

Project: Wells Ranch
Site: A Section 35
Well: Reveille A34-714
Wellbore: Reveille A34-714 OH
Design: APD - Rev 1

Northern Region - DJ Basin

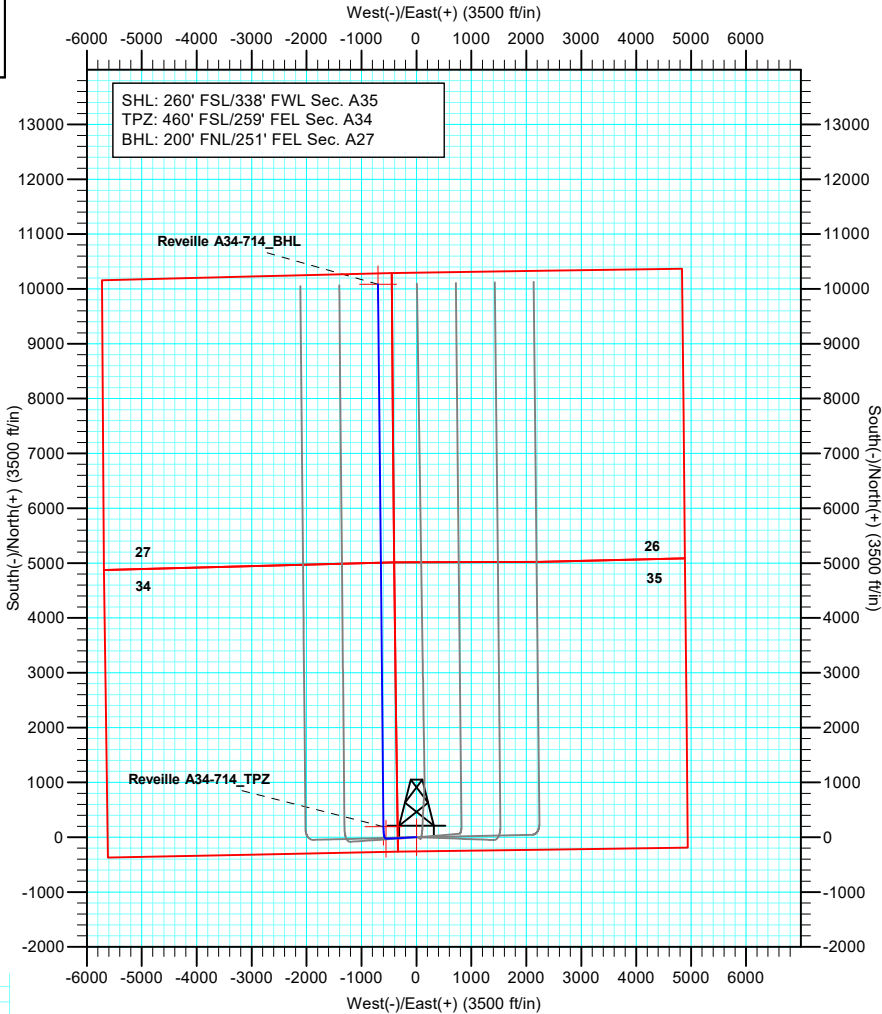
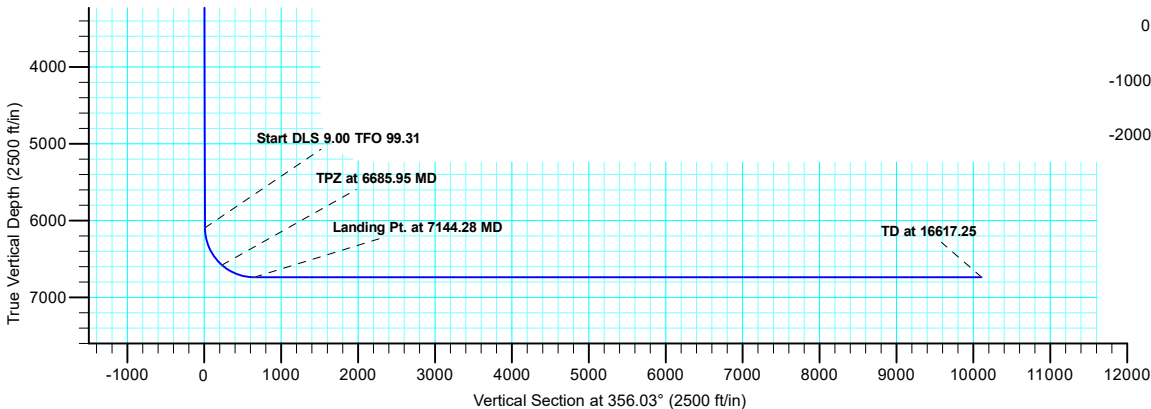
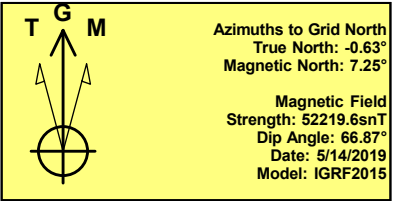
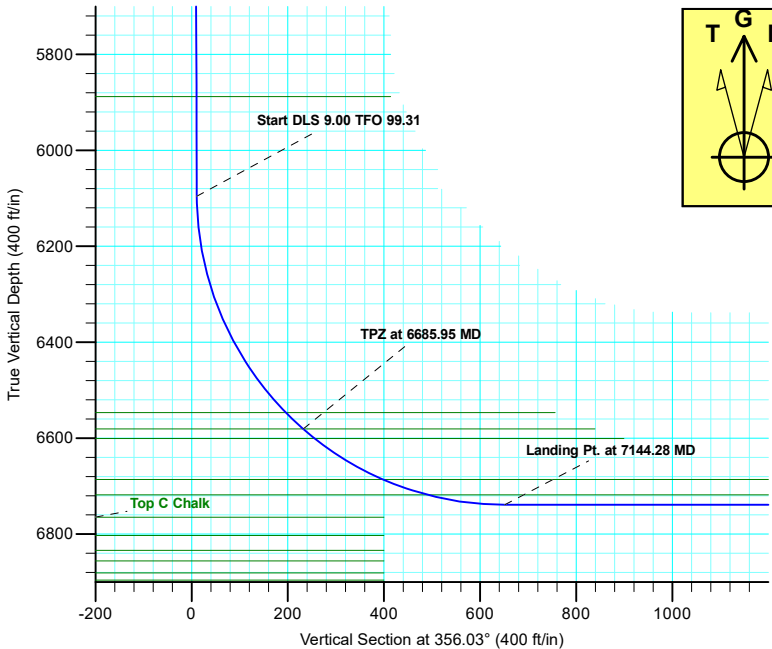
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Northern Zone
System Datum: Mean Sea Level

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	2000.00	0.00	0.00	2000.00	0.00	0.00	0.00	0.00	0.00
3	2407.28	8.15	267.14	2405.91	-1.44	-28.87	2.00	267.14	0.56
4	6135.10	8.15	267.14	6096.12	-27.82	-556.40	0.00	0.00	10.74
5	6685.95	48.75	359.43	6581.00	191.13	-600.22	9.00	99.31	232.19
6	7144.28	90.00	359.43	6738.98	610.86	-604.42	9.00	0.00	651.21
7	16617.25	90.00	359.43	6739.00	10083.36	-699.19	0.00	0.00	10107.57

WELL DETAILS: Reveille A34-714

+N/-S	+E/-W	Ground Level: Northing	Ground Level: Easting	Ground Level: Latitude	Ground Level: Longitude	Slot
0.00	0.00	1403285.68	3271240.74	40.4363300	-104.5255600	



Northern Region - DJ Basin

Wells Ranch

A Section 35

Reveille A34-714

Reveille A34-714 OH

Plan: APD - Rev 1

Standard Planning Report

22 July, 2019

Noble Energy, Inc.

Planning Report

Database:	EDMP	Local Co-ordinate Reference:	Well Reveille A34-714
Company:	Northern Region - DJ Basin	TVD Reference:	KB @ 4679.00ft
Project:	Wells Ranch	MD Reference:	KB @ 4679.00ft
Site:	A Section 35	North Reference:	Grid
Well:	Reveille A34-714	Survey Calculation Method:	Minimum Curvature
Wellbore:	Reveille A34-714 OH		
Design:	APD - Rev 1		

Project	Wells Ranch, Weld County Colorado		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site		A Section 35			
Site Position:		Northing:	1,403,359.25 usft	Latitude:	40.4364500
From:	Map	Easting:	3,273,942.97 usft	Longitude:	-104.5158500
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.64 °

Well	Reveille A34-714					
Well Position	+N/-S	-73.57 ft	Northing:	1,403,285.68 usft	Latitude:	40.4363300
	+E/-W	-2,702.24 ft	Easting:	3,271,240.74 usft	Longitude:	-104.5255600
Position Uncertainty		0.00 ft	Wellhead Elevation:	0.00 ft	Ground Level:	4,649.00 ft

Wellbore	Reveille A34-714 OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	5/14/2019	7.88	66.87	52,219.56809622

Design	APD - Rev 1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	356.03

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,407.28	8.15	267.14	2,405.91	-1.44	-28.87	2.00	2.00	0.00	267.14	
6,135.10	8.15	267.14	6,096.12	-27.82	-556.40	0.00	0.00	0.00	0.00	
6,685.95	48.75	359.43	6,581.00	191.13	-600.22	9.00	7.37	16.75	99.31	Reveille A34-714_TP;
7,144.28	90.00	359.43	6,738.98	610.86	-604.42	9.00	9.00	0.00	0.00	
16,617.25	90.00	359.43	6,739.00	10,083.36	-699.19	0.00	0.00	0.00	0.00	Reveille A34-714_BH

Noble Energy, Inc.

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Company:	Northern Region - DJ Basin	TVD Reference:	KB @ 4679.00ft
Project:	Wells Ranch	MD Reference:	KB @ 4679.00ft
Site:	A Section 35	North Reference:	Grid
Well:	Reveille A34-714	Survey Calculation Method:	Minimum Curvature
Wellbore:	Reveille A34-714 OH		
Design:	APD - Rev 1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
299.00	0.00	0.00	299.00	0.00	0.00	0.00	0.00	0.00	0.00
Pierre									
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
414.00	0.00	0.00	414.00	0.00	0.00	0.00	0.00	0.00	0.00
Upper Pierre Aquifer Top									
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,457.00	0.00	0.00	1,457.00	0.00	0.00	0.00	0.00	0.00	0.00
Upper Pierre Aquifer Base									
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
2,100.00	2.00	267.14	2,099.98	-0.09	-1.74	0.03	2.00	2.00	0.00
2,200.00	4.00	267.14	2,199.84	-0.35	-6.97	0.13	2.00	2.00	0.00
2,300.00	6.00	267.14	2,299.45	-0.78	-15.67	0.30	2.00	2.00	0.00
2,407.28	8.15	267.14	2,405.91	-1.44	-28.87	0.56	2.00	2.00	0.00
Start 3727.82 hold at 2407.28 MD									
2,500.00	8.15	267.14	2,497.69	-2.10	-41.99	0.81	0.00	0.00	0.00
2,600.00	8.15	267.14	2,596.69	-2.81	-56.14	1.08	0.00	0.00	0.00
2,700.00	8.15	267.14	2,695.68	-3.51	-70.29	1.36	0.00	0.00	0.00
2,800.00	8.15	267.14	2,794.67	-4.22	-84.44	1.63	0.00	0.00	0.00
2,900.00	8.15	267.14	2,893.66	-4.93	-98.59	1.90	0.00	0.00	0.00
3,000.00	8.15	267.14	2,992.65	-5.64	-112.74	2.18	0.00	0.00	0.00
3,100.00	8.15	267.14	3,091.64	-6.34	-126.90	2.45	0.00	0.00	0.00
3,200.00	8.15	267.14	3,190.63	-7.05	-141.05	2.72	0.00	0.00	0.00
3,300.00	8.15	267.14	3,289.62	-7.76	-155.20	2.99	0.00	0.00	0.00
3,400.00	8.15	267.14	3,388.61	-8.47	-169.35	3.27	0.00	0.00	0.00
3,500.00	8.15	267.14	3,487.61	-9.18	-183.50	3.54	0.00	0.00	0.00
3,573.13	8.15	267.14	3,560.00	-9.69	-193.85	3.74	0.00	0.00	0.00
Parkman									
3,600.00	8.15	267.14	3,586.60	-9.88	-197.65	3.81	0.00	0.00	0.00
3,700.00	8.15	267.14	3,685.59	-10.59	-211.80	4.09	0.00	0.00	0.00
3,800.00	8.15	267.14	3,784.58	-11.30	-225.96	4.36	0.00	0.00	0.00
3,900.00	8.15	267.14	3,883.57	-12.01	-240.11	4.63	0.00	0.00	0.00
4,000.00	8.15	267.14	3,982.56	-12.71	-254.26	4.91	0.00	0.00	0.00
4,100.00	8.15	267.14	4,081.55	-13.42	-268.41	5.18	0.00	0.00	0.00
4,200.00	8.15	267.14	4,180.54	-14.13	-282.56	5.45	0.00	0.00	0.00

Noble Energy, Inc.

Planning Report

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Company:	Northern Region - DJ Basin	TVD Reference:	KB @ 4679.00ft
Project:	Wells Ranch	MD Reference:	KB @ 4679.00ft
Site:	A Section 35	North Reference:	Grid
Well:	Reveille A34-714	Survey Calculation Method:	Minimum Curvature
Wellbore:	Reveille A34-714 OH		
Design:	APD - Rev 1		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
4,276.23	8.15	267.14	4,256.00	-14.67	-293.35	5.66	0.00	0.00	0.00	
Sussex										
4,300.00	8.15	267.14	4,279.53	-14.84	-296.71	5.72	0.00	0.00	0.00	
4,400.00	8.15	267.14	4,378.53	-15.54	-310.86	6.00	0.00	0.00	0.00	
4,500.00	8.15	267.14	4,477.52	-16.25	-325.01	6.27	0.00	0.00	0.00	
4,600.00	8.15	267.14	4,576.51	-16.96	-339.17	6.54	0.00	0.00	0.00	
4,700.00	8.15	267.14	4,675.50	-17.67	-353.32	6.82	0.00	0.00	0.00	
4,800.00	8.15	267.14	4,774.49	-18.37	-367.47	7.09	0.00	0.00	0.00	
4,884.36	8.15	267.14	4,858.00	-18.97	-379.41	7.32	0.00	0.00	0.00	
Shannon										
4,900.00	8.15	267.14	4,873.48	-19.08	-381.62	7.36	0.00	0.00	0.00	
5,000.00	8.15	267.14	4,972.47	-19.79	-395.77	7.64	0.00	0.00	0.00	
5,100.00	8.15	267.14	5,071.46	-20.50	-409.92	7.91	0.00	0.00	0.00	
5,200.00	8.15	267.14	5,170.45	-21.20	-424.07	8.18	0.00	0.00	0.00	
5,300.00	8.15	267.14	5,269.44	-21.91	-438.23	8.46	0.00	0.00	0.00	
5,400.00	8.15	267.14	5,368.44	-22.62	-452.38	8.73	0.00	0.00	0.00	
5,500.00	8.15	267.14	5,467.43	-23.33	-466.53	9.00	0.00	0.00	0.00	
5,600.00	8.15	267.14	5,566.42	-24.03	-480.68	9.27	0.00	0.00	0.00	
5,700.00	8.15	267.14	5,665.41	-24.74	-494.83	9.55	0.00	0.00	0.00	
5,800.00	8.15	267.14	5,764.40	-25.45	-508.98	9.82	0.00	0.00	0.00	
5,900.00	8.15	267.14	5,863.39	-26.16	-523.13	10.09	0.00	0.00	0.00	
5,924.86	8.15	267.14	5,888.00	-26.33	-526.65	10.16	0.00	0.00	0.00	
Teepee Buttes										
6,000.00	8.15	267.14	5,962.38	-26.86	-537.28	10.37	0.00	0.00	0.00	
6,100.00	8.15	267.14	6,061.37	-27.57	-551.44	10.64	0.00	0.00	0.00	
6,135.10	8.15	267.14	6,096.12	-27.82	-556.40	10.74	0.00	0.00	0.00	
Start DLS 9.00 TFO 99.31										
6,150.00	8.04	276.64	6,110.87	-27.75	-558.49	10.95	9.00	-0.72	63.81	
6,200.00	9.21	305.99	6,160.33	-24.99	-565.21	14.16	9.00	2.35	58.70	
6,250.00	12.06	325.15	6,209.48	-18.35	-571.43	21.22	9.00	5.69	38.31	
6,300.00	15.69	336.35	6,258.02	-7.87	-577.13	32.07	9.00	7.26	22.41	
6,350.00	19.67	343.27	6,305.66	6.39	-582.26	46.65	9.00	7.97	13.85	
6,400.00	23.84	347.90	6,352.09	24.33	-586.81	64.87	9.00	8.33	9.25	
6,450.00	28.10	351.20	6,397.03	45.86	-590.73	86.61	9.00	8.53	6.61	
6,500.00	32.42	353.69	6,440.21	70.83	-594.00	111.75	9.00	8.64	4.98	
6,550.00	36.78	355.65	6,481.36	99.09	-596.61	140.13	9.00	8.72	3.92	
6,600.00	41.17	357.25	6,520.22	130.47	-598.54	171.56	9.00	8.77	3.19	
6,636.48	44.38	358.24	6,547.00	155.23	-599.50	196.32	9.00	8.81	2.73	
Sharon Springs										
6,650.00	45.57	358.58	6,556.56	164.78	-599.77	205.87	9.00	8.82	2.52	
6,685.95	48.75	359.43	6,581.00	191.13	-600.22	232.19	9.00	8.83	2.34	
TPZ at 6685.95 MD - Top A Chalk										
6,700.00	50.01	359.43	6,590.15	201.79	-600.33	242.84	9.00	9.00	0.00	
6,717.17	51.56	359.43	6,601.00	215.09	-600.46	256.11	9.00	9.00	0.00	
Top A Marl										
6,750.00	54.51	359.43	6,620.74	241.32	-600.72	282.30	9.00	9.00	0.00	
6,800.00	59.01	359.43	6,648.14	283.13	-601.14	324.04	9.00	9.00	0.00	
6,850.00	63.51	359.43	6,672.17	326.96	-601.58	367.79	9.00	9.00	0.00	
6,882.71	66.46	359.43	6,686.00	356.60	-601.88	397.38	9.00	9.00	0.00	
Top B Chalk										
6,900.00	68.01	359.43	6,692.69	372.54	-602.03	413.29	9.00	9.00	0.00	
6,950.00	72.51	359.43	6,709.57	419.59	-602.51	460.26	9.00	9.00	0.00	
6,980.37	75.25	359.43	6,718.00	448.77	-602.80	489.39	9.00	9.00	0.00	

