

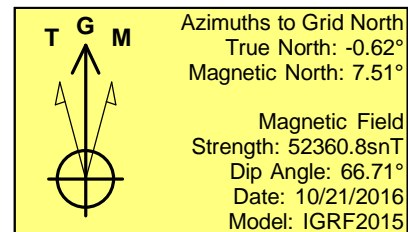
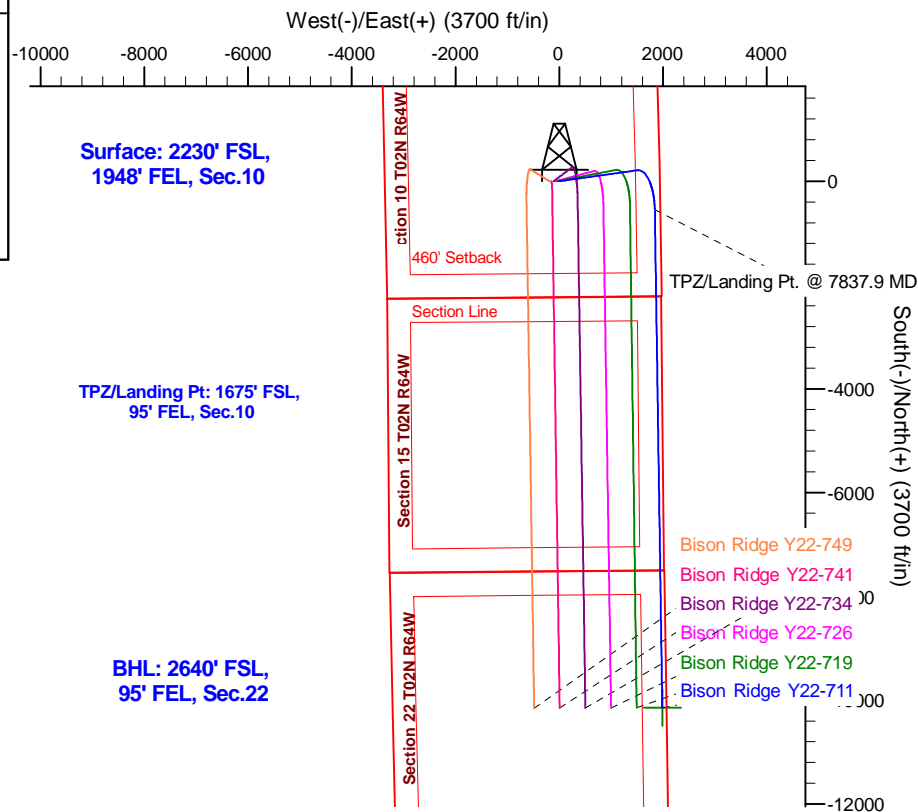
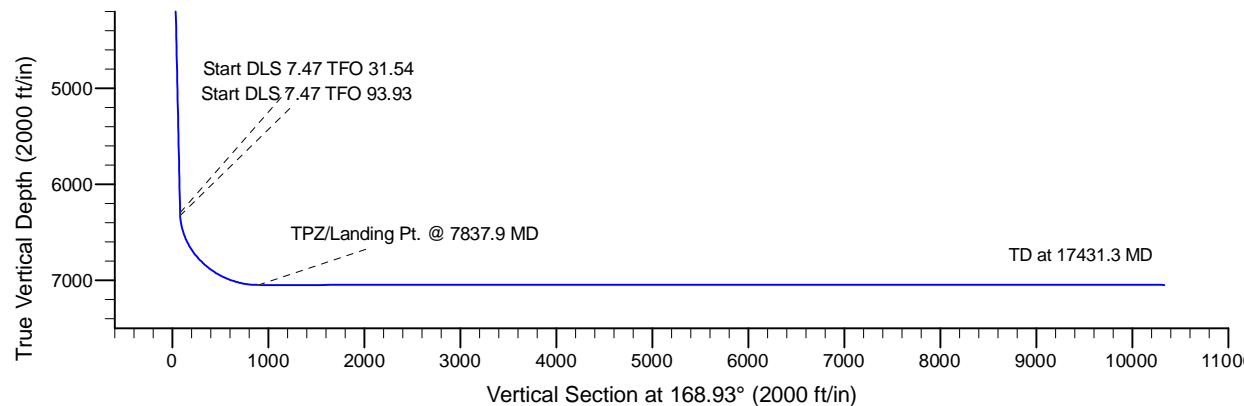
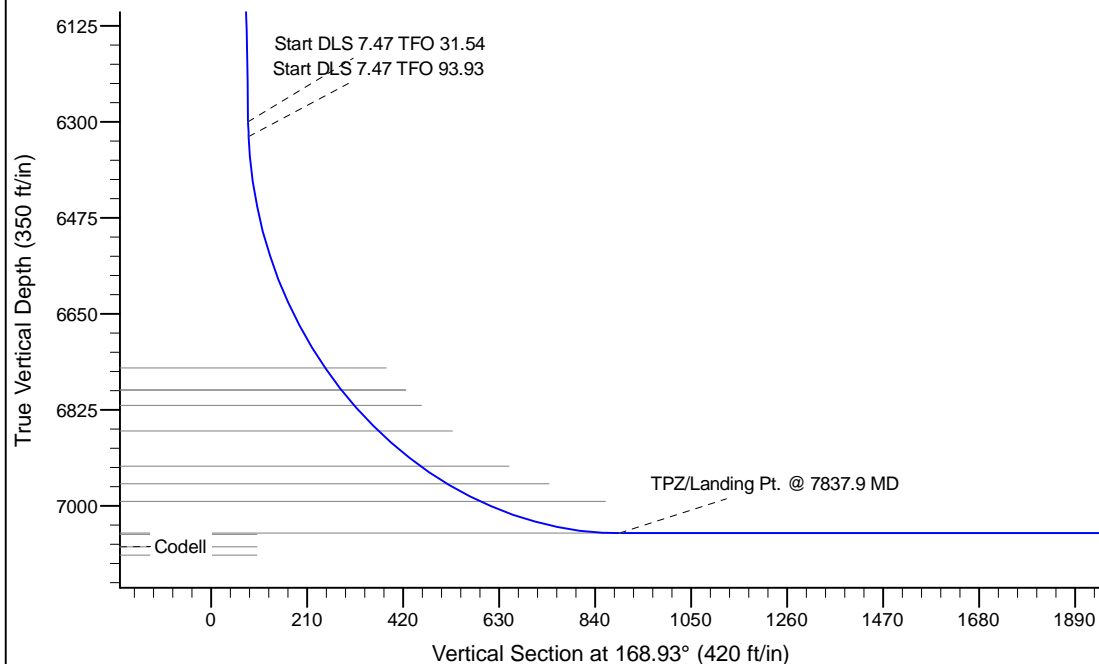
Project: Mustang  
 Site: Y Section 10-T2N-R64W Weld County, CO  
 Well: Bison Ridge Y22-711  
 Wellbore: Original Drilling  
 Design: APD - Rev 0

