

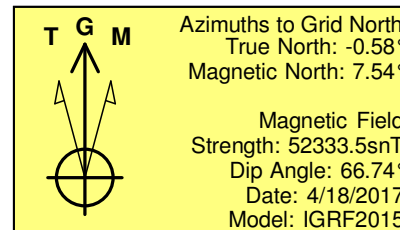
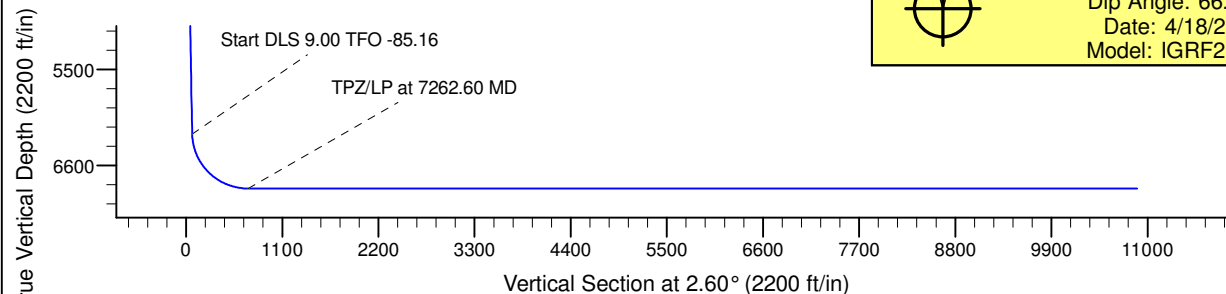
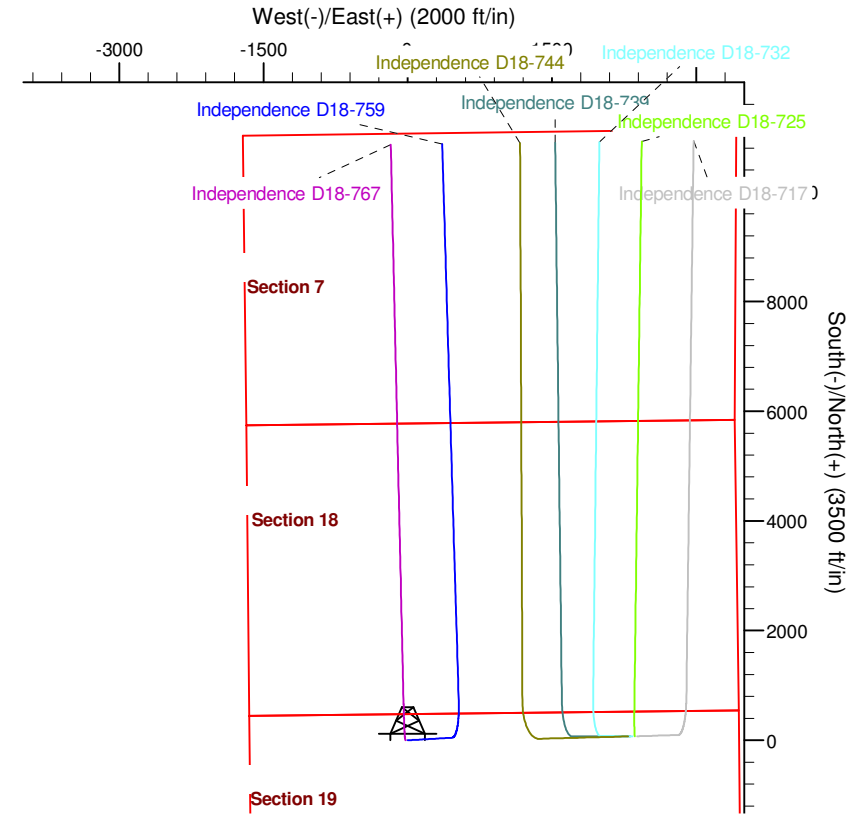
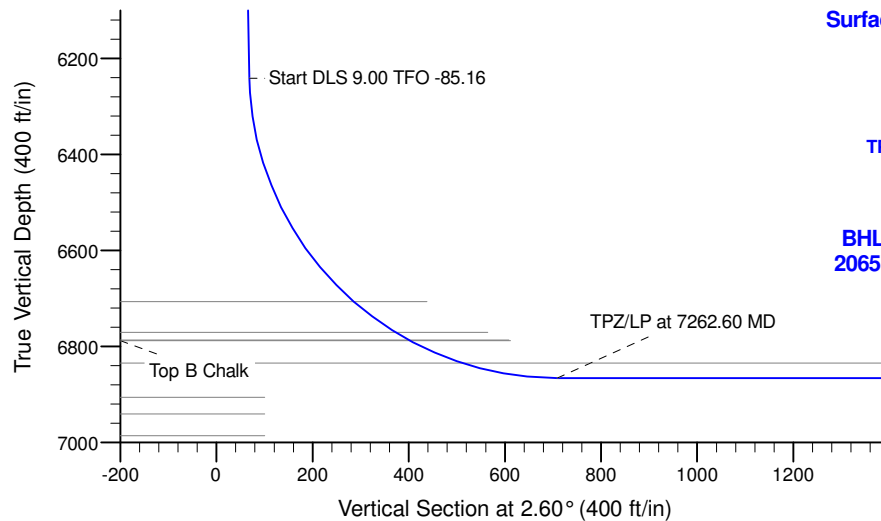
Project: Mustang
 Site: D Section 19
 Well: Independence D18-759
 Wellbore: Independence D18-759
 Design: Plan 1

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	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	2300.00	0.00	0.00	2300.00	0.00	0.00	0.00	0.00	0.00	
3	2653.94	7.08	84.15	2653.04	2.22	21.72	2.00	84.15	3.21	
4	6269.28	7.08	84.15	6240.82	47.62	464.93	0.00	0.00	68.70	
5	7262.60	90.00	359.03	6866.00	685.42	531.53	9.00	-85.16	708.86	Independence D18-759 TPZ
6	17454.04	90.00	359.03	6866.00	10875.40	359.51	0.00	0.00	10880.50	Independence D18-759 BHL



WELL DETAILS: Independence D18-759

0.00	0.00	1323057.32	3252224.25	4786.00 Latitude	40.2166638 Longitude
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Plan: Plan 1 (Independence D18-759/Independence D18-759)

Created By: Colby Baxter Date: 10:15, September 20 2018
 Checked: _____ Date: _____
 Reviewed: _____ Date: _____
 Approved: _____ Date: _____

Northern Region - DJ Basin

Mustang

D Section 19

Independence D18-759

Independence D18-759

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 D18-759
Project:	Mustang	TVD Reference:	Well @ 4816.00ft
Site:	D Section 19	MD Reference:	Well @ 4816.00ft
Well:	Independence D18-759	North Reference:	Grid
Wellbore:	Independence D18-759	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 D18-759					
Well Position	+N/-S	0.00 ft	Northing:	1,323,057.32 usft	Latitude:	40.2166638
	+E/-W	0.00 ft	Easting:	3,252,224.25 usft	Longitude:	-104.5968079
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,786.00 ft

Wellbore	Independence D18-759				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	4/18/2017	8.12	66.74	52,333.50698825

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	2.60	

Survey Tool Program	Date	9/20/2018			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.00	17,453.26	Plan 1 (Independence D18-759)	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 D18-759
Project:	Mustang	TVD Reference:	Well @ 4816.00ft
Site:	D Section 19	MD Reference:	Well @ 4816.00ft
Well:	Independence D18-759	North Reference:	Grid
Wellbore:	Independence D18-759	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	2.00	84.15	2,399.98	0.18	1.74	0.26	2.00	2.00	0.00
2,500.00	4.00	84.15	2,499.84	0.71	6.94	1.03	2.00	2.00	0.00
2,600.00	6.00	84.15	2,599.45	1.60	15.61	2.31	2.00	2.00	0.00
2,653.94	7.08	84.15	2,653.04	2.22	21.72	3.21	2.00	2.00	0.00
2,700.00	7.08	84.15	2,698.75	2.80	27.37	4.04	0.00	0.00	0.00
2,800.00	7.08	84.15	2,797.99	4.06	39.63	5.86	0.00	0.00	0.00
2,900.00	7.08	84.15	2,897.22	5.31	51.89	7.67	0.00	0.00	0.00
3,000.00	7.08	84.15	2,996.46	6.57	64.15	9.48	0.00	0.00	0.00
3,100.00	7.08	84.15	3,095.70	7.83	76.41	11.29	0.00	0.00	0.00
3,200.00	7.08	84.15	3,194.94	9.08	88.67	13.10	0.00	0.00	0.00
3,300.00	7.08	84.15	3,294.18	10.34	100.92	14.91	0.00	0.00	0.00
3,400.00	7.08	84.15	3,393.41	11.59	113.18	16.72	0.00	0.00	0.00
3,500.00	7.08	84.15	3,492.65	12.85	125.44	18.53	0.00	0.00	0.00
3,600.00	7.08	84.15	3,591.89	14.10	137.70	20.35	0.00	0.00	0.00
3,700.00	7.08	84.15	3,691.13	15.36	149.96	22.16	0.00	0.00	0.00
3,800.00	7.08	84.15	3,790.36	16.62	162.22	23.97	0.00	0.00	0.00
3,900.00	7.08	84.15	3,889.60	17.87	174.48	25.78	0.00	0.00	0.00
4,000.00	7.08	84.15	3,988.84	19.13	186.74	27.59	0.00	0.00	0.00
4,100.00	7.08	84.15	4,088.08	20.38	199.00	29.40	0.00	0.00	0.00
4,200.00	7.08	84.15	4,187.32	21.64	211.26	31.21	0.00	0.00	0.00
4,300.00	7.08	84.15	4,286.55	22.89	223.52	33.03	0.00	0.00	0.00
4,400.00	7.08	84.15	4,385.79	24.15	235.78	34.84	0.00	0.00	0.00
4,500.00	7.08	84.15	4,485.03	25.40	248.04	36.65	0.00	0.00	0.00
4,600.00	7.08	84.15	4,584.27	26.66	260.29	38.46	0.00	0.00	0.00
4,700.00	7.08	84.15	4,683.50	27.92	272.55	40.27	0.00	0.00	0.00
4,800.00	7.08	84.15	4,782.74	29.17	284.81	42.08	0.00	0.00	0.00
4,900.00	7.08	84.15	4,881.98	30.43	297.07	43.89	0.00	0.00	0.00
5,000.00	7.08	84.15	4,981.22	31.68	309.33	45.71	0.00	0.00	0.00
5,100.00	7.08	84.15	5,080.46	32.94	321.59	47.52	0.00	0.00	0.00
5,200.00	7.08	84.15	5,179.69	34.19	333.85	49.33	0.00	0.00	0.00

Noble Energy, Inc.

Survey Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Independence D18-759
Project:	Mustang	TVD Reference:	Well @ 4816.00ft
Site:	D Section 19	MD Reference:	Well @ 4816.00ft
Well:	Independence D18-759	North Reference:	Grid
Wellbore:	Independence D18-759	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	7.08	84.15	5,278.93	35.45	346.11	51.14	0.00	0.00	0.00
5,400.00	7.08	84.15	5,378.17	36.70	358.37	52.95	0.00	0.00	0.00
5,500.00	7.08	84.15	5,477.41	37.96	370.63	54.76	0.00	0.00	0.00
5,600.00	7.08	84.15	5,576.64	39.22	382.89	56.57	0.00	0.00	0.00
5,700.00	7.08	84.15	5,675.88	40.47	395.15	58.38	0.00	0.00	0.00
5,800.00	7.08	84.15	5,775.12	41.73	407.41	60.20	0.00	0.00	0.00
5,900.00	7.08	84.15	5,874.36	42.98	419.66	62.01	0.00	0.00	0.00
6,000.00	7.08	84.15	5,973.60	44.24	431.92	63.82	0.00	0.00	0.00
6,100.00	7.08	84.15	6,072.83	45.49	444.18	65.63	0.00	0.00	0.00
6,200.00	7.08	84.15	6,172.07	46.75	456.44	67.44	0.00	0.00	0.00
6,269.28	7.08	84.15	6,240.82	47.62	464.94	68.70	0.00	0.00	0.00
6,300.00	7.81	63.44	6,271.29	48.75	468.69	69.99	9.00	2.39	-67.41
6,400.00	14.21	28.29	6,369.50	62.62	480.61	84.39	9.00	6.40	-35.16
6,500.00	22.45	16.46	6,464.37	91.80	491.85	114.05	9.00	8.24	-11.83
6,600.00	31.10	10.87	6,553.58	135.56	502.15	158.24	9.00	8.65	-5.59
6,700.00	39.89	7.55	6,634.93	192.83	511.25	215.86	9.00	8.79	-3.32
6,800.00	48.75	5.26	6,706.41	262.19	518.93	285.50	9.00	8.86	-2.28
6,900.00	57.64	3.53	6,766.26	341.95	524.99	365.45	9.00	8.89	-1.73
7,000.00	66.56	2.11	6,813.01	430.12	529.28	453.73	9.00	8.91	-1.42
7,100.00	75.48	0.87	6,845.50	524.56	531.71	548.18	9.00	8.92	-1.24
7,200.00	84.41	359.73	6,862.95	622.92	532.21	646.46	9.00	8.93	-1.14
7,262.60	90.00	359.03	6,866.00	685.42	531.53	708.86	9.00	8.93	-1.11
7,300.00	90.00	359.03	6,866.00	722.81	530.90	746.19	0.00	0.00	0.00
7,400.00	90.00	359.03	6,866.00	822.80	529.21	845.99	0.00	0.00	0.00
7,500.00	90.00	359.03	6,866.00	922.78	527.53	945.80	0.00	0.00	0.00
7,600.00	90.00	359.03	6,866.00	1,022.77	525.84	1,045.60	0.00	0.00	0.00
7,700.00	90.00	359.03	6,866.00	1,122.75	524.15	1,145.41	0.00	0.00	0.00
7,800.00	90.00	359.03	6,866.00	1,222.74	522.46	1,245.22	0.00	0.00	0.00
7,900.00	90.00	359.03	6,866.00	1,322.72	520.77	1,345.02	0.00	0.00	0.00
8,000.00	90.00	359.03	6,866.00	1,422.71	519.09	1,444.83	0.00	0.00	0.00
8,100.00	90.00	359.03	6,866.00	1,522.70	517.40	1,544.63	0.00	0.00	0.00
8,200.00	90.00	359.03	6,866.00	1,622.68	515.71	1,644.44	0.00	0.00	0.00
8,300.00	90.00	359.03	6,866.00	1,722.67	514.02	1,744.24	0.00	0.00	0.00
8,400.00	90.00	359.03	6,866.00	1,822.65	512.33	1,844.05	0.00	0.00	0.00
8,500.00	90.00	359.03	6,866.00	1,922.64	510.65	1,943.86	0.00	0.00	0.00
8,600.00	90.00	359.03	6,866.00	2,022.62	508.96	2,043.66	0.00	0.00	0.00
8,700.00	90.00	359.03	6,866.00	2,122.61	507.27	2,143.47	0.00	0.00	0.00
8,800.00	90.00	359.03	6,866.00	2,222.60	505.58	2,243.27	0.00	0.00	0.00
8,900.00	90.00	359.03	6,866.00	2,322.58	503.89	2,343.08	0.00	0.00	0.00
9,000.00	90.00	359.03	6,866.00	2,422.57	502.21	2,442.89	0.00	0.00	0.00
9,100.00	90.00	359.03	6,866.00	2,522.55	500.52	2,542.69	0.00	0.00	0.00
9,200.00	90.00	359.03	6,866.00	2,622.54	498.83	2,642.50	0.00	0.00	0.00
9,300.00	90.00	359.03	6,866.00	2,722.52	497.14	2,742.30	0.00	0.00	0.00

Noble Energy, Inc.