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Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
Top B Marl									
7,000.00	77.01	359.43	6,722.70	467.82	-602.99	508.41	9.00	9.00	0.00
7,050.00	81.51	359.43	6,732.02	516.93	-603.48	557.44	9.00	9.00	0.00
7,100.00	86.01	359.43	6,737.44	566.62	-603.98	607.04	9.00	9.00	0.00
7,144.28	90.00	359.43	6,738.98	610.86	-604.42	651.21	9.00	9.00	0.00
Landing Pt. at 7144.28 MD									
7,200.00	90.00	359.43	6,738.98	666.58	-604.98	706.83	0.00	0.00	0.00
7,300.00	90.00	359.43	6,738.98	766.57	-605.98	806.65	0.00	0.00	0.00
7,400.00	90.00	359.43	6,738.98	866.57	-606.98	906.48	0.00	0.00	0.00
7,500.00	90.00	359.43	6,738.98	966.56	-607.98	1,006.30	0.00	0.00	0.00
7,600.00	90.00	359.43	6,738.98	1,066.56	-608.98	1,106.13	0.00	0.00	0.00
7,700.00	90.00	359.43	6,738.98	1,166.55	-609.98	1,205.95	0.00	0.00	0.00
7,800.00	90.00	359.43	6,738.98	1,266.55	-610.98	1,305.78	0.00	0.00	0.00
7,900.00	90.00	359.43	6,738.99	1,366.54	-611.98	1,405.60	0.00	0.00	0.00
8,000.00	90.00	359.43	6,738.99	1,466.54	-612.98	1,505.43	0.00	0.00	0.00
8,100.00	90.00	359.43	6,738.99	1,566.53	-613.98	1,605.25	0.00	0.00	0.00
8,200.00	90.00	359.43	6,738.99	1,666.53	-614.98	1,705.08	0.00	0.00	0.00
8,300.00	90.00	359.43	6,738.99	1,766.52	-615.98	1,804.90	0.00	0.00	0.00
8,400.00	90.00	359.43	6,738.99	1,866.52	-616.98	1,904.72	0.00	0.00	0.00
8,500.00	90.00	359.43	6,738.99	1,966.51	-617.98	2,004.55	0.00	0.00	0.00
8,600.00	90.00	359.43	6,738.99	2,066.51	-618.98	2,104.37	0.00	0.00	0.00
8,700.00	90.00	359.43	6,738.99	2,166.50	-619.98	2,204.20	0.00	0.00	0.00
8,800.00	90.00	359.43	6,738.99	2,266.50	-620.98	2,304.02	0.00	0.00	0.00
8,900.00	90.00	359.43	6,738.99	2,366.49	-621.98	2,403.85	0.00	0.00	0.00
9,000.00	90.00	359.43	6,738.99	2,466.49	-622.98	2,503.67	0.00	0.00	0.00
9,100.00	90.00	359.43	6,738.99	2,566.48	-623.98	2,603.50	0.00	0.00	0.00
9,200.00	90.00	359.43	6,738.99	2,666.48	-624.99	2,703.32	0.00	0.00	0.00
9,300.00	90.00	359.43	6,738.99	2,766.47	-625.99	2,803.15	0.00	0.00	0.00
9,400.00	90.00	359.43	6,738.99	2,866.47	-626.99	2,902.97	0.00	0.00	0.00
9,500.00	90.00	359.43	6,738.99	2,966.46	-627.99	3,002.80	0.00	0.00	0.00
9,600.00	90.00	359.43	6,738.99	3,066.46	-628.99	3,102.62	0.00	0.00	0.00
9,700.00	90.00	359.43	6,738.99	3,166.45	-629.99	3,202.45	0.00	0.00	0.00
9,800.00	90.00	359.43	6,738.99	3,266.45	-630.99	3,302.27	0.00	0.00	0.00
9,900.00	90.00	359.43	6,738.99	3,366.44	-631.99	3,402.09	0.00	0.00	0.00
10,000.00	90.00	359.43	6,738.99	3,466.44	-632.99	3,501.92	0.00	0.00	0.00
10,100.00	90.00	359.43	6,738.99	3,566.43	-633.99	3,601.74	0.00	0.00	0.00
10,200.00	90.00	359.43	6,738.99	3,666.43	-634.99	3,701.57	0.00	0.00	0.00
10,300.00	90.00	359.43	6,738.99	3,766.42	-635.99	3,801.39	0.00	0.00	0.00
10,400.00	90.00	359.43	6,738.99	3,866.42	-636.99	3,901.22	0.00	0.00	0.00
10,500.00	90.00	359.43	6,738.99	3,966.41	-637.99	4,001.04	0.00	0.00	0.00
10,600.00	90.00	359.43	6,738.99	4,066.41	-638.99	4,100.87	0.00	0.00	0.00
10,700.00	90.00	359.43	6,738.99	4,166.40	-639.99	4,200.69	0.00	0.00	0.00
10,800.00	90.00	359.43	6,738.99	4,266.40	-640.99	4,300.52	0.00	0.00	0.00
10,900.00	90.00	359.43	6,738.99	4,366.39	-641.99	4,400.34	0.00	0.00	0.00
11,000.00	90.00	359.43	6,738.99	4,466.39	-642.99	4,500.17	0.00	0.00	0.00
11,100.00	90.00	359.43	6,738.99	4,566.38	-643.99	4,599.99	0.00	0.00	0.00
11,200.00	90.00	359.43	6,738.99	4,666.38	-644.99	4,699.82	0.00	0.00	0.00
11,300.00	90.00	359.43	6,738.99	4,766.37	-645.99	4,799.64	0.00	0.00	0.00
11,400.00	90.00	359.43	6,738.99	4,866.37	-647.00	4,899.46	0.00	0.00	0.00
11,500.00	90.00	359.43	6,738.99	4,966.36	-648.00	4,999.29	0.00	0.00	0.00
11,600.00	90.00	359.43	6,738.99	5,066.36	-649.00	5,099.11	0.00	0.00	0.00
11,700.00	90.00	359.43	6,738.99	5,166.35	-650.00	5,198.94	0.00	0.00	0.00
11,800.00	90.00	359.43	6,738.99	5,266.35	-651.00	5,298.76	0.00	0.00	0.00
11,900.00	90.00	359.43	6,738.99	5,366.34	-652.00	5,398.59	0.00	0.00	0.00

Noble Energy, Inc.

Planning Report

Database:	EDMP	Local Co-ordinate Reference:	Well Reveille A34-714
Company:	Northern Region - DJ Basin	TVD Reference:	KB @ 4679.00ft
Project:	Wells Ranch	MD Reference:	KB @ 4679.00ft
Site:	A Section 35	North Reference:	Grid
Well:	Reveille A34-714	Survey Calculation Method:	Minimum Curvature
Wellbore:	Reveille A34-714 OH		
Design:	APD - Rev 1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
12,000.00	90.00	359.43	6,738.99	5,466.34	-653.00	5,498.41	0.00	0.00	0.00
12,100.00	90.00	359.43	6,738.99	5,566.33	-654.00	5,598.24	0.00	0.00	0.00
12,200.00	90.00	359.43	6,738.99	5,666.33	-655.00	5,698.06	0.00	0.00	0.00
12,300.00	90.00	359.43	6,738.99	5,766.32	-656.00	5,797.89	0.00	0.00	0.00
12,400.00	90.00	359.43	6,738.99	5,866.32	-657.00	5,897.71	0.00	0.00	0.00
12,500.00	90.00	359.43	6,738.99	5,966.31	-658.00	5,997.54	0.00	0.00	0.00
12,600.00	90.00	359.43	6,738.99	6,066.31	-659.00	6,097.36	0.00	0.00	0.00
12,700.00	90.00	359.43	6,738.99	6,166.30	-660.00	6,197.19	0.00	0.00	0.00
12,800.00	90.00	359.43	6,738.99	6,266.30	-661.00	6,297.01	0.00	0.00	0.00
12,900.00	90.00	359.43	6,738.99	6,366.29	-662.00	6,396.83	0.00	0.00	0.00
13,000.00	90.00	359.43	6,738.99	6,466.29	-663.00	6,496.66	0.00	0.00	0.00
13,100.00	90.00	359.43	6,738.99	6,566.28	-664.00	6,596.48	0.00	0.00	0.00
13,200.00	90.00	359.43	6,738.99	6,666.28	-665.00	6,696.31	0.00	0.00	0.00
13,300.00	90.00	359.43	6,738.99	6,766.27	-666.00	6,796.13	0.00	0.00	0.00
13,400.00	90.00	359.43	6,738.99	6,866.27	-667.00	6,895.96	0.00	0.00	0.00
13,500.00	90.00	359.43	6,738.99	6,966.26	-668.00	6,995.78	0.00	0.00	0.00
13,600.00	90.00	359.43	6,738.99	7,066.26	-669.00	7,095.61	0.00	0.00	0.00
13,700.00	90.00	359.43	6,739.00	7,166.25	-670.01	7,195.43	0.00	0.00	0.00
13,800.00	90.00	359.43	6,739.00	7,266.25	-671.01	7,295.26	0.00	0.00	0.00
13,900.00	90.00	359.43	6,739.00	7,366.24	-672.01	7,395.08	0.00	0.00	0.00
14,000.00	90.00	359.43	6,739.00	7,466.24	-673.01	7,494.91	0.00	0.00	0.00
14,100.00	90.00	359.43	6,739.00	7,566.23	-674.01	7,594.73	0.00	0.00	0.00
14,200.00	90.00	359.43	6,739.00	7,666.23	-675.01	7,694.56	0.00	0.00	0.00
14,300.00	90.00	359.43	6,739.00	7,766.22	-676.01	7,794.38	0.00	0.00	0.00
14,400.00	90.00	359.43	6,739.00	7,866.22	-677.01	7,894.21	0.00	0.00	0.00
14,500.00	90.00	359.43	6,739.00	7,966.21	-678.01	7,994.03	0.00	0.00	0.00
14,600.00	90.00	359.43	6,739.00	8,066.21	-679.01	8,093.85	0.00	0.00	0.00
14,700.00	90.00	359.43	6,739.00	8,166.20	-680.01	8,193.68	0.00	0.00	0.00
14,800.00	90.00	359.43	6,739.00	8,266.20	-681.01	8,293.50	0.00	0.00	0.00
14,900.00	90.00	359.43	6,739.00	8,366.19	-682.01	8,393.33	0.00	0.00	0.00
15,000.00	90.00	359.43	6,739.00	8,466.19	-683.01	8,493.15	0.00	0.00	0.00
15,100.00	90.00	359.43	6,739.00	8,566.18	-684.01	8,592.98	0.00	0.00	0.00
15,200.00	90.00	359.43	6,739.00	8,666.18	-685.01	8,692.80	0.00	0.00	0.00
15,300.00	90.00	359.43	6,739.00	8,766.17	-686.01	8,792.63	0.00	0.00	0.00
15,400.00	90.00	359.43	6,739.00	8,866.17	-687.01	8,892.45	0.00	0.00	0.00
15,500.00	90.00	359.43	6,739.00	8,966.16	-688.01	8,992.28	0.00	0.00	0.00
15,600.00	90.00	359.43	6,739.00	9,066.16	-689.01	9,092.10	0.00	0.00	0.00
15,700.00	90.00	359.43	6,739.00	9,166.15	-690.01	9,191.93	0.00	0.00	0.00
15,800.00	90.00	359.43	6,739.00	9,266.15	-691.01	9,291.75	0.00	0.00	0.00
15,900.00	90.00	359.43	6,739.00	9,366.14	-692.01	9,391.58	0.00	0.00	0.00
16,000.00	90.00	359.43	6,739.00	9,466.14	-693.02	9,491.40	0.00	0.00	0.00
16,100.00	90.00	359.43	6,739.00	9,566.13	-694.02	9,591.22	0.00	0.00	0.00
16,200.00	90.00	359.43	6,739.00	9,666.13	-695.02	9,691.05	0.00	0.00	0.00
16,300.00	90.00	359.43	6,739.00	9,766.12	-696.02	9,790.87	0.00	0.00	0.00
16,400.00	90.00	359.43	6,739.00	9,866.12	-697.02	9,890.70	0.00	0.00	0.00
16,500.00	90.00	359.43	6,739.00	9,966.11	-698.02	9,990.52	0.00	0.00	0.00
16,600.00	90.00	359.43	6,739.00	10,066.11	-699.02	10,090.35	0.00	0.00	0.00
16,617.25	90.00	359.43	6,739.00	10,083.36	-699.19	10,107.57	0.00	0.00	0.00
TD at 16617.25									

Noble Energy, Inc.

Planning Report

Database:	EDMP	Local Co-ordinate Reference:	Well Reveille A34-714
Company:	Northern Region - DJ Basin	TVD Reference:	KB @ 4679.00ft
Project:	Wells Ranch	MD Reference:	KB @ 4679.00ft
Site:	A Section 35	North Reference:	Grid
Well:	Reveille A34-714	Survey Calculation Method:	Minimum Curvature
Wellbore:	Reveille A34-714 OH		
Design:	APD - Rev 1		

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(usft)	(usft)		
Reveille A34-714_SHL - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	1,403,285.68	3,271,240.74	40.4363300	-104.5255600
Reveille A34-714_KOP - plan hits target center - Point	0.00	0.00	6,096.12	-27.82	-556.40	1,403,257.86	3,270,684.34	40.4362704	-104.5275598
Reveille A34-714_TPZ - plan hits target center - Point	0.00	0.00	6,581.00	191.13	-600.22	1,403,476.81	3,270,640.52	40.4368727	-104.5277086
Reveille A34-714_BHL - plan hits target center - Point	0.00	0.00	6,739.00	10,083.36	-699.19	1,413,369.02	3,270,541.55	40.4640280	-104.5276744

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(ft)	(ft)			(°)	(°)	
299.00	299.00	Pierre				
414.00	414.00	Upper Pierre Aquifer Top				
1,457.00	1,457.00	Upper Pierre Aquifer Base				
3,573.13	3,560.00	Parkman				
4,276.23	4,256.00	Sussex				
4,884.36	4,858.00	Shannon				
5,924.86	5,888.00	Teepee Buttes				
6,636.48	6,547.00	Sharon Springs				
6,685.95	6,581.00	Top A Chalk				
6,717.17	6,601.00	Top A Marl				
6,882.71	6,686.00	Top B Chalk				
6,980.37	6,718.00	Top B Marl				

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates			
(ft)	(ft)	+N/-S	+E/-W	Comment	
(ft)	(ft)	(ft)	(ft)		
2,000.00	2,000.00	0.00	0.00	Start Build 2.00	
2,407.28	2,405.91	-1.44	-28.87	Start 3727.82 hold at 2407.28 MD	
6,135.10	6,096.12	-27.82	-556.40	Start DLS 9.00 TFO 99.31	
6,685.95	6,581.00	191.13	-600.22	TPZ at 6685.95 MD	
7,144.28	6,738.98	610.86	-604.42	Landing Pt. at 7144.28 MD	
16,617.25	6,739.00	10,083.36	-699.19	TD at 16617.25	

Northern Region - DJ Basin

Wells Ranch

A Section 35

Reveille A34-714

Reveille A34-714 OH

APD - Rev 1

Anticollision Summary Report

22 July, 2019

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Reveille A34-714
Project:	Wells Ranch	TVD Reference:	KB @ 4679.00ft
Reference Site:	A Section 35	MD Reference:	KB @ 4679.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Reveille A34-714	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Reveille A34-714 OH	Database:	EDMP
Reference Design:	APD - Rev 1	Offset TVD Reference:	Offset Datum