# 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	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	2000.0	0.00	0.00	2000.0	0.0	0.0	0.00	0.00	0.0	
3	3100.0	22.00	82.00	3073.2	29.0	206.6	2.00	82.00	11.2	
4	6580.2	22.00	82.00	6300.0	210.5	1497.6	0.00	0.00	81.0	
5	6609.8	23.91	84.85	6327.2	211.8	1509.0	7.47	31.54	81.9	
6	7837.9	90.00	179.14	7050.0	-550.0	1840.0	7.47	93.93	893.0	
7	17431.3	90.00	179.14	7050.0	-10142.3	1984.1	0.00	0.00	10334.6	Bison Ridge Y22-711 BHL 2640'FSL, 95'FEL



## WELL DETAILS: Bison Ridge Y22-711

Northing	Easting	Ground Elevation: 4923.0	Latitude	Longitude
0.00.0	1299618.9003730	3269724.2714911	40.1518199	-104.5350600

Plan: APD - Rev 0 (Bison Ridge Y22-711/Original Drilling)

Created By: Shailey Jewell Date: 10:31, April 27 2017

**OK to submit with 2A as per Noble Drilling**  
**4/27/2017 10:36**

# **Northern Region - DJ Basin**

**Mustang**

**Y Section 10**

**Bison Ridge Y22-711**

**Original Drilling**

**APD - Rev 0**

## **Anticollision Summary Report**

**27 April, 2017**

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

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Bison Ridge Y22-711
<b>Project:</b>	Mustang	<b>TVD Reference:</b>	WELL @ 4953.0ft (Original Well Elev.)
<b>Reference Site:</b>	Y Section 10	<b>MD Reference:</b>	WELL @ 4953.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Bison Ridge Y22-711	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	APD - Rev 0	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>	APD - Rev 0		
<b>Filter type:</b>	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
<b>Interpolation Method:</b>	MD Interval 100.0ft	<b>Error Model:</b>	ISCWSA
<b>Depth Range:</b>	Unlimited	<b>Scan Method:</b>	Closest Approach 3D
<b>Results Limited by:</b>	Maximum center-center distance of 1,933.6 ft	<b>Error Surface:</b>	Pedal Curve
<b>Warning Levels Evaluated at:</b>	2.00 Sigma	<b>Casing Method:</b>	Not applied