Survey Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Independence D18-759
Project:	Mustang	TVD Reference:	Well @ 4816.00ft
Site:	D Section 19	MD Reference:	Well @ 4816.00ft
Well:	Independence D18-759	North Reference:	Grid
Wellbore:	Independence D18-759	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	359.03	6,866.00	2,822.51	495.45	2,842.11	0.00	0.00	0.00
9,500.00	90.00	359.03	6,866.00	2,922.50	493.77	2,941.91	0.00	0.00	0.00
9,600.00	90.00	359.03	6,866.00	3,022.48	492.08	3,041.72	0.00	0.00	0.00
9,700.00	90.00	359.03	6,866.00	3,122.47	490.39	3,141.53	0.00	0.00	0.00
9,800.00	90.00	359.03	6,866.00	3,222.45	488.70	3,241.33	0.00	0.00	0.00
9,900.00	90.00	359.03	6,866.00	3,322.44	487.02	3,341.14	0.00	0.00	0.00
10,000.00	90.00	359.03	6,866.00	3,422.43	485.33	3,440.94	0.00	0.00	0.00
10,100.00	90.00	359.03	6,866.00	3,522.41	483.64	3,540.75	0.00	0.00	0.00
10,200.00	90.00	359.03	6,866.00	3,622.40	481.95	3,640.55	0.00	0.00	0.00
10,300.00	90.00	359.03	6,866.00	3,722.38	480.26	3,740.36	0.00	0.00	0.00
10,400.00	90.00	359.03	6,866.00	3,822.37	478.58	3,840.17	0.00	0.00	0.00
10,500.00	90.00	359.03	6,866.00	3,922.35	476.89	3,939.97	0.00	0.00	0.00
10,600.00	90.00	359.03	6,866.00	4,022.34	475.20	4,039.78	0.00	0.00	0.00
10,700.00	90.00	359.03	6,866.00	4,122.33	473.51	4,139.58	0.00	0.00	0.00
10,800.00	90.00	359.03	6,866.00	4,222.31	471.82	4,239.39	0.00	0.00	0.00
10,900.00	90.00	359.03	6,866.00	4,322.30	470.14	4,339.20	0.00	0.00	0.00
11,000.00	90.00	359.03	6,866.00	4,422.28	468.45	4,439.00	0.00	0.00	0.00
11,100.00	90.00	359.03	6,866.00	4,522.27	466.76	4,538.81	0.00	0.00	0.00
11,200.00	90.00	359.03	6,866.00	4,622.25	465.07	4,638.61	0.00	0.00	0.00
11,300.00	90.00	359.03	6,866.00	4,722.24	463.38	4,738.42	0.00	0.00	0.00
11,400.00	90.00	359.03	6,866.00	4,822.23	461.70	4,838.22	0.00	0.00	0.00
11,500.00	90.00	359.03	6,866.00	4,922.21	460.01	4,938.03	0.00	0.00	0.00
11,600.00	90.00	359.03	6,866.00	5,022.20	458.32	5,037.84	0.00	0.00	0.00
11,700.00	90.00	359.03	6,866.00	5,122.18	456.63	5,137.64	0.00	0.00	0.00
11,800.00	90.00	359.03	6,866.00	5,222.17	454.95	5,237.45	0.00	0.00	0.00
11,900.00	90.00	359.03	6,866.00	5,322.15	453.26	5,337.25	0.00	0.00	0.00
12,000.00	90.00	359.03	6,866.00	5,422.14	451.57	5,437.06	0.00	0.00	0.00
12,100.00	90.00	359.03	6,866.00	5,522.13	449.88	5,536.86	0.00	0.00	0.00
12,200.00	90.00	359.03	6,866.00	5,622.11	448.19	5,636.67	0.00	0.00	0.00
12,300.00	90.00	359.03	6,866.00	5,722.10	446.51	5,736.48	0.00	0.00	0.00
12,400.00	90.00	359.03	6,866.00	5,822.08	444.82	5,836.28	0.00	0.00	0.00
12,500.00	90.00	359.03	6,866.00	5,922.07	443.13	5,936.09	0.00	0.00	0.00
12,600.00	90.00	359.03	6,866.00	6,022.05	441.44	6,035.89	0.00	0.00	0.00
12,700.00	90.00	359.03	6,866.00	6,122.04	439.75	6,135.70	0.00	0.00	0.00
12,800.00	90.00	359.03	6,866.00	6,222.03	438.07	6,235.51	0.00	0.00	0.00
12,900.00	90.00	359.03	6,866.00	6,322.01	436.38	6,335.31	0.00	0.00	0.00
13,000.00	90.00	359.03	6,866.00	6,422.00	434.69	6,435.12	0.00	0.00	0.00
13,100.00	90.00	359.03	6,866.00	6,521.98	433.00	6,534.92	0.00	0.00	0.00
13,200.00	90.00	359.03	6,866.00	6,621.97	431.31	6,634.73	0.00	0.00	0.00
13,300.00	90.00	359.03	6,866.00	6,721.96	429.63	6,734.53	0.00	0.00	0.00
13,400.00	90.00	359.03	6,866.00	6,821.94	427.94	6,834.34	0.00	0.00	0.00
13,500.00	90.00	359.03	6,866.00	6,921.93	426.25	6,934.15	0.00	0.00	0.00
13,600.00	90.00	359.03	6,866.00	7,021.91	424.56	7,033.95	0.00	0.00	0.00

Noble Energy, Inc.

Survey Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Independence D18-759
Project:	Mustang	TVD Reference:	Well @ 4816.00ft
Site:	D Section 19	MD Reference:	Well @ 4816.00ft
Well:	Independence D18-759	North Reference:	Grid
Wellbore:	Independence D18-759	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	359.03	6,866.00	7,121.90	422.88	7,133.76	0.00	0.00	0.00
13,800.00	90.00	359.03	6,866.00	7,221.88	421.19	7,233.56	0.00	0.00	0.00
13,900.00	90.00	359.03	6,866.00	7,321.87	419.50	7,333.37	0.00	0.00	0.00
14,000.00	90.00	359.03	6,866.00	7,421.86	417.81	7,433.17	0.00	0.00	0.00
14,100.00	90.00	359.03	6,866.00	7,521.84	416.12	7,532.98	0.00	0.00	0.00
14,200.00	90.00	359.03	6,866.00	7,621.83	414.44	7,632.79	0.00	0.00	0.00
14,300.00	90.00	359.03	6,866.00	7,721.81	412.75	7,732.59	0.00	0.00	0.00
14,400.00	90.00	359.03	6,866.00	7,821.80	411.06	7,832.40	0.00	0.00	0.00
14,500.00	90.00	359.03	6,866.00	7,921.78	409.37	7,932.20	0.00	0.00	0.00
14,600.00	90.00	359.03	6,866.00	8,021.77	407.68	8,032.01	0.00	0.00	0.00
14,700.00	90.00	359.03	6,866.00	8,121.76	406.00	8,131.81	0.00	0.00	0.00
14,800.00	90.00	359.03	6,866.00	8,221.74	404.31	8,231.62	0.00	0.00	0.00
14,900.00	90.00	359.03	6,866.00	8,321.73	402.62	8,331.43	0.00	0.00	0.00
15,000.00	90.00	359.03	6,866.00	8,421.71	400.93	8,431.23	0.00	0.00	0.00
15,100.00	90.00	359.03	6,866.00	8,521.70	399.24	8,531.04	0.00	0.00	0.00
15,200.00	90.00	359.03	6,866.00	8,621.68	397.56	8,630.84	0.00	0.00	0.00
15,300.00	90.00	359.03	6,866.00	8,721.67	395.87	8,730.65	0.00	0.00	0.00
15,400.00	90.00	359.03	6,866.00	8,821.66	394.18	8,830.46	0.00	0.00	0.00
15,500.00	90.00	359.03	6,866.00	8,921.64	392.49	8,930.26	0.00	0.00	0.00
15,600.00	90.00	359.03	6,866.00	9,021.63	390.81	9,030.07	0.00	0.00	0.00
15,700.00	90.00	359.03	6,866.00	9,121.61	389.12	9,129.87	0.00	0.00	0.00
15,800.00	90.00	359.03	6,866.00	9,221.60	387.43	9,229.68	0.00	0.00	0.00
15,900.00	90.00	359.03	6,866.00	9,321.58	385.74	9,329.48	0.00	0.00	0.00
16,000.00	90.00	359.03	6,866.00	9,421.57	384.05	9,429.29	0.00	0.00	0.00
16,100.00	90.00	359.03	6,866.00	9,521.56	382.37	9,529.10	0.00	0.00	0.00
16,200.00	90.00	359.03	6,866.00	9,621.54	380.68	9,628.90	0.00	0.00	0.00
16,300.00	90.00	359.03	6,866.00	9,721.53	378.99	9,728.71	0.00	0.00	0.00
16,400.00	90.00	359.03	6,866.00	9,821.51	377.30	9,828.51	0.00	0.00	0.00
16,500.00	90.00	359.03	6,866.00	9,921.50	375.61	9,928.32	0.00	0.00	0.00
16,600.00	90.00	359.03	6,866.00	10,021.49	373.93	10,028.12	0.00	0.00	0.00
16,700.00	90.00	359.03	6,866.00	10,121.47	372.24	10,127.93	0.00	0.00	0.00
16,800.00	90.00	359.03	6,866.00	10,221.46	370.55	10,227.74	0.00	0.00	0.00
16,900.00	90.00	359.03	6,866.00	10,321.44	368.86	10,327.54	0.00	0.00	0.00
17,000.00	90.00	359.03	6,866.00	10,421.43	367.17	10,427.35	0.00	0.00	0.00
17,100.00	90.00	359.03	6,866.00	10,521.41	365.49	10,527.15	0.00	0.00	0.00
17,200.00	90.00	359.03	6,866.00	10,621.40	363.80	10,626.96	0.00	0.00	0.00
17,300.00	90.00	359.03	6,866.00	10,721.39	362.11	10,726.77	0.00	0.00	0.00
17,400.00	90.00	359.03	6,866.00	10,821.37	360.42	10,826.57	0.00	0.00	0.00
17,454.04	90.00	359.03	6,866.00	10,875.40	359.51	10,880.50	0.00	0.00	0.00

Noble Energy, Inc.

Survey Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Independence D18-759
Project:	Mustang	TVD Reference:	Well @ 4816.00ft
Site:	D Section 19	MD Reference:	Well @ 4816.00ft
Well:	Independence D18-759	North Reference:	Grid
Wellbore:	Independence D18-759	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 D18-759 - plan hits target center - Point	0.00	0.00	6,866.00	685.42	531.53	1,323,742.74	3,252,755.78	40.2185304	-104.5948796
Independence D18-759 - plan hits target center - Point	0.00	0.00	6,866.00	10,875.40	359.51	1,333,932.70	3,252,583.76	40.2465062	-104.5951232

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
508.00	508.00	Pierre			
672.00	672.00	Upper Pierre Aquifer Top			
1,570.00	1,570.00	Upper Pierre Aquifer Base			
3,713.98	3,705.00	Parkman			
4,119.07	4,107.00	Sussex			
4,909.09	4,891.00	Shannon			
6,086.06	6,059.00	Teepee Buttes			
6,800.90	6,707.00	Sharon Springs			
6,908.96	6,771.00	Top A Chalk			
6,940.83	6,787.00	Top A Marl			
6,942.92	6,788.00	Top B Chalk			
7,062.35	6,835.00	Top B Marl			

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
2300	2300	0	0	Start Build 2.00
6269	6241	2	22	Start DLS 9.00 TFO -85.16
7263	6866	48	465	TPZ/LP at 7262.60 MD
17,454	6866	685	532	TD at 17454.04 MD