Reference	APD - Rev 1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD + Stations Interval 100.00ft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 10,000.00 ft	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program	Date	7/22/2019		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	16,617.25	APD - Rev 1 (Reveille A34-714 OH)	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						
A Section 21						
Culbreath 23-21 - Original Drilling - Original Drilling - As D	16,617.25	6,816.23	8,350.86	8,244.08	78.210	CC, ES, SF
Culbreath 33-21 (PA) - Original Drilling - Original Drilling -	16,617.25	6,778.00	7,301.61	7,083.39	33.460	CC, ES, SF
Harper A21-618 - Harper A21-618 OH - As-Drilled	16,617.25	15,970.40	676.23	530.58	4.643	CC, ES, SF
Harper A21-626 - Harper A21-626 OH - As-Drilled	16,617.25	16,010.64	1,238.66	1,092.57	8.478	CC, ES, SF
Harper A21-631 - Harper A21-631 OH - As-Drilled	16,617.25	15,920.70	1,619.03	1,473.27	11.107	CC, ES, SF
Harper A21-637 - Harper A21-637 OH - As-Drilled	16,617.25	15,894.07	2,016.38	1,872.27	13.992	CC, ES, SF
Harper A21-643 - Harper A21-643 OH - As-Drilled	16,617.25	16,006.00	2,425.96	2,280.20	16.643	CC, ES, SF
Harper A21-649 - Harper A21-649 OH - As-Drilled	16,617.25	16,328.72	2,768.85	2,619.71	18.566	CC, ES, SF
Harper A21-656 - Harper A21-656 OH - As-Drilled	16,617.25	16,378.00	3,159.52	3,009.20	21.018	CC, ES, SF
Harper A21-664 - Harper A21-664 OH - As-Drilled	16,617.25	16,233.00	3,638.33	3,492.04	24.871	CC, ES, SF
Harper A21-669 - Harper A21-669 OH - As-Drilled	16,617.25	16,421.53	3,966.72	3,818.10	26.690	CC, ES, SF
Harper A21-674 - Harper A21-674 OH - As-Drilled	16,617.25	16,381.00	4,335.09	4,188.96	29.665	CC, ES, SF
Harper A21-681 - Harper A21-681 OH - As-Drilled	16,617.25	16,416.42	4,724.79	4,578.48	32.292	CC, ES, SF
Kona A19-616 - Kona A19-616 - Kona A19-616 - As Drille	16,617.25	6,234.00	8,917.46	8,814.47	86.592	CC, ES, SF
Kona A19-624 - Kona A19-624 - Kona A19-624 - As Drille	16,617.25	6,372.00	8,861.70	8,759.08	86.356	CC, ES, SF
Kona A19-636 - Kona A19-636 - Kona A19-636 - As Drille	16,617.25	6,327.00	8,677.09	8,572.78	83.181	CC, ES, SF
Kona A19-646 - Original Drilling - Original Drilling - As Dr	16,617.25	6,327.00	9,105.50	9,005.53	91.078	CC, ES, SF
Kona A19-662 - Original Drilling - Original Drilling - As Dr	16,617.25	6,136.00	9,543.04	9,444.84	97.181	CC, ES, SF
Kona A19-670 - Kona A19-670 - Original Drilling - As Dril	16,617.25	6,325.00	9,453.93	9,355.45	95.998	CC, ES, SF
Kona A19-685 - Original Drilling - Original Drilling - As Dr	16,617.25	6,149.00	9,355.65	9,257.35	95.175	CC, ES, SF
McKee 12-21 (PA) - Original Drilling - Original Drilling - A						Out of range
McKee 21-21 (PA) - Original Drilling - Original Drilling - A	16,617.25	6,830.00	9,251.74	9,039.43	43.575	CC, ES, SF
McKee 22-21 - Original Drilling - Original Drilling - As Dril	16,617.25	6,879.66	8,908.03	8,804.10	85.712	CC, ES, SF
McKee 31-21 - Original Drilling - Original Drilling - As Dril	16,617.25	6,873.78	8,556.99	8,461.39	89.509	CC, ES, SF
McKee 32-21 - Original Drilling - Original Drilling - As Dril	16,617.25	6,855.86	7,777.63	7,675.75	76.348	CC, ES, SF
McKee 41-21 - Original Drilling - Original Drilling - As Dril	16,617.25	6,714.86	7,488.67	7,397.92	82.519	CC, ES, SF
McKee 42-21 - Original Drilling - Original Drilling - As Dril	16,617.25	6,812.08	6,488.85	6,389.50	65.316	CC, ES, SF
Rampart A33-730 - Rampart A33-730 - APD-Rev 1	6,550.00	17,720.27	6,344.83	6,229.53	55.029	SF
Rampart A33-730 - Rampart A33-730 - APD-Rev 1	16,265.49	8,110.54	6,315.94	6,205.41	57.144	CC
Rampart A33-730 - Rampart A33-730 - APD-Rev 1	16,300.00	8,100.00	6,316.02	6,205.21	56.998	ES
Rampart A33-740 - Rampart A33-740 - APD-Rev 0	6,600.00	17,515.21	6,991.02	6,875.87	60.712	SF
Rampart A33-740 - Rampart A33-740 - APD-Rev 0	6,850.00	17,320.25	6,985.68	6,871.75	61.316	ES
Rampart A33-740 - Rampart A33-740 - APD-Rev 0	7,018.86	17,160.95	6,985.18	6,872.29	61.871	CC
Rampart A33-750 - Rampart A33-750 - APD-Rev 0	6,550.00	17,089.58	7,661.96	7,547.88	67.164	SF
Rampart A33-750 - Rampart A33-750 - APD-Rev 0	16,250.30	7,482.67	7,641.64	7,534.81	71.529	CC
Rampart A33-750 - Rampart A33-750 - APD-Rev 0	16,300.00	7,482.67	7,641.80	7,534.54	71.245	ES
Rampart A33-760 - Rampart A33-760 - APD-Rev 1	6,550.00	16,942.30	8,297.67	8,183.95	72.964	SF

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

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Reveille A34-714
Project:	Wells Ranch	TVD Reference:	KB @ 4679.00ft
Reference Site:	A Section 35	MD Reference:	KB @ 4679.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Reveille A34-714	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Reveille A34-714 OH	Database:	EDMP
Reference Design:	APD - Rev 1	Offset TVD Reference:	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						
A Section 21						
Rampart A33-760 - Rampart A33-760 - APD-Rev 1	16,243.45	7,342.94	8,276.70	8,171.38	78.586	CC
Rampart A33-760 - Rampart A33-760 - APD-Rev 1	16,300.00	7,325.21	8,276.82	8,171.09	78.286	ES
Rampart A33-770 - Rampart A33-770 - APD-Rev 0	6,500.00	16,811.58	8,987.15	8,873.30	78.938	SF
Rampart A33-770 - Rampart A33-770 - APD-Rev 0	16,249.83	7,183.10	8,962.02	8,857.78	85.976	CC
Rampart A33-770 - Rampart A33-770 - APD-Rev 0	16,400.00	7,113.08	8,962.69	8,857.51	85.213	ES
Sexton 43-21 (PA) - Original Drilling - Original Drilling - As	16,617.25	6,770.00	6,153.86	5,938.30	28.549	CC, ES, SF
Wells Trust 13-21 - Original Drilling - Original Drilling - As	16,617.25	6,891.73	9,882.44	9,774.07	91.198	CC, ES, SF
Wells Trust 14-21 - Original Drilling - Original Drilling - As	16,617.25	6,767.04	9,847.71	9,738.35	90.045	CC, ES, SF
Wells Trust 24-21 - Original Drilling - Original Drilling - As	16,617.25	6,843.27	9,001.17	8,891.71	82.232	CC, ES, SF
A Section 22						
Carpio 22-01 - Original Drilling - Original Drilling - As Drill	16,617.25	6,776.95	1,001.68	935.52	15.140	CC, ES, SF
Carpio 22-04-19 - Original Drilling - Original Drilling - As D	16,617.25	6,756.60	2,411.64	2,317.34	25.573	CC, ES, SF
Carpio 22-41 - Original Drilling - Original Drilling - As Drill	16,617.25	6,765.34	1,953.87	1,882.29	27.297	CC, ES, SF
Carpio 22-43 - Original Drilling - Original Drilling - As Drill	16,617.25	6,828.41	1,947.35	1,846.69	19.346	CC, ES, SF
Carpio 22-45 - Original Drilling - Original Drilling - As Drill	16,617.25	6,753.52	1,534.91	1,463.24	21.418	CC, ES, SF
Eisenstat 22-11 (PA) - Original Drilling - Original Drilling -	16,617.25	6,784.00	4,931.31	4,766.82	29.979	CC, ES, SF
Eisenstat 22-13 - Original Drilling - Original Drilling - As D	16,617.25	6,780.30	3,539.11	3,465.79	48.272	CC, ES, SF
Eisenstat 22-15 - Original Drilling - Original Drilling - As D	16,617.25	6,758.23	4,373.81	4,316.95	76.928	CC, ES, SF
Eisenstat 22-21 - Original Drilling - Original Drilling - As D	16,617.25	6,858.04	5,336.01	5,261.77	71.874	CC, ES, SF
Eisenstat 22-23 - Original Drilling - Original Drilling - As D	16,617.25	6,833.06	5,529.54	5,438.26	60.580	CC, ES, SF
Gill Land Assoc. 1 (PA) - Original Drilling - Original Drilling	16,617.25	6,785.00	3,420.03	3,254.92	20.713	CC, ES, SF
Gill Land Assoc. 22-02 (PA) - Original Drilling - Original D	16,617.25	6,795.00	4,551.17	4,354.73	23.168	CC, ES, SF
Gill Land Assoc. 22-03 - Original Drilling - Original Drilling	16,617.25	6,800.86	6,371.59	6,286.76	75.113	CC, ES, SF
Gill Land Assoc. 22-04 (PA) - Original Drilling - Original D	16,617.25	6,793.00	5,008.11	4,833.00	28.601	CC, ES, SF
Gruen 22-01 - Original Drilling - Original Drilling - As Drille	16,617.25	6,844.92	4,880.89	4,779.05	47.924	CC, ES, SF
Gruen 22-02 - Original Drilling - Original Drilling - As Drille	16,617.25	6,692.46	3,209.84	3,103.12	30.076	CC, ES, SF
Gruen 22-31 - Original Drilling - Original Drilling - As Drille	16,617.25	6,800.00	3,735.62	3,639.94	39.044	CC, ES, SF
Gruen 22-33 - Original Drilling - Original Drilling - As Drille	15,400.00	15,400.00	4,820.32	4,698.25	39.488	SF
Gruen 22-33 - Original Drilling - Original Drilling - As Drille	16,617.25	6,913.35	4,449.82	4,341.41	41.050	CC, ES
Gruen 22-35 - Original Drilling - Original Drilling - As Drille	16,617.25	6,708.08	4,000.48	3,896.13	38.338	CC, ES, SF
Ottinger 22-01 - Original Drilling - Original Drilling - As Dr	16,617.25	6,813.91	2,810.10	2,730.07	35.111	CC, ES, SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Reveille A34-714
Project:	Wells Ranch	TVD Reference:	KB @ 4679.00ft
Reference Site:	A Section 35	MD Reference:	KB @ 4679.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Reveille A34-714	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Reveille A34-714 OH	Database:	EDMP
Reference Design:	APD - Rev 1	Offset TVD Reference:	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						
A Section 23						
Cecil 23-13 - Original Drilling - Original Drilling - As Drilled	16,617.25	6,709.23	4,904.96	4,818.96	57.031	CC, ES, SF
Champlin 23-02 (PA) - Original Drilling - Original Drilling -	16,617.25	6,744.00	2,376.01	2,198.53	13.388	CC, ES, SF
Champlin 23-03 - Original Drilling - Original Drilling - As D	16,617.25	6,700.00	2,205.37	2,102.33	21.403	CC, ES, SF
Champlin Amoco A 1 #308 - Original Drilling - Original Dr	16,617.25	6,719.00	2,033.27	1,819.32	9.503	CC, ES, SF
Cooper 23-1-17 - Original Drilling - Original Drilling - As Dr	16,617.25	6,717.56	6,603.80	6,519.99	78.803	CC, ES, SF
Cooper 23-1-19 - Original Drilling - Original Drilling - As D	16,617.25	6,619.91	5,251.59	5,171.83	65.843	CC, ES, SF
Cooper 23-12 - Original Drilling - Original Drilling - As Dri	16,617.25	6,713.70	5,949.79	5,868.19	72.912	CC, ES, SF
Cooper 23-1-20 - Original Drilling - Original Drilling - As D	16,617.25	6,718.12	4,238.19	4,147.99	46.984	CC, ES, SF
Cooper 23-15 - Original Drilling - Original Drilling - As Dri	16,617.25	6,591.55	5,969.31	5,880.56	67.263	CC, ES, SF
Foss 41-23D - Original Drilling - Original Drilling - As Drill	16,617.25	6,887.06	6,829.03	6,733.82	71.730	CC, ES, SF
Foss 42-23 - Original Drilling - Original Drilling - As Drilled	16,617.25	6,701.26	5,740.31	5,643.68	59.405	CC, ES, SF
J&L Farms 23-11 - Original Drilling - Original Drilling - As	16,617.25	6,735.62	4,846.15	4,790.46	87.010	CC, ES, SF
J&L Farms 23-12 - Original Drilling - Original Drilling - As	16,617.25	6,657.09	3,363.27	3,306.10	58.826	CC, ES, SF
J&L Farms 23-21 - Original Drilling - Original Drilling - As	16,617.25	6,643.18	5,457.69	5,387.37	77.613	CC, ES, SF
J&L Farms 23-22 - Original Drilling - Original Drilling - As	16,617.25	6,676.67	4,131.36	4,055.39	54.375	CC, ES, SF
McIntosh 33-23 - Original Drilling - Original Drilling - As D	16,617.25	7,019.00	4,058.11	3,955.72	39.632	CC, ES, SF
McIntosh 34-23 - Original Drilling - Original Drilling - As D	16,617.25	6,727.93	3,798.61	3,690.50	35.136	CC, ES, SF
McIntosh 43-23 - Original Drilling - Original Drilling - As D	16,617.25	6,728.13	5,540.52	5,436.84	53.441	CC, ES, SF
McIntosh 44-23 - Original Drilling - Original Drilling - As D	16,617.25	6,736.52	5,165.32	5,056.09	47.288	CC, ES, SF
Schroeder 23-31 - Original Drilling - Original Drilling - As	16,617.25	6,775.23	3,084.51	2,990.00	32.636	CC, ES, SF
Schroeder 23-33 - Original Drilling - Original Drilling - As	16,617.25	6,764.70	974.09	880.50	10.408	CC, ES, SF
A Section 24						
Larson A23-622 - Larson A23-622 OH - As-drilled	16,617.25	17,299.00	1,070.44	904.49	6.450	CC, ES, SF
Larson A23-627 - Larson A23-627 OH - As-drilled	16,617.25	17,330.00	1,400.58	1,235.18	8.468	CC, ES, SF
Larson A23-633 - Larson A23-633 OH - As-drilled	16,617.25	17,260.00	1,729.77	1,565.40	10.523	CC, ES, SF
Larson A23-639 - Larson A23-639 OH - As-drilled	16,617.25	17,200.00	2,119.18	1,955.45	12.943	CC, ES, SF
Larson A23-645 - Larson A23-645 OH - As-drilled	16,617.25	18,040.00	2,527.81	2,354.41	14.578	CC, ES, SF
Larson A23-651 - Larson A23-651 OH - As-drilled	16,617.25	18,045.00	2,835.75	2,663.04	16.419	CC, ES, SF
Larson A23-656 - Larson A23-656 OH - As-drilled	16,617.25	18,030.00	3,133.93	2,960.59	18.080	CC, ES, SF
Larson A23-662 - Larson A23-662 OH - As-drilled	16,617.25	18,100.00	3,544.16	3,371.39	20.513	CC, ES, SF
Larson A23-668 - Larson A23-668 OH - As-Drilled	16,617.25	17,400.00	3,943.33	3,779.31	24.041	CC, ES, SF
Larson A23-672 - Larson A23-672 OH - As-Drilled	16,617.25	17,415.00	4,218.56	4,055.14	25.814	CC, ES, SF
Larson A23-678 - Larson A23-678 OH - As-Drilled	16,617.25	17,106.00	4,603.91	4,441.96	28.429	CC, ES, SF
Larson A23-683 - Larson A23-683 OH - As-Drilled	16,617.25	17,368.00	4,903.77	4,740.21	29.980	CC, ES, SF
Larson AA19-618 - Larson AA19-618 OH - As-Drilled	16,617.25	6,045.00	9,984.28	9,881.75	97.375	CC, ES, SF
Larson AA19-624 - Larson AA19-624 OH - As-Drilled						Out of range
Larson AA19-624 - Larson AA19-624 ST01 - As-Drilled						Out of range
Larson AA19-630 - Larson AA19-630 OH - As-Drilled						Out of range
Larson AA19-635 - Larson AA19-635 OH - As-Drilled						Out of range
Larson Farms 01-24 - Original Drilling - Original Drilling -						Out of range
Larson Farms 02-24 - Original Drilling - Original Drilling -						Out of range
Larson Farms 03-24 - Original Drilling - Original Drilling -	16,617.25	6,800.42	9,141.95	9,031.88	83.056	CC, ES, SF
Larson Farms 04-24 - Original Drilling - Original Drilling -	16,617.25	2,514.00	9,809.94	9,719.39	108.338	CC, ES, SF
Larson Farms 05-24 - Original Drilling - Original Drilling -	16,617.25	3,559.00	9,510.59	9,411.93	96.401	CC, ES, SF
Larson Farms 06-24 - Original Drilling - Original Drilling -	16,617.25	3,789.00	9,818.10	9,711.31	91.940	CC, ES, SF
Larson Farms 07-24 - Original Drilling - Original Drilling -	16,617.25	6,941.63	8,911.35	8,786.83	71.566	CC, ES, SF
Peppler 24-32 - Original Drilling - Original Drilling - As Dri	16,617.25	6,457.98	6,491.81	6,387.88	62.462	CC, ES, SF
Roth 24-21 - Original Drilling - Original Drilling - As Drilled	16,617.25	6,867.81	8,835.67	8,736.23	88.850	CC, ES, SF