<b>Survey Tool Program</b>	<b>Date</b>	4/26/2017		
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.0	17,430.6	APD - Rev 0 (Original Drilling)	2_MWD+IFR1+MS	A008Mb: IFR dec & multi-station analysis

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Y Section 10						
Bison Ridge State Y22-786 - Original Drilling - APD - Rev	2,000.0	2,007.0	1,375.3	1,361.4	98.957	CC, ES
Bison Ridge State Y22-786 - Original Drilling - APD - Rev	2,700.0	2,460.9	1,515.7	1,498.1	85.713	SF
Bison Ridge Y22-719 - Original Drilling - APD - Rev 0	2,000.0	2,000.0	39.1	25.3	2.821	CC, ES
Bison Ridge Y22-719 - Original Drilling - APD - Rev 0	2,100.0	2,100.0	40.9	26.3	2.802	SF
Bison Ridge Y22-726 - Original Drilling - APD - Rev 0	2,000.0	2,001.0	75.5	61.6	5.439	CC, ES
Bison Ridge Y22-726 - Original Drilling - APD - Rev 0	2,100.0	2,101.0	77.2	62.6	5.293	SF
Bison Ridge Y22-734 - Original Drilling - APD - Rev 0	2,000.0	2,001.0	111.8	97.9	8.058	CC, ES
Bison Ridge Y22-734 - Original Drilling - APD - Rev 0	2,200.0	2,200.8	118.7	103.4	7.767	SF
Bison Ridge Y22-741 - Original Drilling - APD - Rev 0	2,000.0	2,001.0	150.9	137.1	10.878	CC, ES
Bison Ridge Y22-741 - Original Drilling - APD - Rev 0	2,200.0	2,200.8	157.9	142.6	10.327	SF
Bison Ridge Y22-749 - Original Drilling - APD - Rev 0	2,000.0	2,002.0	187.3	173.4	13.493	CC, ES
Bison Ridge Y22-749 - Original Drilling - APD - Rev 0	2,100.0	2,096.6	190.5	175.9	13.081	SF
Bison Ridge Y22-756 - Original Drilling - APD - Rev 0	2,000.0	2,008.0	1,224.3	1,210.4	88.073	CC, ES
Bison Ridge Y22-756 - Original Drilling - APD - Rev 0	4,500.0	4,412.6	1,918.3	1,886.9	61.029	SF
Bison Ridge Y22-764 - Original Drilling - APD - Rev 0	2,000.0	2,008.0	1,263.5	1,249.6	90.888	CC, ES
Bison Ridge Y22-764 - Original Drilling - APD - Rev 0	4,000.0	3,741.9	1,906.7	1,879.9	71.120	SF
Bison Ridge Y22-771 - Original Drilling - APD - Rev 0	2,000.0	2,008.0	1,299.8	1,285.9	93.502	CC, ES
Bison Ridge Y22-771 - Original Drilling - APD - Rev 0	2,900.0	2,731.3	1,466.4	1,446.9	75.439	SF
Bison Ridge Y22-779 - Original Drilling - APD - Rev 0	2,000.0	2,007.0	1,339.0	1,325.1	96.342	CC, ES
Bison Ridge Y22-779 - Original Drilling - APD - Rev 0	2,800.0	2,600.0	1,489.8	1,471.2	80.190	SF
Oscar Y10-72-1HC - Original Drilling - APD - Rev 1	6,491.2	6,239.4	171.1	145.6	6.721	CC, ES
Oscar Y10-72-1HC - Original Drilling - APD - Rev 1	6,500.0	6,247.6	171.1	145.6	6.714	SF
Oscar Y10-72-1HC - Original Drilling - Original Drilling - A	6,512.1	6,279.3	321.2	277.3	7.311	CC, ES
Oscar Y10-72-1HC - Original Drilling - Original Drilling - A	6,600.0	6,360.5	323.0	278.4	7.251	SF
Oscar Y10-72-1HN - Original Drilling - APD - Rev 0	6,605.6	6,319.7	248.7	222.8	9.599	CC, ES, SF
Oscar Y10-72-1HN - Original Drilling - Original Drilling - A	6,600.0	6,310.0	299.9	254.4	6.587	CC, ES, SF
Oscar Y10-72HN - Original Drilling - APD - Rev 1	6,033.7	5,810.9	135.5	112.1	5.792	CC, ES, SF
Oscar Y10-72HN - Original Drilling - Original Drilling - As	5,996.4	5,774.9	200.7	160.7	5.025	CC
Oscar Y10-72HN - Original Drilling - Original Drilling - As	6,000.0	5,778.1	200.7	160.7	5.022	ES, SF
Oscar Y10-73-1HC - Original Drilling - APD - Rev 1	4,719.6	4,593.5	208.6	191.0	11.866	CC, ES
Oscar Y10-73-1HC - Original Drilling - APD - Rev 1	4,800.0	4,668.1	210.8	192.9	11.792	SF
Oscar Y10-73-1HC - Original Drilling - Original Drilling - A	4,684.0	4,564.1	276.4	245.7	8.990	CC
Oscar Y10-73-1HC - Original Drilling - Original Drilling - A	4,700.0	4,578.8	276.5	245.6	8.968	ES
Oscar Y10-73-1HC - Original Drilling - Original Drilling - A	4,800.0	4,672.4	279.8	248.5	8.928	SF
Oscar Y10-73-1HN - Original Drilling - APD - Rev 1	5,197.0	5,034.6	278.4	258.7	14.149	CC
Oscar Y10-73-1HN - Original Drilling - APD - Rev 1	5,200.0	5,037.5	278.4	258.7	14.141	ES
Oscar Y10-73-1HN - Original Drilling - APD - Rev 1	5,300.0	5,130.2	281.1	261.0	14.008	SF

