,600.0	6,672.0	6,756.1	6,753.1	99.2	23.5	90.25	-3,169.2	12,683.7	7,425.5	7,336.8	88.68	83.733		
14,700.0	6,672.0	6,756.3	6,753.3	100.4	23.5	90.26	-3,169.2	12,683.7	7,346.7	7,256.7	89.97	81.658		
14,800.0	6,672.0	6,756.5	6,753.5	101.6	23.5	90.26	-3,169.2	12,683.7	7,268.4	7,177.2	91.29	79.623		
14,900.0	6,672.0	6,756.7	6,753.7	102.7	23.5	90.26	-3,169.2	12,683.7	7,190.7	7,098.1	92.63	77.628		
15,000.0	6,672.0	6,756.9	6,753.9	103.9	23.5	90.26	-3,169.2	12,683.7	7,113.6	7,019.6	94.00	75.674		
15,100.0	6,672.0	6,757.1	6,754.1	105.1	23.5	90.27	-3,169.2	12,683.7	7,037.0	6,941.6	95.40	73.760		
15,200.0	6,672.0	6,757.3	6,754.3	106.3	23.5	90.27	-3,169.2	12,683.7	6,961.0	6,864.2	96.83	71.886		
15,300.0	6,672.0	6,757.5	6,754.5	107.6	23.5	90.27	-3,169.2	12,683.7	6,885.7	6,787.4	98.29	70.052		
15,400.0	6,672.0	6,757.7	6,754.7	108.8	23.5	90.27	-3,169.2	12,683.7	6,810.9	6,711.2	99.78	68.258		
15,500.0	6,672.0	6,757.9	6,754.9	110.0	23.5	90.28	-3,169.2	12,683.7	6,736.9	6,635.6	101.30	66.504		
15,600.0	6,672.0	6,758.1	6,755.1	111.2	23.5	90.28	-3,169.2	12,683.7	6,663.5	6,560.7	102.85	64.790		
15,700.0	6,672.0	6,758.3	6,755.3	112.4	23.5	90.28	-3,169.2	12,683.7	6,590.8	6,486.4	104.42	63.116		
15,800.0	6,672.0	6,758.5	6,755.5	113.6	23.5	90.28	-3,169.2	12,683.7	6,518.9	6,412.9	106.03	61.480		
15,900.0	6,672.0	6,758.7	6,755.7	114.8	23.5	90.29	-3,169.2	12,683.7	6,447.7	6,340.0	107.67	59.884		
16,000.0	6,672.0	6,758.9	6,755.9	116.0	23.5	90.29	-3,169.2	12,683.7	6,377.3	6,268.0	109.34	58.327		
16,100.0	6,672.0	6,759.1	6,756.1	117.2	23.5	90.29	-3,169.2	12,683.7	6,307.7	6,196.7	111.03	56.808		
16,200.0	6,672.0	6,759.3	6,756.3	118.4	23.5	90.29	-3,169.2	12,683.7	6,238.9	6,126.2	112.76	55.328		
16,300.0	6,672.0	6,759.5	6,756.5	119.6	23.5	90.30	-3,169.2	12,683.7	6,171.0	6,056.5	114.52	53.887		
16,400.0	6,672.0	6,759.7	6,756.7	120.8	23.5	90.30	-3,169.2	12,683.7	6,104.0	5,987.7	116.30	52.483		
16,500.0	6,672.0	6,759.9	6,757.0	122.0	23.5	90.30	-3,169.2	12,683.7	6,037.9	5,919.8	118.12	51.117		
16,600.0	6,672.0	6,760.1	6,757.2	123.2	23.5	90.30	-3,169.2	12,683.7	5,972.7	5,852.8	119.96	49.788		
16,700.0	6,672.0	6,760.4	6,757.4	124.5	23.5	90.31	-3,169.2	12,683.7	5,908.5	5,786.7	121.83	48.496		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> BB Section 09 - 70 Ranch USX BB09-15 - Original Drilling - Original Drilling - As Drilled												Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWSG												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
16,800.0	6,672.0	6,760.6	6,757.6	125.7	23.5	90.31	-3,169.2	12,683.7	5,845.4	5,721.6	123.73	47.242	
16,900.0	6,672.0	6,760.8	6,757.8	126.9	23.5	90.31	-3,169.2	12,683.7	5,783.3	5,657.6	125.66	46.023	
17,000.0	6,672.0	6,761.0	6,758.0	128.1	23.5	90.31	-3,169.2	12,683.7	5,722.2	5,594.6	127.61	44.841	
17,100.0	6,672.0	6,761.2	6,758.2	129.3	23.5	90.32	-3,169.2	12,683.7	5,662.3	5,532.7	129.59	43.695	
17,200.0	6,672.0	6,761.4	6,758.4	130.5	23.5	90.32	-3,169.2	12,683.7	5,603.5	5,471.9	131.59	42.584	
17,300.0	6,672.0	6,761.6	6,758.6	131.7	23.5	90.32	-3,169.2	12,683.7	5,545.9	5,412.3	133.61	41.508	
17,400.0	6,672.0	6,761.8	6,758.8	133.0	23.5	90.32	-3,169.2	12,683.7	5,489.6	5,353.9	135.65	40.468	
17,500.0	6,672.0	6,762.0	6,759.0	134.2	23.5	90.33	-3,169.2	12,683.7	5,434.4	5,296.7	137.72	39.461	
17,600.0	6,672.0	6,762.2	6,759.2	135.4	23.5	90.33	-3,169.2	12,683.7	5,380.6	5,240.8	139.80	38.489	
17,700.0	6,672.0	6,762.4	6,759.4	136.6	23.5	90.33	-3,169.2	12,683.7	5,328.2	5,186.3	141.89	37.551	
17,800.0	6,672.0	6,762.6	6,759.6	137.8	23.5	90.33	-3,169.2	12,683.7	5,277.1	5,133.1	144.00	36.646	
17,900.0	6,672.0	6,762.8	6,759.8	139.0	23.5	90.34	-3,169.2	12,683.7	5,227.4	5,081.3	146.12	35.774	
18,000.0	6,672.0	6,763.0	6,760.0	140.3	23.5	90.34	-3,169.2	12,683.7	5,179.2	5,031.0	148.25	34.935	
18,100.0	6,672.0	6,763.2	6,760.2	141.5	23.5	90.34	-3,169.2	12,683.7	5,132.5	4,982.1	150.39	34.128	
18,200.0	6,672.0	6,763.4	6,760.4	142.7	23.5	90.34	-3,169.2	12,683.7	5,087.4	4,934.8	152.53	33.354	
18,300.0	6,672.0	6,763.6	6,760.7	143.9	23.5	90.35	-3,169.2	12,683.7	5,043.8	4,889.1	154.67	32.610	
18,342.5	6,672.0	6,763.7	6,760.7	144.4	23.5	90.35	-3,169.2	12,683.7	5,025.8	4,870.2	155.58	32.304 CC, ES, SF	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 09 - 70 Ranch USX BB09-63HN - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 700-2_MWD, 7003-2_MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance							Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
8,800.0	6,672.0	10,902.0	6,577.6	35.5	114.3	87.77	-2,624.9	10,158.9	9,978.2	9,893.3	84.97	117.434		
8,900.0	6,672.0	10,902.0	6,577.6	36.3	114.3	87.77	-2,624.9	10,158.9	9,886.4	9,800.8	85.56	115.547		
9,000.0	6,672.0	10,902.0	6,577.6	37.2	114.3	87.77	-2,624.9	10,158.9	9,794.7	9,708.5	86.18	113.658		
9,100.0	6,672.0	10,902.0	6,577.6	38.1	114.3	87.78	-2,624.9	10,158.9	9,703.1	9,616.3	86.81	111.770		
9,200.0	6,672.0	10,902.0	6,577.6	39.0	114.3	87.78	-2,624.9	10,158.9	9,611.8	9,524.3	87.47	109.883		
9,300.0	6,672.0	10,902.0	6,577.6	39.9	114.3	87.78	-2,624.9	10,158.9	9,520.6	9,432.4	88.16	107.997		
9,400.0	6,672.0	10,902.0	6,577.6	40.8	114.3	87.78	-2,624.9	10,158.9	9,429.6	9,340.7	88.86	106.114		
9,500.0	6,672.0	10,902.0	6,577.6	41.8	114.3	87.78	-2,624.9	10,158.9	9,338.7	9,249.1	89.59	104.234		
9,600.0	6,672.0	10,902.0	6,577.6	42.7	114.3	87.78	-2,624.9	10,158.9	9,248.1	9,157.8	90.35	102.359		
9,700.0	6,672.0	10,902.0	6,577.6	43.7	114.3	87.78	-2,624.9	10,158.9	9,157.7	9,066.5	91.13	100.490		
9,800.0	6,672.0	10,902.0	6,577.6	44.7	114.3	87.78	-2,624.9	10,158.9	9,067.4	8,975.5	91.94	98.626		
9,900.0	6,672.0	10,902.0	6,577.6	45.7	114.3	87.78	-2,624.9	10,158.9	8,977.4	8,884.7	92.77	96.770		
10,000.0	6,672.0	10,902.0	6,577.6	46.7	114.3	87.78	-2,624.9	10,158.9	8,887.6	8,794.0	93.63	94.922		
10,100.0	6,672.0	10,902.0	6,577.6	47.7	114.3	87.78	-2,624.9	10,158.9	8,798.0	8,703.5	94.52	93.083		
10,200.0	6,672.0	10,902.0	6,577.6	48.8	114.3	87.78	-2,624.9	10,158.9	8,708.7	8,613.3	95.43	91.254		
10,300.0	6,672.0	10,902.0	6,577.6	49.8	114.3	87.78	-2,624.9	10,158.9	8,619.6	8,523.2	96.38	89.435		
10,400.0	6,672.0	10,902.0	6,577.6	50.9	114.3	87.78	-2,624.9	10,158.9	8,530.7	8,433.4	97.35	87.628		
10,500.0	6,672.0	10,902.0	6,577.6	51.9	114.3	87.78	-2,624.9	10,158.9	8,442.1	8,343.8	98.35	85.834		
10,600.0	6,672.0	10,902.0	6,577.6	53.0	114.3	87.78	-2,624.9	10,158.9	8,353.8	8,254.4	99.39	84.053		
10,700.0	6,672.0	10,902.0	6,577.6	54.1	114.3	87.78	-2,624.9	10,158.9	8,265.7	8,165.2	100.45	82.287		
10,800.0	6,672.0	10,902.0	6,577.6	55.2	114.3	87.78	-2,624.9	10,158.9	8,177.9	8,076.3	101.54	80.535		
10,900.0	6,672.0	10,902.0	6,577.6	56.3	114.3	87.78	-2,624.9	10,158.9	8,090.4	7,987.7	102.67	78.799		
11,000.0	6,672.0	10,902.0	6,577.6	57.4	114.3	87.78	-2,624.9	10,158.9	8,003.1	7,899.3	103.83	77.079		
11,100.0	6,672.0	10,902.0	6,577.6	58.5	114.3	87.78	-2,624.9	10,158.9	7,916.2	7,811.2	105.02	75.377		
11,200.0	6,672.0	10,902.0	6,577.6	59.6	114.3	87.78	-2,624.9	10,158.9	7,829.6	7,723.4	106.25	73.692		
11,300.0	6,672.0	10,902.0	6,577.6	60.7	114.3	87.78	-2,624.9	10,158.9	7,743.3	7,635.8	107.51	72.027		
11,400.0	6,672.0	10,902.0	6,577.6	61.8	114.3	87.78	-2,624.9	10,158.9	7,657.4	7,548.6	108.80	70.380		
11,500.0	6,672.0	10,902.0	6,577.6	62.9	114.3	87.78	-2,624.9	10,158.9	7,571.8	7,461.7	110.13	68.753		
11,600.0	6,672.0	10,902.0	6,577.6	64.1	114.3	87.78	-2,624.9	10,158.9	7,486.6	7,375.1	111.50	67.147		
11,700.0	6,672.0	10,902.0	6,577.6	65.2	114.3	87.78	-2,624.9	10,158.9	7,401.8	7,288.9	112.90	65.561		
11,800.0	6,672.0	10,902.0	6,577.6	66.3	114.3	87.78	-2,624.9	10,158.9	7,317.3	7,202.9	114.34	63.997		
11,900.0	6,672.0	10,902.0	6,577.6	67.5	114.3	87.78	-2,624.9	10,158.9	7,233.2	7,117.4	115.82	62.455		
12,000.0	6,672.0	10,902.0	6,577.6	68.6	114.3	87.78	-2,624.9	10,158.9	7,149.6	7,032.2	117.33	60.935		
12,100.0	6,672.0	10,902.0	6,577.6	69.8	114.3	87.78	-2,624.9	10,158.9	7,066.4	6,947.5	118.89	59.438		
12,200.0	6,672.0	10,902.0	6,577.6	70.9	114.3	87.78	-2,624.9	10,158.9	6,983.6	6,863.1	120.48	57.964		