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

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Reveille A34-714
Project:	Wells Ranch	TVD Reference:	KB @ 4679.00ft
Reference Site:	A Section 35	MD Reference:	KB @ 4679.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Reveille A34-714	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Reveille A34-714 OH	Database:	EDMP
Reference Design:	APD - Rev 1	Offset TVD Reference:	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						
A Section 25						
Fairmeadows 03-25G - Original Drilling - Original Drilling						Out of range
Fairmeadows Land Co 1 - Original Drilling - Original Drilling						Out of range
Larsen 01-25G - Original Drilling - Original Drilling - As D	16,222.07	6,746.10	6,343.19	6,207.04	46.591	CC
Larsen 01-25G - Original Drilling - Original Drilling - As D	16,300.00	6,747.93	6,343.66	6,206.91	46.386	ES
Larsen 01-25G - Original Drilling - Original Drilling - As D	16,617.25	6,755.37	6,355.48	6,216.34	45.678	SF
Larsen A25-01 - Original Drilling - Original Drilling - As Dr						Out of range
Larsen A25-02 - Original Drilling - Original Drilling - As Dr	14,300.00	14,300.00	9,280.75	9,163.74	79.317	SF
Larsen A25-02 - Original Drilling - Original Drilling - As Dr	16,245.49	6,571.34	9,074.66	8,968.64	85.594	CC
Larsen A25-02 - Original Drilling - Original Drilling - As Dr	16,300.00	6,570.96	9,074.83	8,968.39	85.262	ES
Larsen A25-03 - Original Drilling - Original Drilling - As Dr	16,211.03	6,694.00	7,508.89	7,291.97	34.616	CC
Larsen A25-03 - Original Drilling - Original Drilling - As Dr	16,300.00	6,694.00	7,509.42	7,291.83	34.512	ES
Larsen A25-03 - Original Drilling - Original Drilling - As Dr	16,617.25	6,694.00	7,519.87	7,299.97	34.197	SF
Larsen A25-03X - Original Drilling - Original Drilling - As D	16,386.00	6,634.15	7,284.19	7,176.82	67.840	CC
Larsen A25-03X - Original Drilling - Original Drilling - As D	16,400.00	6,634.03	7,284.20	7,176.72	67.773	ES
Larsen A25-03X - Original Drilling - Original Drilling - As D	16,617.25	6,632.22	7,287.86	7,178.77	66.808	SF
Larsen A25-05 - Original Drilling - Original Drilling - As Dr	14,832.22	6,746.47	6,196.38	6,100.71	64.770	CC
Larsen A25-05 - Original Drilling - Original Drilling - As Dr	14,900.00	6,745.65	6,196.75	6,100.59	64.439	ES
Larsen A25-05 - Original Drilling - Original Drilling - As Dr	16,500.00	6,726.30	6,416.87	6,311.36	60.819	SF
Larsen A25-06 - Original Drilling - Original Drilling - As Dr	14,859.82	6,694.00	7,788.87	7,582.55	37.752	CC
Larsen A25-06 - Original Drilling - Original Drilling - As Dr	14,900.00	6,694.00	7,788.97	7,582.35	37.697	ES
Larsen A25-06 - Original Drilling - Original Drilling - As Dr	16,500.00	6,694.00	7,959.69	7,742.57	36.660	SF
Larsen A25-06X - Original Drilling - Original Drilling - As D	14,797.82	6,534.94	7,429.54	7,330.83	75.265	CC
Larsen A25-06X - Original Drilling - Original Drilling - As D	14,800.00	6,534.93	7,429.54	7,330.81	75.254	ES
Larsen A25-06X - Original Drilling - Original Drilling - As D	16,617.25	6,524.44	7,649.07	7,540.09	70.192	SF
Larsen A25-07 - Original Drilling - Original Drilling - As Dr	14,919.98	6,611.91	8,853.65	8,757.88	92.443	CC
Larsen A25-07 - Original Drilling - Original Drilling - As Dr	15,000.00	6,611.79	8,854.01	8,757.64	91.871	ES
Larsen A25-07 - Original Drilling - Original Drilling - As Dr	16,617.25	6,617.48	9,014.86	8,907.51	83.973	SF
Larsen A25-08 - Original Drilling - Original Drilling - As Dr						Out of range
Larsen A25-10 - Original Drilling - Original Drilling - Drilled	13,606.61	6,615.02	8,833.64	8,747.99	103.136	CC
Larsen A25-10 - Original Drilling - Original Drilling - Drilled	13,700.00	6,615.14	8,834.13	8,747.79	102.320	ES
Larsen A25-10 - Original Drilling - Original Drilling - Drilled	16,617.25	6,619.27	9,332.58	9,228.24	89.441	SF
Larsen A25-11 - Original Drilling - Original Drilling - As Dr	13,568.18	6,680.99	7,636.35	7,440.25	38.941	CC
Larsen A25-11 - Original Drilling - Original Drilling - As Dr	13,600.00	6,680.99	7,636.41	7,440.08	38.895	ES
Larsen A25-11 - Original Drilling - Original Drilling - As Dr	15,200.00	6,681.00	7,808.75	7,601.93	37.755	SF
Larsen A25-12 - Original Drilling - Original Drilling - As Dr	13,636.95	6,653.85	6,057.94	5,971.88	70.396	CC
Larsen A25-12 - Original Drilling - Original Drilling - As Dr	13,700.00	6,655.00	6,058.27	5,971.75	70.024	ES
Larsen A25-12 - Original Drilling - Original Drilling - As Dr	15,400.00	6,660.62	6,309.27	6,212.78	65.389	SF
Larsen A25-13 - Original Drilling - Original Drilling - As Dr	12,424.02	6,746.63	6,158.97	6,081.66	79.660	CC
Larsen A25-13 - Original Drilling - Original Drilling - As Dr	12,500.00	6,746.09	6,159.44	6,081.59	79.121	ES
Larsen A25-13 - Original Drilling - Original Drilling - As Dr	16,600.00	16,600.00	7,441.19	7,311.52	57.389	SF
Larsen A25-14 - Original Drilling - Original Drilling - As Dr	12,172.86	6,947.35	7,439.05	7,362.78	97.543	CC
Larsen A25-14 - Original Drilling - Original Drilling - As Dr	12,200.00	6,947.02	7,439.10	7,362.64	97.301	ES
Larsen A25-14 - Original Drilling - Original Drilling - As Dr	15,100.00	6,911.81	7,994.14	7,900.97	85.796	SF
Larsen A25-15 - Original Drilling - Original Drilling - As Dr	12,276.40	6,646.82	8,868.92	8,793.11	116.992	CC
Larsen A25-15 - Original Drilling - Original Drilling - As Dr	12,300.00	6,646.93	8,868.95	8,792.97	116.733	ES
Larsen A25-15 - Original Drilling - Original Drilling - As Dr	16,300.00	6,665.09	9,738.93	9,639.59	98.043	SF
Larsen A25-17 - Original Drilling - Original Drilling - As D	15,490.66	6,600.00	9,598.93	9,498.72	95.791	CC
Larsen A25-17 - Original Drilling - Original Drilling - As D	15,600.00	6,600.00	9,599.55	9,498.52	95.011	ES
Larsen A25-17 - Original Drilling - Original Drilling - As D	16,617.25	6,613.68	9,664.79	9,556.43	89.188	SF
Larsen A25-19 - Original Drilling - Original Drilling - As Dr	15,621.02	6,368.73	6,757.22	6,656.95	67.395	CC
Larsen A25-19 - Original Drilling - Original Drilling - As Dr	15,700.00	6,368.85	6,757.68	6,656.83	67.005	ES
Larsen A25-19 - Original Drilling - Original Drilling - As Dr	16,617.25	6,370.17	6,830.26	6,723.28	63.845	SF
Larsen A25-23 - Original Drilling - Original Drilling - As Dr	12,942.45	6,693.54	9,565.77	9,484.84	118.188	CC

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

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Reveille A34-714
Project:	Wells Ranch	TVD Reference:	KB @ 4679.00ft
Reference Site:	A Section 35	MD Reference:	KB @ 4679.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Reveille A34-714	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Reveille A34-714 OH	Database:	EDMP
Reference Design:	APD - Rev 1	Offset TVD Reference:	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						
A Section 25						
Larson A25-23 - Original Drilling - Original Drilling - As Dr	13,000.00	6,693.93	9,565.95	9,484.59	117.579	ES
Larson A25-23 - Original Drilling - Original Drilling - As Dr	15,800.00	6,716.99	9,983.45	9,883.92	100.303	SF
Larson A25-25 - Original Drilling - Original Drilling - As Dr	12,864.33	6,636.23	6,835.62	6,755.49	85.308	CC
Larson A25-25 - Original Drilling - Original Drilling - As Dr	12,900.00	6,636.00	6,835.71	6,755.33	85.039	ES
Larson A25-25 - Original Drilling - Original Drilling - As Dr	15,200.00	6,622.32	7,223.63	7,129.81	76.998	SF
A Section 26						
Barrett 11-26 (SI) - Original Drilling - Original Drilling - As	13,599.80	6,655.13	2,100.13	2,010.61	23.459	CC
Barrett 11-26 (SI) - Original Drilling - Original Drilling - As	13,600.00	6,655.13	2,100.13	2,010.61	23.459	ES
Barrett 11-26 (SI) - Original Drilling - Original Drilling - As	13,800.00	6,655.38	2,109.65	2,019.04	23.281	SF
Barrett 12-26 (SI) - Original Drilling - Original Drilling - As	13,584.17	6,713.14	783.28	698.56	9.245	CC, ES
Barrett 12-26 (SI) - Original Drilling - Original Drilling - As	13,600.00	6,713.31	783.44	698.65	9.240	SF
Brown-Orr 14-26 (SI) - Original Drilling - Original Drilling -	12,018.85	6,699.38	702.71	628.58	9.480	CC, ES, SF
Brown-Orr 24-26 - Original Drilling - Original Drilling - As	11,995.17	6,761.50	2,389.14	2,314.80	32.140	CC
Brown-Orr 24-26 - Original Drilling - Original Drilling - As	12,000.00	6,761.63	2,389.14	2,314.77	32.126	ES
Brown-Orr 24-26 - Original Drilling - Original Drilling - As	12,300.00	6,769.88	2,408.49	2,332.46	31.675	SF
Carpio A26-04 - Original Drilling - Original Drilling - As Dr	16,204.92	6,715.84	880.36	774.11	8.286	CC, ES, SF
Carpio A26-05 - Original Drilling - Original Drilling - As Dr	14,675.81	6,704.19	991.15	896.89	10.516	CC, ES
Carpio A26-05 - Original Drilling - Original Drilling - As Dr	14,700.00	6,704.06	991.44	897.07	10.506	SF
DCD Farm A26-02 - Original Drilling - Original Drilling - A	16,045.39	6,668.52	3,559.29	3,454.47	33.954	CC, ES
DCD Farm A26-02 - Original Drilling - Original Drilling - A	16,600.00	6,670.46	3,602.24	3,494.28	33.365	SF
DCD Farms 01-26 - Original Drilling - Original Drilling - As	14,832.42	6,768.22	4,853.12	4,757.36	50.679	CC
DCD Farms 01-26 - Original Drilling - Original Drilling - As	14,900.00	6,768.47	4,853.59	4,757.33	50.425	ES
DCD Farms 01-26 - Original Drilling - Original Drilling - As	15,900.00	6,772.16	4,969.15	4,867.14	48.710	SF
DCD Farms 02-26 (PA) - Original Drilling - Original Drilling	14,800.98	6,725.89	2,157.73	2,062.16	22.579	CC, ES
DCD Farms 02-26 (PA) - Original Drilling - Original Drilling	15,000.00	6,728.77	2,166.89	2,070.22	22.416	SF
DCD Farms A26-07 - Original Drilling - Original Drilling - A	15,074.74	6,723.34	3,520.42	3,423.01	36.141	CC
DCD Farms A26-07 - Original Drilling - Original Drilling - A	15,100.00	6,722.75	3,520.51	3,422.92	36.076	ES
DCD Farms A26-07 - Original Drilling - Original Drilling - A	15,600.00	6,711.08	3,559.37	3,458.94	35.443	SF
Pfeiffer 09-26 - Original Drilling - Original Drilling - As Dril	13,522.37	6,717.48	4,861.79	4,776.35	56.903	CC, ES
Pfeiffer 09-26 - Original Drilling - Original Drilling - As Dril	14,700.00	6,706.15	5,002.37	4,910.13	54.232	SF
Pfeiffer 10-26 - Wellbore #1 - Wellbore #1 - As Drilled	13,556.76	6,686.02	3,542.26	3,456.69	41.395	CC
Pfeiffer 10-26 - Wellbore #1 - Wellbore #1 - As Drilled	13,600.00	6,685.75	3,542.52	3,456.65	41.254	ES
Pfeiffer 10-26 - Wellbore #1 - Wellbore #1 - As Drilled	14,200.00	6,682.06	3,600.19	3,511.00	40.364	SF
Pfeiffer 15-26 - Wellbore #1 - Wellbore #1 - As Drilled	12,171.86	6,847.84	3,360.06	3,284.05	44.208	CC
Pfeiffer 15-26 - Wellbore #1 - Wellbore #1 - As Drilled	12,200.00	6,848.36	3,360.18	3,283.98	44.099	ES
Pfeiffer 15-26 - Wellbore #1 - Wellbore #1 - As Drilled	12,800.00	6,859.42	3,418.25	3,338.68	42.961	SF
Pfeiffer 16-26 - Original Drilling - Original Drilling - As Dril	12,047.53	6,682.99	4,895.36	4,710.58	26.493	CC
Pfeiffer 16-26 - Original Drilling - Original Drilling - As Dril	12,100.00	6,682.99	4,895.64	4,710.50	26.443	ES
Pfeiffer 16-26 - Original Drilling - Original Drilling - As Dril	12,800.00	6,682.99	4,952.85	4,763.34	26.135	SF
Sidwell 26-1G4 - Original Drilling - Original Drilling - As D	16,082.54	6,655.20	4,908.64	4,803.19	46.550	CC
Sidwell 26-1G4 - Original Drilling - Original Drilling - As D	16,100.00	6,655.44	4,908.67	4,803.09	46.493	ES
Sidwell 26-1G4 - Original Drilling - Original Drilling - As D	16,617.25	6,662.65	4,937.68	4,828.64	45.285	SF
Sidwell A26-03 (PA) - Original Drilling - Original Drilling -	16,250.21	6,963.64	2,288.66	2,170.26	19.331	CC, ES
Sidwell A26-03 (PA) - Original Drilling - Original Drilling -	16,400.00	6,963.75	2,293.55	2,174.28	19.230	SF

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

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Reveille A34-714
Project:	Wells Ranch	TVD Reference:	KB @ 4679.00ft
Reference Site:	A Section 35	MD Reference:	KB @ 4679.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Reveille A34-714	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Reveille A34-714 OH	Database:	EDMP
Reference Design:	APD - Rev 1	Offset TVD Reference:	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						
A Section 27						
Howard 02-27 (PA) - Original Drilling - Original Drilling - A	16,135.52	6,800.00	1,706.77	1,488.33	7.813	CC, ES
Howard 02-27 (PA) - Original Drilling - Original Drilling - A	16,200.00	6,800.00	1,707.99	1,489.01	7.800	SF
Howard 03-27 - Original Drilling - Original Drilling - As Dri	16,048.43	6,743.66	3,114.90	3,009.72	29.615	CC
Howard 03-27 - Original Drilling - Original Drilling - As Dri	16,100.00	6,743.53	3,115.33	3,009.72	29.498	ES
Howard 03-27 - Original Drilling - Original Drilling - As Dri	16,500.00	6,742.54	3,147.46	3,039.19	29.069	SF
Howard 04-27 (PA) - Original Drilling - Original Drilling - A	16,156.98	6,760.00	4,357.15	4,139.34	20.004	CC
Howard 04-27 (PA) - Original Drilling - Original Drilling - A	16,200.00	6,760.00	4,357.36	4,139.19	19.972	ES
Howard 04-27 (PA) - Original Drilling - Original Drilling - A	16,617.25	6,760.00	4,381.39	4,160.13	19.802	SF
Howard 08-27 - Original Drilling - Original Drilling - As Dri	14,741.44	6,753.93	410.56	315.64	4.325	CC, ES, SF
Howard 10-27 - Original Drilling - Original Drilling - As Dri	13,428.86	6,743.11	1,637.01	1,552.19	19.301	CC, ES
Howard 10-27 - Original Drilling - Original Drilling - As Dri	13,600.00	6,741.12	1,645.93	1,559.87	19.127	SF
Howard 15-27 - Original Drilling - Original Drilling - As Dri	12,262.84	6,721.95	1,794.67	1,720.79	24.293	CC, ES
Howard 15-27 - Original Drilling - Original Drilling - As Dri	12,500.00	6,726.23	1,810.27	1,734.74	23.968	SF
Howard 4B-27 (DA) - Original Drilling - Original Drilling - A	16,116.89	3,765.00	5,293.52	5,148.99	36.626	CC
Howard 4B-27 (DA) - Original Drilling - Original Drilling - A	16,200.00	3,765.00	5,294.17	5,148.97	36.462	ES
Howard 4B-27 (DA) - Original Drilling - Original Drilling - A	16,617.25	3,765.00	5,317.11	5,168.73	35.834	SF
Howard A27-01 - Original Drilling - Original Drilling - As D	16,134.26	6,758.67	378.47	272.61	3.575	CC, ES, SF
Howard A27-05 (SI) - Original Drilling - Original Drilling - A	14,756.70	6,780.27	4,344.51	4,249.37	45.665	CC
Howard A27-05 (SI) - Original Drilling - Original Drilling - A	14,800.00	6,779.60	4,344.72	4,249.23	45.498	ES
Howard A27-05 (SI) - Original Drilling - Original Drilling - A	15,700.00	6,766.67	4,445.72	4,344.35	43.855	SF
Howard A27-06 (PR) - Original Drilling - Original Drilling -	14,800.76	6,846.74	2,966.36	2,868.33	30.259	CC, ES
Howard A27-06 (PR) - Original Drilling - Original Drilling -	15,400.00	6,847.46	3,026.28	2,923.15	29.343	SF
Howard A27-07 - Original Drilling - Original Drilling - As D	14,730.26	6,808.88	1,616.74	1,521.75	17.019	CC, ES
Howard A27-07 - Original Drilling - Original Drilling - As D	14,900.00	6,808.30	1,625.63	1,529.43	16.898	SF
Howard A27-09 - Original Drilling - Original Drilling - As D	13,368.24	6,743.17	508.70	424.37	6.032	CC, ES
Howard A27-09 - Original Drilling - Original Drilling - As D	13,400.00	6,742.92	509.69	425.09	6.024	SF
Howard A27-16 - Original Drilling - Original Drilling - As D	12,097.51	6,732.42	230.46	155.63	3.080	CC
Howard A27-16 - Original Drilling - Original Drilling - As D	12,100.00	6,732.44	230.48	155.60	3.078	ES, SF
Howard A27-17D - Original Drilling - Original Drilling - As	15,542.66	6,858.03	963.12	858.13	9.173	CC, ES, SF

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

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Reveille A34-714
Project:	Wells Ranch	TVD Reference:	KB @ 4679.00ft
Reference Site:	A Section 35	MD Reference:	KB @ 4679.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Reveille A34-714	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Reveille A34-714 OH	Database:	EDMP
Reference Design:	APD - Rev 1	Offset TVD Reference:	Offset Datum