Checked By: _____ Approved By: _____ Date: _____

Northern Region - DJ Basin

Mustang

D Section 19

Independence D18-759

Independence D18-759

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 D18-759
Project:	Mustang	TVD Reference:	Well @ 4816.00ft
Reference Site:	D Section 19	MD Reference:	Well @ 4816.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Independence D18-759	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Independence D18-759	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	17,453.26	Plan 1 (Independence D18-759)	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						
D Section 07						
Dechant 07-01-17 - Dechant 07-01-17 - Dechant 07-01-1	17,441.59	6,853.05	1,593.62	1,477.83	13.763	CC
Dechant 07-01-17 - Dechant 07-01-17 - Dechant 07-01-1	17,454.04	6,853.12	1,593.67	1,477.77	13.750	ES, SF
Dechant 07-11 - Dechant 07-11 - Dechant 07-11 - As Dril	17,033.00	6,810.51	2,272.90	2,160.34	20.191	CC, ES
Dechant 07-11 - Dechant 07-11 - Dechant 07-11 - As Dril	17,300.00	6,817.66	2,288.52	2,174.14	20.008	SF
Dechant 07-13 - Dechant 07-13 - Dechant 07-13 - As Dri	15,715.82	6,839.67	1,021.68	919.52	10.001	CC, ES
Dechant 07-13 - Dechant 07-13 - Dechant 07-13 - As Dri	15,800.00	6,841.58	1,025.14	922.38	9.976	SF
Dechant 07-14 - Dechant 07-14 - Dechant 07-14 - As Dri	15,574.29	6,832.00	2,348.17	2,211.24	17.149	CC
Dechant 07-14 - Dechant 07-14 - Dechant 07-14 - As Dri	15,600.00	6,832.00	2,348.31	2,211.16	17.122	ES
Dechant 07-14 - Dechant 07-14 - Dechant 07-14 - As Dri	15,800.00	6,832.00	2,358.99	2,220.41	17.022	SF
Dechant 07-15 - Dechant 07-15 - Dechant 07-15 - As Dri	16,341.20	6,844.00	1,565.15	1,422.09	10.941	CC, ES
Dechant 07-15 - Dechant 07-15 - Dechant 07-15 - As Dri	16,400.00	6,844.00	1,566.25	1,422.70	10.911	SF
Dechant 18-07 - Dechant 18-07 - Dechant 18-07 - As Dri	16,440.44	6,883.56	801.29	693.18	7.412	CC, ES, SF
Dechant D07-09 - Dechant D07-09 - Dechant D07-09 - A	14,366.09	6,817.12	2,294.02	2,202.32	25.015	CC
Dechant D07-09 - Dechant D07-09 - Dechant D07-09 - A	14,400.00	6,817.00	2,294.27	2,202.28	24.940	ES
Dechant D07-09 - Dechant D07-09 - Dechant D07-09 - A	14,700.00	6,815.94	2,318.20	2,224.23	24.671	SF
Dechant D07-10 - Dechant D07-10 - Dechant D07-10 - A	14,247.30	6,924.01	1,176.63	1,085.68	12.937	CC, ES
Dechant D07-10 - Dechant D07-10 - Dechant D07-10 - A	14,300.00	6,977.08	1,177.78	1,086.20	12.861	SF
Dechant D07-11 - Dechant D07-11 - Dechant D07-11 - A	14,395.08	6,880.41	389.55	297.35	4.225	CC, ES
Dechant D07-11 - Dechant D07-11 - Dechant D07-11 - A	14,400.00	6,880.62	389.58	297.37	4.225	SF
Dechant D07-12 - Dechant D07-12 - Dechant D07-12 - A	14,293.10	6,817.88	1,609.19	1,518.17	17.678	CC
Dechant D07-12 - Dechant D07-12 - Dechant D07-12 - A	14,300.00	6,818.01	1,609.21	1,518.14	17.670	ES
Dechant D07-12 - Dechant D07-12 - Dechant D07-12 - A	14,400.00	6,819.88	1,612.74	1,521.12	17.603	SF
Dechant D07-13 - Dechant D07-13 - Dechant D07-13 - A	13,112.81	6,923.76	1,405.26	1,322.82	17.046	CC, ES
Dechant D07-13 - Dechant D07-13 - Dechant D07-13 - A	13,200.00	6,922.59	1,407.96	1,325.09	16.989	SF
Dechant D07-14 - Dechant D07-14 - Dechant D07-14 - A	13,090.35	6,893.52	286.92	204.52	3.482	CC, ES, SF
Dechant D07-15 - Dechant D07-15 - Dechant D07-15 - A	12,892.32	6,879.20	826.53	745.95	10.257	CC
Dechant D07-15 - Dechant D07-15 - Dechant D07-15 - A	12,900.00	6,879.31	826.57	745.91	10.248	ES, SF
Dechant D07-16 - Dechant D07-16 - Dechant D07-16 - A	13,030.74	6,838.20	2,414.36	2,332.77	29.592	CC, ES
Dechant D07-16 - Dechant D07-16 - Dechant D07-16 - A	13,400.00	6,834.92	2,442.44	2,358.35	29.048	SF
Dechant D07-20 - Dechant D07-20 - Dechant D07-20 - A	14,891.53	6,881.11	936.84	840.88	9.763	CC
Dechant D07-20 - Dechant D07-20 - Dechant D07-20 - A	14,900.00	6,881.23	936.87	840.87	9.758	ES, SF
Dechant D07-21 - Dechant D07-21 - Dechant D07-21 - A	14,800.47	6,861.04	419.63	324.52	4.412	CC, ES, SF
Dechant D07-22 - Dechant D07-22 - Dechant D07-22 - A	14,912.22	6,916.28	1,646.34	1,550.33	17.148	CC, ES
Dechant D07-22 - Dechant D07-22 - Dechant D07-22 - A	15,100.00	6,927.26	1,656.97	1,559.66	17.028	SF
Dechant D07-23 - Dechant D07-23 - Dechant D07-23 - A	13,438.82	6,846.80	1,632.72	1,548.02	19.276	CC, ES
Dechant D07-23 - Dechant D07-23 - Dechant D07-23 - A	13,600.00	6,849.04	1,640.65	1,554.76	19.101	SF
Dechant D07-24 - Dechant D07-24 - Dechant D07-24 - A	13,692.51	6,865.93	347.81	261.13	4.013	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 D18-759
Project:	Mustang	TVD Reference:	Well @ 4816.00ft
Reference Site:	D Section 19	MD Reference:	Well @ 4816.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Independence D18-759	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Independence D18-759	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 D07-24 - Dechant D07-24 - Dechant D07-24 - A	13,700.00	6,866.23	347.89	261.12	4.009	ES, SF
Dechant D07-25 - Dechant D07-25 - Dechant D07-25 - A	13,755.16	6,871.48	859.36	772.28	9.868	CC, ES
Dechant D07-25 - Dechant D07-25 - Dechant D07-25 - A	13,800.00	6,871.58	860.53	773.29	9.864	SF
Dechant D07-32 - Dechant D07-32 - Dechant D07-32 - A	14,908.07	6,884.18	1,980.94	1,884.92	20.630	CC, ES
Dechant D07-32 - Dechant D07-32 - Dechant D07-32 - A	15,100.00	6,885.82	1,990.22	1,893.18	20.510	SF
Dechant D07-33 - Dechant D07-33 - Dechant D07-33 - A	13,718.71	6,775.64	2,103.20	2,016.80	24.342	CC, ES
Dechant D07-33 - Dechant D07-33 - Dechant D07-33 - A	13,900.00	6,783.67	2,110.98	2,023.47	24.122	SF
Dechant D18-27D - Dechant D18-27D - Dechant D18-27	11,800.00	7,292.90	1,622.94	1,516.43	15.237	SF
Dechant D18-27D - Dechant D18-27D - Dechant D18-27	12,300.00	7,301.01	1,541.58	1,450.26	16.881	ES
Dechant D18-27D - Dechant D18-27D - Dechant D18-27	12,307.52	7,301.14	1,541.57	1,450.50	16.928	CC
Dechant D18-30D - Wellbore #1 - Wellbore #1- As Drilled	11,700.00	7,240.35	2,285.17	2,182.61	22.282	SF
Dechant D18-30D - Wellbore #1 - Wellbore #1- As Drilled	12,400.00	7,248.15	2,167.74	2,078.16	24.200	ES
Dechant D18-30D - Wellbore #1 - Wellbore #1- As Drilled	12,423.56	7,248.43	2,167.61	2,078.49	24.321	CC
HSR Barbour 04-07 - HSR Barbour 04-07 - HSR Barbour	17,232.00	6,899.62	1,478.45	1,364.70	12.997	CC, ES
HSR Barbour 04-07 - HSR Barbour 04-07 - HSR Barbour	17,300.00	6,899.55	1,480.01	1,365.90	12.970	SF
HSR Parkman 06-07 - HSR Parkman 06-07 - HSR Parkm	15,496.44	6,865.14	445.74	345.25	4.436	CC, ES
HSR Parkman 06-07 - HSR Parkman 06-07 - HSR Parkm	15,500.00	6,865.09	445.76	345.26	4.435	SF
HSR Petrie 03-07 - HSR Petrie 03-07 - HSR Petrie 03-07	17,146.01	6,863.51	431.72	318.30	3.807	CC, ES, SF
HSR Safran 05-07 - HSR Safran 05-07 - HSR Safran 05-	15,590.01	6,923.98	1,717.32	1,615.74	16.907	CC
HSR Safran 05-07 - HSR Safran 05-07 - HSR Safran 05-	15,600.00	6,924.04	1,717.35	1,615.71	16.897	ES
HSR Safran 05-07 - HSR Safran 05-07 - HSR Safran 05-	15,700.00	6,924.63	1,720.84	1,618.66	16.841	SF
Two E Ranch 07-01 - Two E Ranch 07-01 - Two E Ranch	16,950.12	6,865.07	1,037.66	925.75	9.272	CC, ES
Two E Ranch 07-01 - Two E Ranch 07-01 - Two E Ranch	17,000.00	6,866.19	1,038.86	926.54	9.249	SF
Two E Ranches 1 - Two E Ranches 1 - Two E Ranches 1	15,622.30	4,625.00	2,453.86	2,358.47	25.724	CC, ES
Two E Ranches 1 - Two E Ranches 1 - Two E Ranches 1	16,000.00	4,625.00	2,482.76	2,384.59	25.290	SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Independence D18-759
Project:	Mustang	TVD Reference:	Well @ 4816.00ft
Reference Site:	D Section 19	MD Reference:	Well @ 4816.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Independence D18-759	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Independence D18-759	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 17						
Butterball D19-27D - Wellbore #1 - Gyro Surveys	7,229.64	7,051.95	1,604.47	1,553.49	31.475	CC
Butterball D19-27D - Wellbore #1 - Gyro Surveys	7,250.00	7,052.38	1,604.64	1,553.49	31.373	ES
Butterball D19-27D - Wellbore #1 - Gyro Surveys	8,100.00	7,040.20	1,829.98	1,763.80	27.654	SF
Guttersen State D16-33 (SI) - Wellbore #1 - No Surveys	8,546.04	6,802.00	8,202.98	8,114.79	93.015	CC
Guttersen State D16-33 (SI) - Wellbore #1 - No Surveys	8,600.00	6,802.00	8,203.16	8,114.72	92.759	ES
Guttersen State D16-33 (SI) - Wellbore #1 - No Surveys	12,300.00	6,802.00	9,021.15	8,912.18	82.790	SF
HSR LDS 6-17 (SI) - Wellbore #1 - No Surveys	10,384.32	6,800.00	4,728.22	4,629.77	48.031	CC
HSR LDS 6-17 (SI) - Wellbore #1 - No Surveys	10,400.00	6,800.00	4,728.24	4,629.69	47.980	ES
HSR LDS 6-17 (SI) - Wellbore #1 - No Surveys	11,600.00	6,800.00	4,882.00	4,775.91	46.019	SF
HSR LDS B5-17 (SI) - Wellbore #1 - No Surveys	10,546.33	6,801.00	3,623.81	3,524.31	36.419	CC, ES
HSR LDS B5-17 (SI) - Wellbore #1 - No Surveys	11,300.00	6,801.00	3,701.36	3,597.05	35.484	SF
HSR Mike Guttersen 16-17X (SI) - Wellbore #1 - No Su	7,633.94	6,807.00	7,501.29	7,416.28	88.244	CC, ES
HSR Mike Guttersen 16-17X (SI) - Wellbore #1 - No Su	11,000.00	6,807.00	8,221.90	8,121.08	81.553	SF
HSR Weeks 10-17 - Wellbore #1 - Gyro Surveys	9,039.72	6,700.00	6,194.26	6,139.79	113.720	CC
HSR Weeks 10-17 - Wellbore #1 - Gyro Surveys	9,100.00	6,700.00	6,194.55	6,139.76	113.055	ES
HSR Weeks 10-17 - Wellbore #1 - Gyro Surveys	13,000.00	13,000.00	7,351.96	7,255.21	75.990	SF
HSR Weeks 15-17 (SI) - Wellbore #1 - No Surveys	7,739.08	6,805.00	6,213.75	6,128.48	72.871	CC, ES
HSR Weeks 15-17 (SI) - Wellbore #1 - No Surveys	10,000.00	6,805.00	6,612.29	6,516.91	69.327	SF
HSR Weeks 9-17 - Wellbore #1 - Gyro Surveys	9,092.43	6,826.75	7,314.15	7,259.52	133.900	CC
HSR Weeks 9-17 - Wellbore #1 - Gyro Surveys	9,100.00	6,826.74	7,314.15	7,259.49	133.801	ES
HSR Weeks 9-17 - Wellbore #1 - Gyro Surveys	13,100.00	6,824.58	8,340.11	8,263.37	108.683	SF
HSR-LDS 3-17 (SI) - Wellbore #1 - No Surveys	11,708.42	6,795.00	4,745.45	4,638.03	44.177	CC, ES
HSR-LDS 3-17 (SI) - Wellbore #1 - No Surveys	12,900.00	6,795.00	4,892.77	4,777.53	42.458	SF
HSR-LDS 4-17 (SI) - Wellbore #1 - No Surveys	11,540.90	6,797.00	3,616.34	3,510.09	34.036	CC, ES
HSR-LDS 4-17 (SI) - Wellbore #1 - No Surveys	12,200.00	6,797.00	3,675.92	3,565.24	33.211	SF
LDS 18-17 (SI) - Wellbore #1 - No Surveys	11,041.01	6,800.00	4,412.49	4,309.68	42.920	CC
LDS 18-17 (SI) - Wellbore #1 - No Surveys	11,100.00	6,800.00	4,412.88	4,309.65	42.747	ES
LDS 18-17 (SI) - Wellbore #1 - No Surveys	12,100.00	6,800.00	4,537.79	4,428.12	41.379	SF
LDS D17-13 - Wellbore #1 - Gyro Surveys	7,424.50	6,709.21	3,268.32	3,219.84	67.421	CC, ES
LDS D17-13 - Wellbore #1 - Gyro Surveys	8,200.00	6,721.45	3,359.04	3,308.20	66.071	SF
LDS D17-18 (SI) - Wellbore #1 - No Surveys	11,090.11	6,798.00	5,718.71	5,615.59	55.454	CC
LDS D17-18 (SI) - Wellbore #1 - No Surveys	11,100.00	6,798.00	5,718.72	5,615.52	55.416	ES
LDS D17-18 (SI) - Wellbore #1 - No Surveys	12,800.00	6,798.00	5,968.87	5,854.75	52.307	SF
LDS D17-20 - Wellbore #1 - No Surveys	9,562.26	6,806.00	4,256.84	4,163.39	45.550	CC
LDS D17-20 - Wellbore #1 - No Surveys	9,600.00	6,806.00	4,257.01	4,163.33	45.441	ES
LDS D17-20 - Wellbore #1 - No Surveys	10,600.00	6,806.00	4,381.51	4,281.93	44.002	SF
LDS D17-21 - Wellbore #1 - No Surveys	9,503.84	6,802.00	5,401.33	5,308.25	58.027	CC, ES
LDS D17-21 - Wellbore #1 - No Surveys	11,200.00	6,802.00	5,661.39	5,558.33	54.934	SF
LDS D17-22 (SI) - Wellbore #1 - No Surveys	9,873.63	6,797.00	6,813.84	6,718.62	71.561	CC
LDS D17-22 (SI) - Wellbore #1 - No Surveys	9,900.00	6,797.00	6,813.89	6,718.51	71.438	ES
LDS D17-22 (SI) - Wellbore #1 - No Surveys	12,400.00	6,797.00	7,267.12	7,156.54	65.719	SF
LDS D17-24D - Wellbore #1 - LDS D17-24D - As Drilled	8,467.37	6,908.57	5,482.30	5,424.24	94.410	CC
LDS D17-24D - Wellbore #1 - LDS D17-24D - As Drilled	8,500.00	6,908.26	5,482.40	5,424.19	94.185	ES
LDS D17-24D - Wellbore #1 - LDS D17-24D - As Drilled	10,600.00	6,884.09	5,882.45	5,814.34	86.372	SF
LDS D17-25D - Wellbore #1 - LDS D17-25D - As Drilled	8,732.84	7,041.43	4,239.40	4,181.07	72.682	CC, ES
LDS D17-25D - Wellbore #1 - LDS D17-25D - As Drilled	10,500.00	7,038.99	4,592.97	4,522.11	64.815	SF
LDS D17-31D - LDS D17-31D - LDS D17-31D - As Drille	11,039.74	6,997.83	2,890.49	2,813.44	37.512	CC, ES
LDS D17-31D - LDS D17-31D - LDS D17-31D - As Drille	11,500.00	6,995.96	2,926.91	2,847.56	36.886	SF
LDS D17-32D - LDS D17-32D - LDS D17-32D - As Drille	9,908.10	6,845.15	2,859.94	2,800.72	48.288	CC, ES
LDS D17-32D - LDS D17-32D - LDS D17-32D - As Drille	10,600.00	6,844.62	2,942.45	2,879.51	46.749	SF
LDS D17-33 - LDS D17-33 - LDS D17-33 - As Drilled	8,497.21	6,790.72	3,088.60	3,036.42	59.191	CC
LDS D17-33 - LDS D17-33 - LDS D17-33 - As Drilled	8,500.00	6,790.70	3,088.60	3,036.41	59.176	ES
LDS D17-33 - LDS D17-33 - LDS D17-33 - As Drilled	9,300.00	6,784.84	3,191.22	3,135.20	56.965	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 D18-759
Project:	Mustang	TVD Reference:	Well @ 4816.00ft
Reference Site:	D Section 19	MD Reference:	Well @ 4816.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Independence D18-759	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Independence D18-759	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 17						
LDS D17-7 - Wellbore #1 - No Surveys	10,389.29	6,796.00	6,103.72	6,005.28	62.006	CC
LDS D17-7 - Wellbore #1 - No Surveys	10,400.00	6,796.00	6,103.73	6,005.22	61.961	ES
LDS D17-7 - Wellbore #1 - No Surveys	12,400.00	6,796.00	6,426.38	6,315.39	57.899	SF
LDS D20-29D - Wellbore #1 - LDS D20-29D - As Drilled	100.00	59.34	3,817.06	3,816.83	10,000.000	CC
LDS D20-29D - Wellbore #1 - LDS D20-29D - As Drilled	800.00	723.35	3,818.15	3,814.16	958.521	ES
LDS D20-29D - Wellbore #1 - LDS D20-29D - As Drilled	7,250.00	6,975.62	4,224.52	4,175.06	85.408	SF
LDS D20-30D - Wellbore #1 - LDS D20-30D - As Drilled	7,063.22	6,871.84	2,781.04	2,732.47	57.256	CC, ES
LDS D20-30D - Wellbore #1 - LDS D20-30D - As Drilled	7,400.00	6,900.03	2,810.70	2,761.19	56.769	SF
LDS RED D17-11 (SI) - Wellbore #1 - No Surveys	9,056.87	6,803.00	5,061.40	4,970.74	55.830	CC
LDS RED D17-11 (SI) - Wellbore #1 - No Surveys	9,100.00	6,803.00	5,061.59	4,970.70	55.690	ES
LDS RED D17-11 (SI) - Wellbore #1 - No Surveys	10,500.00	6,803.00	5,263.12	5,164.38	53.304	SF
LDS Red D17-12 - Wellbore #1 - No Surveys	9,259.97	6,806.00	3,407.10	3,315.34	37.130	CC, ES
LDS Red D17-12 - Wellbore #1 - No Surveys	9,900.00	6,806.00	3,466.70	3,371.30	36.339	SF
LDS Red D17-14X (SI) - Wellbore #1 - No Surveys	7,882.55	6,807.00	5,092.34	5,006.63	59.412	CC
LDS Red D17-14X (SI) - Wellbore #1 - No Surveys	7,900.00	6,807.00	5,092.37	5,006.61	59.374	ES
LDS Red D17-14X (SI) - Wellbore #1 - No Surveys	9,400.00	6,807.00	5,313.62	5,221.33	57.571	SF
LDS Red D17-3J - Wellbore #1 - Gyro Surveys	8,106.51	6,843.27	3,834.68	3,783.89	75.491	CC, ES
LDS Red D17-3J - Wellbore #1 - Gyro Surveys	9,400.00	6,845.56	4,046.96	3,990.44	71.601	SF
LDS White D17-1 - Wellbore #1 - Gyro Surveys	11,713.16	6,713.63	7,527.07	7,455.60	105.307	CC
LDS White D17-1 - Wellbore #1 - Gyro Surveys	11,800.00	6,713.23	7,527.57	7,455.46	104.385	ES
LDS White D17-1 - Wellbore #1 - Gyro Surveys	15,000.00	6,698.94	8,213.41	8,121.66	89.527	SF
LDS White D17-2 - Wellbore #1 - No Surveys	11,709.43	6,793.00	6,225.84	6,118.43	57.963	CC
LDS White D17-2 - Wellbore #1 - No Surveys	11,800.00	6,793.00	6,226.50	6,118.42	57.611	ES
LDS White D17-2 - Wellbore #1 - No Surveys	13,600.00	6,793.00	6,506.56	6,386.81	54.332	SF
LDS White D17-8 - Wellbore #1 - No Surveys	10,360.28	6,791.00	7,449.68	7,351.48	75.856	CC
LDS White D17-8 - Wellbore #1 - No Surveys	10,400.00	6,791.00	7,449.79	7,351.32	75.654	ES
LDS White D17-8 - Wellbore #1 - No Surveys	13,200.00	6,791.00	7,972.57	7,856.63	68.769	SF
Thomson D20-31D - Wellbore #1 - Gyro Surveys	6,409.76	6,500.00	2,961.75	2,900.95	48.712	CC, ES
Thomson D20-31D - Wellbore #1 - Gyro Surveys	6,800.00	6,918.09	3,004.68	2,941.88	47.847	SF
Weeks 20-17 (SI) - Wellbore #1 - Gyro Surveys	8,303.95	6,820.02	6,725.38	6,673.89	130.610	CC, ES
Weeks 20-17 (SI) - Wellbore #1 - Gyro Surveys	12,000.00	6,815.34	7,674.08	7,603.85	109.269	SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Independence D18-759
Project:	Mustang	TVD Reference:	Well @ 4816.00ft
Reference Site:	D Section 19	MD Reference:	Well @ 4816.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Independence D18-759	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Independence D18-759	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	9,623.86	7,181.13	853.03	777.22	11.252	CC
Horton D18-20D - Horton D18-20D - Horton D18-20D - A	9,700.00	7,180.01	856.42	775.33	10.561	ES
Horton D18-20D - Horton D18-20D - Horton D18-20D - A	10,000.00	7,175.47	932.26	833.76	9.464	SF
Horton D18-22D - Horton D18-22D - Horton D18-22D - A	9,572.25	6,929.40	1,643.37	1,580.75	26.245	CC