12,300.0	6,672.0	10,902.0	6,577.6	72.1	114.3	87.78	-2,624.9	10,158.9	6,901.3	6,779.1	122.12	56.514		
12,400.0	6,672.0	10,902.0	6,577.6	73.2	114.3	87.79	-2,624.9	10,158.9	6,819.4	6,695.6	123.79	55.088		
12,500.0	6,672.0	10,902.0	6,577.6	74.4	114.3	87.79	-2,624.9	10,158.9	6,738.1	6,612.6	125.51	53.686		
12,600.0	6,672.0	10,902.0	6,577.6	75.5	114.3	87.79	-2,624.9	10,158.9	6,657.2	6,530.0	127.27	52.309		
12,700.0	6,672.0	10,902.0	6,577.6	76.7	114.3	87.79	-2,624.9	10,158.9	6,576.9	6,447.9	129.07	50.957		
12,800.0	6,672.0	10,902.0	6,577.6	77.9	114.3	87.79	-2,624.9	10,158.9	6,497.2	6,366.3	130.91	49.629		
12,900.0	6,672.0	10,902.0	6,577.6	79.0	114.3	87.79	-2,624.9	10,158.9	6,418.0	6,285.2	132.80	48.327		
13,000.0	6,672.0	10,902.0	6,577.6	80.2	114.3	87.79	-2,624.9	10,158.9	6,339.4	6,204.7	134.74	47.051		
13,100.0	6,672.0	10,902.0	6,577.6	81.4	114.3	87.79	-2,624.9	10,158.9	6,261.5	6,124.8	136.71	45.800		
13,200.0	6,672.0	10,902.0	6,577.6	82.6	114.3	87.79	-2,624.9	10,158.9	6,184.1	6,045.4	138.73	44.575		
13,300.0	6,672.0	10,902.0	6,577.6	83.7	114.3	87.79	-2,624.9	10,158.9	6,107.5	5,966.7	140.80	43.376		
13,400.0	6,672.0	10,902.0	6,577.6	84.9	114.3	87.79	-2,624.9	10,158.9	6,031.5	5,888.6	142.91	42.204		
13,500.0	6,672.0	10,902.0	6,577.6	86.1	114.3	87.79	-2,624.9	10,158.9	5,956.2	5,811.2	145.07	41.057		
13,600.0	6,672.0	10,902.0	6,577.6	87.3	114.3	87.79	-2,624.9	10,158.9	5,881.7	5,734.4	147.28	39.936		
13,700.0	6,672.0	10,902.0	6,577.6	88.4	114.3	87.79	-2,624.9	10,158.9	5,808.0	5,658.4	149.53	38.842		
13,800.0	6,672.0	10,902.0	6,577.6	89.6	114.3	87.79	-2,624.9	10,158.9	5,735.0	5,583.2	151.82	37.775		
13,900.0	6,672.0	10,902.0	6,577.6	90.8	114.3	87.79	-2,624.9	10,158.9	5,662.9	5,508.7	154.16	36.733		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 09 - 70 Ranch USX BB09-63HN - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 700-2_MWD, 7003-2_MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
14,000.0	6,672.0	10,902.0	6,577.6	92.0	114.3	87.79	-2,624.9	10,158.9	5,591.6	5,435.1	156.55	35.718		
14,100.0	6,672.0	10,902.0	6,577.6	93.2	114.3	87.79	-2,624.9	10,158.9	5,521.3	5,362.3	158.98	34.730		
14,200.0	6,672.0	10,902.0	6,577.6	94.4	114.3	87.79	-2,624.9	10,158.9	5,451.9	5,290.4	161.45	33.767		
14,300.0	6,672.0	10,902.0	6,577.6	95.6	114.3	87.79	-2,624.9	10,158.9	5,383.4	5,219.4	163.97	32.832		
14,400.0	6,672.0	10,902.0	6,577.6	96.8	114.3	87.79	-2,624.9	10,158.9	5,316.0	5,149.4	166.53	31.922		
14,500.0	6,672.0	10,902.0	6,577.6	98.0	114.3	87.79	-2,624.9	10,158.9	5,249.6	5,080.4	169.13	31.039		
14,600.0	6,672.0	10,902.0	6,577.6	99.2	114.3	87.79	-2,624.9	10,158.9	5,184.2	5,012.5	171.77	30.181		
14,700.0	6,672.0	10,902.0	6,577.6	100.4	114.3	87.79	-2,624.9	10,158.9	5,120.0	4,945.6	174.45	29.350		
14,800.0	6,672.0	10,902.0	6,577.6	101.6	114.3	87.79	-2,624.9	10,158.9	5,057.0	4,879.8	177.16	28.545		
14,900.0	6,672.0	10,902.0	6,577.6	102.7	114.3	87.79	-2,624.9	10,158.9	4,995.2	4,815.3	179.90	27.766		
15,000.0	6,672.0	10,902.0	6,577.6	103.9	114.3	87.79	-2,624.9	10,158.9	4,934.6	4,751.9	182.68	27.012		
15,100.0	6,672.0	10,902.0	6,577.6	105.1	114.3	87.79	-2,624.9	10,158.9	4,875.4	4,689.9	185.49	26.284		
15,200.0	6,672.0	10,902.0	6,577.6	106.3	114.3	87.79	-2,624.9	10,158.9	4,817.5	4,629.2	188.32	25.582		
15,300.0	6,672.0	10,902.0	6,577.6	107.6	114.3	87.79	-2,624.9	10,158.9	4,761.0	4,569.8	191.17	24.905		
15,400.0	6,672.0	10,902.0	6,577.6	108.8	114.3	87.79	-2,624.9	10,158.9	4,705.9	4,511.9	194.03	24.253		
15,500.0	6,672.0	10,902.0	6,577.6	110.0	114.3	87.79	-2,624.9	10,158.9	4,652.4	4,455.5	196.91	23.627		
15,600.0	6,672.0	10,902.0	6,577.6	111.2	114.3	87.79	-2,624.9	10,158.9	4,600.4	4,400.6	199.80	23.025		
15,700.0	6,672.0	10,902.0	6,577.6	112.4	114.3	87.79	-2,624.9	10,158.9	4,550.0	4,347.3	202.69	22.448		
15,800.0	6,672.0	10,902.0	6,577.6	113.6	114.3	87.79	-2,624.9	10,158.9	4,501.3	4,295.7	205.58	21.896		
15,900.0	6,672.0	10,902.0	6,577.6	114.8	114.3	87.79	-2,624.9	10,158.9	4,454.3	4,245.9	208.46	21.368		
16,000.0	6,672.0	10,902.0	6,577.6	116.0	114.3	87.79	-2,624.9	10,158.9	4,409.1	4,197.8	211.32	20.865		
16,100.0	6,672.0	10,902.0	6,577.6	117.2	114.3	87.79	-2,624.9	10,158.9	4,365.7	4,151.6	214.16	20.385		
16,200.0	6,672.0	10,902.0	6,577.6	118.4	114.3	87.79	-2,624.9	10,158.9	4,324.2	4,107.3	216.97	19.930		
16,300.0	6,672.0	10,902.0	6,577.6	119.6	114.3	87.79	-2,624.9	10,158.9	4,284.7	4,064.9	219.75	19.498		
16,400.0	6,672.0	10,902.0	6,577.6	120.8	114.3	87.79	-2,624.9	10,158.9	4,247.1	4,024.6	222.48	19.090		
16,500.0	6,672.0	10,902.0	6,577.6	122.0	114.3	87.79	-2,624.9	10,158.9	4,211.6	3,986.4	225.16	18.705		
16,600.0	6,672.0	10,902.0	6,577.6	123.2	114.3	87.79	-2,624.9	10,158.9	4,178.2	3,950.4	227.78	18.343		
16,700.0	6,672.0	10,902.0	6,577.6	124.5	114.3	87.79	-2,624.9	10,158.9	4,146.9	3,916.6	230.33	18.004		
16,800.0	6,672.0	10,902.0	6,577.6	125.7	114.3	87.79	-2,624.9	10,158.9	4,117.8	3,885.0	232.81	17.688		
16,900.0	6,672.0	10,902.0	6,577.6	126.9	114.3	87.79	-2,624.9	10,158.9	4,091.0	3,855.8	235.19	17.394		
17,000.0	6,672.0	10,902.0	6,577.6	128.1	114.3	87.79	-2,624.9	10,158.9	4,066.5	3,829.0	237.49	17.123		
17,100.0	6,672.0	10,902.0	6,577.6	129.3	114.3	87.79	-2,624.9	10,158.9	4,044.3	3,804.6	239.68	16.874		
17,200.0	6,672.0	10,902.0	6,577.6	130.5	114.3	87.79	-2,624.9	10,158.9	4,024.4	3,782.7	241.76	16.646		
17,300.0	6,672.0	10,902.0	6,577.6	131.7	114.3	87.79	-2,624.9	10,158.9	4,007.0	3,763.3	243.73	16.440		
17,400.0	6,672.0	10,902.0	6,577.6	133.0	114.3	87.79	-2,624.9	10,158.9	3,992.0	3,746.4	245.57	16.256		
17,500.0	6,672.0	10,902.0	6,577.6	134.2	114.3	87.79	-2,624.9	10,158.9	3,979.5	3,732.2	247.28	16.093		
17,600.0	6,672.0	10,902.0	6,577.6	135.4	114.3	87.79	-2,624.9	10,158.9	3,969.5	3,720.6	248.86	15.951 SF		
17,700.0	6,672.0	10,820.2	6,578.9	136.6	112.2	87.81	-2,616.1	10,240.2	3,961.0	3,713.0	247.99	15.972		
17,800.0	6,672.0	10,735.2	6,578.8	137.8	110.0	87.80	-2,607.0	10,324.7	3,952.9	3,705.8	247.03	16.002		
17,900.0	6,672.0	10,668.0	6,578.4	139.0	108.2	87.79	-2,600.2	10,391.5	3,945.3	3,698.7	246.57	16.001		
18,000.0	6,672.0	10,603.6	6,579.1	140.3	106.5	87.80	-2,594.3	10,455.7	3,938.6	3,692.4	246.17	16.000		
18,100.0	6,672.0	10,545.1	6,579.6	141.5	105.0	87.80	-2,589.5	10,514.0	3,932.8	3,686.9	245.92	15.992		
18,200.0	6,672.0	10,408.3	6,579.0	142.7	101.5	87.79	-2,578.1	10,650.3	3,927.0	3,683.5	243.53	16.125		
18,300.0	6,672.0	10,313.7	6,576.8	143.9	99.0	87.76	-2,569.9	10,744.6	3,921.0	3,678.7	242.30	16.182		
18,342.5	6,672.0	10,275.6	6,575.8	144.4	98.0	87.74	-2,566.7	10,782.5	3,918.5	3,676.7	241.84	16.203 CC, ES		



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 09 - 70 Ranch USX BB09-99HZ - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 722-2_MWD, 6906-2_MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
8,400.0	6,672.0	6,015.0	6,013.7	32.4	19.8	-3.81	1,348.4	10,478.8	9,995.7	9,951.6	44.04	226.945		
8,500.0	6,672.0	6,015.0	6,013.7	33.1	19.8	-3.75	1,348.4	10,478.8	9,896.0	9,851.9	44.03	224.773		
8,600.0	6,672.0	6,015.0	6,013.7	33.9	19.8	-3.69	1,348.4	10,478.8	9,796.3	9,752.2	44.01	222.595		
8,700.0	6,672.0	6,015.0	6,013.7	34.7	19.8	-3.64	1,348.4	10,478.8	9,696.6	9,652.6	43.99	220.412		
8,800.0	6,672.0	6,015.0	6,013.7	35.5	19.8	-3.58	1,348.4	10,478.8	9,596.9	9,552.9	43.98	218.225		
8,900.0	6,672.0	6,015.0	6,013.7	36.3	19.8	-3.53	1,348.4	10,478.8	9,497.2	9,453.2	43.96	216.033		
9,000.0	6,672.0	6,033.1	6,031.7	37.2	19.8	-3.43	1,346.8	10,480.1	9,397.4	9,353.4	44.03	213.431		
9,100.0	6,672.0	6,034.4	6,033.1	38.1	19.8	-3.38	1,346.7	10,480.2	9,297.7	9,253.7	44.02	211.201		
9,200.0	6,672.0	6,035.8	6,034.4	39.0	19.9	-3.32	1,346.6	10,480.4	9,198.0	9,154.0	44.02	208.966		
9,300.0	6,672.0	6,037.2	6,035.8	39.9	19.9	-3.26	1,346.5	10,480.5	9,098.3	9,054.3	44.01	206.727		
9,400.0	6,672.0	6,038.7	6,037.2	40.8	19.9	-3.20	1,346.3	10,480.6	8,998.7	8,954.7	44.01	204.483		
9,500.0	6,672.0	6,040.1	6,038.7	41.8	19.9	-3.15	1,346.2	10,480.7	8,899.0	8,855.0	44.00	202.235		