Summary

Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
A Section 28						
Ankeney 2-28 (SI) - Wellbore #1 - No Surveys	16,196.88	6,752.00	7,099.36	6,881.39	32.571	CC
Ankeney 2-28 (SI) - Wellbore #1 - No Surveys	16,300.00	6,752.00	7,100.11	6,881.30	32.449	ES
Ankeney 2-28 (SI) - Wellbore #1 - No Surveys	16,617.25	6,752.00	7,111.80	6,890.51	32.138	SF
Ankeney 28-01 (PA) - Wellbore #1 - Gyro Surveys	14,553.40	6,796.33	5,629.55	5,537.01	60.839	CC
Ankeney 28-01 (PA) - Wellbore #1 - Gyro Surveys	14,600.00	6,795.96	5,629.74	5,536.83	60.594	ES
Ankeney 28-01 (PA) - Wellbore #1 - Gyro Surveys	16,100.00	6,784.00	5,838.12	5,735.48	56.884	SF
Art Rohr 1 (PA) - Wellbore #1 - No Surveys	13,385.47	6,746.99	8,359.49	8,163.46	42.644	CC
Art Rohr 1 (PA) - Wellbore #1 - No Surveys	13,500.00	6,746.99	8,360.27	8,163.35	42.454	ES
Art Rohr 1 (PA) - Wellbore #1 - No Surveys	15,500.00	6,747.00	8,622.78	8,411.92	40.895	SF
Danley 1 (TA) - Wellbore #1 - Gyro Surveys	16,264.96	6,878.10	9,391.74	9,284.49	87.567	CC
Danley 1 (TA) - Wellbore #1 - Gyro Surveys	16,300.00	6,878.43	9,391.81	9,284.27	87.336	ES
Danley 1 (TA) - Wellbore #1 - Gyro Surveys	16,617.25	6,881.38	9,398.35	9,288.28	85.386	SF
Danley 12-28 (SI) - Wellbore #1 - Gyro Surveys	14,676.41	6,853.01	9,555.57	9,460.83	100.862	CC
Danley 12-28 (SI) - Wellbore #1 - Gyro Surveys	14,800.00	6,847.31	9,556.37	9,460.66	99.852	ES
Danley 12-28 (SI) - Wellbore #1 - Gyro Surveys	16,617.25	6,776.44	9,750.33	9,641.67	89.734	SF
Danley 13-28 (PR) - Wellbore #1 - Gyro Surveys	13,355.55	6,936.63	9,592.65	9,508.31	113.739	CC
Danley 13-28 (PR) - Wellbore #1 - Gyro Surveys	13,400.00	6,935.98	9,592.76	9,508.07	113.275	ES
Danley 13-28 (PR) - Wellbore #1 - Gyro Surveys	16,100.00	6,896.40	9,977.44	9,873.96	96.419	SF
Danley 14-28 (PR) - Wellbore #1 - Gyro Surveys	12,007.30	6,842.63	9,611.32	9,536.83	129.027	CC
Danley 14-28 (PR) - Wellbore #1 - Gyro Surveys	12,100.00	6,840.80	9,611.77	9,536.59	127.853	ES
Danley 14-28 (PR) - Wellbore #1 - Gyro Surveys	14,700.00	6,783.80	9,981.17	9,888.16	107.310	SF
Dewey 21-28 (TA) - Wellbore #1 - Gyro Surveys	15,911.21	7,071.64	8,301.46	8,197.16	79.597	CC
Dewey 21-28 (TA) - Wellbore #1 - Gyro Surveys	16,000.00	7,069.97	8,301.93	8,196.92	79.056	ES
Dewey 21-28 (TA) - Wellbore #1 - Gyro Surveys	16,617.25	7,058.32	8,331.42	8,221.63	75.887	SF
Dewey 22-28 (SI) - Wellbore #1 - Gyro Surveys	14,768.29	7,168.00	8,245.30	8,148.90	85.531	CC
Dewey 22-28 (SI) - Wellbore #1 - Gyro Surveys	14,800.00	7,168.00	8,245.36	8,148.70	85.306	ES
Dewey 22-28 (SI) - Wellbore #1 - Gyro Surveys	16,617.25	7,105.75	8,449.84	8,340.42	77.224	SF
Hannan Rohr 1 (PA) - Wellbore #1 - Gyro Surveys	11,985.07	6,732.84	8,316.07	8,242.22	112.612	CC
Hannan Rohr 1 (PA) - Wellbore #1 - Gyro Surveys	12,000.00	6,732.89	8,316.08	8,242.13	112.442	ES
Hannan Rohr 1 (PA) - Wellbore #1 - Gyro Surveys	15,800.00	6,744.77	9,149.35	9,051.78	93.777	SF
Rohr A 28-25 (SI) - Wellbore #1 - Gyro Surveys	12,862.19	7,052.83	8,800.93	8,720.18	108.982	CC
Rohr A 28-25 (SI) - Wellbore #1 - Gyro Surveys	12,900.00	7,052.18	8,801.01	8,719.97	108.591	ES
Rohr A 28-25 (SI) - Wellbore #1 - Gyro Surveys	16,617.25	6,987.88	9,568.32	9,463.70	91.465	SF
Wardlaw 16-28 (SI) - Wellbore #1 - Gyro Surveys	12,031.07	6,775.53	5,842.52	5,768.08	78.479	CC
Wardlaw 16-28 (SI) - Wellbore #1 - Gyro Surveys	12,100.00	6,776.25	5,842.93	5,767.96	77.936	ES
Wardlaw 16-28 (SI) - Wellbore #1 - Gyro Surveys	14,100.00	6,794.73	6,198.00	6,110.43	70.780	SF
Wardlaw 20-28 - Original Drilling - Original Drilling - As D	12,642.29	6,719.99	6,175.27	5,985.36	32.518	CC
Wardlaw 20-28 - Original Drilling - Original Drilling - As D	12,700.00	6,719.99	6,175.53	5,985.19	32.443	ES
Wardlaw 20-28 - Original Drilling - Original Drilling - As D	13,900.00	6,720.00	6,302.04	6,103.30	31.709	SF
Wardlaw 20-28 (SI) - Wellbore #1 - Gyro Surveys	12,675.56	6,760.06	6,166.36	6,087.21	77.909	CC
Wardlaw 20-28 (SI) - Wellbore #1 - Gyro Surveys	12,700.00	6,760.38	6,166.41	6,087.07	77.722	ES
Wardlaw 20-28 (SI) - Wellbore #1 - Gyro Surveys	14,800.00	6,792.05	6,522.00	6,429.19	70.273	SF
Wardlaw 33-28 (PA) - Wellbore #1 - Gyro Surveys	13,170.72	7,500.00	6,722.38	6,578.96	46.873	CC
Wardlaw 33-28 (PA) - Wellbore #1 - Gyro Surveys	13,300.00	7,500.00	6,723.62	6,577.45	45.998	ES
Wardlaw 33-28 (PA) - Wellbore #1 - Gyro Surveys	16,100.00	7,500.00	7,332.87	7,141.37	38.291	SF
Webster 09-28 (PR) - Original Drilling - Original Drilling -	13,441.77	6,734.99	5,886.70	5,690.48	30.001	CC
Webster 09-28 (PR) - Original Drilling - Original Drilling -	13,500.00	6,734.99	5,886.98	5,690.31	29.932	ES
Webster 09-28 (PR) - Original Drilling - Original Drilling -	14,500.00	6,735.00	5,981.06	5,777.27	29.350	SF
Webster 15-28 (SI) - Wellbore #1 - Gyro Surveys	12,104.38	6,775.86	7,179.60	7,104.71	95.859	CC
Webster 15-28 (SI) - Wellbore #1 - Gyro Surveys	12,200.00	6,775.57	7,180.24	7,104.62	94.952	ES
Webster 15-28 (SI) - Wellbore #1 - Gyro Surveys	15,100.00	6,766.52	7,779.48	7,685.91	83.134	SF
Webster 9-28 (PR) - Wellbore #1 - Gyro Surveys	13,481.42	6,764.12	5,871.39	5,786.18	68.903	CC
Webster 9-28 (PR) - Wellbore #1 - Gyro Surveys	13,500.00	6,764.19	5,871.42	5,786.06	68.785	ES

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

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Reveille A34-714
Project:	Wells Ranch	TVD Reference:	KB @ 4679.00ft
Reference Site:	A Section 35	MD Reference:	KB @ 4679.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Reveille A34-714	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Reveille A34-714 OH	Database:	EDMP
Reference Design:	APD - Rev 1	Offset TVD Reference:	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Separation Factor	Warning
A Section 28						
Webster 9-28 (PR) - Wellbore #1 - Gyro Surveys	15,300.00	6,771.15	6,146.58	6,049.61	63.385	SF
A Section 33						
Achziger 11-33 (PR) - Wellbore #1 - Gyro Surveys	8,242.46	6,833.37	8,102.82	8,051.66	158.379	CC
Achziger 11-33 (PR) - Wellbore #1 - Gyro Surveys	8,300.00	6,831.89	8,103.02	8,051.62	157.630	ES
Achziger 11-33 (PR) - Wellbore #1 - Gyro Surveys	13,200.00	6,709.31	9,498.26	9,421.22	123.289	SF
Achziger 14-33 (PA) - Wellbore #1 - No Surveys	6,663.13	6,511.66	8,339.01	8,185.40	54.285	CC
Achziger 14-33 (PA) - Wellbore #1 - No Surveys	6,750.00	6,566.74	8,339.82	8,184.89	53.829	ES
Achziger 14-33 (PA) - Wellbore #1 - No Surveys	8,700.00	6,684.99	8,591.36	8,428.03	52.600	SF
Briggs 15-33 (SI) - Wellbore #1 - Gyro Surveys	6,928.67	6,936.87	7,023.46	6,976.00	147.976	CC
Briggs 15-33 (SI) - Wellbore #1 - Gyro Surveys	6,950.00	6,943.56	7,023.50	6,975.99	147.813	ES
Briggs 15-33 (SI) - Wellbore #1 - Gyro Surveys	11,300.00	6,959.15	8,321.60	8,256.30	127.441	SF
Ehrlich 19-33 (PR) - Wellbore #1 - Gyro Survey	7,412.43	6,705.26	9,127.15	9,078.98	189.468	CC, ES
Ehrlich 19-33 (PR) - Wellbore #1 - Gyro Survey	11,400.00	6,683.04	9,960.18	9,892.51	147.195	SF
French 09-33 (SI) - Original Drilling - Original Drilling - As	8,156.29	6,616.24	5,666.84	5,616.60	112.785	CC
French 09-33 (SI) - Original Drilling - Original Drilling - As	8,200.00	6,616.86	5,667.01	5,616.59	112.385	ES
French 09-33 (SI) - Original Drilling - Original Drilling - As	11,000.00	6,653.54	6,340.18	6,275.71	98.350	SF
Hammerbeck 16-33 (PA) - Original Drilling - Original Drilling	6,658.09	6,400.00	5,603.81	5,558.24	122.972	CC
Hammerbeck 16-33 (PA) - Original Drilling - Original Drilling	6,685.95	6,417.95	5,603.93	5,558.23	122.612	ES
Hammerbeck 16-33 (PA) - Original Drilling - Original Drilling	9,700.00	6,441.66	6,337.75	6,281.54	112.743	SF
Hammerbeck 20-33 - Wellbore #1 - Gyro Surveys	7,466.78	6,535.63	6,370.97	6,323.22	133.421	CC, ES
Hammerbeck 20-33 - Wellbore #1 - Gyro Surveys	11,100.00	6,567.45	7,334.04	7,269.91	114.362	SF
Noffsinger 11-33 (PR) - Wellbore #1 - Gyro Surveys	10,907.85	6,700.00	9,743.39	9,677.13	147.033	CC
Noffsinger 11-33 (PR) - Wellbore #1 - Gyro Surveys	11,000.00	6,700.00	9,743.83	9,676.91	145.613	ES
Noffsinger 11-33 (PR) - Wellbore #1 - Gyro Surveys	13,100.00	6,700.00	9,986.95	9,905.50	122.613	SF
Noffsinger 12-33 (PR) - Wellbore #1 - Gyro Surveys	9,176.65	6,758.81	9,554.03	9,498.56	172.237	CC
Noffsinger 12-33 (PR) - Wellbore #1 - Gyro Surveys	9,200.00	6,758.83	9,554.06	9,498.46	171.832	ES
Noffsinger 12-33 (PR) - Wellbore #1 - Gyro Surveys	12,100.00	6,762.23	9,991.27	9,917.62	135.645	SF
Noffsinger 21-33 (PA) - Wellbore #1 - No Surveys	10,931.93	6,724.99	8,317.61	8,140.16	46.872	CC
Noffsinger 21-33 (PA) - Wellbore #1 - No Surveys	11,000.00	6,724.99	8,317.89	8,139.95	46.747	ES
Noffsinger 21-33 (PA) - Wellbore #1 - No Surveys	13,300.00	6,724.99	8,648.14	8,454.76	44.721	SF
Noffsinger 22-33 (PR) - Wellbore #1 - Gyro Surveys	10,960.64	6,439.79	6,776.37	6,710.57	102.976	CC
Noffsinger 22-33 (PR) - Wellbore #1 - Gyro Surveys	11,000.00	6,440.97	6,776.49	6,710.40	102.536	ES
Noffsinger 22-33 (PR) - Wellbore #1 - Gyro Surveys	13,900.00	6,504.11	7,386.03	7,302.07	87.975	SF
Noffsinger 31-33 (PR) - Wellbore #1 - Gyro Surveys	10,921.83	6,742.83	6,891.68	6,825.21	103.679	CC
Noffsinger 31-33 (PR) - Wellbore #1 - Gyro Surveys	11,000.00	6,742.90	6,892.12	6,825.09	102.826	ES
Noffsinger 31-33 (PR) - Wellbore #1 - Gyro Surveys	14,000.00	6,745.14	7,547.87	7,462.64	88.562	SF
Noffsinger 32-33 (PR) - Wellbore #1 - Gyro Surveys	9,146.71	6,952.67	7,113.47	7,057.96	128.148	CC
Noffsinger 32-33 (PR) - Wellbore #1 - Gyro Surveys	9,200.00	6,951.59	7,113.67	7,057.86	127.462	ES
Noffsinger 32-33 (PR) - Wellbore #1 - Gyro Surveys	12,900.00	6,876.04	8,042.56	7,965.95	104.979	SF
Sitzman 12-33 (PR) - Wellbore #1 - Gyro Surveys	8,094.22	6,744.50	9,690.44	9,640.13	192.634	CC
Sitzman 12-33 (PR) - Wellbore #1 - Gyro Surveys	8,100.00	6,744.51	9,690.44	9,640.11	192.550	ES
Sitzman 12-33 (PR) - Wellbore #1 - Gyro Surveys	10,500.00	6,747.32	9,984.60	9,921.40	157.961	SF
Sitzman 13-33 (SI) - Wellbore #1 - Gyro Surveys	6,648.22	6,515.18	9,689.75	9,643.82	210.967	CC
Sitzman 13-33 (SI) - Wellbore #1 - Gyro Surveys	6,650.00	6,517.12	9,689.75	9,643.80	210.915	ES
Sitzman 13-33 (SI) - Wellbore #1 - Gyro Surveys	9,000.00	6,690.17	9,996.16	9,941.85	184.026	SF
Sughrue 41-33 (SI) - Original Drilling - Original Drilling -	10,917.63	6,514.85	5,603.15	5,537.33	85.121	CC, ES
Sughrue 41-33 (SI) - Original Drilling - Original Drilling -	13,100.00	6,529.66	6,013.13	5,933.94	75.929	SF
Webster 10-33 (PA) - Wellbore #1 - Gyro Surveys	8,193.66	6,883.22	6,966.24	6,915.36	136.914	CC
Webster 10-33 (PA) - Wellbore #1 - Gyro Surveys	8,200.00	6,883.29	6,966.25	6,915.34	136.845	ES
Webster 10-33 (PA) - Wellbore #1 - Gyro Surveys	12,200.00	6,931.63	8,035.98	7,964.42	112.303	SF

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

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Reveille A34-714
Project:	Wells Ranch	TVD Reference:	KB @ 4679.00ft
Reference Site:	A Section 35	MD Reference:	KB @ 4679.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Reveille A34-714	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Reveille A34-714 OH	Database:	EDMP
Reference Design:	APD - Rev 1	Offset TVD Reference:	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						
A Section 34						
Barthol A34-05X - Original Drilling - Original Drilling - As D	9,610.50	6,713.31	4,483.31	4,425.32	77.312	CC, ES
Barthol A34-05X - Original Drilling - Original Drilling - As D	11,200.00	6,691.94	4,756.70	4,689.50	70.787	SF
Ehlich A34-01 - Original Drilling - Original Drilling - As Dr	10,650.60	6,733.88	303.87	239.26	4.703	CC, ES, SF
Howard A34-03 (PA) - Original Drilling - Original Drilling -	10,795.48	6,740.99	3,078.27	2,901.18	17.383	CC
Howard A34-03 (PA) - Original Drilling - Original Drilling -	10,800.00	6,740.99	3,078.28	2,901.15	17.379	ES
Howard A34-03 (PA) - Original Drilling - Original Drilling -	11,100.00	6,740.99	3,093.30	2,914.09	17.261	SF
Howard BC A34-02 - Original Drilling - Original Drilling - A	10,668.43	6,723.26	1,969.04	1,904.31	30.419	CC, ES
Howard BC A34-02 - Original Drilling - Original Drilling - A	11,000.00	6,720.27	1,996.75	1,929.88	29.860	SF
Landwehr A34-03X - Original Drilling - Original Drilling - A	10,960.79	6,778.78	3,139.21	3,072.34	46.951	CC
Landwehr A34-03X - Original Drilling - Original Drilling - A	11,000.00	6,778.42	3,139.45	3,072.30	46.753	ES
Landwehr A34-03X - Original Drilling - Original Drilling - A	11,700.00	6,771.66	3,225.06	3,153.52	45.079	SF
Landwehr A34-04 - Original Drilling - Original Drilling - As	10,977.13	6,841.53	4,626.19	4,559.05	68.906	CC
Landwehr A34-04 - Original Drilling - Original Drilling - As	11,000.00	6,842.28	4,626.25	4,558.94	68.735	ES
Landwehr A34-04 - Original Drilling - Original Drilling - As	12,500.00	6,891.34	4,870.14	4,793.44	63.496	SF
Petrikin A34-05 (PA) - Original Drilling - Original Drilling -	9,450.14	6,717.99	4,396.43	4,228.35	26.158	CC
Petrikin A34-05 (PA) - Original Drilling - Original Drilling -	9,500.00	6,717.99	4,396.71	4,228.33	26.113	ES
Petrikin A34-05 (PA) - Original Drilling - Original Drilling -	10,100.00	6,717.99	4,444.20	4,272.16	25.833	SF
Petrikin A34-06 - Original Drilling - Original Drilling - As D	9,485.20	6,772.27	3,062.85	3,005.54	53.448	CC
Petrikin A34-06 - Original Drilling - Original Drilling - As D	9,500.00	6,772.35	3,062.88	3,005.49	53.362	ES
Petrikin A34-06 - Original Drilling - Original Drilling - As D	10,300.00	6,776.60	3,169.37	3,107.37	51.115	SF
Petrikin A34-07 (PA) - Original Drilling - Original Drilling -	9,556.19	6,702.99	1,737.09	1,568.70	10.316	CC, ES
Petrikin A34-07 (PA) - Original Drilling - Original Drilling -	9,700.00	6,702.99	1,743.03	1,573.72	10.295	SF
Petrikin A34-08 - Original Drilling - Original Drilling - As D	9,572.39	6,719.39	305.74	247.99	5.295	CC, ES, SF
Petrikin A34-09 - Original Drilling - Original Drilling - As D	8,272.23	6,725.13	285.97	234.85	5.594	CC, ES, SF
Petrikin A34-10 - Original Drilling - Original Drilling - As D	8,281.48	6,667.01	1,553.09	1,502.07	30.446	CC, ES
Petrikin A34-10 - Original Drilling - Original Drilling - As D	8,500.00	6,659.66	1,568.37	1,516.38	30.167	SF
Petrikin A34-11 - Original Drilling - Original Drilling - As D	8,239.57	6,705.81	3,027.16	2,976.31	59.528	CC, ES
Petrikin A34-11 - Original Drilling - Original Drilling - As D	9,100.00	6,703.49	3,147.07	3,092.24	57.398	SF
Petrikin A34-12 (PA) - Original Drilling - Original Drilling -	8,255.41	6,865.91	4,274.63	4,223.28	83.253	CC, ES
Petrikin A34-12 (PA) - Original Drilling - Original Drilling -	9,900.00	6,896.89	4,579.98	4,520.58	77.116	SF
Petrikin A34-13 - Original Drilling - Original Drilling - As D	6,763.75	6,529.30	4,335.63	4,289.32	93.629	CC
Petrikin A34-13 - Original Drilling - Original Drilling - As D	6,800.00	6,546.61	4,335.73	4,289.28	93.339	ES
Petrikin A34-13 - Original Drilling - Original Drilling - As D	8,400.00	6,648.74	4,615.58	4,564.38	90.154	SF
Petrikin A34-14 (PA) - Original Drilling - Original Drilling -	6,876.70	6,628.88	3,599.74	3,552.66	76.458	CC
Petrikin A34-14 (PA) - Original Drilling - Original Drilling -	6,900.00	6,640.34	3,599.80	3,552.63	76.316	ES
Petrikin A34-14 (PA) - Original Drilling - Original Drilling -	7,800.00	6,700.79	3,712.05	3,662.58	75.038	SF
Petrikin A34-15 - Original Drilling - Original Drilling - As D	6,911.92	6,647.31	1,735.68	1,688.65	36.909	CC, ES
Petrikin A34-15 - Original Drilling - Original Drilling - As D	7,050.00	6,676.25	1,740.74	1,693.35	36.731	SF
Petrikin A34-16 (PA) - Original Drilling - Original Drilling -	6,982.70	6,716.18	344.78	297.54	7.298	CC, ES, SF
Petrikin A34-25 - Original Drilling - Original Drilling - As D	7,652.46	6,665.68	3,638.50	3,589.83	74.753	CC, ES
Petrikin A34-25 - Original Drilling - Original Drilling - As D	8,800.00	6,611.33	3,814.88	3,761.89	71.993	SF
Reveille A33-720 - Reveille A33-720 OH - APD - Rev 1	3,052.92	2,454.56	4,077.46	4,058.52	215.267	CC
Reveille A33-720 - Reveille A33-720 OH - APD - Rev 1	3,100.00	2,475.28	4,077.61	4,058.44	212.747	ES
Reveille A33-720 - Reveille A33-720 OH - APD - Rev 1	16,617.25	17,576.35	5,661.11	5,487.96	32.695	SF
Reveille A34-746 - Reveille A34-746 OH - APD - Rev 1	16,586.07	16,819.70	2,122.51	1,951.22	12.391	CC
Reveille A34-746 - Reveille A34-746 OH - APD - Rev 1	16,600.00	16,817.91	2,122.56	1,951.19	12.386	ES
Reveille A34-746 - Reveille A34-746 OH - APD - Rev 1	16,617.25	16,817.91	2,122.74	1,951.28	12.380	SF
Reveille A34-757 - Reveille A34-757 OH - APD - Rev 1	16,575.23	16,629.09	2,830.36	2,659.41	16.556	CC
Reveille A34-757 - Reveille A34-757 OH - APD - Rev 1	16,600.00	16,626.69	2,830.47	2,659.35	16.540	ES
Reveille A34-757 - Reveille A34-757 OH - APD - Rev 1	16,617.25	16,626.69	2,830.68	2,659.42	16.529	SF
Reveille A34-768 - Reveille A34-768 OH - APD - Rev 1	16,566.45	16,564.66	3,537.45	3,365.63	20.588	CC
Reveille A34-768 - Reveille A34-768 OH - APD - Rev 1	16,600.00	16,558.98	3,537.63	3,365.57	20.561	ES
Reveille A34-768 - Reveille A34-768 OH - APD - Rev 1	16,617.25	16,558.98	3,537.84	3,365.65	20.546	SF