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

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

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Bison Ridge Y22-711
<b>Project:</b>	Mustang	<b>TVD Reference:</b>	WELL @ 4953.0ft (Original Well Elev.)
<b>Reference Site:</b>	Y Section 10	<b>MD Reference:</b>	WELL @ 4953.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Bison Ridge Y22-711	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	APD - Rev 0	<b>Offset TVD Reference:</b>	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Y Section 10						
Oscar Y10-73-1HN - Original Drilling - Original Drilling - A	5,167.4	5,015.5	352.8	318.6	10.332	CC
Oscar Y10-73-1HN - Original Drilling - Original Drilling - A	5,200.0	5,046.1	353.0	318.6	10.274	ES
Oscar Y10-73-1HN - Original Drilling - Original Drilling - A	5,300.0	5,139.4	356.0	321.0	10.171	SF
Oscar Y10-73HN - Original Drilling - APD - Rev 0	4,274.9	4,206.8	238.1	222.4	15.199	CC, ES
Oscar Y10-73HN - Original Drilling - APD - Rev 0	4,400.0	4,338.7	242.7	226.5	15.041	SF
Oscar Y10-73HN - Original Drilling - Original Drilling - As	4,238.4	4,142.9	279.7	251.3	9.858	CC, ES
Oscar Y10-73HN - Original Drilling - Original Drilling - As	4,300.0	4,196.2	281.4	252.8	9.818	SF
Oscar Y10-74-1HC - Original Drilling - APD - Rev 1	1,500.0	1,485.0	168.6	163.5	32.776	CC
Oscar Y10-74-1HC - Original Drilling - APD - Rev 1	1,600.0	1,583.6	169.0	163.5	30.704	ES
Oscar Y10-74-1HC - Original Drilling - APD - Rev 1	2,100.0	2,070.7	192.7	185.5	26.535	SF
Oscar Y10-74-1HC - Original Drilling - Original Drilling- A	504.7	497.7	167.8	164.9	58.320	CC
Oscar Y10-74-1HC - Original Drilling - Original Drilling- A	900.0	891.7	169.2	163.6	29.757	ES
Oscar Y10-74-1HC - Original Drilling - Original Drilling- A	2,400.0	2,380.7	225.9	211.9	16.191	SF
Oscar Y10-74-1HC - Original Drilling - Target Change	504.7	497.7	167.8	164.9	58.320	CC
Oscar Y10-74-1HC - Original Drilling - Target Change	900.0	891.7	169.2	163.6	29.757	ES
Oscar Y10-74-1HC - Original Drilling - Target Change	2,400.0	2,380.7	225.9	211.9	16.191	SF
Oscar Y10-74-1HN - Original Drilling - APD - Rev 0	1,000.0	982.0	149.4	146.0	44.562	CC, ES
Oscar Y10-74-1HN - Original Drilling - APD - Rev 0	3,700.0	3,649.5	377.3	364.1	28.601	SF
Oscar Y10-74-1HN - Original Drilling - Baxter	1,158.4	1,151.4	147.1	143.2	37.527	CC
Oscar Y10-74-1HN - Original Drilling - Baxter	1,300.0	1,292.7	147.3	142.8	33.263	ES
Oscar Y10-74-1HN - Original Drilling - Baxter	3,100.0	3,061.1	283.4	272.6	26.153	SF
Oscar Y10-74-1HN - Original Drilling - Original Drilling - A	1,158.4	1,151.4	147.2	139.8	20.046	CC
Oscar Y10-74-1HN - Original Drilling - Original Drilling - A	1,300.0	1,292.6	147.3	139.2	18.147	ES
Oscar Y10-74-1HN - Original Drilling - Original Drilling - A	3,100.0	3,061.1	283.5	264.8	15.180	SF