9,600.0	6,672.0	6,058.0	6,056.4	42.7	19.9	-3.04	1,344.6	10,482.3	8,799.4	8,755.3	44.08	199.631		
9,700.0	6,672.0	6,058.0	6,056.4	43.7	19.9	-2.99	1,344.6	10,482.3	8,699.8	8,655.7	44.07	197.408		
9,800.0	6,672.0	6,058.0	6,056.4	44.7	19.9	-2.94	1,344.6	10,482.3	8,600.1	8,556.0	44.06	195.182		
9,900.0	6,672.0	6,058.0	6,056.4	45.7	19.9	-2.89	1,344.6	10,482.3	8,500.4	8,456.4	44.05	192.952		
10,000.0	6,672.0	6,058.0	6,056.4	46.7	19.9	-2.84	1,344.6	10,482.3	8,400.8	8,356.7	44.05	190.719		
10,100.0	6,672.0	6,058.0	6,056.4	47.7	19.9	-2.79	1,344.6	10,482.3	8,301.2	8,257.1	44.04	188.482		
10,200.0	6,672.0	6,058.0	6,056.4	48.8	19.9	-2.74	1,344.6	10,482.3	8,201.5	8,157.5	44.04	186.243		
10,300.0	6,672.0	6,058.0	6,056.4	49.8	19.9	-2.69	1,344.6	10,482.3	8,101.9	8,057.9	44.03	183.999		
10,400.0	6,672.0	6,058.0	6,056.4	50.9	19.9	-2.64	1,344.6	10,482.3	8,002.3	7,958.3	44.03	181.753		
10,500.0	6,672.0	6,058.0	6,056.4	51.9	19.9	-2.59	1,344.6	10,482.3	7,902.7	7,858.7	44.03	179.504		
10,600.0	6,672.0	6,058.0	6,056.4	53.0	19.9	-2.54	1,344.6	10,482.3	7,803.1	7,759.1	44.02	177.252		
10,700.0	6,672.0	6,058.0	6,056.4	54.1	19.9	-2.50	1,344.6	10,482.3	7,703.5	7,659.5	44.02	174.997		
10,800.0	6,672.0	6,058.0	6,056.4	55.2	19.9	-2.45	1,344.6	10,482.3	7,604.0	7,559.9	44.02	172.739		
10,900.0	6,672.0	6,058.0	6,056.4	56.3	19.9	-2.41	1,344.6	10,482.3	7,504.4	7,460.4	44.02	170.479		
11,000.0	6,672.0	6,058.0	6,056.4	57.4	19.9	-2.36	1,344.6	10,482.3	7,404.9	7,360.8	44.02	168.216		
11,100.0	6,672.0	6,058.0	6,056.4	58.5	19.9	-2.32	1,344.6	10,482.3	7,305.3	7,261.3	44.02	165.950		
11,200.0	6,672.0	6,058.0	6,056.4	59.6	19.9	-2.27	1,344.6	10,482.3	7,205.8	7,161.8	44.02	163.682		
11,300.0	6,672.0	6,058.0	6,056.4	60.7	19.9	-2.23	1,344.6	10,482.3	7,106.3	7,062.3	44.03	161.412		
11,400.0	6,672.0	6,058.0	6,056.4	61.8	19.9	-2.19	1,344.6	10,482.3	7,006.8	6,962.8	44.03	159.139		
11,500.0	6,672.0	6,058.0	6,056.4	62.9	19.9	-2.15	1,344.6	10,482.3	6,907.3	6,863.3	44.03	156.864		
11,600.0	6,672.0	6,058.0	6,056.4	64.1	19.9	-2.10	1,344.6	10,482.3	6,807.9	6,763.8	44.04	154.586		
11,700.0	6,672.0	6,058.0	6,056.4	65.2	19.9	-2.06	1,344.6	10,482.3	6,708.4	6,664.4	44.05	152.307		
11,800.0	6,672.0	6,058.0	6,056.4	66.3	19.9	-2.02	1,344.6	10,482.3	6,609.0	6,565.0	44.05	150.025		
11,900.0	6,672.0	6,058.0	6,056.4	67.5	19.9	-1.98	1,344.6	10,482.3	6,509.6	6,465.5	44.06	147.742		
12,000.0	6,672.0	6,076.3	6,074.5	68.6	20.0	-1.85	1,342.9	10,484.1	6,410.0	6,365.9	44.17	145.137		
12,100.0	6,672.0	6,077.8	6,076.1	69.8	20.0	-1.81	1,342.8	10,484.3	6,310.6	6,266.4	44.18	142.827		
12,200.0	6,672.0	6,079.5	6,077.7	70.9	20.0	-1.76	1,342.6	10,484.5	6,211.2	6,167.0	44.20	140.515		
12,300.0	6,672.0	6,081.1	6,079.3	72.1	20.0	-1.71	1,342.5	10,484.7	6,111.9	6,067.6	44.22	138.202		
12,400.0	6,672.0	6,082.8	6,081.0	73.2	20.0	-1.66	1,342.3	10,484.9	6,012.5	5,968.3	44.25	135.887		
12,500.0	6,672.0	6,101.0	6,099.0	74.4	20.1	-1.51	1,340.5	10,487.1	5,913.3	5,869.0	44.36	133.314		
12,600.0	6,672.0	6,101.0	6,099.0	75.5	20.1	-1.47	1,340.5	10,487.1	5,814.0	5,769.6	44.37	131.028		
12,700.0	6,672.0	6,101.0	6,099.0	76.7	20.1	-1.44	1,340.5	10,487.1	5,714.6	5,670.3	44.39	128.740		
12,800.0	6,672.0	6,101.0	6,099.0	77.9	20.1	-1.40	1,340.5	10,487.1	5,615.3	5,570.9	44.41	126.451		
12,900.0	6,672.0	6,101.0	6,099.0	79.0	20.1	-1.36	1,340.5	10,487.1	5,516.1	5,471.6	44.43	124.160		
13,000.0	6,672.0	6,101.0	6,099.0	80.2	20.1	-1.33	1,340.5	10,487.1	5,416.8	5,372.4	44.45	121.867		
13,100.0	6,672.0	6,101.0	6,099.0	81.4	20.1	-1.29	1,340.5	10,487.1	5,317.6	5,273.1	44.47	119.573		
13,200.0	6,672.0	6,101.0	6,099.0	82.6	20.1	-1.26	1,340.5	10,487.1	5,218.4	5,173.9	44.50	117.276		
13,300.0	6,672.0	6,101.0	6,099.0	83.7	20.1	-1.23	1,340.5	10,487.1	5,119.2	5,074.7	44.52	114.978		
13,400.0	6,672.0	6,101.0	6,099.0	84.9	20.1	-1.20	1,340.5	10,487.1	5,020.1	4,975.6	44.55	112.678		
13,500.0	6,672.0	6,101.0	6,099.0	86.1	20.1	-1.16	1,340.5	10,487.1	4,921.0	4,876.4	44.58	110.375		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 09 - 70 Ranch USX BB09-99HZ - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 722-2_MWD, 6906-2_MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
13,600.0	6,672.0	6,101.0	6,099.0	87.3	20.1	-1.13	1,340.5	10,487.1	4,822.0	4,777.3	44.62	108.070		
13,700.0	6,672.0	6,101.0	6,099.0	88.4	20.1	-1.10	1,340.5	10,487.1	4,722.9	4,678.3	44.66	105.763		
13,800.0	6,672.0	6,101.0	6,099.0	89.6	20.1	-1.07	1,340.5	10,487.1	4,624.0	4,579.3	44.70	103.453		
13,900.0	6,672.0	6,101.0	6,099.0	90.8	20.1	-1.04	1,340.5	10,487.1	4,525.0	4,480.3	44.74	101.141		
14,000.0	6,672.0	6,101.0	6,099.0	92.0	20.1	-1.02	1,340.5	10,487.1	4,426.2	4,381.4	44.79	98.825		
14,100.0	6,672.0	6,119.0	6,116.7	93.2	20.2	-0.84	1,338.5	10,489.7	4,327.1	4,282.2	44.92	96.338		
14,200.0	6,672.0	6,121.7	6,119.4	94.4	20.2	-0.78	1,338.2	10,490.1	4,228.3	4,183.3	44.98	94.001		
14,300.0	6,672.0	6,124.6	6,122.1	95.6	20.2	-0.73	1,337.9	10,490.6	4,129.5	4,084.4	45.05	91.663		
14,400.0	6,672.0	6,144.0	6,141.1	96.8	20.2	-0.50	1,335.5	10,493.8	4,030.9	3,985.7	45.19	89.201		
14,500.0	6,672.0	6,144.0	6,141.1	98.0	20.2	-0.47	1,335.5	10,493.8	3,932.2	3,886.9	45.25	86.891		
14,600.0	6,672.0	6,144.0	6,141.1	99.2	20.2	-0.44	1,335.5	10,493.8	3,833.5	3,788.1	45.33	84.576		
14,700.0	6,672.0	6,144.0	6,141.1	100.4	20.2	-0.42	1,335.5	10,493.8	3,734.9	3,689.4	45.40	82.257		
14,800.0	6,672.0	6,144.0	6,141.1	101.6	20.2	-0.39	1,335.5	10,493.8	3,636.3	3,590.8	45.49	79.933		
14,900.0	6,672.0	6,144.0	6,141.1	102.7	20.2	-0.37	1,335.5	10,493.8	3,537.8	3,492.3	45.59	77.605		
15,000.0	6,672.0	6,144.0	6,141.1	103.9	20.2	-0.34	1,335.5	10,493.8	3,439.5	3,393.8	45.69	75.271		
15,100.0	6,672.0	6,144.0	6,141.1	105.1	20.2	-0.32	1,335.5	10,493.8	3,341.2	3,295.4	45.81	72.930		
15,200.0	6,672.0	6,144.0	6,141.1	106.3	20.2	-0.30	1,335.5	10,493.8	3,243.0	3,197.1	45.95	70.583		
15,300.0	6,672.0	6,144.0	6,141.1	107.6	20.2	-0.28	1,335.5	10,493.8	3,144.9	3,098.9	46.09	68.230		
15,400.0	6,672.0	6,162.1	6,158.7	108.8	20.3	-0.02	1,332.9	10,497.3	3,046.8	3,000.5	46.26	65.855		
15,500.0	6,672.0	6,166.2	6,162.7	110.0	20.3	0.06	1,332.3	10,498.1	2,948.8	2,902.4	46.44	63.500		
15,600.0	6,672.0	6,186.0	6,181.7	111.2	20.4	0.41	1,329.1	10,502.4	2,851.2	2,804.6	46.62	61.160		
15,700.0	6,672.0	6,186.0	6,181.7	112.4	20.4	0.43	1,329.1	10,502.4	2,753.4	2,706.6	46.82	58.807		
15,800.0	6,672.0	6,186.0	6,181.7	113.6	20.4	0.45	1,329.1	10,502.4	2,655.8	2,608.7	47.05	56.445		
15,900.0	6,672.0	6,186.0	6,181.7	114.8	20.4	0.47	1,329.1	10,502.4	2,558.3	2,511.0	47.31	54.073		
16,000.0	6,672.0	6,186.0	6,181.7	116.0	20.4	0.49	1,329.1	10,502.4	2,461.1	2,413.5	47.61	51.692		
16,100.0	6,672.0	6,186.0	6,181.7	117.2	20.4	0.50	1,329.1	10,502.4	2,364.1	2,316.1	47.95	49.301		
16,200.0	6,672.0	6,203.3	6,198.2	118.4	20.5	0.86	1,325.9	10,506.6	2,267.1	2,218.8	48.23	47.005		
16,300.0	6,672.0	6,210.1	6,204.7	119.6	20.5	1.02	1,324.6	10,508.3	2,170.4	2,121.8	48.60	44.656		
16,400.0	6,672.0	6,229.0	6,222.5	120.8	20.6	1.49	1,320.8	10,513.4	2,074.0	2,025.1	48.91	42.402		
16,500.0	6,672.0	6,229.0	6,222.5	122.0	20.6	1.51	1,320.8	10,513.4	1,977.7	1,928.3	49.43	40.008		
16,600.0	6,672.0	6,229.0	6,222.5	123.2	20.6	1.52	1,320.8	10,513.4	1,881.8	1,831.7	50.04	37.607		
16,700.0	6,672.0	6,244.7	6,237.1	124.5	20.6	1.96	1,317.4	10,517.8	1,786.1	1,735.6	50.52	35.354		
16,800.0	6,672.0	6,256.0	6,247.6	125.7	20.7	2.31	1,314.8	10,521.2	1,690.8	1,639.7	51.13	33.070		
16,900.0	6,672.0	6,272.0	6,262.3	126.9	20.7	2.83	1,311.0	10,526.1	1,595.8	1,544.1	51.73	30.849		
17,000.0	6,672.0	6,272.0	6,262.3	128.1	20.7	2.84	1,311.0	10,526.1	1,501.3	1,448.6	52.74	28.464		
17,100.0	6,672.0	6,290.9	6,279.6	129.3	20.8	3.53	1,306.3	10,532.3	1,407.2	1,353.7	53.50	26.304		
17,200.0	6,672.0	6,314.0	6,300.3	130.5	20.9	4.48	1,300.0	10,540.3	1,313.8	1,259.6	54.25	24.218		
17,300.0	6,672.0	6,314.0	6,300.3	131.7	20.9	4.49	1,300.0	10,540.3	1,220.9	1,165.1	55.80	21.879		
17,400.0	6,672.0	6,327.4	6,312.2	133.0	21.0	5.11	1,296.2	10,545.3	1,129.0	1,071.7	57.23	19.728		
