

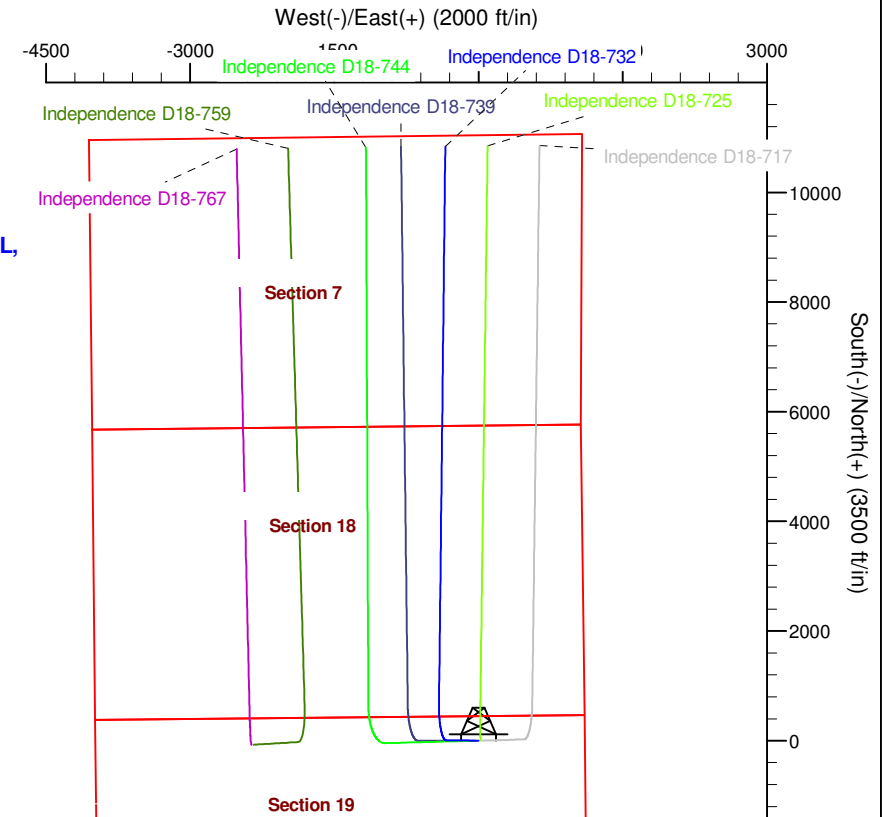
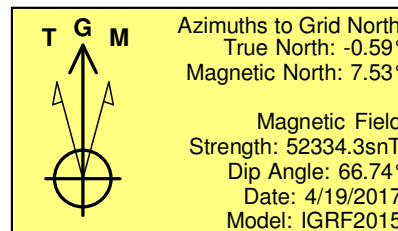
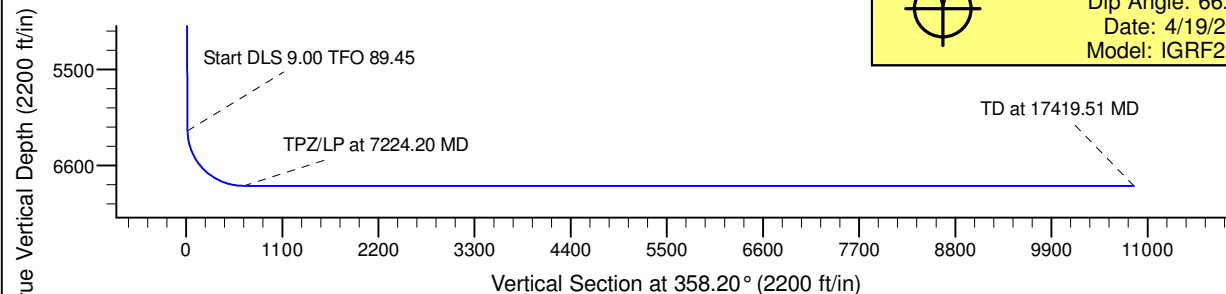
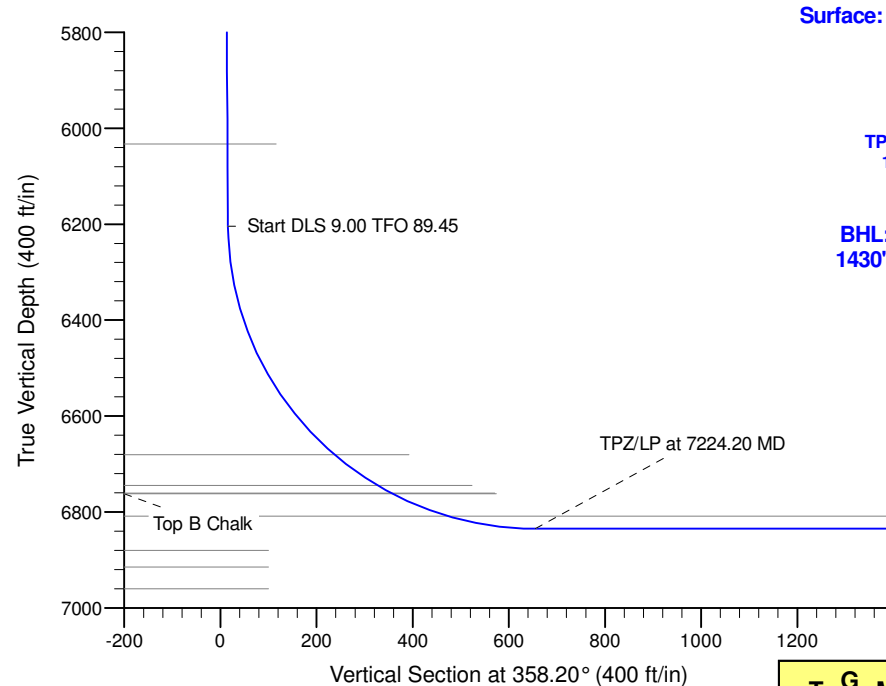
Project: Mustang
Site: D Section 19
Well: Independence D18-732
Wellbore: Independence D18-732
Design: Plan 1

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	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	3400.00	0.00	0.00	3400.00	0.00	0.00	0.00	0.00	0.00	
3	3763.11	7.26	270.92	3762.14	0.37	-22.98	2.00	270.92	1.09	
4	6224.98	7.26	270.92	6204.26	5.37	-334.15	0.00	0.00	15.85	
5	7224.20	90.00	0.37	6835.00	642.49	-410.44	9.00	89.45	655.05	Independence D18-732 TPZ
6	17419.51	90.00	0.37	6835.00	10837.59	-345.05	0.00	0.00	10843.08	Independence D18-732 BHL



WELL DETAILS: Independence D18-732

Northing	Easting	Latitude	Longitude
0.00	1323129.99	4770.00	-104.5884282
	3254563.77	40.2167975	

Plan: Plan 1 (Independence D18-732/Independence D18-732)

Created By: Colby Baxter Date: 9:50, September 20 2018

Checked: _____ Date: _____

Reviewed: _____ Date: _____

Approved: _____ Date: _____

Northern Region - DJ Basin

Mustang

D Section 19

Independence D18-732

Independence D18-732

Plan: Plan 1

Standard Survey Report

20 September, 2018

Noble Energy, Inc.

Survey Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Independence D18-732
Project:	Mustang	TVD Reference:	Well @ 4800.00ft
Site:	D Section 19	MD Reference:	Well @ 4800.00ft
Well:	Independence D18-732	North Reference:	Grid
Wellbore:	Independence D18-732	Survey Calculation Method:	Minimum Curvature
Design:	Plan 1	Database:	EDMP

Project	Mustang, 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		D Section 19			
Site Position:		Northing:	1,318,926.35 usft	Latitude:	40.2052853
From:	Map	Easting:	3,253,617.62 usft	Longitude:	-104.5919702
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.59 °

Well	Independence D18-732					
Well Position	+N/-S	0.00 ft	Northing:	1,323,129.99 usft	Latitude:	40.2167976
	+E/-W	0.00 ft	Easting:	3,254,563.77 usft	Longitude:	-104.5884282
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,770.00 ft

Wellbore	Independence D18-732				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	4/19/2017	8.12	66.74	52,334.26783879

Design	Plan 1				
Audit Notes:					
Version:	Phase:	PLAN	Tie On Depth:	0.00	
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.00	0.00	0.00	358.20	

Survey Tool Program	Date	9/20/2018			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.00	17,419.51	Plan 1 (Independence D18-732)	2_MWD+IFR1+MS	A008Mb: IFR dec & multi-station analysis	

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	
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	
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	

Noble Energy, Inc.

Survey Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Independence D18-732
Project:	Mustang	TVD Reference:	Well @ 4800.00ft
Site:	D Section 19	MD Reference:	Well @ 4800.00ft
Well:	Independence D18-732	North Reference:	Grid
Wellbore:	Independence D18-732	Survey Calculation Method:	Minimum Curvature
Design:	Plan 1	Database:	EDMP

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)	
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	
1,500.00	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	
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,500.00	2.00	270.92	3,499.98	0.03	-1.74	0.08	2.00	2.00	0.00	
3,600.00	4.00	270.92	3,599.84	0.11	-6.98	0.33	2.00	2.00	0.00	
3,700.00	6.00	270.92	3,699.45	0.25	-15.69	0.74	2.00	2.00	0.00	
3,763.11	7.26	270.92	3,762.14	0.37	-22.98	1.09	2.00	2.00	0.00	
3,800.00	7.26	270.92	3,798.73	0.44	-27.64	1.31	0.00	0.00	0.00	
3,900.00	7.26	270.92	3,897.93	0.65	-40.28	1.91	0.00	0.00	0.00	
4,000.00	7.26	270.92	3,997.13	0.85	-52.92	2.51	0.00	0.00	0.00	
4,100.00	7.26	270.92	4,096.33	1.05	-65.56	3.11	0.00	0.00	0.00	
4,200.00	7.26	270.92	4,195.52	1.26	-78.20	3.71	0.00	0.00	0.00	
4,300.00	7.26	270.92	4,294.72	1.46	-90.84	4.31	0.00	0.00	0.00	
4,400.00	7.26	270.92	4,393.92	1.66	-103.48	4.91	0.00	0.00	0.00	
4,500.00	7.26	270.92	4,493.12	1.87	-116.12	5.51	0.00	0.00	0.00	
4,600.00	7.26	270.92	4,592.31	2.07	-128.76	6.11	0.00	0.00	0.00	
4,700.00	7.26	270.92	4,691.51	2.27	-141.40	6.71	0.00	0.00	0.00	
4,800.00	7.26	270.92	4,790.71	2.48	-154.04	7.31	0.00	0.00	0.00	
4,900.00	7.26	270.92	4,889.91	2.68	-166.68	7.91	0.00	0.00	0.00	
5,000.00	7.26	270.92	4,989.11	2.88	-179.32	8.51	0.00	0.00	0.00	
5,100.00	7.26	270.92	5,088.30	3.09	-191.95	9.11	0.00	0.00	0.00	
5,200.00	7.26	270.92	5,187.50	3.29	-204.59	9.71	0.00	0.00	0.00	

Noble Energy, Inc.

Survey Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Independence D18-732
Project:	Mustang	TVD Reference:	Well @ 4800.00ft
Site:	D Section 19	MD Reference:	Well @ 4800.00ft
Well:	Independence D18-732	North Reference:	Grid
Wellbore:	Independence D18-732	Survey Calculation Method:	Minimum Curvature
Design:	Plan 1	Database:	EDMP

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)
5,300.00	7.26	270.92	5,286.70	3.49	-217.23	10.31	0.00	0.00	0.00
5,400.00	7.26	270.92	5,385.90	3.70	-229.87	10.91	0.00	0.00	0.00
5,500.00	7.26	270.92	5,485.10	3.90	-242.51	11.51	0.00	0.00	0.00
5,600.00	7.26	270.92	5,584.29	4.10	-255.15	12.11	0.00	0.00	0.00
5,700.00	7.26	270.92	5,683.49	4.31	-267.79	12.71	0.00	0.00	0.00
5,800.00	7.26	270.92	5,782.69	4.51	-280.43	13.30	0.00	0.00	0.00
5,900.00	7.26	270.92	5,881.89	4.71	-293.07	13.90	0.00	0.00	0.00
6,000.00	7.26	270.92	5,981.08	4.92	-305.71	14.50	0.00	0.00	0.00
6,100.00	7.26	270.92	6,080.28	5.12	-318.35	15.10	0.00	0.00	0.00
6,200.00	7.26	270.92	6,179.48	5.32	-330.99	15.70	0.00	0.00	0.00
6,224.98	7.26	270.92	6,204.26	5.37	-334.15	15.85	0.00	0.00	0.00
6,300.00	9.95	313.79	6,278.50	9.94	-343.58	20.71	9.00	3.58	57.14
6,400.00	17.37	336.33	6,375.67	29.63	-355.83	40.78	9.00	7.42	22.54
6,500.00	25.80	345.08	6,468.60	64.40	-367.45	75.90	9.00	8.43	8.75
6,600.00	34.50	349.68	6,555.00	113.39	-378.15	125.20	9.00	8.70	4.60
6,700.00	43.32	352.60	6,632.74	175.40	-387.66	187.47	9.00	8.81	2.92
6,800.00	52.18	354.69	6,699.92	248.89	-395.75	261.19	9.00	8.87	2.09
6,900.00	61.08	356.33	6,754.87	332.07	-402.22	344.52	9.00	8.90	1.64
7,000.00	69.99	357.71	6,796.24	422.87	-406.91	435.43	9.00	8.91	1.38
7,100.00	78.91	358.94	6,823.02	519.07	-409.70	531.67	9.00	8.92	1.23
7,200.00	87.84	0.09	6,834.54	618.30	-410.53	630.87	9.00	8.93	1.16
7,224.20	90.00	0.37	6,835.00	642.49	-410.44	655.05	9.00	8.93	1.14
7,300.00	90.00	0.37	6,835.00	718.29	-409.95	730.80	0.00	0.00	0.00
7,400.00	90.00	0.37	6,835.00	818.29	-409.31	830.73	0.00	0.00	0.00
7,500.00	90.00	0.37	6,835.00	918.29	-408.67	930.66	0.00	0.00	0.00
7,600.00	90.00	0.37	6,835.00	1,018.29	-408.03	1,030.59	0.00	0.00	0.00
7,700.00	90.00	0.37	6,835.00	1,118.28	-407.39	1,130.51	0.00	0.00	0.00
7,800.00	90.00	0.37	6,835.00	1,218.28	-406.74	1,230.44	0.00	0.00	0.00
7,900.00	90.00	0.37	6,835.00	1,318.28	-406.10	1,330.37	0.00	0.00	0.00
8,000.00	90.00	0.37	6,835.00	1,418.28	-405.46	1,430.30	0.00	0.00	0.00
8,100.00	90.00	0.37	6,835.00	1,518.27	-404.82	1,530.23	0.00	0.00	0.00
8,200.00	90.00	0.37	6,835.00	1,618.27	-404.18	1,630.16	0.00	0.00	0.00
8,300.00	90.00	0.37	6,835.00	1,718.27	-403.54	1,730.09	0.00	0.00	0.00
8,400.00	90.00	0.37	6,835.00	1,818.27	-402.90	1,830.01	0.00	0.00	0.00
8,500.00	90.00	0.37	6,835.00	1,918.27	-402.25	1,929.94	0.00	0.00	0.00
8,600.00	90.00	0.37	6,835.00	2,018.26	-401.61	2,029.87	0.00	0.00	0.00
8,700.00	90.00	0.37	6,835.00	2,118.26	-400.97	2,129.80	0.00	0.00	0.00
8,800.00	90.00	0.37	6,835.00	2,218.26	-400.33	2,229.73	0.00	0.00	0.00
8,900.00	90.00	0.37	6,835.00	2,318.26	-399.69	2,329.66	0.00	0.00	0.00
9,000.00	90.00	0.37	6,835.00	2,418.26	-399.05	2,429.59	0.00	0.00	0.00
9,100.00	90.00	0.37	6,835.00	2,518.25	-398.41	2,529.51	0.00	0.00	0.00
9,200.00	90.00	0.37	6,835.00	2,618.25	-397.77	2,629.44	0.00	0.00	0.00
9,300.00	90.00	0.37	6,835.00	2,718.25	-397.12	2,729.37	0.00	0.00	0.00

Noble Energy, Inc.