Oscar Y10-74HN - Original Drilling - APD - Rev 1	1,800.0	1,786.0	168.6	162.4	27.109	CC, ES
Oscar Y10-74HN - Original Drilling - APD - Rev 1	2,100.0	2,073.1	179.6	172.3	24.700	SF
Oscar Y10-74HN - Original Drilling - Original Drilling - As	1,927.8	1,922.0	154.8	143.6	13.795	CC, ES
Oscar Y10-74HN - Original Drilling - Original Drilling - As	2,100.0	2,084.7	159.9	147.7	13.134	SF
Oscar Y10-75-1HC - Original Drilling - APD - Rev 1	1,200.0	1,195.0	214.3	210.3	52.676	CC, ES
Oscar Y10-75-1HC - Original Drilling - APD - Rev 1	1,700.0	1,659.3	250.7	244.9	43.134	SF
Oscar Y10-75-1HC - Original Drilling - Original Drilling - A	1,579.8	1,574.9	201.4	191.9	21.259	CC
Oscar Y10-75-1HC - Original Drilling - Original Drilling - A	1,600.0	1,594.3	201.4	191.8	21.049	ES
Oscar Y10-75-1HC - Original Drilling - Original Drilling - A	1,900.0	1,876.9	213.2	202.2	19.322	SF
Oscar Y10-75-1HN - Original Drilling - APD - Rev 1	1,500.0	1,486.0	188.3	183.1	36.594	CC, ES
Oscar Y10-75-1HN - Original Drilling - APD - Rev 1	1,900.0	1,860.4	212.4	205.9	32.485	SF
Oscar Y10-75-1HN - Original Drilling - Original Drilling - A	0.0	0.0	188.3			
Oscar Y10-75-1HN - Original Drilling - Original Drilling - A	1,328.8	1,323.6	196.3	188.0	23.836	ES
Oscar Y10-75-1HN - Original Drilling - Original Drilling - A	2,100.0	2,073.6	217.6	205.4	17.939	SF
Oscar Y10-75HN - Original Drilling - APD - Rev 0	1,000.0	996.0	241.7	238.4	72.117	CC, ES
Oscar Y10-75HN - Original Drilling - APD - Rev 0	1,600.0	1,547.0	293.5	288.1	53.955	SF
Oscar Y10-75HN - Original Drilling - Original Drilling - As	379.2	375.2	241.4	239.5	124.742	CC
Oscar Y10-75HN - Original Drilling - Original Drilling - As	1,200.0	1,193.5	243.7	236.1	31.860	ES
Oscar Y10-75HN - Original Drilling - Original Drilling - As	1,500.0	1,469.8	257.8	248.9	28.724	SF
Oscar Y10-76-1HC - Original Drilling - APD - Rev 0	2,369.3	2,512.8	1,180.3	1,172.1	144.515	CC, ES
Oscar Y10-76-1HC - Original Drilling - APD - Rev 0	4,800.0	4,657.2	1,910.5	1,893.5	112.245	SF
Oscar Y10-76-1HN - Original Drilling - APD - Rev 2	2,316.2	2,446.2	1,227.6	1,219.6	153.511	CC, ES
Oscar Y10-76-1HN - Original Drilling - APD - Rev 2	4,800.0	4,670.4	1,911.4	1,894.4	112.235	SF
Oscar Y10-76-1HN - Original Drilling - Original Drilling - A	2,145.9	2,202.7	1,217.7	1,205.1	96.502	CC, ES
Oscar Y10-76-1HN - Original Drilling - Original Drilling - A	4,800.0	4,649.1	1,921.1	1,890.7	63.191	SF
Oscar Y10-76HN - Original Drilling - APD - Rev 2	1,800.0	1,792.0	1,311.6	1,305.3	210.873	CC, ES
Oscar Y10-76HN - Original Drilling - APD - Rev 2	3,900.0	3,821.6	1,904.6	1,891.0	140.062	SF
Oscar Y10-76HN - Original Drilling - Original Drilling - As	100.0	91.9	1,311.6	1,311.3	4,625.337	CC
Oscar Y10-76HN - Original Drilling - Original Drilling - As	1,200.0	1,189.7	1,312.7	1,305.2	174.888	ES