Horton D18-22D - Horton D18-22D - Horton D18-22D - A	9,600.00	6,929.30	1,643.60	1,580.67	26.116	ES
Horton D18-22D - Horton D18-22D - Horton D18-22D - A	9,900.00	6,928.24	1,675.73	1,609.67	25.366	SF
LSWD 1 - LSWD 1 - LSWD 1 - As Drilled	11,848.75	6,855.00	24.91	-84.03	0.229	Level 1, CC, ES, SF
Mick D18-03 - Mick D18-03 - Mick D18-03 - As Drilled	11,892.02	6,852.68	135.08	62.02	1.849	CC, ES, SF
Mick D18-04 - Wellbore #1 - Wellbore #1 - As Drilled	11,857.25	6,837.49	1,659.24	1,586.37	22.771	CC, ES
Mick D18-04 - Wellbore #1 - Wellbore #1 - As Drilled	12,000.00	6,837.35	1,665.37	1,591.77	22.629	SF
Mick D18-05 - Wellbore #1 - Wellbore #1 - As Drilled	10,567.82	6,782.10	1,637.90	1,574.29	25.746	CC, ES
Mick D18-05 - Wellbore #1 - Wellbore #1 - As Drilled	10,700.00	6,782.23	1,643.23	1,578.96	25.569	SF
Mick D18-06 - Mick D18-06 - Mick D18-06 - As Drilled	10,555.80	6,839.98	170.55	106.70	2.671	CC, ES, SF
Mick D18-11 - Mick D18-11 - Mick D18-11 - As Drilled	8,844.04	6,831.29	341.95	288.15	6.357	CC, ES, SF
Mick D18-12 - Wellbore #1 - Wellbore #1 - As Drilled	9,031.24	6,793.70	1,454.58	1,400.06	26.678	CC, ES
Mick D18-12 - Wellbore #1 - Wellbore #1 - As Drilled	9,200.00	6,794.73	1,464.34	1,409.16	26.536	SF
Mick D18-13 - Wellbore #1 - Wellbore #1 - As Drilled	100.00	85.12	1,503.90	1,503.63	5,482.572	CC
Mick D18-13 - Wellbore #1 - Wellbore #1 - As Drilled	7,800.00	6,886.93	1,537.15	1,487.17	30.754	ES
Mick D18-13 - Wellbore #1 - Wellbore #1 - As Drilled	7,900.00	6,886.48	1,540.82	1,490.58	30.667	SF
Mick D18-14 - Mick D18-14 - Mick D18-14 - As Drilled	7,691.77	6,838.47	335.10	285.70	6.783	CC, ES, SF
Mick D18-19 - Mick D18-19 - Mick D18-19 - As Drilled	11,231.68	6,800.12	804.85	736.53	11.781	CC, ES, SF
Mick D18-25 - Mick D18-25 - Mick D18-25 - As Drilled	8,319.85	6,804.56	853.34	801.83	16.567	CC, ES, SF
Scooter D18-02 - Scooter D18-02 - Scooter D18-02 - As	11,638.58	6,832.63	890.69	819.30	12.475	CC, ES
Scooter D18-02 - Scooter D18-02 - Scooter D18-02 - As	11,700.00	6,833.59	892.81	820.93	12.422	SF
Scooter D18-07 - Scooter D18-07 - Scooter D18-07 - As	10,328.13	6,849.15	898.83	836.28	14.368	CC, ES
Scooter D18-07 - Scooter D18-07 - Scooter D18-07 - As	10,400.00	6,846.45	901.70	838.63	14.297	SF
Scooter D18-10 - Scooter D18-10 - Scooter D18-10 - As	8,843.59	6,837.36	920.88	866.99	17.091	CC, ES
Scooter D18-10 - Scooter D18-10 - Scooter D18-10 - As	8,900.00	6,836.68	922.60	868.40	17.020	SF
Scooter D18-15 - Scooter D18-15 - Scooter D18-15 - As	7,697.21	6,805.91	1,024.78	975.37	20.741	CC
Scooter D18-15 - Scooter D18-15 - Scooter D18-15 - As	7,700.00	6,805.87	1,024.78	975.36	20.738	ES
Scooter D18-15 - Scooter D18-15 - Scooter D18-15 - As	7,800.00	6,804.42	1,029.92	980.19	20.713	SF
Scooter D18-16 - Scooter D18-16 - Scooter D18-16 - As	7,734.07	6,811.00	2,276.47	2,191.16	26.685	CC, ES
Scooter D18-16 - Scooter D18-16 - Scooter D18-16 - As	7,900.00	6,811.00	2,282.51	2,196.68	26.594	SF
Scooter D18-17 JI - Scooter D18-17 JI - Scooter D18-17	10,919.21	6,943.62	1,650.41	1,582.80	24.409	CC, ES
Scooter D18-17 JI - Scooter D18-17 JI - Scooter D18-17	11,100.00	6,944.23	1,660.28	1,591.75	24.227	SF
Scooter D18-1JI - Scooter D18-1JI - Scooter D18-1JI - A	11,443.09	7,148.19	2,412.45	2,337.02	31.984	CC
Scooter D18-1JI - Scooter D18-1JI - Scooter D18-1JI - A	11,500.00	7,148.72	2,413.12	2,336.51	31.497	ES
Scooter D18-1JI - Scooter D18-1JI - Scooter D18-1JI - A	12,600.00	7,159.04	2,675.49	2,575.56	26.775	SF
Scooter D18-4J - Scooter D18-4J - Scooter D18-4J - As	8,586.51	6,941.82	1,916.22	1,863.29	36.201	CC
Scooter D18-4J - Scooter D18-4J - Scooter D18-4J - As	8,600.00	6,941.83	1,916.27	1,863.27	36.157	ES
Scooter D18-4J - Scooter D18-4J - Scooter D18-4J - As	8,900.00	6,941.97	1,941.69	1,887.24	35.657	SF
Scooter D18-78-1HN - Original Drilling - Original Drilling -	12,217.54	6,879.90	1,161.56	1,089.73	16.171	CC, ES
Scooter D18-78-1HN - Original Drilling - Original Drilling -	12,300.00	6,880.66	1,164.48	1,092.31	16.136	SF
Scooter D18-78-1HN - Original Drilling - ST01 - Original D	7,600.00	11,300.42	1,179.43	1,074.35	11.224	SF
Scooter D18-78-1HN - Original Drilling - ST01 - Original D	8,865.02	10,032.59	1,161.36	1,072.79	13.112	ES
Scooter D18-78-1HN - Original Drilling - ST01 - Original D	10,511.01	8,387.97	1,145.89	1,073.23	15.771	CC
Scooter D18-79-1HN - Original Drilling - Original Drilling -	7,600.00	11,260.09	1,834.63	1,729.01	17.370	SF
Scooter D18-79-1HN - Original Drilling - Original Drilling -	11,550.65	7,313.62	1,792.52	1,721.60	25.278	CC, ES
Scooter D18-79HN - Original Drilling - Original Drilling - A	7,500.00	11,410.00	2,259.17	2,153.20	21.320	SF
Scooter D18-79HN - Original Drilling - Original Drilling - A	11,938.01	7,051.08	2,209.24	2,137.12	30.633	CC, ES
Scooter D18-8JI - Scooter D18-8JI - Scooter D18-8JI - A	10,365.79	7,041.08	2,291.09	2,214.85	30.051	CC
Scooter D18-8JI - Scooter D18-8JI - Scooter D18-8JI - A	10,400.00	7,040.96	2,291.34	2,214.81	29.938	ES
Scooter D18-8JI - Scooter D18-8JI - Scooter D18-8JI - A	10,800.00	7,039.60	2,331.87	2,252.55	29.398	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 D18-759
Project:	Mustang	TVD Reference:	Well @ 4816.00ft
Reference Site:	D Section 19	MD Reference:	Well @ 4816.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Independence D18-759	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Independence D18-759	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 18						
Scooter D18-9JI - Scooter D18-9JI - Scooter D18-9JI - A	9,189.43	6,831.73	2,423.73	2,366.06	42.032	CC
Scooter D18-9JI - Scooter D18-9JI - Scooter D18-9JI - A	9,200.00	6,831.69	2,423.75	2,366.01	41.980	ES
Scooter D18-9JI - Scooter D18-9JI - Scooter D18-9JI - A	9,800.00	6,829.47	2,499.45	2,437.92	40.625	SF
Shianne D18-29D - Shianne D18-29D - Shianne D18-29D	12,289.72	6,922.65	820.28	741.91	10.466	CC
Shianne D18-29D - Shianne D18-29D - Shianne D18-29D	12,300.00	6,922.50	820.35	741.86	10.452	ES
Shianne D18-29D - Shianne D18-29D - Shianne D18-29D	12,400.00	6,921.02	827.66	748.40	10.442	SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Independence D18-759
Project:	Mustang	TVD Reference:	Well @ 4816.00ft
Reference Site:	D Section 19	MD Reference:	Well @ 4816.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Independence D18-759	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Independence D18-759	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	2,373.79	2,375.08	3,017.02	3,000.62	184.000	CC
Butterball 13-19 - Butterball 13-19 - Butterball 13-19 - As	2,400.00	2,399.46	3,017.08	3,000.50	182.034	ES
Butterball 13-19 - Butterball 13-19 - Butterball 13-19 - As	6,550.00	6,592.37	3,239.70	3,193.52	70.152	SF
Butterball 14-19 - Butterball 14-19 - Butterball 14-19 - As	2,501.44	2,563.87	4,269.95	4,252.43	243.689	CC
Butterball 14-19 - Butterball 14-19 - Butterball 14-19 - As	2,600.00	2,669.19	4,270.40	4,252.17	234.180	ES
Butterball 14-19 - Butterball 14-19 - Butterball 14-19 - As	6,650.00	6,660.16	4,505.17	4,458.42	96.380	SF
Butterball 23-19 - Butterball 23-19 - Butterball 23-19 - As	100.00	45.56	2,852.59	2,852.39	10,000.000	CC
Butterball 23-19 - Butterball 23-19 - Butterball 23-19 - As	2,400.00	2,356.96	2,868.06	2,851.62	174.491	ES
Butterball 23-19 - Butterball 23-19 - Butterball 23-19 - As	6,550.00	6,489.33	2,962.89	2,917.14	64.761	SF
Butterball B04-19 - Butterball B04-19 - Butterball B04-19	2,397.46	2,424.52	3,790.54	3,773.89	227.659	CC
Butterball B04-19 - Butterball B04-19 - Butterball B04-19	2,400.00	2,426.94	3,790.55	3,773.88	227.422	ES
Butterball B04-19 - Butterball B04-19 - Butterball B04-19	6,600.00	6,562.31	4,074.83	4,028.61	88.158	SF
Butterball D18-75HN - Original Drilling - Original Drilling -	11,959.66	11,559.29	350.85	212.53	2.537	CC
Butterball D18-75HN - Original Drilling - Original Drilling -	12,500.00	12,096.42	360.75	210.04	2.394	ES, SF
Butterball D19-17D - Butterball D19-17D - Butterball D19	1,201.35	1,183.12	583.86	574.57	62.890	CC
Butterball D19-17D - Butterball D19-17D - Butterball D19	1,300.00	1,273.40	584.74	574.32	56.106	ES
Butterball D19-17D - Butterball D19-17D - Butterball D19	7,600.00	7,446.39	2,405.62	2,287.78	20.414	SF
Butterball D19-18D - Butterball D19-18D - Butterball D19	1,685.21	1,665.94	556.14	543.76	44.926	CC
Butterball D19-18D - Butterball D19-18D - Butterball D19	1,800.00	1,776.71	557.12	543.54	41.011	ES
Butterball D19-18D - Butterball D19-18D - Butterball D19	6,350.00	6,379.12	602.70	550.47	11.541	SF
Butterball D19-19D - Butterball D19-19D - Butterball D19	709.81	683.82	579.36	574.83	127.853	CC
Butterball D19-19D - Butterball D19-19D - Butterball D19	800.00	765.56	579.93	574.79	112.860	ES
Butterball D19-19D - Butterball D19-19D - Butterball D19	6,400.00	6,420.91	1,475.22	1,430.13	32.715	SF
Butterball D19-20D - Butterball D19-20D - Butterball D19	2,555.32	2,660.47	2,099.32	2,076.10	90.430	CC
Butterball D19-20D - Butterball D19-20D - Butterball D19	2,600.00	2,699.37	2,099.55	2,075.88	88.680	ES
Butterball D19-20D - Butterball D19-20D - Butterball D19	6,400.00	6,474.82	2,280.64	2,224.81	40.853	SF
Butterball D19-22D - Wellbore #1 - Wellbore #1 - As Drill	6,325.02	6,347.98	2,668.27	2,617.60	52.662	CC, ES
Butterball D19-22D - Wellbore #1 - Wellbore #1 - As Drill	6,550.00	6,549.33	2,701.05	2,649.05	51.940	SF
Butterball D19-75HN - Original Drilling - Original Drilling -	6,645.39	6,576.64	689.52	644.43	15.290	CC
Butterball D19-75HN - Original Drilling - Original Drilling -	6,650.00	6,578.79	689.54	644.42	15.283	ES
Butterball D19-75HN - Original Drilling - Original Drilling -	6,700.00	6,597.41	691.69	646.41	15.273	SF
Butterball D24-19 - Butterball D24-19 - Butterball D24-19	2,332.79	2,300.00	4,090.69	4,074.67	255.338	CC
Butterball D24-19 - Butterball D24-19 - Butterball D24-19	2,500.00	2,446.11	4,091.42	4,074.32	239.161	ES
Butterball D24-19 - Butterball D24-19 - Butterball D24-19	6,650.00	6,600.98	4,251.93	4,205.47	91.518	SF
Butterball H24-69HN - Original Drilling - Original Drilling -	7,152.20	7,680.07	67.92	42.76	2.699	CC
Butterball H24-69HN - Original Drilling - Original Drilling -	7,200.00	7,678.63	84.49	41.24	1.954	ES, SF
Champlin 366 Amoco F 1 - Wellbore #1 - Wellbore #1 - A	6,302.62	6,241.90	3,605.21	3,561.27	82.050	CC, ES
Champlin 366 Amoco F 1 - Wellbore #1 - Wellbore #1 - A	6,650.00	6,552.84	3,689.76	3,643.57	79.886	SF
Dechant D19-32D - Dechant D19-32D - Dechant D19-32	204.04	177.04	556.65	555.71	590.224	CC
Dechant D19-32D - Dechant D19-32D - Dechant D19-32	400.00	367.18	557.51	555.20	241.369	ES
Dechant D19-32D - Dechant D19-32D - Dechant D19-32	11,800.00	11,800.00	7,579.36	7,421.28	47.945	SF
Graznak 01-19 - Graznak 01-19 - Graznak 01-19 - As Dr	2,300.00	2,267.00	3,580.12	3,552.33	128.803	CC
Graznak 01-19 - Graznak 01-19 - Graznak 01-19 - As Dr	2,400.00	2,366.98	3,580.60	3,551.58	123.389	ES
Graznak 01-19 - Graznak 01-19 - Graznak 01-19 - As Dr	6,600.00	6,520.58	3,829.12	3,748.78	47.663	SF
Higgins D19-720 - Original Drilling - Original Drilling - As	7,051.78	6,841.84	2,214.20	2,170.28	50.410	CC, ES
Higgins D19-720 - Original Drilling - Original Drilling - As	7,200.00	6,873.33	2,221.12	2,176.90	50.231	SF
Higgins D19-720 - Sidetrack Curve/Horizontal - ST01 - A	7,004.26	6,753.23	2,227.07	2,183.29	50.870	CC, ES
Higgins D19-720 - Sidetrack Curve/Horizontal - ST01 - A	7,150.00	6,759.40	2,233.40	2,189.33	50.679	SF
Independence D18-712(Killed) - Independence D18-712	2,872.21	2,558.43	2,401.62	2,382.86	128.025	CC
Independence D18-712(Killed) - Independence D18-712	2,900.00	2,573.64	2,401.69	2,382.79	127.089	ES
Independence D18-712(Killed) - Independence D18-712	17,454.04	17,724.03	2,958.99	2,775.43	16.119	SF
Independence D18-717 - Independence D18-717 - Plan 1	3,266.48	2,962.52	2,328.77	2,307.19	107.894	CC
Independence D18-717 - Independence D18-717 - Plan 1	6,500.00	6,183.24	2,335.48	2,290.76	52.226	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 D18-759
Project:	Mustang	TVD Reference:	Well @ 4816.00ft
Reference Site:	D Section 19	MD Reference:	Well @ 4816.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Independence D18-759	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Independence D18-759	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						
Independence D18-717 - Independence D18-717 - Plan 1	17,454.04	17,353.05	2,614.58	2,431.28	14.264	SF
Independence D18-725 - Independence D18-725 - Plan 1	7,146.20	7,087.07	1,826.23	1,777.14	37.204	CC
Independence D18-725 - Independence D18-725 - Plan 1	7,150.00	7,090.92	1,826.23	1,777.13	37.193	ES
Independence D18-725 - Independence D18-725 - Plan 1	17,454.04	17,403.60	2,075.09	1,892.33	11.354	SF
Independence D18-732 - Independence D18-732 - Plan 1	7,213.40	7,156.75	1,397.12	1,347.98	28.431	CC, ES
Independence D18-732 - Independence D18-732 - Plan 1	17,454.04	17,374.17	1,634.77	1,451.47	8.918	SF
Independence D18-739 - Independence D18-739 - Plan 1	7,243.43	7,321.83	1,076.02	1,026.16	21.581	CC
Independence D18-739 - Independence D18-739 - Plan 1	17,454.04	17,527.65	1,178.14	994.09	6.401	ES, SF
Independence D18-744 - Independence D18-744 - Plan 1	7,241.86	7,339.72	662.59	612.37	13.195	CC
Independence D18-744 - Independence D18-744 - Plan 1	7,250.00	7,346.27	662.60	612.36	13.189	ES
Independence D18-744 - Independence D18-744 - Plan 1	17,454.04	17,543.91	809.94	625.75	4.397	SF
Independence D18-767 - Independence D18-767 - Plan 1	2,300.00	2,301.00	22.00	5.97	1.373	Level 3, CC, ES, SF
Independence D30-711 - Independence D30-711 - Plan 1	2,987.78	2,672.48	2,401.85	2,382.25	122.548	CC
Independence D30-711 - Independence D30-711 - Plan 1	3,000.00	2,679.94	2,401.87	2,382.20	122.143	ES
Independence D30-711 - Independence D30-711 - Plan 1	8,200.00	6,500.00	2,803.40	2,751.96	54.496	SF
Independence D30-718 - Independence D30-718 - Plan 2	3,100.00	2,789.79	2,371.83	2,351.42	116.214	CC
Independence D30-718 - Independence D30-718 - Plan 2	3,111.27	2,800.00	2,371.83	2,351.35	115.791	ES
Independence D30-718 - Independence D30-718 - Plan 2	7,900.00	6,550.00	2,462.98	2,412.86	49.139	SF
Independence D30-724 - Independence D30-724 - Plan 1	7,217.93	7,112.41	2,011.88	1,962.78	40.976	CC, ES
Independence D30-724 - Independence D30-724 - Plan 1	7,600.00	6,807.75	2,022.76	1,973.19	40.804	SF
Independence D30-731 - Independence D30-731 - Plan 1	7,123.69	7,237.77	1,658.94	1,609.99	33.889	CC, ES
Independence D30-731 - Independence D30-731 - Plan 1	7,250.00	7,129.95	1,661.34	1,612.21	33.811	SF
Independence D30-737 - Independence D30-737 - Plan 1	7,118.58	7,271.36	1,168.69	1,119.45	23.731	CC, ES
Independence D30-737 - Independence D30-737 - Plan 1	7,200.00	7,211.04	1,170.19	1,120.84	23.713	SF
Independence D30-743 - Independence D30-743 - Plan 1	7,096.46	7,350.00	799.55	749.89	16.100	CC, ES
Independence D30-743 - Independence D30-743 - Plan 1	7,100.00	7,347.65	799.55	749.89	16.099	SF
Independence D30-758 - Independence D30-758 - Plan 1	7,107.18	7,269.19	56.77	7.35	1.149	Level 2, CC, ES, SF
Independence D30-765 - Independence D30-765 - Plan 1	2,200.00	2,201.00	153.33	138.02	10.015	CC, ES
Independence D30-765 - Independence D30-765 - Plan 1	2,400.00	2,390.76	159.95	143.28	9.595	SF
Independence D30-770 - Independence D30-770 - Plan 1	2,200.00	2,201.00	154.74	139.43	10.107	CC, ES
Independence D30-770 - Independence D30-770 - Plan 1	2,400.00	2,390.38	161.78	145.11	9.706	SF
Independence D30-777 - Independence D30-777 - Plan 2	2,200.00	2,201.00	162.67	147.36	10.625	CC, ES
Independence D30-777 - Independence D30-777 - Plan 2	2,400.00	2,389.93	169.87	153.21	10.194	SF
Independence State D30-784 - Independence State D30	2,200.00	2,201.00	173.16	157.85	11.310	CC, ES
Independence State D30-784 - Independence State D30	2,400.00	2,389.60	180.36	163.69	10.825	SF
LDS White D19-10 - LDS White D19-10 - LDS White D19	6,285.50	6,221.71	2,897.44	2,853.55	66.014	CC, ES
LDS White D19-10 - LDS White D19-10 - LDS White D19	6,550.00	6,472.18	2,950.15	2,904.46	64.572	SF
LDS White D19-15 - LDS White D19-15 - LDS White D19	6,286.15	6,273.15	4,289.82	4,245.78	97.413	CC, ES
LDS White D19-15 - LDS White D19-15 - LDS White D19	6,600.00	6,550.54	4,364.92	4,318.84	94.719	SF
LDS White D19-16 - Wellbore #1 - Wellbore #1 - As Drill	6,302.13	6,235.51	4,689.37	4,645.46	106.785	CC, ES
LDS White D19-16 - Wellbore #1 - Wellbore #1 - As Drill	6,700.00	6,605.59	4,798.26	4,751.76	103.181	SF
Mile High 02-19 - Wellbore #1 - Wellbore #1 - As Drilled	6,344.49	6,271.32	1,777.64	1,733.51	40.280	CC
Mile High 02-19 - Wellbore #1 - Wellbore #1 - As Drilled	6,350.00	6,276.81	1,777.66	1,733.49	40.245	ES
Mile High 02-19 - Wellbore #1 - Wellbore #1 - As Drilled	6,550.00	6,461.92	1,801.44	1,755.93	39.590	SF
Sean D19-09 - Wellbore #1 - Wellbore #1 - As Drilled	6,332.70	6,260.63	3,660.16	3,512.59	24.802	CC