17,500.0	6,672.0	6,340.0	6,323.1	134.2	21.0	5.74	1,292.4	10,550.2	1,038.1	979.1	58.97	17.604		
17,600.0	6,672.0	6,357.0	6,337.7	135.4	21.1	6.67	1,287.1	10,557.3	948.5	887.6	60.89	15.578		
17,700.0	6,672.0	6,357.0	6,337.7	136.6	21.1	6.67	1,287.1	10,557.3	860.7	796.6	64.06	13.436		
17,800.0	6,672.0	6,385.5	6,361.2	137.8	21.2	8.44	1,277.5	10,570.1	774.4	708.0	66.46	11.653		
17,900.0	6,672.0	6,399.0	6,371.9	139.0	21.3	9.39	1,272.6	10,576.6	691.1	620.7	70.36	9.823		
18,000.0	6,672.0	6,426.0	6,392.6	140.3	21.4	11.53	1,261.9	10,590.4	611.0	536.5	74.50	8.201		
18,100.0	6,672.0	6,450.8	6,410.5	141.5	21.5	13.80	1,251.1	10,603.7	535.5	455.4	80.04	6.690		
18,200.0	6,672.0	6,485.0	6,433.6	142.7	21.7	17.37	1,234.9	10,622.9	466.1	379.2	86.88	5.365		
18,300.0	6,672.0	6,514.9	6,452.6	143.9	21.9	20.89	1,219.6	10,640.3	405.1	309.2	95.91	4.224		
18,342.5	6,672.0	6,528.0	6,460.6	144.4	21.9	22.54	1,212.7	10,648.0	382.6	282.3	100.33	3.814 CC, ES, SF		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 09 - National Hog Farm 13-09 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
8,600.0	6,672.0	6,975.0	6,972.3	33.9	24.3	94.33	-1,665.6	10,258.2	9,945.7	9,895.4	50.26	197.867		
8,700.0	6,672.0	6,975.0	6,972.3	34.7	24.3	94.33	-1,665.6	10,258.2	9,850.3	9,799.9	50.42	195.375		
8,800.0	6,672.0	6,975.0	6,972.3	35.5	24.3	94.33	-1,665.6	10,258.2	9,755.0	9,704.4	50.58	192.861		
8,900.0	6,672.0	6,975.0	6,972.3	36.3	24.3	94.33	-1,665.6	10,258.2	9,659.8	9,609.1	50.75	190.326		
9,000.0	6,672.0	6,975.0	6,972.3	37.2	24.3	94.33	-1,665.6	10,258.2	9,564.7	9,513.8	50.94	187.771		
9,100.0	6,672.0	6,975.0	6,972.3	38.1	24.3	94.33	-1,665.6	10,258.2	9,469.7	9,418.6	51.13	185.196		
9,200.0	6,672.0	6,975.0	6,972.3	39.0	24.3	94.33	-1,665.6	10,258.2	9,374.8	9,323.5	51.34	182.601		
9,300.0	6,672.0	6,975.0	6,972.3	39.9	24.3	94.33	-1,665.6	10,258.2	9,280.0	9,228.5	51.56	179.989		
9,400.0	6,672.0	6,975.0	6,972.3	40.8	24.3	94.32	-1,665.6	10,258.2	9,185.4	9,133.6	51.79	177.359		
9,500.0	6,672.0	6,975.0	6,972.3	41.8	24.3	94.32	-1,665.6	10,258.2	9,090.8	9,038.8	52.03	174.712		
9,600.0	6,672.0	6,975.0	6,972.3	42.7	24.3	94.32	-1,665.6	10,258.2	8,996.4	8,944.1	52.29	172.050		
9,700.0	6,672.0	6,975.0	6,972.3	43.7	24.3	94.32	-1,665.6	10,258.2	8,902.1	8,849.5	52.56	169.373		
9,800.0	6,672.0	6,975.0	6,972.3	44.7	24.3	94.32	-1,665.6	10,258.2	8,807.9	8,755.1	52.84	166.683		
9,900.0	6,672.0	6,975.0	6,972.3	45.7	24.3	94.32	-1,665.6	10,258.2	8,713.9	8,660.7	53.14	163.981		
10,000.0	6,672.0	6,975.0	6,972.3	46.7	24.3	94.32	-1,665.6	10,258.2	8,619.9	8,566.5	53.45	161.267		
10,100.0	6,672.0	6,975.0	6,972.3	47.7	24.3	94.32	-1,665.6	10,258.2	8,526.2	8,472.4	53.78	158.544		
10,200.0	6,672.0	6,975.0	6,972.3	48.8	24.3	94.32	-1,665.6	10,258.2	8,432.6	8,378.4	54.12	155.812		
10,300.0	6,672.0	6,975.0	6,972.3	49.8	24.3	94.32	-1,665.6	10,258.2	8,339.1	8,284.6	54.48	153.073		
10,400.0	6,672.0	6,975.0	6,972.3	50.9	24.3	94.32	-1,665.6	10,258.2	8,245.8	8,190.9	54.85	150.327		
10,500.0	6,672.0	6,975.0	6,972.3	51.9	24.3	94.31	-1,665.6	10,258.2	8,152.6	8,097.4	55.24	147.578		
10,600.0	6,672.0	6,975.0	6,972.3	53.0	24.3	94.31	-1,665.6	10,258.2	8,059.6	8,004.0	55.65	144.825		
10,700.0	6,672.0	6,975.0	6,972.3	54.1	24.3	94.31	-1,665.6	10,258.2	7,966.8	7,910.7	56.08	142.071		
10,800.0	6,672.0	6,975.0	6,972.3	55.2	24.3	94.31	-1,665.6	10,258.2	7,874.2	7,817.7	56.52	139.317		
10,900.0	6,672.0	6,975.0	6,972.3	56.3	24.3	94.31	-1,665.6	10,258.2	7,781.7	7,724.7	56.98	136.565		
11,000.0	6,672.0	6,975.0	6,972.3	57.4	24.3	94.31	-1,665.6	10,258.2	7,689.5	7,632.0	57.46	133.815		
11,100.0	6,672.0	6,975.0	6,972.3	58.5	24.3	94.31	-1,665.6	10,258.2	7,597.4	7,539.4	57.96	131.070		
11,200.0	6,672.0	6,975.0	6,972.3	59.6	24.3	94.31	-1,665.6	10,258.2	7,505.5	7,447.1	58.49	128.331		
11,300.0	6,672.0	6,975.0	6,972.3	60.7	24.3	94.31	-1,665.6	10,258.2	7,413.9	7,354.9	59.03	125.600		
11,400.0	6,672.0	6,975.0	6,972.3	61.8	24.3	94.31	-1,665.6	10,258.2	7,322.5	7,262.9	59.59	122.878		
11,500.0	6,672.0	6,975.0	6,972.3	62.9	24.3	94.31	-1,665.6	10,258.2	7,231.3	7,171.1	60.18	120.168		
11,600.0	6,672.0	6,975.0	6,972.3	64.1	24.3	94.31	-1,665.6	10,258.2	7,140.3	7,079.6	60.78	117.469		
11,700.0	6,672.0	6,975.0	6,972.3	65.2	24.3	94.31	-1,665.6	10,258.2	7,049.6	6,988.2	61.42	114.785		
11,800.0	6,672.0	6,975.0	6,972.3	66.3	24.3	94.30	-1,665.6	10,258.2	6,959.2	6,897.1	62.07	112.117		
11,900.0	6,672.0	6,975.0	6,972.3	67.5	24.3	94.30	-1,665.6	10,258.2	6,869.0	6,806.3	62.75	109.465		
12,000.0	6,672.0	6,975.0	6,972.3	68.6	24.3	94.30	-1,665.6	10,258.2	6,779.1	6,715.7	63.46	106.832		
12,100.0	6,672.0	6,975.0	6,972.3	69.8	24.3	94.30	-1,665.6	10,258.2	6,689.5	6,625.3	64.19	104.220		
12,200.0	6,672.0	6,975.0	6,972.3	70.9	24.3	94.30	-1,665.6	10,258.2	6,600.2	6,535.3	64.94	101.629		
12,300.0	6,672.0	6,975.0	6,972.3	72.1	24.3	94.30	-1,665.6	10,258.2	6,511.2	6,445.5	65.73	99.061		
12,400.0	6,672.0	6,975.0	6,972.3	73.2	24.3	94.30	-1,665.6	10,258.2	6,422.6	6,356.0	66.54	96.517		
12,500.0	6,672.0	6,975.0	6,972.3	74.4	24.3	94.30	-1,665.6	10,258.2	6,334.2	6,266.9	67.39	94.000		
12,600.0	6,672.0	6,975.0	6,972.3	75.5	24.3	94.30	-1,665.6	10,258.2	6,246.3	6,178.0	68.26	91.509		
12,700.0	6,672.0	6,975.0	6,972.3	76.7	24.3	94.30	-1,665.6	10,258.2	6,158.7	6,089.5	69.16	89.048		
12,800.0	6,672.0	6,975.0	6,972.3	77.9	24.3	94.30	-1,665.6	10,258.2	6,071.5	6,001.4	70.10	86.616		
12,900.0	6,672.0	6,975.0	6,972.3	79.0	24.3	94.30	-1,665.6	10,258.2	5,984.7	5,913.6	71.06	84.215		
13,000.0	6,672.0	6,975.0	6,972.3	80.2	24.3	94.30	-1,665.6	10,258.2	5,898.3	5,826.2	72.07	81.846		
13,100.0	6,672.0	6,975.0	6,972.3	81.4	24.3	94.30	-1,665.6	10,258.2	5,812.4	5,739.3	73.10	79.511		
13,200.0	6,672.0	6,975.0	6,972.3	82.6	24.3	94.30	-1,665.6	10,258.2	5,726.9	5,652.7	74.17	77.211		
13,300.0	6,672.0	6,975.0	6,972.3	83.7	24.3	94.30	-1,665.6	10,258.2	5,641.9	5,566.6	75.28	74.946		
13,400.0	6,672.0	6,975.0	6,972.3	84.9	24.3	94.30	-1,665.6	10,258.2	5,557.4	5,481.0	76.42	72.717		
13,500.0	6,672.0	6,975.0	6,972.3	86.1	24.3	94.29	-1,665.6	10,258.2	5,473.4	5,395.8	77.61	70.526		
13,600.0	6,672.0	6,975.0	6,972.3	87.3	24.3	94.29	-1,665.6	10,258.2	5,390.0	5,311.2	78.83	68.374		
13,700.0	6,672.0	6,975.0	6,972.3	88.4	24.3	94.29	-1,665.6	10,258.2	5,307.2	5,227.1	80.09	66.261		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 09 - National Hog Farm 13-09 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
13,800.0	6,672.0	6,975.0	6,972.3	89.6	24.3	94.29	-1,665.6	10,258.2	5,224.9	5,143.5	81.40	64.188		
13,900.0	6,672.0	6,975.0	6,972.3	90.8	24.3	94.29	-1,665.6	10,258.2	5,143.3	5,060.6	82.75	62.156		
14,000.0	6,672.0	6,975.0	6,972.3	92.0	24.3	94.29	-1,665.6	10,258.2	5,062.4	4,978.2	84.14	60.166		
14,100.0	6,672.0	6,975.0	6,972.3	93.2	24.3	94.29	-1,665.6	10,258.2	4,982.1	4,896.6	85.58	58.219		
14,200.0	6,672.0	6,975.0	6,972.3	94.4	24.3	94.29	-1,665.6	10,258.2	4,902.6	4,815.6	87.06	56.315		
14,300.0	6,672.0	6,975.0	6,972.3	95.6	24.3	94.29	-1,665.6	10,258.2	4,823.9	4,735.3	88.59	54.454		
14,400.0	6,672.0	6,975.0	6,972.3	96.8	24.3	94.29	-1,665.6	10,258.2	4,745.9	4,655.8	90.16	52.638		
14,500.0	6,672.0	6,975.0	6,972.3	98.0	24.3	94.29	-1,665.6	10,258.2	4,668.9	4,577.1	91.79	50.866		
14,600.0	6,672.0	6,975.0	6,972.3	99.2	24.3	94.29	-1,665.6	10,258.2	4,592.7	4,499.2	93.46	49.140		
14,700.0	6,672.0	6,975.0	6,972.3	100.4	24.3	94.29	-1,665.6	10,258.2	4,517.4	4,422.2	95.18	47.459		
14,800.0	6,672.0	6,975.0	6,972.3	101.6	24.3	94.29	-1,665.6	10,258.2	4,443.1	4,346.1	96.96	45.825		
14,900.0	6,672.0	6,975.0	6,972.3	102.7	24.3	94.29	-1,665.6	10,258.2	4,369.8	4,271.1	98.78	44.237		
15,000.0	6,672.0	6,975.0	6,972.3	103.9	24.3	94.29	-1,665.6	10,258.2	4,297.7	4,197.0	100.66	42.696		
15,100.0	6,672.0	6,975.0	6,972.3	105.1	24.3	94.29	-1,665.6	10,258.2	4,226.6	4,124.0	102.58	41.202		
15,200.0	6,672.0	7,001.0	6,998.3	106.3	24.4	94.78	-1,664.9	10,256.8	4,156.7	4,052.0	104.72	39.694		
15,300.0	6,672.0	6,995.5	6,992.8	107.6	24.3	94.68	-1,665.0	10,257.1	4,088.2	3,981.4	106.71	38.311		