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

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Reveille A34-714
Project:	Wells Ranch	TVD Reference:	KB @ 4679.00ft
Reference Site:	A Section 35	MD Reference:	KB @ 4679.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Reveille A34-714	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Reveille A34-714 OH	Database:	EDMP
Reference Design:	APD - Rev 1	Offset TVD Reference:	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						
A Section 34						
Reveille A34-778 - Reveille A34-778 OH - APD - Rev 1	3,441.17	2,845.94	4,015.87	3,994.15	184.903	CC
Reveille A34-778 - Reveille A34-778 OH - APD - Rev 1	3,500.00	2,871.76	4,016.11	3,994.11	182.551	ES
Reveille A34-778 - Reveille A34-778 OH - APD - Rev 1	16,617.25	16,607.30	4,245.91	4,074.90	24.829	SF
Reveille A34-788 - Reveille A34-788 OH - APD - Rev 1	3,098.00	2,500.00	4,073.03	4,053.78	211.641	CC
Reveille A34-788 - Reveille A34-788 OH - APD - Rev 1	3,100.00	2,500.00	4,073.03	4,053.78	211.573	ES
Reveille A34-788 - Reveille A34-788 OH - APD - Rev 1	16,617.25	17,226.69	4,953.16	4,779.79	28.569	SF
A Section 35						
Hoffner 13-35 - Original Drilling - Original Drilling - As Dri	8,321.54	6,732.92	644.30	592.93	12.541	CC, ES, SF
Hoffner 14-35 (SI) - Original Drilling - Original Drilling - As	1,805.77	1,797.85	224.58	212.22	18.175	CC
Hoffner 14-35 (SI) - Original Drilling - Original Drilling - As	2,016.31	2,009.47	224.78	210.93	16.233	ES
Hoffner 14-35 (SI) - Original Drilling - Original Drilling - As	2,500.00	2,488.48	255.38	238.20	14.864	SF
Hoffner 24-35 (SI) - Original Drilling - Original Drilling - As	1,189.99	1,131.00	1,660.80	1,652.99	212.578	CC
Hoffner 24-35 (SI) - Original Drilling - Original Drilling - As	2,003.50	1,946.50	1,661.31	1,647.74	122.401	ES
Hoffner 24-35 (SI) - Original Drilling - Original Drilling - As	7,100.00	6,659.14	2,171.01	2,123.62	45.817	SF
Hoffner 33-35 - Original Drilling - Original Drilling - As Dri	100.00	31.39	3,538.85	3,538.67	10,000.000	CC
Hoffner 33-35 - Original Drilling - Original Drilling - As Dri	1,200.00	1,110.66	3,543.53	3,535.75	455.535	ES
Hoffner 33-35 - Original Drilling - Original Drilling - As Dri	9,200.00	6,742.25	3,989.89	3,935.07	72.782	SF
Hoffner 34-35 - Original Drilling - Original Drilling - As Dri	100.00	23.51	3,190.84	3,190.67	10,000.000	CC, ES
Hoffner 34-35 - Original Drilling - Original Drilling - As Dri	8,900.00	8,900.00	4,115.78	4,055.70	68.499	SF
Hoffner 44-35 - Wellbore #1 - Wellbore #1- As Drilled	2,022.63	2,000.00	4,480.02	4,466.20	324.109	CC, ES
Hoffner 44-35 - Wellbore #1 - Wellbore #1- As Drilled	9,000.00	6,700.79	5,442.02	5,388.85	102.368	SF
Reveille A34-725 - Reveille A34-725 OH - APD - Rev 1	2,410.05	2,407.50	24.92	8.37	1.506	CC, ES, SF
Reveille A34-735 - Reveille A34-735 OH - APD - Rev 1	2,411.60	2,406.88	47.15	30.60	2.848	CC, ES
Reveille A34-735 - Reveille A34-735 OH - APD - Rev 1	2,500.00	2,493.82	48.49	31.40	2.837	SF
Reveille A35-750 - Reveille A35-750 OH - APD - Rev 2	2,000.00	1,998.00	89.08	75.21	6.424	CC, ES
Reveille A35-750 - Reveille A35-750 OH - APD - Rev 2	2,100.00	2,093.46	93.22	78.68	6.413	SF
Reveille A35-762 - Reveille A35-762 OH - APD - Rev 2	2,000.00	1,998.00	66.81	52.94	4.818	CC, ES, SF
Reveille A35-772 - Reveille A35-772 OH - APD - Rev 2	2,000.00	1,999.00	44.54	30.67	3.211	CC, ES, SF
Reveille A35-783 - Reveille A35-783 OH - APD - Rev 1	2,000.00	2,000.00	22.27	8.40	1.605	CC, ES, SF
Sharkey 31-35 - Original Drilling - Original Drilling - As Dr	10,903.00	6,687.04	3,557.83	3,491.65	53.755	CC, ES
Sharkey 31-35 - Original Drilling - Original Drilling - As Dr	11,700.00	6,696.66	3,646.00	3,575.42	51.661	SF
Sharkey 32-35 - Original Drilling - Original Drilling - As Dr	9,383.85	6,618.75	3,650.47	3,594.28	64.965	CC
Sharkey 32-35 - Original Drilling - Original Drilling - As Dr	9,400.00	6,619.20	3,650.51	3,594.23	64.864	ES
Sharkey 32-35 - Original Drilling - Original Drilling - As Dr	10,400.00	6,640.65	3,789.20	3,727.93	61.840	SF
Wardlaw 35-21 (SI) - Original Drilling - Original Drilling - A	10,677.86	6,704.90	2,198.51	2,133.74	33.942	CC
Wardlaw 35-21 (SI) - Original Drilling - Original Drilling - A	10,700.00	6,704.74	2,198.62	2,133.72	33.876	ES
Wardlaw 35-21 (SI) - Original Drilling - Original Drilling - A	11,000.00	6,702.55	2,221.98	2,155.59	33.465	SF
Wardlaw 35-22 - Original Drilling - Original Drilling - As D	10,996.29	6,706.63	906.19	839.30	13.547	CC
Wardlaw 35-22 - Original Drilling - Original Drilling - As D	11,000.00	6,706.57	906.20	839.29	13.543	ES, SF
Wardlaw 35-23 (PA) - Original Drilling - Original Drilling -	9,542.35	6,692.21	842.82	782.84	14.053	CC, ES
Wardlaw 35-23 (PA) - Original Drilling - Original Drilling -	9,600.00	6,689.45	844.78	784.64	14.047	SF
Wardlaw 35-24 - Original Drilling - Original Drilling - As D	9,569.69	6,735.98	2,221.07	2,163.21	38.389	CC, ES
Wardlaw 35-24 - Original Drilling - Original Drilling - As D	9,900.00	6,737.98	2,245.50	2,186.06	37.777	SF
Wardlaw 35-25 - Original Drilling - Original Drilling - As D	9,993.59	6,696.75	1,597.86	1,537.62	26.524	CC
Wardlaw 35-25 - Original Drilling - Original Drilling - As D	10,000.00	6,696.91	1,597.88	1,537.60	26.509	ES
Wardlaw 35-25 - Original Drilling - Original Drilling - As D	10,200.00	6,701.78	1,611.13	1,549.93	26.326	SF

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

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Reveille A34-714
Project:	Wells Ranch	TVD Reference:	KB @ 4679.00ft
Reference Site:	A Section 35	MD Reference:	KB @ 4679.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Reveille A34-714	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Reveille A34-714 OH	Database:	EDMP
Reference Design:	APD - Rev 1	Offset TVD Reference:	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						
A Section 36						
Devries State A36-17 (Exist.) - Wellbore #1 - Wellbore #1	10,220.94	6,690.25	9,554.11	9,461.01	102.621	CC
Devries State A36-17 (Exist.) - Wellbore #1 - Wellbore #1	10,300.00	6,686.79	9,554.44	9,460.90	102.142	ES
Devries State A36-17 (Exist.) - Wellbore #1 - Wellbore #1	13,100.00	6,564.30	9,977.68	9,868.83	91.667	SF
Devries State A36-21 - Wellbore #1 - Wellbore #1 - As Dr	2,036.01	2,074.82	7,858.62	7,844.52	557.164	CC, ES
Devries State A36-21 - Wellbore #1 - Wellbore #1 - As Dr	13,300.00	6,899.63	9,241.53	9,164.44	119.881	SF
Devries State A36-23 - Wellbore #1 - Wellbore #1 - As Dr	2,021.32	2,032.38	9,033.70	9,019.78	649.106	CC, ES
Devries State A36-23 - Wellbore #1 - Wellbore #1 - As Dr	10,700.00	6,584.07	9,993.69	9,931.03	159.501	SF
Devries State A36-25 - Wellbore #1 - Wellbore #1 - As Dr	2,006.28	1,969.49	6,365.73	6,352.07	466.163	CC, ES
Devries State A36-25 - Wellbore #1 - Wellbore #1 - As Dr	11,400.00	6,588.32	7,827.36	7,763.03	121.687	SF
Scholfield A36-19 (Exist.) - Wellbore #1 - Wellbore #1 - A	10,231.89	6,771.19	6,685.92	6,623.88	107.774	CC
Scholfield A36-19 (Exist.) - Wellbore #1 - Wellbore #1 - A	10,300.00	6,768.78	6,686.26	6,623.81	107.066	ES
Scholfield A36-19 (Exist.) - Wellbore #1 - Wellbore #1 - A	13,100.00	6,700.00	7,274.60	7,197.06	93.821	SF
Scholfield A36-20 - Wellbore #1 - Wellbore #1 - As Drilled	2,071.02	2,169.74	6,577.93	6,563.36	451.481	CC
Scholfield A36-20 - Wellbore #1 - Wellbore #1 - As Drilled	2,100.00	2,191.69	6,578.08	6,563.34	446.033	ES
Scholfield A36-20 - Wellbore #1 - Wellbore #1 - As Drilled	12,200.00	6,607.90	7,430.40	7,360.06	105.643	SF
Scholfield State A36-4X - Wellbore #1 - Wellbore #1 - As	10,966.26	6,863.45	6,066.12	5,998.79	90.095	CC
Scholfield State A36-4X - Wellbore #1 - Wellbore #1 - As	11,000.00	6,860.98	6,066.22	5,998.67	89.814	ES
Scholfield State A36-4X - Wellbore #1 - Wellbore #1 - As	11,800.00	11,800.00	6,122.70	6,032.76	68.082	SF
Scholfield State A36-69HN - Original Drilling - Original Dr	11,474.07	6,062.28	6,117.87	6,052.28	93.270	CC
Scholfield State A36-69HN - Original Drilling - Original Dr	11,500.00	6,062.32	6,117.93	6,052.16	93.022	ES
Scholfield State A36-69HN - Original Drilling - Original Dr	13,800.00	6,080.01	6,545.18	6,466.48	83.163	SF
Scholfield State A36-79HN - Wellbore #1 - Original Drillin	8,000.00	9,267.02	5,399.75	5,311.33	61.070	ES
Scholfield State A36-79HN - Wellbore #1 - Original Drillin	10,320.03	6,940.74	5,388.16	5,321.08	80.323	CC
Scholfield State A36-79HN - Wellbore #1 - Original Drillin	11,500.00	11,500.00	5,489.38	5,378.10	49.331	SF
Sinjin E 36-9 (SI) - Wellbore #1 - No Surveys						Out of range
State A36-05 - Wellbore #1 - Wellbore #1 - As Drilled	9,595.27	6,716.51	6,185.30	6,127.47	106.949	CC
State A36-05 - Wellbore #1 - Wellbore #1 - As Drilled	9,600.00	6,716.49	6,185.30	6,127.44	106.899	ES
State A36-05 - Wellbore #1 - Wellbore #1 - As Drilled	12,300.00	6,711.00	6,750.80	6,678.73	93.671	SF
State A36-06 - Wellbore #1 - Wellbore #1 - As Drilled	9,470.21	6,656.57	7,480.55	7,423.65	131.473	CC
State A36-06 - Wellbore #1 - Wellbore #1 - As Drilled	9,500.00	6,655.98	7,480.61	7,423.55	131.094	ES
State A36-06 - Wellbore #1 - Wellbore #1 - As Drilled	13,200.00	6,571.67	8,358.45	8,281.94	109.242	SF
State A36-07 - Wellbore #1 - Wellbore #1 - As Drilled	9,800.91	6,646.99	8,833.89	8,775.06	150.173	CC
State A36-07 - Wellbore #1 - Wellbore #1 - As Drilled	9,900.00	6,646.88	8,834.44	8,775.02	148.682	ES
State A36-07 - Wellbore #1 - Wellbore #1 - As Drilled	14,400.00	6,641.82	9,959.37	9,875.01	118.058	SF
State A36-08 - Wellbore #1 - Wellbore #1 - As Drilled						Out of range
State A36-09 - Wellbore #1 - Wellbore #1 - As Drilled	2,017.73	2,026.37	9,724.88	9,710.99	700.381	CC, ES
State A36-09 - Wellbore #1 - Wellbore #1 - As Drilled	4,100.00	3,991.50	9,987.37	9,959.33	356.131	SF
State A36-10 - Wellbore #1 - Wellbore #1 - As Drilled	2,013.98	1,998.56	8,437.00	8,423.23	612.317	CC, ES
State A36-10 - Wellbore #1 - Wellbore #1 - As Drilled	12,800.00	6,665.65	9,969.96	9,896.12	135.014	SF
State A36-11 - Wellbore #1 - Wellbore #1 - As Drilled	366.27	295.44	7,122.62	7,120.71	3,728.973	CC
State A36-11 - Wellbore #1 - Wellbore #1 - As Drilled	2,000.00	1,886.64	7,126.86	7,113.53	534.759	ES
State A36-11 - Wellbore #1 - Wellbore #1 - As Drilled	13,900.00	13,900.00	9,456.72	9,355.44	93.370	SF
State A36-12 - Wellbore #1 - Wellbore #1 - As Drilled	1,038.30	969.30	5,863.39	5,856.71	877.554	CC
State A36-12 - Wellbore #1 - Wellbore #1 - As Drilled	2,024.51	2,004.06	5,866.38	5,852.57	424.615	ES
State A36-12 - Wellbore #1 - Wellbore #1 - As Drilled	11,200.00	6,731.50	6,816.36	6,751.76	105.512	SF
State A36-13 - Wellbore #1 - Wellbore #1 - As Drilled	100.00	24.79	5,634.90	5,634.73	10,000.000	CC, ES
State A36-13 - Wellbore #1 - Wellbore #1 - As Drilled	10,300.00	6,646.92	6,970.28	6,911.67	118.938	SF
State A36-14 - Wellbore #1 - Wellbore #1 - As Drilled	2,000.00	1,944.00	6,919.69	6,873.87	151.030	CC
State A36-14 - Wellbore #1 - Wellbore #1 - As Drilled	2,100.00	2,043.98	6,921.43	6,873.26	143.702	ES
State A36-14 - Wellbore #1 - Wellbore #1 - As Drilled	8,300.00	6,682.99	7,621.06	7,459.80	47.258	SF
State A36-15 - Wellbore #1 - Wellbore #1 - As Drilled	100.00	34.48	8,279.04	8,278.85	10,000.000	CC
State A36-15 - Wellbore #1 - Wellbore #1 - As Drilled	1,500.00	1,387.44	8,285.83	8,276.18	858.704	ES
State A36-15 - Wellbore #1 - Wellbore #1 - As Drilled	11,400.00	6,642.17	9,957.09	9,891.97	152.885	SF