Survey Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Independence D18-732
Project:	Mustang	TVD Reference:	Well @ 4800.00ft
Site:	D Section 19	MD Reference:	Well @ 4800.00ft
Well:	Independence D18-732	North Reference:	Grid
Wellbore:	Independence D18-732	Survey Calculation Method:	Minimum Curvature
Design:	Plan 1	Database:	EDMP

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)
9,400.00	90.00	0.37	6,835.00	2,818.25	-396.48	2,829.30	0.00	0.00	0.00
9,500.00	90.00	0.37	6,835.00	2,918.25	-395.84	2,929.23	0.00	0.00	0.00
9,600.00	90.00	0.37	6,835.00	3,018.24	-395.20	3,029.16	0.00	0.00	0.00
9,700.00	90.00	0.37	6,835.00	3,118.24	-394.56	3,129.09	0.00	0.00	0.00
9,800.00	90.00	0.37	6,835.00	3,218.24	-393.92	3,229.01	0.00	0.00	0.00
9,900.00	90.00	0.37	6,835.00	3,318.24	-393.28	3,328.94	0.00	0.00	0.00
10,000.00	90.00	0.37	6,835.00	3,418.24	-392.63	3,428.87	0.00	0.00	0.00
10,100.00	90.00	0.37	6,835.00	3,518.23	-391.99	3,528.80	0.00	0.00	0.00
10,200.00	90.00	0.37	6,835.00	3,618.23	-391.35	3,628.73	0.00	0.00	0.00
10,300.00	90.00	0.37	6,835.00	3,718.23	-390.71	3,728.66	0.00	0.00	0.00
10,400.00	90.00	0.37	6,835.00	3,818.23	-390.07	3,828.59	0.00	0.00	0.00
10,500.00	90.00	0.37	6,835.00	3,918.23	-389.43	3,928.51	0.00	0.00	0.00
10,600.00	90.00	0.37	6,835.00	4,018.22	-388.79	4,028.44	0.00	0.00	0.00
10,700.00	90.00	0.37	6,835.00	4,118.22	-388.15	4,128.37	0.00	0.00	0.00
10,800.00	90.00	0.37	6,835.00	4,218.22	-387.50	4,228.30	0.00	0.00	0.00
10,900.00	90.00	0.37	6,835.00	4,318.22	-386.86	4,328.23	0.00	0.00	0.00
11,000.00	90.00	0.37	6,835.00	4,418.22	-386.22	4,428.16	0.00	0.00	0.00
11,100.00	90.00	0.37	6,835.00	4,518.21	-385.58	4,528.09	0.00	0.00	0.00
11,200.00	90.00	0.37	6,835.00	4,618.21	-384.94	4,628.01	0.00	0.00	0.00
11,300.00	90.00	0.37	6,835.00	4,718.21	-384.30	4,727.94	0.00	0.00	0.00
11,400.00	90.00	0.37	6,835.00	4,818.21	-383.66	4,827.87	0.00	0.00	0.00
11,500.00	90.00	0.37	6,835.00	4,918.20	-383.02	4,927.80	0.00	0.00	0.00
11,600.00	90.00	0.37	6,835.00	5,018.20	-382.37	5,027.73	0.00	0.00	0.00
11,700.00	90.00	0.37	6,835.00	5,118.20	-381.73	5,127.66	0.00	0.00	0.00
11,800.00	90.00	0.37	6,835.00	5,218.20	-381.09	5,227.59	0.00	0.00	0.00
11,900.00	90.00	0.37	6,835.00	5,318.20	-380.45	5,327.51	0.00	0.00	0.00
12,000.00	90.00	0.37	6,835.00	5,418.19	-379.81	5,427.44	0.00	0.00	0.00
12,100.00	90.00	0.37	6,835.00	5,518.19	-379.17	5,527.37	0.00	0.00	0.00
12,200.00	90.00	0.37	6,835.00	5,618.19	-378.53	5,627.30	0.00	0.00	0.00
12,300.00	90.00	0.37	6,835.00	5,718.19	-377.88	5,727.23	0.00	0.00	0.00
12,400.00	90.00	0.37	6,835.00	5,818.19	-377.24	5,827.16	0.00	0.00	0.00
12,500.00	90.00	0.37	6,835.00	5,918.18	-376.60	5,927.09	0.00	0.00	0.00
12,600.00	90.00	0.37	6,835.00	6,018.18	-375.96	6,027.01	0.00	0.00	0.00
12,700.00	90.00	0.37	6,835.00	6,118.18	-375.32	6,126.94	0.00	0.00	0.00
12,800.00	90.00	0.37	6,835.00	6,218.18	-374.68	6,226.87	0.00	0.00	0.00
12,900.00	90.00	0.37	6,835.00	6,318.18	-374.04	6,326.80	0.00	0.00	0.00
13,000.00	90.00	0.37	6,835.00	6,418.17	-373.40	6,426.73	0.00	0.00	0.00
13,100.00	90.00	0.37	6,835.00	6,518.17	-372.75	6,526.66	0.00	0.00	0.00
13,200.00	90.00	0.37	6,835.00	6,618.17	-372.11	6,626.59	0.00	0.00	0.00
13,300.00	90.00	0.37	6,835.00	6,718.17	-371.47	6,726.52	0.00	0.00	0.00
13,400.00	90.00	0.37	6,835.00	6,818.17	-370.83	6,826.44	0.00	0.00	0.00
13,500.00	90.00	0.37	6,835.00	6,918.16	-370.19	6,926.37	0.00	0.00	0.00
13,600.00	90.00	0.37	6,835.00	7,018.16	-369.55	7,026.30	0.00	0.00	0.00

Noble Energy, Inc.

Survey Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Independence D18-732
Project:	Mustang	TVD Reference:	Well @ 4800.00ft
Site:	D Section 19	MD Reference:	Well @ 4800.00ft
Well:	Independence D18-732	North Reference:	Grid
Wellbore:	Independence D18-732	Survey Calculation Method:	Minimum Curvature
Design:	Plan 1	Database:	EDMP

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)	
13,700.00	90.00	0.37	6,835.00	7,118.16	-368.91	7,126.23	0.00	0.00	0.00	
13,800.00	90.00	0.37	6,835.00	7,218.16	-368.26	7,226.16	0.00	0.00	0.00	
13,900.00	90.00	0.37	6,835.00	7,318.16	-367.62	7,326.09	0.00	0.00	0.00	
14,000.00	90.00	0.37	6,835.00	7,418.15	-366.98	7,426.02	0.00	0.00	0.00	
14,100.00	90.00	0.37	6,835.00	7,518.15	-366.34	7,525.94	0.00	0.00	0.00	
14,200.00	90.00	0.37	6,835.00	7,618.15	-365.70	7,625.87	0.00	0.00	0.00	
14,300.00	90.00	0.37	6,835.00	7,718.15	-365.06	7,725.80	0.00	0.00	0.00	
14,400.00	90.00	0.37	6,835.00	7,818.15	-364.42	7,825.73	0.00	0.00	0.00	
14,500.00	90.00	0.37	6,835.00	7,918.14	-363.78	7,925.66	0.00	0.00	0.00	
14,600.00	90.00	0.37	6,835.00	8,018.14	-363.13	8,025.59	0.00	0.00	0.00	
14,700.00	90.00	0.37	6,835.00	8,118.14	-362.49	8,125.52	0.00	0.00	0.00	
14,800.00	90.00	0.37	6,835.00	8,218.14	-361.85	8,225.44	0.00	0.00	0.00	
14,900.00	90.00	0.37	6,835.00	8,318.14	-361.21	8,325.37	0.00	0.00	0.00	
15,000.00	90.00	0.37	6,835.00	8,418.13	-360.57	8,425.30	0.00	0.00	0.00	
15,100.00	90.00	0.37	6,835.00	8,518.13	-359.93	8,525.23	0.00	0.00	0.00	
15,200.00	90.00	0.37	6,835.00	8,618.13	-359.29	8,625.16	0.00	0.00	0.00	
15,300.00	90.00	0.37	6,835.00	8,718.13	-358.64	8,725.09	0.00	0.00	0.00	
15,400.00	90.00	0.37	6,835.00	8,818.12	-358.00	8,825.02	0.00	0.00	0.00	
15,500.00	90.00	0.37	6,835.00	8,918.12	-357.36	8,924.94	0.00	0.00	0.00	
15,600.00	90.00	0.37	6,835.00	9,018.12	-356.72	9,024.87	0.00	0.00	0.00	
15,700.00	90.00	0.37	6,835.00	9,118.12	-356.08	9,124.80	0.00	0.00	0.00	
15,800.00	90.00	0.37	6,835.00	9,218.12	-355.44	9,224.73	0.00	0.00	0.00	
15,900.00	90.00	0.37	6,835.00	9,318.11	-354.80	9,324.66	0.00	0.00	0.00	
16,000.00	90.00	0.37	6,835.00	9,418.11	-354.16	9,424.59	0.00	0.00	0.00	
16,100.00	90.00	0.37	6,835.00	9,518.11	-353.51	9,524.52	0.00	0.00	0.00	
16,200.00	90.00	0.37	6,835.00	9,618.11	-352.87	9,624.44	0.00	0.00	0.00	
16,300.00	90.00	0.37	6,835.00	9,718.11	-352.23	9,724.37	0.00	0.00	0.00	
16,400.00	90.00	0.37	6,835.00	9,818.10	-351.59	9,824.30	0.00	0.00	0.00	
16,500.00	90.00	0.37	6,835.00	9,918.10	-350.95	9,924.23	0.00	0.00	0.00	
16,600.00	90.00	0.37	6,835.00	10,018.10	-350.31	10,024.16	0.00	0.00	0.00	
16,700.00	90.00	0.37	6,835.00	10,118.10	-349.67	10,124.09	0.00	0.00	0.00	
16,800.00	90.00	0.37	6,835.00	10,218.10	-349.02	10,224.02	0.00	0.00	0.00	
16,900.00	90.00	0.37	6,835.00	10,318.09	-348.38	10,323.94	0.00	0.00	0.00	
17,000.00	90.00	0.37	6,835.00	10,418.09	-347.74	10,423.87	0.00	0.00	0.00	
17,100.00	90.00	0.37	6,835.00	10,518.09	-347.10	10,523.80	0.00	0.00	0.00	
17,200.00	90.00	0.37	6,835.00	10,618.09	-346.46	10,623.73	0.00	0.00	0.00	
17,300.00	90.00	0.37	6,835.00	10,718.09	-345.82	10,723.66	0.00	0.00	0.00	
17,400.00	90.00	0.37	6,835.00	10,818.08	-345.18	10,823.59	0.00	0.00	0.00	
17,419.51	90.00	0.37	6,835.00	10,837.59	-345.05	10,843.08	0.00	0.00	0.00	

Noble Energy, Inc.

Survey Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Independence D18-732
Project:	Mustang	TVD Reference:	Well @ 4800.00ft
Site:	D Section 19	MD Reference:	Well @ 4800.00ft
Well:	Independence D18-732	North Reference:	Grid
Wellbore:	Independence D18-732	Survey Calculation Method:	Minimum Curvature
Design:	Plan 1	Database:	EDMP

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Independence D18-732 - plan hits target center - Point	0.00	0.01	6,835.00	642.49	-410.44	1,323,772.48	3,254,153.33	40.2185728	-104.5898742
Independence D18-732 - plan hits target center - Point	0.00	0.01	6,835.00	10,837.59	-345.05	1,333,967.56	3,254,218.72	40.2465560	-104.5892652

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
482.00	482.00	Pierre				
646.00	646.00	Upper Pierre Aquifer Top				
1,544.00	1,544.00	Upper Pierre Aquifer Base				
3,679.44	3,679.00	Parkman				
4,084.55	4,081.00	Sussex				
4,874.89	4,865.00	Shannon				
6,052.34	6,033.00	Teepee Buttes				
6,770.04	6,681.00	Sharon Springs				
6,880.15	6,745.00	Top A Chalk				
6,912.92	6,761.00	Top A Marl				
6,915.07	6,762.00	Top B Chalk				
7,040.89	6,809.00	Top B Marl				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
3400	3400	0	0	Start Build 2.00	
6225	6204	0	-23	Start DLS 9.00 TFO 89.45	
7224	6835	5	-334	TPZ/LP at 7224.20 MD	
17,420	6835	642	-410	TD at 17419.51 MD	