15,400.0	6,672.0	6,990.1	6,987.4	108.8	24.3	94.57	-1,665.2	10,257.4	4,020.9	3,912.2	108.75	36.973		
15,500.0	6,672.0	6,984.6	6,981.9	110.0	24.3	94.47	-1,665.4	10,257.7	3,955.1	3,844.2	110.84	35.682		
15,600.0	6,672.0	6,979.2	6,976.5	111.2	24.3	94.37	-1,665.5	10,258.0	3,890.7	3,777.7	112.98	34.437		
15,700.0	6,672.0	6,973.7	6,971.0	112.4	24.3	94.26	-1,665.7	10,258.3	3,827.8	3,712.7	115.16	33.239		
15,800.0	6,672.0	6,968.3	6,965.6	113.6	24.2	94.16	-1,665.8	10,258.6	3,766.5	3,649.2	117.38	32.088		
15,900.0	6,672.0	6,962.8	6,960.1	114.8	24.2	94.05	-1,666.0	10,258.9	3,707.0	3,587.3	119.65	30.983		
16,000.0	6,672.0	6,957.3	6,954.7	116.0	24.2	93.95	-1,666.2	10,259.2	3,649.2	3,527.2	121.94	29.925		
16,100.0	6,672.0	6,951.9	6,949.2	117.2	24.2	93.85	-1,666.3	10,259.5	3,593.2	3,468.9	124.27	28.914		
16,200.0	6,672.0	6,946.4	6,943.8	118.4	24.2	93.74	-1,666.5	10,259.8	3,539.2	3,412.5	126.63	27.949		
16,300.0	6,672.0	6,941.0	6,938.3	119.6	24.1	93.64	-1,666.7	10,260.1	3,487.2	3,358.2	129.00	27.032		
16,400.0	6,672.0	6,935.5	6,932.9	120.8	24.1	93.53	-1,666.8	10,260.4	3,437.3	3,305.9	131.39	26.160		
16,500.0	6,672.0	6,930.1	6,927.5	122.0	24.1	93.43	-1,667.0	10,260.7	3,389.6	3,255.8	133.79	25.335		
16,600.0	6,672.0	6,924.6	6,922.0	123.2	24.1	93.32	-1,667.1	10,261.0	3,344.3	3,208.1	136.19	24.556		
16,700.0	6,672.0	6,919.1	6,916.6	124.5	24.1	93.22	-1,667.3	10,261.3	3,301.3	3,162.8	138.58	23.822		
16,800.0	6,672.0	6,913.7	6,911.1	125.7	24.1	93.12	-1,667.5	10,261.6	3,260.9	3,119.9	140.95	23.134		
16,900.0	6,672.0	6,908.2	6,905.7	126.9	24.0	93.01	-1,667.6	10,261.9	3,223.1	3,079.8	143.30	22.492		
17,000.0	6,672.0	6,902.8	6,900.2	128.1	24.0	92.91	-1,667.8	10,262.2	3,187.9	3,042.3	145.61	21.894		
17,100.0	6,672.0	6,897.3	6,894.8	129.3	24.0	92.80	-1,668.0	10,262.5	3,155.5	3,007.6	147.86	21.340		
17,200.0	6,672.0	6,891.9	6,889.3	130.5	24.0	92.70	-1,668.1	10,262.8	3,126.0	2,975.9	150.06	20.831		
17,300.0	6,672.0	6,886.4	6,883.9	131.7	24.0	92.60	-1,668.3	10,263.1	3,099.4	2,947.2	152.19	20.365		
17,400.0	6,672.0	6,881.0	6,878.4	133.0	23.9	92.49	-1,668.4	10,263.4	3,075.8	2,921.6	154.24	19.943		
17,500.0	6,672.0	6,875.5	6,873.0	134.2	23.9	92.39	-1,668.6	10,263.7	3,055.4	2,899.2	156.19	19.562		
17,600.0	6,672.0	6,870.0	6,867.6	135.4	23.9	92.28	-1,668.8	10,264.0	3,038.0	2,880.0	158.03	19.224		
17,700.0	6,672.0	6,864.6	6,862.1	136.6	23.9	92.18	-1,668.9	10,264.3	3,023.9	2,864.2	159.76	18.927		
17,800.0	6,672.0	6,859.1	6,856.7	137.8	23.9	92.08	-1,669.1	10,264.6	3,013.1	2,851.7	161.37	18.672		
17,900.0	6,672.0	6,853.7	6,851.2	139.0	23.8	91.97	-1,669.2	10,264.9	3,005.5	2,842.7	162.85	18.456		
18,000.0	6,672.0	6,848.2	6,845.8	140.3	23.8	91.87	-1,669.4	10,265.2	3,001.3	2,837.1	164.19	18.280		
18,078.0	6,672.0	6,844.0	6,841.5	141.2	23.8	91.79	-1,669.5	10,265.4	3,000.2	2,835.1	165.13	18.169 CC		
18,100.0	6,672.0	6,842.8	6,840.3	141.5	23.8	91.76	-1,669.6	10,265.5	3,000.3	2,834.9	165.38	18.142 ES		
18,200.0	6,672.0	6,837.3	6,834.9	142.7	23.8	91.66	-1,669.7	10,265.8	3,002.7	2,836.3	166.42	18.043		
18,300.0	6,672.0	6,831.9	6,829.5	143.9	23.8	91.56	-1,669.9	10,266.1	3,008.4	2,841.1	167.31	17.981		
18,342.5	6,672.0	6,829.6	6,827.2	144.4	23.8	91.51	-1,670.0	10,266.2	3,011.9	2,844.2	167.64	17.966 SF		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 09 - National Hog Farm 14-09 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
9,100.0	6,672.0	6,400.0	6,393.3	38.1	22.3	85.95	-3,713.9	9,863.7	9,921.1	9,870.1	50.96	194.699		
9,200.0	6,672.0	6,400.0	6,393.3	39.0	22.3	85.95	-3,713.9	9,863.7	9,834.9	9,783.6	51.36	191.484		
9,300.0	6,672.0	6,400.0	6,393.3	39.9	22.3	85.95	-3,713.9	9,863.7	9,749.1	9,697.3	51.79	188.248		
9,400.0	6,672.0	6,400.0	6,393.3	40.8	22.3	85.95	-3,713.9	9,863.7	9,663.5	9,611.3	52.24	184.994		
9,500.0	6,672.0	6,400.0	6,393.3	41.8	22.3	85.95	-3,713.9	9,863.7	9,578.2	9,525.5	52.71	181.727		
9,600.0	6,672.0	6,400.0	6,393.3	42.7	22.3	85.95	-3,713.9	9,863.7	9,493.2	9,440.0	53.20	178.450		
9,700.0	6,672.0	6,400.0	6,393.3	43.7	22.3	85.95	-3,713.9	9,863.7	9,408.4	9,354.7	53.71	175.167		
9,800.0	6,672.0	6,400.0	6,393.3	44.7	22.3	85.95	-3,713.9	9,863.7	9,324.0	9,269.8	54.25	171.882		
9,900.0	6,672.0	6,400.0	6,393.3	45.7	22.3	85.95	-3,713.9	9,863.7	9,239.9	9,185.1	54.80	168.598		
10,000.0	6,672.0	6,400.0	6,393.3	46.7	22.3	85.95	-3,713.9	9,863.7	9,156.2	9,100.8	55.38	165.319		
10,100.0	6,672.0	6,400.0	6,393.3	47.7	22.3	85.95	-3,713.9	9,863.7	9,072.7	9,016.7	55.99	162.049		
10,200.0	6,672.0	6,400.0	6,393.3	48.8	22.3	85.95	-3,713.9	9,863.7	8,989.6	8,933.0	56.61	158.790		
10,300.0	6,672.0	6,400.0	6,393.3	49.8	22.3	85.95	-3,713.9	9,863.7	8,906.9	8,849.6	57.26	155.547		
10,400.0	6,672.0	6,400.0	6,393.3	50.9	22.3	85.95	-3,713.9	9,863.7	8,824.5	8,766.6	57.93	152.322		
10,500.0	6,672.0	6,400.0	6,393.3	51.9	22.3	85.95	-3,713.9	9,863.7	8,742.5	8,683.8	58.63	149.118		
10,600.0	6,672.0	6,400.0	6,393.3	53.0	22.3	85.95	-3,713.9	9,863.7	8,660.8	8,601.5	59.35	145.938		
10,700.0	6,672.0	6,400.0	6,393.3	54.1	22.3	85.95	-3,713.9	9,863.7	8,579.6	8,519.5	60.09	142.784		
10,800.0	6,672.0	6,400.0	6,393.3	55.2	22.3	85.95	-3,713.9	9,863.7	8,498.8	8,437.9	60.85	139.660		
10,900.0	6,672.0	6,400.0	6,393.3	56.3	22.3	85.96	-3,713.9	9,863.7	8,418.4	8,356.7	61.64	136.568		
11,000.0	6,672.0	6,400.0	6,393.3	57.4	22.3	85.96	-3,713.9	9,863.7	8,338.4	8,275.9	62.46	133.509		
11,100.0	6,672.0	6,400.0	6,393.3	58.5	22.3	85.96	-3,713.9	9,863.7	8,258.8	8,195.5	63.29	130.487		
11,200.0	6,672.0	6,400.0	6,393.3	59.6	22.3	85.96	-3,713.9	9,863.7	8,179.7	8,115.6	64.15	127.502		
11,300.0	6,672.0	6,430.6	6,423.9	60.7	22.4	86.31	-3,715.2	9,864.1	8,100.9	8,035.7	65.20	124.248		
11,400.0	6,672.0	6,431.1	6,424.4	61.8	22.4	86.31	-3,715.2	9,864.1	8,022.8	7,956.7	66.11	121.350		
11,500.0	6,672.0	6,431.6	6,424.9	62.9	22.4	86.32	-3,715.3	9,864.1	7,945.1	7,878.1	67.05	118.494		
11,600.0	6,672.0	6,432.0	6,425.3	64.1	22.4	86.32	-3,715.3	9,864.1	7,868.0	7,799.9	68.01	115.682		
11,700.0	6,672.0	6,432.5	6,425.8	65.2	22.4	86.33	-3,715.3	9,864.1	7,791.3	7,722.3	69.00	112.916		
11,800.0	6,672.0	6,433.0	6,426.3	66.3	22.4	86.33	-3,715.3	9,864.1	7,715.2	7,645.2	70.01	110.196		
11,900.0	6,672.0	6,433.5	6,426.8	67.5	22.4	86.34	-3,715.4	9,864.1	7,639.7	7,568.7	71.05	107.523		
12,000.0	6,672.0	6,434.0	6,427.2	68.6	22.4	86.35	-3,715.4	9,864.1	7,564.8	7,492.6	72.12	104.898		
12,100.0	6,672.0	6,434.5	6,427.7	69.8	22.4	86.35	-3,715.4	9,864.2	7,490.4	7,417.2	73.20	102.322		
12,200.0	6,672.0	6,434.9	6,428.2	70.9	22.5	86.36	-3,715.4	9,864.2	7,416.6	7,342.3	74.32	99.795		
12,300.0	6,672.0	6,435.4	6,428.7	72.1	22.5	86.36	-3,715.4	9,864.2	7,343.5	7,268.0	75.46	97.319		
12,400.0	6,672.0	6,435.9	6,429.2	73.2	22.5	86.37	-3,715.5	9,864.2	7,271.0	7,194.4	76.62	94.892		
12,500.0	6,672.0	6,436.5	6,429.7	74.4	22.5	86.38	-3,715.5	9,864.2	7,199.2	7,121.4	77.82	92.517		
12,600.0	6,672.0	6,437.0	6,430.3	75.5	22.5	86.38	-3,715.5	9,864.2	7,128.1	7,049.0	79.03	90.192		
12,700.0	6,672.0	6,437.5	6,430.8	76.7	22.5	86.39	-3,715.5	9,864.2	7,057.6	6,977.3	80.27	87.918		
12,800.0	6,672.0	6,438.0	6,431.3	77.9	22.5	86.39	-3,715.6	9,864.2	6,987.9	6,906.4	81.54	85.696		
12,900.0	6,672.0	6,438.5	6,431.8	79.0	22.5	86.40	-3,715.6	9,864.2	6,918.9	6,836.1	82.84	83.525		
13,000.0	6,672.0	6,439.1	6,432.3	80.2	22.5	86.41	-3,715.6	9,864.2	6,850.8	6,766.6	84.16	81.405		
13,100.0	6,672.0	6,439.6	6,432.9	81.4	22.5	86.41	-3,715.6	9,864.2	6,783.4	6,697.9	85.50	79.336		
13,200.0	6,672.0	6,440.1	6,433.4	82.6	22.5	86.42	-3,715.7	9,864.2	6,716.8	6,629.9	86.87	77.318		
13,300.0	6,672.0	6,440.7	6,434.0	83.7	22.5	86.43	-3,715.7	9,864.3	6,651.1	6,562.8	88.27	75.351		
13,400.0	6,672.0	6,441.2	6,434.5	84.9	22.5	86.43	-3,715.7	9,864.3	6,586.2	6,496.5	89.69	73.434		
13,500.0	6,672.0	6,441.8	6,435.1	86.1	22.5	86.44	-3,715.8	9,864.3	6,522.2	6,431.1	91.13	71.568		
13,600.0	6,672.0	6,442.3	6,435.6	87.3	22.5	86.45	-3,715.8	9,864.3	6,459.2	6,366.6	92.60	69.751		
13,700.0	6,672.0	6,442.9	6,436.2	88.4	22.5	86.45	-3,715.8	9,864.3	6,397.1	6,303.0	94.10	67.985		