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

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

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Bison Ridge Y22-711
<b>Project:</b>	Mustang	<b>TVD Reference:</b>	WELL @ 4953.0ft (Original Well Elev.)
<b>Reference Site:</b>	Y Section 10	<b>MD Reference:</b>	WELL @ 4953.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Bison Ridge Y22-711	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	APD - Rev 0	<b>Offset TVD Reference:</b>	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Y Section 10						
Oscar Y10-76HN - Original Drilling - Original Drilling - As	3,900.0	3,812.1	1,916.3	1,892.8	81.663	SF
Oscar Y10-77-1HC - Original Drilling - APD - Rev 2	1,200.0	1,192.0	1,350.4	1,346.4	331.896	CC, ES
Oscar Y10-77-1HC - Original Drilling - APD - Rev 2	3,100.0	2,658.7	1,862.4	1,852.0	179.444	SF
Oscar Y10-77-1HC - Original Drilling - Original Drilling - A	1,109.1	1,101.2	1,346.1	1,339.1	190.574	CC
Oscar Y10-77-1HC - Original Drilling - Original Drilling - A	1,300.0	1,286.6	1,346.4	1,338.3	164.728	ES
Oscar Y10-77-1HC - Original Drilling - Original Drilling - A	3,500.0	3,220.1	1,893.0	1,873.0	94.262	SF
Oscar Y10-77-1HN - Original Drilling - APD 0 Rev 0	1,500.0	1,489.0	1,311.6	1,306.4	254.956	CC, ES
Oscar Y10-77-1HN - Original Drilling - APD 0 Rev 0	3,000.0	2,613.4	1,688.7	1,678.6	167.263	SF
Oscar Y10-77HN - Original Drilling - APD - Rev 2	1,000.0	993.0	1,386.5	1,383.2	413.659	CC, ES
Oscar Y10-77HN - Original Drilling - APD - Rev 2	3,000.0	2,483.0	1,923.9	1,914.0	193.127	SF
Oscar Y10-77HN - Original Drilling - Original Drilling - As	792.8	785.9	1,382.6	1,378.0	299.373	CC
Oscar Y10-77HN - Original Drilling - Original Drilling - As	1,200.0	1,186.0	1,382.8	1,375.3	185.681	ES
Oscar Y10-77HN - Original Drilling - Original Drilling - As	3,200.0	2,873.7	1,884.0	1,866.0	104.833	SF
Oscar Y10-78-1HC - Original Drilling - APD - Rev 2						Out of range
Oscar Y10-78-1HC - Original Drilling - Original Drilling - A						Out of range
Oscar Y10-78-1HN - Original Drilling - APD - Rev 2						Out of range
Oscar Y10-78-1HN - Original Drilling - Original Drilling - As						Out of range
Oscar Y10-78HN - Original Drilling - APD - Rev 2						Out of range
Oscar Y10-78HN - Original Drilling - Original Drilling - As						Out of range
Oscar Y10-79-1HC - Original Drilling - APD - Rev 2						Out of range
Oscar Y10-79-1HC - Original Drilling - Original Drilling - A						Out of range
Oscar Y10-79-1HN - Original Drilling - APD - Rev 2						Out of range
Oscar Y10-79-1HN - Original Drilling - Original Drilling - A						Out of range
Oscar Y10-79HN - Original Drilling - APD - Rev 2						Out of range
Oscar Y10-79HN - Original Drilling - Original Drilling - As						Out of range
Oscar Y10-79HN - Original Drilling - ST01 - ST01 - As Dr						Out of range
Oscar Y11-79HN - Original Drilling - APD - Rev 1	6,789.4	6,485.5	339.5	313.3	12.965	CC, ES
Oscar Y11-79HN - Original Drilling - APD - Rev 1	6,800.0	6,491.5	339.6	313.4	12.937	SF
Oscar Y11-79HN - Original Drilling - Original Drilling - As	6,746.3	6,420.2	359.3	313.4	7.833	CC, ES, SF
Oscar Y11-79HN - ST01 Original Drilling - ST01 Original	6,746.3	6,420.2	359.3	313.4	7.833	CC, ES, SF
Y Section 15						
Feather 31-15 - Original Drilling - Original Drilling - As Dr	9,880.8	7,075.1	1,733.1	1,673.5	29.089	CC, ES
Feather 31-15 - Original Drilling - Original Drilling - As Dr	9,900.0	7,075.2	1,733.2	1,673.6	29.081	SF
UPRR 62 Pan Am B1 - Original Drilling - Original Drilling	13,110.8	7,121.3	1,565.6	1,485.2	19.463	CC, ES, SF
Y Section 22						
Acco-Terra-Bodeker 40 - Original Drilling - Original Drilling						Out of range
Goetz #1 (PA) - Original Drilling - Original Drilling - As Dr	15,774.1	7,117.0	916.5	698.6	4.206	CC, ES, SF
Goetz #2 (PA) - Original Drilling - Original Drilling - As Dr						Out of range
Goetz Y22-06 - Original Drilling - Original Drilling - As Dri						Out of range