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

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Reveille A34-714
Project:	Wells Ranch	TVD Reference:	KB @ 4679.00ft
Reference Site:	A Section 35	MD Reference:	KB @ 4679.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Reveille A34-714	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Reveille A34-714 OH	Database:	EDMP
Reference Design:	APD - Rev 1	Offset TVD Reference:	Offset Datum

Summary

Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
A Section 36						
State A36-16 - Wellbore #1 - Wellbore #1 - As Drilled	688.19	636.21	9,586.73	9,582.44	2,236.560	CC
State A36-16 - Wellbore #1 - Wellbore #1 - As Drilled	2,014.74	2,012.11	9,587.33	9,573.50	692.856	ES
State A36-16 - Wellbore #1 - Wellbore #1 - As Drilled	5,100.00	5,188.48	9,991.16	9,955.27	278.388	SF
State A36-3 (Exist.) - Wellbore #1 - Wellbore #1	10,860.94	6,469.51	7,541.24	7,476.11	115.790	CC
State A36-3 (Exist.) - Wellbore #1 - Wellbore #1	10,900.00	6,468.96	7,541.34	7,475.95	115.340	ES
State A36-3 (Exist.) - Wellbore #1 - Wellbore #1	14,200.00	6,424.88	8,247.17	8,163.27	98.291	SF
State A36-99HZ - Original Drilling - As Drilled	11,240.92	6,163.01	6,107.12	6,042.08	93.906	CC
State A36-99HZ - Original Drilling - As Drilled	11,300.00	6,163.01	6,107.40	6,041.97	93.345	ES
State A36-99HZ - Original Drilling - As Drilled	13,600.00	6,163.01	6,546.92	6,468.68	83.676	SF
AA Section 30						
Shadow A26-622 - Original Drilling - Original Drilling - As	12,210.32	17,520.00	3,574.34	3,492.22	43.529	CC, ES
Shadow A26-622 - Original Drilling - Original Drilling - As	14,400.00	17,520.00	4,191.73	4,072.89	35.273	SF
Shadow A26-627 - Original Drilling - Original Drilling - As	12,603.34	17,590.00	3,438.17	3,353.17	40.449	CC, ES
Shadow A26-627 - Original Drilling - Original Drilling - As	14,800.00	17,590.00	4,079.99	3,950.14	31.419	SF
Shadow A26-632 - Original Drilling - Original Drilling - As	12,903.40	17,781.00	3,445.92	3,362.60	41.355	CC
Shadow A26-632 - Original Drilling - Original Drilling - As	13,000.00	17,781.00	3,447.28	3,362.39	40.612	ES
Shadow A26-632 - Original Drilling - Original Drilling - As	15,200.00	17,781.00	4,141.10	3,995.30	28.402	SF
Shadow A26-637 - Original Drilling - Original Drilling - As	13,189.13	17,626.00	3,442.42	3,360.30	41.918	CC
Shadow A26-637 - Original Drilling - Original Drilling - As	13,200.00	17,626.00	3,442.44	3,360.17	41.846	ES
Shadow A26-637 - Original Drilling - Original Drilling - As	15,500.00	17,626.00	4,146.13	4,000.10	28.393	SF
Shadow A26-646 - Original Drilling - Original Drilling - As	13,868.13	17,659.00	3,443.02	3,353.91	38.638	CC
Shadow A26-646 - Original Drilling - Original Drilling - As	13,900.00	17,659.00	3,443.16	3,353.74	38.506	ES
Shadow A26-646 - Original Drilling - Original Drilling - As	16,100.00	17,659.00	4,103.12	3,955.45	27.785	SF
Shadow A26-656 - Original Drilling - Original Drilling - As	14,510.89	17,347.00	3,816.92	3,717.57	38.419	CC, ES
Shadow A26-656 - Original Drilling - Original Drilling - As	16,600.00	17,347.00	4,351.24	4,217.83	32.617	SF
Shadow A26-663 - Original Drilling - Original Drilling - As	15,067.76	17,466.00	3,672.53	3,568.63	35.347	CC
Shadow A26-663 - Original Drilling - Original Drilling - As	15,100.00	17,466.00	3,672.68	3,568.56	35.274	ES
Shadow A26-663 - Original Drilling - Original Drilling - As	16,617.25	17,466.00	3,986.03	3,855.95	30.642	SF
Shadow A26-672 - Original Drilling - Original Drilling - As	15,559.95	17,710.00	3,433.32	3,331.19	33.616	CC
Shadow A26-672 - Original Drilling - Original Drilling - As	15,600.00	17,710.00	3,433.55	3,330.97	33.471	ES
Shadow A26-672 - Original Drilling - Original Drilling - As	16,617.25	17,710.00	3,592.43	3,462.33	27.611	SF
Shadow A26-676 - Original Drilling - Original Drilling - As	15,845.86	17,725.00	3,442.76	3,332.56	31.241	CC
Shadow A26-676 - Original Drilling - Original Drilling - As	15,900.00	17,725.00	3,443.19	3,332.44	31.089	ES
Shadow A26-676 - Original Drilling - Original Drilling - As	16,617.25	17,725.00	3,528.13	3,404.51	28.541	SF
Shadow A26-685 - Original Drilling - Original Drilling - As	13,800.00	17,810.00	4,401.46	4,102.37	14.716	SF
Shadow A26-685 - Original Drilling - Original Drilling - As	16,534.42	17,810.00	3,449.02	3,333.63	29.889	CC
Shadow A26-685 - Original Drilling - Original Drilling - As	16,617.25	17,810.00	3,450.02	3,332.40	29.332	ES
Shadow A26-690 - Original Drilling - Original Drilling - As	15,200.00	17,780.00	3,768.17	3,637.40	28.815	SF
Shadow A26-690 - Original Drilling - Original Drilling - As	16,617.25	17,780.00	3,431.75	3,320.47	30.839	CC, ES
Shadow State A26-614 - Original Drilling - Original Drilling	11,673.87	17,675.00	3,442.54	3,363.84	43.743	CC
Shadow State A26-614 - Original Drilling - Original Drilling	11,700.00	17,675.00	3,442.64	3,363.68	43.597	ES
Shadow State A26-614 - Original Drilling - Original Drilling	13,800.00	17,675.00	4,046.18	3,930.30	34.919	SF
Shadow State A26-618 - Original Drilling - Original Drilling	11,921.08	17,415.00	3,609.27	3,529.66	45.335	CC, ES
Shadow State A26-618 - Original Drilling - Original Drilling	14,300.00	17,415.00	4,322.74	4,197.25	34.448	SF

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

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Reveille A34-714
Project:	Wells Ranch	TVD Reference:	KB @ 4679.00ft
Reference Site:	A Section 35	MD Reference:	KB @ 4679.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Reveille A34-714	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Reveille A34-714 OH	Database:	EDMP
Reference Design:	APD - Rev 1	Offset TVD Reference:	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 01						
Lucci B01-69HNL - Original Drilling - Original Drilling - As	1,908.81	1,871.00	5,610.61	5,598.79	474.512	CC
Lucci B01-69HNL - Original Drilling - Original Drilling - As	2,000.00	1,946.28	5,610.83	5,598.41	451.850	ES
Lucci B01-69HNL - Original Drilling - Original Drilling - As	10,000.00	6,043.00	7,202.98	7,149.77	135.364	SF
Lucci B01-99HZ - Original Drilling - Original Drilling - As	100.00	53.27	5,665.60	5,665.38	10,000.000	CC
Lucci B01-99HZ - Original Drilling - Original Drilling - As	500.00	427.01	5,666.79	5,664.49	2,463.129	ES
Lucci B01-99HZ - Original Drilling - Original Drilling - As	9,500.00	5,932.15	7,233.29	7,183.28	144.641	SF
Lucci BC B 1-13 (PA) - Wellbore #1 - Gyro Surveys	2,017.92	1,981.86	7,303.06	7,289.31	530.979	CC
Lucci BC B 01-13 (PA) - Wellbore #1 - Gyro Surveys	2,100.00	2,115.00	7,303.63	7,289.13	503.532	ES
Lucci BC B 01-13 (PA) - Wellbore #1 - Gyro Surveys	6,750.00	6,319.48	7,953.73	7,908.16	174.537	SF
Lucci BC B 1-14 (PA) - Wellbore #1 - Gyro Surveys	100.00	15.52	8,436.84	8,436.69	10,000.000	CC
Lucci BC B 1-14 (PA) - Wellbore #1 - Gyro Surveys	2,000.00	1,873.42	8,441.60	8,428.30	634.461	ES
Lucci BC B 1-14 (PA) - Wellbore #1 - Gyro Surveys	6,900.00	6,622.23	9,189.55	9,142.57	195.600	SF
Lucci BC B 1-15 (PA) - Wellbore #1 - Gyro Surveys	100.00	14.26	9,490.19	9,490.03	10,000.000	CC
Lucci BC B 1-15 (PA) - Wellbore #1 - Gyro Surveys	2,008.72	1,951.15	9,494.80	9,481.19	697.645	ES
Lucci BC B 1-15 (PA) - Wellbore #1 - Gyro Surveys	6,450.00	6,416.47	9,986.96	9,941.80	221.154	SF
Lucci BC B 1-16 (PA) - Wellbore #1 - Wellbore #1						Out of range
Lucci State B03-69HNL - Original Drilling - Original Drilling	6,542.97	12,498.93	370.60	222.14	2.496	CC
Lucci State B03-69HNL - Original Drilling - Original Drilling	6,600.00	12,500.33	377.42	216.18	2.341	ES
Lucci State B03-69HNL - Original Drilling - Original Drilling	6,650.00	12,500.67	394.07	224.82	2.328	SF
SLW Ranch B01-62-1HN - Original Drilling - As Drilled	5,916.92	11,286.02	7,915.65	7,813.60	77.569	CC, ES
SLW Ranch B01-62-1HN - Original Drilling - As Drilled	6,750.00	11,286.02	8,105.84	7,999.34	76.115	SF
SLW Ranch B01-63-1HN - Original Drilling - As Drilled	5,863.16	11,250.02	7,502.51	7,410.78	81.794	CC
SLW Ranch B01-63-1HN - Original Drilling - As Drilled	5,900.00	11,250.02	7,502.60	7,410.74	81.676	ES
SLW Ranch B01-63-1HN - Original Drilling - As Drilled	7,100.00	11,250.02	7,891.73	7,792.02	79.149	SF
SLW Ranch B01-64-1HN - Original Drilling - As Drilled	5,940.36	11,274.02	7,149.17	7,066.22	86.188	CC, ES
SLW Ranch B01-64-1HN - Original Drilling - As Drilled	8,300.00	11,274.02	8,265.83	8,163.92	81.104	SF
SLW Ranch B01-66-1HN - Original Drilling - Original Drill	5,937.90	11,201.02	6,553.61	6,471.10	79.427	CC, ES
SLW Ranch B01-66-1HN - Original Drilling - Original Drill	9,300.00	11,201.02	8,070.99	7,953.83	68.892	SF
SLW Ranch B01-67-1HN - Original Drilling - As Drilled - S	5,917.20	11,165.02	6,327.54	6,260.30	94.106	CC, ES
SLW Ranch B01-67-1HN - Original Drilling - As Drilled - S	10,300.00	11,165.02	8,295.92	8,177.77	70.217	SF
SLW Ranch B01-68-1HN - Original Drilling - Original Drill	5,872.96	11,204.02	6,161.09	6,111.83	125.063	CC
SLW Ranch B01-68-1HN - Original Drilling - Original Drill	5,900.00	11,204.02	6,161.15	6,111.78	124.799	ES
SLW Ranch B01-68-1HN - Original Drilling - Original Drill	10,300.00	11,204.02	7,848.39	7,773.91	105.368	SF
SLW Ranch B01-69-1HN - Original Drilling - As Drilled	5,827.82	11,247.02	6,069.60	6,018.50	118.777	CC, ES
SLW Ranch B01-69-1HN - Original Drilling - As Drilled	11,800.00	11,247.02	8,425.69	8,308.34	71.795	SF
SLW Ranch B12-69-1HN - Wellbore #1 - Wellbore #1- As						Out of range

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Reveille A34-714
Project:	Wells Ranch	TVD Reference:	KB @ 4679.00ft
Reference Site:	A Section 35	MD Reference:	KB @ 4679.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Reveille A34-714	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Reveille A34-714 OH	Database:	EDMP
Reference Design:	APD - Rev 1	Offset TVD Reference:	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Separation Factor	Warning
B Section 02						
Baker B02-04 - Wellbore #1 - Original Drilling - As Drilled	100.00	56.25	927.05	926.83	4,113.614	CC
Baker B02-04 - Wellbore #1 - Original Drilling - As Drilled	1,800.00	1,752.32	936.83	924.65	76.940	ES
Baker B02-04 - Wellbore #1 - Original Drilling - As Drilled	6,300.00	6,227.07	1,331.37	1,287.31	30.216	SF
Baker B02-05 - Wellbore #1 - Wellbore #1-As Drilled	1,917.34	1,877.44	2,373.90	2,360.86	182.062	CC
Baker B02-05 - Wellbore #1 - Wellbore #1-As Drilled	2,100.00	2,055.51	2,374.45	2,360.15	165.999	ES
Baker B02-05 - Wellbore #1 - Wellbore #1-As Drilled	6,350.00	6,242.26	2,605.93	2,561.58	58.764	SF
Bucklen 01-02 - Wellbore #1 - Wellbore #1- As Drilled	1,998.09	1,930.66	5,028.59	5,015.06	371.645	CC
Bucklen 01-02 - Wellbore #1 - Wellbore #1- As Drilled	4,000.00	3,905.57	5,034.88	5,007.33	182.774	ES
Bucklen 01-02 - Wellbore #1 - Wellbore #1- As Drilled	6,550.00	6,421.82	5,181.25	5,135.67	113.671	SF
Bucklen B02-12 - Wellbore #1 - Wellbore #1-As drilled	1,968.17	1,914.54	3,562.28	3,548.92	266.610	CC
Bucklen B02-12 - Wellbore #1 - Wellbore #1-As drilled	2,100.00	2,025.68	3,562.68	3,548.47	250.684	ES
Bucklen B02-12 - Wellbore #1 - Wellbore #1-As drilled	6,450.00	6,262.34	3,754.03	3,709.29	83.922	SF
Buckmur B02-14 - Wellbore #1 - Wellbore #1- As Drilled	1,604.38	1,541.44	5,189.82	5,179.08	483.219	CC
Buckmur B02-14 - Wellbore #1 - Wellbore #1- As Drilled	1,800.00	1,701.13	5,190.59	5,178.59	432.741	ES
Buckmur B02-14 - Wellbore #1 - Wellbore #1- As Drilled	6,550.00	6,252.08	5,547.10	5,502.17	123.446	SF
Buckmur B02-25 - Wellbore #1 - Wellbore #1- As Drilled	1,703.00	1,644.04	4,289.91	4,278.47	375.029	CC
Buckmur B02-25 - Wellbore #1 - Wellbore #1- As Drilled	2,400.00	2,414.46	4,290.41	4,273.83	258.804	ES
Buckmur B02-25 - Wellbore #1 - Wellbore #1- As Drilled	6,550.00	6,448.55	4,558.23	4,512.55	99.792	SF
Cougar B02-67-1HN - Original Drilling - Original Drilling -	100.00	85.33	888.55	888.29	3,328.430	CC
Cougar B02-67-1HN - Original Drilling - Original Drilling -	500.00	478.97	889.70	887.04	333.715	ES
Cougar B02-67-1HN - Original Drilling - Original Drilling -	6,200.00	5,830.89	1,966.37	1,927.39	50.437	SF
Cougar B02-68-1HN - Original Drilling - Original Drilling -	100.00	82.70	906.31	906.05	3,504.145	CC
Cougar B02-68-1HN - Original Drilling - Original Drilling -	200.00	179.99	906.71	905.94	1,172.174	ES
Cougar B02-68-1HN - Original Drilling - Original Drilling -	6,250.00	6,149.00	1,576.67	1,537.55	40.305	SF
Cougar B02-69-1HN - Original Drilling - Original Drilling -	3,097.28	3,154.50	781.10	762.24	41.418	CC
Cougar B02-69-1HN - Original Drilling - Original Drilling -	3,100.00	3,156.60	781.10	762.23	41.385	ES
Cougar B02-69-1HN - Original Drilling - Original Drilling -	6,000.00	5,937.11	1,057.82	1,020.90	28.653	SF
Foe A35-73HN - Original Drilling - Original Drilling - As Dr	1,640.32	1,595.37	3,408.06	3,399.25	386.677	CC, ES
Foe A35-73HN - Original Drilling - Original Drilling - As Dr	11,500.00	11,176.02	4,236.88	4,102.59	31.551	SF
Foe B02-02 - Wellbore #1 - Wellbore #1- As Drilled	1,067.44	999.46	3,091.97	3,085.06	447.411	CC
Foe B02-02 - Wellbore #1 - Wellbore #1- As Drilled	1,600.00	1,508.66	3,093.26	3,082.66	291.945	ES
Foe B02-02 - Wellbore #1 - Wellbore #1- As Drilled	6,800.00	6,620.70	3,765.66	3,718.84	80.425	SF
Foe B02-07 - Wellbore #1 - Wellbore #1-As Drilled	100.00	27.29	3,605.43	3,605.25	10,000.000	CC
Foe B02-07 - Wellbore #1 - Wellbore #1-As Drilled	2,100.00	2,074.08	3,611.15	3,596.79	251.445	ES
Foe B02-07 - Wellbore #1 - Wellbore #1-As Drilled	6,600.00	6,415.30	4,177.81	4,132.23	91.652	SF
Foemeyer B02-17 - Original Drilling - Original Drilling - As	437.10	372.10	3,747.42	3,744.96	1,524.218	CC
Foemeyer B02-17 - Original Drilling - Original Drilling - As	2,036.90	2,014.94	3,749.57	3,735.64	269.264	ES
Foemeyer B02-17 - Original Drilling - Original Drilling - As	6,750.00	6,490.40	4,333.53	4,287.37	93.873	SF
Fritzler B02-03 - Wellbore #1 - Original Drilling	2,000.00	1,933.00	1,994.14	1,948.54	43.734	CC
Fritzler B02-03 - Wellbore #1 - Original Drilling	2,100.00	2,032.98	1,995.66	1,947.71	41.624	ES
Fritzler B02-03 - Wellbore #1 - Original Drilling	6,600.00	6,453.22	2,591.68	2,439.29	17.007	SF
Fritzler B02-06 - Original Drilling - Original Drilling	2,000.00	1,938.00	2,641.51	2,595.81	57.805	CC
Fritzler B02-06 - Original Drilling - Original Drilling	2,100.00	2,037.98	2,642.37	2,594.33	54.997	ES
Fritzler B02-06 - Original Drilling - Original Drilling	6,450.00	6,335.03	3,035.07	2,885.37	20.274	SF
Fritzler B2-19 - Original Drilling - Original Drilling	2,000.00	1,950.00	1,632.32	1,586.38	35.534	CC
Fritzler B2-19 - Original Drilling - Original Drilling	2,100.00	2,049.98	1,633.12	1,584.84	33.822	ES
Fritzler B2-19 - Original Drilling - Original Drilling	6,350.00	6,255.66	1,995.73	1,847.95	13.505	SF
Lonewolf B02-65HC - Original Drilling - As Drilled	4,940.59	4,970.01	2,959.89	2,926.43	88.457	CC
Lonewolf B02-65HC - Original Drilling - As Drilled	5,000.00	5,001.38	2,960.08	2,926.31	87.651	ES
Lonewolf B02-65HC - Original Drilling - As Drilled	6,300.00	6,346.01	2,990.29	2,946.99	69.064	SF
Lonewolf B02-65HC - Original Drilling - ST01 - ST01 As D	4,940.52	4,970.01	2,959.13	2,925.16	87.113	CC
Lonewolf B02-65HC - Original Drilling - ST01 - ST01 As D	5,000.00	5,001.38	2,959.32	2,925.04	86.330	ES
Lonewolf B02-65HC - Original Drilling - ST01 - ST01 As D	6,300.00	6,346.01	2,989.55	2,945.72	68.215	SF