13,800.0	6,672.0	6,443.5	6,436.8	89.6	22.5	86.46	-3,715.8	9,864.3	6,335.9	6,240.3	95.61	66.267		
13,900.0	6,672.0	6,444.1	6,437.3	90.8	22.5	86.47	-3,715.9	9,864.3	6,275.8	6,178.7	97.15	64.598		
14,000.0	6,672.0	6,444.6	6,437.9	92.0	22.5	86.47	-3,715.9	9,864.3	6,216.7	6,118.0	98.71	62.977		
14,100.0	6,672.0	6,445.2	6,438.5	93.2	22.5	86.48	-3,715.9	9,864.3	6,158.7	6,058.4	100.30	61.405		
14,200.0	6,672.0	6,445.8	6,439.1	94.4	22.5	86.49	-3,716.0	9,864.3	6,101.8	5,999.9	101.90	59.879		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 09 - National Hog Farm 14-09 - Original Drilling - Original Drilling - As Drilled													Offset Site Error: 0.0 ft	
Survey Program: 100-2_Gyro-NS-GC_OWSG													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis		Distance								Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
14,300.0	6,672.0	6,446.4	6,439.7	95.6	22.5	86.49	-3,716.0	9,864.3	6,045.9	5,942.4	103.52	58.401		
14,400.0	6,672.0	6,447.0	6,440.3	96.8	22.5	86.50	-3,716.0	9,864.4	5,991.3	5,886.1	105.17	56.969		
14,500.0	6,672.0	6,447.6	6,440.9	98.0	22.5	86.51	-3,716.0	9,864.4	5,937.8	5,831.0	106.83	55.583		
14,600.0	6,672.0	6,448.2	6,441.5	99.2	22.5	86.51	-3,716.1	9,864.4	5,885.6	5,777.1	108.51	54.241		
14,700.0	6,672.0	6,448.9	6,442.1	100.4	22.5	86.52	-3,716.1	9,864.4	5,834.6	5,724.4	110.20	52.945		
14,800.0	6,672.0	6,449.5	6,442.8	101.6	22.5	86.53	-3,716.1	9,864.4	5,784.9	5,673.0	111.91	51.693		
14,900.0	6,672.0	6,450.1	6,443.4	102.7	22.5	86.54	-3,716.2	9,864.4	5,736.5	5,622.8	113.63	50.484		
15,000.0	6,672.0	6,450.8	6,444.0	103.9	22.5	86.54	-3,716.2	9,864.4	5,689.4	5,574.1	115.36	49.318		
15,100.0	6,672.0	6,451.4	6,444.7	105.1	22.5	86.55	-3,716.2	9,864.4	5,643.8	5,526.7	117.10	48.194		
15,200.0	6,672.0	6,452.1	6,445.3	106.3	22.5	86.56	-3,716.3	9,864.4	5,599.5	5,480.7	118.85	47.113		
15,300.0	6,672.0	6,452.7	6,446.0	107.6	22.5	86.57	-3,716.3	9,864.5	5,556.8	5,436.2	120.61	46.072		
15,400.0	6,672.0	6,453.4	6,446.7	108.8	22.5	86.57	-3,716.3	9,864.5	5,515.5	5,393.1	122.37	45.072		
15,500.0	6,672.0	6,454.1	6,447.3	110.0	22.5	86.58	-3,716.4	9,864.5	5,475.7	5,351.6	124.13	44.111		
15,600.0	6,672.0	6,454.7	6,448.0	111.2	22.5	86.59	-3,716.4	9,864.5	5,437.5	5,311.6	125.90	43.190		
15,700.0	6,672.0	6,455.4	6,448.7	112.4	22.5	86.60	-3,716.4	9,864.5	5,400.9	5,273.2	127.66	42.307		
15,800.0	6,672.0	6,456.1	6,449.4	113.6	22.5	86.61	-3,716.5	9,864.5	5,365.9	5,236.5	129.41	41.463		
15,900.0	6,672.0	6,456.8	6,450.1	114.8	22.5	86.61	-3,716.5	9,864.5	5,332.5	5,201.4	131.16	40.656		
16,000.0	6,672.0	6,457.5	6,450.8	116.0	22.5	86.62	-3,716.6	9,864.5	5,300.8	5,167.9	132.90	39.885		
16,100.0	6,672.0	6,458.3	6,451.5	117.2	22.5	86.63	-3,716.6	9,864.6	5,270.9	5,136.3	134.63	39.151		
16,200.0	6,672.0	6,459.0	6,452.2	118.4	22.5	86.64	-3,716.6	9,864.6	5,242.7	5,106.3	136.34	38.452		
16,300.0	6,672.0	6,459.7	6,453.0	119.6	22.5	86.65	-3,716.7	9,864.6	5,216.2	5,078.2	138.04	37.788		
16,400.0	6,672.0	6,460.4	6,453.7	120.8	22.5	86.65	-3,716.7	9,864.6	5,191.6	5,051.9	139.72	37.158		
16,500.0	6,672.0	6,461.2	6,454.4	122.0	22.5	86.66	-3,716.8	9,864.6	5,168.8	5,027.4	141.37	36.563		
16,600.0	6,672.0	6,461.9	6,455.2	123.2	22.5	86.67	-3,716.8	9,864.6	5,147.8	5,004.8	143.00	36.000		
16,700.0	6,672.0	6,462.7	6,456.0	124.5	22.5	86.68	-3,716.8	9,864.6	5,128.7	4,984.1	144.60	35.469		
16,800.0	6,672.0	6,463.5	6,456.7	125.7	22.5	86.69	-3,716.9	9,864.7	5,111.5	4,965.4	146.17	34.971		
16,900.0	6,672.0	6,464.3	6,457.5	126.9	22.6	86.70	-3,716.9	9,864.7	5,096.2	4,948.5	147.70	34.504		
17,000.0	6,672.0	6,465.0	6,458.3	128.1	22.6	86.71	-3,717.0	9,864.7	5,082.9	4,933.7	149.20	34.067		
17,100.0	6,672.0	6,465.8	6,459.1	129.3	22.6	86.72	-3,717.0	9,864.7	5,071.5	4,920.8	150.67	33.660		
17,200.0	6,672.0	6,466.6	6,459.9	130.5	22.6	86.73	-3,717.0	9,864.7	5,062.0	4,909.9	152.09	33.284		
17,300.0	6,672.0	6,467.5	6,460.7	131.7	22.6	86.73	-3,717.1	9,864.7	5,054.5	4,901.0	153.47	32.936		
17,400.0	6,672.0	6,468.3	6,461.5	133.0	22.6	86.74	-3,717.1	9,864.8	5,049.0	4,894.2	154.80	32.616		
17,500.0	6,672.0	6,469.1	6,462.3	134.2	22.6	86.75	-3,717.2	9,864.8	5,045.5	4,889.4	156.09	32.324		
17,600.0	6,672.0	6,470.0	6,463.2	135.4	22.6	86.76	-3,717.2	9,864.8	5,043.9	4,886.6	157.33	32.060		
17,627.6	6,672.0	6,470.2	6,463.4	135.7	22.6	86.77	-3,717.2	9,864.8	5,043.8	4,886.2	157.66	31.991 CC		
17,700.0	6,672.0	6,470.8	6,464.0	136.6	22.6	86.77	-3,717.3	9,864.8	5,044.4	4,885.9	158.52	31.822 ES		
17,800.0	6,672.0	6,471.7	6,464.9	137.8	22.6	86.78	-3,717.3	9,864.8	5,046.8	4,887.1	159.66	31.610		
17,900.0	6,672.0	6,472.5	6,465.8	139.0	22.6	86.79	-3,717.4	9,864.8	5,051.2	4,890.5	160.74	31.424		
18,000.0	6,672.0	6,473.4	6,466.6	140.3	22.6	86.80	-3,717.4	9,864.9	5,057.6	4,895.9	161.78	31.263		
18,100.0	6,672.0	6,474.3	6,467.5	141.5	22.6	86.81	-3,717.5	9,864.9	5,066.0	4,903.3	162.75	31.127		
18,200.0	6,672.0	6,475.2	6,468.4	142.7	22.6	86.82	-3,717.5	9,864.9	5,076.3	4,912.7	163.68	31.014		
18,300.0	6,672.0	6,476.1	6,469.3	143.9	22.6	86.83	-3,717.6	9,864.9	5,088.6	4,924.1	164.54	30.926		
18,342.5	6,672.0	6,476.5	6,469.7	144.4	22.6	86.84	-3,717.6	9,864.9	5,094.4	4,929.5	164.90	30.895 SF		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 09 - National Hog Farm 21-09 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
9,600.0	6,672.0	6,541.1	6,540.5	42.7	22.7	50.95	1,063.6	11,673.7	9,962.4	9,914.9	47.46	209.921		
9,700.0	6,672.0	6,542.4	6,541.8	43.7	22.7	51.20	1,063.5	11,673.7	9,862.5	9,815.0	47.48	207.732		
9,800.0	6,672.0	6,543.7	6,543.1	44.7	22.7	51.45	1,063.5	11,673.8	9,762.5	9,715.0	47.50	205.541		
9,900.0	6,672.0	6,545.0	6,544.4	45.7	22.7	51.70	1,063.4	11,673.8	9,662.6	9,615.1	47.52	203.346		
10,000.0	6,672.0	6,546.3	6,545.7	46.7	22.7	51.95	1,063.4	11,673.8	9,562.7	9,515.1	47.54	201.149		
10,100.0	6,672.0	6,547.7	6,547.0	47.7	22.7	52.21	1,063.3	11,673.9	9,462.7	9,415.2	47.56	198.950		
10,200.0	6,672.0	6,549.0	6,548.3	48.8	22.7	52.46	1,063.3	11,673.9	9,362.8	9,315.2	47.59	196.748		
10,300.0	6,672.0	6,550.3	6,549.7	49.8	22.7	52.72	1,063.3	11,673.9	9,262.8	9,215.2	47.61	194.544		
10,400.0	6,672.0	6,551.7	6,551.0	50.9	22.7	52.97	1,063.2	11,673.9	9,162.9	9,115.3	47.64	192.337		
10,500.0	6,672.0	6,553.0	6,552.4	51.9	22.7	53.23	1,063.2	11,674.0	9,063.0	9,015.3	47.67	190.129		
10,600.0	6,672.0	6,554.4	6,553.8	53.0	22.7	53.49	1,063.1	11,674.0	8,963.1	8,915.4	47.70	187.918		
10,700.0	6,672.0	6,555.8	6,555.2	54.1	22.7	53.75	1,063.1	11,674.0	8,863.1	8,815.4	47.73	185.706		
10,800.0	6,672.0	6,557.2	6,556.5	55.2	22.7	54.01	1,063.0	11,674.1	8,763.2	8,715.4	47.76	183.492		
10,900.0	6,672.0	6,558.6	6,558.0	56.3	22.8	54.27	1,063.0	11,674.1	8,663.3	8,615.5	47.79	181.277		
11,000.0	6,672.0	6,560.0	6,559.4	57.4	22.8	54.54	1,062.9	11,674.1	8,563.4	8,515.5	47.82	179.060		
11,100.0	6,672.0	6,561.5	6,560.8	58.5	22.8	54.80	1,062.9	11,674.2	8,463.4	8,415.6	47.86	176.842		
11,200.0	6,672.0	6,562.9	6,562.2	59.6	22.8	55.07	1,062.8	11,674.2	8,363.5	8,315.6	47.89	174.623		
11,300.0	6,672.0	6,564.4	6,563.7	60.7	22.8	55.33	1,062.8	11,674.2	8,263.6	8,215.7	47.93	172.402		
11,400.0	6,672.0	6,565.8	6,565.2	61.8	22.8	55.60	1,062.7	11,674.3	8,163.7	8,115.7	47.97	170.181		
11,500.0	6,672.0	6,567.3	6,566.6	62.9	22.8	55.87	1,062.7	11,674.3	8,063.8	8,015.8	48.01	167.959		
11,600.0	6,672.0	6,568.8	6,568.1	64.1	22.8	56.14	1,062.7	11,674.3	7,963.9	7,915.8	48.05	165.736		
11,700.0	6,672.0	6,570.3	6,569.6	65.2	22.8	56.42	1,062.6	11,674.4	7,864.0	7,815.9	48.09	163.513		
11,800.0	6,672.0	6,571.8	6,571.1	66.3	22.8	56.69	1,062.6	11,674.4	7,764.0	7,715.9	48.14	161.289		
11,900.0	6,672.0	6,573.3	6,572.7	67.5	22.8	56.97	1,062.5	11,674.4	7,664.1	7,616.0	48.18	159.065		
12,000.0	6,672.0	6,574.9	6,574.2	68.6	22.8	57.24	1,062.4	11,674.5	7,564.2	7,516.0	48.23	156.840		
12,100.0	6,672.0	6,576.4	6,575.8	69.8	22.8	57.52	1,062.4	11,674.5	7,464.3	7,416.1	48.28	154.615		
12,200.0	6,672.0	6,578.0	6,577.3	70.9	22.8	57.80	1,062.3	11,674.5	7,364.4	7,316.1	48.33	152.391		
