

Project: Mustang
Site: D Section 19
Well: Independence D18-767
Wellbore: Independence D18-767
Design: Plan #2

Northern Region - DJ Basin

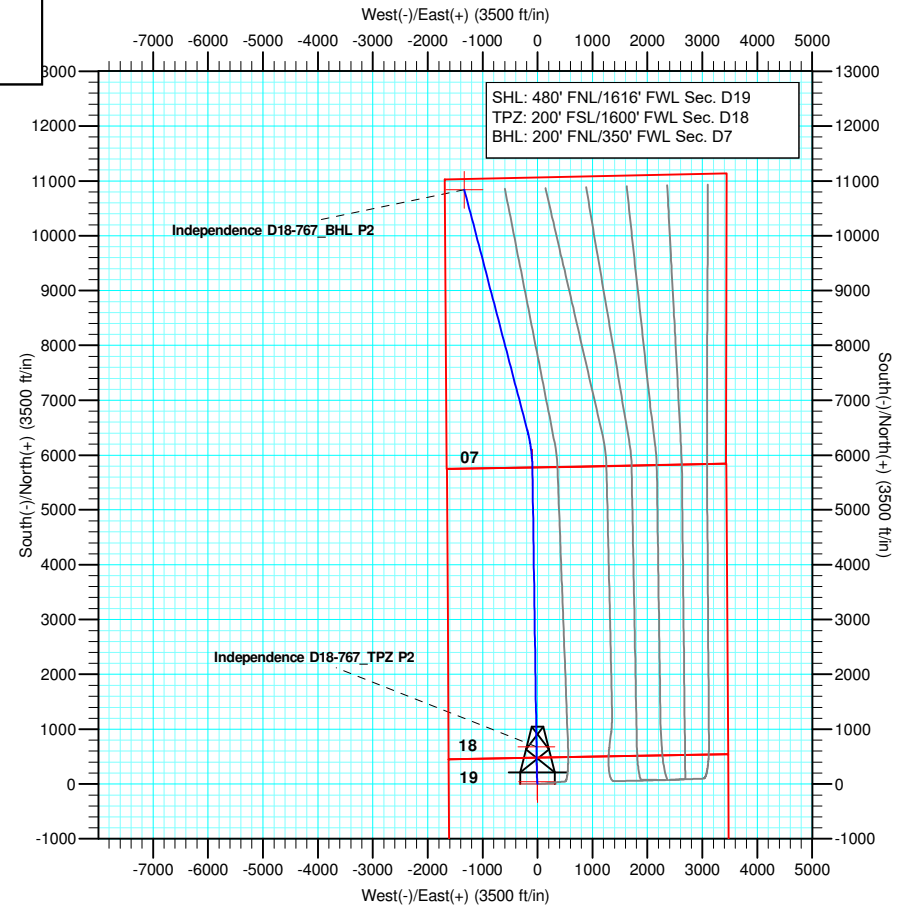
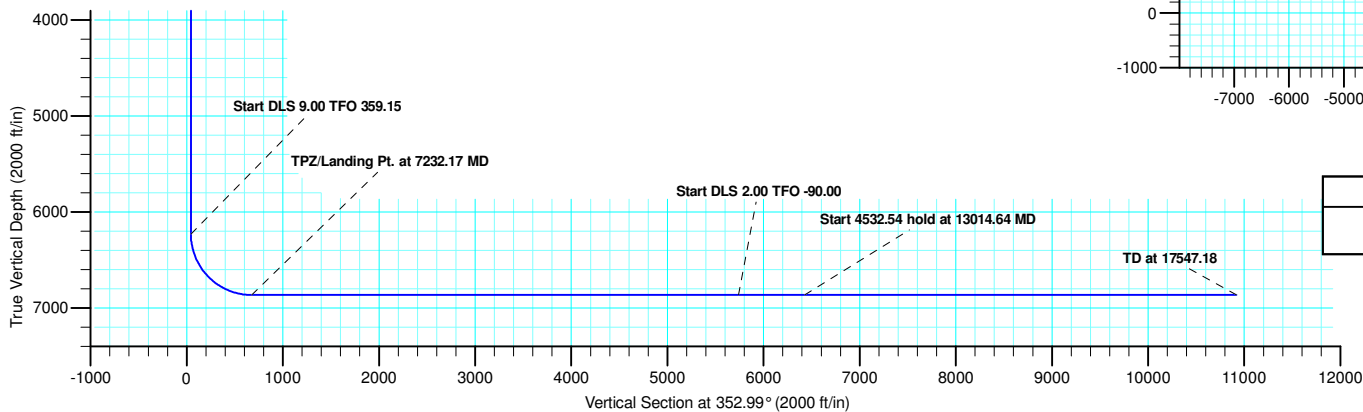
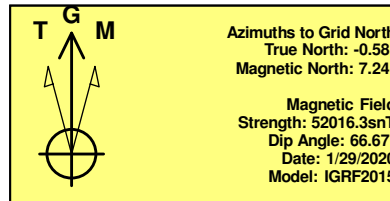
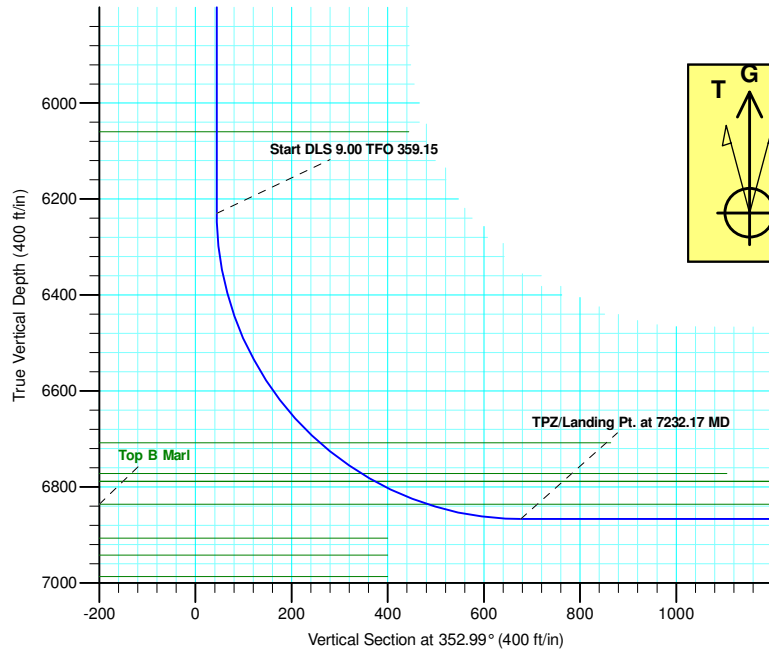
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Northern Zone
System Datum: Mean Sea Level

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	2200.00	0.00	0.00	2200.00	0.00	0.00	0.00	0.00	0.00	
3	2500.15	6.00	345.80	2499.60	15.23	-3.85	2.00	345.80	15.59	
4	2625.82	6.00	345.80	2624.58	27.97	-7.08	0.00	0.00	28.63	
5	2925.97	0.00	0.00	2924.18	43.20	-10.93	2.00	180.00	44.21	
6	6232.17	0.00	0.00	6230.38	43.20	-10.93	0.00	0.00	44.21	
7	7232.17	90.00	359.15	6867.00	679.75	-20.32	9.00	359.15	677.15	Independence D18-767_IP1 P2
8	12325.19	90.00	359.15	6867.00	5772.22	-95.50	0.00	0.00	5740.70	
9	13014.64	90.00	345.37	6867.00	6453.74	-188.13	2.00	-90.00	6428.43	
10	17547.18	90.00	345.37	6867.00	10839.23	-1333.30	0.00	0.00	10920.92	Independence D18-767_BHL P2

WELL DETAILS: Independence D18-767

+N/-S	+E/-W	Northing	Ground Level: Easting	4787.00 Latitude	Longitude	Slot
0.00	0.00	1323056.94	3252202.25	40.2166633	-104.5968867	



Plan: Plan #2 (Independence D18-767/Independence D18-767)

Created by: Shelly C. Peterkin Date: 14:44, February 04 2020

Northern Region - DJ Basin

Mustang

D Section 19

Independence D18-767

Independence D18-767

Plan: Plan #2

Standard Planning Report

04 February, 2020

Noble Energy, Inc.

Planning Report

Database:	EDMP	Local Co-ordinate Reference:	Well Independence D18-767
Company:	Northern Region - DJ Basin	TVD Reference:	Well @ 4817.00ft
Project:	Mustang	MD Reference:	Well @ 4817.00ft
Site:	D Section 19	North Reference:	Grid
Well:	Independence D18-767	Survey Calculation Method:	Minimum Curvature
Wellbore:	Independence D18-767		
Design:	Plan #2		

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 D18-767					
Well Position	+N/-S	4,130.60 ft	Northing:	1,323,056.94 usft	Latitude:	40.2166634
	+E/-W	-1,415.37 ft	Easting:	3,252,202.26 usft	Longitude:	-104.5968867
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	4,787.00 ft

Wellbore	Independence D18-767				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	1/29/2020	7.83	66.67	52,016.34327027

Design	Plan #2			
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	352.99

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,500.15	6.00	345.80	2,499.60	15.23	-3.85	2.00	2.00	0.00	345.80	
2,625.82	6.00	345.80	2,624.58	27.97	-7.08	0.00	0.00	0.00	0.00	
2,925.97	0.00	0.00	2,924.18	43.20	-10.93	2.00	-2.00	0.00	180.00	
6,232.17	0.00	0.00	6,230.38	43.20	-10.93	0.00	0.00	0.00	0.00	
7,232.17	90.00	359.15	6,867.00	679.75	-20.32	9.00	9.00	-0.08	359.15	
12,325.19	90.00	359.15	6,867.00	5,772.22	-95.50	0.00	0.00	0.00	0.00	Independence D18-767
13,014.64	90.00	345.37	6,867.00	6,453.74	-188.13	2.00	0.00	-2.00	-90.00	
17,547.18	90.00	345.37	6,867.00	10,839.23	-1,333.30	0.00	0.00	0.00	0.00	Independence D18-767

Noble Energy, Inc.

Planning Report

Database:	EDMP	Local Co-ordinate Reference:	Well Independence D18-767
Company:	Northern Region - DJ Basin	TVD Reference:	Well @ 4817.00ft
Project:	Mustang	MD Reference:	Well @ 4817.00ft
Site:	D Section 19	North Reference:	Grid
Well:	Independence D18-767	Survey Calculation Method:	Minimum Curvature
Wellbore:	Independence D18-767		
Design:	Plan #2		

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
509.00	0.00	0.00	509.00	0.00	0.00	0.00	0.00	0.00	0.00
Pierre									
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
673.00	0.00	0.00	673.00	0.00	0.00	0.00	0.00	0.00	0.00
Upper Pierre Aquifer Top									
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,571.00	0.00	0.00	1,571.00	0.00	0.00	0.00	0.00	0.00	0.00
Upper Pierre Aquifer Base									
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
Start Build 2.00									
2,300.00	2.00	345.80	2,299.98	1.69	-0.43	1.73	2.00	2.00	0.00
2,400.00	4.00	345.80	2,399.84	6.77	-1.71	6.92	2.00	2.00	0.00
2,500.15	6.00	345.80	2,499.60	15.23	-3.85	15.59	2.00	2.00	0.00
Start 125.67 hold at 2500.15 MD									
2,600.00	6.00	345.80	2,598.90	25.35	-6.41	25.95	0.00	0.00	0.00
2,625.82	6.00	345.80	2,624.58	27.97	-7.08	28.63	0.00	0.00	0.00
Start Drop -2.00									
2,700.00	4.52	345.80	2,698.45	34.56	-8.74	35.37	2.00	-2.00	0.00
2,800.00	2.52	345.80	2,798.25	40.52	-10.25	41.46	2.00	-2.00	0.00
2,900.00	0.52	345.80	2,898.21	43.09	-10.90	44.09	2.00	-2.00	0.00
2,925.97	0.00	0.00	2,924.18	43.20	-10.93	44.21	2.00	-2.00	0.00
Start 3306.20 hold at 2925.97 MD									
3,000.00	0.00	0.00	2,998.21	43.20	-10.93	44.21	0.00	0.00	0.00
3,100.00	0.00	0.00	3,098.21	43.20	-10.93	44.21	0.00	0.00	0.00
3,200.00	0.00	0.00	3,198.21	43.20	-10.93	44.21	0.00	0.00	0.00
3,300.00	0.00	0.00	3,298.21	43.20	-10.93	44.21	0.00	0.00	0.00
3,400.00	0.00	0.00	3,398.21	43.20	-10.93	44.21	0.00	0.00	0.00
3,500.00	0.00	0.00	3,498.21	43.20	-10.93	44.21	0.00	0.00	0.00
3,600.00	0.00	0.00	3,598.21	43.20	-10.93	44.21	0.00	0.00	0.00
3,700.00	0.00	0.00	3,698.21	43.20	-10.93	44.21	0.00	0.00	0.00
3,707.79	0.00	0.00	3,706.00	43.20	-10.93	44.21	0.00	0.00	0.00
Parkman									
3,800.00	0.00	0.00	3,798.21	43.20	-10.93	44.21	0.00	0.00	0.00

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Wellbore:	Independence D18-767		
Design:	Plan #2		

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)
3,900.00	0.00	0.00	3,898.21	43.20	-10.93	44.21	0.00	0.00	0.00
4,000.00	0.00	0.00	3,998.21	43.20	-10.93	44.21	0.00	0.00	0.00
4,100.00	0.00	0.00	4,098.21	43.20	-10.93	44.21	0.00	0.00	0.00
4,109.79	0.00	0.00	4,108.00	43.20	-10.93	44.21	0.00	0.00	0.00
Sussex									
4,200.00	0.00	0.00	4,198.21	43.20	-10.93	44.21	0.00	0.00	0.00
4,300.00	0.00	0.00	4,298.21	43.20	-10.93	44.21	0.00	0.00	0.00
4,400.00	0.00	0.00	4,398.21	43.20	-10.93	44.21	0.00	0.00	0.00
4,500.00	0.00	0.00	4,498.21	43.20	-10.93	44.21	0.00	0.00	0.00
4,600.00	0.00	0.00	4,598.21	43.20	-10.93	44.21	0.00	0.00	0.00
4,700.00	0.00	0.00	4,698.21	43.20	-10.93	44.21	0.00	0.00	0.00
4,800.00	0.00	0.00	4,798.21	43.20	-10.93	44.21	0.00	0.00	0.00
4,893.79	0.00	0.00	4,892.00	43.20	-10.93	44.21	0.00	0.00	0.00
Shannon									
4,900.00	0.00	0.00	4,898.21	43.20	-10.93	44.21	0.00	0.00	0.00
5,000.00	0.00	0.00	4,998.21	43.20	-10.93	44.21	0.00	0.00	0.00
5,100.00	0.00	0.00	5,098.21	43.20	-10.93	44.21	0.00	0.00	0.00
5,200.00	0.00	0.00	5,198.21	43.20	-10.93	44.21	0.00	0.00	0.00
5,300.00	0.00	0.00	5,298.21	43.20	-10.93	44.21	0.00	0.00	0.00
5,400.00	0.00	0.00	5,398.21	43.20	-10.93	44.21	0.00	0.00	0.00
5,500.00	0.00	0.00	5,498.21	43.20	-10.93	44.21	0.00	0.00	0.00
5,600.00	0.00	0.00	5,598.21	43.20	-10.93	44.21	0.00	0.00	0.00
5,700.00	0.00	0.00	5,698.21	43.20	-10.93	44.21	0.00	0.00	0.00
5,800.00	0.00	0.00	5,798.21	43.20	-10.93	44.21	0.00	0.00	0.00
5,900.00	0.00	0.00	5,898.21	43.20	-10.93	44.21	0.00	0.00	0.00
6,000.00	0.00	0.00	5,998.21	43.20	-10.93	44.21	0.00	0.00	0.00
6,061.79	0.00	0.00	6,060.00	43.20	-10.93	44.21	0.00	0.00	0.00
Teepee Buttes									
6,100.00	0.00	0.00	6,098.21	43.20	-10.93	44.21	0.00	0.00	0.00
6,200.00	0.00	0.00	6,198.21	43.20	-10.93	44.21	0.00	0.00	0.00
6,232.17	0.00	0.00	6,230.38	43.20	-10.93	44.21	0.00	0.00	0.00
Start DLS 9.00 TFO 359.15									
6,250.00	1.60	359.15	6,248.21	43.45	-10.93	44.46	9.00	9.00	0.00
6,300.00	6.10	359.15	6,298.09	46.81	-10.98	47.80	9.00	9.00	0.00
6,350.00	10.60	359.15	6,347.54	54.07	-11.09	55.02	9.00	9.00	0.00
6,400.00	15.10	359.15	6,396.28	65.19	-11.25	66.08	9.00	9.00	0.00
6,450.00	19.60	359.15	6,443.99	80.10	-11.47	80.90	9.00	9.00	0.00
6,500.00	24.10	359.15	6,490.38	98.71	-11.75	99.40	9.00	9.00	0.00
6,550.00	28.60	359.15	6,535.17	120.90	-12.07	121.47	9.00	9.00	0.00
6,600.00	33.10	359.15	6,578.09	146.53	-12.45	146.95	9.00	9.00	0.00
6,650.00	37.60	359.15	6,618.85	175.45	-12.88	175.71	9.00	9.00	0.00
6,700.00	42.10	359.15	6,657.23	207.48	-13.35	207.56	9.00	9.00	0.00
6,750.00	46.60	359.15	6,692.97	242.42	-13.87	242.30	9.00	9.00	0.00
6,772.29	48.61	359.15	6,708.00	258.89	-14.11	258.67	9.00	9.00	0.00
Sharon Springs									
6,800.00	51.10	359.15	6,725.86	280.06	-14.42	279.73	9.00	9.00	0.00
6,850.00	55.60	359.15	6,755.70	320.17	-15.02	319.60	9.00	9.00	0.00
6,879.90	58.30	359.15	6,772.00	345.22	-15.39	344.52	9.00	9.00	0.00
Top A Chalk									
6,900.00	60.10	359.15	6,782.29	362.49	-15.64	361.68	9.00	9.00	0.00
6,911.64	61.15	359.15	6,788.00	372.63	-15.79	371.77	9.00	9.00	0.00
Top A Marl									
6,913.72	61.34	359.15	6,789.00	374.45	-15.82	373.58	9.00	9.00	0.00

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Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
Top B Chalk									
6,950.00	64.60	359.15	6,805.49	406.76	-16.29	405.71	9.00	9.00	0.00
7,000.00	69.10	359.15	6,825.13	452.72	-16.97	451.41	9.00	9.00	0.00
7,032.68	72.05	359.15	6,836.00	483.53	-17.43	482.04	9.00	9.00	0.00
Top B Marl									
7,050.00	73.60	359.15	6,841.11	500.08	-17.67	498.50	9.00	9.00	0.00
7,100.00	78.10	359.15	6,853.33	548.55	-18.39	546.69	9.00	9.00	0.00
7,150.00	82.60	359.15	6,861.70	597.82	-19.11	595.68	9.00	9.00	0.00
7,200.00	87.10	359.15	6,866.19	647.60	-19.85	645.18	9.00	9.00	0.00
7,232.17	90.00	359.15	6,867.00	679.75	-20.32	677.15	9.00	9.00	0.00
TPZ/Landing Pt. at 7232.17 MD									
7,300.00	90.00	359.15	6,867.00	747.58	-21.33	744.59	0.00	0.00	0.00
7,400.00	90.00	359.15	6,867.00	847.57	-22.80	844.01	0.00	0.00	0.00
7,500.00	90.00	359.15	6,867.00	947.55	-24.28	943.43	0.00	0.00	0.00
7,600.00	90.00	359.15	6,867.00	1,047.54	-25.75	1,042.85	0.00	0.00	0.00
7,700.00	90.00	359.15	6,867.00	1,147.53	-27.23	1,142.27	0.00	0.00	0.00
7,800.00	90.00	359.15	6,867.00	1,247.52	-28.71	1,241.69	0.00	0.00	0.00
7,900.00	90.00	359.15	6,867.00	1,347.51	-30.18	1,341.12	0.00	0.00	0.00
8,000.00	90.00	359.15	6,867.00	1,447.50	-31.66	1,440.54	0.00	0.00	0.00
8,100.00	90.00	359.15	6,867.00	1,547.49	-33.13	1,539.96	0.00	0.00	0.00
8,200.00	90.00	359.15	6,867.00	1,647.48	-34.61	1,639.38	0.00	0.00	0.00
8,300.00	90.00	359.15	6,867.00	1,747.47	-36.09	1,738.80	0.00	0.00	0.00
8,400.00	90.00	359.15	6,867.00	1,847.46	-37.56	1,838.22	0.00	0.00	0.00
8,500.00	90.00	359.15	6,867.00	1,947.45	-39.04	1,937.64	0.00	0.00	0.00
8,600.00	90.00	359.15	6,867.00	2,047.43	-40.51	2,037.06	0.00	0.00	0.00
8,700.00	90.00	359.15	6,867.00	2,147.42	-41.99	2,136.49	0.00	0.00	0.00
8,800.00	90.00	359.15	6,867.00	2,247.41	-43.47	2,235.91	0.00	0.00	0.00
8,900.00	90.00	359.15	6,867.00	2,347.40	-44.94	2,335.33	0.00	0.00	0.00
9,000.00	90.00	359.15	6,867.00	2,447.39	-46.42	2,434.75	0.00	0.00	0.00
9,100.00	90.00	359.15	6,867.00	2,547.38	-47.89	2,534.17	0.00	0.00	0.00
9,200.00	90.00	359.15	6,867.00	2,647.37	-49.37	2,633.59	0.00	0.00	0.00
9,300.00	90.00	359.15	6,867.00	2,747.36	-50.84	2,733.01	0.00	0.00	0.00
9,400.00	90.00	359.15	6,867.00	2,847.35	-52.32	2,832.44	0.00	0.00	0.00
9,500.00	90.00	359.15	6,867.00	2,947.34	-53.80	2,931.86	0.00	0.00	0.00
9,600.00	90.00	359.15	6,867.00	3,047.33	-55.27	3,031.28	0.00	0.00	0.00
9,700.00	90.00	359.15	6,867.00	3,147.31	-56.75	3,130.70	0.00	0.00	0.00
9,800.00	90.00	359.15	6,867.00	3,247.30	-58.22	3,230.12	0.00	0.00	0.00
9,900.00	90.00	359.15	6,867.00	3,347.29	-59.70	3,329.54	0.00	0.00	0.00
10,000.00	90.00	359.15	6,867.00	3,447.28	-61.18	3,428.96	0.00	0.00	0.00
10,100.00	90.00	359.15	6,867.00	3,547.27	-62.65	3,528.38	0.00	0.00	0.00
10,200.00	90.00	359.15	6,867.00	3,647.26	-64.13	3,627.81	0.00	0.00	0.00
10,300.00	90.00	359.15	6,867.00	3,747.25	-65.60	3,727.23	0.00	0.00	0.00
10,400.00	90.00	359.15	6,867.00	3,847.24	-67.08	3,826.65	0.00	0.00	0.00
10,500.00	90.00	359.15	6,867.00	3,947.23	-68.56	3,926.07	0.00	0.00	0.00
10,600.00	90.00	359.15	6,867.00	4,047.22	-70.03	4,025.49	0.00	0.00	0.00
10,700.00	90.00	359.15	6,867.00	4,147.21	-71.51	4,124.91	0.00	0.00	0.00
10,800.00	90.00	359.15	6,867.00	4,247.20	-72.98	4,224.33	0.00	0.00	0.00
10,900.00	90.00	359.15	6,867.00	4,347.18	-74.46	4,323.76	0.00	0.00	0.00
11,000.00	90.00	359.15	6,867.00	4,447.17	-75.94	4,423.18	0.00	0.00	0.00
11,100.00	90.00	359.15	6,867.00	4,547.16	-77.41	4,522.60	0.00	0.00	0.00
11,200.00	90.00	359.15	6,867.00	4,647.15	-78.89	4,622.02	0.00	0.00	0.00
11,300.00	90.00	359.15	6,867.00	4,747.14	-80.36	4,721.44	0.00	0.00	0.00
11,400.00	90.00	359.15	6,867.00	4,847.13	-81.84	4,820.86	0.00	0.00	0.00

Noble Energy, Inc.

Planning Report

Database:	EDMP	Local Co-ordinate Reference:	Well Independence D18-767
Company:	Northern Region - DJ Basin	TVD Reference:	Well @ 4817.00ft
Project:	Mustang	MD Reference:	Well @ 4817.00ft
Site:	D Section 19	North Reference:	Grid
Well:	Independence D18-767	Survey Calculation Method:	Minimum Curvature
Wellbore:	Independence D18-767		
Design:	Plan #2		

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)
11,500.00	90.00	359.15	6,867.00	4,947.12	-83.32	4,920.28	0.00	0.00	0.00
11,600.00	90.00	359.15	6,867.00	5,047.11	-84.79	5,019.70	0.00	0.00	0.00
11,700.00	90.00	359.15	6,867.00	5,147.10	-86.27	5,119.13	0.00	0.00	0.00
11,800.00	90.00	359.15	6,867.00	5,247.09	-87.74	5,218.55	0.00	0.00	0.00
11,900.00	90.00	359.15	6,867.00	5,347.08	-89.22	5,317.97	0.00	0.00	0.00
12,000.00	90.00	359.15	6,867.00	5,447.06	-90.70	5,417.39	0.00	0.00	0.00
12,100.00	90.00	359.15	6,867.00	5,547.05	-92.17	5,516.81	0.00	0.00	0.00
12,200.00	90.00	359.15	6,867.00	5,647.04	-93.65	5,616.23	0.00	0.00	0.00
12,300.00	90.00	359.15	6,867.00	5,747.03	-95.12	5,715.65	0.00	0.00	0.00
12,325.19	90.00	359.15	6,867.00	5,772.22	-95.50	5,740.70	0.00	0.00	0.00
Start DLS 2.00 TFO -90.00									
12,400.00	90.00	357.66	6,867.00	5,847.00	-97.58	5,815.17	2.00	0.00	-2.00
12,500.00	90.00	355.66	6,867.00	5,946.82	-103.41	5,914.96	2.00	0.00	-2.00
12,600.00	90.00	353.66	6,867.00	6,046.38	-112.71	6,014.91	2.00	0.00	-2.00
12,700.00	90.00	351.66	6,867.00	6,145.56	-125.49	6,114.91	2.00	0.00	-2.00
12,800.00	90.00	349.66	6,867.00	6,244.23	-141.72	6,214.82	2.00	0.00	-2.00
12,900.00	90.00	347.66	6,867.00	6,342.27	-161.39	6,314.53	2.00	0.00	-2.00
13,000.00	90.00	345.66	6,867.00	6,439.57	-184.47	6,413.91	2.00	0.00	-2.00
13,014.64	90.00	345.37	6,867.00	6,453.74	-188.13	6,428.43	2.00	0.00	-2.00
Start 4532.54 hold at 13014.64 MD									
13,100.00	90.00	345.37	6,867.00	6,536.33	-209.69	6,513.04	0.00	0.00	0.00
13,200.00	90.00	345.37	6,867.00	6,633.09	-234.96	6,612.15	0.00	0.00	0.00
13,300.00	90.00	345.37	6,867.00	6,729.84	-260.23	6,711.27	0.00	0.00	0.00
13,400.00	90.00	345.37	6,867.00	6,826.60	-285.49	6,810.39	0.00	0.00	0.00
13,500.00	90.00	345.37	6,867.00	6,923.35	-310.76	6,909.50	0.00	0.00	0.00
13,600.00	90.00	345.37	6,867.00	7,020.11	-336.02	7,008.62	0.00	0.00	0.00
13,700.00	90.00	345.37	6,867.00	7,116.86	-361.29	7,107.73	0.00	0.00	0.00
13,800.00	90.00	345.37	6,867.00	7,213.62	-386.55	7,206.85	0.00	0.00	0.00
13,900.00	90.00	345.37	6,867.00	7,310.38	-411.82	7,305.97	0.00	0.00	0.00
14,000.00	90.00	345.37	6,867.00	7,407.13	-437.09	7,405.08	0.00	0.00	0.00
14,100.00	90.00	345.37	6,867.00	7,503.89	-462.35	7,504.20	0.00	0.00	0.00
14,200.00	90.00	345.37	6,867.00	7,600.64	-487.62	7,603.32	0.00	0.00	0.00
14,300.00	90.00	345.37	6,867.00	7,697.40	-512.88	7,702.43	0.00	0.00	0.00
14,400.00	90.00	345.37	6,867.00	7,794.15	-538.15	7,801.55	0.00	0.00	0.00
14,500.00	90.00	345.37	6,867.00	7,890.91	-563.41	7,900.67	0.00	0.00	0.00
14,600.00	90.00	345.37	6,867.00	7,987.66	-588.68	7,999.78	0.00	0.00	0.00
14,700.00	90.00	345.37	6,867.00	8,084.42	-613.94	8,098.90	0.00	0.00	0.00
14,800.00	90.00	345.37	6,867.00	8,181.18	-639.21	8,198.02	0.00	0.00	0.00
14,900.00	90.00	345.37	6,867.00	8,277.93	-664.48	8,297.13	0.00	0.00	0.00
15,000.00	90.00	345.37	6,867.00	8,374.69	-689.74	8,396.25	0.00	0.00	0.00
15,100.00	90.00	345.37	6,867.00	8,471.44	-715.01	8,495.36	0.00	0.00	0.00
15,200.00	90.00	345.37	6,867.00	8,568.20	-740.27	8,594.48	0.00	0.00	0.00
15,300.00	90.00	345.37	6,867.00	8,664.95	-765.54	8,693.60	0.00	0.00	0.00
15,400.00	90.00	345.37	6,867.00	8,761.71	-790.80	8,792.71	0.00	0.00	0.00
15,500.00	90.00	345.37	6,867.00	8,858.47	-816.07	8,891.83	0.00	0.00	0.00
15,600.00	90.00	345.37	6,867.00	8,955.22	-841.34	8,990.95	0.00	0.00	0.00
15,700.00	90.00	345.37	6,867.00	9,051.98	-866.60	9,090.06	0.00	0.00	0.00
15,800.00	90.00	345.37	6,867.00	9,148.73	-891.87	9,189.18	0.00	0.00	0.00
15,900.00	90.00	345.37	6,867.00	9,245.49	-917.13	9,288.30	0.00	0.00	0.00
16,000.00	90.00	345.37	6,867.00	9,342.24	-942.40	9,387.41	0.00	0.00	0.00
16,100.00	90.00	345.37	6,867.00	9,439.00	-967.66	9,486.53	0.00	0.00	0.00
16,200.00	90.00	345.37	6,867.00	9,535.75	-992.93	9,585.64	0.00	0.00	0.00
16,300.00	90.00	345.37	6,867.00	9,632.51	-1,018.19	9,684.76	0.00	0.00	0.00
16,400.00	90.00	345.37	6,867.00	9,729.27	-1,043.46	9,783.88	0.00	0.00	0.00

Noble Energy, Inc.

Planning Report

Database:	EDMP	Local Co-ordinate Reference:	Well Independence D18-767
Company:	Northern Region - DJ Basin	TVD Reference:	Well @ 4817.00ft
Project:	Mustang	MD Reference:	Well @ 4817.00ft
Site:	D Section 19	North Reference:	Grid
Well:	Independence D18-767	Survey Calculation Method:	Minimum Curvature
Wellbore:	Independence D18-767		
Design:	Plan #2		

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)
16,500.00	90.00	345.37	6,867.00	9,826.02	-1,068.73	9,882.99	0.00	0.00	0.00
16,600.00	90.00	345.37	6,867.00	9,922.78	-1,093.99	9,982.11	0.00	0.00	0.00
16,700.00	90.00	345.37	6,867.00	10,019.53	-1,119.26	10,081.23	0.00	0.00	0.00
16,800.00	90.00	345.37	6,867.00	10,116.29	-1,144.52	10,180.34	0.00	0.00	0.00
16,900.00	90.00	345.37	6,867.00	10,213.04	-1,169.79	10,279.46	0.00	0.00	0.00
17,000.00	90.00	345.37	6,867.00	10,309.80	-1,195.05	10,378.58	0.00	0.00	0.00
17,100.00	90.00	345.37	6,867.00	10,406.55	-1,220.32	10,477.69	0.00	0.00	0.00
17,200.00	90.00	345.37	6,867.00	10,503.31	-1,245.59	10,576.81	0.00	0.00	0.00
17,300.00	90.00	345.37	6,867.00	10,600.07	-1,270.85	10,675.93	0.00	0.00	0.00
17,400.00	90.00	345.37	6,867.00	10,696.82	-1,296.12	10,775.04	0.00	0.00	0.00
17,500.00	90.00	345.37	6,867.00	10,793.58	-1,321.38	10,874.16	0.00	0.00	0.00
17,547.18	90.00	345.37	6,867.00	10,839.23	-1,333.30	10,920.92	0.00	0.00	0.00
TD at 17547.18									

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 D18-767_ - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	1,323,056.94	3,252,202.26	40.2166634	-104.5968867
Independence D18-767_ - plan hits target center - Point	0.00	0.00	6,230.38	43.20	-10.93	1,323,100.14	3,252,191.33	40.2167822	-104.5969242
Independence D18-767_ - plan hits target center - Point	0.00	0.00	6,867.00	679.75	-20.32	1,323,736.68	3,252,181.93	40.2185298	-104.5969347
Independence D18-767_ - plan hits target center - Point	0.00	0.00	6,867.00	5,772.22	-95.50	1,328,829.14	3,252,106.76	40.2325105	-104.5970181
Independence D18-767_ - plan hits target center - Point	0.00	0.00	6,867.00	10,839.23	-1,333.30	1,333,896.14	3,250,868.96	40.2464537	-104.6012674

Noble Energy, Inc.

Planning Report

Database:	EDMP	Local Co-ordinate Reference:	Well Independence D18-767
Company:	Northern Region - DJ Basin	TVD Reference:	Well @ 4817.00ft
Project:	Mustang	MD Reference:	Well @ 4817.00ft
Site:	D Section 19	North Reference:	Grid
Well:	Independence D18-767	Survey Calculation Method:	Minimum Curvature
Wellbore:	Independence D18-767		
Design:	Plan #2		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
509.00	509.00	Pierre				
673.00	673.00	Upper Pierre Aquifer Top				
1,571.00	1,571.00	Upper Pierre Aquifer Base				
3,707.79	3,706.00	Parkman				
4,109.79	4,108.00	Sussex				
4,893.79	4,892.00	Shannon				
6,061.79	6,060.00	Teepee Buttes				
6,772.29	6,708.00	Sharon Springs				
6,879.90	6,772.00	Top A Chalk				
6,911.64	6,788.00	Top A Marl				
6,913.72	6,789.00	Top B Chalk				
7,032.68	6,836.00	Top B Marl				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
2,200.00	2,200.00	0.00	0.00	Start Build 2.00	
2,500.15	2,499.60	15.23	-3.85	Start 125.67 hold at 2500.15 MD	
2,625.82	2,624.58	27.97	-7.08	Start Drop -2.00	
2,925.97	2,924.18	43.20	-10.93	Start 3306.20 hold at 2925.97 MD	
6,232.17	6,230.38	43.20	-10.93	Start DLS 9.00 TFO 359.15	
7,232.17	6,867.00	679.75	-20.32	TPZ/Landing Pt. at 7232.17 MD	
12,325.19	6,867.00	5,772.22	-95.50	Start DLS 2.00 TFO -90.00	
13,014.64	6,867.00	6,453.74	-188.13	Start 4532.54 hold at 13014.64 MD	
17,547.18	6,867.00	10,839.23	-1,333.30	TD at 17547.18	

Northern Region - DJ Basin

Mustang

D Section 19

Independence D18-767

Independence D18-767

Plan #2

Anticollision Summary Report

04 February, 2020

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Independence D18-767
Project:	Mustang	TVD Reference:	Well @ 4817.00ft
Reference Site:	D Section 19	MD Reference:	Well @ 4817.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Independence D18-767	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Independence D18-767	Database:	EDMP
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Reference	Plan #2		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD + Stations Interval 100.00ft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 10,000.00 ft	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program	Date	2/4/2020		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	17,547.18	Plan #2 (Independence D18-767)	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						
C Section 30						
Johnson D06-730 - Wellbore #1 - Plan #1	16,907.06	20,077.64	4,408.64	4,173.68	18.763	CC
Johnson D06-730 - Wellbore #1 - Plan #1	17,000.00	20,077.64	4,409.62	4,173.02	18.637	ES
Johnson D06-730 - Wellbore #1 - Plan #1	17,547.18	20,077.64	4,454.87	4,210.62	18.238	SF
Johnson D06-734 - Wellbore #1 - Plan #1	17,053.88	20,173.72	3,793.19	3,558.53	16.165	CC
Johnson D06-734 - Wellbore #1 - Plan #1	17,100.00	20,173.72	3,793.47	3,557.86	16.101	ES
Johnson D06-734 - Wellbore #1 - Plan #1	17,547.18	20,173.72	3,825.13	3,582.00	15.733	SF
Johnson D06-744 - Wellbore #1 - Plan #1	17,127.30	20,296.64	3,488.22	3,253.28	14.848	CC
Johnson D06-744 - Wellbore #1 - Plan #1	17,200.00	20,296.64	3,488.98	3,252.46	14.751	ES
Johnson D06-744 - Wellbore #1 - Plan #1	17,547.18	20,296.64	3,513.40	3,270.66	14.474	SF
Johnson D06-756 - Wellbore #1 - Plan #1	17,200.71	20,153.15	3,177.44	2,942.61	13.531	CC
Johnson D06-756 - Wellbore #1 - Plan #1	17,300.00	20,153.15	3,178.99	2,941.88	13.407	ES
Johnson D06-756 - Wellbore #1 - Plan #1	17,547.18	20,153.15	3,196.27	2,954.41	13.215	SF
Johnson D06-761 - Wellbore #1 - Plan #1	17,347.54	20,201.27	2,562.02	2,324.72	10.797	CC
Johnson D06-761 - Wellbore #1 - Plan #1	17,400.00	20,201.27	2,562.55	2,323.89	10.737	ES
Johnson D06-761 - Wellbore #1 - Plan #1	17,547.18	20,201.27	2,569.78	2,327.79	10.619	SF
Johnson D06-766 - Wellbore #1 - Plan #1	17,494.37	20,183.61	1,945.99	1,708.81	8.205	CC
Johnson D06-766 - Wellbore #1 - Plan #1	17,547.18	20,183.61	1,946.71	1,707.80	8.149	ES, SF
Johnson D06-777 - Wellbore #1 - Plan #1	17,547.18	20,430.09	1,646.37	1,409.33	6.946	CC, ES, SF
Johnson D06-785 - Wellbore #1 - Plan #1	17,547.18	20,393.15	1,334.82	1,101.68	5.726	CC, ES, SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Independence D18-767
Project:	Mustang	TVD Reference:	Well @ 4817.00ft
Reference Site:	D Section 19	MD Reference:	Well @ 4817.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Independence D18-767	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Independence D18-767	Database:	EDMP
Reference Design:	Plan #2	Offset TVD Reference:	Reference 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 05						
BECKER #12-10I(PA) - Wellbore #1 - Gyro Surveys	17,547.18	7,186.00	9,098.36	8,981.51	77.866	CC, ES, SF
BECKER #15-9I(PR) - Wellbore #1 - Gyro Surveys	17,460.12	6,804.17	7,471.99	7,355.64	64.218	CC
BECKER #15-9I(PR) - Wellbore #1 - Gyro Surveys	17,547.18	6,805.24	7,472.50	7,355.28	63.751	ES, SF
BECKER #5-12(PA) - Wellbore #1 - Gyro	17,547.18	7,026.34	8,735.11	8,620.52	76.229	CC, ES, SF
BECKER #5-13(PA) - Wellbore #1 - Gyro Surveys	17,547.18	7,148.00	6,720.99	6,597.64	54.486	CC, ES, SF
BECKER #5-14(PA) - Wellbore #1 - Gyro Surveys	16,900.00	16,900.00	5,543.04	5,396.84	37.913	ES, SF
BECKER #5-14(PA) - Wellbore #1 - Gyro Surveys	17,255.28	6,924.48	5,531.67	5,416.68	48.107	CC
BECKER #5-16(PA) - Wellbore #1 - Gyro Surveys	17,547.18	6,544.93	9,456.32	9,340.13	81.387	CC, ES, SF
BECKER #5-2(PA) - Wellbore #1 - Gyro Surveys	17,114.87	6,680.69	6,513.55	6,400.57	57.650	CC
BECKER #5-2(PA) - Wellbore #1 - Gyro Surveys	17,200.00	6,700.00	6,514.16	6,400.26	57.190	ES
BECKER #5-2(PA) - Wellbore #1 - Gyro Surveys	17,547.18	6,700.00	6,527.92	6,410.69	55.681	SF
BECKER #5-3(PA) - Wellbore #1 - Gyro Surveys	17,547.18	6,806.31	7,701.70	7,589.86	68.869	CC, ES, SF
BECKER #5-4(PA) - Wellbore #1 - Gyro Surveys	17,547.18	6,974.03	9,914.49	9,798.86	85.741	CC, ES, SF
BECKER #5-5(PA) - Wellbore #1 - Gyro Surveys	16,333.68	6,742.61	9,155.52	9,048.92	85.890	CC
BECKER #5-5(PA) - Wellbore #1 - Gyro Surveys	16,400.00	6,742.72	9,155.76	9,048.53	85.386	ES
BECKER #5-5(PA) - Wellbore #1 - Gyro Surveys	17,547.18	6,744.71	9,235.59	9,118.07	78.586	SF
BECKER #5-8(PR) - Wellbore #1 - Gyro Surveys	17,547.18	6,832.89	5,881.61	5,765.61	50.701	CC, ES, SF
BECKER #6(SI) - Wellbore #1 - Gyro Surveys	17,163.66	7,169.54	8,742.83	8,627.71	75.940	CC
BECKER #6(SI) - Wellbore #1 - Gyro Surveys	17,200.00	7,170.29	8,742.91	8,627.43	75.709	ES
BECKER #6(SI) - Wellbore #1 - Gyro Surveys	17,547.18	7,177.48	8,751.24	8,632.45	73.671	SF
BECKER #7(PA) - Wellbore #1 - Gyro Surveys	17,547.18	6,737.08	6,279.42	6,162.71	53.805	CC, ES, SF
Becker 5-1(PA) - Wellbore #1 - Gyro Surveys	17,547.18	6,846.94	8,288.68	8,171.86	70.952	CC, ES, SF
Becker 5-15(PA) - Wellbore #1 - Gyro Surveys	16,424.89	6,943.53	7,685.25	7,574.10	69.145	CC
Becker 5-15(PA) - Wellbore #1 - Gyro Surveys	16,500.00	6,948.47	7,685.61	7,573.73	68.692	ES
Becker 5-15(PA) - Wellbore #1 - Gyro Surveys	17,547.18	7,017.45	7,766.41	7,645.06	64.002	SF
Becker Ranch #5E-223 - Wellbore #1 - As Drilled	17,016.36	11,398.00	5,258.13	5,091.02	31.463	CC
Becker Ranch #5E-223 - Wellbore #1 - As Drilled	17,100.00	11,398.00	5,258.80	5,090.46	31.239	ES
Becker Ranch #5E-223 - Wellbore #1 - As Drilled	17,547.18	11,398.00	5,284.86	5,110.63	30.333	SF
Becker Ranch #5E-403 - As Drilled - As Drilled	17,088.57	11,599.00	4,980.73	4,809.28	29.051	CC
Becker Ranch #5E-403 - As Drilled - As Drilled	17,200.00	11,599.00	4,981.98	4,808.78	28.764	ES
Becker Ranch #5E-403 - As Drilled - As Drilled	17,547.18	11,599.00	5,001.80	4,823.64	28.074	SF
Becker Ranch #5J-103 - Wellbore #1 - As Drilled	17,547.18	8,438.00	6,962.05	6,838.22	56.221	CC, ES, SF
Becker Ranch #5J-203 - Wellbore #1 - Plan #1	16,773.69	11,568.80	6,224.09	6,092.86	47.428	CC
Becker Ranch #5J-203 - Wellbore #1 - Plan #1	16,800.00	11,568.80	6,224.15	6,092.60	47.316	ES
Becker Ranch #5J-203 - Wellbore #1 - Plan #1	17,547.18	11,568.80	6,271.97	6,132.36	44.925	SF
Becker Ranch #5J-303 - Wellbore #1 - As Drilled	16,850.20	11,473.00	5,901.71	5,729.02	34.175	CC
Becker Ranch #5J-303 - Wellbore #1 - As Drilled	16,900.00	11,473.00	5,901.92	5,728.58	34.048	ES
Becker Ranch #5J-303 - Wellbore #1 - As Drilled	17,547.18	11,473.00	5,942.72	5,762.01	32.884	SF
Becker Ranch #5J-323 - Wellbore #1 - As Drilled	16,697.50	11,430.00	6,531.52	6,363.16	38.794	CC
Becker Ranch #5J-323 - Wellbore #1 - As Drilled	16,800.00	11,430.00	6,532.33	6,362.57	38.481	ES
Becker Ranch #5J-323 - Wellbore #1 - As Drilled	17,547.18	11,430.00	6,586.56	6,407.82	36.851	SF
Becker Ranch #5J-323R - Wellbore #1 - Plan #1	16,693.79	11,454.00	6,541.81	6,412.05	50.413	CC
Becker Ranch #5J-323R - Wellbore #1 - Plan #1	16,800.00	11,454.00	6,542.67	6,411.70	49.953	ES
Becker Ranch #5J-323R - Wellbore #1 - Plan #1	17,547.18	11,454.00	6,597.24	6,458.57	47.575	SF
Becker Ranch #5J-343 - Wellbore #1 - As Drilled	16,953.64	11,500.00	5,598.34	5,426.91	32.657	CC
Becker Ranch #5J-343 - Wellbore #1 - As Drilled	17,000.00	11,500.00	5,598.54	5,426.46	32.535	ES
Becker Ranch #5J-343 - Wellbore #1 - As Drilled	17,547.18	11,500.00	5,629.72	5,450.85	31.474	SF
Becker Ranch #5M-203 - Wellbore #1 - Plan #1	16,471.90	11,268.00	7,459.36	7,331.48	58.333	CC
Becker Ranch #5M-203 - Wellbore #1 - Plan #1	16,600.00	11,268.00	7,460.46	7,331.15	57.696	ES
Becker Ranch #5M-203 - Wellbore #1 - Plan #1	17,547.18	11,268.00	7,536.46	7,397.58	54.265	SF
Becker Ranch #5M-243 - Wellbore #1 - Plan #1	16,616.52	11,282.50	6,865.65	6,736.50	53.160	CC
Becker Ranch #5M-243 - Wellbore #1 - Plan #1	16,700.00	11,282.50	6,866.16	6,736.09	52.788	ES
Becker Ranch #5M-243 - Wellbore #1 - Plan #1	17,547.18	11,282.50	6,928.44	6,789.95	50.030	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 D18-767
Project:	Mustang	TVD Reference:	Well @ 4817.00ft
Reference Site:	D Section 19	MD Reference:	Well @ 4817.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Independence D18-767	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Independence D18-767	Database:	EDMP
Reference Design:	Plan #2	Offset TVD Reference:	Reference 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 05						
Becker Ranch #5M-303 - Wellbore #1 - Plan #1	16,536.84	11,462.20	7,184.57	7,055.35	55.602	CC
Becker Ranch #5M-303 - Wellbore #1 - Plan #1	16,600.00	11,462.20	7,184.85	7,054.95	55.314	ES
Becker Ranch #5M-303 - Wellbore #1 - Plan #1	17,547.18	11,462.20	7,255.26	7,116.22	52.181	SF
Becker Ranch #5M-323 - Wellbore #1 - Plan #1	16,371.65	11,315.70	7,859.71	7,732.53	61.802	CC
Becker Ranch #5M-323 - Wellbore #1 - Plan #1	16,500.00	11,315.70	7,860.75	7,732.19	61.143	ES
Becker Ranch #5M-323 - Wellbore #1 - Plan #1	17,547.18	11,315.70	7,947.13	7,808.33	57.257	SF
Becker Ranch #5M-423 - Wellbore #1 - Plan #1	16,421.91	11,437.50	7,660.65	7,532.84	59.938	CC
Becker Ranch #5M-423 - Wellbore #1 - Plan #1	16,500.00	11,437.50	7,661.05	7,532.38	59.540	ES
Becker Ranch #5M-423 - Wellbore #1 - Plan #1	17,547.18	11,437.50	7,742.85	7,603.74	55.660	SF
Becker Ranch #5R-203 - Wellbore #1 - Plan #1	16,149.11	11,257.60	8,765.48	8,640.27	70.008	CC
Becker Ranch #5R-203 - Wellbore #1 - Plan #1	16,200.00	11,257.60	8,765.63	8,639.88	69.707	ES
Becker Ranch #5R-203 - Wellbore #1 - Plan #1	17,547.18	11,257.60	8,876.27	8,737.47	63.951	SF
Becker Ranch #5R-243 - Wellbore #1 - Plan #1	16,314.10	11,231.80	8,090.28	7,963.61	63.869	CC
Becker Ranch #5R-243 - Wellbore #1 - Plan #1	16,400.00	11,231.80	8,090.74	7,963.16	63.415	ES
Becker Ranch #5R-243 - Wellbore #1 - Plan #1	17,547.18	11,231.80	8,183.71	8,045.11	59.042	SF
Becker Ranch #5R-303 - Wellbore #1 - Plan #1	16,217.42	11,308.90	8,491.25	8,364.51	66.999	CC
Becker Ranch #5R-303 - Wellbore #1 - Plan #1	16,300.00	11,308.90	8,491.65	8,364.06	66.555	ES
Becker Ranch #5R-303 - Wellbore #1 - Plan #1	17,547.18	11,308.90	8,594.74	8,455.53	61.741	SF
Becker Ranch #5R-323 - Wellbore #1 - Plan #1	16,098.37	11,332.80	8,968.25	8,843.30	71.776	CC
Becker Ranch #5R-323 - Wellbore #1 - Plan #1	16,200.00	11,332.80	8,968.83	8,842.82	71.177	ES
Becker Ranch #5R-323 - Wellbore #1 - Plan #1	17,547.18	11,332.80	9,084.52	8,945.74	65.459	SF
Becker Ranch #5R-443 - Wellbore #1 - Plan #1	16,299.98	11,417.20	8,148.07	8,021.12	64.184	CC
Becker Ranch #5R-443 - Wellbore #1 - Plan #1	16,400.00	11,417.20	8,148.68	8,020.68	63.660	ES
Becker Ranch #5R-443 - Wellbore #1 - Plan #1	17,547.18	11,417.20	8,242.97	8,104.03	59.331	SF
Becker Ranch #5U-243 - Wellbore #1 - Plan #1	16,013.48	11,243.60	9,324.49	9,199.88	74.831	CC
Becker Ranch #5U-243 - Wellbore #1 - Plan #1	16,100.00	11,243.60	9,324.89	9,199.40	74.309	ES
Becker Ranch #5U-243 - Wellbore #1 - Plan #1	17,547.18	11,243.60	9,449.78	9,310.90	68.043	SF
Becker Ranch #5U-303 - Wellbore #1 - Plan #1	15,913.11	11,348.00	9,724.44	9,599.80	78.023	CC
Becker Ranch #5U-303 - Wellbore #1 - Plan #1	16,000.00	11,348.00	9,724.83	9,599.33	77.489	ES
Becker Ranch #5U-303 - Wellbore #1 - Plan #1	17,547.18	11,348.00	9,860.78	9,721.29	70.695	SF
Becker Ranch #5U-443 - Wellbore #1 - Plan #1	15,963.14	11,407.70	9,525.50	9,400.88	76.438	CC
Becker Ranch #5U-443 - Wellbore #1 - Plan #1	16,100.00	11,407.70	9,526.48	9,400.49	75.613	ES
Becker Ranch #5U-443 - Wellbore #1 - Plan #1	17,547.18	11,407.70	9,656.31	9,517.12	69.377	SF
LDS #D08-18D(PR) - Wellbore #1 - MWD Surveys	14,726.04	7,257.03	6,971.77	6,860.93	62.899	CC
LDS #D08-18D(PR) - Wellbore #1 - MWD Surveys	14,800.00	7,257.30	6,972.16	6,860.73	62.571	ES
LDS #D08-18D(PR) - Wellbore #1 - MWD Surveys	16,800.00	16,800.00	7,225.41	7,043.72	39.769	SF
LDS #D08-29(SI) - Wellbore #1 - Gyro Surveys	16,580.48	6,808.09	6,106.38	5,997.44	56.053	CC
LDS #D08-29(SI) - Wellbore #1 - Gyro Surveys	16,600.00	6,808.23	6,106.41	5,997.28	55.952	ES
LDS #D08-29(SI) - Wellbore #1 - Gyro Surveys	17,547.18	6,815.64	6,182.43	6,064.65	52.495	SF
LDS D08-28D(PR) - Wellbore #1 - MWD Surveys	16,248.39	6,960.14	7,058.33	6,950.36	65.371	CC
LDS D08-28D(PR) - Wellbore #1 - MWD Surveys	16,300.00	6,961.15	7,058.52	6,950.06	65.080	ES
LDS D08-28D(PR) - Wellbore #1 - MWD Surveys	17,547.18	6,983.57	7,176.77	7,057.66	60.255	SF
LDS D08-30D(SI) - Wellbore #1 - MWD Surveys	16,784.34	7,113.05	4,580.09	4,466.91	40.464	CC
LDS D08-30D(SI) - Wellbore #1 - MWD Surveys	16,800.00	7,112.50	4,580.12	4,466.78	40.411	ES
LDS D08-30D(SI) - Wellbore #1 - MWD Surveys	17,547.18	7,075.94	4,643.13	4,523.46	38.797	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 D18-767
Project:	Mustang	TVD Reference:	Well @ 4817.00ft
Reference Site:	D Section 19	MD Reference:	Well @ 4817.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Independence D18-767	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Independence D18-767	Database:	EDMP
Reference Design:	Plan #2	Offset TVD Reference:	Reference 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 06						
AMEN PC D #06-18D(PR) - Wellbore #1 - MWD Surveys	17,547.18	7,137.74	4,793.54	4,708.02	56.052	CC, ES, SF
Amen PC D06-29 - Wellbore #1 - Wellbore #1 - As Drille	17,547.18	6,916.11	5,281.51	5,218.87	84.325	CC, ES, SF
FARAMIER FARMS #6-1(PA) - Wellbore #1 - Gyro Surve	17,547.18	6,893.07	888.21	811.66	11.603	CC, ES, SF
FARAMIR FARMS #6-2(PA) - Wellbore #1 - No Surveys	17,547.18	6,894.00	3,520.39	3,425.34	37.038	CC, ES, SF
FARAMIR FARMS #6-21(PR) - Wellbore #1 - No Surveys	17,547.18	6,879.00	4,998.82	4,890.43	46.119	CC, ES, SF
FARAMIR FARMS #6-22(PA) - Wellbore #1 - No Surveys	17,547.18	6,901.00	4,679.49	4,586.67	50.413	CC, ES, SF
FARAMIR FARMS #6-3(PA) - Wellbore #1 - Gyro Survey	17,547.18	6,857.68	3,796.80	3,717.63	47.961	CC, ES, SF
FARAMIR FARMS #6-32(PA) - Wellbore #1 - Gyro Survey	17,547.18	6,888.23	1,966.71	1,908.68	33.888	CC, ES, SF
FARAMIR FARMS #6-34(PR) - Wellbore #1 - No Surveys	17,547.18	6,869.00	1,694.86	1,548.54	11.583	CC, ES, SF
FARAMIR FARMS #6-4(SI) - Wellbore #1 - No Surveys	17,547.18	6,871.00	2,637.05	2,512.03	21.093	CC, ES, SF
HILL #6-35(PA) - Wellbore #1 - Gyro Surveys	17,547.18	6,856.16	1,633.88	1,558.18	21.585	CC, ES, SF
HOFF #6-15(PR) - Wellbore #1 - No Surveys	17,547.18	6,853.00	5,498.55	5,367.65	42.005	CC, ES, SF
HOFF PC D #06-21(PR) - Wellbore #1 - No Surveys	17,547.18	6,872.00	3,416.17	3,287.97	26.647	CC, ES, SF
Hoff PC D #06-27(SI) - Wellbore #1 - No Surveys	17,547.18	6,882.00	6,511.69	6,384.55	51.214	CC, ES, SF
Hoff PC D06-28D - Wellbore #1 - Wellbore #1 - As Drilled	17,547.18	7,175.01	5,728.02	5,631.93	59.611	CC, ES, SF
HORST #6-25(PA) - Wellbore #1 - No Surveys	17,547.18	6,891.00	4,398.82	4,295.75	42.680	CC, ES, SF
MCKENNEY #5(SI) - Wellbore #1 - No Surveys	17,547.18	6,830.00	3,710.24	3,562.07	25.041	CC, ES, SF
MCKENNEY #6-1(PA) - Wellbore #1 - Gyro Surveys	17,547.18	6,873.57	3,915.03	3,798.49	33.593	CC, ES, SF
MCKENNEY #6-12(SI) - Wellbore #1 - No Surveys	17,547.18	6,861.00	5,722.82	5,600.03	46.607	CC, ES, SF
MCKENNEY #6-13(SI) - Wellbore #1 - No Surveys	17,547.18	6,846.00	4,543.90	4,414.59	35.139	CC, ES, SF
MCKENNEY #6-14(SI) - Wellbore #1 - No Surveys	17,547.18	6,843.00	5,428.30	5,288.79	38.910	CC, ES, SF
MCKENNEY #6-2(PA) - Wellbore #1 - Gyro Surveys	17,547.18	6,794.45	5,913.67	5,819.01	62.467	CC, ES, SF
MCKENNEY #6-42(PR) - Wellbore #1 - No Surveys	17,547.18	6,847.00	3,363.01	3,222.09	23.866	CC, ES, SF
MCKENNEY #6-43(PR) - Wellbore #1 - No Surveys	17,547.18	6,845.00	2,941.94	2,789.04	19.241	CC, ES, SF
McKenney 06-01 - Wellbore #1 - Wellbore #1- As Drilled	17,547.18	6,874.78	4,009.51	3,892.85	34.368	CC, ES, SF
McKENNEY 6-3(PA) - Wellbore #1 - Gyro Surveys	17,547.18	6,820.47	4,635.50	4,524.72	41.846	CC, ES, SF
Shelton PC D06-32D(PR) - Wellbore #1 - MWD Surveys	17,547.18	7,366.23	2,953.07	2,873.62	37.173	CC, ES, SF
SMITH PC D #06-20D(PR) - Wellbore #1 - No Surveys	17,547.18	6,873.00	3,385.96	3,258.44	26.552	CC, ES, SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Independence D18-767
Project:	Mustang	TVD Reference:	Well @ 4817.00ft
Reference Site:	D Section 19	MD Reference:	Well @ 4817.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Independence D18-767	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Independence D18-767	Database:	EDMP
Reference Design:	Plan #2	Offset TVD Reference:	Reference 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 07						
Dechant 07-01-17 - Dechant 07-01-17 - Dechant 07-01-1	16,760.72	6,861.20	3,213.92	3,103.30	29.051	CC
Dechant 07-01-17 - Dechant 07-01-17 - Dechant 07-01-1	16,800.00	6,861.45	3,214.16	3,103.08	28.934	ES
Dechant 07-01-17 - Dechant 07-01-17 - Dechant 07-01-1	17,400.00	6,865.34	3,276.88	3,160.34	28.117	SF
Dechant 07-11 - Dechant 07-11 - Dechant 07-11 - As Dri	16,202.21	6,778.60	3,777.16	3,671.41	35.716	CC, ES
Dechant 07-11 - Dechant 07-11 - Dechant 07-11 - As Dri	17,100.00	6,800.00	3,882.34	3,768.68	34.157	SF
Dechant 07-13 - Dechant 07-13 - Dechant 07-13 - As Dri	15,218.52	6,823.33	2,250.38	2,152.75	23.049	CC, ES
Dechant 07-13 - Dechant 07-13 - Dechant 07-13 - As Dri	15,600.00	6,832.84	2,282.47	2,180.82	22.454	SF
Dechant 07-14 - Dechant 07-14 - Dechant 07-14 - As Dri	14,767.93	6,832.00	3,505.93	3,376.04	26.993	CC
Dechant 07-14 - Dechant 07-14 - Dechant 07-14 - As Dri	14,800.00	6,832.00	3,506.07	3,375.83	26.920	ES
Dechant 07-14 - Dechant 07-14 - Dechant 07-14 - As Dri	15,500.00	6,832.00	3,581.54	3,444.87	26.205	SF
Dechant 07-15 - Dechant 07-15 - Dechant 07-15 - As Dri	15,698.14	6,844.00	2,926.29	2,788.64	21.259	CC
Dechant 07-15 - Dechant 07-15 - Dechant 07-15 - As Dri	15,700.00	6,844.00	2,926.29	2,788.62	21.255	ES
Dechant 07-15 - Dechant 07-15 - Dechant 07-15 - As Dri	16,200.00	6,844.00	2,969.01	2,826.41	20.821	SF
Dechant 18-07 - Dechant 18-07 - Dechant 18-07 - As Dri	16,353.81	6,875.32	650.29	542.92	6.057	CC, ES
Dechant 18-07 - Dechant 18-07 - Dechant 18-07 - As Dri	16,400.00	6,874.91	651.93	543.61	6.019	SF
Dechant D07-09 - Dechant D07-09 - Dechant D07-09 - A	13,606.78	6,813.72	3,167.80	3,083.19	37.438	CC, ES
Dechant D07-09 - Dechant D07-09 - Dechant D07-09 - A	14,400.00	6,809.86	3,265.60	3,173.76	35.558	SF
Dechant D07-10 - Dechant D07-10 - Dechant D07-10 - A	13,757.04	6,951.84	2,053.02	1,966.59	23.753	CC
Dechant D07-10 - Dechant D07-10 - Dechant D07-10 - A	13,800.00	6,953.68	2,053.47	1,966.49	23.608	ES
Dechant D07-10 - Dechant D07-10 - Dechant D07-10 - A	14,100.00	6,966.50	2,081.42	1,991.24	23.082	SF
Dechant D07-11 - Dechant D07-11 - Dechant D07-11 - A	14,268.09	6,854.07	566.62	476.53	6.290	CC, ES
Dechant D07-11 - Dechant D07-11 - Dechant D07-11 - A	14,300.00	6,855.04	567.52	476.68	6.247	SF
Dechant D07-12 - Dechant D07-12 - Dechant D07-12 - A	14,458.98	6,865.50	642.78	550.95	7.000	CC, ES, SF
Dechant D07-13 - Dechant D07-13 - Dechant D07-13 - A	13,263.06	6,923.06	722.84	640.61	8.790	CC, ES, SF
Dechant D07-14 - Dechant D07-14 - Dechant D07-14 - A	12,980.25	6,856.32	357.57	277.64	4.474	CC
Dechant D07-14 - Dechant D07-14 - Dechant D07-14 - A	13,000.00	6,856.84	358.18	277.64	4.447	ES
Dechant D07-14 - Dechant D07-14 - Dechant D07-14 - A	13,014.64	6,857.23	359.42	278.51	4.442	SF
Dechant D07-15 - Dechant D07-15 - Dechant D07-15 - A	12,684.41	6,886.31	1,422.06	1,343.50	18.101	CC
Dechant D07-15 - Dechant D07-15 - Dechant D07-15 - A	12,700.00	6,886.57	1,422.19	1,343.46	18.063	ES
Dechant D07-15 - Dechant D07-15 - Dechant D07-15 - A	12,800.00	6,888.26	1,429.07	1,349.37	17.929	SF
Dechant D07-16 - Dechant D07-16 - Dechant D07-16 - A	12,656.14	6,842.18	3,015.21	2,936.91	38.508	CC, ES
Dechant D07-16 - Dechant D07-16 - Dechant D07-16 - A	13,100.00	6,838.34	3,080.17	2,998.34	37.637	SF
Dechant D07-20 - Dechant D07-20 - Dechant D07-20 - A	14,880.67	6,876.96	152.60	57.46	1.604	CC, ES
Dechant D07-20 - Dechant D07-20 - Dechant D07-20 - A	14,900.00	6,877.18	153.82	57.68	1.600	SF
Dechant D07-21 - Dechant D07-21 - Dechant D07-21 - A	14,471.77	6,875.33	1,449.07	1,357.27	15.785	CC
Dechant D07-21 - Dechant D07-21 - Dechant D07-21 - A	14,500.00	6,875.43	1,449.34	1,357.12	15.716	ES
Dechant D07-21 - Dechant D07-21 - Dechant D07-21 - A	14,700.00	6,876.09	1,466.93	1,372.37	15.513	SF
Dechant D07-22 - Dechant D07-22 - Dechant D07-22 - A	14,291.15	6,921.11	2,666.95	2,576.50	29.485	CC
Dechant D07-22 - Dechant D07-22 - Dechant D07-22 - A	14,300.00	6,921.71	2,666.97	2,576.41	29.450	ES
Dechant D07-22 - Dechant D07-22 - Dechant D07-22 - A	14,900.00	6,962.05	2,735.26	2,638.90	28.383	SF
Dechant D07-23 - Dechant D07-23 - Dechant D07-23 - A	12,930.04	6,838.85	2,308.39	2,228.71	28.970	CC, ES
Dechant D07-23 - Dechant D07-23 - Dechant D07-23 - A	13,400.00	6,845.98	2,368.07	2,283.86	28.120	SF
Dechant D07-24 - Dechant D07-24 - Dechant D07-24 - A	13,411.56	6,851.20	1,117.47	1,034.29	13.436	CC, ES
Dechant D07-24 - Dechant D07-24 - Dechant D07-24 - A	13,600.00	6,858.06	1,133.22	1,047.49	13.219	SF
Dechant D07-25 - Dechant D07-25 - Dechant D07-25 - A	13,758.23	6,877.47	40.64	-45.34	0.473	Level 1, CC, ES, SF
Dechant D07-32 - Dechant D07-32 - Dechant D07-32 - A	15,143.55	6,889.37	858.01	760.71	8.818	CC, ES, SF
Dechant D07-33 - Dechant D07-33 - Dechant D07-33 - A	14,019.47	6,834.06	1,258.53	1,170.31	14.265	CC, ES, SF
Dechant D18-27D - Dechant D18-27D - Dechant D18-27	11,500.00	7,287.78	2,243.87	2,137.27	21.051	SF
Dechant D18-27D - Dechant D18-27D - Dechant D18-27	12,200.00	7,298.83	2,106.19	2,013.91	22.824	ES
Dechant D18-27D - Dechant D18-27D - Dechant D18-27	12,277.90	7,300.14	2,104.75	2,014.34	23.280	CC
Dechant D18-30D - Wellbore #1 - Wellbore #1- As Drilled	11,800.00	7,247.86	1,708.40	1,604.41	16.429	SF
Dechant D18-30D - Wellbore #1 - Wellbore #1- As Drilled	12,400.00	7,254.94	1,603.78	1,515.42	18.149	ES
Dechant D18-30D - Wellbore #1 - Wellbore #1- As Drilled	12,463.75	7,255.75	1,603.23	1,516.52	18.489	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 D18-767
Project:	Mustang	TVD Reference:	Well @ 4817.00ft
Reference Site:	D Section 19	MD Reference:	Well @ 4817.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Independence D18-767	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Independence D18-767	Database:	EDMP
Reference Design:	Plan #2	Offset TVD Reference:	Reference 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						
HSR Barbour 04-07 - HSR Barbour 04-07 - HSR Barbour	17,282.90	6,893.86	179.36	64.75	1.565	CC, ES
HSR Barbour 04-07 - HSR Barbour 04-07 - HSR Barbour	17,300.00	6,893.83	180.17	64.78	1.561	SF
HSR Parkman 06-07 - HSR Parkman 06-07 - HSR Parkm	15,352.26	6,885.18	772.56	673.58	7.805	CC, ES
HSR Parkman 06-07 - HSR Parkman 06-07 - HSR Parkm	15,400.00	6,884.71	774.03	674.13	7.748	SF
HSR Petrie 03-07 - HSR Petrie 03-07 - HSR Petrie 03-07	16,952.55	6,908.56	1,175.91	1,063.48	10.459	CC, ES
HSR Petrie 03-07 - HSR Petrie 03-07 - HSR Petrie 03-07	17,100.00	6,905.39	1,185.12	1,070.76	10.363	SF
HSR Safran 05-07 - HSR Safran 05-07 - HSR Safran 05-	15,743.73	6,900.18	440.95	338.60	4.308	CC, ES, SF
Two E Ranch 07-01 - Two E Ranch 07-01 - Two E Ranch	16,414.51	6,866.34	2,557.59	2,449.85	23.739	CC, ES
Two E Ranch 07-01 - Two E Ranch 07-01 - Two E Ranch	16,900.00	6,877.16	2,603.23	2,490.76	23.146	SF
Two E Ranches 1 - Two E Ranches 1 - Two E Ranches 1	15,124.41	4,625.00	3,158.81	3,058.02	31.342	CC, ES
Two E Ranches 1 - Two E Ranches 1 - Two E Ranches 1	15,800.00	4,625.00	3,230.24	3,123.44	30.245	SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Independence D18-767
Project:	Mustang	TVD Reference:	Well @ 4817.00ft
Reference Site:	D Section 19	MD Reference:	Well @ 4817.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Independence D18-767	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Independence D18-767	Database:	EDMP
Reference Design:	Plan #2	Offset TVD Reference:	Reference 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 08						
Becker D17-715 - Wellbore #1 - Plan #2	9,898.21	15,102.10	8,411.08	8,292.83	71.133	CC
Becker D17-715 - Wellbore #1 - Plan #2	9,900.00	15,102.10	8,411.08	8,292.82	71.127	ES
Becker D17-715 - Wellbore #1 - Plan #2	10,000.00	15,082.16	8,411.67	8,293.02	70.897	SF
Becker D17-725 - Wellbore #1 - Plan #2	9,897.85	15,019.15	7,761.35	7,643.15	65.663	CC
Becker D17-725 - Wellbore #1 - Plan #2	9,900.00	15,019.15	7,761.36	7,643.14	65.656	ES
Becker D17-725 - Wellbore #1 - Plan #2	10,000.00	14,997.18	7,762.00	7,643.37	65.431	SF
Becker D17-730 (KILLED) - Wellbore #1 - Plan #1	9,897.66	15,133.40	7,437.91	7,319.70	62.921	CC
Becker D17-730 (KILLED) - Wellbore #1 - Plan #1	9,900.00	15,133.40	7,437.91	7,319.69	62.913	ES, SF
Becker D17-735 - Wellbore #1 - Plan #2	9,897.49	15,022.42	7,111.63	6,993.58	60.241	CC
Becker D17-735 - Wellbore #1 - Plan #2	9,900.00	15,022.42	7,111.63	6,993.56	60.233	ES
Becker D17-735 - Wellbore #1 - Plan #2	10,000.00	14,997.64	7,112.33	6,993.82	60.017	SF
Becker D17-745 - Wellbore #1 - Plan #2	9,897.12	15,111.52	6,461.95	6,344.23	54.894	CC
Becker D17-745 - Wellbore #1 - Plan #2	9,900.00	15,111.52	6,461.95	6,344.21	54.884	ES
Becker D17-745 - Wellbore #1 - Plan #2	10,000.00	15,083.13	6,462.70	6,344.51	54.679	SF
Becker D17-750 (KILLED) - Wellbore #1 - Plan #1	9,896.93	15,303.42	6,138.70	6,020.96	52.135	CC
Becker D17-750 (KILLED) - Wellbore #1 - Plan #1	9,900.00	15,303.42	6,138.70	6,020.93	52.125	ES
Becker D17-750 (KILLED) - Wellbore #1 - Plan #1	10,000.00	15,272.97	6,139.49	6,021.26	51.929	SF
Becker D17-755 - Wellbore #1 - Plan #2	9,896.75	15,201.67	5,812.25	5,695.25	49.679	CC
Becker D17-755 - Wellbore #1 - Plan #2	9,900.00	15,201.67	5,812.25	5,695.24	49.673	ES
Becker D17-755 - Wellbore #1 - Plan #2	10,000.00	15,168.92	5,813.07	5,695.83	49.583	SF
Becker D17-765 - Wellbore #1 - Plan #2	9,895.83	15,095.78	5,163.06	5,022.80	36.809	CC
Becker D17-765 - Wellbore #1 - Plan #2	9,900.00	15,095.78	5,163.06	5,022.78	36.805	ES
Becker D17-765 - Wellbore #1 - Plan #2	10,000.00	15,056.97	5,163.97	5,023.59	36.787	SF
Becker D17-770 (KILLED) - Wellbore #1 - Plan #1	9,896.20	15,165.38	4,839.72	4,699.42	34.495	CC
Becker D17-770 (KILLED) - Wellbore #1 - Plan #1	9,900.00	15,165.38	4,839.72	4,699.40	34.491	ES
Becker D17-770 (KILLED) - Wellbore #1 - Plan #1	10,000.00	15,124.60	4,840.66	4,700.24	34.473	SF
Becker D17-775 - Wellbore #1 - Plan #2	9,896.03	15,024.89	4,512.91	4,372.61	32.166	CC
Becker D17-775 - Wellbore #1 - Plan #2	9,900.00	15,024.89	4,512.91	4,372.59	32.161	ES
Becker D17-775 - Wellbore #1 - Plan #2	10,000.00	14,981.07	4,513.89	4,373.47	32.144	SF
Becker D17-785 - Wellbore #1 - Plan #2	9,895.66	14,956.00	3,863.05	3,746.34	33.101	CC
Becker D17-785 - Wellbore #1 - Plan #2	9,900.00	14,956.00	3,863.05	3,746.31	33.093	ES
Becker D17-785 - Wellbore #1 - Plan #2	10,000.00	14,905.33	3,864.12	3,747.15	33.035	SF
HSR-ALVIN DECHANT #12-8 (SI) - Wellbore #1 - No Su	13,373.57	6,812.00	4,638.31	4,519.79	39.134	CC
HSR-ALVIN DECHANT #12-8 (SI) - Wellbore #1 - No Su	13,400.00	6,812.00	4,638.38	4,519.60	39.047	ES
HSR-ALVIN DECHANT #12-8 (SI) - Wellbore #1 - No Su	14,600.00	6,812.00	4,797.71	4,668.62	37.166	SF
HSR-ALVIN DECHANT #13-8(SI) - Wellbore #1 - No Sur	12,547.59	6,801.00	4,261.67	4,148.51	37.662	CC, ES
HSR-ALVIN DECHANT #13-8(SI) - Wellbore #1 - No Sur	13,000.00	6,801.00	4,320.87	4,204.23	37.046	SF
HSR-LDS #14-8(SI) - Wellbore #1 - No Surveys	12,693.00	6,792.00	5,452.80	5,338.85	47.850	CC
HSR-LDS #14-8(SI) - Wellbore #1 - No Surveys	12,700.00	6,792.00	5,452.82	5,338.80	47.826	ES
HSR-LDS #14-8(SI) - Wellbore #1 - No Surveys	13,800.00	6,792.00	5,666.89	5,544.43	46.277	SF
HSR-LDS #15-8(SI) - Wellbore #1 - No Surveys	12,553.95	6,789.00	6,846.28	6,733.19	60.538	CC, ES
HSR-LDS #15-8(SI) - Wellbore #1 - No Surveys	14,100.00	6,789.00	7,220.99	7,096.81	58.149	SF
HSR-LDS #16-8(SI) - Wellbore #1 - Gyro Surveys	12,479.58	6,932.45	8,095.67	7,995.09	80.491	CC
HSR-LDS #16-8(SI) - Wellbore #1 - Gyro Surveys	12,500.00	6,931.87	8,095.77	7,995.04	80.374	ES
HSR-LDS #16-8(SI) - Wellbore #1 - Gyro Surveys	14,600.00	6,878.93	8,694.52	8,580.06	75.963	SF
HSR-LDS #3-8(SI) - Wellbore #1 - No Surveys	15,473.04	6,790.00	6,288.45	6,153.14	46.473	CC
HSR-LDS #3-8(SI) - Wellbore #1 - No Surveys	15,500.00	6,790.00	6,288.51	6,152.93	46.381	ES
HSR-LDS #3-8(SI) - Wellbore #1 - No Surveys	17,300.00	6,790.00	6,548.47	6,398.10	43.550	SF
HSR-LDS #4-8(SI) - Wellbore 1 - No Surveys	15,607.98	6,815.00	5,148.20	5,011.55	37.674	CC
HSR-LDS #4-8(SI) - Wellbore 1 - No Surveys	15,700.00	6,815.00	5,149.03	5,011.43	37.422	ES
HSR-LDS #4-8(SI) - Wellbore 1 - No Surveys	16,900.00	6,815.00	5,307.85	5,160.14	35.934	SF
HSR-LDS #5-8(SI) - Wellbore #1 - No Surveys	14,532.55	6,808.00	4,703.71	4,575.95	36.818	CC
HSR-LDS #5-8(SI) - Wellbore #1 - No Surveys	14,600.00	6,808.00	4,704.19	4,575.74	36.623	ES

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Noble Energy, Inc.
Anticollision Summary Report

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Project:	Mustang	TVD Reference:	Well @ 4817.00ft
Reference Site:	D Section 19	MD Reference:	Well @ 4817.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Independence D18-767	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Independence D18-767	Database:	EDMP
Reference Design:	Plan #2	Offset TVD Reference:	Reference 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 08						
HSR-LDS #5-8(SI) - Wellbore #1 - No Surveys	15,700.00	6,808.00	4,846.42	4,708.51	35.141	SF
HSR-LDS #6-8(SI) - Wellbore #1 - No Surveys	14,242.05	6,788.00	6,075.61	5,950.38	48.515	CC
HSR-LDS #6-8(SI) - Wellbore #1 - No Surveys	14,300.00	6,788.00	6,075.88	5,950.09	48.300	ES
HSR-LDS #6-8(SI) - Wellbore #1 - No Surveys	16,100.00	6,788.00	6,353.35	6,212.84	45.217	SF
HSR-LDS #9-8(SI) - Wellbore #1 - No Surveys	12,891.13	6,783.00	8,366.01	8,251.09	72.800	CC
HSR-LDS #9-8(SI) - Wellbore #1 - No Surveys	12,900.00	6,783.00	8,366.02	8,251.03	72.751	ES
HSR-LDS #9-8(SI) - Wellbore #1 - No Surveys	16,000.00	6,783.00	9,047.23	8,908.91	65.405	SF
HSR-LDS A #10-8(SI) - Wellbore #1 - No Surveys	12,886.31	6,787.00	7,103.07	6,988.14	61.803	CC
HSR-LDS A #10-8(SI) - Wellbore #1 - No Surveys	12,900.00	6,787.00	7,103.12	6,988.07	61.739	ES
HSR-LDS A #10-8(SI) - Wellbore #1 - No Surveys	15,200.00	6,787.00	7,565.56	7,432.81	56.992	SF
HSR-LDS A #11-8(SI) - Wellbore #1 - No Surveys	13,073.71	6,789.00	5,717.29	5,601.30	49.294	CC
HSR-LDS A #11-8(SI) - Wellbore #1 - No Surveys	13,100.00	6,789.00	5,717.35	5,601.11	49.189	ES
HSR-LDS A #11-8(SI) - Wellbore #1 - No Surveys	14,900.00	6,789.00	6,001.89	5,870.98	45.848	SF
LDS #18-8(SI) - Wellbore #1 - Gyro Surveys	14,952.64	6,566.63	5,502.77	5,408.22	58.199	CC
LDS #18-8(SI) - Wellbore #1 - Gyro Surveys	15,000.00	6,566.77	5,502.98	5,407.95	57.909	ES
LDS #18-8(SI) - Wellbore #1 - Gyro Surveys	16,700.00	6,828.37	5,773.50	5,663.85	52.652	SF
LDS #20-8(SI) - Wellbore #1 - No Surveys	12,685.33	6,786.00	7,561.58	7,447.72	66.412	CC
LDS #20-8(SI) - Wellbore #1 - No Surveys	12,700.00	6,786.00	7,561.63	7,447.65	66.342	ES
LDS #20-8(SI) - Wellbore #1 - No Surveys	14,900.00	6,786.00	8,101.58	7,971.58	62.321	SF
LDS D #09-30(SI) - Wellbore #1 - As-Drilled	15,247.03	2,050.30	9,546.36	9,352.79	49.319	CC
LDS D #09-30(SI) - Wellbore #1 - As-Drilled	15,300.00	2,050.30	9,546.51	9,352.45	49.194	ES
LDS D #09-30(SI) - Wellbore #1 - As-Drilled	17,547.18	2,050.30	9,819.56	9,606.54	46.098	SF
LDS D #09-31D(SI) - Wellbore #1 - No Surveys	15,223.90	6,777.00	9,538.28	9,405.13	71.639	CC
LDS D #09-31D(SI) - Wellbore #1 - No Surveys	15,300.00	6,777.00	9,538.58	9,404.73	71.261	ES
LDS D #09-31D(SI) - Wellbore #1 - No Surveys	17,547.18	6,777.00	9,817.15	9,664.39	64.265	SF
RUBY RED #D #8-1D(PA) - Wellbore #1 - Gyro Surveys	14,660.01	6,804.17	8,517.59	8,424.63	91.623	CC
RUBY RED #D #8-1D(PA) - Wellbore #1 - Gyro Surveys	14,700.00	6,804.52	8,517.69	8,424.35	91.255	ES
RUBY RED #D #8-1D(PA) - Wellbore #1 - Gyro Surveys	17,547.18	6,818.34	8,993.60	8,877.51	77.468	SF
RUBY RED #D 8-7(PR) - Wellbore #1 - Gyro Surveys	13,906.38	6,762.53	7,195.12	7,108.36	82.929	CC
RUBY RED #D 8-7(PR) - Wellbore #1 - Gyro Surveys	14,000.00	6,762.88	7,195.73	7,108.08	82.103	ES
RUBY RED #D 8-7(PR) - Wellbore #1 - Gyro Surveys	16,900.00	6,773.14	7,793.03	7,683.44	71.109	SF
RUBY RED #D 8-8(PR) - Wellbore #1 - Gyro Surveys	13,491.99	6,705.59	8,789.28	8,706.02	105.560	CC
RUBY RED #D 8-8(PR) - Wellbore #1 - Gyro Surveys	13,600.00	6,706.30	8,789.94	8,705.70	104.342	ES
RUBY RED #D 8-8(PR) - Wellbore #1 - Gyro Surveys	17,547.18	6,731.65	9,679.63	9,566.05	85.224	SF
RUBY RED D8-2(PA) - Wellbore #1 - Gyro Surveys	15,422.90	6,764.48	7,497.70	7,398.59	75.651	CC
RUBY RED D8-2(PA) - Wellbore #1 - Gyro Surveys	15,500.00	6,764.62	7,498.09	7,398.24	75.092	ES
RUBY RED D8-2(PA) - Wellbore #1 - Gyro Surveys	17,547.18	6,768.17	7,792.82	7,676.14	66.790	SF
TWO E RANCHES #1(PA) - Wellbore #1 - Gyro Surveys	12,964.08	6,766.36	4,731.79	4,652.28	59.511	CC, ES
TWO E RANCHES #1(PA) - Wellbore #1 - Gyro Surveys	14,500.00	6,743.77	5,000.07	4,908.32	54.492	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 D18-767
Project:	Mustang	TVD Reference:	Well @ 4817.00ft
Reference Site:	D Section 19	MD Reference:	Well @ 4817.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Independence D18-767	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Independence D18-767	Database:	EDMP
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
D Section 17						
Butterball D19-27D - Wellbore #1 - Gyro Surveys	7,189.86	7,050.25	2,178.30	2,127.50	42.882	CC
Butterball D19-27D - Wellbore #1 - Gyro Surveys	7,200.00	7,050.71	2,178.32	2,127.46	42.830	ES
Butterball D19-27D - Wellbore #1 - Gyro Surveys	8,500.00	7,032.92	2,541.71	2,473.49	37.258	SF
Guttersen State D16-33 (SI) - Wellbore #1 - No Surveys	8,530.57	6,802.00	8,774.12	8,686.17	99.759	CC
Guttersen State D16-33 (SI) - Wellbore #1 - No Surveys	8,600.00	6,802.00	8,774.40	8,686.14	99.421	ES
Guttersen State D16-33 (SI) - Wellbore #1 - No Surveys	12,400.00	6,802.00	9,590.35	9,481.57	88.163	SF
HSR LDS 6-17 (PA) - Wellbore #1 - Gyro Surveys	10,506.81	6,743.51	5,353.89	5,290.81	84.880	CC, ES
HSR LDS 6-17 (PA) - Wellbore #1 - Gyro Surveys	12,400.00	6,743.59	5,679.67	5,605.71	76.791	SF
HSR LDS B5-17 (SI) - Wellbore #1 - Gyro Surveys	10,486.64	6,776.56	4,142.50	4,079.35	65.599	CC
HSR LDS B5-17 (SI) - Wellbore #1 - Gyro Surveys	10,500.00	6,776.62	4,142.52	4,079.29	65.509	ES
HSR LDS B5-17 (SI) - Wellbore #1 - Gyro Surveys	11,700.00	6,782.08	4,316.54	4,246.46	61.596	SF
HSR Mike Guttersen 16-17X (SI) - Wellbore #1 - As-Dri	7,591.87	6,837.81	8,081.92	8,032.72	164.259	CC
HSR Mike Guttersen 16-17X (SI) - Wellbore #1 - As-Dri	7,600.00	6,837.79	8,081.92	8,032.70	164.198	ES
HSR Mike Guttersen 16-17X (SI) - Wellbore #1 - As-Dri	12,500.00	6,826.57	9,460.03	9,388.63	132.504	SF
HSR Mike Guttersen 16-17 (DA) - Wellbore #1 - As-Drille	1,212.89	1,172.41	8,155.17	8,131.93	350.961	CC
HSR Mike Guttersen 16-17 (DA) - Wellbore #1 - As-Drille	1,800.00	1,666.00	8,155.69	8,100.65	148.182	ES
HSR Mike Guttersen 16-17 (DA) - Wellbore #1 - As-Drille	10,400.00	1,666.00	9,997.36	9,919.66	128.673	SF
HSR Weeks 10-17 - Wellbore #1 - Gyro Surveys	9,019.68	6,738.54	6,764.18	6,709.93	124.684	CC, ES
HSR Weeks 10-17 - Wellbore #1 - Gyro Surveys	12,500.00	12,500.00	7,611.58	7,519.13	82.333	SF
HSR Weeks 15-17 (SI) - Wellbore #1 - As-Drilled	7,736.41	6,741.02	6,760.77	6,711.57	137.425	CC, ES
HSR Weeks 15-17 (SI) - Wellbore #1 - As-Drilled	11,600.00	6,773.11	7,786.80	7,720.51	117.458	SF
HSR Weeks 9-17 - Wellbore #1 - Gyro Surveys	9,075.07	6,828.93	7,884.13	7,829.78	145.059	CC
HSR Weeks 9-17 - Wellbore #1 - Gyro Surveys	9,100.00	6,828.91	7,884.17	7,829.69	144.720	ES
HSR Weeks 9-17 - Wellbore #1 - Gyro Surveys	12,700.00	6,827.04	8,699.34	8,625.06	117.118	SF
HSR-LDS 3-17 (PA) - Wellbore #1 - Gyro Surveys	11,580.94	6,751.16	5,268.40	5,198.04	74.876	CC
HSR-LDS 3-17 (PA) - Wellbore #1 - Gyro Surveys	11,600.00	6,751.21	5,268.44	5,197.94	74.734	ES
HSR-LDS 3-17 (PA) - Wellbore #1 - Gyro Surveys	12,800.00	6,754.49	5,445.37	5,367.30	69.747	SF
HSR-LDS 4-17 (SI) - Wellbore #1 - Gyro Surveys	11,586.52	6,797.48	4,127.10	4,056.53	58.479	CC
HSR-LDS 4-17 (SI) - Wellbore #1 - Gyro Surveys	11,600.00	6,797.61	4,127.12	4,056.46	58.401	ES
HSR-LDS 4-17 (SI) - Wellbore #1 - Gyro Surveys	12,500.00	6,809.25	4,232.16	4,155.96	55.540	SF
LDS 18-17 (PA) - Wellbore #1 - Gyro Surveys	10,979.89	6,783.35	4,999.65	4,933.33	75.393	CC
LDS 18-17 (PA) - Wellbore #1 - Gyro Surveys	11,000.00	6,783.30	4,999.69	4,933.24	75.240	ES
LDS 18-17 (PA) - Wellbore #1 - Gyro Surveys	12,500.00	6,780.40	5,230.70	5,155.41	69.468	SF
LDS D17-13 - Wellbore #1 - Gyro Surveys	7,398.42	6,700.00	3,841.54	3,793.31	79.649	CC
LDS D17-13 - Wellbore #1 - Gyro Surveys	7,400.00	6,700.00	3,841.54	3,793.31	79.644	ES
LDS D17-13 - Wellbore #1 - Gyro Surveys	8,500.00	6,708.21	3,996.36	3,944.91	77.679	SF
LDS D17-18 (SI) - Wellbore #1 - Gyro Surveys	11,053.12	6,733.21	6,233.39	6,166.74	93.534	CC
LDS D17-18 (SI) - Wellbore #1 - Gyro Surveys	11,100.00	6,732.76	6,233.56	6,166.60	93.095	ES
LDS D17-18 (SI) - Wellbore #1 - Gyro Surveys	12,800.00	6,717.11	6,510.74	6,433.32	84.090	SF
LDS D17-20 - Wellbore #1 - INC/MWD	9,550.20	6,795.26	4,815.87	4,756.54	81.166	CC
LDS D17-20 - Wellbore #1 - INC/MWD	9,600.00	6,795.02	4,816.13	4,756.51	80.785	ES
LDS D17-20 - Wellbore #1 - INC/MWD	11,300.00	6,786.85	5,123.90	5,055.23	74.615	SF
LDS D17-21 - Wellbore #1 - INC/MWD	9,494.24	6,788.72	5,960.47	5,901.47	101.031	CC
LDS D17-21 - Wellbore #1 - INC/MWD	9,500.00	6,788.69	5,960.47	5,901.44	100.976	ES
LDS D17-21 - Wellbore #1 - INC/MWD	12,100.00	6,776.32	6,505.15	6,432.13	89.084	SF
LDS D17-22 (SI) - Wellbore #1 - No Surveys	9,855.21	6,797.00	7,382.17	7,287.30	77.809	CC
LDS D17-22 (SI) - Wellbore #1 - No Surveys	9,900.00	6,797.00	7,382.31	7,287.17	77.591	ES
LDS D17-22 (SI) - Wellbore #1 - No Surveys	12,400.00	6,797.00	7,809.40	7,699.46	71.033	SF
LDS D17-24D - LDS D17-24D Gyros - As-Drilled	8,457.13	6,925.73	6,073.99	6,004.15	86.971	CC
LDS D17-24D - LDS D17-24D Gyros - As-Drilled	8,500.00	6,925.23	6,074.14	6,004.15	86.779	ES
LDS D17-24D - LDS D17-24D Gyros - As-Drilled	10,300.00	6,903.61	6,347.36	6,270.54	82.628	SF
LDS D17-24D - LDS D17-24D OH - As-Drilled	8,457.17	6,938.73	6,073.98	6,004.14	86.971	CC
LDS D17-24D - LDS D17-24D OH - As-Drilled	8,500.00	6,938.23	6,074.13	6,004.14	86.779	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 D18-767
Project:	Mustang	TVD Reference:	Well @ 4817.00ft
Reference Site:	D Section 19	MD Reference:	Well @ 4817.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Independence D18-767	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Independence D18-767	Database:	EDMP
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
D Section 17						
LDS D17-24D - LDS D17-24D OH - As-Drilled	10,300.00	6,916.61	6,347.34	6,270.52	82.628	SF
LDS D17-25D - LDS D17-25D Gyros - As-Drilled	8,687.84	7,002.40	4,827.48	4,757.33	68.822	CC
LDS D17-25D - LDS D17-25D Gyros - As-Drilled	8,800.00	7,003.39	4,828.78	4,757.17	67.435	ES
LDS D17-25D - LDS D17-25D Gyros - As-Drilled	11,100.00	7,022.15	5,396.55	5,298.80	55.211	SF
LDS D17-25D - LDS D17-25D OH - LDS D17-25D - As D	8,687.83	7,015.40	4,827.48	4,757.34	68.822	CC
LDS D17-25D - LDS D17-25D OH - LDS D17-25D - As D	8,800.00	7,016.39	4,828.79	4,757.18	67.435	ES
LDS D17-25D - LDS D17-25D OH - LDS D17-25D - As D	11,100.00	7,035.15	5,396.56	5,298.82	55.211	SF
LDS D17-31D - LDS D17-31D - As-Drilled	11,013.02	6,992.43	3,456.34	3,357.66	35.026	CC, ES
LDS D17-31D - LDS D17-31D - As-Drilled	11,300.00	6,991.21	3,468.23	3,368.83	34.891	SF
LDS D17-32D - LDS D17-32D - LDS D17-32D - As Drille	9,881.30	6,844.28	3,428.21	3,369.39	58.284	CC
LDS D17-32D - LDS D17-32D - LDS D17-32D - As Drille	9,900.00	6,844.27	3,428.26	3,369.34	58.184	ES
LDS D17-32D - LDS D17-32D - LDS D17-32D - As Drille	10,700.00	6,843.65	3,524.61	3,461.67	55.997	SF
LDS D17-33 - LDS D17-33 - As-Drilled	8,470.93	6,785.73	3,659.84	3,607.91	70.470	CC
LDS D17-33 - LDS D17-33 - As-Drilled	8,500.00	6,785.51	3,659.96	3,607.90	70.306	ES
LDS D17-33 - LDS D17-33 - As-Drilled	9,600.00	6,776.85	3,830.04	3,773.03	67.188	SF
LDS D17-7 - Wellbore #1 - As-Drilled	10,367.27	6,740.08	6,597.98	6,535.85	106.185	CC
LDS D17-7 - Wellbore #1 - As-Drilled	10,400.00	6,739.80	6,598.06	6,535.72	105.833	ES
LDS D17-7 - Wellbore #1 - As-Drilled	12,700.00	6,723.47	7,020.91	6,945.01	92.497	SF
LDS D20-29D - Wellbore #1 - LDS D20-29D - As Drilled	100.00	58.34	3,838.68	3,838.45	10,000.000	CC
LDS D20-29D - Wellbore #1 - LDS D20-29D - As Drilled	800.00	722.60	3,839.76	3,835.78	964.602	ES
LDS D20-29D - Wellbore #1 - LDS D20-29D - As Drilled	8,400.00	6,974.02	5,019.59	4,967.91	97.121	SF
LDS D20-30D - Wellbore #1 - LDS D20-30D - As Drilled	6,921.33	6,831.39	3,349.62	3,301.56	69.700	CC
LDS D20-30D - Wellbore #1 - LDS D20-30D - As Drilled	6,950.00	6,844.16	3,349.72	3,301.54	69.527	ES
LDS D20-30D - Wellbore #1 - LDS D20-30D - As Drilled	7,500.00	6,901.11	3,398.29	3,348.68	68.490	SF
LDS RED D17-11 (SI) - Wellbore #1 - As Drilled	9,062.36	6,833.68	5,570.73	5,515.82	101.465	CC
LDS RED D17-11 (SI) - Wellbore #1 - As Drilled	9,100.00	6,834.95	5,570.85	5,515.75	101.105	ES
LDS RED D17-11 (SI) - Wellbore #1 - As Drilled	11,500.00	6,915.99	6,080.16	6,012.42	89.764	SF
LDS Red D17-12 - Wellbore #1 - Gyro Surveys	9,288.63	6,817.22	4,037.06	3,981.10	72.137	CC
LDS Red D17-12 - Wellbore #1 - Gyro Surveys	9,300.00	6,817.15	4,037.08	3,981.05	72.060	ES
LDS Red D17-12 - Wellbore #1 - Gyro Surveys	10,600.00	6,808.60	4,244.70	4,182.05	67.752	SF
LDS Red D17-14 (DA) - LDS Red D17-14 - No Surveys	7,672.43	6,818.00	5,601.25	5,305.15	18.917	CC
LDS Red D17-14 (DA) - LDS Red D17-14 - No Surveys	7,700.00	6,818.00	5,601.32	5,305.15	18.913	ES
LDS Red D17-14 (DA) - LDS Red D17-14 - No Surveys	8,000.00	6,818.00	5,610.82	5,313.77	18.889	SF
LDS Red D17-14X (SI) - Wellbore #1 - As-Drilled	7,866.10	6,600.00	5,654.92	5,605.90	115.368	CC, ES
LDS Red D17-14X (SI) - Wellbore #1 - As-Drilled	10,600.00	6,610.05	6,281.10	6,220.37	103.435	SF
LDS Red D17-3J (PR) - Wellbore #1 - Gyro Surveys	8,081.79	6,846.46	4,406.75	4,356.15	87.084	CC
LDS Red D17-3J (PR) - Wellbore #1 - Gyro Surveys	8,100.00	6,846.49	4,406.79	4,356.13	86.978	ES
LDS Red D17-3J (PR) - Wellbore #1 - Gyro Surveys	9,700.00	6,849.03	4,694.47	4,637.10	81.829	SF
LDS White D17-1 - Wellbore #1 - Gyro Surveys	11,696.28	6,703.69	8,091.47	8,020.47	113.963	CC
LDS White D17-1 - Wellbore #1 - Gyro Surveys	11,800.00	6,703.21	8,092.14	8,020.40	112.810	ES
LDS White D17-1 - Wellbore #1 - Gyro Surveys	14,300.00	6,684.55	8,858.35	8,771.11	101.542	SF
LDS White D17-2 - Wellbore #1 - As-Drilled	11,723.74	6,817.29	6,705.33	6,633.67	93.582	CC
LDS White D17-2 - Wellbore #1 - As-Drilled	11,800.00	6,816.11	6,705.76	6,633.57	92.895	ES
LDS White D17-2 - Wellbore #1 - As-Drilled	13,400.00	6,800.00	7,076.78	6,994.46	85.963	SF
LDS White D17-8 - Wellbore #1 - As-Drilled	10,373.91	6,753.51	7,959.86	7,897.56	127.771	CC
LDS White D17-8 - Wellbore #1 - As-Drilled	10,400.00	6,753.34	7,959.90	7,897.44	127.433	ES
LDS White D17-8 - Wellbore #1 - As-Drilled	13,100.00	6,735.27	8,508.23	8,429.40	107.927	SF
Thomson D20-31D - Wellbore #1 - Gyro Surveys	5,180.02	5,400.00	3,428.67	3,375.56	64.565	CC
Thomson D20-31D - Wellbore #1 - Gyro Surveys	5,200.00	5,409.98	3,428.70	3,375.50	64.438	ES
Thomson D20-31D - Wellbore #1 - Gyro Surveys	6,750.00	6,909.15	3,517.78	3,454.95	55.989	SF
Weeks 20-17 (SI) - Wellbore #1 - Gyro Surveys	8,285.34	6,822.64	7,297.04	7,245.75	142.269	CC
Weeks 20-17 (SI) - Wellbore #1 - Gyro Surveys	8,300.00	6,822.61	7,297.05	7,245.71	142.115	ES
Weeks 20-17 (SI) - Wellbore #1 - Gyro Surveys	12,325.19	6,817.83	8,340.68	8,269.62	117.369	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 D18-767
Project:	Mustang	TVD Reference:	Well @ 4817.00ft
Reference Site:	D Section 19	MD Reference:	Well @ 4817.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Independence D18-767	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Independence D18-767	Database:	EDMP
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Independence D18-767
Project:	Mustang	TVD Reference:	Well @ 4817.00ft
Reference Site:	D Section 19	MD Reference:	Well @ 4817.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Independence D18-767	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Independence D18-767	Database:	EDMP
Reference Design:	Plan #2	Offset TVD Reference:	Reference 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	9,589.00	7,195.30	284.32	208.93	3.771	CC
Horton D18-20D - Horton D18-20D - Horton D18-20D - A	9,600.00	7,195.15	284.54	206.92	3.666	ES
Horton D18-20D - Horton D18-20D - Horton D18-20D - A	9,700.00	7,193.76	305.22	209.76	3.197	SF
Horton D18-22D - Horton D18-22D - Horton D18-22D - A	9,542.90	6,924.73	2,212.33	2,150.13	35.568	CC, ES
Horton D18-22D - Horton D18-22D - Horton D18-22D - A	10,100.00	6,922.59	2,281.40	2,214.55	34.128	SF
LSWD 1 - LSWD 1 - LSWD 1 - As Drilled	11,815.94	6,855.00	589.07	480.64	5.433	CC, ES, SF
Mick D18-03 - Mick D18-03 - Mick D18-03 - As Drilled	11,858.36	6,869.23	428.75	356.03	5.896	CC, ES, SF
Mick D18-04 - Wellbore #1 - Wellbore #1- As Drilled	11,820.86	6,846.38	1,095.16	1,022.74	15.122	CC, ES
Mick D18-04 - Wellbore #1 - Wellbore #1- As Drilled	11,900.00	6,846.26	1,098.01	1,025.12	15.063	SF
Mick D18-05 - Wellbore #1 - Wellbore #1- As Drilled	10,531.51	6,806.95	1,071.70	1,008.30	16.903	CC, ES
Mick D18-05 - Wellbore #1 - Wellbore #1- As Drilled	10,600.00	6,807.02	1,073.88	1,010.09	16.832	SF
Mick D18-06 - Mick D18-06 - Mick D18-06 - As Drilled	10,522.76	6,855.49	396.14	332.60	6.234	CC, ES, SF
Mick D18-11 - Mick D18-11 - Mick D18-11 - As Drilled	8,811.13	6,847.65	228.35	174.74	4.260	CC, ES, SF
Mick D18-12 - Wellbore #1 - Wellbore #1- As Drilled	8,995.51	6,818.56	885.06	830.66	16.271	CC
Mick D18-12 - Wellbore #1 - Wellbore #1- As Drilled	9,000.00	6,818.60	885.07	830.65	16.264	ES
Mick D18-12 - Wellbore #1 - Wellbore #1- As Drilled	9,100.00	6,819.61	891.20	836.35	16.247	SF
Mick D18-13 - Wellbore #1 - Wellbore #1- As Drilled	7,757.38	6,874.83	964.50	914.85	19.427	CC, ES
Mick D18-13 - Wellbore #1 - Wellbore #1- As Drilled	7,800.00	6,874.65	965.44	915.68	19.400	SF
Mick D18-14 - Mick D18-14 - Mick D18-14 - As Drilled	7,657.99	6,852.56	237.70	188.37	4.819	CC, ES, SF
Mick D18-19 - Mick D18-19 - Mick D18-19 - As Drilled	11,197.13	6,805.55	239.40	171.54	3.527	CC
Mick D18-19 - Mick D18-19 - Mick D18-19 - As Drilled	11,200.00	6,805.56	239.42	171.53	3.527	ES, SF
Mick D18-25 - Mick D18-25 - Mick D18-25 - As Drilled	8,285.20	6,803.19	281.70	230.49	5.501	CC, ES, SF
Scooter D18-02 - Scooter D18-02 - Scooter D18-02 - As	11,607.43	6,821.20	1,455.18	1,384.40	20.561	CC, ES
Scooter D18-02 - Scooter D18-02 - Scooter D18-02 - As	11,800.00	6,824.21	1,467.86	1,396.03	20.433	SF
Scooter D18-07 - Scooter D18-07 - Scooter D18-07 - As	10,297.21	6,848.34	1,466.21	1,404.11	23.609	CC
Scooter D18-07 - Scooter D18-07 - Scooter D18-07 - As	10,300.00	6,848.25	1,466.22	1,404.09	23.603	ES
Scooter D18-07 - Scooter D18-07 - Scooter D18-07 - As	10,500.00	6,841.10	1,480.15	1,417.01	23.442	SF
Scooter D18-10 - Scooter D18-10 - Scooter D18-10 - As	8,812.63	6,842.86	1,491.38	1,437.78	27.825	CC, ES
Scooter D18-10 - Scooter D18-10 - Scooter D18-10 - As	9,000.00	6,840.65	1,503.10	1,448.68	27.621	SF
Scooter D18-15 - Scooter D18-15 - Scooter D18-15 - As	7,666.72	6,792.75	1,597.58	1,548.47	32.528	CC, ES
Scooter D18-15 - Scooter D18-15 - Scooter D18-15 - As	7,800.00	6,790.81	1,603.13	1,553.68	32.421	SF
Scooter D18-16 - Scooter D18-16 - Scooter D18-16 - As	7,706.04	6,811.00	2,849.35	2,764.23	33.475	CC, ES
Scooter D18-16 - Scooter D18-16 - Scooter D18-16 - As	8,000.00	6,811.00	2,864.47	2,778.51	33.321	SF
Scooter D18-17 JI - Scooter D18-17 JI - Scooter D18-17	10,889.84	6,942.04	2,216.54	2,149.41	33.019	CC
Scooter D18-17 JI - Scooter D18-17 JI - Scooter D18-17	10,900.00	6,942.08	2,216.56	2,149.38	32.995	ES
Scooter D18-17 JI - Scooter D18-17 JI - Scooter D18-17	11,200.00	6,943.09	2,238.13	2,169.56	32.639	SF
Scooter D18-1JI - Scooter D18-1JI - Scooter D18-1JI - A	11,415.32	7,145.49	2,977.46	2,902.46	39.702	CC
Scooter D18-1JI - Scooter D18-1JI - Scooter D18-1JI - A	11,500.00	7,146.28	2,978.66	2,902.16	38.938	ES
Scooter D18-1JI - Scooter D18-1JI - Scooter D18-1JI - A	12,700.00	7,157.20	3,264.84	3,166.58	33.228	SF
Scooter D18-4J - Scooter D18-4J - Scooter D18-4J - As	8,557.71	6,929.66	2,487.16	2,434.48	47.209	CC, ES
Scooter D18-4J - Scooter D18-4J - Scooter D18-4J - As	9,000.00	6,929.89	2,526.18	2,471.59	46.272	SF
Scooter D18-78-1HN - Original Drilling - Original Drilling -	12,182.30	6,887.03	598.24	526.89	8.385	CC, ES
Scooter D18-78-1HN - Original Drilling - Original Drilling -	12,200.00	6,887.22	598.50	527.05	8.376	SF
Scooter D18-78-1HN - Original Drilling - ST01 - Original D	7,565.20	11,301.83	608.76	504.52	5.840	ES, SF
Scooter D18-78-1HN - Original Drilling - ST01 - Original D	10,458.29	8,405.45	582.45	510.81	8.130	CC
Scooter D18-79-1HN - Original Drilling - Original Drilling -	7,500.00	11,265.00	1,263.35	1,157.78	11.967	SF
Scooter D18-79-1HN - Original Drilling - Original Drilling -	8,300.00	10,517.52	1,251.22	1,155.88	13.124	ES
Scooter D18-79-1HN - Original Drilling - Original Drilling -	11,510.01	7,317.59	1,227.75	1,157.33	17.436	CC
Scooter D18-79HN - Original Drilling - Original Drilling - A	7,500.00	11,410.00	1,685.62	1,579.98	15.956	SF
Scooter D18-79HN - Original Drilling - Original Drilling - A	11,896.32	7,056.37	1,645.26	1,573.69	22.987	CC
Scooter D18-79HN - Original Drilling - Original Drilling - A	11,900.00	7,054.23	1,645.27	1,573.67	22.981	ES
Scooter D18-8JI - Scooter D18-8JI - Scooter D18-8JI - A	10,337.80	7,036.73	2,858.37	2,782.59	37.718	CC, ES
Scooter D18-8JI - Scooter D18-8JI - Scooter D18-8JI - A	10,900.00	7,034.97	2,913.13	2,833.81	36.725	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 D18-767
Project:	Mustang	TVD Reference:	Well @ 4817.00ft
Reference Site:	D Section 19	MD Reference:	Well @ 4817.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Independence D18-767	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Independence D18-767	Database:	EDMP
Reference Design:	Plan #2	Offset TVD Reference:	Reference 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	9,161.71	6,831.70	2,993.52	2,936.20	52.225	CC, ES
Scooter D18-9JI - Scooter D18-9JI - Scooter D18-9JI - A	9,900.00	6,828.99	3,083.22	3,021.69	50.110	SF
Shianne D18-29D - Shianne D18-29D - Shianne D18-29D	12,254.97	6,932.34	257.14	179.21	3.300	CC, ES, SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Independence D18-767
Project:	Mustang	TVD Reference:	Well @ 4817.00ft
Reference Site:	D Section 19	MD Reference:	Well @ 4817.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Independence D18-767	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Independence D18-767	Database:	EDMP
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
D Section 19						
Butterball 13-19 - Butterball 13-19 - Butterball 13-19 - As	6,256.65	6,332.70	2,989.16	2,945.01	67.700	CC, ES
Butterball 13-19 - Butterball 13-19 - Butterball 13-19 - As	6,550.00	6,598.71	3,052.69	3,006.59	66.221	SF
Butterball 14-19 - Butterball 14-19 - Butterball 14-19 - As	6,236.43	6,229.90	4,264.37	4,220.62	97.469	CC, ES
Butterball 14-19 - Butterball 14-19 - Butterball 14-19 - As	6,600.00	6,620.47	4,360.84	4,314.50	94.094	SF
Butterball 23-19 - Butterball 23-19 - Butterball 23-19 - As	100.00	44.83	2,854.31	2,854.11	10,000.000	CC
Butterball 23-19 - Butterball 23-19 - Butterball 23-19 - As	6,239.16	6,230.21	2,897.00	2,853.30	66.290	ES
Butterball 23-19 - Butterball 23-19 - Butterball 23-19 - As	6,500.00	6,465.70	2,950.60	2,905.17	64.944	SF
Butterball B04-19 - Butterball B04-19 - Butterball B04-19	6,244.19	6,275.32	3,776.03	3,732.12	85.990	CC
Butterball B04-19 - Butterball B04-19 - Butterball B04-19	6,250.00	6,282.81	3,776.05	3,732.10	85.899	ES
Butterball B04-19 - Butterball B04-19 - Butterball B04-19	6,550.00	6,531.21	3,843.93	3,798.07	83.821	SF
Butterball D18-75HN - Original Drilling - Original Drilling -	11,936.85	11,568.61	910.86	770.74	6.500	CC
Butterball D18-75HN - Original Drilling - Original Drilling -	12,400.00	12,025.92	919.20	768.05	6.082	ES
Butterball D18-75HN - Original Drilling - Original Drilling -	12,500.00	12,107.00	924.31	771.24	6.039	SF
Butterball D19-17D - Butterball D19-17D - Butterball D19	986.06	962.12	583.95	576.91	82.949	CC
Butterball D19-17D - Butterball D19-17D - Butterball D19	1,200.00	1,175.63	584.36	575.14	63.375	ES
Butterball D19-17D - Butterball D19-17D - Butterball D19	8,100.00	7,452.69	3,187.87	3,068.67	26.744	SF
Butterball D19-18D - Butterball D19-18D - Butterball D19	1,467.20	1,442.13	554.56	544.31	54.087	CC
Butterball D19-18D - Butterball D19-18D - Butterball D19	1,700.00	1,673.57	555.56	543.08	44.515	ES
Butterball D19-18D - Butterball D19-18D - Butterball D19	6,350.00	6,407.30	867.98	818.97	17.708	SF
Butterball D19-19D - Butterball D19-19D - Butterball D19	707.92	680.94	575.66	571.14	127.509	CC
Butterball D19-19D - Butterball D19-19D - Butterball D19	800.00	764.64	576.22	571.09	112.211	ES
Butterball D19-19D - Butterball D19-19D - Butterball D19	6,350.00	6,394.45	1,228.34	1,183.43	27.347	SF
Butterball D19-20D - Butterball D19-20D - Butterball D19	2,345.14	2,436.01	2,096.71	2,075.97	101.084	CC
Butterball D19-20D - Butterball D19-20D - Butterball D19	2,400.00	2,487.86	2,097.20	2,075.83	98.161	ES
Butterball D19-20D - Butterball D19-20D - Butterball D19	6,400.00	6,491.52	2,167.09	2,111.57	39.036	SF
Butterball D19-22D - Wellbore #1 - Wellbore #1 - As Drill	6,237.78	6,292.77	2,999.60	2,949.52	59.895	CC, ES
Butterball D19-22D - Wellbore #1 - Wellbore #1 - As Drill	6,550.00	6,570.49	3,054.52	3,002.59	58.822	SF
Butterball D19-75HN - Original Drilling - Original Drilling -	3,276.69	3,272.98	1,213.42	1,191.50	55.352	CC
Butterball D19-75HN - Original Drilling - Original Drilling -	6,532.74	6,539.76	1,226.50	1,181.84	27.459	ES
Butterball D19-75HN - Original Drilling - Original Drilling -	6,700.00	6,646.49	1,236.07	1,190.49	27.117	SF
Butterball D24-19 - Butterball D24-19 - Butterball D24-19	2,221.95	2,217.18	4,092.27	4,076.93	266.793	CC, ES
Butterball D24-19 - Butterball D24-19 - Butterball D24-19	6,600.00	6,568.31	4,235.85	4,189.73	91.852	SF
Butterball H24-69HN - Original Drilling - Original Drilling -	7,139.85	8,256.98	70.63	44.03	2.656	CC
Butterball H24-69HN - Original Drilling - Original Drilling -	7,150.00	8,257.44	71.43	40.44	2.305	ES
Butterball H24-69HN - Original Drilling - Original Drilling -	7,200.00	8,259.76	94.85	42.88	1.825	SF
Champlin 366 Amoco F 1 - Wellbore #1 - Wellbore #1 - A	2,324.13	2,437.89	3,841.11	3,824.68	233.704	CC
Champlin 366 Amoco F 1 - Wellbore #1 - Wellbore #1 - A	6,234.50	6,202.42	3,854.53	3,810.94	88.419	ES
Champlin 366 Amoco F 1 - Wellbore #1 - Wellbore #1 - A	6,600.00	6,535.85	3,941.09	3,895.11	85.705	SF
Dechant D19-32D - Dechant D19-32D - Dechant D19-32	202.04	174.04	551.60	550.67	596.051	CC
Dechant D19-32D - Dechant D19-32D - Dechant D19-32	400.00	366.32	552.48	550.17	239.508	ES
Dechant D19-32D - Dechant D19-32D - Dechant D19-32	13,014.64	13,014.64	8,581.54	8,368.77	40.332	SF
Graznak 01-19 - Graznak 01-19 - Graznak 01-19 - As Dr	2,200.00	2,166.00	3,576.03	3,549.47	134.663	CC
Graznak 01-19 - Graznak 01-19 - Graznak 01-19 - As Dr	6,232.17	6,196.38	3,616.86	3,540.69	47.484	ES
Graznak 01-19 - Graznak 01-19 - Graznak 01-19 - As Dr	6,550.00	6,501.17	3,693.38	3,613.46	46.212	SF
Higgins D19-720 - Original Drilling - Original Drilling - As	6,921.04	6,801.12	2,782.49	2,738.87	63.788	CC, ES
Higgins D19-720 - Original Drilling - Original Drilling - As	7,200.00	6,875.20	2,795.17	2,751.02	63.307	SF
Higgins D19-720 - Sidetrack Curve/Horizontal - ST01 - A	6,853.78	6,732.68	2,792.35	2,748.94	64.324	CC, ES
Higgins D19-720 - Sidetrack Curve/Horizontal - ST01 - A	7,150.00	6,753.36	2,806.42	2,762.48	63.875	SF
Independence D18-717 - Independence D18-717 - Plan #	2,200.00	2,183.00	2,407.65	2,392.40	157.922	CC, ES
Independence D18-717 - Independence D18-717 - Plan #	17,547.18	17,345.30	4,429.58	4,245.08	24.008	SF
Independence D18-725 - Independence D18-725 - Plan #	2,200.00	2,183.00	2,385.65	2,370.40	156.479	CC, ES
Independence D18-725 - Independence D18-725 - Plan #	17,400.00	17,442.26	3,661.20	3,476.71	19.845	SF
Independence D18-732 - Independence D18-732 - Plan #	12,637.09	12,859.86	2,251.39	2,140.92	20.380	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 D18-767
Project:	Mustang	TVD Reference:	Well @ 4817.00ft
Reference Site:	D Section 19	MD Reference:	Well @ 4817.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Independence D18-767	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Independence D18-767	Database:	EDMP
Reference Design:	Plan #2	Offset TVD Reference:	Reference 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 D18-732 - Independence D18-732 - Plan #	12,700.00	12,922.77	2,252.08	2,140.66	20.212	ES
Independence D18-732 - Independence D18-732 - Plan #	17,300.00	17,428.40	2,906.56	2,722.16	15.762	SF
Independence D18-739 - Independence D18-739 - Plan #	12,763.73	13,127.45	1,786.24	1,673.02	15.776	CC
Independence D18-739 - Independence D18-739 - Plan #	12,800.00	13,163.73	1,786.47	1,672.70	15.702	ES
Independence D18-739 - Independence D18-739 - Plan #	17,300.00	17,569.77	2,173.10	1,987.09	11.683	SF
Independence D18-744 - Independence D18-744 - Plan #	6,903.84	7,010.40	1,305.67	1,256.83	26.737	CC
Independence D18-744 - Independence D18-744 - Plan #	13,000.00	13,393.98	1,314.95	1,198.44	11.286	ES
Independence D18-744 - Independence D18-744 - Plan #	17,300.00	17,638.20	1,439.83	1,253.00	7.707	SF
Independence D18-759 - Independence D18-759 - Plan #	2,200.00	2,199.00	22.00	6.70	1.438	Level 3, CC, ES, SF
Independence D30-711 - Independence D30-711 OH - As	2,098.89	2,080.00	2,433.19	2,419.23	174.251	CC
Independence D30-711 - Independence D30-711 OH - As	2,200.00	2,180.02	2,433.26	2,418.90	169.489	ES
Independence D30-711 - Independence D30-711 OH - As	8,400.00	6,430.06	3,524.75	3,478.76	76.640	SF
Independence D30-718 - Independence D30-718 OH - A	0.00	0.00	2,417.41			
Independence D30-718 - Independence D30-718 OH - A	2,300.00	2,280.94	2,429.41	2,414.37	161.494	ES
Independence D30-718 - Independence D30-718 OH - A	8,000.00	6,668.96	3,034.97	2,989.96	67.427	SF
Independence D30-724 - Independence D30-724 OH - A	2,191.30	2,170.36	2,391.96	2,377.53	165.799	CC
Independence D30-724 - Independence D30-724 OH - A	2,200.00	2,178.96	2,391.96	2,377.50	165.419	ES
Independence D30-724 - Independence D30-724 OH - A	7,700.00	6,815.00	2,607.55	2,563.20	58.785	SF
Independence D30-731 - Independence D30-731 OH - A	6,868.31	7,449.21	2,228.68	2,185.39	51.479	CC, ES
Independence D30-731 - Independence D30-731 OH - A	7,150.00	7,232.08	2,235.44	2,191.77	51.187	SF
Independence D30-737 - Independence D30-737 OH - A	6,919.68	7,572.00	1,722.23	1,678.12	39.038	CC, ES
Independence D30-737 - Independence D30-737 OH - A	7,050.00	7,491.87	1,725.52	1,681.22	38.951	SF
Independence D30-743 - Independence D30-743 OH - A	6,854.05	7,582.87	1,388.10	1,343.59	31.186	CC, ES
Independence D30-743 - Independence D30-743 OH - A	6,900.00	7,546.65	1,388.53	1,343.99	31.180	SF
Independence D30-758 - Independence D30-758 OH - A	1,892.66	1,905.68	151.74	138.74	11.668	CC
Independence D30-758 - Independence D30-758 OH - A	2,100.00	2,112.67	152.11	138.12	10.879	ES
Independence D30-758 - Independence D30-758 OH - A	2,500.15	2,492.04	163.36	147.82	10.511	SF
Independence D30-765 - Independence D30-765 OH - A	7,372.62	7,036.67	73.98	29.69	1.671	CC, ES, SF
Independence D30-770 - Independence D30-770 OH - A	1,908.46	1,908.48	147.24	134.17	11.268	CC
Independence D30-770 - Independence D30-770 OH - A	2,100.00	2,099.23	147.46	133.52	10.584	ES
Independence D30-770 - Independence D30-770 OH - A	7,100.00	7,213.19	324.10	280.28	7.396	SF
Independence D30-777 - Independence D30-777 - As-Dr	825.75	825.75	153.44	148.02	28.325	CC
Independence D30-777 - Independence D30-777 - As-Dr	2,200.00	2,198.59	154.26	139.91	10.754	ES
Independence D30-777 - Independence D30-777 - As-Dr	2,625.82	2,603.79	160.03	143.95	9.954	SF
Independence State D30-784 - Independence State D30	1,946.29	1,946.34	153.00	139.69	11.488	CC
Independence State D30-784 - Independence State D30	2,000.00	1,998.59	153.22	139.65	11.284	ES
Independence State D30-784 - Independence State D30	2,100.00	2,093.80	155.53	141.59	11.154	SF
LDS White D19-10 - LDS White D19-10 - LDS White D19	6,002.41	5,959.28	3,072.14	3,030.18	73.217	CC
LDS White D19-10 - LDS White D19-10 - LDS White D19	6,232.47	6,190.67	3,072.34	3,028.75	70.484	ES
LDS White D19-10 - LDS White D19-10 - LDS White D19	6,550.00	6,493.47	3,143.12	3,097.39	68.732	SF
LDS White D19-15 - LDS White D19-15 - LDS White D19	100.00	48.55	4,386.76	4,386.54	10,000.000	CC
LDS White D19-15 - LDS White D19-15 - LDS White D19	6,240.63	6,255.77	4,417.74	4,373.94	100.858	ES
LDS White D19-15 - LDS White D19-15 - LDS White D19	6,600.00	6,569.99	4,512.55	4,466.44	97.876	SF
LDS White D19-16 - Wellbore #1 - Wellbore #1 - As Drill	1,882.46	1,843.48	4,911.47	4,898.68	383.953	CC
LDS White D19-16 - Wellbore #1 - Wellbore #1 - As Drill	6,232.84	6,196.93	4,938.72	4,895.15	113.361	ES
LDS White D19-16 - Wellbore #1 - Wellbore #1 - As Drill	6,700.00	6,624.46	5,078.72	5,032.17	109.083	SF
Mile High 02-19 - Wellbore #1 - Wellbore #1 - As Drilled	4,480.70	4,435.89	2,149.12	2,117.96	68.961	CC
Mile High 02-19 - Wellbore #1 - Wellbore #1 - As Drilled	4,600.00	4,537.76	2,149.79	2,117.84	67.297	ES
Mile High 02-19 - Wellbore #1 - Wellbore #1 - As Drilled	6,550.00	6,483.31	2,219.74	2,174.09	48.635	SF
Sean D19-09 - Wellbore #1 - Wellbore #1 - As Drilled	100.00	47.96	3,979.19	3,978.98	10,000.000	CC
Sean D19-09 - Wellbore #1 - Wellbore #1 - As Drilled	2,200.00	2,123.10	3,981.46	3,966.56	267.239	ES
Sean D19-09 - Wellbore #1 - Wellbore #1 - As Drilled	6,700.00	6,608.39	4,144.74	4,098.24	89.124	SF
Turk Blue D19-02J - Turk Blue D19-02J - Turk Blue D19-	307.54	277.54	527.45	525.78	316.701	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 D18-767
Project:	Mustang	TVD Reference:	Well @ 4817.00ft
Reference Site:	D Section 19	MD Reference:	Well @ 4817.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Independence D18-767	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Independence D18-767	Database:	EDMP
Reference Design:	Plan #2	Offset TVD Reference:	Reference 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 D19-02J - Turk Blue D19-02J - Turk Blue D19-02J	6,233.30	6,203.74	548.62	505.02	12.583	ES
Turk Blue D19-02J - Turk Blue D19-02J - Turk Blue D19-02J	6,300.00	6,272.74	551.77	507.68	12.517	SF
Turk Blue D19-04 - Turk Blue D19-04 - Turk Blue D19-04	3,524.44	3,512.12	1,042.78	1,018.27	42.546	CC
Turk Blue D19-04 - Turk Blue D19-04 - Turk Blue D19-04	6,250.00	6,234.73	1,046.80	1,003.04	23.922	ES
Turk Blue D19-04 - Turk Blue D19-04 - Turk Blue D19-04	6,650.00	6,609.37	1,066.41	1,020.04	22.995	SF
Turk Blue D19-05 - Turk Blue D19-05 - Turk Blue D19-05	6,270.73	6,350.51	2,043.05	1,998.86	46.226	CC, ES
Turk Blue D19-05 - Turk Blue D19-05 - Turk Blue D19-05	6,500.00	6,562.19	2,079.15	2,033.40	45.452	SF
Turk Blue D19-06 - Turk Blue D19-06 - Turk Blue D19-06	2,206.32	2,167.89	1,615.19	1,600.12	107.177	CC, ES
Turk Blue D19-06 - Turk Blue D19-06 - Turk Blue D19-06	6,400.00	6,365.77	1,696.77	1,652.03	37.920	SF
Turk White D19-01 - Wellbore #1 - Wellbore #1 - As Drill	6,302.17	6,277.18	2,961.71	2,917.63	67.191	CC
Turk White D19-01 - Wellbore #1 - Wellbore #1 - As Drill	6,350.00	6,319.89	2,961.88	2,917.48	66.715	ES
Turk White D19-01 - Wellbore #1 - Wellbore #1 - As Drill	7,000.00	6,780.80	3,013.92	2,966.11	63.041	SF
Turk White D19-02 - Wellbore #1 - Wellbore #1 - As Drill	2,253.27	2,206.51	1,452.77	1,437.36	94.303	CC
Turk White D19-02 - Wellbore #1 - Wellbore #1 - As Drill	2,300.00	2,249.86	1,452.92	1,437.20	92.405	ES
Turk White D19-02 - Wellbore #1 - Wellbore #1 - As Drill	6,800.00	6,671.97	1,531.03	1,484.05	32.590	SF
Turk White D19-08 - Wellbore #1 - Wellbore #1 - As Drill	2,049.45	2,003.54	3,253.40	3,239.45	233.288	CC
Turk White D19-08 - Wellbore #1 - Wellbore #1 - As Drill	2,200.00	2,142.43	3,253.70	3,238.73	217.376	ES
Turk White D19-08 - Wellbore #1 - Wellbore #1 - As Drill	6,700.00	6,633.19	3,374.05	3,327.48	72.441	SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Independence D18-767
Project:	Mustang	TVD Reference:	Well @ 4817.00ft
Reference Site:	D Section 19	MD Reference:	Well @ 4817.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Independence D18-767	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Independence D18-767	Database:	EDMP
Reference Design:	Plan #2	Offset TVD Reference:	Reference 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	2,200.00	2,151.00	4,596.31	4,569.89	173.941	CC
Bohlender D20-2J - Wellbore #1 - No Surveys	6,250.00	6,199.21	4,617.39	4,541.14	60.560	ES
Bohlender D20-2J - Wellbore #1 - No Surveys	6,950.00	6,756.49	4,724.66	4,641.51	56.824	SF
Bohlender D20-3 - Wellbore #1 - Gyro Surveys	6,206.86	6,163.09	5,393.62	5,350.25	124.364	CC
Bohlender D20-3 - Wellbore #1 - Gyro Surveys	6,300.00	6,240.57	5,393.94	5,349.97	122.672	ES
Bohlender D20-3 - Wellbore #1 - Gyro Surveys	8,700.00	6,794.51	5,857.75	5,805.55	112.207	SF
Bohlender D20-4 (P&A) - Wellbore #1 - No Surveys	2,200.00	2,153.00	4,025.23	3,974.52	79.372	CC
Bohlender D20-4 (P&A) - Wellbore #1 - No Surveys	6,600.00	6,531.09	4,038.61	3,884.68	26.236	ES
Bohlender D20-4 (P&A) - Wellbore #1 - No Surveys	7,100.00	6,806.33	4,074.23	3,913.62	25.366	SF
Bohlender D20-6 - Wellbore#1 - Gyro Surveys	5,704.57	5,651.86	5,615.74	5,575.97	141.197	CC
Bohlender D20-6 - Wellbore#1 - Gyro Surveys	5,900.00	5,811.21	5,616.71	5,575.68	136.910	ES
Bohlender D20-6 - Wellbore#1 - Gyro Surveys	7,050.00	6,733.48	5,768.88	5,721.17	120.924	SF
Butterball D19-27D - Butterball D19-27D - Butterball D19	7,189.87	7,050.25	2,178.30	2,127.50	42.882	CC
Butterball D19-27D - Butterball D19-27D - Butterball D19	7,200.00	7,050.71	2,178.32	2,127.46	42.830	ES
Butterball D19-27D - Butterball D19-27D - Butterball D19	8,500.00	7,032.92	2,541.71	2,473.49	37.260	SF
Duncan D20-1 (P&A) - Wellbore #1 - No Surveys	2,200.00	2,152.00	8,195.54	8,144.84	161.668	CC
Duncan D20-1 (P&A) - Wellbore #1 - No Surveys	6,650.00	6,570.85	8,209.13	8,054.25	53.005	ES
Duncan D20-1 (P&A) - Wellbore #1 - No Surveys	7,232.17	6,819.00	8,239.44	8,078.36	51.150	SF
Duncan D20-10 - Wellbore #1 - Gyro Surveys	2,231.88	2,247.44	7,738.26	7,722.80	500.562	CC
Duncan D20-10 - Wellbore #1 - Gyro Surveys	6,250.00	6,210.12	7,746.83	7,703.14	177.303	ES
Duncan D20-10 - Wellbore #1 - Gyro Surveys	7,000.00	6,785.02	7,926.18	7,878.38	165.803	SF
Duncan D20-11 (SI) - Wellbore #1 - No Surveys	2,200.00	2,158.00	6,139.93	6,113.44	231.821	CC
Duncan D20-11 (SI) - Wellbore #1 - No Surveys	6,250.00	6,206.21	6,168.87	6,092.56	80.843	ES
Duncan D20-11 (SI) - Wellbore #1 - No Surveys	6,950.00	6,763.49	6,342.77	6,259.59	76.253	SF
Duncan D20-12 (SI) - Wellbore #1 - No Surveys	2,200.00	2,156.00	4,973.12	4,946.66	187.891	CC
Duncan D20-12 (SI) - Wellbore #1 - No Surveys	6,250.00	6,204.21	5,006.34	4,930.05	65.622	ES
Duncan D20-12 (SI) - Wellbore #1 - No Surveys	6,800.00	6,681.86	5,144.91	5,062.76	62.630	SF
Duncan D20-13 (SI) - Wellbore #1 - No Surveys	2,200.00	2,161.00	5,950.53	5,924.01	224.448	CC
Duncan D20-13 (SI) - Wellbore #1 - No Surveys	6,250.00	6,209.21	5,989.44	5,913.11	78.460	ES
Duncan D20-13 (SI) - Wellbore #1 - No Surveys	6,800.00	6,686.86	6,164.98	6,082.80	75.017	SF
Duncan D20-14 (SI) - Wellbore #1 - Gyro Surveys	2,217.84	2,203.30	6,344.39	6,329.15	416.088	CC, ES
Duncan D20-14 (SI) - Wellbore #1 - Gyro Surveys	6,900.00	6,609.56	6,583.65	6,536.72	140.294	SF
Duncan D20-15 (P&A) - Wellbore #1 - Gyro Surveys	5,948.77	5,920.68	7,801.00	7,759.38	187.405	CC
Duncan D20-15 (P&A) - Wellbore #1 - Gyro Surveys	6,232.17	6,162.12	7,801.85	7,758.37	179.442	ES
Duncan D20-15 (P&A) - Wellbore #1 - Gyro Surveys	6,950.00	6,761.68	8,006.53	7,958.91	168.134	SF
Duncan D20-16 (SI) - Wellbore #1 - Gyro Surveys	2,252.58	2,332.46	9,236.22	9,220.41	584.159	CC
Duncan D20-16 (SI) - Wellbore #1 - Gyro Surveys	6,250.00	6,300.00	9,239.68	9,195.70	210.089	ES
Duncan D20-16 (SI) - Wellbore #1 - Gyro Surveys	7,050.00	6,686.50	9,459.62	9,412.12	199.149	SF
Duncan D20-2 - Wellbore #1 - Gyro Surveys	2,060.18	2,003.70	6,750.25	6,736.27	482.845	CC
Duncan D20-2 - Wellbore #1 - Gyro Surveys	5,500.00	5,400.00	6,758.28	6,720.14	177.179	ES
Duncan D20-2 - Wellbore #1 - Gyro Surveys	10,600.00	6,806.26	7,974.06	7,913.83	132.403	SF
Duncan D20-7 - Wellbore #1 - Gyro Surveys	2,221.40	2,185.95	7,148.98	7,133.79	470.615	CC
Duncan D20-7 - Wellbore #1 - Gyro Surveys	6,300.00	6,292.96	7,162.99	7,118.87	162.350	ES
Duncan D20-7 - Wellbore #1 - Gyro Surveys	10,100.00	6,828.82	8,490.34	8,432.95	147.955	SF
Duncan D20-8 - Wellbore #1 - Gyro Surveys	1,914.14	1,885.34	8,234.11	8,221.04	630.373	CC
Duncan D20-8 - Wellbore #1 - Gyro Surveys	2,200.00	2,112.87	8,235.32	8,220.43	553.032	ES
Duncan D20-8 - Wellbore #1 - Gyro Surveys	10,700.00	6,821.58	9,942.67	9,882.61	165.535	SF
Duncan D20-9 (P&A) - Wellbore #1 - Gyro Surveys	6,232.77	6,188.16	8,666.25	8,622.70	199.011	CC
Duncan D20-9 (P&A) - Wellbore #1 - Gyro Surveys	6,250.00	6,209.25	8,666.32	8,622.64	198.396	ES
Duncan D20-9 (P&A) - Wellbore #1 - Gyro Surveys	9,400.00	6,832.09	9,947.92	9,893.76	183.685	SF
E Ranches (P&A) - Wellbore #1 - No Surveys	2,200.00	2,153.00	6,164.28	6,113.57	121.551	CC
E Ranches (P&A) - Wellbore #1 - No Surveys	6,250.00	6,201.21	6,201.23	6,055.06	42.423	ES
E Ranches (P&A) - Wellbore #1 - No Surveys	6,850.00	6,708.70	6,391.16	6,233.05	40.422	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 D18-767
Project:	Mustang	TVD Reference:	Well @ 4817.00ft
Reference Site:	D Section 19	MD Reference:	Well @ 4817.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Independence D18-767	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Independence D18-767	Database:	EDMP
Reference Design:	Plan #2	Offset TVD Reference:	Reference 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						
Guttersen 10-20 - Wellbore #1 - Gyro Surveys	6,124.95	6,071.30	7,078.24	7,035.49	165.565	CC
Guttersen 10-20 - Wellbore #1 - Gyro Surveys	6,232.17	6,164.03	7,078.43	7,034.97	162.878	ES
Guttersen 10-20 - Wellbore #1 - Gyro Surveys	6,900.00	6,685.71	7,207.25	7,160.24	153.322	SF
LDS D20-30D - LDS D20-30D - LDS D20-30D - As Drille	6,924.73	6,817.96	3,347.02	3,297.54	67.638	CC
LDS D20-30D - LDS D20-30D - LDS D20-30D - As Drille	6,950.00	6,829.45	3,347.10	3,297.50	67.484	ES
LDS D20-30D - LDS D20-30D - LDS D20-30D - As Drille	7,600.00	6,888.12	3,413.40	3,361.89	66.271	SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Independence D18-767
Project:	Mustang	TVD Reference:	Well @ 4817.00ft
Reference Site:	D Section 19	MD Reference:	Well @ 4817.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Independence D18-767	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Independence D18-767	Database:	EDMP
Reference Design:	Plan #2	Offset TVD Reference:	Reference 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 29						
Guttersen D29-31D - Wellbore #1 - Guttersen D29-31D	5,611.66	875.25	7,133.82	7,094.51	181.490	CC
Guttersen D29-31D - Wellbore #1 - Guttersen D29-31D	6,234.63	1,522.17	7,134.79	7,091.14	163.463	ES
Guttersen D29-31D - Wellbore #1 - Guttersen D29-31D	6,750.00	1,952.00	7,307.54	7,260.84	156.495	SF
Guttersen D29-33D - Wellbore #1 - Guttersen D29-33D -	872.00	863.00	8,383.87	8,379.31	1,838.730	CC
Guttersen D29-33D - Wellbore #1 - Guttersen D29-33D -	900.00	863.00	8,383.92	8,379.26	1,799.123	ES
Guttersen D29-33D - Wellbore #1 - Guttersen D29-33D -	6,900.00	6,930.99	9,808.52	9,759.33	199.428	SF
Guttersen D29-65HN - Guttersen D29-65HN OH - As-Dri	0.00	0.00	8,366.22			
Guttersen D29-65HN - Guttersen D29-65HN OH - As-Dri	6,241.54	6,348.00	8,378.26	8,335.72	196.936	ES
Guttersen D29-65HN - Guttersen D29-65HN OH - As-Dri	6,600.00	6,379.00	8,472.88	8,429.05	193.288	SF
Guttersen D29-67HN - Original Drilling - Original Drilling	1,563.54	1,552.65	7,197.86	7,188.49	768.517	CC
Guttersen D29-67HN - Original Drilling - Original Drilling	1,700.00	1,634.23	7,198.29	7,188.16	710.837	ES
Guttersen D29-67HN - Original Drilling - Original Drilling	6,550.00	6,221.01	7,318.53	7,275.18	168.834	SF
Guttersen D29-69HN - Original Drilling - Original Drilling	5,828.26	5,984.01	6,216.13	6,171.92	140.600	CC, ES
Guttersen D29-69HN - Original Drilling - Original Drilling	6,600.00	6,358.66	6,315.90	6,268.29	132.665	SF
Guttersen D29-722 - Guttersen D29-722 OH - As-Drilled	7,801.65	15,805.73	7,927.05	7,825.36	77.951	CC, ES
Guttersen D29-722 - Guttersen D29-722 OH - As-Drilled	11,400.00	17,570.00	8,188.63	8,056.24	61.854	SF
Guttersen D29-730 - Guttersen D29-730 OH - As-Drilled	9,093.20	16,851.85	7,322.16	7,206.35	63.224	CC
Guttersen D29-730 - Guttersen D29-730 OH - As-Drilled	9,100.00	16,853.13	7,322.20	7,206.34	63.201	ES
Guttersen D29-730 - Guttersen D29-730 OH - As-Drilled	11,100.00	17,403.00	7,500.35	7,370.54	57.778	SF
Guttersen D29-738 - Guttersen D29-738 OH - As-Drilled	7,314.62	15,459.45	6,674.21	6,577.54	69.037	CC
Guttersen D29-738 - Guttersen D29-738 OH - As-Drilled	9,100.00	17,200.14	6,674.93	6,557.93	57.050	ES
Guttersen D29-738 - Guttersen D29-738 OH - As-Drilled	11,000.00	17,760.00	6,840.87	6,709.64	52.130	SF
Guttersen D29-746 - Guttersen D29-746 OH - As-Drilled	9,611.02	17,334.00	6,118.48	5,995.25	49.651	CC, ES
Guttersen D29-746 - Guttersen D29-746 OH - As-Drilled	10,700.00	17,334.00	6,214.63	6,086.19	48.384	SF
Guttersen D29-754 - Guttersen D29-754 OH - As-Drilled	9,609.21	17,705.00	5,511.51	5,387.10	44.301	CC, ES
Guttersen D29-754 - Guttersen D29-754 OH - As-Drilled	10,400.00	17,705.00	5,567.95	5,439.91	43.487	SF
Guttersen D29-770 - Guttersen D29-770 OH - As-Drilled	8,619.24	16,406.29	4,888.56	4,778.30	44.339	CC
Guttersen D29-770 - Guttersen D29-770 OH - As-Drilled	8,700.00	16,441.00	4,888.86	4,777.95	44.081	ES
Guttersen D29-770 - Guttersen D29-770 OH - As-Drilled	10,300.00	17,356.00	4,998.42	4,872.20	39.602	SF
Guttersen D29-778 - Guttersen D29-778 OH - As-Drilled	8,392.57	16,463.15	4,281.54	4,172.69	39.334	CC
Guttersen D29-778 - Guttersen D29-778 OH - As-Drilled	9,610.04	17,682.00	4,292.85	4,168.15	34.425	ES
Guttersen D29-778 - Guttersen D29-778 OH - As-Drilled	10,100.00	17,682.00	4,320.72	4,193.79	34.039	SF
Guttersen D29-786 - Guttersen D29-786 OH - As-Drilled	7,047.90	15,003.27	3,703.56	3,609.67	39.448	CC
Guttersen D29-786 - Guttersen D29-786 OH - As-Drilled	7,300.00	15,221.34	3,704.30	3,608.34	38.602	ES
Guttersen D29-786 - Guttersen D29-786 OH - As-Drilled	10,000.00	17,558.00	3,757.65	3,632.21	29.955	SF
Guttersen D29-99HZ - Guttersen D29-99HZ OH - As-Dril	6,164.90	6,210.29	9,690.19	9,647.28	225.848	CC
Guttersen D29-99HZ - Guttersen D29-99HZ OH - As-Dril	6,200.00	6,215.52	9,690.29	9,647.25	225.129	ES
Guttersen D29-99HZ - Guttersen D29-99HZ OH - As-Dril	6,700.00	6,290.00	9,852.48	9,807.69	219.990	SF
Guttersen D30-68-1HN - Original Drilling - Original Drillin	6,299.41	5,289.48	5,921.70	5,802.79	49.802	CC
Guttersen D30-68-1HN - Original Drilling - Original Drillin	6,300.00	5,289.48	5,921.70	5,802.79	49.800	ES
Guttersen D30-68-1HN - Original Drilling - Original Drillin	6,450.00	5,289.27	5,941.30	5,821.65	49.656	SF
Guttersen D30-69-1HN - Original Drilling - Original Drillin	6,307.13	5,499.59	5,224.70	5,100.50	42.065	CC, ES
Guttersen D30-69-1HN - Original Drilling - Original Drillin	6,400.00	5,499.00	5,232.28	5,107.60	41.966	SF
Guttersen State D29-714 - Guttersen State D29-714 OH	9,603.55	17,529.00	8,528.46	8,404.39	68.741	CC
Guttersen State D29-714 - Guttersen State D29-714 OH	9,700.00	17,529.00	8,529.01	8,404.38	68.437	ES
Guttersen State D29-714 - Guttersen State D29-714 OH	11,700.00	17,529.00	8,782.36	8,647.88	65.306	SF
Guttersen State Y05-719 - Guttersen State Y05-719 - Pla						Out of range
Guttersen Y05-726 - Guttersen Y05-726 - Plan #4						Out of range
Guttersen Y05-734 - Guttersen Y05-734 - As-Drilled						Out of range
Guttersen Y05-749 - Guttersen Y05-749 OH - As-Drilled	0.00	0.00	9,089.73			
Guttersen Y05-749 - Guttersen Y05-749 OH - As-Drilled	2,200.00	2,180.00	9,093.59	9,079.24	633.887	ES
Guttersen Y05-749 - Guttersen Y05-749 OH - As-Drilled	6,950.00	5,433.85	9,935.69	9,897.47	259.943	SF
Guttersen Y05-756 - Guttersen Y05-756 - As-Drilled	2,091.98	2,085.00	9,065.40	9,051.47	651.010	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 D18-767
Project:	Mustang	TVD Reference:	Well @ 4817.00ft
Reference Site:	D Section 19	MD Reference:	Well @ 4817.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Independence D18-767	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Independence D18-767	Database:	EDMP
Reference Design:	Plan #2	Offset TVD Reference:	Reference 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 29						
Guttersen Y05-756 - Guttersen Y05-756 - As-Drilled	2,200.00	2,178.93	9,065.59	9,051.25	632.078	ES
Guttersen Y05-756 - Guttersen Y05-756 - As-Drilled	6,550.00	6,550.00	9,483.13	9,442.38	232.723	SF
Guttersen Y05-771 - Guttersen Y05-771 - As-Drilled	1,970.44	1,968.47	8,294.15	8,280.70	616.741	CC
Guttersen Y05-771 - Guttersen Y05-771 - As-Drilled	2,200.00	2,200.00	8,294.76	8,280.39	577.394	ES
Guttersen Y05-771 - Guttersen Y05-771 - As-Drilled	7,100.00	5,635.45	9,401.21	9,362.00	239.818	SF
Guttersen Y05-779 - Guttersen Y05- 779 - As-Drilled	0.00	0.00	8,277.90			
Guttersen Y05-779 - Guttersen Y05- 779 - As-Drilled	2,208.15	2,228.52	8,282.81	8,268.40	574.689	ES
Guttersen Y05-779 - Guttersen Y05- 779 - As-Drilled	6,100.00	6,100.00	8,481.46	8,444.30	228.260	SF
Guttersen Y05-786 - Guttersen Y05-786 - As-Drilled	2,210.49	2,237.21	8,252.59	8,238.18	572.672	CC, ES
Guttersen Y05-786 - Guttersen Y05-786 - As-Drilled	6,700.00	6,700.00	8,658.24	8,616.25	206.227	SF
Jessie D29-1J (PR) - Wellbore #1 - Gyro Surveys	2,214.23	2,217.37	9,120.65	9,105.37	597.142	CC
Jessie D29-1J (PR) - Wellbore #1 - Gyro Surveys	6,232.17	6,182.01	9,126.55	9,083.05	209.776	ES
Jessie D29-1J (PR) - Wellbore #1 - Gyro Surveys	6,950.00	6,704.84	9,364.65	9,317.29	197.728	SF
Jessie D29-4J (PA) - Wellbore #1 - Gyro Surveys						Out of range
Kate Red D29-03J - Kate Red D29-03J - Kate Red D29-0	2,217.49	2,250.84	9,485.48	9,470.06	615.085	CC, ES
Kate Red D29-03J - Kate Red D29-03J - Kate Red D29-0	6,850.00	6,751.49	9,764.64	9,717.31	206.312	SF
Kate Red D29-11 - Wellbore #1 - Gyro Surveys	6,233.15	6,216.61	9,703.10	9,659.43	222.187	CC, ES
Kate Red D29-11 - Wellbore #1 - Gyro Surveys	6,900.00	6,890.56	9,967.19	9,919.31	208.191	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	2,239.97	2,295.11	7,337.29	7,321.65	469.249	CC, ES
Kate Red D29-2J - Wellbore #1 - Kate Red D29-2J	6,850.00	6,654.10	7,665.86	7,618.87	163.141	SF
Kate Red D29-3 - Wellbore #1 - Kate Red D29-3	2,210.06	2,191.12	7,664.64	7,649.46	504.864	CC, ES
Kate Red D29-3 - Wellbore #1 - Kate Red D29-3	6,900.00	6,706.23	7,963.20	7,915.94	168.487	SF
Kate Red D29-5 - Wellbore #1 - Gyro Surveys	4,758.57	4,721.82	7,906.94	7,873.77	238.415	CC
Kate Red D29-5 - Wellbore #1 - Gyro Surveys	4,900.00	4,800.00	7,907.54	7,873.59	232.984	ES
Kate Red D29-5 - Wellbore #1 - Gyro Surveys	6,800.00	6,660.53	8,125.42	8,078.51	173.196	SF
Kate Red D29-6 - Wellbore #1 - Gyro Surveys	508.22	467.22	8,658.55	8,655.51	2,841.872	CC
Kate Red D29-6 - Wellbore #1 - Gyro Surveys	2,257.49	2,373.92	8,660.98	8,645.01	542.282	ES
Kate Red D29-6 - Wellbore #1 - Gyro Surveys	6,850.00	6,700.00	8,951.86	8,904.72	189.905	SF
Kate White D29-01 (PR) - Wellbore #1 - Gyro Surveys	2,202.02	2,180.05	9,720.38	9,705.28	643.744	CC, ES
Kate White D29-01 (PR) - Wellbore #1 - Gyro Surveys	6,950.00	6,762.94	9,984.16	9,936.57	209.801	SF
Kate White D29-07 (PA) - Wellbore #1 - Gyro Surveys	6,244.33	6,345.93	9,733.62	9,689.44	220.315	CC
Kate White D29-07 (PA) - Wellbore #1 - Gyro Surveys	6,250.00	6,349.61	9,733.64	9,689.43	220.150	ES
Kate White D29-07 (PA) - Wellbore #1 - Gyro Surveys	6,900.00	6,700.00	9,957.80	9,910.49	210.489	SF
Kate White D29-08 (PA) - Wellbore #1 - Gyro Surveys						Out of range
Kate White D29-15 (SI) - Wellbore #1 - Gyro Surveys						Out of range
Kate White D29-16 - Wellbore #1 - Gyro Surveys						Out of range
Kate White D29-9 (SI) - Wellbore #1 - Gyro Surveys						Out of range

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 D18-767
Project:	Mustang	TVD Reference:	Well @ 4817.00ft
Reference Site:	D Section 19	MD Reference:	Well @ 4817.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Independence D18-767	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Independence D18-767	Database:	EDMP
Reference Design:	Plan #2	Offset TVD Reference:	Reference 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	5,912.15	5,966.10	5,089.91	5,044.69	112.551	CC
Adams D30-27D - Adams D30-27D - Adams D30-27D - A	6,232.17	6,270.70	5,090.43	5,043.16	107.689	ES
Adams D30-27D - Adams D30-27D - Adams D30-27D - A	6,600.00	6,615.93	5,187.45	5,137.94	104.763	SF
Adams D30-29D - Wellbore #1 - Wellbore #1 - As Drilled	6,251.95	6,462.61	4,950.64	4,901.65	101.045	CC, ES
Adams D30-29D - Wellbore #1 - Wellbore #1 - As Drilled	6,550.00	6,637.66	5,022.18	4,971.68	99.445	SF
Adams D30-30D - Adams D30-30D Gyros - Gyros	2,125.28	2,148.15	4,794.00	4,772.37	221.706	CC
Adams D30-30D - Adams D30-30D Gyros - Gyros	2,200.00	2,200.00	4,794.33	4,771.60	211.012	ES
Adams D30-30D - Adams D30-30D Gyros - Gyros	6,400.00	6,661.88	5,087.95	4,969.85	43.083	SF
Adams D30-30D - Adams D30-30D OH - As Drilled	2,125.28	2,161.16	4,794.02	4,772.40	221.706	CC
Adams D30-30D - Adams D30-30D OH - As Drilled	2,200.00	2,213.00	4,794.35	4,771.63	211.013	ES
Adams D30-30D - Adams D30-30D OH - As Drilled	6,400.00	6,674.88	5,087.97	4,969.87	43.083	SF
Adams D30-31D - Adams D30-31D Gyros - Gyros	100.00	50.14	5,002.70	5,002.49	10,000.000	CC
Adams D30-31D - Adams D30-31D Gyros - Gyros	300.00	225.85	5,003.87	5,002.41	3,417.896	ES
Adams D30-31D - Adams D30-31D Gyros - Gyros	6,500.00	6,934.47	6,274.29	6,177.19	64.616	SF
Adams D30-31D - Adams D30-31D OH - As-drilled	0.00	0.00	5,002.65			
Adams D30-31D - Adams D30-31D OH - As-drilled	300.00	238.85	5,003.91	5,002.45	3,418.037	ES
Adams D30-31D - Adams D30-31D OH - As-drilled	6,500.00	6,947.47	6,274.34	6,177.24	64.616	SF
Corbin D30-23D - Corbin D30-23D - Corbin D30-23D - As	4,523.26	4,828.66	9,375.57	9,290.98	110.839	CC
Corbin D30-23D - Corbin D30-23D - Corbin D30-23D - As	4,800.00	4,993.44	9,377.91	9,289.33	105.870	ES
Corbin D30-23D - Corbin D30-23D - Corbin D30-23D - As	6,450.00	6,714.29	9,429.90	9,327.44	92.033	SF
Corbin Red D30-04J - Corbin Red D30-04J - Corbin Red	2,205.91	2,200.00	8,642.59	8,627.39	568.919	CC, ES
Corbin Red D30-04J - Corbin Red D30-04J - Corbin Red	6,750.00	6,300.00	8,887.36	8,841.87	195.387	SF
Corbin Red D30-09 - Corbin Red D30-09 - Corbin Red D	2,242.73	2,350.42	8,591.87	8,576.02	541.803	CC
Corbin Red D30-09 - Corbin Red D30-09 - Corbin Red D	5,500.00	5,421.41	8,607.76	8,569.51	225.022	ES
Corbin Red D30-09 - Corbin Red D30-09 - Corbin Red D	6,800.00	6,539.82	8,846.85	8,800.38	190.369	SF
Corbin Red D30-15 - Corbin Red D30-15 - Corbin Red D	2,271.05	2,490.57	9,567.37	9,550.94	582.444	CC
Corbin Red D30-15 - Corbin Red D30-15 - Corbin Red D	6,232.17	6,200.00	9,580.93	9,537.36	219.868	ES
Corbin Red D30-15 - Corbin Red D30-15 - Corbin Red D	6,650.00	6,400.00	9,716.62	9,670.98	212.927	SF
Corbin Red D30-16 - Corbin Red D30-16 - Corbin Red D	0.00	0.00	9,850.03			
Corbin Red D30-16 - Corbin Red D30-16 - Corbin Red D	2,200.00	2,141.09	9,856.77	9,841.80	658.682	ES
Corbin Red D30-16 - Corbin Red D30-16 - Corbin Red D	6,450.00	6,435.36	9,999.07	9,953.87	221.182	SF
Dechant D30-17D - Dechant D30-17D - Dechant D30-17	139.26	108.48	5,004.54	5,004.08	10,000.000	CC
Dechant D30-17D - Dechant D30-17D - Dechant D30-17	200.00	141.25	5,004.68	5,003.88	6,223.557	ES
Dechant D30-17D - Dechant D30-17D - Dechant D30-17	7,600.00	7,600.00	7,697.26	7,608.32	86.544	SF
Dechant D30-20D - Dechant D30-20D - Dechant D30-20	6,242.44	6,430.70	7,448.77	7,400.17	153.265	CC
Dechant D30-20D - Dechant D30-20D - Dechant D30-20	6,250.00	6,438.28	7,448.81	7,400.16	153.111	ES
Dechant D30-20D - Dechant D30-20D - Dechant D30-20	6,650.00	6,756.28	7,575.84	7,524.95	148.854	SF
Dechant D30-24D - Dechant D30-24D - Dechant D30-24	5,802.69	5,900.00	8,868.91	8,826.47	208.995	CC
Dechant D30-24D - Dechant D30-24D - Dechant D30-24	5,900.00	5,938.10	8,869.27	8,826.39	206.829	ES
Dechant D30-24D - Dechant D30-24D - Dechant D30-24	6,750.00	6,597.06	9,083.40	9,035.73	190.528	SF
Dechant D30-25D - Dechant D30-25D - Dechant D30-25	6,238.89	6,500.00	8,826.89	8,773.27	164.615	CC, ES
Dechant D30-25D - Dechant D30-25D - Dechant D30-25	6,650.00	6,656.49	8,960.05	8,904.77	162.091	SF
Dechant D31-27D - Dechant D31-27D - Dechant D31-27	374.30	358.32	9,800.11	9,797.92	4,471.709	CC
Dechant D31-27D - Dechant D31-27D - Dechant D31-27	400.00	366.93	9,800.13	9,797.82	4,235.758	ES
Dechant D31-27D - Dechant D31-27D - Dechant D31-27	2,925.97	2,925.97	9,961.94	9,918.08	227.089	SF
Dechant D31-28D - Dechant D31-28D - Dechant D31-28	963.34	947.48	9,838.23	9,831.88	1,547.095	CC
Dechant D31-28D - Dechant D31-28D - Dechant D31-28	1,000.00	952.14	9,838.29	9,831.79	1,511.923	ES
Dechant D31-28D - Dechant D31-28D - Dechant D31-28	2,900.00	2,900.00	9,998.53	9,975.75	438.827	SF
Dechant D31-29D - Dechant D31-29D - Dechant D31-29	0.00	0.00	9,824.19			
Dechant D31-29D - Dechant D31-29D - Dechant D31-29	1,100.00	1,044.94	9,829.45	9,822.25	1,363.694	ES
Dechant D31-29D - Dechant D31-29D - Dechant D31-29	3,600.00	2,898.08	9,994.74	9,964.98	335.783	SF
Dechant D31-77HN - Original Drilling - Original Drilling - A	1,634.31	1,631.34	9,897.76	9,889.39	1,182.822	CC
Dechant D31-77HN - Original Drilling - Original Drilling - A	1,970.11	1,971.67	9,897.76	9,886.98	917.778	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 D18-767
Project:	Mustang	TVD Reference:	Well @ 4817.00ft
Reference Site:	D Section 19	MD Reference:	Well @ 4817.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Independence D18-767	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Independence D18-767	Database:	EDMP
Reference Design:	Plan #2	Offset TVD Reference:	Reference 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						
Dechant D31-77HN - Original Drilling - Original Drilling - A	3,200.00	2,310.00	9,996.75	9,980.49	615.037	SF
Hanson D30-11 - Hanson D30-11 - Hanson D30-11 - As D	2,220.59	2,251.26	7,990.09	7,974.64	517.354	CC, ES
Hanson D30-11 - Hanson D30-11 - Hanson D30-11 - As D	7,100.00	7,100.00	8,541.87	8,493.06	175.010	SF
Hanson D30-12 - Hanson D30-12 - Hanson D30-12 - As	6,239.18	6,300.00	7,999.07	7,955.08	181.842	CC, ES
Hanson D30-12 - Hanson D30-12 - Hanson D30-12 - As	6,750.00	6,796.32	8,192.95	8,145.63	173.128	SF
Hanson D30-13 - Hanson D30-13 - Hanson D30-13 - As	5,774.29	5,757.96	9,567.95	9,527.55	236.809	CC
Hanson D30-13 - Hanson D30-13 - Hanson D30-13 - As	5,900.00	5,800.00	9,568.38	9,527.38	233.390	ES
Hanson D30-13 - Hanson D30-13 - Hanson D30-13 - As	6,800.00	6,703.87	9,808.15	9,761.09	208.407	SF
Hanson D30-14 - Hanson D30-14 - Hanson D30-14 - As	5,976.08	5,963.11	9,417.27	9,375.35	224.618	CC
Hanson D30-14 - Hanson D30-14 - Hanson D30-14 - As	6,100.00	6,039.20	9,417.59	9,374.96	220.911	ES
Hanson D30-14 - Hanson D30-14 - Hanson D30-14 - As	6,800.00	6,481.90	9,664.03	9,617.70	208.593	SF
Hettinger C Unit 1 - Hettinger C Unit 1 - Hettinger C Unit	6,171.16	6,142.27	6,143.89	6,100.66	142.120	CC
Hettinger C Unit 1 - Hettinger C Unit 1 - Hettinger C Unit	6,232.17	6,194.84	6,143.93	6,100.30	140.817	ES
Hettinger C Unit 1 - Hettinger C Unit 1 - Hettinger C Unit	6,750.00	6,690.84	6,327.72	6,280.74	134.686	SF
Hettinger D30-02 - Hettinger D30-02 - Hettinger D30-02 -	2,200.00	2,162.00	5,499.57	5,473.05	207.370	CC
Hettinger D30-02 - Hettinger D30-02 - Hettinger D30-02 -	6,232.17	6,192.38	5,544.11	5,467.97	72.821	ES
Hettinger D30-02 - Hettinger D30-02 - Hettinger D30-02 -	6,700.00	6,619.23	5,702.81	5,621.45	70.094	SF
Hettinger D30-03 - Hettinger D30-03 - Hettinger D30-03 -	2,211.73	2,198.95	5,292.70	5,277.49	347.830	CC
Hettinger D30-03 - Hettinger D30-03 - Hettinger D30-03 -	6,236.32	6,236.67	5,313.81	5,270.05	121.439	ES
Hettinger D30-03 - Hettinger D30-03 - Hettinger D30-03 -	6,700.00	6,700.43	5,473.27	5,426.40	116.777	SF
Hettinger D30-04 - Hettinger D30-04 - Hettinger D30-04 -	6,237.20	6,244.97	5,376.46	5,332.66	122.760	CC, ES
Hettinger D30-04 - Hettinger D30-04 - Hettinger D30-04 -	6,700.00	6,705.38	5,532.51	5,485.61	117.969	SF
Hettinger D30-05 - Hettinger D30-05 - Hettinger D30-05 -	494.22	466.23	7,091.27	7,088.28	2,367.832	CC
Hettinger D30-05 - Hettinger D30-05 - Hettinger D30-05 -	6,232.17	6,200.00	7,121.79	7,078.21	163.435	ES
Hettinger D30-05 - Hettinger D30-05 - Hettinger D30-05 -	6,650.00	6,618.00	7,252.96	7,206.55	156.271	SF
Hettinger D30-06 - Hettinger D30-06 - Hettinger D30-06 -	0.00	0.00	6,993.50			
Hettinger D30-06 - Hettinger D30-06 - Hettinger D30-06 -	6,250.00	6,352.77	7,018.40	6,974.23	158.904	ES
Hettinger D30-06 - Hettinger D30-06 - Hettinger D30-06 -	6,700.00	6,700.00	7,176.41	7,129.58	153.259	SF
Hettinger D30-08 - Hettinger D30-08 - Hettinger D30-08 -	2,108.92	2,079.96	7,352.14	7,337.72	510.017	CC
Hettinger D30-08 - Hettinger D30-08 - Hettinger D30-08 -	2,200.00	2,148.91	7,352.30	7,337.32	490.727	ES
Hettinger D30-08 - Hettinger D30-08 - Hettinger D30-08 -	6,750.00	6,673.82	7,596.04	7,549.19	162.127	SF
Leslie E Hanson Gas Unit 1 - Leslie E Hanson Gas Unit	2,200.00	2,180.00	8,874.53	8,847.86	332.659	CC
Leslie E Hanson Gas Unit 1 - Leslie E Hanson Gas Unit	6,232.17	6,210.38	8,916.92	8,840.63	116.878	ES
Leslie E Hanson Gas Unit 1 - Leslie E Hanson Gas Unit	6,800.00	6,705.86	9,153.08	9,070.75	111.165	SF
McWilliams D29-32 - McWilliams D29-32 - McWilliams D	100.00	70.76	8,068.94	8,068.69	10,000.000	CC
McWilliams D29-32 - McWilliams D29-32 - McWilliams D	2,223.67	2,264.37	8,077.10	8,061.62	521.937	ES
McWilliams D29-32 - McWilliams D29-32 - McWilliams D	6,800.00	6,572.43	8,335.79	8,289.22	178.968	SF
McWilliams D30-07 - McWilliams D30-07 - McWilliams D	2,200.00	2,170.00	6,791.19	6,764.60	255.401	CC
McWilliams D30-07 - McWilliams D30-07 - McWilliams D	6,232.17	6,200.38	6,835.74	6,759.54	89.704	ES
McWilliams D30-07 - McWilliams D30-07 - McWilliams D	6,750.00	6,662.97	7,030.61	6,948.75	85.889	SF
McWilliams D30-18 - McWilliams D30-18 - McWilliams D	2,214.91	2,215.02	6,192.54	6,177.27	405.319	CC, ES
McWilliams D30-18 - McWilliams D30-18 - McWilliams D	6,700.00	6,640.24	6,401.69	6,355.07	137.311	SF
McWilliams D30-19 - McWilliams D30-19 - McWilliams D	170.23	139.23	6,109.52	6,108.83	8,864.259	CC
McWilliams D30-19 - McWilliams D30-19 - McWilliams D	700.00	641.38	6,111.52	6,107.18	1,407.174	ES
McWilliams D30-19 - McWilliams D30-19 - McWilliams D	6,750.00	6,699.43	6,348.84	6,300.30	130.821	SF
McWilliams D30-21 - McWilliams D30-21 - McWilliams D	1,886.39	1,863.43	7,835.57	7,822.71	609.033	CC
McWilliams D30-21 - McWilliams D30-21 - McWilliams D	6,255.48	6,435.88	7,861.89	7,817.42	176.801	ES
McWilliams D30-21 - McWilliams D30-21 - McWilliams D	6,650.00	6,542.59	7,989.29	7,943.15	173.170	SF
McWilliams D30-22 - McWilliams D30-22 - McWilliams D	2,237.82	2,311.58	7,626.25	7,610.56	486.008	CC, ES
McWilliams D30-22 - McWilliams D30-22 - McWilliams D	6,750.00	6,531.77	7,858.81	7,812.48	169.629	SF

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Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Independence D18-767
Project:	Mustang	TVD Reference:	Well @ 4817.00ft
Reference Site:	D Section 19	MD Reference:	Well @ 4817.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Independence D18-767	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Independence D18-767	Database:	EDMP
Reference Design:	Plan #2	Offset TVD Reference:	Reference 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 01						
Collins 1-1 - Wellbore #1 - Wellbore #1 - As Drilled	17,547.18	6,958.35	4,999.91	4,945.26	91.484	CC, ES, SF
Houndskeeper 1-13 - Wellbore #1 - Wellbore #1 - As Dril	17,547.18	6,868.64	4,138.87	4,065.71	56.575	CC, ES, SF
Houndskeeper H01-17 - Wellbore #1 - Wellbore #1 - As D	17,547.18	6,876.46	4,318.34	4,258.93	72.684	CC, ES, SF
Houndskeeper H01-22 - Wellbore #1 - Wellbore #1 - As D	17,547.18	6,957.75	3,326.13	3,257.93	48.776	CC, ES, SF
Houndskeeper H01-27 - Wellbore #1 - Wellbore #1 - As D	17,547.18	6,969.82	5,683.12	5,618.95	88.565	CC, ES, SF
Houndskeeper H01-28 - Wellbore #1 - Wellbore #1 - As D	17,547.18	6,869.11	6,097.48	6,029.70	89.960	CC, ES, SF
Houndskeeper PC H01-21D - Wellbore #1 - Wellbore #1	17,547.18	7,092.47	3,954.91	3,851.45	38.227	CC, ES, SF
HSR-HARTMAN #4-1(PR) - Wellbore #1 - Gyro Surveys	17,547.18	6,933.94	7,090.23	7,003.38	81.633	CC, ES, SF
HSR-KOSKELA #5-1(PR) - Wellbore #1 - No Surveys	17,547.18	6,868.00	5,787.10	5,655.03	43.817	CC, ES, SF
HSR-LAURICE #6-1(PR) - Wellbore #1 - No Surveys	17,547.18	6,868.00	4,849.34	4,726.45	39.462	CC, ES, SF
LJS R H01-02 - Wellbore #1 - Wellbore #1 - As Drilled	17,547.18	6,911.83	5,296.56	5,229.83	79.378	CC, ES, SF
LJS R H01-08 - Wellbore #1 - Wellbore #1 - As Drilled	17,547.18	6,929.87	3,633.59	3,577.45	64.726	CC, ES, SF
Shelton 22-1(PR) - Wellbore #1 - Wellbore #1	17,547.18	6,958.31	5,027.28	4,928.32	50.800	CC, ES, SF
Shelton 31-01(PR) - Wellbore #1 - Gyro Surveys	17,547.18	6,968.20	6,770.63	6,671.20	68.098	CC, ES, SF
Shelton D07-30 - Wellbore #1 - Wellbore #1 - As Drilled	17,547.18	6,902.75	551.40	455.91	5.774	CC, ES, SF
Shelton H #12-29(PR) - Wellbore #1 - No Surveys	17,547.18	6,891.00	4,205.08	4,052.77	27.608	CC, ES, SF
Shelton H 1-12X(PR) - Wellbore #1 - No Surveys	17,547.18	6,884.00	5,326.38	5,184.97	37.666	CC, ES, SF
Shelton H01-23 - Wellbore #1 - Wellbore #1 - As Drilled	17,547.18	6,951.07	2,151.23	2,061.82	24.060	CC, ES, SF
Shelton H01-24 - Wellbore #1 - Wellbore #1 - As Drilled	17,547.18	6,959.43	3,277.76	3,175.28	31.985	CC, ES, SF
Shelton H01-759 - Wellbore #1 - Plan #1	17,547.18	6,745.04	3,319.10	3,201.16	28.143	CC, ES, SF
Shelton H01-766 - Wellbore #1 - Plan #1	17,547.18	6,302.49	3,742.47	3,625.99	32.130	CC, ES, SF
Shelton H01-780 - Wellbore #1 - Plan #1	17,547.18	7,200.00	4,461.16	4,343.02	37.761	CC, ES, SF
Shelton H01-783 - Wellbore #1 - Plan #1	17,547.18	7,394.96	4,970.13	4,852.54	42.266	CC, ES, SF
Shelton H13-715 - Shelton H13-715 - Plan #1	17,547.18	7,306.63	680.07	561.93	5.757	CC, ES, SF
Shelton H13-724 - Shelton H13-724 - Plan #1	17,547.18	7,419.60	1,276.06	1,157.63	10.775	CC, ES, SF
Shelton H13-730 - Shelton H13-730 - Plan #1	17,547.18	7,552.32	1,597.02	1,478.06	13.425	CC, ES, SF
Shelton H13-734 - Shelton H13-734 - Plan #1	17,547.18	7,424.92	1,896.80	1,777.79	15.939	CC, ES, SF
Shelton H13-744 - Shelton H13-744 - Plan #1	17,547.18	7,387.86	2,523.32	2,404.88	21.305	CC, ES, SF
Shelton H13-753 - Shelton H13-753 - Plan #1	17,547.18	7,359.35	3,144.81	3,026.59	26.601	CC, ES, SF
Shelton H13-763 - Shelton H13-763 - Plan #1	17,300.00	7,704.54	3,831.96	3,714.40	32.597	SF
Shelton H13-763 - Shelton H13-763 - Plan #1	17,547.18	6,335.90	3,735.69	3,622.96	33.140	CC, ES
Shelton H13-768 - Shelton H13-768 - Plan #1	17,547.18	7,533.94	4,083.51	3,963.86	34.128	CC, ES, SF
Shelton H13-773 - Shelton H13-773 - Plan #1	17,547.18	7,329.00	4,390.66	4,272.06	37.019	CC, ES, SF
Shelton H13-782 - Shelton H13-782 - Plan #1	17,547.18	7,002.13	4,996.17	4,879.49	42.821	CC, ES, SF
Shelton H3-615 - Wellbore #1 - Plan #1	17,547.18	6,500.00	5,036.08	4,921.63	44.004	CC, ES, SF
Shelton H3-625 - Wellbore #1 - Plan #1	17,547.18	6,500.00	5,138.77	5,026.69	45.849	CC, ES, SF
Shelton H3-635 - Wellbore #1 - Plan #1	17,547.18	6,621.02	5,391.95	5,283.98	49.940	CC, ES, SF
Shelton H3-645 - Wellbore #1 - Plan #1	17,547.18	6,361.81	5,630.52	5,528.04	54.940	CC, ES, SF
Shelton H3-655 - Wellbore #1 - Plan #1	17,547.18	6,008.15	5,896.56	5,799.05	60.475	CC, ES, SF
Shelton H3-665 - Wellbore #1 - Plan #1	17,547.18	6,722.15	6,416.56	6,322.34	68.109	CC, ES, SF
Shelton H3-675 - Wellbore #1 - Plan #1	17,547.18	6,550.00	6,805.03	6,716.25	76.650	CC, ES, SF
Shelton H3-683 - Wellbore #1 - Plan #1	17,547.18	6,500.00	7,166.36	7,080.96	83.914	CC, ES, SF
UPRC #1-12J(PA) - Wellbore #1 - No Surveys	17,547.18	6,884.00	5,348.52	5,255.86	57.723	CC, ES, SF
UPRC #1-13J(SI) - Wellbore #1 - No Surveys	17,547.18	6,882.00	5,069.66	4,919.90	33.853	CC, ES, SF
UPRC 1-09J - Wellbore #1 - Wellbore #1 - As Drilled	17,547.18	6,937.92	2,462.89	2,400.83	39.684	CC, ES, SF
UPRC 1-10J - Wellbore #1 - Wellbore #1 - As Drilled	17,547.18	6,942.64	3,237.22	3,148.45	36.468	CC, ES, SF
UPRC 1-15J - Wellbore #1 - Wellbore #1 - As Drilled	17,547.18	6,927.24	2,503.89	2,391.27	22.232	CC, ES, SF
UPRC 1-16J - Wellbore #1 - Wellbore #1 - As Drilled	17,547.18	6,918.17	1,271.97	1,181.32	14.032	CC, ES, SF
UPRR 39 PAN AM G #1(PR) - Wellbore #1 - No Surveys	17,547.18	6,890.00	4,626.22	4,480.53	31.754	CC, ES, SF

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

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Independence D18-767
Project:	Mustang	TVD Reference:	Well @ 4817.00ft
Reference Site:	D Section 19	MD Reference:	Well @ 4817.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Independence D18-767	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Independence D18-767	Database:	EDMP
Reference Design:	Plan #2	Offset TVD Reference:	Reference 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 12						
Helms H 12-14D(SI) - Wellbore #1 - Gyro Surveys	13,886.63	6,912.91	4,565.16	4,478.04	52.400	CC
Helms H 12-14D(SI) - Wellbore #1 - Gyro Surveys	13,900.00	6,913.22	4,565.18	4,477.98	52.354	ES
Helms H 12-14D(SI) - Wellbore #1 - Gyro Surveys	14,700.00	6,931.62	4,637.02	4,546.01	50.949	SF
JOHNSON H #13-27D(PR) - Wellbore #1 - MWD Survey	13,105.73	7,049.07	2,952.99	2,867.99	34.743	CC, ES
JOHNSON H #13-27D(PR) - Wellbore #1 - MWD Survey	13,400.00	7,050.91	2,967.61	2,881.30	34.383	SF
Ray H 12-24D(SI) - Wellbore #1 - Gyro Surveys	14,912.99	6,981.31	3,785.63	3,688.56	38.999	CC, ES
Ray H 12-24D(SI) - Wellbore #1 - Gyro Surveys	15,300.00	6,975.69	3,805.35	3,706.94	38.668	SF
SHELTON H #01-25D(SI) - Wellbore #1 - MWD Surveys	17,547.18	7,250.79	4,336.38	4,210.38	34.415	CC, ES, SF
Shelton H01-33D(SI) - Wellbore #1 - MWD Surveys	17,547.18	7,055.57	5,708.97	5,585.03	46.062	CC, ES, SF
STROH #H 12-03(SI) - Wellbore #1 - No Surveys	17,547.18	6,901.00	3,434.90	3,280.58	22.258	CC, ES, SF
Stroh #H12-16(SI) - Wellbore #1 - No Surveys	13,286.23	6,877.00	1,930.82	1,812.41	16.307	CC, ES
Stroh #H12-16(SI) - Wellbore #1 - No Surveys	13,300.00	6,877.00	1,930.86	1,812.43	16.302	SF
Stroh #H12-18(PR) - Wellbore #1 - No Surveys	17,313.86	6,904.00	3,147.17	2,995.44	20.741	CC, ES
Stroh #H12-18(PR) - Wellbore #1 - No Surveys	17,547.18	6,904.00	3,155.81	3,003.12	20.668	SF
Stroh #H12-22(PR) - Wellbore #1 - Gyro Surveys	15,838.65	6,800.00	2,166.53	2,064.06	21.143	CC, ES
Stroh #H12-22(PR) - Wellbore #1 - Gyro Surveys	15,900.00	6,800.00	2,167.39	2,064.75	21.115	SF
Stroh #H12-32(PR) - Wellbore #1 - No Surveys	16,682.38	6,887.00	5,564.48	5,418.22	38.046	CC
Stroh #H12-32(PR) - Wellbore #1 - No Surveys	16,700.00	6,887.00	5,564.51	5,418.14	38.016	ES
Stroh #H12-32(PR) - Wellbore #1 - No Surveys	17,547.18	6,887.00	5,631.28	5,480.36	37.313	SF
Stroh 12-01 - Wellbore #1 - Wellbore #1 - As Drilled	17,500.00	6,905.14	874.68	757.36	7.455	SF
Stroh 12-01 - Wellbore #1 - Wellbore #1 - As Drilled	17,526.78	6,905.07	874.27	757.01	7.456	CC, ES
STROH D #07-31(PR) - Wellbore #1 - Gyro Surveys	16,700.00	6,905.91	825.60	715.19	7.478	SF
STROH D #07-31(PR) - Wellbore #1 - Gyro Surveys	16,710.10	6,905.83	825.54	715.17	7.480	CC, ES
STROH H #12-05(PA) - Wellbore #1 - Gyro Surveys	17,317.91	6,830.91	4,642.15	4,527.13	40.358	CC, ES
STROH H #12-05(PA) - Wellbore #1 - Gyro Surveys	17,547.18	6,829.86	4,647.81	4,531.48	39.954	SF
STROH H #12-06(SI) - Wellbore #1 - No Surveys	16,611.64	6,905.00	3,573.14	3,427.32	24.504	CC, ES
STROH H #12-06(SI) - Wellbore #1 - No Surveys	16,900.00	6,905.00	3,584.75	3,437.62	24.364	SF
STROH H #12-08(PR) - Wellbore #1 - No Surveys	15,911.15	6,904.00	1,270.74	1,130.80	9.080	CC, ES, SF
STROH H #12-10(PR) - Wellbore #1 - No Surveys	15,229.69	7,113.00	3,018.46	2,882.34	22.174	CC, ES
STROH H #12-10(PR) - Wellbore #1 - No Surveys	15,400.00	7,113.00	3,023.26	2,886.43	22.095	SF
STROH H #12-11(SI) - Wellbore #1 - No Surveys	15,485.66	6,914.00	4,370.32	4,233.82	32.017	CC
STROH H #12-11(SI) - Wellbore #1 - No Surveys	15,500.00	6,914.00	4,370.34	4,233.76	31.997	ES
STROH H #12-11(SI) - Wellbore #1 - No Surveys	16,000.00	6,914.00	4,400.48	4,261.43	31.647	SF
STROH H #12-12(SI) - Wellbore #1 - No Surveys	15,852.26	6,891.00	5,605.83	5,466.48	40.230	CC
STROH H #12-12(SI) - Wellbore #1 - No Surveys	15,900.00	6,891.00	5,606.03	5,466.38	40.144	ES
STROH H #12-12(SI) - Wellbore #1 - No Surveys	16,800.00	6,891.00	5,685.38	5,540.96	39.367	SF
STROH H #12-13(SI) - Wellbore #1 - No Surveys	14,207.08	6,883.00	5,872.96	5,747.18	46.693	CC, ES
STROH H #12-13(SI) - Wellbore #1 - No Surveys	15,400.00	6,883.00	5,992.89	5,860.77	45.359	SF
STROH H #12-14(PA) - Wellbore #1 - No Surveys	14,756.08	6,911.00	4,576.10	4,445.62	35.072	CC
STROH H #12-14(PA) - Wellbore #1 - No Surveys	14,800.00	6,911.00	4,576.31	4,445.58	35.006	ES
STROH H #12-14(PA) - Wellbore #1 - No Surveys	15,400.00	6,911.00	4,621.18	4,487.52	34.574	SF
STROH H #12-20(PR) - Wellbore #1 - No Surveys	16,405.65	6,912.00	4,416.44	4,272.29	30.637	CC, ES
STROH H #12-20(PR) - Wellbore #1 - No Surveys	16,900.00	6,912.00	4,444.02	4,297.39	30.307	SF
STROH H #12-21(PR) - Wellbore #1 - No Surveys	16,051.60	6,909.00	3,001.42	2,860.25	21.262	CC, ES
STROH H #12-21(PR) - Wellbore #1 - No Surveys	16,300.00	6,909.00	3,011.68	2,869.57	21.192	SF
STROH H #12-28D(PR) - Wellbore #1 - MWD Surveys	17,547.18	7,344.55	3,055.23	2,932.47	24.887	CC, ES, SF
STROH H #12-4J(PR) - Wellbore #1 - No Surveys	13,999.46	6,891.00	2,379.66	2,255.48	19.163	CC
STROH H #12-4J(PR) - Wellbore #1 - No Surveys	14,000.00	6,891.00	2,379.66	2,255.48	19.163	ES
STROH H #12-4J(PR) - Wellbore #1 - No Surveys	14,100.00	6,891.00	2,381.78	2,257.28	19.131	SF
STROH H #12-9(PR) - Wellbore #1 - No Surveys	14,855.33	6,893.00	1,598.40	1,467.27	12.189	CC, ES, SF
Stroh H 12-04(PR) - Wellbore #1 - Wellbore #1	17,547.18	6,988.39	4,976.73	4,858.60	42.131	CC, ES, SF
Stroh H12-02 - Wellbore #1 - Wellbore #1 - As Drilled	17,547.18	6,926.24	2,477.36	2,359.21	20.967	CC, ES, SF
Stroh H12-27 - Wellbore #1 - Wellbore #1 - As Drilled	17,547.18	6,900.01	1,665.81	1,549.05	14.267	CC, ES, SF

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

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Independence D18-767
Project:	Mustang	TVD Reference:	Well @ 4817.00ft
Reference Site:	D Section 19	MD Reference:	Well @ 4817.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Independence D18-767	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Independence D18-767	Database:	EDMP
Reference Design:	Plan #2	Offset TVD Reference:	Reference 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 12						
STROH H12-99HZ(PR) - Wellbore #1 - MWD Surveys	17,088.69	10,914.00	1,027.16	906.07	8.483	CC
STROH H12-99HZ(PR) - Wellbore #1 - MWD Surveys	17,200.00	10,914.00	1,033.17	904.12	8.006	ES
STROH H12-99HZ(PR) - Wellbore #1 - MWD Surveys	17,500.00	10,914.00	1,106.45	958.36	7.471	SF
STROH PC H #12-30D(SI) - Wellbore #1 - MWD Surveys	17,547.18	6,990.11	5,353.58	5,233.90	44.732	CC, ES, SF
STROH PC H #12-31D(SI) - Wellbore #1 - MWD Surveys	17,547.18	7,014.80	5,402.09	5,282.40	45.134	CC, ES, SF
Stroh/12-7(PR) - Wellbore #1 - Gyro Surveys	16,702.48	6,942.94	2,238.66	2,128.23	20.273	CC, ES
Stroh/12-7(PR) - Wellbore #1 - Gyro Surveys	16,800.00	6,943.09	2,240.78	2,130.07	20.240	SF