Sean D19-09 - Wellbore #1 - Wellbore #1 - As Drilled	6,350.00	6,277.66	3,660.34	3,512.36	24.735	ES
Sean D19-09 - Wellbore #1 - Wellbore #1 - As Drilled	6,700.00	6,591.93	3,739.28	3,583.89	24.063	SF
Turk Blue D19-02J - Turk Blue D19-02J - Turk Blue D19-	305.69	276.69	533.96	532.31	322.465	CC
Turk Blue D19-02J - Turk Blue D19-02J - Turk Blue D19-	2,400.00	2,373.79	542.16	525.68	32.896	ES
Turk Blue D19-02J - Turk Blue D19-02J - Turk Blue D19-	6,300.00	6,243.66	857.67	813.69	19.502	SF
Turk Blue D19-04 - Turk Blue D19-04 - Turk Blue D19-04	2,352.18	2,362.32	1,094.24	1,077.94	67.155	CC, ES
Turk Blue D19-04 - Turk Blue D19-04 - Turk Blue D19-04	6,750.00	6,664.08	1,616.06	1,569.24	34.510	SF
Turk Blue D19-05 - Turk Blue D19-05 - Turk Blue D19-05	674.20	647.21	2,112.12	2,107.85	494.206	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 D18-759
Project:	Mustang	TVD Reference:	Well @ 4816.00ft
Reference Site:	D Section 19	MD Reference:	Well @ 4816.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Independence D18-759	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Independence D18-759	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 D19-05 - Turk Blue D19-05 - Turk Blue D19-05	2,327.03	2,312.41	2,121.40	2,105.39	132.507	ES
Turk Blue D19-05 - Turk Blue D19-05 - Turk Blue D19-05	6,550.00	6,610.55	2,393.46	2,347.28	51.828	SF
Turk Blue D19-06 - Turk Blue D19-06 - Turk Blue D19-06	3,009.98	2,967.30	1,611.19	1,590.51	77.919	CC
Turk Blue D19-06 - Turk Blue D19-06 - Turk Blue D19-06	3,700.00	3,657.65	1,613.01	1,587.47	63.140	ES
Turk Blue D19-06 - Turk Blue D19-06 - Turk Blue D19-06	6,450.00	6,397.59	1,709.63	1,664.53	37.905	SF
Turk White D19-01 - Wellbore #1 - Wellbore #1 - As Drill	6,714.74	6,606.97	2,430.32	2,383.84	52.290	CC, ES
Turk White D19-01 - Wellbore #1 - Wellbore #1 - As Drill	7,000.00	6,769.99	2,452.83	2,405.05	51.342	SF
Turk White D19-02 - Wellbore #1 - Wellbore #1 - As Drill	6,577.11	6,453.63	973.10	927.56	21.367	CC
Turk White D19-02 - Wellbore #1 - Wellbore #1 - As Drill	6,600.00	6,477.43	973.20	927.51	21.297	ES
Turk White D19-02 - Wellbore #1 - Wellbore #1 - As Drill	6,750.00	6,615.50	981.25	934.64	21.056	SF
Turk White D19-08 - Wellbore #1 - Wellbore #1 - As Drill	6,373.13	6,320.58	2,865.14	2,820.78	64.586	CC, ES
Turk White D19-08 - Wellbore #1 - Wellbore #1 - As Drill	6,700.00	6,609.08	2,917.53	2,871.10	62.842	SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Independence D18-759
Project:	Mustang	TVD Reference:	Well @ 4816.00ft
Reference Site:	D Section 19	MD Reference:	Well @ 4816.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Independence D18-759	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Independence D18-759	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	6,497.94	6,414.47	4,124.29	4,045.42	52.293	CC
Bohlender D20-2J - Wellbore #1 - No Surveys	6,500.00	6,416.37	4,124.29	4,045.40	52.277	ES
Bohlender D20-2J - Wellbore #1 - No Surveys	7,000.00	6,765.01	4,198.62	4,115.30	50.392	SF
Bohlender D20-3 - Wellbore #1 - Gyro Surveys	6,848.23	6,684.35	4,852.14	4,804.99	102.915	CC
Bohlender D20-3 - Wellbore #1 - Gyro Surveys	6,850.00	6,685.24	4,852.14	4,804.98	102.899	ES
Bohlender D20-3 - Wellbore #1 - Gyro Surveys	8,100.00	6,798.31	5,096.50	5,045.91	100.758	SF
Bohlender D20-4 (P&A) - Wellbore #1 - No Surveys	6,855.91	6,695.40	3,489.99	3,332.12	22.105	CC
Bohlender D20-4 (P&A) - Wellbore #1 - No Surveys	6,900.00	6,720.26	3,490.42	3,331.93	22.023	ES
Bohlender D20-4 (P&A) - Wellbore #1 - No Surveys	7,150.00	6,810.14	3,510.39	3,349.56	21.827	SF
Bohlender D20-6 - Wellbore#1 - Gyro Surveys	6,477.27	6,346.56	5,131.07	5,086.24	114.459	CC, ES
Bohlender D20-6 - Wellbore#1 - Gyro Surveys	7,100.00	6,748.45	5,242.27	5,194.38	109.449	SF
Butterball D19-27D - Butterball D19-27D - Butterball D19	7,229.64	7,051.95	1,604.47	1,553.49	31.475	CC
Butterball D19-27D - Butterball D19-27D - Butterball D19	7,250.00	7,052.38	1,604.64	1,553.49	31.373	ES
Butterball D19-27D - Butterball D19-27D - Butterball D19	8,100.00	7,040.20	1,829.97	1,763.80	27.655	SF
Duncan D20-1 (P&A) - Wellbore #1 - No Surveys	6,965.04	6,751.23	7,653.12	7,493.86	48.052	CC
Duncan D20-1 (P&A) - Wellbore #1 - No Surveys	7,000.00	6,766.01	7,653.32	7,493.68	47.941	ES
Duncan D20-1 (P&A) - Wellbore #1 - No Surveys	7,250.00	6,818.88	7,666.64	7,505.45	47.564	SF
Duncan D20-10 - Wellbore #1 - Gyro Surveys	6,415.03	6,342.59	7,288.18	7,243.56	163.347	CC, ES
Duncan D20-10 - Wellbore #1 - Gyro Surveys	7,050.00	6,790.24	7,432.21	7,384.28	155.054	SF
Duncan D20-11 (SI) - Wellbore #1 - No Surveys	6,397.64	6,326.21	5,722.30	5,644.54	73.588	CC
Duncan D20-11 (SI) - Wellbore #1 - No Surveys	6,400.00	6,328.50	5,722.31	5,644.52	73.561	ES
Duncan D20-11 (SI) - Wellbore #1 - No Surveys	6,950.00	6,750.35	5,844.30	5,761.24	70.362	SF
Duncan D20-12 (SI) - Wellbore #1 - No Surveys	6,359.99	6,287.47	4,600.21	4,522.91	59.507	CC, ES
Duncan D20-12 (SI) - Wellbore #1 - No Surveys	6,850.00	6,694.88	4,718.60	4,636.26	57.301	SF
Duncan D20-13 (SI) - Wellbore #1 - No Surveys	6,325.69	6,258.71	5,658.38	5,581.41	73.517	CC, ES
Duncan D20-13 (SI) - Wellbore #1 - No Surveys	6,800.00	6,668.41	5,792.66	5,710.65	70.630	SF
Duncan D20-14 (SI) - Wellbore #1 - Gyro Surveys	6,342.34	6,194.58	5,982.51	5,938.66	136.448	CC
Duncan D20-14 (SI) - Wellbore #1 - Gyro Surveys	6,350.00	6,200.00	5,982.54	5,938.65	136.304	ES
Duncan D20-14 (SI) - Wellbore #1 - Gyro Surveys	6,900.00	6,607.82	6,139.73	6,092.78	130.796	SF
Duncan D20-15 (P&A) - Wellbore #1 - Gyro Surveys	6,367.08	6,257.39	7,381.96	7,337.78	167.073	CC, ES
Duncan D20-15 (P&A) - Wellbore #1 - Gyro Surveys	7,000.00	6,770.62	7,556.93	7,509.18	158.244	SF
Duncan D20-16 (SI) - Wellbore #1 - Gyro Surveys	6,404.79	6,371.69	8,791.46	8,746.80	196.860	CC, ES
Duncan D20-16 (SI) - Wellbore #1 - Gyro Surveys	7,200.00	6,734.07	9,027.13	8,979.14	188.128	SF
Duncan D20-2 - Wellbore #1 - Gyro Surveys	6,897.38	6,717.90	6,234.31	6,186.95	131.639	CC
Duncan D20-2 - Wellbore #1 - Gyro Surveys	6,900.00	6,719.06	6,234.31	6,186.94	131.609	ES
Duncan D20-2 - Wellbore #1 - Gyro Surveys	10,100.00	6,806.30	7,212.29	7,153.47	122.615	SF
Duncan D20-7 - Wellbore #1 - Gyro Surveys	6,610.29	6,509.49	6,649.70	6,603.89	145.152	CC, ES
Duncan D20-7 - Wellbore #1 - Gyro Surveys	9,500.00	6,826.41	7,668.28	7,612.58	137.666	SF
Duncan D20-8 - Wellbore #1 - Gyro Surveys	6,580.23	6,504.47	7,786.17	7,740.46	170.335	CC
Duncan D20-8 - Wellbore #1 - Gyro Surveys	6,600.00	6,519.99	7,786.25	7,740.43	169.901	ES
Duncan D20-8 - Wellbore #1 - Gyro Surveys	10,800.00	6,821.30	9,525.41	9,464.25	155.768	SF
Duncan D20-9 (P&A) - Wellbore #1 - Gyro Surveys	6,470.01	6,433.47	8,185.24	8,140.13	181.450	CC, ES
Duncan D20-9 (P&A) - Wellbore #1 - Gyro Surveys	7,150.00	6,829.67	8,323.39	8,275.11	172.397	SF
E Ranches (P&A) - Wellbore #1 - No Surveys	6,338.01	6,262.85	5,838.62	5,690.98	39.548	CC
E Ranches (P&A) - Wellbore #1 - No Surveys	6,350.00	6,274.66	5,838.70	5,690.79	39.474	ES
E Ranches (P&A) - Wellbore #1 - No Surveys	6,850.00	6,691.88	5,983.36	5,825.59	37.925	SF
Guttersen 10-20 - Wellbore #1 - Gyro Surveys	6,426.40	6,316.06	6,610.83	6,566.27	148.364	CC
Guttersen 10-20 - Wellbore #1 - Gyro Surveys	6,450.00	6,348.91	6,611.00	6,566.25	147.723	ES
Guttersen 10-20 - Wellbore #1 - Gyro Surveys	6,950.00	6,699.17	6,703.99	6,656.87	142.290	SF
LDS D20-30D - LDS D20-30D - LDS D20-30D - As Drille	7,065.47	6,858.54	2,778.32	2,728.29	55.531	CC, ES
LDS D20-30D - LDS D20-30D - LDS D20-30D - As Drille	7,400.00	6,886.88	2,807.58	2,756.49	54.948	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 D18-759
Project:	Mustang	TVD Reference:	Well @ 4816.00ft
Reference Site:	D Section 19	MD Reference:	Well @ 4816.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Independence D18-759	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Independence D18-759	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	6,310.01	6,432.46	5,780.40	5,733.90	124.291	CC, ES
Guttersen D29-30D - Wellbore #1 - Design #1	6,750.00	6,823.28	5,907.09	5,858.00	120.330	SF
Guttersen D29-31D - Wellbore #1 - Guttersen D29-31D	6,303.61	6,348.09	6,894.82	6,850.78	156.590	CC, ES
Guttersen D29-31D - Wellbore #1 - Guttersen D29-31D	6,800.00	6,750.71	7,062.56	7,015.63	150.510	SF
Guttersen D29-33D - Wellbore #1 - Guttersen D29-33D -	871.00	863.00	8,378.86	8,374.30	1,839.076	CC
Guttersen D29-33D - Wellbore #1 - Guttersen D29-33D -	900.00	863.00	8,378.91	8,374.25	1,798.047	ES
Guttersen D29-33D - Wellbore #1 - Guttersen D29-33D -	6,850.00	6,891.97	9,557.53	9,508.80	196.118	SF
Guttersen D29-65HN - Original Drilling - Original Drilling	6,301.75	6,348.00	8,171.83	8,129.10	191.241	CC, ES
Guttersen D29-65HN - Original Drilling - Original Drilling	6,750.00	6,410.00	8,320.57	8,276.21	187.566	SF
Guttersen D29-67HN - Original Drilling - Original Drilling	6,291.75	6,126.01	6,995.69	6,953.54	165.980	CC, ES
Guttersen D29-67HN - Original Drilling - Original Drilling	6,600.00	6,221.01	7,064.83	7,021.33	162.380	SF
Guttersen D29-69HN - Original Drilling - Original Drilling	6,300.27	6,316.01	5,928.50	5,882.24	128.155	CC, ES
Guttersen D29-69HN - Original Drilling - Original Drilling	6,550.00	6,355.37	5,973.06	5,926.00	126.925	SF
Guttersen D29-722 - Guttersen D29-722 - Prelim - Rev 1	9,629.22	17,638.72	7,383.93	7,258.39	58.813	CC
Guttersen D29-722 - Guttersen D29-722 - Prelim - Rev 1	9,700.00	17,638.72	7,384.27	7,258.31	58.621	ES
Guttersen D29-722 - Guttersen D29-722 - Prelim - Rev 1	11,300.00	17,638.72	7,570.60	7,436.74	56.558	SF
Guttersen D29-730 - Guttersen D29-730 - Prelim - Rev 1	9,629.92	17,556.91	6,770.93	6,645.89	54.151	CC
Guttersen D29-730 - Guttersen D29-730 - Prelim - Rev 1	9,700.00	17,556.91	6,771.29	6,645.86	53.983	ES
Guttersen D29-730 - Guttersen D29-730 - Prelim - Rev 1	10,900.00	17,556.91	6,889.01	6,757.89	52.538	SF
Guttersen D29-738 - Guttersen D29-738 - Prelim - Rev 1	9,629.01	17,787.86	6,137.91	6,012.57	48.969	CC
Guttersen D29-738 - Guttersen D29-738 - Prelim - Rev 1	9,700.00	17,779.88	6,138.31	6,012.56	48.817	ES
Guttersen D29-738 - Guttersen D29-738 - Prelim - Rev 1	10,800.00	17,779.88	6,248.29	6,116.71	47.489	SF
Guttersen D29-746 - Guttersen D29-746 - Prelim - Rev 1	9,631.51	17,495.86	5,553.99	5,428.62	44.302	CC, ES
Guttersen D29-746 - Guttersen D29-746 - Prelim - Rev 1	10,600.00	17,495.86	5,637.80	5,507.55	43.283	SF
Guttersen D29-754 - Guttersen D29-754 - Prelim - Rev 1	7,262.05	15,347.90	4,967.10	4,869.67	50.979	CC
Guttersen D29-754 - Guttersen D29-754 - Prelim - Rev 1	9,700.00	17,718.83	4,967.88	4,841.86	39.421	ES
Guttersen D29-754 - Guttersen D29-754 - Prelim - Rev 1	10,300.00	17,718.83	5,012.09	4,883.18	38.880	SF
Guttersen D29-770 - Guttersen D29-770 - Prelim - Rev 1	7,261.31	15,164.04	4,332.57	4,235.55	44.657	CC
Guttersen D29-770 - Guttersen D29-770 - Prelim - Rev 1	9,700.00	17,536.90	4,333.63	4,207.88	34.463	ES
Guttersen D29-770 - Guttersen D29-770 - Prelim - Rev 1	10,200.00	17,536.90	4,370.03	4,241.74	34.065	SF
Guttersen D29-778 - Guttersen D29-778 - Prelim - Rev 1	7,261.79	15,302.13	3,719.92	3,622.31	38.110	CC
Guttersen D29-778 - Guttersen D29-778 - Prelim - Rev 1	9,700.00	17,670.79	3,720.92	3,594.69	29.476	ES
Guttersen D29-778 - Guttersen D29-778 - Prelim - Rev 1	10,000.00	17,670.79	3,738.30	3,610.62	29.280	SF
Guttersen D29-786 - Guttersen D29-786 - Prelim - Rev 1	7,260.86	15,178.47	3,140.15	3,043.31	32.428	CC
Guttersen D29-786 - Guttersen D29-786 - Prelim - Rev 1	9,700.00	17,553.42	3,141.73	3,016.21	25.031	ES
Guttersen D29-786 - Guttersen D29-786 - Prelim - Rev 1	9,900.00	17,553.42	3,152.22	3,025.87	24.947	SF
Guttersen D29-99HZ - Wellbore #1 - MWD Surveys	6,287.52	6,258.01	9,503.86	9,460.43	218.831	CC, ES
Guttersen D29-99HZ - Wellbore #1 - MWD Surveys	6,650.00	6,290.01	9,604.03	9,559.36	215.028	SF
Guttersen D30-68-1HN - Original Drilling - Original Drilling	6,326.02	9,900.77	5,894.04	5,787.51	55.326	CC, ES
Guttersen D30-68-1HN - Original Drilling - Original Drilling	6,450.00	9,895.34	5,907.33	5,800.32	55.201	SF
Guttersen D30-69-1HN - Original Drilling - Original Drilling	6,339.02	9,439.65	5,184.34	5,090.36	55.162	CC, ES
Guttersen D30-69-1HN - Original Drilling - Original Drilling	6,450.00	9,430.80	5,195.15	5,100.82	55.075	SF
Guttersen State D29-714 - Guttersen D29-714 - Prelim -	9,628.53	17,532.66	7,936.89	7,811.62	63.358	CC
Guttersen State D29-714 - Guttersen D29-714 - Prelim -	9,700.00	17,532.66	7,937.21	7,811.51	63.141	ES
Guttersen State D29-714 - Guttersen D29-714 - Prelim -	11,600.00	17,532.66	8,178.08	8,042.64	60.381	SF
Guttersen State Y05-719 - Guttersen Y05-719 - Prelim -						Out of range
Guttersen Y05-726 - Guttersen Y05-726 - Prelim - Rev 1	6,351.69	6,400.00	9,747.80	9,702.56	215.475	CC, ES
Guttersen Y05-726 - Guttersen Y05-726 - Prelim - Rev 1	6,800.00	6,450.00	9,858.16	9,811.43	210.945	SF
Guttersen Y05-734 - Guttersen Y05-734 - Prelim - Rev 1	6,352.34	6,550.00	9,356.92	9,310.82	202.960	CC, ES
Guttersen Y05-734 - Guttersen Y05-734 - Prelim - Rev 1	6,750.00	6,600.00	9,448.76	9,401.31	199.142	SF
Guttersen Y05-749 - Guttersen Y05-749 - Prelim - Rev 1	6,325.14	6,300.00	8,774.87	8,729.77	194.544	CC, ES
Guttersen Y05-749 - Guttersen Y05-749 - Prelim - Rev 1	6,750.00	6,350.00	8,885.28	8,838.65	190.560	SF
Guttersen Y05-756 - Guttersen Y05-756 - Prelim - Rev 1	6,323.68	6,300.00	8,435.25	8,390.44	188.236	CC, 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 D18-759
Project:	Mustang	TVD Reference:	Well @ 4816.00ft
Reference Site:	D Section 19	MD Reference:	Well @ 4816.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Independence D18-759	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Independence D18-759	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						
Guttersen Y05-756 - Guttersen Y05-756 - Prelim - Rev 1	6,700.00	6,350.00	8,525.12	8,478.95	184.669	SF
Guttersen Y05-771 - Guttersen Y05-771 - Prelim - Rev 1	6,320.41	6,322.55	7,956.54	7,911.27	175.774	CC, ES
Guttersen Y05-771 - Guttersen Y05-771 - Prelim - Rev 1	6,650.00	6,350.00	8,034.42	7,987.98	173.007	SF
Guttersen Y05-779 - Guttersen Y05- 779 - Prelim - Rev 1	6,318.63	6,400.00	7,707.84	7,662.62	170.423	CC, ES
Guttersen Y05-779 - Guttersen Y05- 779 - Prelim - Rev 1	6,750.00	6,450.00	7,837.36	7,790.64	167.745	SF
Guttersen Y05-786 - Guttersen Y05-786 - Prelim - Rev 1	6,308.80	6,350.00	7,461.80	7,416.80	165.822	CC, ES
Guttersen Y05-786 - Guttersen Y05-786 - Prelim - Rev 1	6,700.00	6,400.00	7,572.47	7,526.12	163.365	SF
Jessie D29-1J - Wellbore #1 - Gyro Surveys	6,346.44	6,256.87	8,743.47	8,699.39	198.352	CC
Jessie D29-1J - Wellbore #1 - Gyro Surveys	6,350.00	6,259.48	8,743.48	8,699.38	198.253	ES
Jessie D29-1J - Wellbore #1 - Gyro Surveys	6,950.00	6,700.00	8,926.97	8,879.61	188.463	SF
Jessie D29-4J - Wellbore #1 - Gyro Surveys						Out of range
Kate Red D29-03J - Kate Red D29-03J - Kate Red D29-0	6,300.30	6,288.28	9,305.50	9,261.40	210.987	CC, ES
Kate Red D29-03J - Kate Red D29-03J - Kate Red D29-0	6,850.00	6,740.10	9,510.39	9,463.05	200.899	SF
Kate Red D29-11 - Wellbore #1 - Gyro Surveys	6,307.66	6,242.68	9,437.22	9,393.24	214.579	CC, ES
Kate Red D29-11 - Wellbore #1 - Gyro Surveys	6,900.00	6,870.08	9,655.67	9,607.83	201.826	SF
Kate Red D29-13 - Wellbore #1 - Gyro Surveys						Out of range
Kate Red D29-14 - Wellbore #1 - Gyro Surveys						Out of range
Kate Red D29-2J - Wellbore #1 - Kate Red D29-2J	6,303.71	6,119.92	7,140.72	7,097.22	164.180	CC, ES
Kate Red D29-2J - Wellbore #1 - Kate Red D29-2J	6,900.00	6,672.01	7,356.72	7,309.55	155.937	SF
Kate Red D29-3 - Wellbore #1 - Kate Red D29-3	6,320.21	6,141.80	7,384.01	7,340.41	169.370	CC, ES
Kate Red D29-3 - Wellbore #1 - Kate Red D29-3	6,900.00	6,689.42	7,567.38	7,520.16	160.255	SF
Kate Red D29-5 - Wellbore #1 - Gyro Surveys	6,301.64	6,219.94	7,673.06	7,629.20	174.928	CC, ES
Kate Red D29-5 - Wellbore #1 - Gyro Surveys	6,850.00	6,681.01	7,871.66	7,824.53	167.043	SF
Kate Red D29-6 - Wellbore #1 - Gyro Surveys	6,322.27	6,295.27	8,429.74	8,385.59	190.949	CC, ES
Kate Red D29-6 - Wellbore #1 - Gyro Surveys	6,900.00	6,710.53	8,633.57	8,586.28	182.549	SF
Kate White D29-1 - Wellbore #1 - Gyro Surveys	6,370.06	6,311.12	9,360.12	9,315.79	211.121	CC, ES
Kate White D29-1 - Wellbore #1 - Gyro Surveys	7,100.00	6,809.72	9,592.01	9,543.97	199.656	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	6,345.21	6,400.00	9,380.91	9,336.27	210.171	CC
Kate White D29-7 - Wellbore #1 - Gyro Surveys	6,350.00	6,400.00	9,380.92	9,336.27	210.088	ES
Kate White D29-7 - Wellbore #1 - Gyro Surveys	6,950.00	6,702.64	9,584.73	9,537.30	202.075	SF
Kate White D29-8 - Wellbore #1 - Gyro Surveys						Out of range
Kate White D29-9 (SI) - Wellbore #1 - Gyro Surveys						Out of range

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Independence D18-759
Project:	Mustang	TVD Reference:	Well @ 4816.00ft
Reference Site:	D Section 19	MD Reference:	Well @ 4816.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Independence D18-759	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Independence D18-759	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						
Adams D30-27D - Adams D30-27D - Adams D30-27D - A	6,285.28	6,302.79	4,917.68	4,870.44	104.089	CC, ES
Adams D30-27D - Adams D30-27D - Adams D30-27D - A	6,650.00	6,639.64	5,015.68	4,966.24	101.449	SF
Adams D30-29D - Wellbore #1 - Wellbore #1 - As Drilled	2,976.49	3,053.99	4,946.90	4,923.72	213.368	CC
Adams D30-29D - Wellbore #1 - Wellbore #1 - As Drilled	3,100.00	3,141.58	4,947.41	4,923.37	205.782	ES
Adams D30-29D - Wellbore #1 - Wellbore #1 - As Drilled	6,550.00	6,627.84	5,073.66	5,023.14	100.435	SF
Adams D30-30D - Adams D30-30D OH - As Drilled	2,115.86	2,152.07	4,793.44	4,771.97	223.283	CC
Adams D30-30D - Adams D30-30D OH - As Drilled	2,300.00	2,291.16	4,794.98	4,770.54	196.187	ES
Adams D30-30D - Adams D30-30D OH - As Drilled	6,450.00	6,624.47	5,284.95	5,169.32	45.706	SF
Adams D30-31D - Adams D30-31D Gyros - Gyros	100.00	50.88	5,000.71	5,000.49	10,000.000	CC
Adams D30-31D - Adams D30-31D Gyros - Gyros	300.00	226.40	5,001.89	5,000.42	3,411.999	ES
Adams D30-31D - Adams D30-31D Gyros - Gyros	6,500.00	6,500.00	6,378.27	6,273.11	60.653	SF
Corbin D30-23D - Corbin D30-23D - Corbin D30-23D - As	6,274.60	6,569.21	9,288.73	9,187.56	91.813	CC, ES
Corbin D30-23D - Corbin D30-23D - Corbin D30-23D - As	6,500.00	6,731.53	9,328.31	9,226.24	91.388	SF
Corbin Red D30-04J - Corbin Red D30-04J - Corbin Red	5,970.85	5,852.28	8,585.21	8,543.78	207.262	CC
Corbin Red D30-04J - Corbin Red D30-04J - Corbin Red	6,100.00	5,925.68	8,585.71	8,543.57	203.713	ES
Corbin Red D30-04J - Corbin Red D30-04J - Corbin Red	6,800.00	6,327.73	8,804.93	8,759.15	192.337	SF
Corbin Red D30-09 - Corbin Red D30-09 - Corbin Red D	6,278.71	6,159.67	8,464.76	8,421.15	194.087	CC, ES
Corbin Red D30-09 - Corbin Red D30-09 - Corbin Red D	6,800.00	6,537.93	8,662.70	8,616.16	186.133	SF
Corbin Red D30-15 - Corbin Red D30-15 - Corbin Red D	5,536.25	5,472.65	9,512.88	9,474.35	246.925	CC
Corbin Red D30-15 - Corbin Red D30-15 - Corbin Red D	6,269.28	6,200.00	9,516.49	9,472.76	217.592	ES
Corbin Red D30-15 - Corbin Red D30-15 - Corbin Red D	6,800.00	6,437.24	9,730.47	9,684.28	210.664	SF
Corbin Red D30-16 - Corbin Red D30-16 - Corbin Red D	4,492.99	4,263.11	9,824.38	9,793.86	321.868	CC
Corbin Red D30-16 - Corbin Red D30-16 - Corbin Red D	4,800.00	4,511.75	9,825.87	9,793.37	302.332	ES
Corbin Red D30-16 - Corbin Red D30-16 - Corbin Red D	6,700.00	6,593.91	9,968.96	9,922.41	214.164	SF
Dechant D30-17D - Dechant D30-17D - Dechant D30-17	138.30	108.60	5,002.46	5,002.00	10,000.000	CC
Dechant D30-17D - Dechant D30-17D - Dechant D30-17	200.00	141.93	5,002.61	5,001.80	6,202.316	ES
Dechant D30-17D - Dechant D30-17D - Dechant D30-17	5,300.00	5,300.00	6,104.44	6,032.97	85.423	SF
Dechant D30-20D - Dechant D30-20D - Dechant D30-20	4,549.70	4,778.12	7,461.69	7,424.04	198.202	CC
Dechant D30-20D - Dechant D30-20D - Dechant D30-20	4,600.00	4,793.86	7,461.81	7,423.94	197.085	ES
Dechant D30-20D - Dechant D30-20D - Dechant D30-20	6,700.00	6,771.00	7,636.29	7,585.55	150.514	SF
Dechant D30-24D - Dechant D30-24D - Dechant D30-24	5,686.47	5,821.68	8,836.90	8,795.27	212.261	CC
Dechant D30-24D - Dechant D30-24D - Dechant D30-24	5,800.00	5,877.79	8,837.30	8,795.10	209.415	ES
Dechant D30-24D - Dechant D30-24D - Dechant D30-24	6,750.00	6,583.44	9,032.65	8,985.11	189.982	SF
Dechant D30-25D - Dechant D30-25D - Dechant D30-25	5,684.77	6,036.06	8,861.07	8,809.82	172.924	CC
Dechant D30-25D - Dechant D30-25D - Dechant D30-25	6,000.00	6,302.74	8,862.00	8,808.92	166.957	ES
Dechant D30-25D - Dechant D30-25D - Dechant D30-25	6,650.00	6,641.76	8,983.95	8,927.76	159.876	SF
Dechant D31-27D - Dechant D31-27D - Dechant D31-27	373.23	358.25	9,799.35	9,797.16	4,479.598	CC
Dechant D31-27D - Dechant D31-27D - Dechant D31-27	400.00	367.23	9,799.37	9,797.06	4,233.526	ES
Dechant D31-27D - Dechant D31-27D - Dechant D31-27	3,900.00	3,160.98	9,999.49	9,948.14	194.725	SF
Dechant D31-28D - Dechant D31-28D - Dechant D31-28	962.43	947.57	9,837.48	9,831.12	1,547.689	CC
Dechant D31-28D - Dechant D31-28D - Dechant D31-28	1,000.00	952.36	9,837.54	9,831.03	1,511.633	ES
Dechant D31-28D - Dechant D31-28D - Dechant D31-28	6,400.00	6,414.45	9,998.84	9,952.87	217.524	SF
Dechant D31-29D - Dechant D31-29D - Dechant D31-29	0.00	0.00	9,823.43			
Dechant D31-29D - Dechant D31-29D - Dechant D31-29	1,100.00	1,044.85	9,828.71	9,821.50	1,363.655	ES
Dechant D31-29D - Dechant D31-29D - Dechant D31-29	4,000.00	3,386.41	9,998.51	9,962.81	280.073	SF
Dechant D31-77HN - Original Drilling - Original Drilling - A	1,634.41	1,632.43	9,896.98	9,888.61	1,182.129	CC
Dechant D31-77HN - Original Drilling - Original Drilling - A	1,968.93	1,971.63	9,896.98	9,886.20	918.080	ES
Dechant D31-77HN - Original Drilling - Original Drilling - A	3,500.00	2,405.00	9,988.54	9,970.97	568.509	SF
Hanson D30-11 - Hanson D30-11 - Hanson D30-11 - As D	3,092.00	3,150.75	7,985.51	7,963.86	368.800	CC
Hanson D30-11 - Hanson D30-11 - Hanson D30-11 - As D	3,500.00	3,500.00	7,987.01	7,962.68	328.328	ES
Hanson D30-11 - Hanson D30-11 - Hanson D30-11 - As D	6,950.00	6,950.00	8,383.11	8,334.82	173.600	SF
Hanson D30-12 - Hanson D30-12 - Hanson D30-12 - As	2,478.56	2,568.57	8,009.33	7,991.89	459.248	CC
Hanson D30-12 - Hanson D30-12 - Hanson D30-12 - As	2,600.00	2,713.28	8,009.73	7,991.37	436.083	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 D18-759
Project:	Mustang	TVD Reference:	Well @ 4816.00ft
Reference Site:	D Section 19	MD Reference:	Well @ 4816.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Independence D18-759	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Independence D18-759	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						
Hanson D30-12 - Hanson D30-12 - Hanson D30-12 - As	6,750.00	6,780.26	8,258.95	8,211.57	174.283	SF
Hanson D30-13 - Hanson D30-13 - Hanson D30-13 - As	2,570.39	2,753.54	9,567.59	9,549.20	520.291	CC
Hanson D30-13 - Hanson D30-13 - Hanson D30-13 - As	2,900.00	3,100.00	9,568.83	9,548.08	461.044	ES
Hanson D30-13 - Hanson D30-13 - Hanson D30-13 - As	6,850.00	6,719.08	9,904.57	9,857.23	209.236	SF
Hanson D30-14 - Hanson D30-14 - Hanson D30-14 - As	5,509.18	5,600.00	9,407.70	9,368.70	241.274	CC
Hanson D30-14 - Hanson D30-14 - Hanson D30-14 - As	5,600.00	5,635.58	9,408.04	9,368.59	238.511	ES
Hanson D30-14 - Hanson D30-14 - Hanson D30-14 - As	6,800.00	6,489.44	9,639.30	9,592.83	207.418	SF
Hettinger C Unit 1 - Hettinger C Unit 1 - Hettinger C Unit	6,288.65	6,241.14	5,968.79	5,924.80	135.683	CC
Hettinger C Unit 1 - Hettinger C Unit 1 - Hettinger C Unit	6,300.00	6,256.33	5,968.89	5,924.80	135.394	ES
Hettinger C Unit 1 - Hettinger C Unit 1 - Hettinger C Unit	6,750.00	6,685.10	6,120.95	6,073.94	130.200	SF
Hettinger D30-02 - Hettinger D30-02 - Hettinger D30-02 -	6,276.41	6,210.90	5,432.16	5,355.69	71.037	CC, ES
Hettinger D30-02 - Hettinger D30-02 - Hettinger D30-02 -	6,700.00	6,597.93	5,566.39	5,485.15	68.520	SF
Hettinger D30-03 - Hettinger D30-03 - Hettinger D30-03 -	3,037.82	3,054.32	5,290.50	5,269.39	250.665	CC
Hettinger D30-03 - Hettinger D30-03 - Hettinger D30-03 -	3,200.00	3,172.01	5,291.14	5,269.05	239.501	ES
Hettinger D30-03 - Hettinger D30-03 - Hettinger D30-03 -	6,700.00	6,684.60	5,468.55	5,421.64	116.575	SF
Hettinger D30-04 - Hettinger D30-04 - Hettinger D30-04 -	2,488.05	2,559.10	5,406.22	5,388.79	310.104	CC
Hettinger D30-04 - Hettinger D30-04 - Hettinger D30-04 -	2,500.00	2,572.92	5,406.22	5,388.70	308.520	ES
Hettinger D30-04 - Hettinger D30-04 - Hettinger D30-04 -	6,700.00	6,699.88	5,642.40	5,595.40	120.054	SF
Hettinger D30-05 - Hettinger D30-05 - Hettinger D30-05 -	493.65	466.66	7,094.71	7,091.72	2,369.393	CC
Hettinger D30-05 - Hettinger D30-05 - Hettinger D30-05 -	600.00	544.51	7,094.89	7,091.24	1,945.350	ES
Hettinger D30-05 - Hettinger D30-05 - Hettinger D30-05 -	6,700.00	6,622.97	7,361.97	7,315.30	157.760	SF
Hettinger D30-06 - Hettinger D30-06 - Hettinger D30-06 -	0.00	0.00	6,993.23			
Hettinger D30-06 - Hettinger D30-06 - Hettinger D30-06 -	3,000.00	3,023.93	6,996.92	6,976.08	335.665	ES
Hettinger D30-06 - Hettinger D30-06 - Hettinger D30-06 -	6,800.00	6,745.16	7,234.12	7,186.80	152.903	SF
Hettinger D30-08 - Hettinger D30-08 - Hettinger D30-08 -	6,295.10	6,335.43	7,248.55	7,204.28	163.738	CC
Hettinger D30-08 - Hettinger D30-08 - Hettinger D30-08 -	6,300.00	6,339.22	7,248.57	7,204.27	163.624	ES
Hettinger D30-08 - Hettinger D30-08 - Hettinger D30-08 -	6,800.00	6,684.19	7,433.95	7,386.90	157.993	SF
Leslie E Hanson Gas Unit 1 - Leslie E Hanson Gas Unit	2,300.00	2,281.00	8,876.40	8,848.49	317.952	CC
Leslie E Hanson Gas Unit 1 - Leslie E Hanson Gas Unit	2,500.00	2,480.84	8,877.59	8,847.24	292.438	ES
Leslie E Hanson Gas Unit 1 - Leslie E Hanson Gas Unit	6,850.00	6,718.88	9,226.04	9,143.37	111.604	SF
McWilliams D29-32 - McWilliams D29-32 - McWilliams D	6,291.30	6,233.89	7,923.15	7,879.28	180.575	CC, ES
McWilliams D29-32 - McWilliams D29-32 - McWilliams D	6,800.00	6,569.94	8,107.82	8,061.19	173.894	SF
McWilliams D30-07 - McWilliams D30-07 - McWilliams D	6,273.52	6,216.03	6,745.49	6,668.98	88.165	CC, ES
McWilliams D30-07 - McWilliams D30-07 - McWilliams D	6,750.00	6,643.02	6,914.45	6,832.69	84.570	SF
McWilliams D30-18 - McWilliams D30-18 - McWilliams D	3,228.81	3,182.70	6,178.65	6,156.42	277.980	CC
McWilliams D30-18 - McWilliams D30-18 - McWilliams D	6,272.03	6,274.58	6,197.00	6,152.98	140.795	ES
McWilliams D30-18 - McWilliams D30-18 - McWilliams D	6,700.00	6,640.67	6,336.26	6,289.55	135.663	SF
McWilliams D30-19 - McWilliams D30-19 - McWilliams D	169.50	139.42	6,111.00	6,110.31	8,891.631	CC
McWilliams D30-19 - McWilliams D30-19 - McWilliams D	2,800.00	2,855.60	6,126.83	6,107.27	313.215	ES
McWilliams D30-19 - McWilliams D30-19 - McWilliams D	6,750.00	6,686.87	6,383.52	6,334.93	131.387	SF
McWilliams D30-21 - McWilliams D30-21 - McWilliams D	6,284.91	6,438.17	7,805.14	7,760.53	174.961	CC, ES
McWilliams D30-21 - McWilliams D30-21 - McWilliams D	6,700.00	6,556.87	7,942.35	7,895.96	171.207	SF
McWilliams D30-22 - McWilliams D30-22 - McWilliams D	6,283.65	6,300.00	7,549.99	7,505.88	171.152	CC, ES
McWilliams D30-22 - McWilliams D30-22 - McWilliams D	6,750.00	6,526.80	7,716.43	7,670.04	166.350	SF

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Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Independence D18-759
Project:	Mustang	TVD Reference:	Well @ 4816.00ft
Reference Site:	D Section 19	MD Reference:	Well @ 4816.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Independence D18-759	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Independence D18-759	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						
H Section 24						
Gurtler 24-09J - Original Drilling - Original Drilling - As Dr	2,370.11	2,409.03	3,666.33	3,649.82	222.123	CC
Gurtler 24-09J - Original Drilling - Original Drilling - As Dr	2,400.00	2,432.97	3,666.46	3,649.76	219.616	ES
Gurtler 24-09J - Original Drilling - Original Drilling - As Dr	6,650.00	6,619.20	4,082.06	4,035.52	87.708	SF
Gurtler 24-10J - Original Drilling - Original Drilling - As Dr	312.04	309.71	4,558.67	4,556.88	2,537.325	CC
Gurtler 24-10J - Original Drilling - Original Drilling - As Dr	700.00	668.41	4,559.43	4,554.99	1,027.309	ES
Gurtler 24-10J - Original Drilling - Original Drilling - As Dr	6,750.00	6,700.01	4,999.16	4,952.11	106.257	SF
Gurtler 24-11J - Original Drilling - Original Drilling - As Dr	2,309.70	2,346.45	5,724.66	5,708.58	356.050	CC, ES
Gurtler 24-11J - Original Drilling - Original Drilling - As Dr	6,950.00	7,165.37	6,342.85	6,293.69	129.024	SF
Gurtler 24-12J - Original Drilling - Original Drilling - As Dr	574.73	607.39	6,799.24	6,795.46	1,801.617	CC
Gurtler 24-12J - Original Drilling - Original Drilling - As Dr	2,300.00	2,328.98	6,804.25	6,788.28	425.928	ES
Gurtler 24-12J - Original Drilling - Original Drilling - As Dr	6,750.00	6,500.01	7,328.72	7,282.49	158.510	SF
Gurtler 24-12J - Original Drilling - ST01 - ST01 Original D	1,039.13	1,071.16	6,798.60	6,792.54	1,121.285	CC
Gurtler 24-12J - Original Drilling - ST01 - ST01 Original D	2,306.83	2,354.05	6,801.25	6,786.17	450.923	ES
Gurtler 24-12J - Original Drilling - ST01 - ST01 Original D	6,850.00	7,340.01	7,329.04	7,279.03	146.541	SF
Gurtler 24-13J - Original Drilling - Original Drilling - As Dr	2,343.60	2,481.11	7,481.80	7,465.13	448.885	CC
Gurtler 24-13J - Original Drilling - Original Drilling - As Dr	2,400.00	2,570.82	7,482.22	7,465.04	435.554	ES
Gurtler 24-13J - Original Drilling - Original Drilling - As Dr	6,700.00	6,600.00	7,937.05	7,890.02	168.784	SF
Gurtler 24-15J - Original Drilling - Original Drilling - As Dr	1,915.05	1,907.89	5,477.44	5,464.31	417.285	CC
Gurtler 24-15J - Original Drilling - Original Drilling - As Dr	2,300.00	2,264.47	5,479.40	5,463.66	347.981	ES
Gurtler 24-15J - Original Drilling - Original Drilling - As Dr	6,700.00	6,589.60	5,943.51	5,896.99	127.746	SF
Gurtler 24-16J - Original Drilling - Original Drilling - As Dr	951.04	923.06	4,864.74	4,858.52	781.380	CC
Gurtler 24-16J - Original Drilling - Original Drilling - As Dr	2,419.68	2,513.57	4,869.15	4,852.12	285.937	ES
Gurtler 24-16J - Original Drilling - Original Drilling - As Dr	6,650.00	6,617.17	5,280.18	5,233.66	113.518	SF
Gurtler H24-14 - Original Drilling - Original Drilling - As D	0.00	0.00	6,404.23			
Gurtler H24-14 - Original Drilling - Original Drilling - As D	6,900.00	6,917.02	6,980.13	6,931.95	144.862	SF
Gurtler H24-21 (PA) - Original Drilling - Original Drilling -	329.41	333.41	4,872.80	4,870.87	2,514.358	CC
Gurtler H24-21 (PA) - Original Drilling - Original Drilling -	600.00	580.95	4,873.68	4,869.91	1,292.204	ES
Gurtler H24-21 (PA) - Original Drilling - Original Drilling -	7,200.00	7,200.00	5,553.20	5,503.54	111.820	SF
Gurtler H24-23 - Original Drilling - Original Drilling - As D	562.22	546.23	4,565.26	4,561.75	1,298.743	CC
Gurtler H24-23 - Original Drilling - Original Drilling - As D	2,400.00	2,480.91	4,568.86	4,552.01	271.151	ES
Gurtler H24-23 - Original Drilling - Original Drilling - As D	6,650.00	6,598.08	4,992.60	4,946.18	107.542	SF
Gurtler H24-24 - Original Drilling - Original Drilling - As D	546.50	550.52	5,482.33	5,478.85	1,575.449	CC
Gurtler H24-24 - Original Drilling - Original Drilling - As D	900.00	867.77	5,483.93	5,478.07	936.893	ES
Gurtler H24-24 - Original Drilling - Original Drilling - As D	6,850.00	7,079.88	5,903.27	5,854.48	120.983	SF
Gurtler H24-99HZ - Wellbore #1 - Original Drilling	2,348.78	2,370.97	3,567.67	3,552.84	240.483	CC
Gurtler H24-99HZ - Wellbore #1 - Original Drilling	2,400.00	2,418.49	3,567.98	3,552.80	234.984	ES
Gurtler H24-99HZ - Wellbore #1 - Original Drilling	6,400.00	6,129.00	3,816.15	3,773.57	89.619	SF
Gurtler H25-27 - Gurtler H25-27 Gyros - Gyros	719.24	638.24	4,874.96	4,870.56	1,107.499	CC
Gurtler H25-27 - Gurtler H25-27 Gyros - Gyros	800.00	700.00	4,875.21	4,870.30	993.593	ES
Gurtler H25-27 - Gurtler H25-27 Gyros - Gyros	6,750.00	6,600.64	6,032.35	5,985.28	128.174	SF
Gurtler Russell L1 (PA) - Original Drilling - Original Drilling	2,337.26	2,440.67	6,576.73	6,560.22	398.292	CC, ES
Gurtler Russell L1 (PA) - Original Drilling - Original Drilling	7,200.00	6,872.72	7,316.44	7,261.87	134.066	SF
HSR Brutschy 04-24 - Original Drilling - Original Drilling -	656.57	689.48	6,007.77	6,003.41	1,377.700	CC
HSR Brutschy 04-24 - Original Drilling - Original Drilling -	1,900.00	1,885.73	6,010.90	5,997.91	462.719	ES
HSR Brutschy 04-24 - Original Drilling - Original Drilling -	10,100.00	6,806.18	7,612.13	7,554.70	132.547	SF
HSR Epstein 05-24 - Original Drilling - Original Drilling - A	2,045.74	2,067.87	5,651.88	5,637.70	398.845	CC
HSR Epstein 05-24 - Original Drilling - Original Drilling - A	2,200.00	2,175.89	5,652.43	5,637.33	374.365	ES
A HSR Epstein 05-24 - Original Drilling - Original Drilling - A	7,150.00	6,916.48	6,297.99	6,249.37	129.533	SF
HSR Hoffman 03-24 - Original Drilling - Original Drilling -	2,349.39	2,447.28	4,746.52	4,729.95	286.602	CC, ES
HSR Hoffman 03-24 - Original Drilling - Original Drilling -	7,250.00	6,833.74	5,354.02	5,300.43	99.911	SF
HSR Sarchet 02-24 - Original Drilling - Original Drilling - A	501.24	508.37	3,442.59	3,439.42	1,087.208	CC
HSR Sarchet 02-24 - Original Drilling - Original Drilling - A	600.00	587.17	3,442.86	3,439.07	906.902	ES
HSR Sarchet 02-24 - Original Drilling - Original Drilling - A	7,100.00	6,864.04	3,999.38	3,951.03	82.723	SF

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Noble Energy, Inc.
Anticollision Summary Report

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Project:	Mustang	TVD Reference:	Well @ 4816.00ft
Reference Site:	D Section 19	MD Reference:	Well @ 4816.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Independence D18-759	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Independence D18-759	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						
H Section 24						
HSR Sarchet 06-24 - HSR Sarchet 06-24 OH - As Drilled	0.00	11.07	4,983.99			
HSR Sarchet 06-24 - HSR Sarchet 06-24 OH - As Drilled	2,200.00	2,180.39	4,991.08	4,975.97	330.365	ES
HSR Sarchet 06-24 - HSR Sarchet 06-24 OH - As Drilled	8,800.00	8,800.00	6,446.39	6,387.95	110.310	SF
HSR Taurig 01-24 - Original Drilling - Original Drilling - A	406.11	407.30	2,490.94	2,488.47	1,007.831	CC
HSR Taurig 01-24 - Original Drilling - Original Drilling - A	2,308.65	2,317.43	2,504.27	2,488.30	156.838	ES
HSR Taurig 01-24 - Original Drilling - Original Drilling - A	7,050.00	6,837.08	3,078.17	3,030.01	63.916	SF
Nopens D19-31 - Original Drilling - Original Drilling - As D	683.43	671.44	2,097.74	2,093.34	477.398	CC
Nopens D19-31 - Original Drilling - Original Drilling - As D	1,200.00	1,174.03	2,099.98	2,091.98	262.591	ES
Nopens D19-31 - Original Drilling - Original Drilling - As D	6,650.00	6,632.76	2,532.42	2,485.89	54.426	SF
Nopens H24-08 - Original Drilling - Original Drilling - As D	0.00	0.00	2,859.77			
Nopens H24-08 - Original Drilling - Original Drilling - As D	2,341.96	2,365.91	2,866.07	2,849.81	176.325	ES
Nopens H24-08 - Original Drilling - Original Drilling - As D	6,700.00	6,707.45	3,268.96	3,221.99	69.594	SF
Sarchet H24-22 - Original Drilling - Original Drilling - As D	526.23	515.24	3,699.77	3,696.49	1,127.103	CC
Sarchet H24-22 - Original Drilling - Original Drilling - As D	2,338.12	2,371.15	3,703.51	3,687.26	227.890	ES
Sarchet H24-22 - Original Drilling - Original Drilling - As D	7,000.00	7,014.03	4,291.05	4,242.27	87.977	SF
Weld County Lumber 01 - Original Drilling - Original Drilling	2,316.44	2,331.19	3,511.46	3,495.40	218.661	CC, ES
Weld County Lumber 01 - Original Drilling - Original Drilling	6,850.00	6,716.50	4,063.12	4,015.79	85.852	SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Independence D18-759
Project:	Mustang	TVD Reference:	Well @ 4816.00ft
Reference Site:	D Section 19	MD Reference:	Well @ 4816.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Independence D18-759	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Independence D18-759	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						
H Section 25						
Dechant 21-25 - Original Drilling - Original Drilling - As D	4,895.49	5,642.65	7,700.36	7,660.04	190.983	CC
Dechant 21-25 - Original Drilling - Original Drilling - As D	4,900.00	5,644.24	7,700.36	7,660.02	190.884	ES
Dechant 21-25 - Original Drilling - Original Drilling - As D	6,850.00	6,780.90	8,013.57	7,963.30	159.407	SF
Dechant D30-33D - Original Drilling - Original Drilling - As	4,498.82	4,936.89	9,073.09	9,035.04	238.451	CC
Dechant D30-33D - Original Drilling - Original Drilling - As	4,600.00	4,993.99	9,073.33	9,034.73	235.018	ES
Dechant D30-33D - Original Drilling - Original Drilling - As	6,850.00	6,903.85	9,394.55	9,342.35	179.966	SF
Dechant D31-30D - Original Drilling - Original Drilling - As	1,210.82	1,207.41	9,410.92	9,402.65	1,136.888	CC
Dechant D31-30D - Original Drilling - Original Drilling - As	1,300.00	1,253.00	9,411.20	9,402.43	1,073.462	ES
Dechant D31-30D - Original Drilling - Original Drilling - As	5,500.00	4,115.01	9,981.32	9,944.08	268.050	SF
Dechant H25-64-1HN - Original Drilling - Original Drilling	6,288.70	11,317.01	8,952.42	8,823.51	69.447	CC, ES
Dechant H25-64-1HN - Original Drilling - Original Drilling	6,450.00	11,317.01	8,973.15	8,843.56	69.240	SF
Dechant H25-65HN - Original Drilling - Original Drilling	6,291.12	11,344.01	8,072.87	7,947.03	64.151	CC, ES
Dechant H25-65HN - Original Drilling - Original Drilling	6,450.00	11,344.01	8,092.92	7,966.41	63.971	SF
HSR Cohn 03-25 - Original Drilling - Original Drilling - As	100.00	100.00	7,439.21	7,438.91	10,000.000	CC
HSR Cohn 03-25 - Original Drilling - Original Drilling - As	200.00	166.77	7,439.51	7,438.62	8,336.439	ES
HSR Cohn 03-25 - Original Drilling - Original Drilling - As	7,000.00	7,031.93	8,137.50	8,088.76	166.952	SF
HSR Crowe 06-25 - Original Drilling - Original Drilling - A	0.00	0.00	8,430.41			
HSR Crowe 06-25 - Original Drilling - Original Drilling - A	2,300.00	2,268.51	8,438.84	8,423.08	535.223	ES
HSR Crowe 06-25 - Original Drilling - Original Drilling - A	6,850.00	6,700.00	9,018.58	8,971.28	190.673	SF
HSR Dechant 04-25 - Original Drilling - Original Drilling -	3,422.75	4,738.79	8,355.67	8,305.77	167.455	CC
HSR Dechant 04-25 - Original Drilling - Original Drilling -	3,500.00	4,762.00	8,355.92	8,305.65	166.211	ES
HSR Dechant 04-25 - Original Drilling - Original Drilling -	6,700.00	7,255.93	8,679.38	8,612.79	130.353	SF
HSR Dechant 05-25 - Original Drilling - Original Drilling -	100.00	124.66	9,204.24	9,203.85	10,000.000	CC
HSR Dechant 05-25 - Original Drilling - Original Drilling -	2,352.50	2,500.00	9,207.26	9,190.51	549.591	ES
HSR Dechant 05-25 - Original Drilling - Original Drilling -	6,950.00	6,814.90	9,805.17	9,757.31	204.858	SF
KY Blue D30-32 - Original Drilling - Original Drilling - As D	942.58	920.59	7,864.08	7,857.89	1,269.907	CC
KY Blue D30-32 - Original Drilling - Original Drilling - As D	1,900.00	1,830.07	7,866.45	7,853.65	614.926	ES
KY Blue D30-32 - Original Drilling - Original Drilling - As D	6,800.00	6,751.09	8,175.37	8,127.99	172.529	SF
KY Blue H25-04J - Original Drilling - Original Drilling - As	6,314.01	7,400.00	9,699.85	9,677.46	433.051	CC, ES
KY Blue H25-04J - Original Drilling - Original Drilling - As	6,900.00	7,400.00	9,949.60	9,925.42	411.475	SF
KY Blue H25-09 - Original Drilling - Original Drilling - As D	2,360.36	2,406.28	8,466.07	8,449.61	514.291	CC
KY Blue H25-09 - Original Drilling - Original Drilling - As D	2,400.00	2,428.48	8,466.22	8,449.54	507.616	ES
KY Blue H25-09 - Original Drilling - Original Drilling - As D	6,800.00	6,745.99	8,824.22	8,776.79	186.069	SF
KY Blue H25-10 - Original Drilling - Original Drilling - As D	2,364.76	2,456.87	8,842.93	8,826.25	530.183	CC
KY Blue H25-10 - Original Drilling - Original Drilling - As D	2,400.00	2,480.50	8,843.07	8,826.18	523.705	ES
KY Blue H25-10 - Original Drilling - Original Drilling - As D	6,800.00	6,700.00	9,235.49	9,188.22	195.384	SF
KY Blue H25-11 - Original Drilling - Original Drilling - As D	2,317.41	2,353.03	9,489.23	9,473.09	587.729	CC, ES
KY Blue H25-11 - Original Drilling - Original Drilling - As D	6,800.00	6,763.74	9,982.54	9,907.51	133.063	SF
KY Blue H25-12 - Original Drilling - Original Drilling - As D						Out of range
KY Blue H25-14 - Original Drilling - Original Drilling - As D						Out of range
KY Blue H25-15 - Original Drilling - Original Drilling - As D						Out of range
KY H25-24 - Original Drilling - Original Drilling - As Drilled	400.00	391.97	9,782.55	9,780.15	4,079.609	CC
KY H25-24 - Original Drilling - Original Drilling - As Drilled	2,500.00	2,780.56	9,786.20	9,767.96	536.413	ES
KY H25-24 - Original Drilling - Original Drilling - As Drilled	6,450.00	6,281.02	9,996.30	9,951.58	223.556	SF
Moore UPRC H25-01 - Original Drilling - Original Drilling	0.00	0.00	5,849.18			
Moore UPRC H25-01 - Original Drilling - Original Drilling	2,100.00	2,025.93	5,861.92	5,847.71	412.466	ES
Moore UPRC H25-01 - Original Drilling - Original Drilling	6,800.00	6,674.88	6,265.97	6,218.87	133.035	SF
Moore UPRC H25-02 - Original Drilling - Original Drilling	575.14	569.14	6,616.01	6,612.36	1,816.057	CC
Moore UPRC H25-02 - Original Drilling - Original Drilling	2,309.89	2,318.17	6,616.31	6,600.35	414.418	ES
Moore UPRC H25-02 - Original Drilling - Original Drilling	6,850.00	6,804.92	7,100.78	7,053.10	148.923	SF
Moser 25-32 - Original Drilling - Original Drilling - As Drill	2,153.27	2,146.36	7,998.53	7,983.71	539.700	CC
Moser 25-32 - Original Drilling - Original Drilling - As Drill	2,300.00	2,238.74	7,999.15	7,983.49	510.572	ES
Moser 25-32 - Original Drilling - Original Drilling - As Drill	6,700.00	6,700.00	8,368.02	8,321.07	178.214	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 D18-759
Project:	Mustang	TVD Reference:	Well @ 4816.00ft
Reference Site:	D Section 19	MD Reference:	Well @ 4816.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Independence D18-759	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Independence D18-759	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						
H Section 25						
Moser 25-42 - Original Drilling - Original Drilling - As Drill	2,410.98	2,498.37	7,159.03	7,142.06	421.862	CC
Moser 25-42 - Original Drilling - Original Drilling - As Drill	2,500.00	2,610.77	7,159.45	7,141.78	405.165	ES
Moser 25-42 - Original Drilling - Original Drilling - As Drill	6,750.00	6,641.15	7,449.26	7,402.34	158.755	SF
UPRR 53 Pan Am T#2 - Original Drilling - Original Drilling	643.97	668.98	8,149.19	8,144.95	1,923.089	CC
UPRR 53 Pan Am T#2 - Original Drilling - Original Drilling	1,900.00	1,876.18	8,150.67	8,137.72	629.153	ES
UPRR 53 Pan Am T#2 - Original Drilling - Original Drilling	6,850.00	7,100.00	8,701.56	8,652.85	178.638	SF
UPRR 53 Pan Am UT T#1 - Original Drilling - Original Dr	2,250.69	2,221.77	6,954.80	6,939.36	450.483	CC
UPRR 53 Pan Am UT T#1 - Original Drilling - Original Dr	2,300.00	2,254.25	6,954.86	6,939.13	442.182	ES
UPRR 53 Pan Am UT T#1 - Original Drilling - Original Dr	6,750.00	6,600.00	7,332.64	7,285.83	156.667	SF
Von Feldt 1-25B - Original Drilling - Original Drilling - As D						Out of range

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Independence D18-759
Project:	Mustang	TVD Reference:	Well @ 4816.00ft
Reference Site:	D Section 19	MD Reference:	Well @ 4816.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Independence D18-759	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Independence D18-759	Database:	EDMP
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to Well @ 4816.00ft

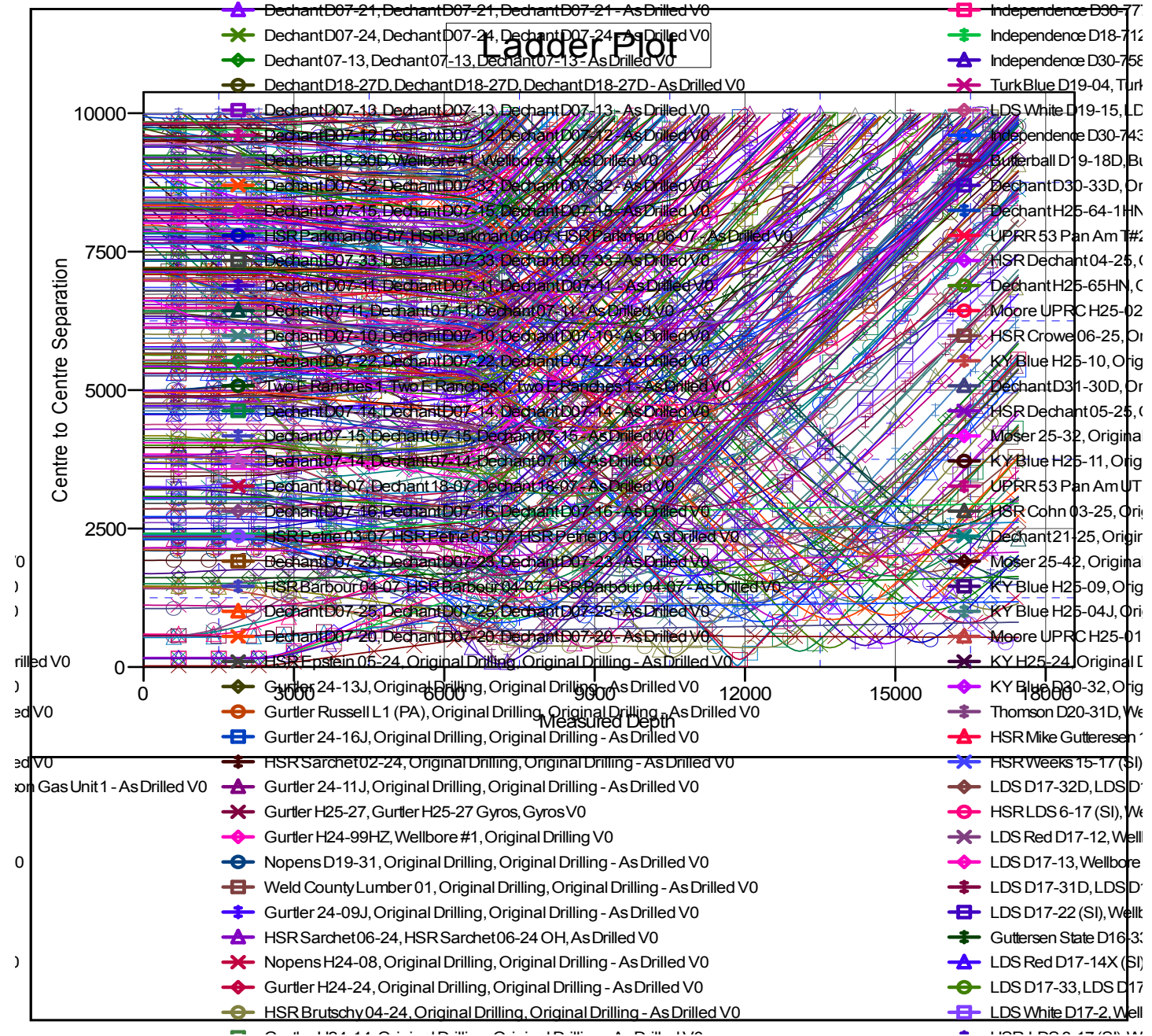
Coordinates are relative to: Independence D18-759

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: 0.58°



Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Independence D18-759
Project:	Mustang	TVD Reference:	Well @ 4816.00ft
Reference Site:	D Section 19	MD Reference:	Well @ 4816.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Independence D18-759	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Independence D18-759	Database:	EDMP
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Grid Convergence at Surface is: 0.58°