Checked By: _____ Approved By: _____ Date: _____

Northern Region - DJ Basin

Mustang

D Section 19

Independence D18-732

Independence D18-732

Plan 1

Anticollision Summary Report

20 September, 2018

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Independence D18-732
Project:	Mustang	TVD Reference:	Well @ 4800.00ft
Reference Site:	D Section 19	MD Reference:	Well @ 4800.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Independence D18-732	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Independence D18-732	Database:	EDMP
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Reference	Plan 1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	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	9/20/2018		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	17,419.51	Plan 1 (Independence D18-732)	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
D Section 07						
Dechant 07-01-17 - Dechant 07-01-17 - Dechant 07-01-1	17,398.67	6,822.97	40.98	-74.04	0.356	Level 1, CC, SF
Dechant 07-01-17 - Dechant 07-01-17 - Dechant 07-01-1	17,400.00	6,822.98	41.00	-74.04	0.356	Level 1, ES
Dechant 07-11 - Dechant 07-11 - Dechant 07-11 - As Dri	17,006.48	6,819.03	647.35	535.45	5.785	CC, ES, SF
Dechant 07-13 - Dechant 07-13 - Dechant 07-13 - As Dri	15,659.94	6,828.06	572.84	471.52	5.654	CC, ES
Dechant 07-13 - Dechant 07-13 - Dechant 07-13 - As Dri	15,700.00	6,829.05	574.24	472.65	5.653	SF
Dechant 07-14 - Dechant 07-14 - Dechant 07-14 - As Dri	15,549.62	6,817.00	756.61	620.35	5.552	CC, ES, SF
Dechant 07-15 - Dechant 07-15 - Dechant 07-15 - As Dri	16,298.08	6,829.00	44.06	-98.17	0.310	Level 1, CC, ES, SF
Dechant 18-07 - Dechant 18-07 - Dechant 18-07 - As Dri	16,342.21	6,879.51	2,412.23	2,305.32	22.563	CC, ES
Dechant 18-07 - Dechant 18-07 - Dechant 18-07 - As Dri	16,600.00	6,877.47	2,425.97	2,317.27	22.318	SF
Dechant D07-09 - Dechant D07-09 - Dechant D07-09 - A	14,340.48	6,816.14	730.55	639.41	8.016	CC, ES, SF
Dechant D07-10 - Dechant D07-10 - Dechant D07-10 - A	14,193.03	6,816.72	379.84	289.56	4.207	CC
Dechant D07-10 - Dechant D07-10 - Dechant D07-10 - A	14,200.00	6,816.93	379.90	289.55	4.204	ES, SF
Dechant D07-11 - Dechant D07-11 - Dechant D07-11 - A	14,308.26	6,910.33	1,952.77	1,861.63	21.427	CC, ES
Dechant D07-11 - Dechant D07-11 - Dechant D07-11 - A	14,500.00	6,920.57	1,962.14	1,869.62	21.208	SF
Dechant D07-12 - Dechant D07-12 - Dechant D07-12 - A	14,175.70	6,751.56	3,167.80	3,077.91	35.240	CC
Dechant D07-12 - Dechant D07-12 - Dechant D07-12 - A	14,200.00	6,751.75	3,167.89	3,077.80	35.163	ES
Dechant D07-12 - Dechant D07-12 - Dechant D07-12 - A	14,700.00	6,755.87	3,210.89	3,117.45	34.361	SF
Dechant D07-13 - Dechant D07-13 - Dechant D07-13 - A	13,001.11	6,863.52	2,938.49	2,857.39	36.233	CC, ES
Dechant D07-13 - Dechant D07-13 - Dechant D07-13 - A	13,500.00	6,929.49	2,980.52	2,895.89	35.218	SF
Dechant D07-14 - Dechant D07-14 - Dechant D07-14 - A	13,007.28	6,954.46	1,818.73	1,737.38	22.356	CC, ES
Dechant D07-14 - Dechant D07-14 - Dechant D07-14 - A	13,200.00	6,961.51	1,828.90	1,746.20	22.116	SF
Dechant D07-15 - Dechant D07-15 - Dechant D07-15 - A	12,832.46	6,842.49	701.78	621.94	8.790	CC, ES
Dechant D07-15 - Dechant D07-15 - Dechant D07-15 - A	12,900.00	6,843.34	705.02	624.72	8.780	SF
Dechant D07-16 - Dechant D07-16 - Dechant D07-16 - A	13,008.46	6,821.02	882.06	800.96	10.877	CC, ES, SF
Dechant D07-20 - Dechant D07-20 - Dechant D07-20 - A	14,790.35	6,866.77	2,511.63	2,416.84	26.498	CC
Dechant D07-20 - Dechant D07-20 - Dechant D07-20 - A	14,800.00	6,866.95	2,511.65	2,416.78	26.475	ES
Dechant D07-20 - Dechant D07-20 - Dechant D07-20 - A	15,100.00	6,872.38	2,530.64	2,433.71	26.108	SF
Dechant D07-21 - Dechant D07-21 - Dechant D07-21 - A	14,731.06	6,829.32	1,153.11	1,058.88	12.238	CC, ES
Dechant D07-21 - Dechant D07-21 - Dechant D07-21 - A	14,800.00	6,829.43	1,155.17	1,060.41	12.191	SF
Dechant D07-22 - Dechant D07-22 - Dechant D07-22 - A	14,866.49	6,830.91	72.31	-23.02	0.758	Level 1, CC, ES, SF
Dechant D07-23 - Dechant D07-23 - Dechant D07-23 - A	13,397.86	6,832.77	91.09	7.03	1.084	Level 2, CC, ES, SF
Dechant D07-24 - Dechant D07-24 - Dechant D07-24 - A	13,621.49	6,859.25	1,199.43	1,113.64	13.981	CC, ES
Dechant D07-24 - Dechant D07-24 - Dechant D07-24 - A	13,700.00	6,862.48	1,201.99	1,115.62	13.916	SF
Dechant D07-25 - Dechant D07-25 - Dechant D07-25 - A	13,656.21	6,840.71	2,407.50	2,321.51	27.997	CC, ES
Dechant D07-25 - Dechant D07-25 - Dechant D07-25 - A	14,000.00	6,841.65	2,431.93	2,343.65	27.548	SF
Dechant D07-32 - Dechant D07-32 - Dechant D07-32 - A	14,782.56	6,866.36	3,555.76	3,461.06	37.551	CC
Dechant D07-32 - Dechant D07-32 - Dechant D07-32 - A	14,800.00	6,866.54	3,555.80	3,460.97	37.495	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 Independence D18-732
Project:	Mustang	TVD Reference:	Well @ 4800.00ft
Reference Site:	D Section 19	MD Reference:	Well @ 4800.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Independence D18-732	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Independence D18-732	Database:	EDMP
Reference Design:	Plan 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
D Section 07						
Dechant D07-32 - Dechant D07-32 - Dechant D07-32 - A	15,400.00	6,872.20	3,608.96	3,510.14	36.519	SF
Dechant D07-33 - Dechant D07-33 - Dechant D07-33 - A	13,587.36	6,683.55	3,647.30	3,562.14	42.828	CC
Dechant D07-33 - Dechant D07-33 - Dechant D07-33 - A	13,600.00	6,683.92	3,647.32	3,562.06	42.777	ES
Dechant D07-33 - Dechant D07-33 - Dechant D07-33 - A	14,400.00	6,708.68	3,736.64	3,646.10	41.271	SF
Dechant D18-27D - Dechant D18-27D - Dechant D18-27	12,264.75	7,289.02	26.29	-62.64	0.296	Level 1, CC, ES, SF
Dechant D18-30D - Wellbore #1 - Wellbore #1- As Drilled	11,300.00	7,210.07	3,816.06	3,718.97	39.305	SF
Dechant D18-30D - Wellbore #1 - Wellbore #1- As Drilled	12,294.23	7,216.82	3,684.28	3,595.04	41.285	CC, ES
HSR Barbour 04-07 - HSR Barbour 04-07 - HSR Barbour	17,117.76	6,890.42	3,107.62	2,995.19	27.640	CC, ES
HSR Barbour 04-07 - HSR Barbour 04-07 - HSR Barbour	17,419.51	6,890.12	3,122.23	3,007.63	27.243	SF
HSR Parkman 06-07 - HSR Parkman 06-07 - HSR Parkm	15,407.11	6,835.55	2,034.45	1,935.00	20.458	CC, ES
HSR Parkman 06-07 - HSR Parkman 06-07 - HSR Parkm	15,600.00	6,833.42	2,043.57	1,942.77	20.273	SF
HSR Petrie 03-07 - HSR Petrie 03-07 - HSR Petrie 03-07	17,055.43	6,809.52	2,058.37	1,946.08	18.332	CC, ES
HSR Petrie 03-07 - HSR Petrie 03-07 - HSR Petrie 03-07	17,200.00	6,811.44	2,063.44	1,950.08	18.202	SF
HSR Safran 05-07 - HSR Safran 05-07 - HSR Safran 05-	15,470.74	6,941.72	3,308.13	3,207.91	33.009	CC
HSR Safran 05-07 - HSR Safran 05-07 - HSR Safran 05-	15,500.00	6,941.90	3,308.26	3,207.80	32.930	ES
HSR Safran 05-07 - HSR Safran 05-07 - HSR Safran 05-	16,000.00	6,944.87	3,350.20	3,246.42	32.281	SF
Two E Ranch 07-01 - Two E Ranch 07-01 - Two E Ranch	16,893.75	6,830.84	585.27	474.21	5.270	CC
Two E Ranch 07-01 - Two E Ranch 07-01 - Two E Ranch	16,900.00	6,830.99	585.30	474.18	5.267	ES, SF
Two E Ranches 1 - Two E Ranches 1 - Two E Ranches 1	15,567.08	4,625.00	2,277.74	2,188.91	25.642	CC
Two E Ranches 1 - Two E Ranches 1 - Two E Ranches 1	15,600.00	4,625.00	2,277.98	2,188.90	25.572	ES
Two E Ranches 1 - Two E Ranches 1 - Two E Ranches 1	16,000.00	4,625.00	2,318.52	2,226.22	25.119	SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Independence D18-732
Project:	Mustang	TVD Reference:	Well @ 4800.00ft
Reference Site:	D Section 19	MD Reference:	Well @ 4800.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Independence D18-732	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Independence D18-732	Database:	EDMP
Reference Design:	Plan 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
D Section 17						
Butterball D19-27D - Wellbore #1 - Gyro Surveys	7,178.10	7,039.06	207.33	156.67	4.093	CC
Butterball D19-27D - Wellbore #1 - Gyro Surveys	7,200.00	7,039.95	208.43	156.08	3.982	ES
Butterball D19-27D - Wellbore #1 - Gyro Surveys	7,300.00	7,039.00	239.70	174.37	3.669	SF
Guttersen State D16-33 (SI) - Wellbore #1 - No Surveys	3,400.00	3,352.00	6,689.06	6,647.85	162.329	CC, ES
Guttersen State D16-33 (SI) - Wellbore #1 - No Surveys	11,200.00	6,787.00	7,234.23	7,133.08	71.519	SF
HSR LDS 6-17 (SI) - Wellbore #1 - No Surveys	10,416.49	6,785.00	3,256.89	3,158.61	33.139	CC, ES
HSR LDS 6-17 (SI) - Wellbore #1 - No Surveys	10,900.00	6,785.00	3,292.59	3,191.61	32.608	SF
HSR LDS B5-17 (SI) - Wellbore #1 - No Surveys	10,552.74	6,786.00	2,149.02	2,049.84	21.669	CC, ES
HSR LDS B5-17 (SI) - Wellbore #1 - No Surveys	10,800.00	6,786.00	2,163.20	2,062.72	21.528	SF
HSR Mike Guttersen 16-17X (SI) - Wellbore #1 - No Su	3,400.00	3,357.00	5,793.42	5,752.17	140.445	CC, ES
HSR Mike Guttersen 16-17X (SI) - Wellbore #1 - No Su	9,700.00	6,792.00	6,403.37	6,310.65	69.063	SF
HSR Weeks 10-17 - Wellbore #1 - Gyro Surveys	9,106.38	6,700.00	4,753.81	4,699.34	87.276	CC, ES
HSR Weeks 10-17 - Wellbore #1 - Gyro Surveys	11,500.00	11,500.00	5,322.40	5,240.20	64.749	SF
HSR Weeks 15-17 (SI) - Wellbore #1 - No Surveys	3,400.00	3,355.00	4,556.08	4,514.85	110.496	CC, ES
HSR Weeks 15-17 (SI) - Wellbore #1 - No Surveys	8,900.00	6,790.00	4,926.51	4,837.48	55.335	SF
HSR Weeks 9-17 - Wellbore #1 - Gyro Surveys	9,185.19	6,806.14	5,872.28	5,817.39	106.985	CC
HSR Weeks 9-17 - Wellbore #1 - Gyro Surveys	9,200.00	6,806.13	5,872.30	5,817.34	106.837	ES
HSR Weeks 9-17 - Wellbore #1 - Gyro Surveys	11,700.00	6,804.56	6,388.11	6,320.46	94.421	SF
HSR-LDS 3-17 (SI) - Wellbore #1 - No Surveys	11,740.63	6,780.00	3,243.29	3,136.02	30.236	CC, ES
HSR-LDS 3-17 (SI) - Wellbore #1 - No Surveys	12,200.00	6,780.00	3,275.66	3,165.69	29.787	SF
HSR-LDS 4-17 (SI) - Wellbore #1 - No Surveys	11,546.86	6,782.00	2,118.39	2,012.47	20.001	CC, ES
HSR-LDS 4-17 (SI) - Wellbore #1 - No Surveys	11,800.00	6,782.00	2,133.46	2,026.18	19.887	SF
LDS 18-17 (SI) - Wellbore #1 - No Surveys	11,065.64	6,785.00	2,925.96	2,823.36	28.518	CC
LDS 18-17 (SI) - Wellbore #1 - No Surveys	11,100.00	6,785.00	2,926.16	2,823.34	28.460	ES
LDS 18-17 (SI) - Wellbore #1 - No Surveys	11,500.00	6,785.00	2,958.02	2,852.98	28.160	SF
LDS D17-13 - Wellbore #1 - Gyro Surveys	3,563.17	3,615.26	1,755.90	1,730.90	70.247	CC
LDS D17-13 - Wellbore #1 - Gyro Surveys	3,600.00	3,649.77	1,756.13	1,730.88	69.566	ES
LDS D17-13 - Wellbore #1 - Gyro Surveys	7,600.00	6,743.46	1,874.88	1,826.33	38.619	SF
LDS D17-18 (SI) - Wellbore #1 - No Surveys	11,145.16	6,783.00	4,230.68	4,127.55	41.023	CC
LDS D17-18 (SI) - Wellbore #1 - No Surveys	11,200.00	6,783.00	4,231.04	4,127.55	40.886	ES
LDS D17-18 (SI) - Wellbore #1 - No Surveys	12,000.00	6,783.00	4,316.18	4,208.06	39.921	SF
LDS D17-20 - Wellbore #1 - No Surveys	9,583.67	6,791.00	2,804.79	2,711.59	30.091	CC
LDS D17-20 - Wellbore #1 - No Surveys	9,600.00	6,791.00	2,804.84	2,711.55	30.064	ES
LDS D17-20 - Wellbore #1 - No Surveys	10,000.00	6,791.00	2,835.52	2,740.22	29.753	SF
LDS D17-21 - Wellbore #1 - No Surveys	9,551.93	6,787.00	3,950.34	3,857.34	42.481	CC, ES
LDS D17-21 - Wellbore #1 - No Surveys	10,400.00	6,787.00	4,040.34	3,942.94	41.482	SF
LDS D17-22 (SI) - Wellbore #1 - No Surveys	9,954.52	6,782.00	5,353.85	5,258.51	56.154	CC
LDS D17-22 (SI) - Wellbore #1 - No Surveys	10,000.00	6,782.00	5,354.04	5,258.43	55.999	ES
LDS D17-22 (SI) - Wellbore #1 - No Surveys	11,400.00	6,782.00	5,545.55	5,442.14	53.624	SF
LDS D17-24D - Wellbore #1 - LDS D17-24D - As Drilled	8,517.68	6,903.30	4,055.35	3,997.39	69.963	CC, ES
LDS D17-24D - Wellbore #1 - LDS D17-24D - As Drilled	9,500.00	6,892.45	4,172.62	4,110.84	67.538	SF
LDS D17-25D - Wellbore #1 - LDS D17-25D - As Drilled	8,754.09	7,029.68	2,806.66	2,748.30	48.091	CC, ES
LDS D17-25D - Wellbore #1 - LDS D17-25D - As Drilled	9,600.00	7,028.44	2,931.37	2,866.81	45.409	SF
LDS D17-31D - LDS D17-31D - LDS D17-31D - As Drille	11,028.93	6,996.50	1,404.33	1,327.75	18.339	CC, ES
LDS D17-31D - LDS D17-31D - LDS D17-31D - As Drille	11,100.00	6,996.23	1,406.13	1,329.40	18.327	SF
LDS D17-32D - LDS D17-32D - LDS D17-32D - As Drille	9,896.89	6,832.42	1,400.20	1,341.38	23.803	CC
LDS D17-32D - LDS D17-32D - LDS D17-32D - As Drille	9,900.00	6,832.42	1,400.20	1,341.37	23.798	ES
LDS D17-32D - LDS D17-32D - LDS D17-32D - As Drille	10,000.00	6,832.34	1,403.99	1,344.81	23.723	SF
LDS D17-33 - LDS D17-33 - LDS D17-33 - As Drilled	8,491.73	6,785.95	1,661.61	1,609.75	32.046	CC
LDS D17-33 - LDS D17-33 - LDS D17-33 - As Drilled	8,500.00	6,785.89	1,661.63	1,609.74	32.027	ES
LDS D17-33 - LDS D17-33 - LDS D17-33 - As Drilled	8,700.00	6,784.54	1,674.61	1,622.00	31.831	SF
LDS D17-7 - Wellbore #1 - No Surveys	10,453.49	6,781.00	4,631.91	4,533.42	47.032	CC
LDS D17-7 - Wellbore #1 - No Surveys	10,500.00	6,781.00	4,632.14	4,533.37	46.897	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 Independence D18-732
Project:	Mustang	TVD Reference:	Well @ 4800.00ft
Reference Site:	D Section 19	MD Reference:	Well @ 4800.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Independence D18-732	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Independence D18-732	Database:	EDMP
Reference Design:	Plan 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
D Section 17						
LDS D17-7 - Wellbore #1 - No Surveys	11,500.00	6,781.00	4,748.66	4,644.20	45.462	SF
LDS D20-29D - Wellbore #1 - LDS D20-29D - As Drilled	751.07	729.04	1,565.43	1,561.69	417.990	CC
LDS D20-29D - Wellbore #1 - LDS D20-29D - As Drilled	800.00	764.30	1,565.78	1,561.65	379.031	ES
LDS D20-29D - Wellbore #1 - LDS D20-29D - As Drilled	7,050.00	6,945.27	2,819.99	2,771.20	57.791	SF
LDS D20-30D - Wellbore #1 - LDS D20-30D - As Drilled	4,666.73	4,842.00	1,214.69	1,181.94	37.086	CC
LDS D20-30D - Wellbore #1 - LDS D20-30D - As Drilled	4,700.00	4,864.58	1,214.84	1,181.87	36.846	ES
LDS D20-30D - Wellbore #1 - LDS D20-30D - As Drilled	7,050.00	6,857.32	1,385.66	1,337.27	28.638	SF
LDS RED D17-11 (SI) - Wellbore #1 - No Surveys	9,097.16	6,788.00	3,620.91	3,530.41	40.013	CC
LDS RED D17-11 (SI) - Wellbore #1 - No Surveys	9,100.00	6,788.00	3,620.91	3,530.40	40.006	ES
LDS RED D17-11 (SI) - Wellbore #1 - No Surveys	9,800.00	6,788.00	3,688.49	3,594.59	39.281	SF
LDS Red D17-12 - Wellbore #1 - No Surveys	9,261.68	6,791.00	1,962.33	1,870.93	21.470	CC, ES
LDS Red D17-12 - Wellbore #1 - No Surveys	9,400.00	6,791.00	1,967.20	1,875.15	21.371	SF
LDS Red D17-14X (SI) - Wellbore #1 - No Surveys	3,400.00	3,357.00	3,528.77	3,487.52	85.545	CC, ES
LDS Red D17-14X (SI) - Wellbore #1 - No Surveys	8,500.00	6,792.00	3,724.03	3,636.59	42.591	SF
LDS Red D17-3J - Wellbore #1 - Gyro Surveys	8,118.43	6,821.89	2,416.83	2,366.28	47.807	CC, ES
LDS Red D17-3J - Wellbore #1 - Gyro Surveys	8,500.00	6,822.85	2,446.77	2,394.89	47.170	SF
LDS White D17-1 - Wellbore #1 - Gyro Surveys	11,810.14	6,714.14	6,023.97	5,952.13	83.851	CC, ES
LDS White D17-1 - Wellbore #1 - Gyro Surveys	13,900.00	6,706.39	6,376.18	6,292.34	76.055	SF
LDS White D17-2 - Wellbore #1 - No Surveys	11,776.12	6,778.00	4,723.25	4,615.75	43.937	CC
LDS White D17-2 - Wellbore #1 - No Surveys	11,800.00	6,778.00	4,723.31	4,615.65	43.871	ES
LDS White D17-2 - Wellbore #1 - No Surveys	12,800.00	6,778.00	4,832.95	4,719.33	42.534	SF
LDS White D17-8 - Wellbore #1 - No Surveys	10,455.84	6,776.00	5,978.18	5,879.73	60.719	CC
LDS White D17-8 - Wellbore #1 - No Surveys	10,500.00	6,776.00	5,978.35	5,879.61	60.551	ES
LDS White D17-8 - Wellbore #1 - No Surveys	12,200.00	6,776.00	6,227.42	6,118.85	57.360	SF
Thomson D20-31D - Wellbore #1 - Gyro Surveys	3,533.93	3,732.19	1,140.96	1,103.84	30.739	CC, ES
Thomson D20-31D - Wellbore #1 - Gyro Surveys	5,300.00	5,416.61	1,404.57	1,352.03	26.733	SF
Weeks 20-17 (SI) - Wellbore #1 - Gyro Surveys	3,285.98	3,222.47	5,245.92	5,223.26	231.485	CC
Weeks 20-17 (SI) - Wellbore #1 - Gyro Surveys	3,400.00	3,322.34	5,246.13	5,222.71	224.036	ES
Weeks 20-17 (SI) - Wellbore #1 - Gyro Surveys	10,600.00	6,793.23	5,746.81	5,685.35	93.497	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 Independence D18-732
Project:	Mustang	TVD Reference:	Well @ 4800.00ft
Reference Site:	D Section 19	MD Reference:	Well @ 4800.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Independence D18-732	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Independence D18-732	Database:	EDMP
Reference Design:	Plan 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
D Section 18						
Horton D18-20D - Horton D18-20D - Horton D18-20D - A	9,527.13	7,127.14	2,304.29	2,230.51	31.231	CC
Horton D18-20D - Horton D18-20D - Horton D18-20D - A	9,600.00	7,125.74	2,305.44	2,229.45	30.338	ES
Horton D18-20D - Horton D18-20D - Horton D18-20D - A	10,700.00	7,102.99	2,585.51	2,481.03	24.746	SF
Horton D18-22D - Horton D18-22D - Horton D18-22D - A	9,532.80	6,926.75	191.72	129.44	3.078	CC, ES, SF
LSWD 1 - LSWD 1 - LSWD 1 - As Drilled	11,770.98	6,840.00	1,479.24	1,371.23	13.696	CC, ES
LSWD 1 - LSWD 1 - LSWD 1 - As Drilled	11,900.00	6,840.00	1,484.86	1,375.94	13.633	SF
Mick D18-03 - Mick D18-03 - Mick D18-03 - As Drilled	11,812.27	6,798.80	1,639.24	1,566.99	22.687	CC, ES
Mick D18-03 - Mick D18-03 - Mick D18-03 - As Drilled	12,000.00	6,792.65	1,649.94	1,576.43	22.446	SF
Mick D18-04 - Wellbore #1 - Wellbore #1 - As Drilled	11,740.26	6,800.01	3,162.71	3,090.95	44.077	CC, ES
Mick D18-04 - Wellbore #1 - Wellbore #1 - As Drilled	12,400.00	6,800.01	3,230.79	3,154.81	42.523	SF
Mick D18-11 - Mick D18-11 - Mick D18-11 - As Drilled	10,451.60	6,724.08	3,109.77	3,047.04	49.573	CC, ES
Mick D18-05 - Wellbore #1 - Wellbore #1 - As Drilled	11,200.00	6,725.85	3,198.56	3,131.33	47.573	SF
Mick D18-06 - Mick D18-06 - Mick D18-06 - As Drilled	10,473.20	6,780.30	1,643.44	1,580.39	26.064	CC, ES
Mick D18-06 - Mick D18-06 - Mick D18-06 - As Drilled	10,700.00	6,782.31	1,659.02	1,594.52	25.721	SF
Mick D18-11 - Mick D18-11 - Mick D18-11 - As Drilled	8,756.47	6,777.95	1,775.01	1,721.90	33.421	CC, ES
Mick D18-11 - Mick D18-11 - Mick D18-11 - As Drilled	9,000.00	6,786.07	1,791.62	1,737.25	32.956	SF
Mick D18-12 - Wellbore #1 - Wellbore #1 - As Drilled	8,919.61	6,734.67	2,890.84	2,837.06	53.751	CC, ES
Mick D18-12 - Wellbore #1 - Wellbore #1 - As Drilled	9,600.00	6,734.95	2,969.83	2,912.53	51.831	SF
Mick D18-13 - Wellbore #1 - Wellbore #1 - As Drilled	7,680.33	6,902.25	2,946.41	2,897.07	59.713	CC, ES
Mick D18-13 - Wellbore #1 - Wellbore #1 - As Drilled	8,300.00	6,899.62	3,010.87	2,959.44	58.543	SF
Mick D18-14 - Mick D18-14 - Mick D18-14 - As Drilled	7,607.38	6,786.12	1,741.49	1,692.63	35.646	CC, ES
Mick D18-14 - Mick D18-14 - Mick D18-14 - As Drilled	7,800.00	6,784.45	1,752.11	1,702.70	35.465	SF
Mick D18-19 - Mick D18-19 - Mick D18-19 - As Drilled	11,134.63	6,766.40	2,294.17	2,226.81	34.059	CC, ES
Mick D18-19 - Mick D18-19 - Mick D18-19 - As Drilled	11,500.00	6,768.22	2,323.08	2,253.36	33.321	SF
Mick D18-25 - Mick D18-25 - Mick D18-25 - As Drilled	8,222.76	6,788.62	2,275.09	2,224.27	44.773	CC, ES
Mick D18-25 - Mick D18-25 - Mick D18-25 - As Drilled	8,600.00	6,783.46	2,306.15	2,253.75	44.011	SF
Scooter D18-02 - Scooter D18-02 - Scooter D18-02 - As	11,581.28	6,848.19	608.80	538.15	8.617	CC, ES
Scooter D18-02 - Scooter D18-02 - Scooter D18-02 - As	11,600.00	6,848.49	609.09	538.28	8.602	SF
Scooter D18-07 - Scooter D18-07 - Scooter D18-07 - As	10,271.68	6,835.92	570.16	508.26	9.211	CC, ES
Scooter D18-07 - Scooter D18-07 - Scooter D18-07 - As	10,300.00	6,834.65	570.87	508.74	9.189	SF
Scooter D18-10 - Scooter D18-10 - Scooter D18-10 - As	8,787.90	6,808.80	513.33	460.00	9.626	CC, ES
Scooter D18-10 - Scooter D18-10 - Scooter D18-10 - As	8,800.00	6,808.61	513.47	460.07	9.615	SF
Scooter D18-15 - Scooter D18-15 - Scooter D18-15 - As	7,643.57	6,823.42	382.92	333.96	7.821	CC, ES, SF
Scooter D18-16 - Scooter D18-16 - Scooter D18-16 - As	7,709.86	6,796.00	867.54	782.70	10.225	CC, ES, SF
Scooter D18-17 JI - Scooter D18-17 JI - Scooter D18-17	10,879.51	6,932.79	167.43	100.47	2.500	CC, ES, SF
Scooter D18-1JI - Scooter D18-1JI - Scooter D18-1JI - A	11,420.97	7,141.75	917.04	841.33	12.112	CC
Scooter D18-1JI - Scooter D18-1JI - Scooter D18-1JI - A	11,500.00	7,142.55	920.44	841.21	11.618	ES
Scooter D18-1JI - Scooter D18-1JI - Scooter D18-1JI - A	11,800.00	7,145.56	992.28	899.85	10.736	SF
Scooter D18-4J - Scooter D18-4J - Scooter D18-4J - As	8,554.05	6,815.63	488.44	436.13	9.339	CC, ES, SF
Scooter D18-78-1HN - Original Drilling - Original Drilling -	12,111.79	6,856.02	2,673.69	2,602.80	37.712	CC, ES
Scooter D18-78-1HN - Original Drilling - Original Drilling -	12,600.00	6,859.17	2,717.90	2,643.93	36.742	SF
Scooter D18-78-1HN - Original Drilling - ST01 - Original D	7,498.95	11,297.00	2,583.44	2,479.11	24.762	CC
Scooter D18-78-1HN - Original Drilling - ST01 - Original D	7,500.00	11,297.00	2,583.44	2,479.11	24.761	ES, SF
Scooter D18-79-1HN - Original Drilling - Original Drilling -	7,482.19	11,265.00	3,239.06	3,133.74	30.754	CC, ES
Scooter D18-79-1HN - Original Drilling - Original Drilling -	7,500.00	11,265.00	3,239.11	3,133.77	30.749	SF
Scooter D18-79HN - Original Drilling - Original Drilling - A	7,474.04	11,410.00	3,661.08	3,555.72	34.749	CC, ES, SF
Scooter D18-8JI - Scooter D18-8JI - Scooter D18-8JI - A	10,341.21	7,037.42	820.79	744.92	10.819	CC, ES
Scooter D18-8JI - Scooter D18-8JI - Scooter D18-8JI - A	10,400.00	7,037.24	822.89	746.61	10.787	SF
Scooter D18-9JI - Scooter D18-9JI - Scooter D18-9JI - A	9,168.31	6,816.75	980.86	923.53	17.110	CC, ES
Scooter D18-9JI - Scooter D18-9JI - Scooter D18-9JI - A	9,300.00	6,816.28	989.66	931.56	17.033	SF
Shianne D18-29D - Shianne D18-29D - Shianne D18-29D	12,192.75	6,883.89	2,334.03	2,256.74	30.199	CC
Shianne D18-29D - Shianne D18-29D - Shianne D18-29D	12,200.00	6,883.78	2,334.04	2,256.68	30.171	ES
Shianne D18-29D - Shianne D18-29D - Shianne D18-29D	12,700.00	6,876.10	2,388.50	2,307.02	29.315	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 Independence D18-732
Project:	Mustang	TVD Reference:	Well @ 4800.00ft
Reference Site:	D Section 19	MD Reference:	Well @ 4800.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Independence D18-732	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Independence D18-732	Database:	EDMP
Reference Design:	Plan 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						