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

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Reveille A34-714
Project:	Wells Ranch	TVD Reference:	KB @ 4679.00ft
Reference Site:	A Section 35	MD Reference:	KB @ 4679.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Reveille A34-714	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Reveille A34-714 OH	Database:	EDMP
Reference Design:	APD - Rev 1	Offset TVD Reference:	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 02						
Lonewolf B02-65HC - Wellbore #3 - Wellbore #3	4,940.59	4,970.01	2,959.89	2,926.43	88.456	CC
Lonewolf B02-65HC - Wellbore #3 - Wellbore #3	5,000.00	5,001.38	2,960.08	2,926.31	87.651	ES
Lonewolf B02-65HC - Wellbore #3 - Wellbore #3	6,300.00	6,346.01	2,990.29	2,946.99	69.063	SF
M&M 02-23 - Wellbore #1 - Wellbore #1- As Drilled	4,878.57	5,423.34	5,817.55	5,777.84	146.512	CC
M&M 02-23 - Wellbore #1 - Wellbore #1- As Drilled	4,900.00	5,433.01	5,817.61	5,777.79	146.094	ES
M&M 02-23 - Wellbore #1 - Wellbore #1- As Drilled	6,550.00	6,400.01	6,015.44	5,966.88	123.869	SF
Meyer B02-01 - Original Drilling - Original Drilling - As Drill	1,557.10	1,486.11	4,367.79	4,357.43	421.493	CC
Meyer B02-01 - Original Drilling - Original Drilling - As Drill	2,000.00	1,918.06	4,369.30	4,355.85	324.659	ES
Meyer B02-01 - Original Drilling - Original Drilling - As Drill	6,950.00	6,538.99	5,051.04	5,004.35	108.196	SF
Meyer B02-08 - Wellbore #1 - Wellbore #1-As Drilled	438.48	366.48	4,806.77	4,804.33	1,966.212	CC
Meyer B02-08 - Wellbore #1 - Wellbore #1-As Drilled	2,000.00	1,917.30	4,813.61	4,800.16	357.671	ES
Meyer B02-08 - Wellbore #1 - Wellbore #1-As Drilled	6,800.00	6,500.01	5,461.07	5,414.77	117.959	SF
Meyer B02-09 - Wellbore #1 - Wellbore #1-As Drilled	2,057.39	2,063.40	5,516.94	5,502.75	388.842	CC
Meyer B02-09 - Wellbore #1 - Wellbore #1-As Drilled	2,100.00	2,111.80	5,517.15	5,502.64	380.327	ES
Meyer B02-09 - Wellbore #1 - Wellbore #1-As Drilled	6,750.00	6,438.49	6,125.62	6,079.60	133.135	SF
Meyer B02-16 (PA) - Wellbore #1 - Gyro Surveys	100.00	13.61	6,436.63	6,436.49	10,000.000	CC
Meyer B02-16 (PA) - Wellbore #1 - Gyro Surveys	2,009.79	1,944.67	6,440.39	6,426.80	473.800	ES
Meyer B02-16 (PA) - Wellbore #1 - Gyro Surveys	6,700.00	6,400.00	6,988.17	6,942.37	152.575	SF
Pherson 02-02 - Wellbore #1 - Wellbore #1-As Drilled	1,575.24	1,522.25	3,889.19	3,878.63	368.358	CC
Pherson 02-02 - Wellbore #1 - Wellbore #1-As Drilled	2,100.00	2,077.35	3,889.63	3,875.26	270.711	ES
Pherson 02-02 - Wellbore #1 - Wellbore #1-As Drilled	6,500.00	6,333.36	4,216.52	4,171.40	93.456	SF
Trebor B02-10 - Wellbore #1 - Wellbore #1 - As Drilled	2,009.78	1,955.55	4,427.38	4,413.53	319.616	CC, ES
Trebor B02-10 - Wellbore #1 - Wellbore #1 - As Drilled	6,600.00	6,268.35	4,997.39	4,952.25	110.698	SF
Trebor B02-15 - Wellbore #1 - Wellbore #1- As Drilled	1,852.66	1,783.71	5,539.70	5,527.23	444.367	CC
Trebor B02-15 - Wellbore #1 - Wellbore #1- As Drilled	2,000.00	1,917.10	5,539.86	5,526.40	411.598	ES
Trebor B02-15 - Wellbore #1 - Wellbore #1- As Drilled	6,650.00	6,926.59	5,992.01	5,944.44	125.968	SF
Wolfpack B02-62-1HN - Original Drilling - Original Drilling	806.47	758.49	4,165.96	4,161.52	939.162	CC, ES
Wolfpack B02-62-1HN - Original Drilling - Original Drilling	6,400.00	6,400.00	5,007.55	4,963.33	113.258	SF
Wolfpack B02-63-1HN - Original Drilling - Original Drilling	667.99	619.99	4,143.46	4,139.70	1,104.652	CC
Wolfpack B02-63-1HN - Original Drilling - Original Drilling	700.00	644.43	4,143.48	4,139.58	1,060.083	ES
Wolfpack B02-63-1HN - Original Drilling - Original Drilling	11,900.00	11,900.00	9,966.35	9,871.50	105.070	SF
Wolfpack B02-64-1HN - Original Drilling - Original Drilling	4,849.90	4,778.01	3,896.57	3,863.61	118.232	CC
Wolfpack B02-64-1HN - Original Drilling - Original Drilling	4,906.32	4,835.01	3,896.79	3,863.44	116.819	ES
Wolfpack B02-64-1HN - Original Drilling - Original Drilling	6,400.00	6,269.01	3,964.55	3,920.89	90.812	SF
Wolfpack B02-65-1HN - Original Drilling - Original Drilling	5,387.70	5,392.72	3,248.02	3,212.11	90.442	CC
Wolfpack B02-65-1HN - Original Drilling - Original Drilling	5,500.00	5,484.29	3,248.40	3,211.76	88.657	ES
Wolfpack B02-65-1HN - Original Drilling - Original Drilling	6,300.00	6,156.01	3,287.17	3,245.31	78.536	SF
Wolfpack B02-65HN - Original Drilling - Original Drilling -	4,263.88	4,306.01	2,956.16	2,927.76	104.097	CC, ES
Wolfpack B02-65HN - Original Drilling - Original Drilling -	6,300.00	6,203.01	3,028.94	2,986.83	71.931	SF
Wolfpack B02-66-1HN - Original Drilling - Original Drilling	5,927.85	5,975.13	2,603.52	2,562.80	63.945	CC
Wolfpack B02-66-1HN - Original Drilling - Original Drilling	6,000.00	6,031.16	2,603.74	2,562.59	63.275	ES
Wolfpack B02-66-1HN - Original Drilling - Original Drilling	6,300.00	6,230.73	2,630.43	2,587.65	61.489	SF
Wolfpack PC B03-63-1HN - Original Drilling - Original Dri	100.00	51.19	4,122.49	4,122.27	10,000.000	CC
Wolfpack PC B03-63-1HN - Original Drilling - Original Dri	1,600.00	1,493.49	4,132.49	4,110.20	185.411	ES
Wolfpack PC B03-63-1HN - Original Drilling - Original Dri	5,900.00	4,560.08	4,694.55	4,622.45	65.106	SF

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

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Reveille A34-714
Project:	Wells Ranch	TVD Reference:	KB @ 4679.00ft
Reference Site:	A Section 35	MD Reference:	KB @ 4679.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Reveille A34-714	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Reveille A34-714 OH	Database:	EDMP
Reference Design:	APD - Rev 1	Offset TVD Reference:	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 03						
Annie B3-9 - Wellbore #1 - Wellbore #1- As Drilled	6,152.64	6,076.92	3,809.83	3,766.78	88.508	CC, ES
Annie B3-9 - Wellbore #1 - Wellbore #1- As Drilled	6,450.00	6,482.95	3,875.49	3,830.06	85.291	SF
Clemons 2-3 - Wellbore #1 - Wellbore #1- As Drilled	6,289.27	6,228.10	2,160.04	2,116.24	49.318	CC
Clemons 2-3 - Wellbore #1 - Wellbore #1- As Drilled	6,300.00	6,236.95	2,160.10	2,116.23	49.241	ES
Clemons 2-3 - Wellbore #1 - Wellbore #1- As Drilled	6,550.00	6,448.97	2,193.84	2,148.44	48.327	SF
Clemons 42-3 - Wellbore #1 - Wellbore #1- As Drilled	6,152.63	6,053.30	2,529.44	2,486.50	58.903	CC, ES
Clemons 42-3 - Wellbore #1 - Wellbore #1- As Drilled	6,400.00	6,288.47	2,577.05	2,532.42	57.741	SF
Schoenleber 16-3 - Wellbore #1 - Wellbore #1- As Drilled	6,139.68	5,969.85	4,767.16	4,724.52	111.800	CC, ES
Schoenleber 16-3 - Wellbore #1 - Wellbore #1- As Drilled	6,500.00	6,230.01	4,869.23	4,824.47	108.802	SF
Sitzman 03-01 - Wellbore #1 - Wellbore #1- As Drilled	6,169.88	6,057.31	5,207.71	5,164.76	121.248	CC
Sitzman 03-01 - Wellbore #1 - Wellbore #1- As Drilled	6,200.00	6,200.00	5,208.29	5,164.73	119.566	ES
Sitzman 03-01 - Wellbore #1 - Wellbore #1- As Drilled	6,600.00	6,514.63	5,345.48	5,299.58	116.467	SF
B Section 04						
Bauer 1 (PA) - Wellbore #1 - No Surveys	6,482.75	6,374.53	9,732.99	9,582.64	64.736	CC
Bauer 1 (PA) - Wellbore #1 - No Surveys	6,500.00	6,389.21	9,733.06	9,582.36	64.588	ES
Bauer 1 (PA) - Wellbore #1 - No Surveys	7,100.00	6,686.44	9,797.26	9,639.24	61.998	SF
Bauer 2 (PA) - Wellbore #1 - No Surveys	6,444.66	6,338.31	7,116.68	7,038.63	91.182	CC
Bauer 2 (PA) - Wellbore #1 - No Surveys	6,450.00	6,343.03	7,116.68	7,038.58	91.114	ES
Bauer 2 (PA) - Wellbore #1 - No Surveys	7,100.00	6,683.44	7,204.70	7,122.09	87.214	SF
Bauer 21-4 (PR) - Wellbore #1 - Gyro Surveys	6,474.22	6,372.98	8,426.29	8,381.35	187.466	CC, ES
Bauer 21-4 (PR) - Wellbore #1 - Gyro Surveys	11,000.00	6,659.08	9,968.99	9,906.57	159.691	SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Reveille A34-714
Project:	Wells Ranch	TVD Reference:	KB @ 4679.00ft
Reference Site:	A Section 35	MD Reference:	KB @ 4679.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Reveille A34-714	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Reveille A34-714 OH	Database:	EDMP
Reference Design:	APD - Rev 1	Offset TVD Reference:	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 05						
Ehrlich 1 (TA) - Wellbore #1 - Gyro Surveys						Out of range
Ehrlich 5E-323 (PR) - Wellbore #1 - Permitted-PDC						Out of range
Ehrlich 5E-423 (DG) - Wellbore #1 - Permitted-PDC						Out of range
Ehrlich 5J-203 (PR) - Wellbore #1 - Permitted-PDC						Out of range
Ehrlich 5J-223 (PR) - Wellbore #1 - Permitted-PDC						Out of range
Ehrlich 5J-243 (PR) - Wellbore #1 - Permitted-PDC						Out of range
Ehrlich 5J-303 (PR) - Wellbore #1 - Permitted-PDC						Out of range
Ehrlich 5J-323 (PR) - Wellbore #1 - Permitted-PDC						Out of range
Ehrlich 5M-243 (PR) - Wellbore #1 - Permitted-PDC						Out of range
Ehrlich 5M-343 (PR) - Wellbore #1 - Permitted-PDC						Out of range
Mininger Pfeif 41-5 (SI) - Wellbore #1 - Gyro Surveys						Out of range
Noffsinger 21-5 (TA) - Wellbore #1 - Gyro Surveys						Out of range
Noffsinger 31-5 (TA) - Wellbore #1 - Gyro Surveys						Out of range
Snowmass 10N (DG) - Wellbore #1 - Permitted-PDC	6,346.20	16,156.48	5,825.63	5,677.85	39.421	CC
Snowmass 10N (DG) - Wellbore #1 - Permitted-PDC	6,350.00	16,156.48	5,825.64	5,677.80	39.404	ES
Snowmass 10N (DG) - Wellbore #1 - Permitted-PDC	8,400.00	16,156.48	6,900.97	6,706.20	35.433	SF
Snowmass 1C (DG) - Wellbore #1 - Permitted-PDC	6,577.34	14,787.56	5,082.45	5,020.64	82.229	CC
Snowmass 1C (DG) - Wellbore #1 - Permitted-PDC	6,600.00	14,787.56	5,082.64	5,020.27	81.497	ES
Snowmass 1C (DG) - Wellbore #1 - Permitted-PDC	10,800.00	14,787.56	6,975.68	6,788.90	37.348	SF
Snowmass 2N (DG) - Wellbore #1 - Permitted-PDC	6,509.73	14,729.08	5,127.97	5,056.53	71.776	CC
Snowmass 2N (DG) - Wellbore #1 - Permitted-PDC	6,550.00	14,729.08	5,128.59	5,056.16	70.813	ES
Snowmass 2N (DG) - Wellbore #1 - Permitted-PDC	10,500.00	14,729.08	6,977.39	6,791.20	37.474	SF
Snowmass 3N (DG) - Wellbore #1 - Permitted-PDC	6,471.06	15,299.73	5,165.77	5,085.70	64.517	CC
Snowmass 3N (DG) - Wellbore #1 - Permitted-PDC	6,500.00	15,299.73	5,166.10	5,085.31	63.941	ES
Snowmass 3N (DG) - Wellbore #1 - Permitted-PDC	10,300.00	15,299.73	6,975.66	6,780.63	35.768	SF
Snowmass 4N (DG) - Wellbore #1 - Permitted-PDC	6,456.90	15,736.33	5,229.68	5,139.15	57.764	CC
Snowmass 4N (DG) - Wellbore #1 - Permitted-PDC	6,500.00	15,736.33	5,230.48	5,138.84	57.079	ES
Snowmass 4N (DG) - Wellbore #1 - Permitted-PDC	10,100.00	15,736.33	7,005.25	6,805.62	35.091	SF
Snowmass 5N (DG) - Wellbore #1 - Permitted-PDC	6,421.56	15,406.96	5,294.91	5,196.41	53.756	CC
Snowmass 5N (DG) - Wellbore #1 - Permitted-PDC	6,450.00	15,406.96	5,295.27	5,196.14	53.414	ES
Snowmass 5N (DG) - Wellbore #1 - Permitted-PDC	9,800.00	15,406.96	6,965.16	6,771.66	35.995	SF
Snowmass 6N (DG) - Wellbore #1 - Permitted-PDC	6,409.71	15,878.12	5,392.53	5,282.09	48.829	CC
Snowmass 6N (DG) - Wellbore #1 - Permitted-PDC	6,450.00	15,878.12	5,393.32	5,281.98	48.442	ES
Snowmass 6N (DG) - Wellbore #1 - Permitted-PDC	9,600.00	15,878.12	7,023.05	6,824.57	35.385	SF
Snowmass 7N (DG) - Wellbore #1 - Permitted-PDC	6,378.73	15,556.58	5,473.01	5,355.27	46.483	CC
Snowmass 7N (DG) - Wellbore #1 - Permitted-PDC	6,400.00	15,556.58	5,473.24	5,355.08	46.322	ES
Snowmass 7N (DG) - Wellbore #1 - Permitted-PDC	9,300.00	15,556.58	6,977.13	6,784.29	36.181	SF
Snowmass 8N (DG) - Wellbore #1 - Permitted-PDC	6,376.77	16,001.51	5,565.14	5,438.20	43.842	CC
Snowmass 8N (DG) - Wellbore #1 - Permitted-PDC	6,400.00	16,001.51	5,565.42	5,438.03	43.687	ES
Snowmass 8N (DG) - Wellbore #1 - Permitted-PDC	9,100.00	16,001.51	6,988.87	6,792.45	35.582	SF
Snowmass 9N (DG) - Wellbore #1 - Permitted-PDC	6,350.33	15,681.01	5,678.67	5,542.32	41.646	CC, ES
Snowmass 9N (DG) - Wellbore #1 - Permitted-PDC	8,700.00	15,681.01	6,901.57	6,709.99	36.024	SF

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