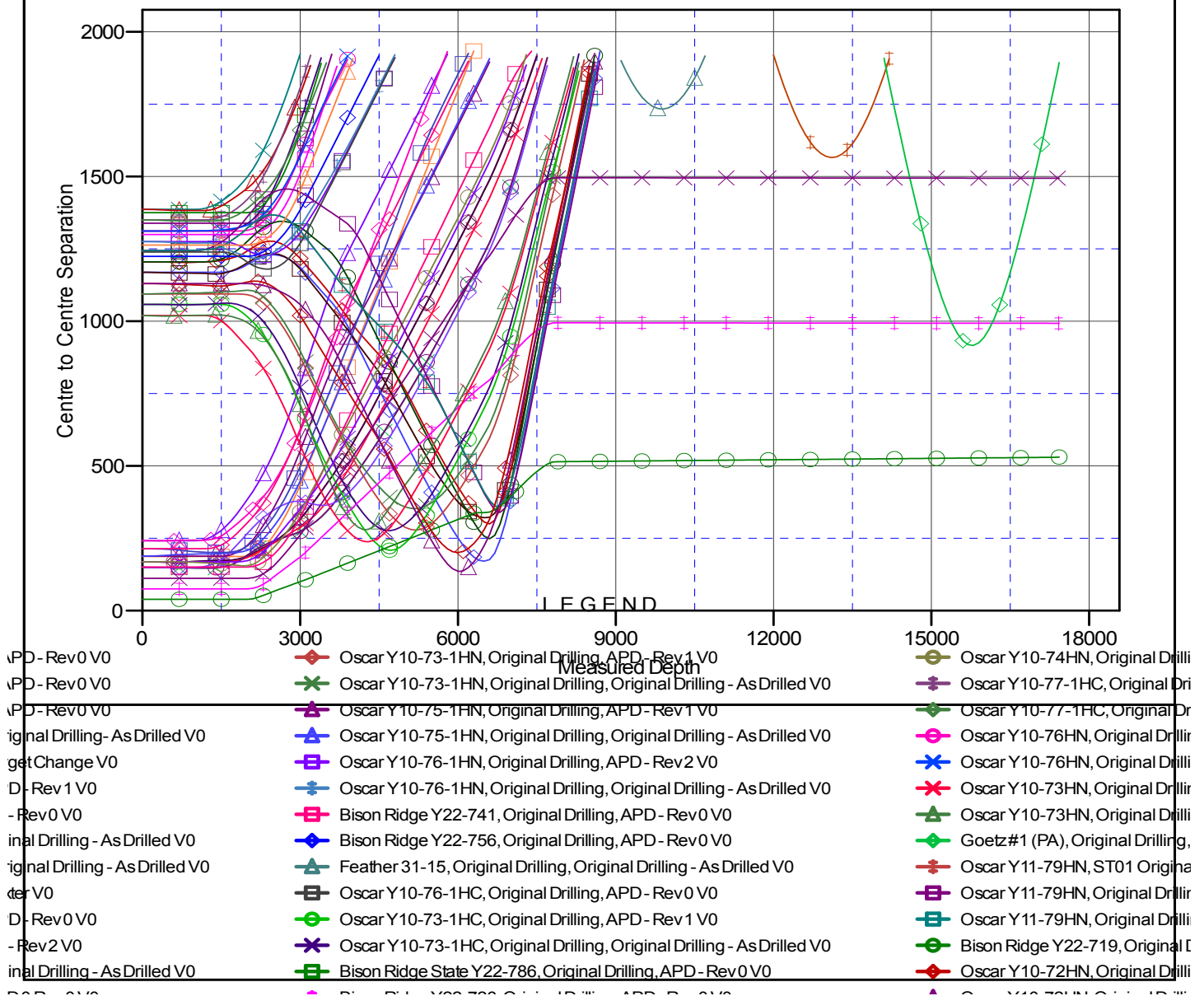
**Noble Energy, Inc.**  
**Anticollision Summary Report**

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Bison Ridge Y22-711
<b>Project:</b>	Mustang	<b>TVD Reference:</b>	WELL @ 4953.0ft (Original Well Elev.)
<b>Reference Site:</b>	Y Section 10	<b>MD Reference:</b>	WELL @ 4953.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Bison Ridge Y22-711	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	APD - Rev 0	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 4953.0ft (Original Well Elev.)  
Offset Depths are relative to Offset Datum  
Central Meridian is -105.5000000

Coordinates are relative to: Bison Ridge Y22-711  
Coordinate System is US State Plane 1983, Colorado Northern Zone  
Grid Convergence at Surface is: 0.62°