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Independence D18-732
Project:	Mustang	TVD Reference:	Well @ 4800.00ft
Reference Site:	D Section 19	MD Reference:	Well @ 4800.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Independence D18-732	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Independence D18-732	Database:	EDMP
Reference Design:	Plan 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
D Section 19						
Butterball 13-19 - Butterball 13-19 - Butterball 13-19 - As	6,344.64	6,501.21	4,108.57	4,063.77	91.705	CC, ES
Butterball 13-19 - Butterball 13-19 - Butterball 13-19 - As	6,700.00	6,740.98	4,183.62	4,136.82	89.400	SF
Butterball 14-19 - Butterball 14-19 - Butterball 14-19 - As	6,298.48	6,406.60	5,085.48	5,041.06	114.471	CC
Butterball 14-19 - Butterball 14-19 - Butterball 14-19 - As	6,300.00	6,408.46	5,085.48	5,041.05	114.441	ES
Butterball 14-19 - Butterball 14-19 - Butterball 14-19 - As	6,700.00	6,766.79	5,189.91	5,142.94	110.498	SF
Butterball 23-19 - Butterball 23-19 - Butterball 23-19 - As	6,281.44	6,282.67	3,412.33	3,368.45	77.772	CC, ES
Butterball 23-19 - Butterball 23-19 - Butterball 23-19 - As	6,600.00	6,557.38	3,481.56	3,435.66	75.846	SF
Butterball B04-19 - Butterball B04-19 - Butterball B04-19	6,321.57	6,415.12	4,909.09	4,864.62	110.401	CC, ES
Butterball B04-19 - Butterball B04-19 - Butterball B04-19	6,700.00	6,650.79	4,994.92	4,948.40	107.389	SF
Butterball D18-75HN - Original Drilling - Original Drilling -	0.00	0.00	916.73			
Butterball D18-75HN - Original Drilling - Original Drilling -	2,100.00	2,092.80	918.99	905.55	68.365	ES
Butterball D18-75HN - Original Drilling - Original Drilling -	12,500.00	12,107.00	1,172.06	1,018.77	7.646	SF
Butterball D19-17D - Butterball D19-17D - Butterball D19	5,146.47	5,686.31	625.82	477.30	4.214	CC
Butterball D19-17D - Butterball D19-17D - Butterball D19	5,200.00	5,733.64	626.32	477.03	4.195	ES
Butterball D19-17D - Butterball D19-17D - Butterball D19	5,300.00	5,826.64	629.57	479.37	4.192	SF
Butterball D19-18D - Butterball D19-18D - Butterball D19	6,386.22	6,428.53	1,518.71	1,472.71	33.014	CC
Butterball D19-18D - Butterball D19-18D - Butterball D19	6,400.00	6,441.49	1,518.79	1,472.68	32.941	ES
Butterball D19-18D - Butterball D19-18D - Butterball D19	6,700.00	6,696.27	1,559.32	1,510.90	32.203	SF
Butterball D19-19D - Butterball D19-19D - Butterball D19	750.34	740.36	2,521.15	2,516.28	517.631	CC
Butterball D19-19D - Butterball D19-19D - Butterball D19	800.00	781.76	2,521.23	2,516.04	485.450	ES
Butterball D19-19D - Butterball D19-19D - Butterball D19	6,700.00	6,704.07	2,722.16	2,674.86	57.560	SF
Butterball D19-20D - Butterball D19-20D - Butterball D19	6,321.16	6,446.38	3,143.61	3,090.55	59.241	CC, ES
Butterball D19-20D - Butterball D19-20D - Butterball D19	6,650.00	6,740.67	3,204.66	3,149.49	58.093	SF
Butterball D19-22D - Wellbore #1 - Wellbore #1 - As Drill	100.00	65.14	1,736.22	1,735.98	7,188.023	CC
Butterball D19-22D - Wellbore #1 - Wellbore #1 - As Drill	1,000.00	957.73	1,740.88	1,734.34	266.355	ES
Butterball D19-22D - Wellbore #1 - Wellbore #1 - As Drill	6,400.00	6,437.74	2,160.20	2,110.39	43.369	SF
Butterball D19-75HN - Original Drilling - Original Drilling -	6,608.82	6,556.59	772.73	727.98	17.266	CC, ES
Butterball D19-75HN - Original Drilling - Original Drilling -	6,650.00	6,564.00	773.89	729.03	17.248	SF
Butterball D24-19 - Butterball D24-19 - Butterball D24-19	6,269.03	6,305.31	4,522.83	4,478.87	102.896	CC, ES
Butterball D24-19 - Butterball D24-19 - Butterball D24-19	6,650.00	6,644.91	4,626.94	4,580.55	99.738	SF
Butterball H24-69HN - Original Drilling - Original Drilling -	6,900.00	6,564.00	520.20	477.56	12.201	SF
Butterball H24-69HN - Original Drilling - Original Drilling -	7,015.42	6,583.27	513.09	471.60	12.367	CC, ES
Champlin 366 Amoco F 1 - Wellbore #1 - Wellbore #1 - A	4,645.27	4,608.37	3,236.09	3,203.86	100.401	CC
Champlin 366 Amoco F 1 - Wellbore #1 - Wellbore #1 - A	6,224.98	6,185.72	3,241.58	3,198.17	74.672	ES
Champlin 366 Amoco F 1 - Wellbore #1 - Wellbore #1 - A	6,500.00	6,446.74	3,301.40	3,256.11	72.898	SF
Dechant D19-32D - Dechant D19-32D - Dechant D19-32	337.55	326.56	2,542.95	2,541.01	1,307.120	CC
Dechant D19-32D - Dechant D19-32D - Dechant D19-32	400.00	370.77	2,543.18	2,540.85	1,094.278	ES
Dechant D19-32D - Dechant D19-32D - Dechant D19-32	6,450.00	6,954.15	4,388.55	4,333.11	79.154	SF
Graznak 01-19 - Graznak 01-19 - Graznak 01-19 - As Dr	6,281.57	6,243.32	4,454.83	4,378.24	58.164	CC
Graznak 01-19 - Graznak 01-19 - Graznak 01-19 - As Dr	6,300.00	6,261.50	4,455.05	4,378.23	57.996	ES
Graznak 01-19 - Graznak 01-19 - Graznak 01-19 - As Dr	6,700.00	6,615.74	4,565.19	4,484.01	56.237	SF
Higgins D19-720 - Original Drilling - Original Drilling - As	3,589.75	3,638.36	608.03	585.37	26.833	CC
Higgins D19-720 - Original Drilling - Original Drilling - As	3,600.00	3,648.13	608.05	585.32	26.752	ES
Higgins D19-720 - Original Drilling - Original Drilling - As	6,900.00	6,781.79	807.14	763.79	18.620	SF
Higgins D19-720 - Sidetrack Curve/Horizontal - ST01 - A	3,589.75	3,638.36	608.03	585.37	26.833	CC
Higgins D19-720 - Sidetrack Curve/Horizontal - ST01 - A	3,600.00	3,648.13	608.05	585.32	26.752	ES
Higgins D19-720 - Sidetrack Curve/Horizontal - ST01 - A	6,850.00	6,743.02	814.68	771.53	18.879	SF
Independence D18-712(Killed) - Independence D18-712	2,200.00	2,199.00	69.33	54.03	4.530	CC, ES
Independence D18-712(Killed) - Independence D18-712	2,300.00	2,296.66	70.98	54.98	4.438	SF
Independence D18-717 - Independence D18-717 - Plan 1	2,600.00	2,600.00	45.00	26.83	2.476	CC, ES
Independence D18-717 - Independence D18-717 - Plan 1	2,700.00	2,698.42	46.72	27.85	2.476	SF
Independence D18-725 - Independence D18-725 - Plan 1	3,400.00	3,400.00	23.00	-0.91	0.962	Level 1, CC, ES, SF
Independence D18-739 - Independence D18-739 - Plan 1	2,300.00	2,299.00	22.00	5.98	1.373	Level 3, 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 Independence D18-732
Project:	Mustang	TVD Reference:	Well @ 4800.00ft
Reference Site:	D Section 19	MD Reference:	Well @ 4800.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Independence D18-732	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Independence D18-732	Database:	EDMP
Reference Design:	Plan 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
D Section 19						
Independence D18-744 - Independence D18-744 - Plan 1	2,200.00	2,198.00	44.00	28.70	2.876	CC, ES
Independence D18-744 - Independence D18-744 - Plan 1	2,300.00	2,296.48	45.65	29.66	2.854	SF
Independence D18-759 - Independence D18-759 - Plan 1	7,156.75	7,213.40	1,397.12	1,347.98	28.431	CC, ES
Independence D18-759 - Independence D18-759 - Plan 1	17,419.51	17,454.04	1,635.40	1,451.76	8.905	SF
Independence D18-767 - Independence D18-767 - Plan 1	7,117.40	7,129.90	1,970.73	1,921.87	40.333	CC
Independence D18-767 - Independence D18-767 - Plan 1	7,150.00	7,164.66	1,970.83	1,921.85	40.241	ES
Independence D18-767 - Independence D18-767 - Plan 1	17,419.51	17,418.52	2,170.44	1,987.45	11.861	SF
Independence D30-711 - Independence D30-711 - Plan 1	2,200.00	2,198.00	165.47	150.17	10.815	CC, ES
Independence D30-711 - Independence D30-711 - Plan 1	2,400.00	2,387.43	171.64	154.98	10.300	SF
Independence D30-718 - Independence D30-718 - Plan 2	2,200.00	2,197.00	157.42	142.12	10.291	CC, ES
Independence D30-718 - Independence D30-718 - Plan 2	2,400.00	2,386.72	163.68	147.02	9.823	SF
Independence D30-724 - Independence D30-724 - Plan 1	2,200.00	2,196.00	152.26	136.96	9.956	CC, ES
Independence D30-724 - Independence D30-724 - Plan 1	2,400.00	2,385.85	158.61	141.95	9.520	SF
Independence D30-731 - Independence D30-731 - Plan 1	2,200.00	2,197.00	150.26	134.97	9.824	CC, ES
Independence D30-731 - Independence D30-731 - Plan 1	7,100.00	7,176.51	261.96	213.28	5.382	SF
Independence D30-737 - Independence D30-737 - Plan 1	2,200.00	2,199.00	151.58	136.28	9.905	CC, ES
Independence D30-737 - Independence D30-737 - Plan 1	7,175.69	7,126.97	225.79	176.60	4.591	SF
Independence D30-743 - Independence D30-743 - Plan 1	2,200.00	2,201.00	156.10	140.79	10.195	CC, ES
Independence D30-743 - Independence D30-743 - Plan 1	2,400.00	2,391.40	162.12	145.44	9.720	SF
Independence D30-758 - Independence D30-758 - Plan 1	7,082.39	7,261.44	1,455.59	1,406.66	29.747	CC, ES
Independence D30-758 - Independence D30-758 - Plan 1	7,150.00	7,211.39	1,456.57	1,407.55	29.714	SF
Independence D30-765 - Independence D30-765 - Plan 1	7,308.55	7,086.97	1,882.03	1,832.68	38.135	CC, ES
Independence D30-765 - Independence D30-765 - Plan 1	7,500.00	6,956.33	1,886.51	1,836.88	38.016	SF
Independence D30-770 - Independence D30-770 - Plan 1	7,244.51	6,971.33	2,275.81	2,226.94	46.570	CC, ES
Independence D30-770 - Independence D30-770 - Plan 1	7,500.00	6,781.75	2,281.05	2,231.95	46.464	SF
Independence D30-777 - Independence D30-777 - Plan 2	2,109.84	2,126.84	2,409.78	2,395.06	163.694	CC
Independence D30-777 - Independence D30-777 - Plan 2	2,200.00	2,211.55	2,409.80	2,394.46	157.012	ES
Independence D30-777 - Independence D30-777 - Plan 2	8,000.00	6,550.00	2,676.94	2,626.58	53.164	SF
Independence State D30-784 - Independence State D30	2,109.84	2,126.84	2,432.11	2,417.39	165.210	CC
Independence State D30-784 - Independence State D30	2,200.00	2,200.00	2,432.17	2,416.86	158.898	ES
Independence State D30-784 - Independence State D30	8,400.00	6,447.04	3,196.91	3,144.90	61.464	SF
LDS White D19-10 - LDS White D19-10 - LDS White D19	6,248.24	6,221.71	2,897.35	2,853.71	66.390	CC
LDS White D19-10 - LDS White D19-10 - LDS White D19	6,250.00	6,223.44	2,897.35	2,853.70	66.371	ES
LDS White D19-10 - LDS White D19-10 - LDS White D19	6,500.00	6,454.90	2,945.74	2,900.40	64.972	SF
LDS White D19-15 - LDS White D19-15 - LDS White D19	6,243.75	6,254.88	4,270.55	4,226.83	97.680	CC
LDS White D19-15 - LDS White D19-15 - LDS White D19	6,250.00	6,260.19	4,270.58	4,226.82	97.589	ES
LDS White D19-15 - LDS White D19-15 - LDS White D19	6,550.00	6,529.89	4,342.76	4,297.03	94.963	SF
LDS White D19-16 - Wellbore #1 - Wellbore #1 - As Drill	3,694.22	3,711.50	4,200.31	4,174.54	163.002	CC
LDS White D19-16 - Wellbore #1 - Wellbore #1 - As Drill	3,763.11	3,766.21	4,200.51	4,174.31	160.332	ES
LDS White D19-16 - Wellbore #1 - Wellbore #1 - As Drill	6,600.00	6,542.12	4,340.21	4,294.28	94.495	SF
Mile High 02-19 - Wellbore #1 - Wellbore #1 - As Drilled	6,236.10	6,186.95	1,234.86	1,191.42	28.427	CC, ES
Mile High 02-19 - Wellbore #1 - Wellbore #1 - As Drilled	6,350.00	6,306.44	1,244.71	1,200.44	28.116	SF
Sean D19-09 - Wellbore #1 - Wellbore #1 - As Drilled	3,400.00	3,373.00	2,771.47	2,692.06	34.899	CC
Sean D19-09 - Wellbore #1 - Wellbore #1 - As Drilled	3,700.00	3,672.45	2,775.31	2,688.87	32.106	ES
Sean D19-09 - Wellbore #1 - Wellbore #1 - As Drilled	6,500.00	6,441.60	2,937.56	2,785.78	19.354	SF
Turk Blue D19-02J - Turk Blue D19-02J - Turk Blue D19-	6,493.34	6,456.40	2,266.38	2,221.25	50.221	CC
Turk Blue D19-02J - Turk Blue D19-02J - Turk Blue D19-	6,500.00	6,464.64	2,266.39	2,221.21	50.166	ES
Turk Blue D19-02J - Turk Blue D19-02J - Turk Blue D19-	6,850.00	6,756.19	2,305.61	2,258.44	48.886	SF
Turk Blue D19-04 - Turk Blue D19-04 - Turk Blue D19-04	6,747.15	6,674.24	3,042.63	2,995.99	65.236	CC
Turk Blue D19-04 - Turk Blue D19-04 - Turk Blue D19-04	6,750.00	6,676.26	3,042.63	2,995.97	65.216	ES
Turk Blue D19-04 - Turk Blue D19-04 - Turk Blue D19-04	7,100.00	6,822.92	3,074.93	3,026.97	64.117	SF
Turk Blue D19-05 - Turk Blue D19-05 - Turk Blue D19-05	6,414.30	6,567.57	3,541.16	3,495.96	78.345	CC, ES
Turk Blue D19-05 - Turk Blue D19-05 - Turk Blue D19-05	6,800.00	6,846.74	3,609.97	3,562.63	76.256	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 Independence D18-732
Project:	Mustang	TVD Reference:	Well @ 4800.00ft
Reference Site:	D Section 19	MD Reference:	Well @ 4800.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Independence D18-732	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Independence D18-732	Database:	EDMP
Reference Design:	Plan 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
D Section 19						
Turk Blue D19-06 - Turk Blue D19-06 - Turk Blue D19-06	6,320.04	6,310.53	2,458.55	2,414.49	55.803	CC, ES
Turk Blue D19-06 - Turk Blue D19-06 - Turk Blue D19-06	6,600.00	6,566.27	2,502.80	2,456.92	54.552	SF
Turk White D19-01 - Wellbore #1 - Wellbore #1 - As Drill	3,435.64	3,415.53	646.03	622.19	27.107	CC, ES
Turk White D19-01 - Wellbore #1 - Wellbore #1 - As Drill	6,350.00	6,305.07	954.96	910.81	21.633	SF
Turk White D19-02 - Wellbore #1 - Wellbore #1 - As Drill	6,504.52	6,451.70	536.92	491.82	11.905	CC, ES
Turk White D19-02 - Wellbore #1 - Wellbore #1 - As Drill	6,550.00	6,488.84	538.02	492.64	11.854	SF
Turk White D19-08 - Wellbore #1 - Wellbore #1 - As Drill	673.85	644.88	1,730.31	1,726.05	405.541	CC
Turk White D19-08 - Wellbore #1 - Wellbore #1 - As Drill	3,500.00	3,468.64	1,732.33	1,708.09	71.457	ES
Turk White D19-08 - Wellbore #1 - Wellbore #1 - As Drill	6,400.00	6,356.71	1,889.73	1,845.11	42.349	SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Independence D18-732
Project:	Mustang	TVD Reference:	Well @ 4800.00ft
Reference Site:	D Section 19	MD Reference:	Well @ 4800.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Independence D18-732	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Independence D18-732	Database:	EDMP
Reference Design:	Plan 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
D Section 20						
Bohlender D20-2J - Wellbore #1 - No Surveys	3,400.00	3,368.00	2,403.23	2,361.88	58.124	CC, ES
Bohlender D20-2J - Wellbore #1 - No Surveys	6,600.00	6,523.00	2,790.35	2,710.29	34.851	SF