12,300.0	6,672.0	6,579.6	6,578.9	72.1	22.8	58.09	1,062.3	11,674.6	7,264.5	7,216.2	48.38	150.166		
12,400.0	6,672.0	6,581.2	6,580.5	73.2	22.8	58.37	1,062.2	11,674.6	7,164.7	7,116.2	48.43	147.942		
12,500.0	6,672.0	6,582.8	6,582.1	74.4	22.8	58.66	1,062.2	11,674.7	7,064.8	7,016.3	48.48	145.718		
12,600.0	6,672.0	6,584.4	6,583.7	75.5	22.8	58.95	1,062.1	11,674.7	6,964.9	6,916.3	48.54	143.494		
12,700.0	6,672.0	6,586.0	6,585.3	76.7	22.8	59.24	1,062.1	11,674.7	6,865.0	6,816.4	48.59	141.271		
12,800.0	6,672.0	6,587.7	6,587.0	77.9	22.9	59.53	1,062.0	11,674.8	6,765.1	6,716.5	48.65	139.048		
12,900.0	6,672.0	6,589.3	6,588.6	79.0	22.9	59.83	1,062.0	11,674.8	6,665.2	6,616.5	48.71	136.826		
13,000.0	6,672.0	6,591.0	6,590.3	80.2	22.9	60.12	1,061.9	11,674.9	6,565.4	6,516.6	48.78	134.605		
13,100.0	6,672.0	6,600.0	6,599.3	81.4	22.9	61.55	1,061.6	11,675.1	6,465.5	6,416.6	48.88	132.263		
13,200.0	6,672.0	6,600.0	6,599.3	82.6	22.9	61.59	1,061.6	11,675.1	6,365.6	6,316.7	48.94	130.072		
13,300.0	6,672.0	6,600.0	6,599.3	83.7	22.9	61.63	1,061.6	11,675.1	6,265.8	6,216.8	49.00	127.883		
13,400.0	6,672.0	6,600.0	6,599.3	84.9	22.9	61.67	1,061.6	11,675.1	6,165.9	6,116.9	49.05	125.694		
13,500.0	6,672.0	6,600.0	6,599.3	86.1	22.9	61.71	1,061.6	11,675.1	6,066.1	6,016.9	49.12	123.507		
13,600.0	6,672.0	6,601.7	6,601.0	87.3	22.9	62.00	1,061.6	11,675.1	5,966.2	5,917.0	49.19	121.293		
13,700.0	6,672.0	6,603.8	6,603.1	88.4	22.9	62.38	1,061.5	11,675.2	5,866.4	5,817.1	49.27	119.073		
13,800.0	6,672.0	6,606.0	6,605.3	89.6	22.9	62.75	1,061.4	11,675.2	5,766.5	5,717.2	49.35	116.855		
13,900.0	6,672.0	6,608.2	6,607.5	90.8	22.9	63.13	1,061.3	11,675.3	5,666.7	5,617.3	49.43	114.639		
14,000.0	6,672.0	6,610.4	6,609.7	92.0	22.9	63.51	1,061.3	11,675.3	5,566.9	5,517.3	49.52	112.424		
14,100.0	6,672.0	6,612.6	6,611.9	93.2	22.9	63.90	1,061.2	11,675.4	5,467.0	5,417.4	49.61	110.211		
14,200.0	6,672.0	6,614.8	6,614.1	94.4	22.9	64.28	1,061.1	11,675.5	5,367.2	5,317.5	49.70	108.000		
14,300.0	6,672.0	6,617.0	6,616.3	95.6	23.0	64.67	1,061.0	11,675.5	5,267.4	5,217.6	49.79	105.790		
14,400.0	6,672.0	6,619.3	6,618.6	96.8	23.0	65.06	1,061.0	11,675.6	5,167.6	5,117.7	49.89	103.583		
14,500.0	6,672.0	6,621.5	6,620.8	98.0	23.0	65.45	1,060.9	11,675.6	5,067.8	5,017.8	49.99	101.377		
14,600.0	6,672.0	6,623.7	6,623.0	99.2	23.0	65.84	1,060.8	11,675.7	4,968.0	4,917.9	50.09	99.174		
14,700.0	6,672.0	6,626.0	6,625.3	100.4	23.0	66.24	1,060.7	11,675.7	4,868.2	4,818.0	50.20	96.972		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 09 - National Hog Farm 21-09 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
14,800.0	6,672.0	6,628.3	6,627.5	101.6	23.0	66.63	1,060.7	11,675.8	4,768.5	4,718.1	50.31	94.773		
14,900.0	6,672.0	6,630.5	6,629.8	102.7	23.0	67.03	1,060.6	11,675.9	4,668.7	4,618.3	50.43	92.575		
15,000.0	6,672.0	6,632.8	6,632.1	103.9	23.0	67.44	1,060.5	11,675.9	4,568.9	4,518.4	50.55	90.380		
15,100.0	6,672.0	6,635.1	6,634.4	105.1	23.0	67.84	1,060.4	11,676.0	4,469.2	4,418.5	50.68	88.186		
15,200.0	6,672.0	6,637.4	6,636.7	106.3	23.0	68.25	1,060.4	11,676.0	4,369.5	4,318.6	50.81	85.995		
15,300.0	6,672.0	6,639.7	6,639.0	107.6	23.0	68.65	1,060.3	11,676.1	4,269.7	4,218.8	50.95	83.805		
15,400.0	6,672.0	6,642.1	6,641.3	108.8	23.0	69.07	1,060.2	11,676.2	4,170.0	4,118.9	51.09	81.618		
15,500.0	6,672.0	6,644.4	6,643.6	110.0	23.1	69.48	1,060.1	11,676.2	4,070.3	4,019.1	51.24	79.432		
15,600.0	6,672.0	6,646.7	6,646.0	111.2	23.1	69.89	1,060.1	11,676.3	3,970.6	3,919.2	51.40	77.249		
15,700.0	6,672.0	6,649.1	6,648.3	112.4	23.1	70.31	1,060.0	11,676.3	3,871.0	3,819.4	51.57	75.067		
15,800.0	6,672.0	6,651.4	6,650.7	113.6	23.1	70.73	1,059.9	11,676.4	3,771.3	3,719.6	51.74	72.887		
15,900.0	6,672.0	6,653.8	6,653.1	114.8	23.1	71.15	1,059.8	11,676.5	3,671.7	3,619.8	51.93	70.708		
16,000.0	6,672.0	6,656.2	6,655.4	116.0	23.1	71.58	1,059.8	11,676.5	3,572.1	3,520.0	52.12	68.532		
16,100.0	6,672.0	6,658.6	6,657.8	117.2	23.1	72.01	1,059.7	11,676.6	3,472.5	3,420.2	52.33	66.356		
16,200.0	6,672.0	6,661.0	6,660.2	118.4	23.1	72.44	1,059.6	11,676.6	3,372.9	3,320.4	52.55	64.183		
16,300.0	6,672.0	6,663.4	6,662.6	119.6	23.1	72.87	1,059.5	11,676.7	3,273.4	3,220.6	52.79	62.011		
16,400.0	6,672.0	6,665.8	6,665.0	120.8	23.1	73.30	1,059.5	11,676.8	3,173.9	3,120.8	53.04	59.840		
16,500.0	6,672.0	6,668.2	6,667.4	122.0	23.1	73.74	1,059.4	11,676.8	3,074.4	3,021.1	53.31	57.670		
16,600.0	6,672.0	6,670.6	6,669.9	123.2	23.1	74.18	1,059.3	11,676.9	2,974.9	2,921.3	53.60	55.502		
16,700.0	6,672.0	6,673.1	6,672.3	124.5	23.2	74.62	1,059.2	11,677.0	2,875.5	2,821.6	53.91	53.335		
16,800.0	6,672.0	6,725.7	6,673.5	125.7	23.3	74.84	1,059.2	11,677.0	2,776.1	2,721.7	54.42	51.013		
16,900.0	6,672.0	6,723.1	6,676.2	126.9	23.3	75.32	1,059.1	11,677.1	2,676.8	2,622.0	54.77	48.870		
17,000.0	6,672.0	6,720.4	6,678.8	128.1	23.3	75.80	1,059.0	11,677.1	2,577.5	2,522.4	55.16	46.728		
17,100.0	6,672.0	6,717.8	6,681.4	129.3	23.3	76.28	1,058.9	11,677.2	2,478.3	2,422.7	55.59	44.585		
17,200.0	6,672.0	6,715.1	6,684.1	130.5	23.3	76.76	1,058.9	11,677.3	2,379.1	2,323.1	56.06	42.441		
17,300.0	6,672.0	6,712.5	6,686.7	131.7	23.3	77.24	1,058.8	11,677.4	2,280.1	2,223.5	56.58	40.298		
17,400.0	6,672.0	6,709.9	6,689.4	133.0	23.3	77.72	1,058.7	11,677.4	2,181.0	2,123.9	57.16	38.156		
17,500.0	6,672.0	6,707.2	6,692.0	134.2	23.3	78.20	1,058.6	11,677.5	2,082.1	2,024.3	57.81	36.014		
17,600.0	6,672.0	6,704.6	6,694.6	135.4	23.3	78.68	1,058.5	11,677.6	1,983.3	1,924.8	58.55	33.875		
17,700.0	6,672.0	6,701.9	6,697.3	136.6	23.3	79.17	1,058.5	11,677.6	1,884.6	1,825.3	59.38	31.738		
17,800.0	6,672.0	6,700.7	6,699.9	137.8	23.2	79.65	1,058.4	11,677.7	1,786.1	1,725.8	60.33	29.604		
17,900.0	6,672.0	6,703.4	6,702.6	139.0	23.3	80.13	1,058.3	11,677.8	1,687.7	1,626.3	61.44	27.471		
18,000.0	6,672.0	6,706.0	6,705.2	140.3	23.3	80.62	1,058.2	11,677.9	1,589.6	1,526.8	62.71	25.348		
18,100.0	6,672.0	6,708.6	6,707.8	141.5	23.3	81.10	1,058.1	11,677.9	1,491.6	1,427.4	64.18	23.241		
18,200.0	6,672.0	6,711.3	6,710.5	142.7	23.3	81.59	1,058.1	11,678.0	1,394.0	1,328.1	65.90	21.152		
18,300.0	6,672.0	6,713.9	6,713.1	143.9	23.3	82.07	1,058.0	11,678.1	1,296.7	1,228.8	67.93	19.089		
18,342.5	6,672.0	6,715.0	6,714.2	144.4	23.3	82.28	1,057.9	11,678.1	1,255.5	1,186.6	68.90	18.222 CC, ES, SF		



# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 09 - National Hog Farm 24-09 - Original Drilling - Original Drilling - As Drilled													Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWGS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,600.0	6,672.0	6,983.0	6,980.1	53.0	24.3	92.82	-3,088.8	11,756.0	9,993.4	9,935.8	57.65	173.359		
10,700.0	6,672.0	6,983.0	6,980.1	54.1	24.3	92.82	-3,088.8	11,756.0	9,903.9	9,845.7	58.16	170.290		
10,800.0	6,672.0	6,983.0	6,980.1	55.2	24.3	92.82	-3,088.8	11,756.0	9,814.6	9,755.9	58.69	167.228		
10,900.0	6,672.0	6,983.0	6,980.1	56.3	24.3	92.82	-3,088.8	11,756.0	9,725.4	9,666.2	59.24	164.174		
11,000.0	6,672.0	6,983.0	6,980.1	57.4	24.3	92.82	-3,088.8	11,756.0	9,636.5	9,576.7	59.81	161.132		
11,100.0	6,672.0	6,983.0	6,980.1	58.5	24.3	92.82	-3,088.8	11,756.0	9,547.9	9,487.5	60.39	158.103		
11,200.0	6,672.0	6,983.0	6,980.1	59.6	24.3	92.82	-3,088.8	11,756.0	9,459.4	9,398.4	60.99	155.088		
11,300.0	6,672.0	6,983.0	6,980.1	60.7	24.3	92.82	-3,088.8	11,756.0	9,371.2	9,309.6	61.62	152.090		
11,400.0	6,672.0	6,983.0	6,980.1	61.8	24.3	92.82	-3,088.8	11,756.0	9,283.3	9,221.0	62.26	149.110		
11,500.0	6,672.0	6,983.0	6,980.1	62.9	24.3	92.82	-3,088.8	11,756.0	9,195.5	9,132.6	62.92	146.150		
11,600.0	6,672.0	6,983.0	6,980.1	64.1	24.3	92.82	-3,088.8	11,756.0	9,108.1	9,044.5	63.60	143.211		
11,700.0	6,672.0	6,983.0	6,980.1	65.2	24.3	92.82	-3,088.8	11,756.0	9,020.9	8,956.6	64.30	140.295		
11,800.0	6,672.0	6,983.0	6,980.1	66.3	24.3	92.82	-3,088.8	11,756.0	8,934.0	8,868.9	65.02	137.404		
11,900.0	6,672.0	6,983.0	6,980.1	67.5	24.3	92.82	-3,088.8	11,756.0	8,847.3	8,781.6	65.76	134.538		
12,000.0	6,672.0	6,983.0	6,980.1	68.6	24.3	92.82	-3,088.8	11,756.0	8,761.0	8,694.4	66.52	131.699		