## Ladder Plot



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

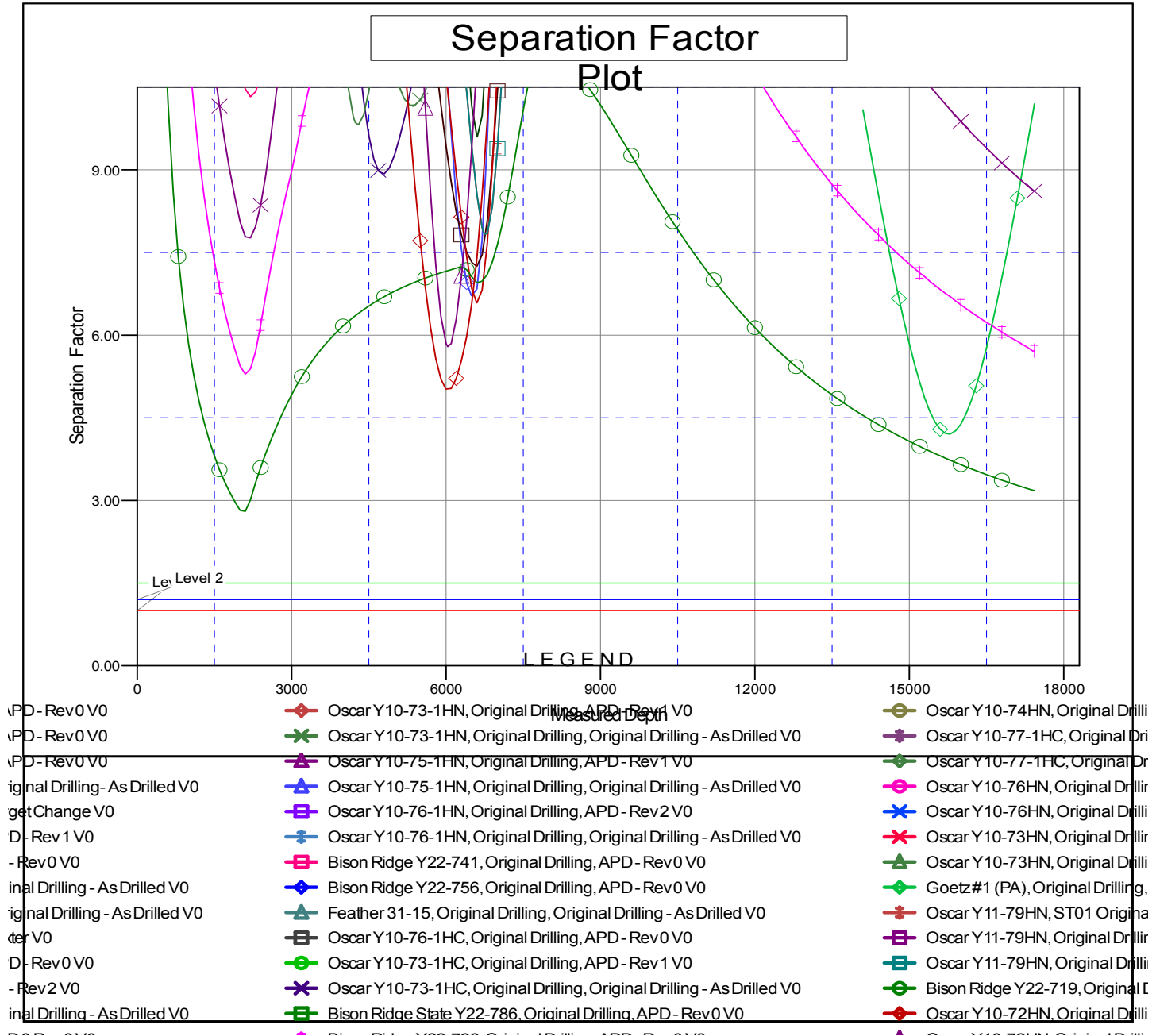
# Noble Energy, Inc.

## Anticollision Summary Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Bison Ridge Y22-711
<b>Project:</b>	Mustang	<b>TVD Reference:</b>	WELL @ 4953.0ft (Original Well Elev.)
<b>Reference Site:</b>	Y Section 10	<b>MD Reference:</b>	WELL @ 4953.0ft (Original Well Elev.)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Bison Ridge Y22-711	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDMP
<b>Reference Design:</b>	APD - Rev 0	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 4953.0ft (Original Well Elev.)  
 Offset Depths are relative to Offset Datum  
 Central Meridian is -105.5000000

Coordinates are relative to: Bison Ridge Y22-711  
 Coordinate System is US State Plane 1983, Colorado Northern Zone  
 Grid Convergence at Surface is: 0.62°



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