Bohlender D20-3 - Wellbore #1 - Gyro Surveys	2,671.14	2,645.39	3,067.99	3,049.55	166.443	CC
Bohlender D20-3 - Wellbore #1 - Gyro Surveys	3,402.45	3,379.34	3,071.39	3,047.78	130.136	ES
Bohlender D20-3 - Wellbore #1 - Gyro Surveys	7,050.00	6,770.96	3,483.05	3,435.38	73.072	SF
Bohlender D20-4 (P&A) - Wellbore #1 - No Surveys	3,400.00	3,370.00	1,663.62	1,584.27	20.964	CC
Bohlender D20-4 (P&A) - Wellbore #1 - No Surveys	3,500.00	3,469.98	1,665.37	1,583.66	20.383	ES
Bohlender D20-4 (P&A) - Wellbore #1 - No Surveys	6,850.00	6,699.01	2,086.50	1,928.75	13.227	SF
Bohlender D20-6 - Wellbore#1 - Gyro Surveys	3,455.28	3,480.78	3,432.50	3,408.36	142.226	CC
Bohlender D20-6 - Wellbore#1 - Gyro Surveys	3,500.00	3,532.23	3,432.78	3,408.31	140.288	ES
Bohlender D20-6 - Wellbore#1 - Gyro Surveys	6,700.00	6,538.96	3,827.02	3,780.96	83.089	SF
Butterball D19-27D - Butterball D19-27D - Butterball D19	7,178.10	7,039.06	207.33	156.67	4.093	CC
Butterball D19-27D - Butterball D19-27D - Butterball D19	7,200.00	7,039.95	208.43	156.08	3.982	ES
Butterball D19-27D - Butterball D19-27D - Butterball D19	7,300.00	7,039.00	239.70	174.37	3.669	SF
Duncan D20-1 (P&A) - Wellbore #1 - No Surveys	3,400.00	3,369.00	5,833.87	5,754.54	73.535	CC
Duncan D20-1 (P&A) - Wellbore #1 - No Surveys	3,500.00	3,468.98	5,835.62	5,753.93	71.441	ES
Duncan D20-1 (P&A) - Wellbore #1 - No Surveys	7,200.00	6,803.54	6,276.77	6,116.26	39.105	SF
Duncan D20-10 - Wellbore #1 - Gyro Surveys	3,415.09	3,420.36	5,684.30	5,660.50	238.860	CC, ES
Duncan D20-10 - Wellbore #1 - Gyro Surveys	6,850.00	6,716.28	6,166.57	6,119.48	130.976	SF
Duncan D20-11 (SI) - Wellbore #1 - No Surveys	3,400.00	3,375.00	4,195.25	4,153.85	101.316	CC, ES
Duncan D20-11 (SI) - Wellbore #1 - No Surveys	6,700.00	6,607.74	4,604.22	4,523.10	56.764	SF
Duncan D20-12 (SI) - Wellbore #1 - No Surveys	3,400.00	3,373.00	3,338.11	3,296.72	80.650	CC
Duncan D20-12 (SI) - Wellbore #1 - No Surveys	3,500.00	3,472.98	3,339.07	3,296.46	78.359	ES
Duncan D20-12 (SI) - Wellbore #1 - No Surveys	6,550.00	6,485.75	3,620.96	3,541.30	45.451	SF
Duncan D20-13 (SI) - Wellbore #1 - No Surveys	3,400.00	3,378.00	4,703.14	4,661.71	113.510	CC
Duncan D20-13 (SI) - Wellbore #1 - No Surveys	3,500.00	3,477.98	4,703.83	4,661.17	110.273	ES
Duncan D20-13 (SI) - Wellbore #1 - No Surveys	6,650.00	6,573.07	4,988.54	4,907.81	61.790	SF
Duncan D20-14 (SI) - Wellbore #1 - Gyro Surveys	2,541.62	2,513.66	4,708.81	4,691.32	269.180	CC
Duncan D20-14 (SI) - Wellbore #1 - Gyro Surveys	3,400.00	3,357.87	4,712.06	4,688.55	200.460	ES
Duncan D20-14 (SI) - Wellbore #1 - Gyro Surveys	6,700.00	6,509.56	5,085.23	5,039.23	110.536	SF
Duncan D20-15 (P&A) - Wellbore #1 - Gyro Surveys	3,510.82	3,656.44	5,981.40	5,956.45	239.702	CC, ES
Duncan D20-15 (P&A) - Wellbore #1 - Gyro Surveys	6,800.00	6,693.41	6,401.29	6,354.37	136.419	SF
Duncan D20-16 (SI) - Wellbore #1 - Gyro Surveys	2,842.59	2,829.65	7,231.97	7,212.31	367.732	CC
Duncan D20-16 (SI) - Wellbore #1 - Gyro Surveys	3,407.43	3,410.02	7,232.70	7,208.99	305.009	ES
Duncan D20-16 (SI) - Wellbore #1 - Gyro Surveys	6,850.00	6,638.55	7,704.50	7,657.72	164.705	SF
Duncan D20-2 - Wellbore #1 - Gyro Surveys	2,047.99	2,008.17	4,391.21	4,377.26	314.736	CC
Duncan D20-2 - Wellbore #1 - Gyro Surveys	2,200.00	2,122.60	4,391.90	4,377.00	294.868	ES
Duncan D20-2 - Wellbore #1 - Gyro Surveys	7,200.00	6,790.36	4,874.97	4,827.01	101.636	SF
Duncan D20-7 - Wellbore #1 - Gyro Surveys	2,288.39	2,249.43	4,841.38	4,825.73	309.315	CC
Duncan D20-7 - Wellbore #1 - Gyro Surveys	3,408.55	3,383.72	4,844.75	4,821.13	205.085	ES
Duncan D20-7 - Wellbore #1 - Gyro Surveys	7,000.00	6,766.12	5,343.01	5,295.49	112.424	SF
Duncan D20-8 - Wellbore #1 - Gyro Surveys	1,957.56	1,945.80	5,942.53	5,929.10	442.445	CC
Duncan D20-8 - Wellbore #1 - Gyro Surveys	2,200.00	2,152.24	5,943.14	5,928.11	395.382	ES
Duncan D20-8 - Wellbore #1 - Gyro Surveys	7,050.00	6,799.94	6,506.89	6,459.15	136.296	SF
Duncan D20-9 (P&A) - Wellbore #1 - Gyro Surveys	3,430.10	3,463.28	6,491.71	6,467.72	270.542	CC, ES
Duncan D20-9 (P&A) - Wellbore #1 - Gyro Surveys	7,000.00	6,779.73	7,021.25	6,973.67	147.540	SF
E Ranches (P&A) - Wellbore #1 - No Surveys	3,400.00	3,370.00	4,723.73	4,644.37	59.526	CC
E Ranches (P&A) - Wellbore #1 - No Surveys	3,500.00	3,469.98	4,724.59	4,642.89	57.825	ES
E Ranches (P&A) - Wellbore #1 - No Surveys	6,650.00	6,565.07	5,040.01	4,885.35	32.587	SF
Guttersen 10-20 - Wellbore #1 - Gyro Surveys	2,393.84	2,357.91	5,002.09	4,985.67	304.630	CC
Guttersen 10-20 - Wellbore #1 - Gyro Surveys	3,500.00	3,582.38	5,002.22	4,977.57	202.970	ES
Guttersen 10-20 - Wellbore #1 - Gyro Surveys	6,700.00	6,634.55	5,384.61	5,338.28	116.224	SF
LDS D20-30D - LDS D20-30D - LDS D20-30D - As Drille	4,627.38	4,789.75	1,217.79	1,184.03	36.082	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 Independence D18-732
Project:	Mustang	TVD Reference:	Well @ 4800.00ft
Reference Site:	D Section 19	MD Reference:	Well @ 4800.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Independence D18-732	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Independence D18-732	Database:	EDMP
Reference Design:	Plan 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						
D Section 20						
LDS D20-30D - LDS D20-30D - LDS D20-30D - As Drille	4,700.00	4,848.48	1,218.19	1,183.94	35.569	ES
LDS D20-30D - LDS D20-30D - LDS D20-30D - As Drille	7,100.00	6,854.39	1,388.82	1,338.68	27.701	SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Independence D18-732
Project:	Mustang	TVD Reference:	Well @ 4800.00ft
Reference Site:	D Section 19	MD Reference:	Well @ 4800.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Independence D18-732	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Independence D18-732	Database:	EDMP
Reference Design:	Plan 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
D Section 29						
Guttersen D29-30D - Wellbore #1 - Design #1	5,497.77	5,845.91	5,133.03	5,091.84	124.598	CC
Guttersen D29-30D - Wellbore #1 - Design #1	5,500.00	5,846.70	5,133.03	5,091.83	124.568	ES
Guttersen D29-30D - Wellbore #1 - Design #1	6,600.00	6,722.25	5,271.75	5,223.91	110.200	SF
Guttersen D29-31D - Wellbore #1 - Guttersen D29-31D	4,820.94	5,096.96	6,328.56	6,293.42	180.077	CC
Guttersen D29-31D - Wellbore #1 - Guttersen D29-31D	4,900.00	5,136.00	6,328.71	6,293.16	178.031	ES
Guttersen D29-31D - Wellbore #1 - Guttersen D29-31D	6,650.00	6,669.73	6,512.00	6,465.43	139.845	SF
Guttersen D29-33D - Wellbore #1 - Guttersen D29-33D -	855.00	863.00	7,697.75	7,693.26	1,711.094	CC
Guttersen D29-33D - Wellbore #1 - Guttersen D29-33D -	900.00	863.00	7,697.89	7,693.23	1,651.868	ES
Guttersen D29-33D - Wellbore #1 - Guttersen D29-33D -	6,850.00	6,910.35	9,249.03	9,201.16	193.203	SF
Guttersen D29-65HN - Original Drilling - Original Drilling	3,485.61	3,539.36	7,669.84	7,646.97	335.308	CC
Guttersen D29-65HN - Original Drilling - Original Drilling	3,500.00	3,554.02	7,669.85	7,646.88	333.829	ES
Guttersen D29-65HN - Original Drilling - Original Drilling	6,600.00	6,474.00	7,825.31	7,781.21	177.466	SF
Guttersen D29-67HN - Original Drilling - Original Drilling	3,441.47	3,487.54	6,318.44	6,295.62	276.829	CC
Guttersen D29-67HN - Original Drilling - Original Drilling	3,500.00	3,498.01	6,318.68	6,295.62	273.952	ES
Guttersen D29-67HN - Original Drilling - Original Drilling	6,650.00	6,316.01	6,579.15	6,535.29	149.985	SF
Guttersen D29-69HN - Original Drilling - Original Drilling	5,036.25	5,425.45	5,188.95	5,151.26	137.687	CC
Guttersen D29-69HN - Original Drilling - Original Drilling	5,100.00	5,462.01	5,189.22	5,151.19	136.465	ES
Guttersen D29-69HN - Original Drilling - Original Drilling	6,500.00	6,411.01	5,309.24	5,263.55	116.209	SF
Guttersen D29-722 - Guttersen D29-722 - Prelim - Rev 1	9,723.45	17,638.72	5,929.73	5,803.82	47.097	CC, ES
Guttersen D29-722 - Guttersen D29-722 - Prelim - Rev 1	10,600.00	17,638.72	5,994.17	5,864.45	46.210	SF
Guttersen D29-730 - Guttersen D29-730 - Prelim - Rev 1	9,709.93	17,556.91	5,316.55	5,191.41	42.486	CC, ES
Guttersen D29-730 - Guttersen D29-730 - Prelim - Rev 1	10,400.00	17,556.91	5,361.15	5,233.31	41.937	SF
Guttersen D29-738 - Guttersen D29-738 - Prelim - Rev 1	9,695.98	17,779.88	4,684.08	4,558.57	37.319	CC
Guttersen D29-738 - Guttersen D29-738 - Prelim - Rev 1	9,700.00	17,779.88	4,684.08	4,558.54	37.312	ES
Guttersen D29-738 - Guttersen D29-738 - Prelim - Rev 1	10,300.00	17,779.88	4,722.87	4,594.56	36.808	SF
Guttersen D29-746 - Guttersen D29-746 - Prelim - Rev 1	9,683.11	17,495.86	4,099.91	3,974.56	32.707	CC
Guttersen D29-746 - Guttersen D29-746 - Prelim - Rev 1	9,700.00	17,495.86	4,099.94	3,974.50	32.685	ES
Guttersen D29-746 - Guttersen D29-746 - Prelim - Rev 1	10,100.00	17,495.86	4,121.05	3,993.93	32.418	SF
Guttersen D29-754 - Guttersen D29-754 - Prelim - Rev 1	9,670.20	17,718.83	3,515.32	3,389.48	27.936	CC
Guttersen D29-754 - Guttersen D29-754 - Prelim - Rev 1	9,700.00	17,718.83	3,515.44	3,389.47	27.906	ES
Guttersen D29-754 - Guttersen D29-754 - Prelim - Rev 1	9,900.00	17,718.83	3,522.82	3,396.07	27.794	SF
Guttersen D29-770 - Guttersen D29-770 - Prelim - Rev 1	9,656.35	17,536.90	2,879.32	2,754.15	23.004	CC, ES
Guttersen D29-770 - Guttersen D29-770 - Prelim - Rev 1	9,900.00	17,536.90	2,889.61	2,763.50	22.913	SF
Guttersen D29-778 - Guttersen D29-778 - Prelim - Rev 1	9,642.93	17,670.79	2,267.54	2,141.76	18.028	CC, ES
Guttersen D29-778 - Guttersen D29-778 - Prelim - Rev 1	9,700.00	17,670.79	2,268.26	2,142.26	18.002	SF
Guttersen D29-786 - Guttersen D29-786 - Prelim - Rev 1	9,630.27	17,553.42	1,687.55	1,562.80	13.528	CC, ES
Guttersen D29-786 - Guttersen D29-786 - Prelim - Rev 1	9,700.00	17,553.42	1,688.99	1,564.12	13.527	SF
Guttersen D29-99HZ - Wellbore #1 - MWD Surveys	5,830.36	6,148.88	9,075.86	9,034.58	219.853	CC
Guttersen D29-99HZ - Wellbore #1 - MWD Surveys	5,900.00	6,177.01	9,076.06	9,034.43	218.034	ES
Guttersen D29-99HZ - Wellbore #1 - MWD Surveys	6,600.00	6,321.01	9,204.12	9,159.70	207.227	SF
Guttersen D30-68-1HN - Original Drilling - Original Drilling	6,289.95	8,133.97	5,897.36	5,832.92	91.522	CC, ES
Guttersen D30-68-1HN - Original Drilling - Original Drilling	6,750.00	8,219.71	6,070.79	6,002.92	89.448	SF
Guttersen D30-69-1HN - Original Drilling - Original Drilling	6,296.84	7,950.67	5,181.17	5,120.03	84.751	CC
Guttersen D30-69-1HN - Original Drilling - Original Drilling	6,300.00	7,951.03	5,181.18	5,120.02	84.724	ES
Guttersen D30-69-1HN - Original Drilling - Original Drilling	6,700.00	8,059.68	5,317.36	5,252.73	82.266	SF
Guttersen State D29-714 - Guttersen D29-714 - Prelim -	9,735.64	17,532.66	6,482.23	6,356.62	51.604	CC
Guttersen State D29-714 - Guttersen D29-714 - Prelim -	9,800.00	17,532.66	6,482.55	6,356.58	51.460	ES
Guttersen State D29-714 - Guttersen D29-714 - Prelim -	10,900.00	17,532.66	6,585.98	6,455.07	50.310	SF
Guttersen State Y05-719 - Guttersen Y05-719 - Prelim -	3,742.97	4,520.72	8,963.96	8,934.88	308.173	CC
Guttersen State Y05-719 - Guttersen Y05-719 - Prelim -	4,100.00	4,868.50	8,966.00	8,934.40	283.759	ES
Guttersen State Y05-719 - Guttersen Y05-719 - Prelim -	6,700.00	6,350.00	9,185.60	9,139.58	199.610	SF
Guttersen Y05-726 - Guttersen Y05-726 - Prelim - Rev 1	5,519.24	6,322.31	8,638.56	8,596.51	205.450	CC, ES
Guttersen Y05-726 - Guttersen Y05-726 - Prelim - Rev 1	6,600.00	6,400.00	8,776.67	8,730.71	190.975	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 Independence D18-732
Project:	Mustang	TVD Reference:	Well @ 4800.00ft
Reference Site:	D Section 19	MD Reference:	Well @ 4800.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Independence D18-732	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Independence D18-732	Database:	EDMP
Reference Design:	Plan 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
D Section 29						
Guttersen Y05-734 - Guttersen Y05-734 - Prelim - Rev 1	5,697.48	6,472.32	8,308.02	8,264.36	190.260	CC, ES
Guttersen Y05-734 - Guttersen Y05-734 - Prelim - Rev 1	6,550.00	6,550.00	8,412.05	8,365.32	179.987	SF
Guttersen Y05-749 - Guttersen Y05-749 - Prelim - Rev 1	3,708.57	4,181.41	7,759.73	7,731.91	278.872	CC
Guttersen Y05-749 - Guttersen Y05-749 - Prelim - Rev 1	3,763.11	4,233.25	7,760.02	7,731.81	275.106	ES
Guttersen Y05-749 - Guttersen Y05-749 - Prelim - Rev 1	6,550.00	6,350.00	7,924.00	7,878.00	172.271	SF
Guttersen Y05-756 - Guttersen Y05-756 - Prelim - Rev 1	5,731.80	6,272.34	7,539.11	7,496.50	176.941	CC, ES
Guttersen Y05-756 - Guttersen Y05-756 - Prelim - Rev 1	6,500.00	6,350.00	7,624.08	7,578.55	167.436	SF
Guttersen Y05-771 - Guttersen Y05-771 - Prelim - Rev 1	5,805.39	6,300.32	7,176.91	7,133.57	165.593	CC, ES
Guttersen Y05-771 - Guttersen Y05-771 - Prelim - Rev 1	6,500.00	6,350.00	7,259.07	7,213.13	158.018	SF
Guttersen Y05-779 - Guttersen Y05- 779 - Prelim - Rev 1	6,008.62	6,400.00	7,007.91	6,963.77	158.790	CC, ES
Guttersen Y05-779 - Guttersen Y05- 779 - Prelim - Rev 1	6,600.00	6,450.00	7,129.39	7,083.14	154.122	SF
Guttersen Y05-786 - Guttersen Y05-786 - Prelim - Rev 1	5,968.86	6,300.00	6,845.26	6,801.61	156.849	CC
Guttersen Y05-786 - Guttersen Y05-786 - Prelim - Rev 1	6,000.00	6,300.00	6,845.33	6,801.57	156.457	ES
Guttersen Y05-786 - Guttersen Y05-786 - Prelim - Rev 1	6,500.00	6,350.00	6,917.38	6,871.80	151.766	SF
Jessie D29-1J - Wellbore #1 - Gyro Surveys	3,423.77	3,448.19	7,473.76	7,449.85	312.659	CC, ES
Jessie D29-1J - Wellbore #1 - Gyro Surveys	6,800.00	6,646.55	7,894.89	7,848.16	168.966	SF
Jessie D29-4J - Wellbore #1 - Gyro Surveys	1,999.94	2,000.00	9,668.21	9,654.44	702.492	CC
Jessie D29-4J - Wellbore #1 - Gyro Surveys	3,500.00	3,636.11	9,675.54	9,650.71	389.657	ES
Jessie D29-4J - Wellbore #1 - Gyro Surveys	6,600.00	6,330.88	9,973.77	9,928.63	220.993	SF
Kate Red D29-03J - Kate Red D29-03J - Kate Red D29-0	3,412.56	3,416.11	8,711.03	8,687.24	366.246	CC
Kate Red D29-03J - Kate Red D29-03J - Kate Red D29-0	3,500.00	3,475.62	8,711.51	8,687.21	358.533	ES
Kate Red D29-03J - Kate Red D29-03J - Kate Red D29-0	6,750.00	6,703.23	9,005.34	8,958.46	192.103	SF
Kate Red D29-11 - Wellbore #1 - Gyro Surveys	3,517.43	3,638.25	8,660.10	8,635.18	347.467	CC
Kate Red D29-11 - Wellbore #1 - Gyro Surveys	3,600.00	3,720.45	8,660.55	8,635.06	339.700	ES
Kate Red D29-11 - Wellbore #1 - Gyro Surveys	6,800.00	6,806.29	9,007.72	8,960.40	190.350	SF
Kate Red D29-13 - Wellbore #1 - Gyro Surveys	3,087.06	3,091.09	9,649.30	9,627.83	449.452	CC
Kate Red D29-13 - Wellbore #1 - Gyro Surveys	3,300.00	3,252.58	9,649.70	9,626.91	423.352	ES
Kate Red D29-13 - Wellbore #1 - Gyro Surveys	6,750.00	6,675.82	9,967.66	9,920.91	213.247	SF
Kate Red D29-14 - Wellbore #1 - Gyro Surveys	3,436.99	3,490.96	9,911.53	9,887.43	411.205	CC
Kate Red D29-14 - Wellbore #1 - Gyro Surveys	3,500.00	3,579.42	9,911.68	9,887.05	402.369	ES
Kate Red D29-14 - Wellbore #1 - Gyro Surveys	5,800.00	5,885.02	9,998.76	9,957.94	244.923	SF
Kate Red D29-2J - Wellbore #1 - Kate Red D29-2J	3,222.80	3,200.00	6,204.13	6,181.80	277.843	CC
Kate Red D29-2J - Wellbore #1 - Kate Red D29-2J	3,400.00	3,338.30	6,204.86	6,181.42	264.650	ES
Kate Red D29-2J - Wellbore #1 - Kate Red D29-2J	6,750.00	6,583.51	6,616.69	6,570.27	142.529	SF
Kate Red D29-3 - Wellbore #1 - Kate Red D29-3	2,305.27	2,280.41	6,257.76	6,241.92	395.058	CC
Kate Red D29-3 - Wellbore #1 - Kate Red D29-3	3,500.00	3,520.20	6,260.59	6,236.15	256.218	ES
Kate Red D29-3 - Wellbore #1 - Kate Red D29-3	6,700.00	6,570.09	6,635.43	6,589.19	143.483	SF
Kate Red D29-5 - Wellbore #1 - Gyro Surveys	3,624.23	3,753.36	7,013.08	6,987.40	273.035	CC
Kate Red D29-5 - Wellbore #1 - Gyro Surveys	3,700.00	3,826.59	7,013.42	6,987.21	267.653	ES
Kate Red D29-5 - Wellbore #1 - Gyro Surveys	6,750.00	6,645.00	7,309.59	7,262.93	156.653	SF
Kate Red D29-6 - Wellbore #1 - Gyro Surveys	3,477.22	3,540.75	7,449.41	7,425.00	305.162	CC
Kate Red D29-6 - Wellbore #1 - Gyro Surveys	3,500.00	3,551.58	7,449.47	7,424.94	303.698	ES
Kate Red D29-6 - Wellbore #1 - Gyro Surveys	6,750.00	6,646.41	7,847.23	7,800.59	168.260	SF
Kate White D29-1 - Wellbore #1 - Gyro Surveys	1,997.24	1,987.24	7,891.19	7,877.50	576.370	CC
Kate White D29-1 - Wellbore #1 - Gyro Surveys	2,400.00	2,343.54	7,892.07	7,875.69	481.814	ES
Kate White D29-1 - Wellbore #1 - Gyro Surveys	6,900.00	6,719.62	8,433.65	8,386.49	178.808	SF
Kate White D29-15 - Wellbore #1 - Gyro Surveys						Out of range
Kate White D29-16 - Wellbore #1 - Gyro Surveys						Out of range
Kate White D29-7 - Wellbore #1 - Gyro Surveys	3,459.37	3,547.79	8,249.99	8,225.58	337.963	CC
Kate White D29-7 - Wellbore #1 - Gyro Surveys	3,500.00	3,588.44	8,250.16	8,225.46	334.074	ES
Kate White D29-7 - Wellbore #1 - Gyro Surveys	6,800.00	6,653.58	8,641.45	8,594.64	184.592	SF
Kate White D29-8 - Wellbore #1 - Gyro Surveys	3,405.53	3,402.13	8,893.95	8,870.26	375.390	CC, ES
Kate White D29-8 - Wellbore #1 - Gyro Surveys	6,800.00	6,500.00	9,313.96	9,267.75	201.579	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 Independence D18-732
Project:	Mustang	TVD Reference:	Well @ 4800.00ft
Reference Site:	D Section 19	MD Reference:	Well @ 4800.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Independence D18-732	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Independence D18-732	Database:	EDMP
Reference Design:	Plan 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						
D Section 29						
Kate White D29-9 (SI) - Wellbore #1 - Gyro Surveys	3,090.02	3,091.12	9,920.73	9,899.27	462.172	CC
Kate White D29-9 (SI) - Wellbore #1 - Gyro Surveys	3,300.00	3,249.12	9,921.18	9,898.41	435.731	ES
Kate White D29-9 (SI) - Wellbore #1 - Gyro Surveys	4,500.00	4,314.95	9,997.06	9,966.40	326.035	SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Independence D18-732
Project:	Mustang	TVD Reference:	Well @ 4800.00ft
Reference Site:	D Section 19	MD Reference:	Well @ 4800.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Independence D18-732	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Independence D18-732	Database:	EDMP
Reference Design:	Plan 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
D Section 30						
Adams D30-27D - Adams D30-27D - Adams D30-27D - A	6,225.53	6,290.12	4,703.94	4,658.22	102.887	CC, ES
Adams D30-27D - Adams D30-27D - Adams D30-27D - A	6,600.00	6,634.97	4,811.61	4,763.50	100.009	SF
Adams D30-29D - Wellbore #1 - Wellbore #1 - As Drilled	1,125.12	1,121.00	5,372.74	5,365.19	711.634	CC
Adams D30-29D - Wellbore #1 - Wellbore #1 - As Drilled	1,200.00	1,162.16	5,372.98	5,365.00	673.735	ES
Adams D30-29D - Wellbore #1 - Wellbore #1 - As Drilled	6,600.00	6,675.01	5,573.88	5,523.73	111.147	SF
Adams D30-30D - Adams D30-30D OH - As Drilled	1,592.47	1,613.00	5,262.03	5,248.17	379.730	CC
Adams D30-30D - Adams D30-30D OH - As Drilled	1,700.00	1,663.01	5,262.62	5,247.78	354.650	ES
Adams D30-30D - Adams D30-30D OH - As Drilled	6,700.00	7,040.80	6,174.24	6,065.84	56.959	SF
Adams D30-31D - Adams D30-31D Gyros - Gyros	0.00	0.00	5,359.61			
Adams D30-31D - Adams D30-31D Gyros - Gyros	100.00	59.30	5,359.75	5,359.52	10,000.000	ES
Adams D30-31D - Adams D30-31D Gyros - Gyros	5,700.00	5,700.00	6,556.12	6,479.88	85.992	SF
Corbin D30-23D - Corbin D30-23D - Corbin D30-23D - As	5,866.19	6,261.18	9,146.28	9,050.19	95.181	CC
Corbin D30-23D - Corbin D30-23D - Corbin D30-23D - As	6,000.00	6,347.34	9,146.71	9,050.00	94.585	ES
Corbin D30-23D - Corbin D30-23D - Corbin D30-23D - As	6,450.00	6,717.32	9,189.86	9,091.05	92.998	SF
Corbin Red D30-04J - Corbin Red D30-04J - Corbin Red	5,583.40	5,550.14	8,499.27	8,460.40	218.639	CC
Corbin Red D30-04J - Corbin Red D30-04J - Corbin Red	5,900.00	5,846.33	8,499.73	8,458.69	207.071	ES
Corbin Red D30-04J - Corbin Red D30-04J - Corbin Red	6,750.00	6,367.18	8,719.31	8,673.67	191.021	SF
Corbin Red D30-09 - Corbin Red D30-09 - Corbin Red D	3,322.28	3,319.62	8,164.75	8,141.62	352.993	CC
Corbin Red D30-09 - Corbin Red D30-09 - Corbin Red D	4,700.00	4,738.14	8,167.43	8,134.52	248.138	ES
Corbin Red D30-09 - Corbin Red D30-09 - Corbin Red D	6,750.00	6,554.14	8,408.12	8,361.78	181.443	SF
Corbin Red D30-15 - Corbin Red D30-15 - Corbin Red D	5,589.96	5,526.37	9,493.87	9,455.06	244.603	CC
Corbin Red D30-15 - Corbin Red D30-15 - Corbin Red D	6,227.09	6,200.00	9,496.77	9,453.30	218.488	ES
Corbin Red D30-15 - Corbin Red D30-15 - Corbin Red D	6,700.00	6,430.81	9,668.40	9,622.62	211.224	SF
Corbin Red D30-16 - Corbin Red D30-16 - Corbin Red D	0.00	0.86	9,509.88			
Corbin Red D30-16 - Corbin Red D30-16 - Corbin Red D	2,300.00	2,237.52	9,514.51	9,498.85	607.777	ES
Corbin Red D30-16 - Corbin Red D30-16 - Corbin Red D	6,850.00	6,850.00	9,910.63	9,863.03	208.234	SF
Dechant D30-17D - Dechant D30-17D - Dechant D30-17	141.68	123.68	5,352.67	5,352.14	10,000.000	CC
Dechant D30-17D - Dechant D30-17D - Dechant D30-17	200.00	162.98	5,352.77	5,351.89	6,073.664	ES
Dechant D30-17D - Dechant D30-17D - Dechant D30-17	6,550.00	6,990.19	6,583.41	6,498.46	77.492	SF
Dechant D30-20D - Dechant D30-20D - Dechant D30-20	6,261.11	6,470.43	7,842.06	7,795.05	166.826	CC, ES
Dechant D30-20D - Dechant D30-20D - Dechant D30-20	6,700.00	6,786.86	7,983.44	7,933.99	161.427	SF
Dechant D30-24D - Dechant D30-24D - Dechant D30-24	6,064.14	6,022.91	8,950.95	8,907.95	208.159	CC
Dechant D30-24D - Dechant D30-24D - Dechant D30-24	6,200.00	6,100.00	8,951.49	8,907.77	204.772	ES
Dechant D30-24D - Dechant D30-24D - Dechant D30-24	6,750.00	6,598.62	9,157.10	9,110.05	194.627	SF
Dechant D30-25D - Dechant D30-25D - Dechant D30-25	6,249.47	6,475.73	9,167.84	9,111.34	162.270	CC
Dechant D30-25D - Dechant D30-25D - Dechant D30-25	6,250.00	6,476.05	9,167.84	9,111.34	162.263	ES
Dechant D30-25D - Dechant D30-25D - Dechant D30-25	6,650.00	6,645.09	9,290.43	9,232.37	160.038	SF
Dechant D31-27D - Dechant D31-27D - Dechant D31-27	3,219.73	3,400.00	9,998.86	9,944.29	183.230	CC
Dechant D31-27D - Dechant D31-27D - Dechant D31-27	3,400.00	3,500.00	9,999.66	9,942.51	174.955	ES, SF
Dechant D31-28D - Dechant D31-28D - Dechant D31-28						Out of range
Dechant D31-29D - Dechant D31-29D - Dechant D31-29						Out of range
Dechant D31-77HN - Original Drilling - Original Drilling - A						Out of range
Hanson D30-11 - Hanson D30-11 - Hanson D30-11 - As D	6,243.73	6,239.25	8,272.83	8,229.18	189.503	CC
Hanson D30-11 - Hanson D30-11 - Hanson D30-11 - As D	6,250.00	6,244.35	8,272.87	8,229.17	189.328	ES
Hanson D30-11 - Hanson D30-11 - Hanson D30-11 - As D	6,950.00	6,950.00	8,619.12	8,571.07	179.357	SF
Hanson D30-12 - Hanson D30-12 - Hanson D30-12 - As	6,260.87	6,323.70	8,517.40	8,473.38	193.481	CC, ES
Hanson D30-12 - Hanson D30-12 - Hanson D30-12 - As	6,750.00	6,794.84	8,687.10	8,639.91	184.086	SF
Hanson D30-13 - Hanson D30-13 - Hanson D30-13 - As						Out of range
Hanson D30-14 - Hanson D30-14 - Hanson D30-14 - As	6,234.09	6,163.74	9,590.92	9,547.47	220.689	CC, ES
Hanson D30-14 - Hanson D30-14 - Hanson D30-14 - As	6,700.00	6,500.79	9,753.54	9,707.42	211.497	SF
Hettinger C Unit 1 - Hettinger C Unit 1 - Hettinger C Unit	6,040.46	6,069.53	5,690.53	5,648.09	134.083	CC
Hettinger C Unit 1 - Hettinger C Unit 1 - Hettinger C Unit	6,200.00	6,187.37	5,691.20	5,647.78	131.058	ES
Hettinger C Unit 1 - Hettinger C Unit 1 - Hettinger C Unit	6,700.00	6,713.47	5,860.97	5,814.09	125.014	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 Independence D18-732
Project:	Mustang	TVD Reference:	Well @ 4800.00ft
Reference Site:	D Section 19	MD Reference:	Well @ 4800.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Independence D18-732	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Independence D18-732	Database:	EDMP
Reference Design:	Plan 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
D Section 30						
Hettinger D30-02 - Hettinger D30-02 - Hettinger D30-02 -	6,231.24	6,189.47	5,386.52	5,310.51	70.864	CC, ES
Hettinger D30-02 - Hettinger D30-02 - Hettinger D30-02 -	6,650.00	6,574.07	5,519.19	5,438.45	68.352	SF
Hettinger D30-03 - Hettinger D30-03 - Hettinger D30-03 -	6,260.63	6,300.00	5,663.79	5,619.87	128.951	CC, ES
Hettinger D30-03 - Hettinger D30-03 - Hettinger D30-03 -	6,650.00	6,683.99	5,770.90	5,724.36	123.999	SF
Hettinger D30-04 - Hettinger D30-04 - Hettinger D30-04 -	6,275.23	6,289.43	6,122.78	6,078.85	139.377	CC, ES
Hettinger D30-04 - Hettinger D30-04 - Hettinger D30-04 -	6,750.00	6,803.37	6,267.85	6,220.65	132.795	SF
Hettinger D30-05 - Hettinger D30-05 - Hettinger D30-05 -	6,257.71	6,229.35	7,697.99	7,654.35	176.414	CC, ES
Hettinger D30-05 - Hettinger D30-05 - Hettinger D30-05 -	6,750.00	6,660.78	7,866.28	7,819.61	168.538	SF
Hettinger D30-06 - Hettinger D30-06 - Hettinger D30-06 -	6,258.24	6,384.87	7,277.68	7,233.49	164.701	CC, ES
Hettinger D30-06 - Hettinger D30-06 - Hettinger D30-06 -	6,800.00	6,780.48	7,491.61	7,444.40	158.696	SF
Hettinger D30-08 - Hettinger D30-08 - Hettinger D30-08 -	866.13	854.13	6,931.13	6,925.45	1,219.941	CC
Hettinger D30-08 - Hettinger D30-08 - Hettinger D30-08 -	5,000.00	5,020.62	6,941.22	6,906.28	198.647	ES
Hettinger D30-08 - Hettinger D30-08 - Hettinger D30-08 -	6,650.00	6,600.00	7,100.23	7,053.96	153.457	SF
Leslie E Hanson Gas Unit 1 - Leslie E Hanson Gas Unit	6,247.16	6,223.26	9,308.05	9,231.70	121.921	CC
Leslie E Hanson Gas Unit 1 - Leslie E Hanson Gas Unit	6,250.00	6,226.07	9,308.05	9,231.67	121.866	ES
Leslie E Hanson Gas Unit 1 - Leslie E Hanson Gas Unit	6,850.00	6,726.01	9,563.78	9,481.29	115.935	SF
McWilliams D29-32 - McWilliams D29-32 - McWilliams D	3,666.33	3,765.21	7,460.72	7,434.88	288.644	CC
McWilliams D29-32 - McWilliams D29-32 - McWilliams D	3,800.00	3,887.91	7,461.39	7,434.65	279.044	ES
McWilliams D29-32 - McWilliams D29-32 - McWilliams D	6,700.00	6,554.69	7,706.22	7,660.01	166.763	SF
McWilliams D30-07 - McWilliams D30-07 - McWilliams D	6,229.62	6,195.86	6,712.52	6,636.46	88.249	CC, ES
McWilliams D30-07 - McWilliams D30-07 - McWilliams D	6,750.00	6,654.76	6,913.55	6,831.86	84.633	SF
McWilliams D30-18 - McWilliams D30-18 - McWilliams D	6,249.08	6,314.53	6,328.26	6,284.33	144.067	CC
McWilliams D30-18 - McWilliams D30-18 - McWilliams D	6,250.00	6,315.47	6,328.26	6,284.32	144.045	ES
McWilliams D30-18 - McWilliams D30-18 - McWilliams D	6,750.00	6,747.12	6,513.20	6,466.20	138.575	SF
McWilliams D30-19 - McWilliams D30-19 - McWilliams D	6,260.61	6,289.86	6,612.10	6,567.13	147.051	CC, ES
McWilliams D30-19 - McWilliams D30-19 - McWilliams D	6,800.00	6,750.60	6,815.56	6,766.81	139.807	SF
McWilliams D30-21 - McWilliams D30-21 - McWilliams D	6,249.67	6,440.07	7,846.74	7,802.37	176.874	CC
McWilliams D30-21 - McWilliams D30-21 - McWilliams D	6,250.00	6,440.16	7,846.74	7,802.37	176.868	ES
McWilliams D30-21 - McWilliams D30-21 - McWilliams D	6,700.00	6,600.00	8,006.40	7,960.03	172.665	SF
McWilliams D30-22 - McWilliams D30-22 - McWilliams D	6,231.87	6,300.00	7,418.73	7,374.90	169.265	CC, ES
McWilliams D30-22 - McWilliams D30-22 - McWilliams D	6,600.00	6,500.00	7,525.90	7,480.13	164.435	SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Independence D18-732
Project:	Mustang	TVD Reference:	Well @ 4800.00ft
Reference Site:	D Section 19	MD Reference:	Well @ 4800.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Independence D18-732	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Independence D18-732	Database:	EDMP
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to Well @ 4800.00ft

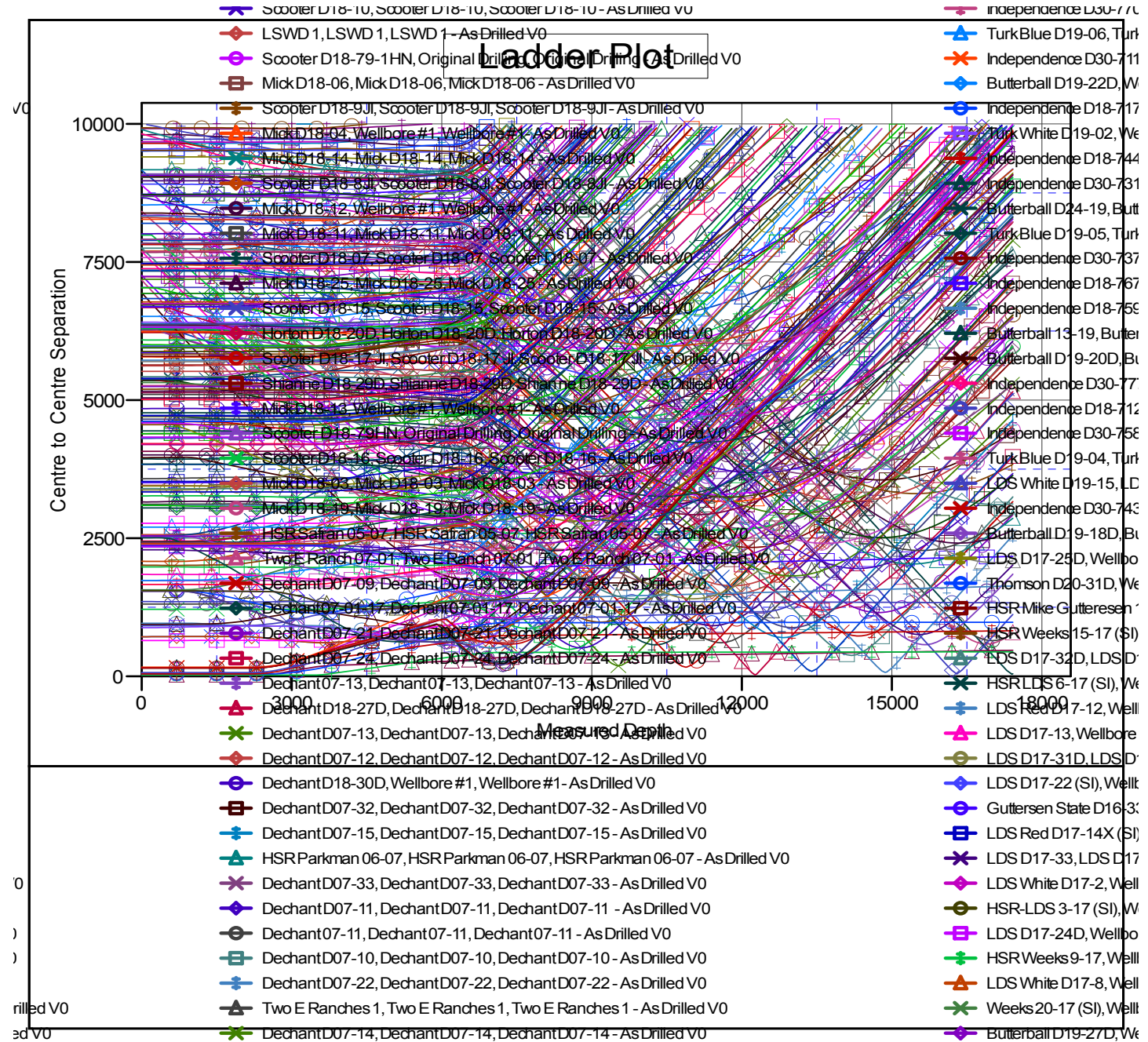
Coordinates are relative to: Independence D18-732

Offset Depths are relative to Offset Datum

Coordinate System is US State Plane 1983, Colorado Northern Zone

Central Meridian is -105.5000000

Grid Convergence at Surface is: 0.59°

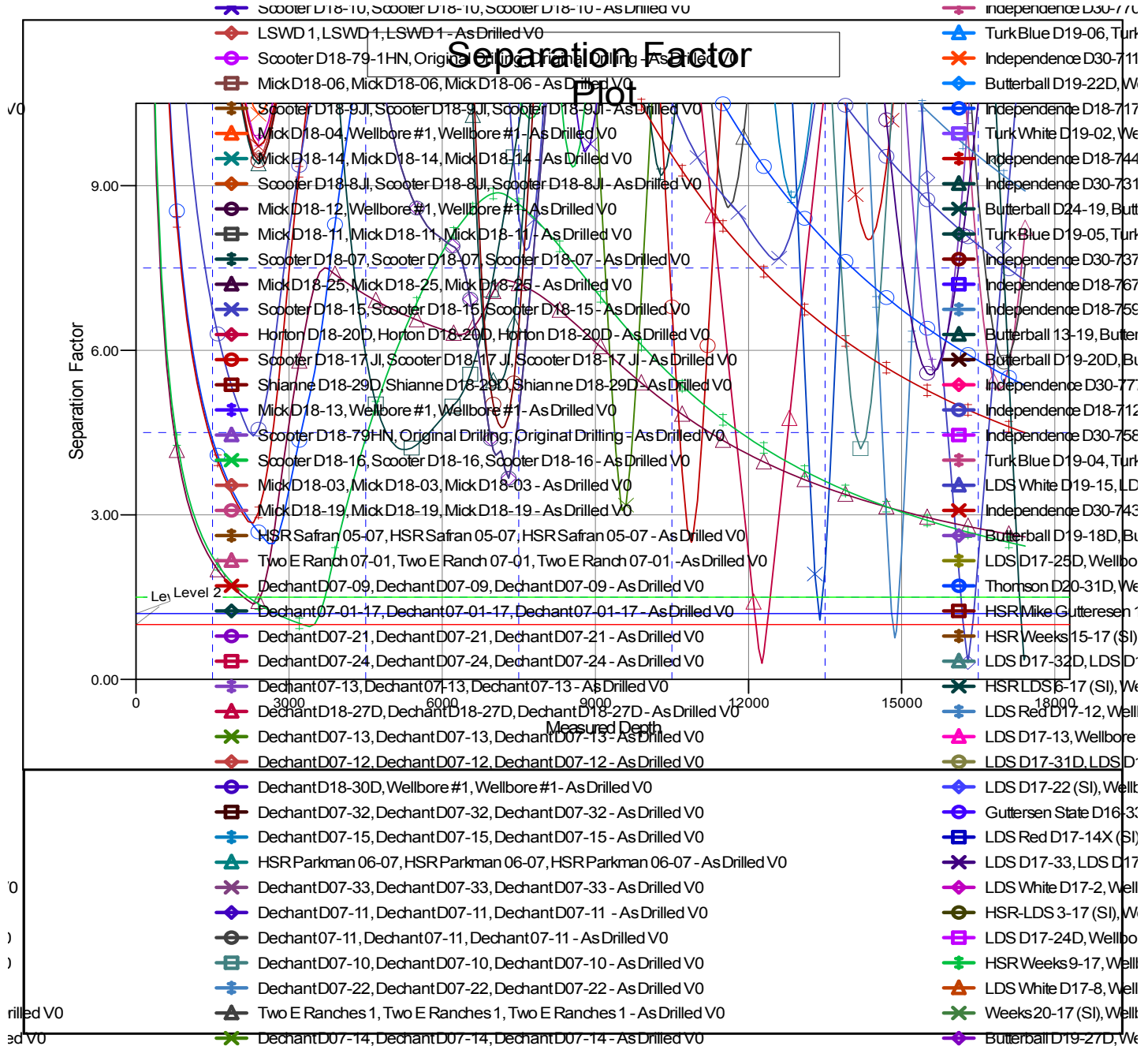


Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Independence D18-732
Project:	Mustang	TVD Reference:	Well @ 4800.00ft
Reference Site:	D Section 19	MD Reference:	Well @ 4800.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Independence D18-732	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Independence D18-732	Database:	EDMP
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to Well @ 4800.00ft
Offset Depths are relative to Offset Datum
Central Meridian is -105.5000000

Coordinates are relative to: Independence D18-732
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.59°



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