12,100.0	6,672.0	6,983.0	6,980.1	69.8	24.3	92.82	-3,088.8	11,756.0	8,674.9	8,607.6	67.31	128.889		
12,200.0	6,672.0	6,983.0	6,980.1	70.9	24.3	92.82	-3,088.8	11,756.0	8,589.2	8,521.1	68.11	126.108		
12,300.0	6,672.0	6,983.0	6,980.1	72.1	24.3	92.82	-3,088.8	11,756.0	8,503.7	8,434.8	68.94	123.358		
12,400.0	6,672.0	6,983.0	6,980.1	73.2	24.3	92.81	-3,088.8	11,756.0	8,418.6	8,348.8	69.78	120.639		
12,500.0	6,672.0	6,983.0	6,980.1	74.4	24.3	92.81	-3,088.8	11,756.0	8,333.8	8,263.2	70.65	117.954		
12,600.0	6,672.0	6,983.0	6,980.1	75.5	24.3	92.81	-3,088.8	11,756.0	8,249.4	8,177.9	71.55	115.302		
12,700.0	6,672.0	6,983.0	6,980.1	76.7	24.3	92.81	-3,088.8	11,756.0	8,165.3	8,092.9	72.46	112.684		
12,800.0	6,672.0	6,983.0	6,980.1	77.9	24.3	92.81	-3,088.8	11,756.0	8,081.6	8,008.2	73.40	110.101		
12,900.0	6,672.0	6,983.0	6,980.1	79.0	24.3	92.81	-3,088.8	11,756.0	7,998.3	7,923.9	74.36	107.555		
13,000.0	6,672.0	6,983.0	6,980.1	80.2	24.3	92.81	-3,088.8	11,756.0	7,915.4	7,840.0	75.35	105.045		
13,100.0	6,672.0	6,983.0	6,980.1	81.4	24.3	92.81	-3,088.8	11,756.0	7,832.8	7,756.4	76.36	102.573		
13,200.0	6,672.0	6,983.0	6,980.1	82.6	24.3	92.81	-3,088.8	11,756.0	7,750.7	7,673.3	77.40	100.138		
13,300.0	6,672.0	6,983.0	6,980.1	83.7	24.3	92.81	-3,088.8	11,756.0	7,669.0	7,590.5	78.46	97.742		
13,400.0	6,672.0	6,983.0	6,980.1	84.9	24.3	92.81	-3,088.8	11,756.0	7,587.7	7,508.2	79.55	95.385		
13,500.0	6,672.0	6,983.0	6,980.1	86.1	24.3	92.81	-3,088.8	11,756.0	7,507.0	7,426.3	80.66	93.067		
13,600.0	6,672.0	6,983.0	6,980.1	87.3	24.3	92.81	-3,088.8	11,756.0	7,426.6	7,344.8	81.80	90.789		
13,700.0	6,672.0	6,983.0	6,980.1	88.4	24.3	92.81	-3,088.8	11,756.0	7,346.8	7,263.8	82.97	88.551		
13,800.0	6,672.0	6,983.0	6,980.1	89.6	24.3	92.81	-3,088.8	11,756.0	7,267.5	7,183.3	84.16	86.353		
13,900.0	6,672.0	6,983.0	6,980.1	90.8	24.3	92.81	-3,088.8	11,756.0	7,188.7	7,103.3	85.38	84.195		
14,000.0	6,672.0	6,983.0	6,980.1	92.0	24.3	92.81	-3,088.8	11,756.0	7,110.4	7,023.8	86.63	82.079		
14,100.0	6,672.0	6,983.0	6,980.1	93.2	24.3	92.81	-3,088.8	11,756.0	7,032.7	6,944.8	87.91	80.003		
14,200.0	6,672.0	6,983.0	6,980.1	94.4	24.3	92.81	-3,088.8	11,756.0	6,955.5	6,866.3	89.21	77.968		
14,300.0	6,672.0	6,983.0	6,980.1	95.6	24.3	92.81	-3,088.8	11,756.0	6,879.0	6,788.4	90.54	75.975		
14,400.0	6,672.0	6,983.0	6,980.1	96.8	24.3	92.81	-3,088.8	11,756.0	6,803.0	6,711.1	91.91	74.022		
14,500.0	6,672.0	6,983.0	6,980.1	98.0	24.3	92.81	-3,088.8	11,756.0	6,727.7	6,634.4	93.30	72.111		
14,600.0	6,672.0	6,983.0	6,980.1	99.2	24.3	92.81	-3,088.8	11,756.0	6,653.1	6,558.4	94.72	70.241		
14,700.0	6,672.0	6,983.0	6,980.1	100.4	24.3	92.81	-3,088.8	11,756.0	6,579.1	6,483.0	96.17	68.412		
14,800.0	6,672.0	6,983.0	6,980.1	101.6	24.3	92.81	-3,088.8	11,756.0	6,505.9	6,408.2	97.65	66.625		
14,900.0	6,672.0	6,983.0	6,980.1	102.7	24.3	92.81	-3,088.8	11,756.0	6,433.3	6,334.2	99.16	64.878		
15,000.0	6,672.0	6,983.0	6,980.1	103.9	24.3	92.81	-3,088.8	11,756.0	6,361.5	6,260.8	100.70	63.173		
15,100.0	6,672.0	6,983.0	6,980.1	105.1	24.3	92.81	-3,088.8	11,756.0	6,290.5	6,188.3	102.27	61.508		
15,200.0	6,672.0	6,983.0	6,980.1	106.3	24.3	92.81	-3,088.8	11,756.0	6,220.3	6,116.4	103.87	59.884		
15,300.0	6,672.0	6,983.0	6,980.1	107.6	24.3	92.81	-3,088.8	11,756.0	6,150.9	6,045.4	105.50	58.300		
15,400.0	6,672.0	6,983.0	6,980.1	108.8	24.3	92.81	-3,088.8	11,756.0	6,082.4	5,975.2	107.17	56.757		
15,500.0	6,672.0	6,983.0	6,980.1	110.0	24.3	92.81	-3,088.8	11,756.0	6,014.8	5,905.9	108.86	55.254		
15,600.0	6,672.0	6,983.0	6,980.1	111.2	24.3	92.81	-3,088.8	11,756.0	5,948.1	5,837.5	110.58	53.791		
15,700.0	6,672.0	6,983.0	6,980.1	112.4	24.3	92.81	-3,088.8	11,756.0	5,882.3	5,770.0	112.33	52.368		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design BB Section 09 - National Hog Farm 24-09 - Original Drilling - Original Drilling - As Drilled												Offset Site Error:	0.0 ft
Survey Program: 100-2_Gyro-NS-GC_OWSG												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
15,800.0	6,672.0	6,983.0	6,980.1	113.6	24.3	92.81	-3,088.8	11,756.0	5,817.5	5,703.4	114.10	50.984	
15,900.0	6,672.0	6,983.0	6,980.1	114.8	24.3	92.81	-3,088.8	11,756.0	5,753.7	5,637.8	115.91	49.639	
16,000.0	6,672.0	6,983.0	6,980.1	116.0	24.3	92.81	-3,088.8	11,756.0	5,691.0	5,573.2	117.75	48.333	
16,100.0	6,672.0	6,983.0	6,980.1	117.2	24.3	92.81	-3,088.8	11,756.0	5,629.4	5,509.7	119.61	47.066	
16,200.0	6,672.0	6,983.0	6,980.1	118.4	24.3	92.81	-3,088.8	11,756.0	5,568.8	5,447.3	121.49	45.837	
16,300.0	6,672.0	6,983.0	6,980.1	119.6	24.3	92.81	-3,088.8	11,756.0	5,509.5	5,386.1	123.40	44.646	
16,400.0	6,672.0	6,983.0	6,980.1	120.8	24.3	92.81	-3,088.8	11,756.0	5,451.3	5,326.0	125.34	43.493	
16,500.0	6,672.0	6,983.0	6,980.1	122.0	24.3	92.80	-3,088.8	11,756.0	5,394.3	5,267.1	127.29	42.377	
16,600.0	6,672.0	6,983.0	6,980.1	123.2	24.3	92.80	-3,088.8	11,756.0	5,338.7	5,209.4	129.27	41.298	
16,700.0	6,672.0	6,983.0	6,980.1	124.5	24.3	92.80	-3,088.8	11,756.0	5,284.3	5,153.1	131.27	40.256	
16,800.0	6,672.0	6,983.0	6,980.1	125.7	24.3	92.80	-3,088.8	11,756.0	5,231.3	5,098.0	133.28	39.250	
16,900.0	6,672.0	6,983.0	6,980.1	126.9	24.3	92.80	-3,088.8	11,756.0	5,179.7	5,044.4	135.31	38.280	
17,000.0	6,672.0	6,983.0	6,980.1	128.1	24.3	92.80	-3,088.8	11,756.0	5,129.6	4,992.2	137.35	37.346	
17,100.0	6,672.0	7,009.4	7,006.6	129.3	24.4	93.14	-3,087.7	11,755.3	5,080.8	4,941.3	139.53	36.412	
17,200.0	6,672.0	7,007.0	7,004.1	130.5	24.4	93.11	-3,087.8	11,755.4	5,033.6	4,892.1	141.58	35.552	
17,300.0	6,672.0	7,004.6	7,001.7	131.7	24.4	93.08	-3,087.9	11,755.4	4,988.0	4,844.4	143.64	34.727	
17,400.0	6,672.0	7,002.1	6,999.3	133.0	24.3	93.05	-3,088.0	11,755.5	4,944.1	4,798.4	145.69	33.935	
17,500.0	6,672.0	6,999.7	6,996.8	134.2	24.3	93.02	-3,088.1	11,755.5	4,901.7	4,754.0	147.75	33.176	
17,600.0	6,672.0	6,997.3	6,994.4	135.4	24.3	92.99	-3,088.2	11,755.6	4,861.1	4,711.3	149.80	32.450	
17,700.0	6,672.0	6,994.9	6,992.0	136.6	24.3	92.96	-3,088.3	11,755.7	4,822.2	4,670.3	151.85	31.757	
17,800.0	6,672.0	6,992.4	6,989.6	137.8	24.3	92.92	-3,088.4	11,755.7	4,785.1	4,631.2	153.88	31.096	
17,900.0	6,672.0	6,990.0	6,987.1	139.0	24.3	92.89	-3,088.5	11,755.8	4,749.8	4,593.9	155.90	30.467	
18,000.0	6,672.0	6,987.6	6,984.7	140.3	24.3	92.86	-3,088.6	11,755.9	4,716.3	4,558.4	157.90	29.870	
18,100.0	6,672.0	6,985.1	6,982.3	141.5	24.3	92.83	-3,088.7	11,755.9	4,684.8	4,524.9	159.88	29.303	
18,200.0	6,672.0	6,982.7	6,979.9	142.7	24.3	92.80	-3,088.8	11,756.0	4,655.2	4,493.4	161.83	28.767	
18,300.0	6,672.0	6,980.3	6,977.4	143.9	24.3	92.77	-3,088.9	11,756.0	4,627.6	4,463.9	163.75	28.261	
18,342.5	6,672.0	6,979.3	6,976.4	144.4	24.3	92.76	-3,089.0	11,756.1	4,616.5	4,451.9	164.55	28.055 CC, ES, SF	



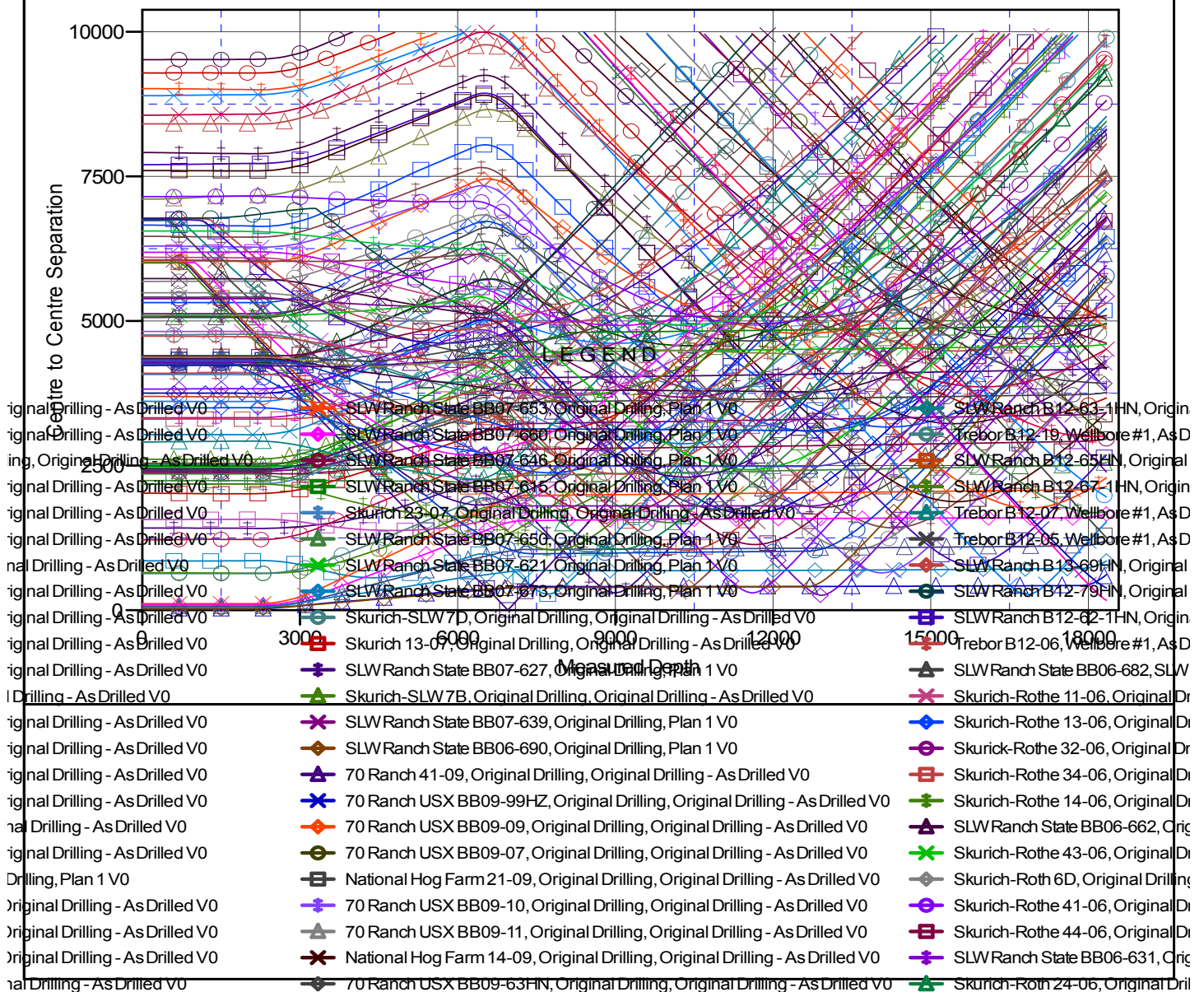
**Noble Energy, Inc.**  
Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 4662.0ft (Original Well Elev.)  
Offset Depths are relative to Offset Datum  
Central Meridian is -105.5000000

Coordinates are relative to: SLW Ranch State BB07-685  
Coordinate System is US State Plane 1983, Colorado Northern Zone  
Grid Convergence at Surface is: 0.66°

## Ladder Plot



CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



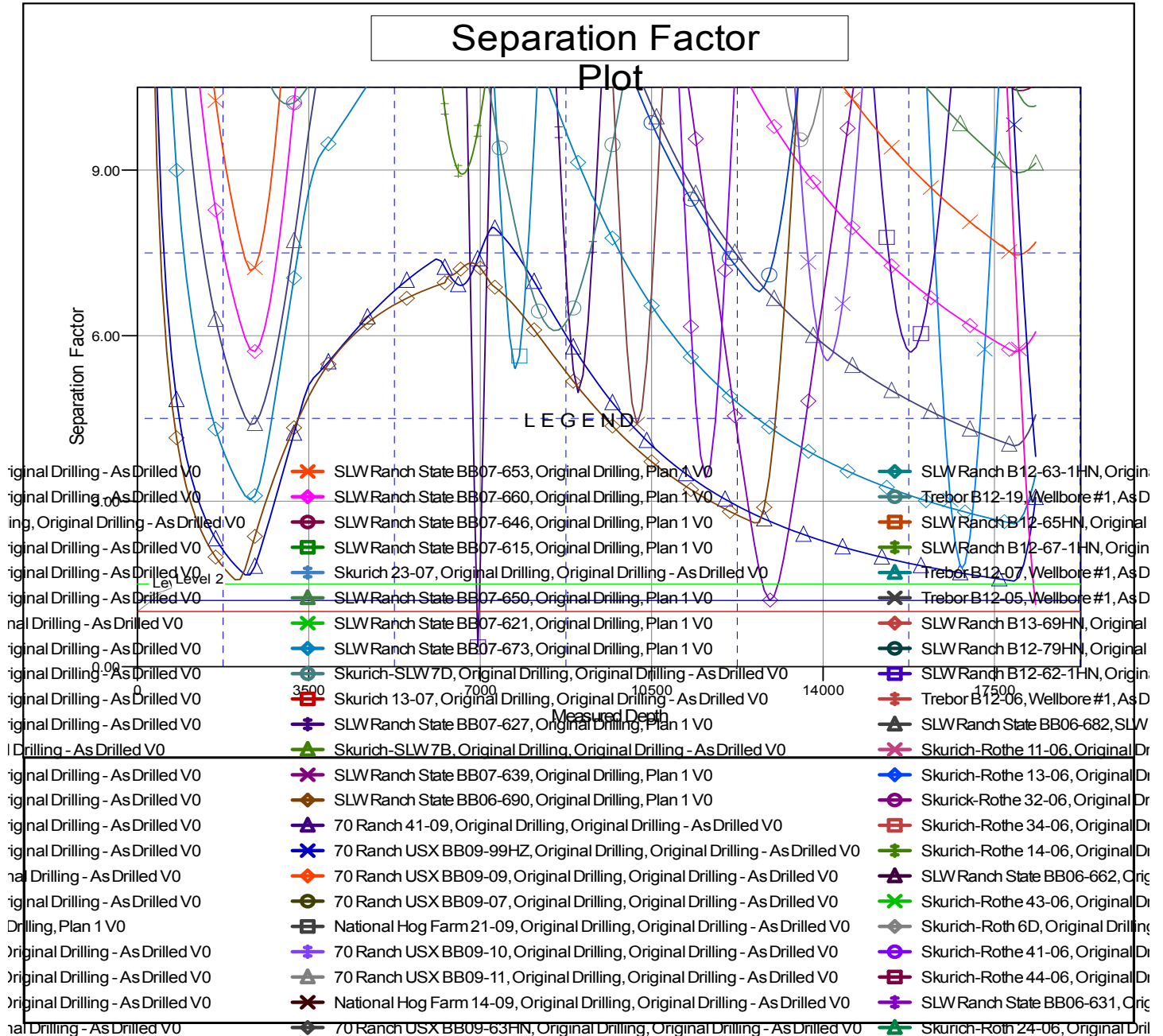
# Noble Energy, Inc.

## Anticollision Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well SLW Ranch State BB07-685
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Reference Site:</b>	BB Section 07	<b>MD Reference:</b>	WELL @ 4662.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SLW Ranch State BB07-685	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan 1	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 4662.0ft (Original Well Elev.)  
 Offset Depths are relative to Offset Datum  
 Central Meridian is -105.5000000

Coordinates are relative to: SLW Ranch State BB07-685  
 Coordinate System is US State Plane 1983, Colorado Northern Zone  
 Grid Convergence at Surface is: 0.66°



CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation