

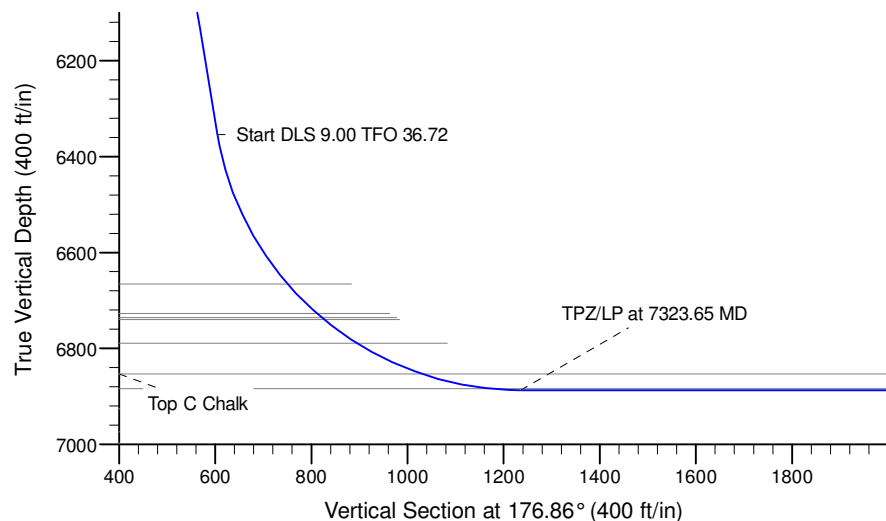
Project: Mustang
Site: D Section 22
Well: Gutteresen D34-759
Wellbore: Wellbore #1
Design: Plan 1

Northern Region - DJ Basin

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

SECTION DETAILS

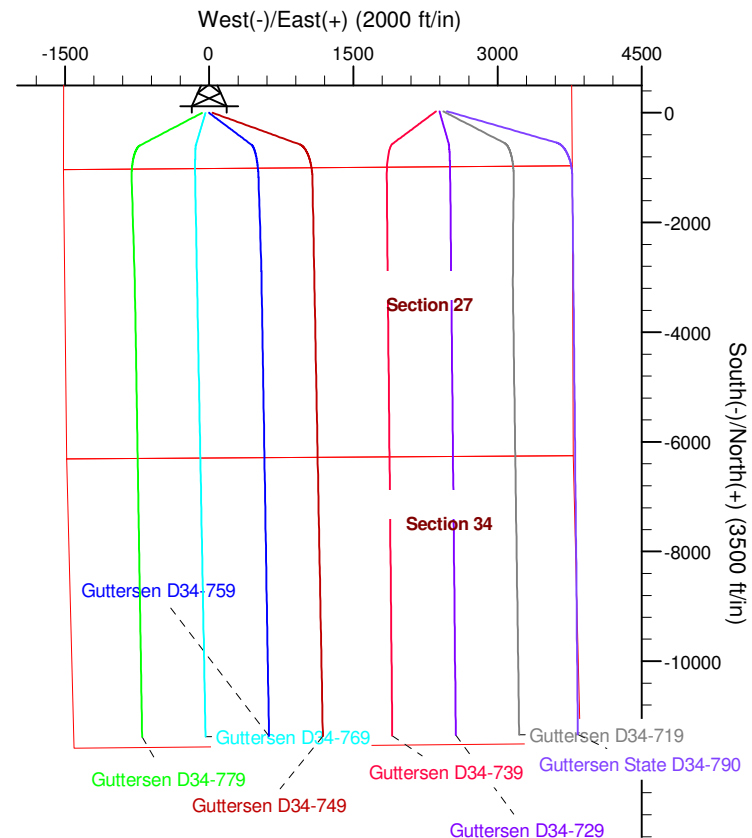
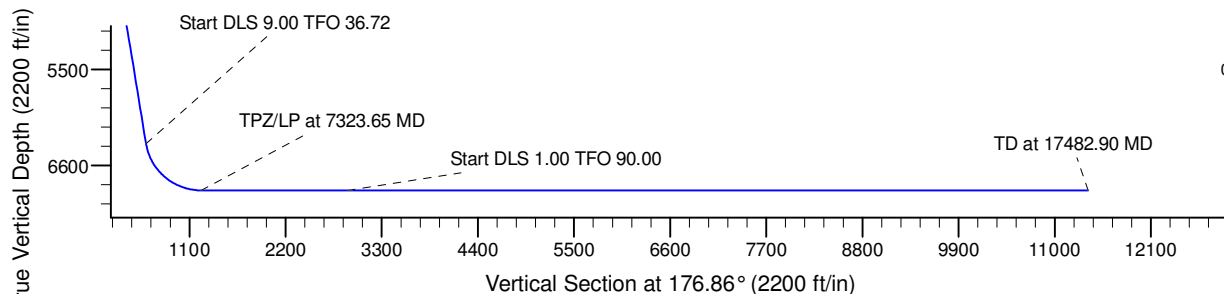
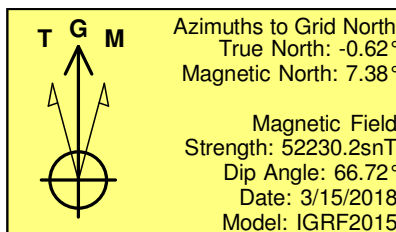
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	2400.00	0.00	0.00	2400.00	0.00	0.00	0.00	0.00	0.00	
3	2962.09	11.24	142.81	2958.49	-43.78	33.23	2.00	142.81	45.54	
4	6424.22	11.24	142.81	6354.20	-581.43	441.24	0.00	0.00	604.70	
5	7323.65	90.00	179.00	6887.00	-1208.94	514.74	9.00	36.72	1235.28	Gutteresen State D34-759 TPZ/LP
6	8999.72	90.00	179.00	6887.00	-2884.76	543.99	0.00	0.00	2910.20	
7	9046.67	90.00	179.47	6887.00	-2931.70	544.62	1.00	90.00	2957.10	
8	17482.90	90.00	179.47	6887.00	-11367.57	622.74	0.00	0.00	11384.61	Gutteresen State D34-759 BHL



Surface: 1015' FSL, 1515' FWL, Sec. 22

TPZ: 200' FNL, 2030' FWL, Sec. 27

BHL: 200' FSL, 2030' FWL, Sec. 34



WELL DETAILS: Gutteresen D34-759

	Northing	Easting	Latitude	Longitude
0.00	0.00	1319482.62	4825.00 40.2064050	-104.5414770

Plan: Plan 1 (Gutteresen D34-759/Wellbore #1)

Created By: Colby Baxter	Date: 14:21, August 13 2018
Checked: _____	Date: _____
Reviewed: _____	Date: _____
Approved: _____	Date: _____

Northern Region - DJ Basin

Mustang

D Section 22

Guttersen D34-759

Wellbore #1

Plan: Plan 1

Standard Survey Report

13 August, 2018

Noble Energy, Inc.

Survey Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersen D34-759
Project:	Mustang	TVD Reference:	KB @ 4855.00ft
Site:	D Section 22	MD Reference:	KB @ 4855.00ft
Well:	Guttersen D34-759	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Plan 1	Database:	EDMP

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

Site		D Section 22						
Site Position:		Northing:	1,323,172.04	usft	Latitude:	40.2165600		
From:	Lat/Long	Easting:	3,266,778.49	usft	Longitude:	-104.5446900		
Position Uncertainty:	0.00	ft	Slot Radius:	13.200	in	Grid Convergence:	0.62	°

Well		Guttersen D34-759				
Well Position	+N/-S	0.00 ft	Northing:	1,319,482.62 usft	Latitude:	40.2064050
	+E/-W	0.00 ft	Easting:	3,267,715.70 usft	Longitude:	-104.5414770
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,825.00 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	3/15/2018	8.00	66.72	52,230.24182413

Design	Plan 1				
Audit Notes:					
Version:	Phase:	PLAN	Tie On Depth:	0.00	
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.00	0.00	0.00	176.86	

Survey Tool Program	Date	8/1/2018			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.00	17,482.90	Plan 1 (Wellbore #1)	2_MWD+IFR1+MS	A008Mb: IFR dec & multi-station analysis	

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00	
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00	
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00	

Noble Energy, Inc.

Survey Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersen D34-759
Project:	Mustang	TVD Reference:	KB @ 4855.00ft
Site:	D Section 22	MD Reference:	KB @ 4855.00ft
Well:	Guttersen D34-759	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Plan 1	Database:	EDMP

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	2.00	142.81	2,499.98	-1.39	1.05	1.45	2.00	2.00	0.00
2,600.00	4.00	142.81	2,599.84	-5.56	4.22	5.78	2.00	2.00	0.00
2,700.00	6.00	142.81	2,699.45	-12.50	9.49	13.00	2.00	2.00	0.00
2,800.00	8.00	142.81	2,798.70	-22.21	16.85	23.10	2.00	2.00	0.00
2,900.00	10.00	142.81	2,897.47	-34.67	26.31	36.06	2.00	2.00	0.00
2,962.09	11.24	142.81	2,958.49	-43.78	33.23	45.54	2.00	2.00	0.00
3,000.00	11.24	142.81	2,995.67	-49.67	37.70	51.66	0.00	0.00	0.00
3,100.00	11.24	142.81	3,093.75	-65.20	49.48	67.81	0.00	0.00	0.00
3,200.00	11.24	142.81	3,191.84	-80.73	61.27	83.96	0.00	0.00	0.00
3,300.00	11.24	142.81	3,289.92	-96.26	73.05	100.11	0.00	0.00	0.00
3,400.00	11.24	142.81	3,388.00	-111.79	84.84	116.26	0.00	0.00	0.00
3,500.00	11.24	142.81	3,486.08	-127.32	96.62	132.41	0.00	0.00	0.00
3,600.00	11.24	142.81	3,584.16	-142.85	108.41	148.57	0.00	0.00	0.00
3,700.00	11.24	142.81	3,682.24	-158.38	120.19	164.72	0.00	0.00	0.00
3,800.00	11.24	142.81	3,780.32	-173.91	131.98	180.87	0.00	0.00	0.00
3,900.00	11.24	142.81	3,878.41	-189.44	143.76	197.02	0.00	0.00	0.00
4,000.00	11.24	142.81	3,976.49	-204.97	155.55	213.17	0.00	0.00	0.00
4,100.00	11.24	142.81	4,074.57	-220.50	167.33	229.32	0.00	0.00	0.00
4,200.00	11.24	142.81	4,172.65	-236.03	179.12	245.47	0.00	0.00	0.00
4,300.00	11.24	142.81	4,270.73	-251.55	190.90	261.62	0.00	0.00	0.00
4,400.00	11.24	142.81	4,368.81	-267.08	202.69	277.77	0.00	0.00	0.00
4,500.00	11.24	142.81	4,466.89	-282.61	214.47	293.92	0.00	0.00	0.00
4,600.00	11.24	142.81	4,564.97	-298.14	226.26	310.07	0.00	0.00	0.00
4,700.00	11.24	142.81	4,663.06	-313.67	238.04	326.22	0.00	0.00	0.00
4,800.00	11.24	142.81	4,761.14	-329.20	249.83	342.37	0.00	0.00	0.00
4,900.00	11.24	142.81	4,859.22	-344.73	261.61	358.53	0.00	0.00	0.00
5,000.00	11.24	142.81	4,957.30	-360.26	273.40	374.68	0.00	0.00	0.00
5,100.00	11.24	142.81	5,055.38	-375.79	285.18	390.83	0.00	0.00	0.00
5,200.00	11.24	142.81	5,153.46	-391.32	296.97	406.98	0.00	0.00	0.00

Noble Energy, Inc.

Survey Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersen D34-759
Project:	Mustang	TVD Reference:	KB @ 4855.00ft
Site:	D Section 22	MD Reference:	KB @ 4855.00ft
Well:	Guttersen D34-759	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Plan 1	Database:	EDMP

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
5,300.00	11.24	142.81	5,251.54	-406.85	308.75	423.13	0.00	0.00	0.00
5,400.00	11.24	142.81	5,349.63	-422.38	320.54	439.28	0.00	0.00	0.00
5,500.00	11.24	142.81	5,447.71	-437.91	332.32	455.43	0.00	0.00	0.00
5,600.00	11.24	142.81	5,545.79	-453.44	344.11	471.58	0.00	0.00	0.00
5,700.00	11.24	142.81	5,643.87	-468.97	355.89	487.73	0.00	0.00	0.00
5,800.00	11.24	142.81	5,741.95	-484.50	367.68	503.88	0.00	0.00	0.00
5,900.00	11.24	142.81	5,840.03	-500.03	379.46	520.03	0.00	0.00	0.00
6,000.00	11.24	142.81	5,938.11	-515.55	391.25	536.18	0.00	0.00	0.00
6,100.00	11.24	142.81	6,036.19	-531.08	403.03	552.34	0.00	0.00	0.00
6,200.00	11.24	142.81	6,134.28	-546.61	414.82	568.49	0.00	0.00	0.00
6,300.00	11.24	142.81	6,232.36	-562.14	426.60	584.64	0.00	0.00	0.00
6,400.00	11.24	142.81	6,330.44	-577.67	438.39	600.79	0.00	0.00	0.00
6,424.22	11.24	142.81	6,354.20	-581.43	441.24	604.70	0.00	0.00	0.00
6,500.00	17.19	156.71	6,427.64	-597.62	450.15	621.35	9.00	7.85	18.34
6,600.00	25.70	164.89	6,520.65	-632.20	461.67	656.51	9.00	8.51	8.18
6,700.00	34.45	169.15	6,607.11	-681.02	472.67	705.85	9.00	8.75	4.26
6,800.00	43.29	171.84	6,684.90	-742.86	482.88	768.16	9.00	8.84	2.69
6,900.00	52.18	173.77	6,752.09	-816.21	492.05	841.90	9.00	8.89	1.93
7,000.00	61.09	175.28	6,807.04	-899.27	499.95	925.27	9.00	8.91	1.51
7,100.00	70.01	176.55	6,848.38	-989.98	506.39	1,016.19	9.00	8.93	1.27
7,200.00	78.95	177.69	6,875.11	-1,086.11	511.20	1,112.45	9.00	8.93	1.13
7,300.00	87.89	178.75	6,886.56	-1,185.30	514.28	1,211.66	9.00	8.94	1.07
7,323.65	90.00	179.00	6,887.00	-1,208.94	514.74	1,235.29	9.00	8.94	1.05
7,400.00	90.00	179.00	6,887.00	-1,285.28	516.08	1,311.59	0.00	0.00	0.00
7,500.00	90.00	179.00	6,887.00	-1,385.27	517.82	1,411.52	0.00	0.00	0.00
7,600.00	90.00	179.00	6,887.00	-1,485.25	519.57	1,511.45	0.00	0.00	0.00
7,700.00	90.00	179.00	6,887.00	-1,585.24	521.31	1,611.38	0.00	0.00	0.00
7,800.00	90.00	179.00	6,887.00	-1,685.22	523.06	1,711.31	0.00	0.00	0.00
7,900.00	90.00	179.00	6,887.00	-1,785.20	524.80	1,811.24	0.00	0.00	0.00
8,000.00	90.00	179.00	6,887.00	-1,885.19	526.55	1,911.17	0.00	0.00	0.00
8,100.00	90.00	179.00	6,887.00	-1,985.17	528.29	2,011.10	0.00	0.00	0.00
8,200.00	90.00	179.00	6,887.00	-2,085.16	530.04	2,111.03	0.00	0.00	0.00
8,300.00	90.00	179.00	6,887.00	-2,185.14	531.78	2,210.96	0.00	0.00	0.00
8,400.00	90.00	179.00	6,887.00	-2,285.13	533.53	2,310.89	0.00	0.00	0.00
8,500.00	90.00	179.00	6,887.00	-2,385.11	535.27	2,410.82	0.00	0.00	0.00
8,600.00	90.00	179.00	6,887.00	-2,485.10	537.02	2,510.75	0.00	0.00	0.00
8,700.00	90.00	179.00	6,887.00	-2,585.08	538.76	2,610.68	0.00	0.00	0.00
8,800.00	90.00	179.00	6,887.00	-2,685.07	540.51	2,710.61	0.00	0.00	0.00
8,900.00	90.00	179.00	6,887.00	-2,785.05	542.25	2,810.54	0.00	0.00	0.00
8,999.73	90.00	179.00	6,887.00	-2,884.76	543.99	2,910.20	0.00	0.00	0.00
9,000.00	90.00	179.00	6,887.00	-2,885.04	544.00	2,910.47	0.00	0.00	0.00
9,046.67	90.00	179.47	6,887.00	-2,931.70	544.62	2,957.10	1.01	0.00	1.01
9,100.00	90.00	179.47	6,887.00	-2,985.03	545.12	3,010.38	0.00	0.00	0.00

Noble Energy, Inc.

Survey Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersen D34-759
Project:	Mustang	TVD Reference:	KB @ 4855.00ft
Site:	D Section 22	MD Reference:	KB @ 4855.00ft
Well:	Guttersen D34-759	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Plan 1	Database:	EDMP

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
9,200.00	90.00	179.47	6,887.00	-3,085.03	546.04	3,110.28	0.00	0.00	0.00
9,300.00	90.00	179.47	6,887.00	-3,185.02	546.97	3,210.17	0.00	0.00	0.00
9,400.00	90.00	179.47	6,887.00	-3,285.02	547.89	3,310.07	0.00	0.00	0.00
9,500.00	90.00	179.47	6,887.00	-3,385.01	548.82	3,409.97	0.00	0.00	0.00
9,600.00	90.00	179.47	6,887.00	-3,485.01	549.75	3,509.86	0.00	0.00	0.00
9,700.00	90.00	179.47	6,887.00	-3,585.01	550.67	3,609.76	0.00	0.00	0.00
9,800.00	90.00	179.47	6,887.00	-3,685.00	551.60	3,709.66	0.00	0.00	0.00
9,900.00	90.00	179.47	6,887.00	-3,785.00	552.52	3,809.55	0.00	0.00	0.00
10,000.00	90.00	179.47	6,887.00	-3,884.99	553.45	3,909.45	0.00	0.00	0.00
10,100.00	90.00	179.47	6,887.00	-3,984.99	554.38	4,009.35	0.00	0.00	0.00
10,200.00	90.00	179.47	6,887.00	-4,084.98	555.30	4,109.24	0.00	0.00	0.00
10,300.00	90.00	179.47	6,887.00	-4,184.98	556.23	4,209.14	0.00	0.00	0.00
10,400.00	90.00	179.47	6,887.00	-4,284.98	557.15	4,309.04	0.00	0.00	0.00
10,500.00	90.00	179.47	6,887.00	-4,384.97	558.08	4,408.93	0.00	0.00	0.00
10,600.00	90.00	179.47	6,887.00	-4,484.97	559.01	4,508.83	0.00	0.00	0.00
10,700.00	90.00	179.47	6,887.00	-4,584.96	559.93	4,608.73	0.00	0.00	0.00
10,800.00	90.00	179.47	6,887.00	-4,684.96	560.86	4,708.62	0.00	0.00	0.00
10,900.00	90.00	179.47	6,887.00	-4,784.95	561.78	4,808.52	0.00	0.00	0.00
11,000.00	90.00	179.47	6,887.00	-4,884.95	562.71	4,908.42	0.00	0.00	0.00
11,100.00	90.00	179.47	6,887.00	-4,984.95	563.64	5,008.31	0.00	0.00	0.00
11,200.00	90.00	179.47	6,887.00	-5,084.94	564.56	5,108.21	0.00	0.00	0.00
11,300.00	90.00	179.47	6,887.00	-5,184.94	565.49	5,208.11	0.00	0.00	0.00
11,400.00	90.00	179.47	6,887.00	-5,284.93	566.41	5,308.00	0.00	0.00	0.00
11,500.00	90.00	179.47	6,887.00	-5,384.93	567.34	5,407.90	0.00	0.00	0.00
11,600.00	90.00	179.47	6,887.00	-5,484.92	568.27	5,507.80	0.00	0.00	0.00
11,700.00	90.00	179.47	6,887.00	-5,584.92	569.19	5,607.69	0.00	0.00	0.00
11,800.00	90.00	179.47	6,887.00	-5,684.92	570.12	5,707.59	0.00	0.00	0.00
11,900.00	90.00	179.47	6,887.00	-5,784.91	571.04	5,807.49	0.00	0.00	0.00
12,000.00	90.00	179.47	6,887.00	-5,884.91	571.97	5,907.38	0.00	0.00	0.00
12,100.00	90.00	179.47	6,887.00	-5,984.90	572.90	6,007.28	0.00	0.00	0.00
12,200.00	90.00	179.47	6,887.00	-6,084.90	573.82	6,107.18	0.00	0.00	0.00
12,300.00	90.00	179.47	6,887.00	-6,184.89	574.75	6,207.07	0.00	0.00	0.00
12,400.00	90.00	179.47	6,887.00	-6,284.89	575.67	6,306.97	0.00	0.00	0.00
12,500.00	90.00	179.47	6,887.00	-6,384.89	576.60	6,406.87	0.00	0.00	0.00
12,600.00	90.00	179.47	6,887.00	-6,484.88	577.53	6,506.76	0.00	0.00	0.00
12,700.00	90.00	179.47	6,887.00	-6,584.88	578.45	6,606.66	0.00	0.00	0.00
12,800.00	90.00	179.47	6,887.00	-6,684.87	579.38	6,706.56	0.00	0.00	0.00
12,900.00	90.00	179.47	6,887.00	-6,784.87	580.30	6,806.45	0.00	0.00	0.00
13,000.00	90.00	179.47	6,887.00	-6,884.86	581.23	6,906.35	0.00	0.00	0.00
13,100.00	90.00	179.47	6,887.00	-6,984.86	582.16	7,006.25	0.00	0.00	0.00
13,200.00	90.00	179.47	6,887.00	-7,084.86	583.08	7,106.14	0.00	0.00	0.00
13,300.00	90.00	179.47	6,887.00	-7,184.85	584.01	7,206.04	0.00	0.00	0.00
13,400.00	90.00	179.47	6,887.00	-7,284.85	584.93	7,305.94	0.00	0.00	0.00

Noble Energy, Inc.

Survey Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersen D34-759
Project:	Mustang	TVD Reference:	KB @ 4855.00ft
Site:	D Section 22	MD Reference:	KB @ 4855.00ft
Well:	Guttersen D34-759	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Plan 1	Database:	EDMP

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
13,500.00	90.00	179.47	6,887.00	-7,384.84	585.86	7,405.83	0.00	0.00	0.00
13,600.00	90.00	179.47	6,887.00	-7,484.84	586.79	7,505.73	0.00	0.00	0.00
13,700.00	90.00	179.47	6,887.00	-7,584.83	587.71	7,605.63	0.00	0.00	0.00
13,800.00	90.00	179.47	6,887.00	-7,684.83	588.64	7,705.52	0.00	0.00	0.00
13,900.00	90.00	179.47	6,887.00	-7,784.83	589.56	7,805.42	0.00	0.00	0.00
14,000.00	90.00	179.47	6,887.00	-7,884.82	590.49	7,905.32	0.00	0.00	0.00
14,100.00	90.00	179.47	6,887.00	-7,984.82	591.42	8,005.21	0.00	0.00	0.00
14,200.00	90.00	179.47	6,887.00	-8,084.81	592.34	8,105.11	0.00	0.00	0.00
14,300.00	90.00	179.47	6,887.00	-8,184.81	593.27	8,205.01	0.00	0.00	0.00
14,400.00	90.00	179.47	6,887.00	-8,284.80	594.19	8,304.90	0.00	0.00	0.00
14,500.00	90.00	179.47	6,887.00	-8,384.80	595.12	8,404.80	0.00	0.00	0.00
14,600.00	90.00	179.47	6,887.00	-8,484.80	596.05	8,504.70	0.00	0.00	0.00
14,700.00	90.00	179.47	6,887.00	-8,584.79	596.97	8,604.59	0.00	0.00	0.00
14,800.00	90.00	179.47	6,887.00	-8,684.79	597.90	8,704.49	0.00	0.00	0.00
14,900.00	90.00	179.47	6,887.00	-8,784.78	598.82	8,804.39	0.00	0.00	0.00
15,000.00	90.00	179.47	6,887.00	-8,884.78	599.75	8,904.28	0.00	0.00	0.00
15,100.00	90.00	179.47	6,887.00	-8,984.77	600.68	9,004.18	0.00	0.00	0.00
15,200.00	90.00	179.47	6,887.00	-9,084.77	601.60	9,104.08	0.00	0.00	0.00
15,300.00	90.00	179.47	6,887.00	-9,184.77	602.53	9,203.97	0.00	0.00	0.00
15,400.00	90.00	179.47	6,887.00	-9,284.76	603.45	9,303.87	0.00	0.00	0.00
15,500.00	90.00	179.47	6,887.00	-9,384.76	604.38	9,403.77	0.00	0.00	0.00
15,600.00	90.00	179.47	6,887.00	-9,484.75	605.31	9,503.66	0.00	0.00	0.00
15,700.00	90.00	179.47	6,887.00	-9,584.75	606.23	9,603.56	0.00	0.00	0.00
15,800.00	90.00	179.47	6,887.00	-9,684.74	607.16	9,703.46	0.00	0.00	0.00
15,900.00	90.00	179.47	6,887.00	-9,784.74	608.08	9,803.35	0.00	0.00	0.00
16,000.00	90.00	179.47	6,887.00	-9,884.74	609.01	9,903.25	0.00	0.00	0.00
16,100.00	90.00	179.47	6,887.00	-9,984.73	609.94	10,003.15	0.00	0.00	0.00
16,200.00	90.00	179.47	6,887.00	-10,084.73	610.86	10,103.04	0.00	0.00	0.00
16,300.00	90.00	179.47	6,887.00	-10,184.72	611.79	10,202.94	0.00	0.00	0.00
16,400.00	90.00	179.47	6,887.00	-10,284.72	612.71	10,302.84	0.00	0.00	0.00
16,500.00	90.00	179.47	6,887.00	-10,384.71	613.64	10,402.73	0.00	0.00	0.00
16,600.00	90.00	179.47	6,887.00	-10,484.71	614.57	10,502.63	0.00	0.00	0.00
16,700.00	90.00	179.47	6,887.00	-10,584.71	615.49	10,602.53	0.00	0.00	0.00
16,800.00	90.00	179.47	6,887.00	-10,684.70	616.42	10,702.42	0.00	0.00	0.00
16,900.00	90.00	179.47	6,887.00	-10,784.70	617.34	10,802.32	0.00	0.00	0.00
17,000.00	90.00	179.47	6,887.00	-10,884.69	618.27	10,902.22	0.00	0.00	0.00
17,100.00	90.00	179.47	6,887.00	-10,984.69	619.19	11,002.11	0.00	0.00	0.00
17,200.00	90.00	179.47	6,887.00	-11,084.68	620.12	11,102.01	0.00	0.00	0.00
17,300.00	90.00	179.47	6,887.00	-11,184.68	621.05	11,201.91	0.00	0.00	0.00
17,400.00	90.00	179.47	6,887.00	-11,284.68	621.97	11,301.80	0.00	0.00	0.00
17,482.90	90.00	179.47	6,887.00	-11,367.57	622.74	11,384.61	0.00	0.00	0.00

Noble Energy, Inc.

Survey Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersen D34-759
Project:	Mustang	TVD Reference:	KB @ 4855.00ft
Site:	D Section 22	MD Reference:	KB @ 4855.00ft
Well:	Guttersen D34-759	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Plan 1	Database:	EDMP

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Guttersen State D34-759 - plan hits target center - Point	0.00	0.01	0.00	0.00	0.00	1,319,482.63	3,267,715.70	40.2064050	-104.5414770
Guttersen State D34-759 - plan hits target center - Point	0.00	0.00	6,354.19	-581.43	441.24	1,318,901.19	3,268,156.94	40.2047959	-104.5399198
Guttersen State D34-759 - plan hits target center - Point	0.00	0.01	6,887.00	-11,367.57	622.74	1,308,115.08	3,268,338.44	40.1751830	-104.5396883
Guttersen State D34-759 - plan hits target center - Point	0.00	0.00	6,887.00	-1,208.94	514.74	1,318,273.69	3,268,230.45	40.2030712	-104.5396810

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
638.00	638.00	Pierre			
757.00	757.00	Upper Pierre Aquifer Top			
1,639.00	1,639.00	Upper Pierre Aquifer Base			
3,757.87	3,739.00	Parkman			
4,351.25	4,321.00	Sussex			
4,999.69	4,957.00	Shannon			
6,079.41	6,016.00	Teepee Buttes			
6,774.50	6,666.00	Sharon Springs			
6,860.61	6,727.00	Top A Chalk			
6,874.41	6,736.00	Top A Marl			
6,880.65	6,740.00	Top B Chalk			
6,964.45	6,789.00	Top B Marl			
7,113.92	6,853.00	Top C Chalk			
7,261.61	6,884.00	Top C Marl			

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
2400	2400	0	0	Start Build 2.00
6424	6354	-581	441	Start DLS 9.00 TFO 36.72
7324	6887	-1209	515	TPZ/LP at 7323.65 MD
9000	6887	-2885	544	Start DLS 1.00 TFO 90.00
17,483	6887	-11,368	623	TD at 17482.90 MD

Checked By: _____ Approved By: _____ Date: _____

Northern Region - DJ Basin

Mustang

D Section 22

Guttersen D34-759

Wellbore #1

Plan 1

Anticollision Summary Report

13 August, 2018

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersen D34-759
Project:	Mustang	TVD Reference:	KB @ 4855.00ft
Reference Site:	D Section 22	MD Reference:	KB @ 4855.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersen D34-759	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

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

Survey Tool Program	Date	8/1/2018		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	17,482.90	Plan 1 (Wellbore #1)	2_MWD+IFR1+MS	A008Mb: IFR dec & multi-station analysis

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
D Section 21						
Casey Blue D 21-11 (PR) - Wellbore #1 - No Surveys	2,400.00	2,359.00	4,912.69	4,857.14	88.437	CC
Casey Blue D 21-11 (PR) - Wellbore #1 - No Surveys	2,500.00	2,458.98	4,914.01	4,856.12	84.883	ES
Casey Blue D 21-11 (PR) - Wellbore #1 - No Surveys	7,050.00	6,788.48	5,662.93	5,502.16	35.225	SF
Casey Blue D21-13 (PR) - Wellbore #1 - Gyro Surveys	100.00	26.10	6,122.34	6,122.17	10,000.000	CC
Casey Blue D21-13 (PR) - Wellbore #1 - Gyro Surveys	2,400.00	2,290.01	6,132.98	6,116.77	378.283	ES
Casey Blue D21-13 (PR) - Wellbore #1 - Gyro Surveys	10,100.00	6,990.07	7,573.89	7,513.35	125.102	SF
Casey Blue D21-14 (SI) - Wellbore #1 - Gyro Surveys	401.79	360.80	4,703.81	4,701.52	2,049.954	CC
Casey Blue D21-14 (SI) - Wellbore #1 - Gyro Surveys	2,400.00	2,341.01	4,713.33	4,696.95	287.713	ES
Casey Blue D21-14 (SI) - Wellbore #1 - Gyro Surveys	8,300.00	6,878.47	5,506.43	5,453.91	104.857	SF
Casey Blue D21-3J (PR) - Wellbore #1 - Gyro Surveys	1,556.25	1,505.27	5,887.51	5,877.07	563.937	CC
Casey Blue D21-3J (PR) - Wellbore #1 - Gyro Surveys	2,400.00	2,326.23	5,888.98	5,872.66	360.781	ES
Casey Blue D21-3J (PR) - Wellbore #1 - Gyro Surveys	8,400.00	6,912.72	6,972.02	6,919.32	132.301	SF
Guttersen 21-31 (SI) - Wellbore #1 - Gyro Surveys	2,306.28	2,244.30	4,980.01	4,964.31	317.204	CC
Guttersen 21-31 (SI) - Wellbore #1 - Gyro Surveys	2,400.00	2,327.18	4,980.11	4,963.78	305.061	ES
Guttersen 21-31 (SI) - Wellbore #1 - Gyro Surveys	6,900.00	6,716.41	5,902.62	5,855.06	124.124	SF
Guttersen 21-42 (SI) - Wellbore #1 - Gyro Surveys	2,461.21	2,482.84	3,132.46	3,115.39	183.456	CC
Guttersen 21-42 (SI) - Wellbore #1 - Gyro Surveys	2,500.00	2,522.17	3,132.71	3,115.37	180.621	ES
Guttersen 21-42 (SI) - Wellbore #1 - Gyro Surveys	6,750.00	6,618.37	3,958.75	3,912.02	84.726	SF
Guttersen 32-21 (PR) - Wellbore #1 - No Surveys	2,400.00	2,363.00	4,133.07	4,077.44	74.295	CC
Guttersen 32-21 (PR) - Wellbore #1 - No Surveys	2,500.00	2,462.98	4,134.70	4,076.73	71.323	ES
Guttersen 32-21 (PR) - Wellbore #1 - No Surveys	6,850.00	6,682.93	4,976.93	4,819.11	31.534	SF
Guttersen 33-21 (PR) - Wellbore #1 - Gyro Surveys	395.18	360.18	3,611.65	3,609.38	1,592.366	CC
Guttersen 33-21 (PR) - Wellbore #1 - Gyro Surveys	2,400.00	2,361.96	3,619.46	3,603.01	220.001	ES
Guttersen 33-21 (PR) - Wellbore #1 - Gyro Surveys	7,000.00	6,792.40	4,374.32	4,325.99	90.523	SF
Guttersen 34-21 (PR) - Wellbore #1 - Gyro Surveys	100.00	59.29	3,497.69	3,497.46	10,000.000	CC
Guttersen 34-21 (PR) - Wellbore #1 - Gyro Surveys	1,300.00	1,241.89	3,501.24	3,492.65	407.424	ES
Guttersen 34-21 (PR) - Wellbore #1 - Gyro Surveys	7,250.00	6,962.63	4,003.75	3,953.85	80.239	SF
Guttersen 41-21 (PR) - Wellbore #1 - Gyro Surveys	100.00	41.62	4,203.27	4,203.07	10,000.000	CC
Guttersen 41-21 (PR) - Wellbore #1 - Gyro Surveys	1,900.00	1,827.35	4,211.61	4,198.82	329.186	ES
Guttersen 41-21 (PR) - Wellbore #1 - Gyro Surveys	6,800.00	6,652.22	5,093.42	5,046.44	108.401	SF
Guttersen 43-21 (PR) - Wellbore #1 - Gyro Surveys	702.68	667.68	2,414.95	2,410.50	543.392	CC
Guttersen 43-21 (PR) - Wellbore #1 - Gyro Surveys	2,400.00	2,342.30	2,421.51	2,405.13	147.864	ES
Guttersen 43-21 (PR) - Wellbore #1 - Gyro Surveys	6,750.00	6,596.96	3,211.27	3,164.52	68.681	SF
Guttersen D21-32D (SI) - Wellbore #1 - MWD Surveys	0.00	0.00	5,137.85			
Guttersen D21-32D (SI) - Wellbore #1 - MWD Surveys	100.00	47.21	5,137.86	5,137.65	10,000.000	ES
Guttersen D21-32D (SI) - Wellbore #1 - MWD Surveys	11,400.00	11,400.00	9,697.48	9,612.20	113.703	SF
Guttersen USX D21-17 (PR) - Wellbore #1 - No Surveys	2,400.00	2,347.00	4,066.60	4,011.29	73.523	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 Guttersen D34-759
Project:	Mustang	TVD Reference:	KB @ 4855.00ft
Reference Site:	D Section 22	MD Reference:	KB @ 4855.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersen D34-759	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Separation Factor	Warning
D Section 21						
Guttersen USX D21-17 (PR) - Wellbore #1 - No Surveys	2,500.00	2,446.98	4,068.34	4,010.69	70.567	ES
Guttersen USX D21-17 (PR) - Wellbore #1 - No Surveys	6,800.00	6,631.90	4,940.91	4,784.33	31.555	SF
Guttersen USX D21-20D (PR) - Wellbore #1 - MWD Surv	785.34	751.00	5,073.28	5,068.29	1,016.778	CC
Guttersen USX D21-20D (PR) - Wellbore #1 - MWD Surv	1,100.00	1,023.76	5,074.20	5,067.03	707.659	ES
Guttersen USX D21-20D (PR) - Wellbore #1 - MWD Surv	7,100.00	7,018.04	6,454.50	6,400.28	119.045	SF
Guttersen USX D21-21D (SI) - Wellbore #1 - MWD Surve	2,891.13	3,585.22	4,768.94	4,742.31	179.076	CC
Guttersen USX D21-21D (SI) - Wellbore #1 - MWD Surve	2,900.00	3,588.92	4,768.96	4,742.27	178.706	ES
Guttersen USX D21-21D (SI) - Wellbore #1 - MWD Surve	6,900.00	6,981.54	5,274.90	5,216.88	90.918	SF
Guttersen USX D21-24D (PR) - Wellbore #1 - MWD Surv	3,998.83	4,633.00	4,509.29	4,478.52	146.555	CC
Guttersen USX D21-24D (PR) - Wellbore #1 - MWD Surv	4,000.00	4,633.00	4,509.29	4,478.52	146.534	ES
Guttersen USX D21-24D (PR) - Wellbore #1 - MWD Surv	7,250.00	6,999.12	4,968.13	4,917.35	97.830	SF
Guttersen USX D21-25 (PR) - Wellbore #1 - MWD Surve	1,213.90	1,180.04	5,097.80	5,089.67	626.483	CC
Guttersen USX D21-25 (PR) - Wellbore #1 - MWD Surve	2,000.00	1,935.94	5,099.67	5,086.02	373.649	ES
Guttersen USX D21-25 (PR) - Wellbore #1 - MWD Surve	7,300.00	6,903.50	5,765.62	5,715.56	115.177	SF
Guttersen USX D21-27D (PR) - Wellbore #1 - MWD Surv	842.62	791.65	4,068.25	4,062.94	765.172	CC
Guttersen USX D21-27D (PR) - Wellbore #1 - MWD Surv	1,000.00	904.22	4,068.78	4,062.51	648.908	ES
Guttersen USX D21-27D (PR) - Wellbore #1 - MWD Surv	6,750.00	6,729.48	5,892.80	5,842.85	117.987	SF
Guttersen USX D21-28D (PR) - Wellbore #1 - MWD Surv	100.00	43.12	4,065.43	4,065.23	10,000.000	CC
Guttersen USX D21-28D (PR) - Wellbore #1 - MWD Surv	300.00	226.59	4,066.03	4,064.78	3,255.708	ES
Guttersen USX D21-28D (PR) - Wellbore #1 - MWD Surv	9,100.00	9,100.00	8,367.44	8,303.69	131.250	SF
Guttersen USX D21-33D (SI) - Wellbore #1 - MWD Surve	100.00	64.25	5,119.58	5,119.34	10,000.000	CC
Guttersen USX D21-33D (SI) - Wellbore #1 - MWD Surve	600.00	534.96	5,121.43	5,117.80	1,411.889	ES
Guttersen USX D21-33D (SI) - Wellbore #1 - MWD Surve	10,900.00	6,904.15	8,868.87	8,799.18	127.264	SF
Guttersen USX D22-30D (PR) - Wellbore #1 - MWD Surv	2,532.46	2,764.06	3,998.30	3,975.72	177.093	CC, ES
Guttersen USX D22-30D (PR) - Wellbore #1 - MWD Surv	6,650.00	6,844.70	5,231.67	5,172.24	88.021	SF
Gutterson 18-21 (SI) - Wellbore #1 - Gyro Surveys	2,370.20	2,325.34	6,063.48	6,047.26	373.861	CC
Gutterson 18-21 (SI) - Wellbore #1 - Gyro Surveys	2,400.00	2,344.95	6,063.51	6,047.11	369.872	ES
Gutterson 18-21 (SI) - Wellbore #1 - Gyro Surveys	6,950.00	6,795.86	6,959.05	6,911.20	145.436	SF
HSR Guttersen B 5-21 (PR) - Wellbore #1 - Gyro Survey	453.98	400.00	6,495.21	6,492.59	2,476.664	CC
HSR Guttersen B 5-21 (PR) - Wellbore #1 - Gyro Survey	2,100.00	2,008.52	6,498.37	6,484.24	459.842	ES
HSR Guttersen B 5-21 (PR) - Wellbore #1 - Gyro Survey	6,950.00	6,763.22	7,283.57	7,235.78	152.402	SF
HSR Gutterson 4-21 (PR) - Wellbore #1 - Gyro Surveys	2,304.74	2,258.95	7,041.97	7,026.08	443.154	CC
HSR Gutterson 4-21 (PR) - Wellbore #1 - Gyro Surveys	2,400.00	2,332.24	7,042.10	7,025.61	427.120	ES
HSR Gutterson 4-21 (PR) - Wellbore #1 - Gyro Surveys	7,050.00	6,809.70	7,997.02	7,948.71	165.534	SF
HSR-Guttersen 3-21 (SI) - Wellbore #1 - Gyro Surveys	2,455.45	2,516.26	5,958.51	5,941.33	346.755	CC, ES
HSR-Guttersen 3-21 (SI) - Wellbore #1 - Gyro Surveys	6,850.00	7,180.54	6,691.60	6,641.15	132.632	SF
HSR-Guttersen 6-21 (SI) - Wellbore #1 - Gyro Surveys	785.74	733.76	5,290.34	5,285.37	1,063.096	CC
HSR-Guttersen 6-21 (SI) - Wellbore #1 - Gyro Surveys	2,100.00	2,012.13	5,292.58	5,278.44	374.148	ES
HSR-Guttersen 6-21 (SI) - Wellbore #1 - Gyro Surveys	6,900.00	6,719.53	6,076.70	6,029.05	127.529	SF
Two E Ranch 1-21C (SI) - Wellbore #1 - Gyro Surveys	410.88	374.89	2,539.71	2,537.33	1,068.175	CC
Two E Ranch 1-21C (SI) - Wellbore #1 - Gyro Surveys	1,600.00	1,547.30	2,545.72	2,534.99	237.121	ES
Two E Ranch 1-21C (SI) - Wellbore #1 - Gyro Surveys	6,950.00	6,768.67	3,276.99	3,228.82	68.029	SF
Vogler State D21-720 - Wellbore #1 - Plan 1	2,000.00	1,995.00	2,107.45	2,093.60	152.109	CC
Vogler State D21-720 - Wellbore #1 - Plan 1	2,200.00	2,178.28	2,108.23	2,093.04	138.868	ES
Vogler State D21-720 - Wellbore #1 - Plan 1	7,600.00	6,937.26	2,701.32	2,649.15	51.775	SF
Vogler State D21-731 - Wellbore #1 - Plan 1	6,515.04	7,837.90	3,349.47	3,298.87	66.198	CC, ES
Vogler State D21-731 - Wellbore #1 - Plan 1	7,600.00	7,371.75	3,429.65	3,376.46	64.478	SF
Vogler State D21-740 - Wellbore #1 - Plan 1	6,540.87	7,783.67	3,981.41	3,931.42	79.630	CC
Vogler State D21-740 - Wellbore #1 - Plan 1	6,550.00	7,780.57	3,981.42	3,931.39	79.575	ES
Vogler State D21-740 - Wellbore #1 - Plan 1	8,200.00	7,022.37	4,124.44	4,069.76	75.429	SF
Vogler State D21-750 - Wellbore #1 - Plan 1	2,000.00	1,999.00	4,035.00	4,021.13	290.931	CC
Vogler State D21-750 - Wellbore #1 - Plan 1	2,300.00	2,269.41	4,036.09	4,020.26	254.880	ES
Vogler State D21-750 - Wellbore #1 - Plan 1	8,800.00	6,650.00	4,836.20	4,780.31	86.533	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 Guttersten D34-759
Project:	Mustang	TVD Reference:	KB @ 4855.00ft
Reference Site:	D Section 22	MD Reference:	KB @ 4855.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersten D34-759	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
D Section 21						
Vogler State D21-760 - Wellbore #1 - Plan 1	6,385.70	7,907.35	5,256.51	5,206.51	105.130	CC
Vogler State D21-760 - Wellbore #1 - Plan 1	6,400.00	7,905.14	5,256.53	5,206.48	105.032	ES
Vogler State D21-760 - Wellbore #1 - Plan 1	9,400.00	7,050.00	5,733.08	5,673.51	96.235	SF
Vogler State D21-770 - Wellbore #1 - Plan 1	2,514.06	2,616.25	5,756.80	5,739.03	323.898	CC
Vogler State D21-770 - Wellbore #1 - Plan 1	2,600.00	2,741.86	5,757.26	5,738.80	311.795	ES
Vogler State D21-770 - Wellbore #1 - Plan 1	9,900.00	6,700.00	6,486.35	6,425.46	106.520	SF
Vogler State D21-780 - Wellbore #1 - Plan 1	2,004.79	1,969.79	5,795.81	5,782.03	420.544	CC
Vogler State D21-780 - Wellbore #1 - Plan 1	2,200.00	2,117.04	5,796.50	5,781.51	386.843	ES
Vogler State D21-780 - Wellbore #1 - Plan 1	10,800.00	6,525.70	7,373.82	7,308.85	113.510	SF
Vogler State D21-790 - Wellbore #1 - Plan 1	6,663.60	7,611.46	2,011.28	1,961.43	40.345	CC, ES
Vogler State D21-790 - Wellbore #1 - Plan 1	7,100.00	7,341.90	2,033.68	1,982.60	39.818	SF
Vogler State D33-711 - Wellbore #1 - Plan 1	2,846.92	3,027.64	2,019.70	1,999.50	99.960	CC
Vogler State D33-711 - Wellbore #1 - Plan 1	17,482.90	17,485.93	2,060.17	1,866.57	10.642	ES, SF
Vogler State D33-718 - Wellbore #1 - Plan 1	2,400.00	2,394.00	2,100.57	2,083.85	125.639	CC, ES
Vogler State D33-718 - Wellbore #1 - Plan 1	17,482.90	17,387.31	2,688.50	2,496.01	13.967	SF
Vogler State D33-728 - Wellbore #1 - Plan 1	6,791.95	7,250.00	3,238.47	3,186.83	62.717	CC
Vogler State D33-728 - Wellbore #1 - Plan 1	17,482.90	17,623.76	3,349.88	3,156.48	17.321	ES, SF
Vogler State D33-738 - Wellbore #1 - Plan 1	6,232.02	6,734.25	3,871.62	3,825.18	83.369	CC
Vogler State D33-738 - Wellbore #1 - Plan 1	17,000.00	16,927.58	3,988.44	3,803.22	21.533	ES
Vogler State D33-738 - Wellbore #1 - Plan 1	17,482.90	17,308.35	4,005.95	3,814.26	20.898	SF
Vogler State D33-752 - Wellbore #1 - Plan 1	2,400.01	2,404.02	4,033.64	4,016.89	240.753	CC, ES
Vogler State D33-752 - Wellbore #1 - Plan 1	17,482.90	17,477.97	4,660.25	4,466.59	24.064	SF
Vogler State D33-759 - Wellbore #1 - Plan 1	6,341.79	7,082.06	5,174.33	5,125.36	105.679	CC
Vogler State D33-759 - Wellbore #1 - Plan 1	17,482.90	17,543.18	5,311.07	5,117.94	27.499	ES, SF
Vogler State D33-769 - Wellbore #1 - Plan 1	2,862.79	3,401.95	5,738.60	5,717.05	266.235	CC
Vogler State D33-769 - Wellbore #1 - Plan 1	2,900.00	3,435.24	5,738.75	5,716.95	263.315	ES
Vogler State D33-769 - Wellbore #1 - Plan 1	17,482.90	17,462.18	5,971.06	5,777.79	30.895	SF
Vogler State D33-779 - Wellbore #1 - Plan 1	2,000.00	1,971.00	5,795.64	5,781.87	420.923	CC
Vogler State D33-779 - Wellbore #1 - Plan 1	2,100.00	2,045.90	5,795.79	5,781.41	402.842	ES
Vogler State D33-779 - Wellbore #1 - Plan 1	17,482.90	17,445.18	6,631.01	6,437.51	34.268	SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersten D34-759
Project:	Mustang	TVD Reference:	KB @ 4855.00ft
Reference Site:	D Section 22	MD Reference:	KB @ 4855.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersten D34-759	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
D Section 22						
Dalbey D22-05 (SI) - Wellbore #1 - Gyro Surveys	100.00	41.55	2,411.17	2,410.97	10,000.000	CC
Dalbey D22-05 (SI) - Wellbore #1 - Gyro Surveys	800.00	733.99	2,414.83	2,409.80	479.832	ES
Dalbey D22-05 (SI) - Wellbore #1 - Gyro Surveys	6,700.00	6,576.69	3,260.34	3,213.93	70.251	SF
O'SH D 22-11 (SI) - Wellbore #1 - No Surveys	2,400.00	2,374.00	752.42	696.57	13.472	CC
O'SH D 22-11 (SI) - Wellbore #1 - No Surveys	2,500.00	2,473.98	753.53	695.34	12.949	ES
O'SH D 22-11 (SI) - Wellbore #1 - No Surveys	6,450.00	6,353.39	1,345.92	1,196.12	8.985	SF
Dalbey D 22-04 (PR) - Wellbore #1 - Gyro Surveys	674.26	615.27	3,806.18	3,802.01	914.098	CC
Dalbey D 22-04 (PR) - Wellbore #1 - Gyro Surveys	1,000.00	922.47	3,807.00	3,800.60	594.890	ES
Dalbey D 22-04 (PR) - Wellbore #1 - Gyro Surveys	6,700.00	6,578.86	4,675.10	4,628.63	100.616	SF
Dalbey D 22-3 (SI) - Wellbore #1 - Gyro Surveys	203.98	154.98	3,786.49	3,785.62	4,363.435	CC
Dalbey D 22-3 (SI) - Wellbore #1 - Gyro Surveys	2,402.23	2,355.30	3,793.08	3,776.65	230.782	ES
Dalbey D 22-3 (SI) - Wellbore #1 - Gyro Surveys	6,750.00	6,600.97	4,462.45	4,415.67	95.394	SF
Dalbey D22-6 (SI) - Wellbore #1 - Gyro Surveys	381.16	332.17	2,621.39	2,619.27	1,234.823	CC
Dalbey D22-6 (SI) - Wellbore #1 - Gyro Surveys	1,800.00	1,731.48	2,623.86	2,611.76	216.921	ES
Dalbey D22-6 (SI) - Wellbore #1 - Gyro Surveys	6,700.00	6,538.23	3,349.47	3,303.15	72.301	SF
Guttersten D 22-18 (SI) - Wellbore #1 - Gyro Surveys	1,996.34	1,955.50	3,190.57	3,176.98	234.733	CC
Guttersten D 22-18 (SI) - Wellbore #1 - Gyro Surveys	2,100.00	2,032.24	3,191.03	3,176.80	224.246	ES
Guttersten D 22-18 (SI) - Wellbore #1 - Gyro Surveys	6,750.00	6,611.93	3,770.08	3,723.18	80.394	SF
Guttersten D34-719 - Wellbore #1 - Plan 1	3,323.78	3,052.16	2,402.59	2,380.63	109.422	CC, ES
Guttersten D34-719 - Wellbore #1 - Plan 1	17,482.90	17,517.73	2,602.97	2,409.93	13.484	SF
Guttersten D34-729 - Wellbore #1 - Plan 1	17,480.23	17,466.74	1,942.91	1,749.46	10.044	CC, ES, SF
Guttersten D34-739 - Wellbore #1 - Plan 1	17,482.90	17,462.76	1,283.37	1,090.25	6.645	CC, ES, SF
Guttersten D34-749 - Wellbore #1 - Plan 1	2,200.00	2,200.00	37.43	22.12	2.445	CC, ES
Guttersten D34-749 - Wellbore #1 - Plan 1	2,300.00	2,298.88	38.89	22.89	2.430	SF
Guttersten D34-769 - Wellbore #1 - Plan 1	2,200.00	2,199.00	37.43	22.12	2.446	CC
Guttersten D34-769 - Wellbore #1 - Plan 1	2,300.00	2,298.73	37.77	21.77	2.361	ES
Guttersten D34-769 - Wellbore #1 - Plan 1	2,400.00	2,398.22	39.25	22.57	2.353	SF
Guttersten D34-779 - Wellbore #1 - Plan 1	2,400.00	2,399.00	75.13	58.40	4.489	CC, ES
Guttersten D34-779 - Wellbore #1 - Plan 1	2,500.00	2,497.06	77.42	60.01	4.447	SF
Guttersten State D 22-22 (SI) - Wellbore #1 - Gyro Survey	575.31	555.32	2,908.73	2,905.13	808.631	CC
Guttersten State D 22-22 (SI) - Wellbore #1 - Gyro Survey	2,500.00	2,456.48	2,909.49	2,892.37	169.884	ES
Guttersten State D 22-22 (SI) - Wellbore #1 - Gyro Survey	6,750.00	6,655.51	3,071.86	3,024.59	64.981	SF
Guttersten State D 22-24 (SI) - Wellbore #1 - Gyro Survey	3,569.54	3,478.55	1,241.15	1,216.79	50.936	CC
Guttersten State D 22-24 (SI) - Wellbore #1 - Gyro Survey	3,700.00	3,602.41	1,241.67	1,216.40	49.143	ES
Guttersten State D 22-24 (SI) - Wellbore #1 - Gyro Survey	6,550.00	6,453.11	1,385.30	1,339.44	30.209	SF
Guttersten State D22-730 - Wellbore #1 - Plan 1	7,492.31	6,885.23	1,841.20	1,789.32	35.489	CC
Guttersten State D22-730 - Wellbore #1 - Plan 1	7,500.00	6,883.20	1,841.21	1,789.31	35.477	ES
Guttersten State D22-730 - Wellbore #1 - Plan 1	7,700.00	6,838.65	1,851.76	1,799.34	35.327	SF
Guttersten State D22-740 - Wellbore #1 - Plan 1	7,082.58	7,308.20	1,295.91	1,245.00	25.453	CC, ES
Guttersten State D22-740 - Wellbore #1 - Plan 1	7,200.00	7,237.89	1,299.16	1,248.02	25.404	SF
Guttersten State D22-750 - Wellbore #1 - Plan 1	2,200.00	2,199.00	154.75	139.44	10.112	CC, ES
Guttersten State D22-750 - Wellbore #1 - Plan 1	2,400.00	2,389.10	160.94	144.31	9.677	SF
Guttersten State D22-760 - Wellbore #1 - Plan 1	7,110.13	7,319.68	46.03	-5.44	0.894	Level 1, CC, ES, SF
Guttersten State D22-770 - Wellbore #1 - Plan 1	2,200.00	2,199.00	154.68	139.37	10.108	CC, ES
Guttersten State D22-770 - Wellbore #1 - Plan 1	2,400.00	2,388.62	161.17	144.55	9.696	SF
Guttersten State D22-780 - Wellbore #1 - Plan 1	2,000.00	1,999.00	167.72	153.85	12.093	CC, ES
Guttersten State D22-780 - Wellbore #1 - Plan 1	2,200.00	2,187.72	174.24	159.05	11.470	SF
Guttersten State D34-790 - Wellbore #1 - Plan 1	2,200.00	2,208.00	2,472.42	2,457.08	161.223	CC, ES
Guttersten State D34-790 - Wellbore #1 - Plan 1	17,482.90	17,636.91	3,212.34	3,019.21	16.632	SF
OSH D 22-12 (SI) - Wellbore #1 - Gyro Surveys	1,361.86	1,321.86	1,398.81	1,389.72	153.832	CC
OSH D 22-12 (SI) - Wellbore #1 - Gyro Surveys	2,000.00	1,950.85	1,401.23	1,387.65	103.245	ES
OSH D 22-12 (SI) - Wellbore #1 - Gyro Surveys	6,550.00	6,444.46	2,187.67	2,142.27	48.192	SF
OSH D 22-13 (SI) - Wellbore #1 - Gyro Surveys	1,595.18	1,569.24	1,119.94	1,109.15	103.719	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 Guttersten D34-759
Project:	Mustang	TVD Reference:	KB @ 4855.00ft
Reference Site:	D Section 22	MD Reference:	KB @ 4855.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersten D34-759	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
D Section 22						
OSH D 22-13 (SI) - Wellbore #1 - Gyro Surveys	2,500.00	2,471.43	1,122.95	1,105.78	65.412	ES
OSH D 22-13 (SI) - Wellbore #1 - Gyro Surveys	6,700.00	6,617.77	1,516.00	1,469.22	32.408	SF
OSH D 22-14 (PR) - Wellbore #1 - Gyro Surveys	6,109.08	6,021.39	189.23	146.60	4.439	CC
OSH D 22-14 (PR) - Wellbore #1 - Gyro Surveys	6,200.00	6,112.23	189.46	146.18	4.378	ES
OSH D 22-14 (PR) - Wellbore #1 - Gyro Surveys	6,300.00	6,210.56	190.87	146.88	4.339	SF
Sevendust State D 22-1 (SI) - Wellbore #1 - Gyro Survey	2,848.49	3,020.45	4,896.33	4,876.07	241.605	CC
Sevendust State D 22-1 (SI) - Wellbore #1 - Gyro Survey	2,900.00	3,035.74	4,896.51	4,876.01	238.908	ES
Sevendust State D 22-1 (SI) - Wellbore #1 - Gyro Survey	6,850.00	6,685.91	5,256.32	5,208.67	110.302	SF
Spike ST GWS D 22-07 (SI) - Wellbore #1 - No Surveys	2,400.00	2,367.00	2,659.60	2,603.89	47.740	CC
Spike ST GWS D 22-07 (SI) - Wellbore #1 - No Surveys	2,600.00	2,566.84	2,661.55	2,601.18	44.082	ES
Spike ST GWS D 22-07 (SI) - Wellbore #1 - No Surveys	6,650.00	6,531.84	3,005.03	2,850.69	19.471	SF
Spike ST GWS D 22-08 (SI) - Wellbore #1 - Gyro Survey	3,397.42	3,344.42	3,913.90	3,890.64	168.276	CC
Spike ST GWS D 22-08 (SI) - Wellbore #1 - Gyro Survey	3,600.00	3,521.16	3,915.02	3,890.43	159.230	ES
Spike ST GWS D 22-08 (SI) - Wellbore #1 - Gyro Survey	6,850.00	6,751.20	4,056.69	4,008.72	84.552	SF
Spike ST GWS D 22-09 (PA) - Wellbore #1 - No Surveys	6,452.61	6,362.93	3,309.40	3,159.09	22.017	CC
Spike ST GWS D 22-09 (PA) - Wellbore #1 - No Surveys	6,500.00	6,408.64	3,310.31	3,158.90	21.863	ES
Spike ST GWS D 22-09 (PA) - Wellbore #1 - No Surveys	6,900.00	6,733.09	3,392.68	3,233.20	21.274	SF
Spike ST GWS D 22-15 (PR) - Wellbore #1 - Gyro Surve	6,566.00	6,461.20	1,307.06	1,261.17	28.479	CC, ES
Spike ST GWS D 22-15 (PR) - Wellbore #1 - Gyro Surve	6,800.00	6,654.52	1,325.22	1,277.70	27.883	SF
Spike ST GWS D 22-4J (PR) - Wellbore #1 - Gyro Surve	6,626.29	6,571.51	2,420.81	2,374.36	52.120	CC
Spike ST GWS D 22-4J (PR) - Wellbore #1 - Gyro Surve	6,650.00	6,591.91	2,420.96	2,374.35	51.935	ES
Spike ST GWS D 22-4J (PR) - Wellbore #1 - Gyro Surve	7,050.00	6,855.71	2,478.88	2,429.74	50.441	SF
Spike State D22-1J (PA) - Wellbore #1 - Gyro Surveys	2,510.00	2,522.32	3,688.13	3,670.74	212.115	CC, ES
Spike State D22-1J (PA) - Wellbore #1 - Gyro Surveys	6,750.00	6,673.36	4,046.12	3,998.89	85.674	SF
Spike State GWS D 22-10 (PA) - Wellbore #1 - Gyro Sur	3,176.16	3,121.12	1,889.09	1,867.40	87.079	CC
Spike State GWS D 22-10 (PA) - Wellbore #1 - Gyro Sur	3,500.00	3,438.63	1,890.38	1,866.45	78.993	ES
Spike State GWS D 22-10 (PA) - Wellbore #1 - Gyro Sur	6,600.00	6,493.54	2,012.12	1,966.01	43.643	SF
Spike State GWS D 22-2 (PR) - Wellbore #1 - Gyro Surv	1,684.54	1,643.57	4,120.14	4,108.77	362.363	CC
Spike State GWS D 22-2 (PR) - Wellbore #1 - Gyro Surv	2,400.00	2,356.09	4,120.97	4,104.55	250.933	ES
Spike State GWS D 22-2 (PR) - Wellbore #1 - Gyro Surv	6,750.00	6,619.23	4,685.24	4,638.28	99.777	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 Guttersten D34-759
Project:	Mustang	TVD Reference:	KB @ 4855.00ft
Reference Site:	D Section 22	MD Reference:	KB @ 4855.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersten D34-759	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Separation Factor	Warning
D Section 23						
Guttersten 23-20 (SI) - Wellbore #1 - Gyro Surveys	6,468.25	6,386.74	5,203.26	5,158.02	115.030	CC, ES
Guttersten 23-20 (SI) - Wellbore #1 - Gyro Surveys	7,150.00	6,860.60	5,372.57	5,323.07	108.541	SF
Guttersten 23-32 (SI) - Wellbore #1 - Gyro Surveys	6,498.56	6,368.50	7,366.99	7,321.68	162.588	CC
Guttersten 23-32 (SI) - Wellbore #1 - Gyro Surveys	6,500.00	6,369.25	7,366.99	7,321.67	162.558	ES
Guttersten 23-32 (SI) - Wellbore #1 - Gyro Surveys	11,200.00	11,200.00	9,965.02	9,886.25	126.507	SF
Guttersten 23-41 (PR) - Wellbore #1 - Gyro Surveys	6,460.59	6,273.29	8,979.99	8,935.18	200.400	CC, ES
Guttersten 23-41 (PR) - Wellbore #1 - Gyro Surveys	8,600.00	6,700.00	9,947.56	9,893.81	185.087	SF
Guttersten 31-23 (PR) - Wellbore #1 - Gyro Surveys	6,431.64	6,275.32	7,813.01	7,768.28	174.665	CC, ES
Guttersten 31-23 (PR) - Wellbore #1 - Gyro Surveys	7,250.00	6,818.18	8,072.43	8,022.79	162.627	SF
Guttersten 42-23 (PR) - Wellbore #1 - Gyro Surveys	6,509.31	6,299.73	8,412.22	8,367.14	186.594	CC, ES
Guttersten 42-23 (PR) - Wellbore #1 - Gyro Surveys	10,000.00	6,803.52	9,958.43	9,897.97	164.719	SF
Guttersten USX D 23-17 (PR) - Wellbore #1 - Gyro Surveys	6,459.24	6,220.63	8,005.91	7,961.26	179.303	CC, ES
Guttersten USX D 23-17 (PR) - Wellbore #1 - Gyro Surveys	7,050.00	7,050.00	8,132.76	8,082.93	163.224	SF
Parker Blue D 23-09 (SI) - Wellbore #1 - Gyro Surveys	6,739.74	6,564.33	8,255.21	8,208.31	176.024	CC
Parker Blue D 23-09 (SI) - Wellbore #1 - Gyro Surveys	6,750.00	6,574.52	8,255.22	8,208.25	175.736	ES
Parker Blue D 23-09 (SI) - Wellbore #1 - Gyro Surveys	11,300.00	6,901.51	9,957.36	9,889.66	147.077	SF
Parker Blue D 23-10 (SI) - Wellbore #1 - Gyro Surveys	6,642.89	6,459.25	7,044.66	6,998.50	152.588	CC
Parker Blue D 23-10 (SI) - Wellbore #1 - Gyro Surveys	6,650.00	6,464.32	7,044.68	6,998.46	152.435	ES
Parker Blue D 23-10 (SI) - Wellbore #1 - Gyro Surveys	10,000.00	6,848.21	8,280.59	8,219.46	135.457	SF
Parker Blue D 23-11 (SI) - Wellbore #1 - Gyro Surveys	6,546.14	6,462.65	5,733.29	5,687.47	125.133	CC
Parker Blue D 23-11 (SI) - Wellbore #1 - Gyro Surveys	6,550.00	6,465.98	5,733.30	5,687.45	125.060	ES
Parker Blue D 23-11 (SI) - Wellbore #1 - Gyro Surveys	7,200.00	6,859.43	5,854.08	5,804.34	117.696	SF
Parker Blue D 23-13 (SI) - Wellbore #1 - Gyro Surveys	6,729.03	6,670.23	3,945.63	3,898.43	83.597	CC
Parker Blue D 23-13 (SI) - Wellbore #1 - Gyro Surveys	6,750.00	6,686.61	3,945.73	3,898.39	83.347	ES
Parker Blue D 23-13 (SI) - Wellbore #1 - Gyro Surveys	7,300.00	6,895.81	4,027.98	3,977.80	80.265	SF
Parker Blue D 23-14 (SI) - Wellbore #1 - Gyro Surveys	6,807.71	6,629.23	5,409.31	5,361.92	114.149	CC
Parker Blue D 23-14 (SI) - Wellbore #1 - Gyro Surveys	6,850.00	6,664.88	5,409.60	5,361.91	113.451	ES
Parker Blue D 23-14 (SI) - Wellbore #1 - Gyro Surveys	8,999.73	6,836.73	6,020.57	5,963.59	105.654	SF
Parker Blue D 23-15 (SI) - Wellbore #1 - Gyro Surveys	7,048.52	6,806.26	6,647.84	6,598.97	136.019	CC
Parker Blue D 23-15 (SI) - Wellbore #1 - Gyro Surveys	7,050.00	6,806.89	6,647.84	6,598.96	136.005	ES
Parker Blue D 23-15 (SI) - Wellbore #1 - Gyro Surveys	10,700.00	6,892.44	7,760.30	7,694.78	118.443	SF
Parker Blue D 23-3J (SI) - Wellbore #1 - Gyro Surveys	6,503.02	6,365.21	4,715.85	4,668.13	98.831	CC, ES
Parker Blue D 23-3J (SI) - Wellbore #1 - Gyro Surveys	7,200.00	6,808.34	4,860.82	4,808.01	92.052	SF
Parker Red D 23-05 (PR) - Wellbore #1 - Gyro Surveys	6,431.74	6,371.84	4,903.89	4,858.82	108.796	CC, ES
Parker Red D 23-05 (PR) - Wellbore #1 - Gyro Surveys	7,050.00	6,842.67	5,073.13	5,024.06	103.397	SF
Parker Red D 23-2J (SI) - Wellbore #1 - Gyro Surveys	6,452.64	6,454.00	5,794.29	5,748.87	127.583	CC, ES
Parker Red D 23-2J (SI) - Wellbore #1 - Gyro Surveys	7,150.00	7,017.15	5,998.60	5,948.39	119.468	SF
Parker Red D 23-3 (PR) - Wellbore #1 - Gyro Surveys	5,476.21	5,400.00	6,760.66	6,722.59	177.575	CC
Parker Red D 23-3 (PR) - Wellbore #1 - Gyro Surveys	6,450.00	6,491.88	6,767.37	6,721.80	148.500	ES
Parker Red D 23-3 (PR) - Wellbore #1 - Gyro Surveys	6,950.00	6,876.94	6,890.83	6,842.09	141.391	SF
Parker Red D 23-4 (SI) - Wellbore #1 - Gyro Surveys	1,911.32	1,890.38	5,609.46	5,596.41	430.012	CC
Parker Red D 23-4 (SI) - Wellbore #1 - Gyro Surveys	2,500.00	2,436.99	5,611.59	5,594.54	329.155	ES
Parker Red D 23-4 (SI) - Wellbore #1 - Gyro Surveys	7,000.00	6,772.96	5,902.01	5,853.40	121.421	SF
Two E Ranch 1-23 (SI) - Wellbore #1 - Gyro Surveys	6,837.86	6,626.43	7,693.04	7,645.55	161.993	CC
Two E Ranch 1-23 (SI) - Wellbore #1 - Gyro Surveys	6,850.00	6,635.99	7,693.06	7,645.49	161.714	ES
Two E Ranch 1-23 (SI) - Wellbore #1 - Gyro Surveys	11,300.00	6,839.15	9,266.04	9,197.68	135.542	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 Guttersen D34-759
Project:	Mustang	TVD Reference:	KB @ 4855.00ft
Reference Site:	D Section 22	MD Reference:	KB @ 4855.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersen D34-759	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Summary

Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
D Section 26						
Adam Red D 26-11 (PR) - Wellbore #1 - Gyro Surveys	10,397.61	6,778.25	5,048.56	4,982.24	76.123	CC
Adam Red D 26-11 (PR) - Wellbore #1 - Gyro Surveys	10,400.00	6,778.27	5,048.56	4,982.22	76.103	ES
Adam Red D 26-11 (PR) - Wellbore #1 - Gyro Surveys	12,200.00	6,791.75	5,360.64	5,282.82	68.887	SF
Adam Red D 26-12 (PR) - Wellbore #1 - Gyro Surveys	10,384.80	6,924.73	3,845.51	3,771.44	51.917	CC
Adam Red D 26-12 (PR) - Wellbore #1 - Gyro Surveys	10,400.00	6,924.66	3,845.54	3,771.36	51.837	ES
Adam Red D 26-12 (PR) - Wellbore #1 - Gyro Surveys	11,400.00	6,919.70	3,977.26	3,896.47	49.235	SF
Adam Red D 26-13 (PR) - Wellbore #1 - Gyro Surveys	11,531.34	6,900.00	4,020.98	3,946.30	53.843	CC, ES
Adam Red D 26-13 (PR) - Wellbore #1 - Gyro Surveys	12,600.00	6,900.00	4,160.57	4,078.71	50.823	SF
Adam Red D 26-14 (PR) - Wellbore #1 - Gyro Surveys	11,551.32	6,853.48	5,385.54	5,306.14	67.828	CC
Adam Red D 26-14 (PR) - Wellbore #1 - Gyro Surveys	11,600.00	6,854.05	5,385.76	5,305.98	67.505	ES
Adam Red D 26-14 (PR) - Wellbore #1 - Gyro Surveys	13,300.00	6,873.86	5,662.29	5,571.25	62.192	SF
Coors Energy 14-25H (PR) - Wellbore #1 - MWD Survey	11,238.20	5,920.20	8,586.82	8,518.97	126.550	CC
Coors Energy 14-25H (PR) - Wellbore #1 - MWD Survey	11,300.00	5,920.20	8,587.04	8,518.73	125.703	ES
Coors Energy 14-25H (PR) - Wellbore #1 - MWD Survey	15,500.00	5,920.20	9,586.26	9,492.12	101.830	SF
Heyde 1-26 (PR) - Wellbore #1 - Gyro Surveys	8,141.33	6,856.49	7,547.48	7,494.29	141.891	CC
Heyde 1-26 (PR) - Wellbore #1 - Gyro Surveys	8,200.00	6,856.69	7,547.71	7,494.23	141.133	ES
Heyde 1-26 (PR) - Wellbore #1 - Gyro Surveys	12,500.00	6,871.58	8,740.25	8,663.14	113.345	SF
Heyde 26ND (PR) - Wellbore #1 - MWD Surveys	909.83	895.00	5,751.82	5,746.03	992.664	CC, ES
Heyde 26ND (PR) - Wellbore #1 - MWD Surveys	11,600.00	6,924.49	6,760.12	6,682.66	87.266	SF
Heyde 26RD (PR) - Wellbore #1 - MWD Surveys	7,282.18	6,857.61	7,261.46	7,209.42	139.517	CC
Heyde 26RD (PR) - Wellbore #1 - MWD Surveys	7,300.00	6,858.56	7,261.51	7,209.40	139.338	ES
Heyde 26RD (PR) - Wellbore #1 - MWD Surveys	11,500.00	6,885.80	8,440.54	8,367.20	115.085	SF
Heyde 26VD (PR) - Wellbore #1 - MWD Surveys	100.00	58.02	8,203.66	8,203.43	10,000.000	CC
Heyde 26VD (PR) - Wellbore #1 - MWD Surveys	1,000.00	928.22	8,205.51	8,200.48	1,632.444	ES
Heyde 26VD (PR) - Wellbore #1 - MWD Surveys	13,600.00	7,127.00	9,890.68	9,800.60	109.797	SF
Heyde 31-26 (PR) - Wellbore #1 - No Surveys	7,844.48	6,833.28	6,293.78	6,242.01	121.570	CC, ES
Heyde 31-26 (PR) - Wellbore #1 - No Surveys	11,200.00	6,834.78	7,148.11	7,078.75	103.053	SF
Heyde 32-26 (SI) - Wellbore #1 - Gyro Surveys	9,088.75	6,738.51	6,441.53	6,383.66	111.329	CC
Heyde 32-26 (SI) - Wellbore #1 - Gyro Surveys	9,100.00	6,738.57	6,441.53	6,383.60	111.195	ES
Heyde 32-26 (SI) - Wellbore #1 - Gyro Surveys	12,200.00	6,758.61	7,153.51	7,077.23	93.784	SF
Heyde 41-26 (PR) - Wellbore #1 - Gyro Surveys	7,658.88	6,870.77	7,930.33	7,879.14	154.924	CC
Heyde 41-26 (PR) - Wellbore #1 - Gyro Surveys	7,700.00	6,871.63	7,930.43	7,879.08	154.434	ES
Heyde 41-26 (PR) - Wellbore #1 - Gyro Surveys	12,600.00	6,973.94	9,367.96	9,290.82	121.444	SF
Heyde 42-26 (PR) - Wellbore #1 - Gyro Surveys	9,046.07	6,913.42	7,842.26	7,784.12	134.872	CC
Heyde 42-26 (PR) - Wellbore #1 - Gyro Surveys	9,100.00	6,912.83	7,842.46	7,783.98	134.120	ES
Heyde 42-26 (PR) - Wellbore #1 - Gyro Surveys	13,400.00	6,933.57	8,970.10	8,886.38	107.140	SF
HSR-Waste Services 10-26 (SI) - Wellbore #1 - No Surve	10,616.66	6,878.00	6,754.78	6,572.96	37.151	CC
HSR-Waste Services 10-26 (SI) - Wellbore #1 - No Surve	10,700.00	6,878.00	6,755.30	6,572.86	37.029	ES
HSR-Waste Services 10-26 (SI) - Wellbore #1 - No Surve	12,200.00	6,878.00	6,937.87	6,745.06	35.982	SF
HSR-Waste Services 15-26 (SI) - Wellbore #1 - No Surve	11,611.62	6,894.00	6,502.39	6,313.21	34.371	CC
HSR-Waste Services 15-26 (SI) - Wellbore #1 - No Surve	11,700.00	6,894.00	6,502.99	6,313.12	34.250	ES
HSR-Waste Services 15-26 (SI) - Wellbore #1 - No Surve	13,000.00	6,894.00	6,648.96	6,449.84	33.392	SF
HSR-Waste Services 16-26 (SI) - Wellbore #1 - Gyro Su	11,626.89	6,993.62	7,751.77	7,676.52	103.003	CC
HSR-Waste Services 16-26 (SI) - Wellbore #1 - Gyro Su	11,700.00	6,993.25	7,752.12	7,676.30	102.246	ES
HSR-Waste Services 16-26 (SI) - Wellbore #1 - Gyro Su	15,000.00	6,976.91	8,453.85	8,357.05	87.331	SF
HSR-Waste Services 9-26 (PA) - Wellbore #1 - Gyro Sur	10,372.97	6,803.27	7,934.60	7,868.39	119.841	CC
HSR-Waste Services 9-26 (PA) - Wellbore #1 - Gyro Sur	10,400.00	6,803.41	7,934.65	7,868.24	119.495	ES
HSR-Waste Services 9-26 (PA) - Wellbore #1 - Gyro Sur	14,300.00	6,823.62	8,853.19	8,762.70	97.830	SF
Waste Management 11-26 (PR) - Wellbore #1 - Gyro Sur	7,909.42	6,957.64	3,862.66	3,810.24	73.679	CC, ES
Waste Management 11-26 (PR) - Wellbore #1 - Gyro Sur	9,300.00	6,975.79	4,107.44	4,047.92	69.013	SF
Waste Management 12-26 (PR) - Wellbore #1 - Gyro Sur	9,179.48	6,963.49	3,797.70	3,738.57	64.223	CC
Waste Management 12-26 (PR) - Wellbore #1 - Gyro Sur	9,200.00	6,964.44	3,797.76	3,738.49	64.075	ES
Waste Management 12-26 (PR) - Wellbore #1 - Gyro Sur	10,400.00	7,019.89	3,988.61	3,921.87	59.762	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 Guttersten D34-759
Project:	Mustang	TVD Reference:	KB @ 4855.00ft
Reference Site:	D Section 22	MD Reference:	KB @ 4855.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersten D34-759	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
D Section 26						
Waste Management 12-26A (PR) - Wellbore #1 - Gyro S	8,655.50	6,871.36	4,447.94	4,392.06	79.608	CC
Waste Management 12-26A (PR) - Wellbore #1 - Gyro S	8,700.00	6,873.73	4,448.16	4,392.02	79.234	ES
Waste Management 12-26A (PR) - Wellbore #1 - Gyro S	10,400.00	6,973.39	4,786.54	4,720.45	72.420	SF
Waste Management 21-26 (PR) - Wellbore #1 - Gyro Sur	7,705.58	6,793.23	5,339.34	5,288.24	104.495	CC, ES
Waste Management 21-26 (PR) - Wellbore #1 - Gyro Sur	10,200.00	6,817.92	5,901.94	5,838.20	92.605	SF
Waste Management 22-26 (PR) - Wellbore #1 - Gyro Sur	9,118.11	6,803.42	5,206.04	5,147.86	89.472	CC, ES
Waste Management 22-26 (PR) - Wellbore #1 - Gyro Sur	11,300.00	6,810.21	5,644.77	5,573.65	79.365	SF
Waste Management 26FD (PR) - Wellbore #1 - MWD Su	8,479.68	7,045.80	3,311.01	3,254.80	58.903	CC
Waste Management 26FD (PR) - Wellbore #1 - MWD Su	8,500.00	7,045.69	3,311.08	3,254.74	58.773	ES
Waste Management 26FD (PR) - Wellbore #1 - MWD Su	9,600.00	7,038.34	3,499.88	3,436.37	55.109	SF
Waste Management 26KD (PR) - Wellbore #1 - MWD Su	9,716.57	7,033.05	4,530.88	4,461.67	65.465	CC, ES
Waste Management 26KD (PR) - Wellbore #1 - MWD Su	11,100.00	7,047.04	4,737.35	4,659.42	60.791	SF
Waste Management D 26-25 (SI) - Wellbore #1 - Gyro S	11,060.17	6,792.66	4,719.91	4,648.93	66.497	CC
Waste Management D 26-25 (SI) - Wellbore #1 - Gyro S	11,100.00	6,792.75	4,720.08	4,648.79	66.213	ES
Waste Management D 26-25 (SI) - Wellbore #1 - Gyro S	13,600.00	13,600.00	5,359.59	5,250.72	49.229	SF
Waste Management 26JD (PR) - Wellbore #1 - MWD Surv	7,267.32	7,015.39	4,589.92	4,536.36	85.696	CC, ES
Waste Management 26JD (PR) - Wellbore #1 - MWD Surv	9,046.67	7,007.97	4,941.01	4,879.07	79.770	SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersen D34-759
Project:	Mustang	TVD Reference:	KB @ 4855.00ft
Reference Site:	D Section 22	MD Reference:	KB @ 4855.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersen D34-759	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Separation Factor	Warning
D Section 27						
Camolo Red 27-3J (SI) - Wellbore #1 - Gyro Surveys	11,443.00	6,872.07	1,096.47	1,022.65	14.855	CC, ES
Camolo Red 27-3J (SI) - Wellbore #1 - Gyro Surveys	11,500.00	6,873.22	1,097.95	1,023.94	14.836	SF
Camolo Red D 27-02J (SI) - Wellbore #1 - Gyro Surveys	8,053.93	6,874.71	395.17	346.07	8.048	CC, ES, SF
Camolo Red D 27-04 (SI) - Wellbore #1 - Gyro Surveys	7,677.15	6,863.85	1,543.00	1,491.70	30.079	CC, ES
Camolo Red D 27-04 (SI) - Wellbore #1 - Gyro Surveys	7,800.00	6,864.73	1,547.89	1,496.23	29.963	SF
Camolo Red D 27-05 (SI) - Wellbore #1 - Gyro Surveys	9,124.75	6,943.52	1,342.31	1,283.46	22.809	CC, ES
Camolo Red D 27-12 (SI) - Wellbore #1 - Gyro Surveys	9,200.00	6,948.47	1,344.41	1,285.25	22.723	SF
Camolo Red D 27-06 (SI) - Wellbore #1 - Gyro Surveys	8,992.09	6,889.22	19.51	-38.35	0.337	Level 1, CC, ES, SF
Camolo Red D 27-11 (PA) - Wellbore #1 - No Surveys	10,446.89	6,910.00	73.82	-107.48	0.407	Level 1, CC, ES, SF
Camolo Red D 27-12 (SI) - Wellbore #1 - Gyro Surveys	10,406.68	6,857.49	1,453.48	1,386.93	21.841	CC, ES
Camolo Red D 27-12 (SI) - Wellbore #1 - Gyro Surveys	10,500.00	6,857.65	1,456.47	1,389.55	21.764	SF
Camolo Red D 27-14 (PR) - Wellbore #1 - Gyro Surveys	11,696.95	6,923.47	80.49	4.54	1.060	Level 2, CC, ES, SF
Estes D 27-10 (SI) - Wellbore #1 - Gyro Surveys	10,634.05	6,823.43	1,271.92	1,203.74	18.654	CC, ES
Estes D 27-10 (SI) - Wellbore #1 - Gyro Surveys	10,800.00	6,829.88	1,282.69	1,213.23	18.467	SF
Estes D27-07 (SI) - Wellbore #1 - Gyro Surveys	9,054.28	6,872.76	1,111.38	1,053.29	19.132	CC, ES
Estes D27-07 (SI) - Wellbore #1 - Gyro Surveys	9,200.00	6,870.29	1,120.89	1,061.77	18.962	SF
Hippo D 27-23 D (PR) - Wellbore #1 - MWD Surveys	11,024.23	7,118.13	1,826.23	1,750.44	24.096	CC, ES
Hippo D 27-23 D (PR) - Wellbore #1 - MWD Surveys	11,500.00	7,118.79	1,887.19	1,805.62	23.135	SF
Hippo D 27-24 D (PR) - Wellbore #1 - MWD Surveys	11,094.94	6,976.45	486.95	413.32	6.614	CC
Hippo D 27-24 D (PR) - Wellbore #1 - MWD Surveys	11,100.00	6,976.52	486.98	413.27	6.607	ES, SF
Hippo D 27-25 D (PR) - Wellbore #1 - MWD Surveys	11,101.52	7,117.38	742.47	667.60	9.916	CC, ES
Hippo D 27-25 D (PR) - Wellbore #1 - MWD Surveys	11,200.00	7,125.15	748.94	673.04	9.867	SF
Hippo D 34-27 D (PR) - Wellbore #1 - MWD Surveys	12,338.78	7,487.38	1,880.73	1,779.09	18.505	CC
Hippo D 34-27 D (PR) - Wellbore #1 - MWD Surveys	12,400.00	7,487.32	1,881.72	1,778.88	18.298	ES
Hippo D 34-27 D (PR) - Wellbore #1 - MWD Surveys	12,700.00	7,487.02	1,915.10	1,807.46	17.791	SF
Hippo D 34-28 D (PR) - Wellbore #1 - MWD Surveys	12,331.71	7,312.97	465.90	368.11	4.764	CC, ES, SF
Hippo D 34-29 D (PR) - Wellbore #1 - MWD Surveys	12,327.59	7,392.13	795.94	696.51	8.005	CC, ES
Hippo D 34-29 D (PR) - Wellbore #1 - MWD Surveys	12,400.00	7,392.51	799.23	698.62	7.944	SF
Hippo D 34-30 D (PR) - Wellbore #1 - MWD Surveys	12,456.55	7,812.17	2,190.89	2,084.84	20.658	CC
Hippo D 34-30 D (PR) - Wellbore #1 - MWD Surveys	12,500.00	7,812.24	2,191.32	2,084.35	20.485	ES
Hippo D 34-30 D (PR) - Wellbore #1 - MWD Surveys	13,000.00	7,813.12	2,257.29	2,141.78	19.542	SF
Kyle D 27-16 (PR) - Wellbore #1 - Gyro Surveys	11,382.81	6,918.98	2,197.31	2,123.63	29.822	CC
Kyle D 27-16 (PR) - Wellbore #1 - Gyro Surveys	11,400.00	6,918.94	2,197.38	2,123.55	29.763	ES
Kyle D 27-16 (PR) - Wellbore #1 - Gyro Surveys	11,800.00	6,919.50	2,236.56	2,159.93	29.187	SF
Kyle White D 27-1 (PR) - Wellbore #1 - Gyro Surveys	7,660.08	6,876.36	2,750.27	2,699.02	53.667	CC, ES
Kyle White D 27-1 (PR) - Wellbore #1 - Gyro Surveys	8,400.00	6,880.00	2,848.06	2,793.37	52.077	SF
Kyle White D 27-15 (SI) - Wellbore #1 - Gyro Surveys	11,818.88	6,914.26	1,118.94	1,042.14	14.569	CC, ES
Kyle White D 27-15 (SI) - Wellbore #1 - Gyro Surveys	11,900.00	6,914.71	1,121.87	1,044.34	14.470	SF
Kyle White D 27-2 (SI) - Wellbore #1 - Gyro Surveys	7,683.94	6,887.35	1,263.60	1,212.50	24.727	CC, ES
Kyle White D 27-2 (SI) - Wellbore #1 - Gyro Surveys	7,800.00	6,891.80	1,268.91	1,217.26	24.566	SF
Kyle White D 27-8 (PR) - Wellbore #1 - Gyro Surveys	9,238.81	6,878.19	2,634.44	2,575.22	44.486	CC, ES
Kyle White D 27-8 (PR) - Wellbore #1 - Gyro Surveys	9,900.00	6,914.09	2,715.90	2,652.46	42.813	SF
Kyle White D 27-9 (PR) - Wellbore #1 - Gyro Surveys	10,344.17	6,846.74	2,667.79	2,601.54	40.272	CC, ES
Kyle White D 27-9 (PR) - Wellbore #1 - Gyro Surveys	10,900.00	6,911.61	2,724.61	2,654.40	38.804	SF
Rhino D 27 18 D (PR) - Wellbore #1 - MWD Surveys	8,448.62	7,114.08	511.10	447.65	8.055	CC, ES
Rhino D 27 18 D (PR) - Wellbore #1 - MWD Surveys	8,500.00	7,114.42	513.67	449.89	8.054	SF
Rhino D 27-19 D (PR) - Wellbore #1 - MWD Surveys	8,300.00	7,273.25	726.63	659.34	10.799	SF
Rhino D 27-19 D (PR) - Wellbore #1 - MWD Surveys	8,439.11	7,276.20	713.20	647.76	10.899	CC, ES
Rhino D 27-20 D (PR) - Wellbore #1 - MWD Surveys	9,687.75	7,073.31	742.21	679.82	11.896	CC, ES
Rhino D 27-20 D (PR) - Wellbore #1 - MWD Surveys	9,700.00	7,073.84	742.31	679.91	11.895	SF
Rhino D 27-21 (PR) - Wellbore #1 - Gyro Surveys	9,868.26	6,903.90	444.67	381.39	7.027	CC, ES
Rhino D 27-21 (PR) - Wellbore #1 - Gyro Surveys	9,900.00	6,901.45	445.80	382.20	7.009	SF
Rhino D 27-22 D (PR) - Wellbore #1 - MWD Surveys	9,702.46	7,065.58	1,930.85	1,867.86	30.654	CC, ES

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

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersen D34-759
Project:	Mustang	TVD Reference:	KB @ 4855.00ft
Reference Site:	D Section 22	MD Reference:	KB @ 4855.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersen D34-759	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
D Section 27						
Rhino D 27-22 D (PR) - Wellbore #1 - MWD Surveys	10,100.00	7,082.78	1,971.27	1,905.49	29.971	SF
Rhino State D 27-27 D (PR) - Wellbore #1 - MWD Surve	7,000.00	7,699.09	1,960.37	1,880.89	24.666	SF
Rhino State D 27-27 D (PR) - Wellbore #1 - MWD Surve	7,139.91	7,763.40	1,954.29	1,875.47	24.794	CC, ES
Rhino State D 27-28 D (PR) - Wellbore #1 - MWD Surve	7,242.99	7,519.80	531.13	455.30	7.004	CC, ES
Rhino State D 27-28 D (PR) - Wellbore #1 - MWD Surve	7,250.00	7,520.58	531.18	455.33	7.003	SF
UPRR Amoco 1 63 (PA) - Wellbore #1 - No Surveys	10,772.11	6,912.00	1,575.19	1,391.61	8.581	CC, ES
UPRR Amoco 1 63 (PA) - Wellbore #1 - No Surveys	10,900.00	6,912.00	1,580.37	1,395.75	8.560	SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersten D34-759
Project:	Mustang	TVD Reference:	KB @ 4855.00ft
Reference Site:	D Section 22	MD Reference:	KB @ 4855.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersten D34-759	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Separation Factor	Warning
D Section 28						
O'SH D 28-7 (P&A) - Wellbore #1 - No Surveys	9,079.40	6,842.00	4,014.66	3,843.42	23.446	CC
O'SH D 28-7 (P&A) - Wellbore #1 - No Surveys	9,100.00	6,842.00	4,014.71	3,843.37	23.431	ES
O'SH D 28-7 (P&A) - Wellbore #1 - No Surveys	9,500.00	6,842.00	4,036.63	3,863.25	23.282	SF
Spike ST GWS D 28-12 (SI) - Wellbore #1 - Gyro Surve	10,440.35	6,810.12	6,754.62	6,687.96	101.329	CC
Spike ST GWS D 28-12 (SI) - Wellbore #1 - Gyro Surve	10,500.00	6,810.80	6,754.89	6,687.85	100.757	ES
Spike ST GWS D 28-12 (SI) - Wellbore #1 - Gyro Surve	13,200.00	6,838.80	7,296.56	7,214.83	89.276	SF
Guttersten D State 28-29D (PR) - Wellbore #1 - MWD Su	4,206.29	4,756.78	5,713.05	5,680.85	177.450	CC
Guttersten D State 28-29D (PR) - Wellbore #1 - MWD Su	4,300.00	4,800.38	5,713.48	5,680.76	174.664	ES
Guttersten D State 28-29D (PR) - Wellbore #1 - MWD Su	9,900.00	6,953.97	6,599.02	6,536.59	105.695	SF
Guttersten D State 28-30D - Wellbore #1 - Guttersten D S	853.85	826.28	6,236.31	6,232.03	1,456.276	CC, ES
Guttersten D State 28-30D - Wellbore #1 - Guttersten D S	8,700.00	8,700.00	7,545.64	7,484.66	123.744	SF
Guttersten State D28-18D (PR) - Wellbore #1 - MWD Sur	2,748.42	2,878.38	4,814.63	4,792.29	215.564	CC
Guttersten State D28-18D (PR) - Wellbore #1 - MWD Sur	8,215.59	6,897.64	4,822.92	4,766.25	85.115	ES
Guttersten State D28-18D (PR) - Wellbore #1 - MWD Sur	9,700.00	6,884.94	5,040.86	4,978.41	80.708	SF
Guttersten State D28-21D (SI) - Wellbore #1 - MWD Surv	9,578.75	7,104.38	4,725.15	4,660.48	73.063	CC
Guttersten State D28-21D (SI) - Wellbore #1 - MWD Surv	9,600.00	7,104.73	4,725.20	4,660.39	72.915	ES
Guttersten State D28-21D (SI) - Wellbore #1 - MWD Surv	12,700.00	12,700.00	5,662.91	5,567.19	59.165	SF
Guttersten State D28-24D (SI) - Wellbore #1 - MWD Surv	11,136.90	6,880.00	4,746.50	4,670.13	62.147	CC, ES
Guttersten State D28-24D (SI) - Wellbore #1 - MWD Surv	12,200.00	6,901.15	4,864.04	4,782.43	59.601	SF
Guttersten State D28-28D (PR) - Wellbore #1 - MWD Sur	4,006.52	4,408.78	4,483.48	4,451.71	141.128	CC, ES
Guttersten State D28-28D (PR) - Wellbore #1 - MWD Sur	8,600.00	6,923.42	5,039.56	4,982.06	87.645	SF
Guttersten State D28-79HN - Wellbore #1 - Actual	7,400.00	11,086.00	7,196.46	7,086.11	65.214	SF
Guttersten State D28-79HN - Wellbore #1 - Actual	11,140.44	7,593.00	7,060.18	6,983.21	91.735	CC
Guttersten State D28-79HN - Wellbore #1 - Actual	11,200.00	7,593.00	7,060.43	6,983.07	91.273	ES
HSR Guttersten State 10-28 (SI) - Wellbore #1 - Gyro Su	10,367.27	6,486.17	4,282.95	4,218.29	66.237	CC
HSR Guttersten State 10-28 (SI) - Wellbore #1 - Gyro Su	10,400.00	6,486.49	4,283.07	4,218.22	66.040	ES
HSR Guttersten State 10-28 (SI) - Wellbore #1 - Gyro Su	11,500.00	6,495.86	4,430.20	4,359.70	62.848	SF
HSR Guttersten State 15-28 (SI) - Wellbore #1 - Gyro Su	11,100.00	11,100.00	3,809.09	3,722.49	43.983	SF
HSR Guttersten State 15-28 (SI) - Wellbore #1 - Gyro Su	12,020.58	7,023.95	3,697.81	3,618.15	46.420	CC, ES
HSR Guttersten State 7-28 (PR) - Wellbore #1 - Gyro Sur	8,969.17	7,142.43	4,208.32	4,148.27	70.079	CC
HSR Guttersten State 7-28 (PR) - Wellbore #1 - Gyro Sur	8,999.73	7,141.13	4,208.43	4,148.23	69.904	ES
HSR Guttersten State 7-28 (PR) - Wellbore #1 - Gyro Sur	10,200.00	7,089.38	4,375.06	4,309.39	66.622	SF
O'SH D 28-1 (SI) - Wellbore #1 - Gyro Surveys	8,089.52	6,859.87	3,007.90	2,954.93	56.776	CC
O'SH D 28-1 (SI) - Wellbore #1 - Gyro Surveys	8,100.00	6,859.79	3,007.92	2,954.90	56.732	ES
O'SH D 28-1 (SI) - Wellbore #1 - Gyro Surveys	8,700.00	6,855.05	3,069.23	3,013.86	55.440	SF
O'SH D 28-2 (SI) - Wellbore #1 - Gyro Surveys	2,431.41	2,401.26	3,847.67	3,830.97	230.414	CC
O'SH D 28-2 (SI) - Wellbore #1 - Gyro Surveys	2,500.00	2,464.15	3,847.89	3,830.73	224.329	ES
O'SH D 28-2 (SI) - Wellbore #1 - Gyro Surveys	8,900.00	6,843.08	4,159.15	4,103.55	74.805	SF
O'SH D 28-8 (SI) - Wellbore #1 - Gyro Surveys	9,152.84	6,917.75	2,661.03	2,602.31	45.315	CC, ES
O'SH D 28-8 (SI) - Wellbore #1 - Gyro Surveys	9,600.00	6,935.90	2,698.28	2,637.46	44.368	SF
Spike ST GWS D 28-03 (PR) - Wellbore #1 - Gyro Surve	100.00	29.32	4,919.63	4,919.45	10,000.000	CC
Spike ST GWS D 28-03 (PR) - Wellbore #1 - Gyro Surve	1,400.00	1,303.74	4,925.98	4,916.80	536.707	ES
Spike ST GWS D 28-03 (PR) - Wellbore #1 - Gyro Surve	9,300.00	6,786.45	5,506.82	5,433.70	75.315	SF
Spike ST GWS D 28-4 (SI) - Wellbore #1 - Gyro Surveys	1,006.49	937.51	6,284.46	6,277.99	970.683	CC
Spike ST GWS D 28-4 (SI) - Wellbore #1 - Gyro Surveys	2,200.00	2,085.99	6,288.20	6,273.44	425.965	ES
Spike ST GWS D 28-4 (SI) - Wellbore #1 - Gyro Surveys	10,900.00	6,830.72	7,412.79	7,347.61	113.726	SF
Spike State D 28-13 (SI) - Wellbore #1 - Gyro Surveys	11,884.10	6,826.09	6,679.37	6,602.43	86.808	CC
Spike State D 28-13 (SI) - Wellbore #1 - Gyro Surveys	11,900.00	6,826.12	6,679.39	6,602.34	86.686	ES
Spike State D 28-13 (SI) - Wellbore #1 - Gyro Surveys	14,200.00	6,830.60	7,069.47	6,979.48	78.557	SF
Spike State D28-05 (PR) - Wellbore #1 - Gyro Surveys	8,841.46	6,852.32	6,759.29	6,702.49	119.000	CC
Spike State D28-05 (PR) - Wellbore #1 - Gyro Surveys	8,900.00	6,852.83	6,759.55	6,702.44	118.362	ES
Spike State D28-05 (PR) - Wellbore #1 - Gyro Surveys	12,000.00	6,879.71	7,438.68	7,365.88	102.184	SF
Spike State D28-06 (SI) - Wellbore #1 - Gyro Surveys	8,899.95	6,909.27	5,068.40	5,011.02	88.330	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 Guttersten D34-759
Project:	Mustang	TVD Reference:	KB @ 4855.00ft
Reference Site:	D Section 22	MD Reference:	KB @ 4855.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersten D34-759	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Separation Factor	Warning
D Section 28						
Spike State D28-06 (SI) - Wellbore #1 - Gyro Surveys	8,900.00	6,909.28	5,068.40	5,011.02	88.329	ES
Spike State D28-06 (SI) - Wellbore #1 - Gyro Surveys	10,700.00	6,921.38	5,365.58	5,299.36	81.027	SF
Spike State D28-11 (SI) - Wellbore #1 - Gyro Surveys	10,238.76	6,681.83	5,156.96	5,092.19	79.616	CC
Spike State D28-11 (SI) - Wellbore #1 - Gyro Surveys	10,300.00	6,683.95	5,157.33	5,092.18	79.158	ES
Spike State D28-11 (SI) - Wellbore #1 - Gyro Surveys	12,000.00	6,782.42	5,448.80	5,374.44	73.277	SF
Spike State GWS D 28-14 (P&A) - Wellbore #1 - Gyro Su	11,951.45	6,850.41	5,145.42	5,067.86	66.343	CC
Spike State GWS D 28-14 (P&A) - Wellbore #1 - Gyro Su	12,000.00	6,852.33	5,145.65	5,067.76	66.064	ES
Spike State GWS D 28-14 (P&A) - Wellbore #1 - Gyro Su	13,400.00	6,913.11	5,344.91	5,259.15	62.318	SF
D Section 33						
Cydney White D33-01 (PR) - Wellbore #1 - Gyro Surveys	13,131.40	6,870.97	2,670.97	2,584.57	30.912	CC, ES
Cydney White D33-01 (PR) - Wellbore #1 - Gyro Surveys	13,500.00	6,874.23	2,696.29	2,608.06	30.560	SF
Cydney White D33-02 (PR) - Wellbore #1 - Gyro Surveys	13,073.89	6,847.13	3,980.55	3,894.64	46.338	CC
Cydney White D33-02 (PR) - Wellbore #1 - Gyro Surveys	13,100.00	6,847.34	3,980.63	3,894.56	46.245	ES
Cydney White D33-02 (PR) - Wellbore #1 - Gyro Surveys	13,800.00	6,853.36	4,046.23	3,956.32	45.003	SF
Cydney White D33-07 (PR) - Wellbore #1 - Gyro Surveys	14,363.76	6,920.19	4,057.17	3,961.14	42.247	CC
Cydney White D33-07 (PR) - Wellbore #1 - Gyro Surveys	14,400.00	6,920.44	4,057.33	3,961.05	42.141	ES
Cydney White D33-07 (PR) - Wellbore #1 - Gyro Surveys	15,100.00	6,925.43	4,123.43	4,023.40	41.222	SF
Guttersten D 33-09 (PR) - Wellbore #1 - Gyro Surveys	15,901.33	6,880.94	2,559.50	2,451.60	23.719	CC, ES
Guttersten D 33-09 (PR) - Wellbore #1 - Gyro Surveys	16,100.00	6,881.65	2,567.20	2,458.24	23.561	SF
Guttersten D 33-16 (PR) - Wellbore #1 - Gyro Surveys	17,080.60	6,860.57	2,697.11	2,596.87	26.908	CC
Guttersten D 33-16 (PR) - Wellbore #1 - Gyro Surveys	17,100.00	6,860.25	2,697.18	2,596.82	26.876	ES
Guttersten D 33-16 (PR) - Wellbore #1 - Gyro Surveys	17,300.00	6,856.92	2,706.01	2,604.65	26.695	SF
Guttersten D 33-23 (PR) - Wellbore #1 - Gyro Surveys	16,359.62	6,847.75	3,367.80	3,256.40	30.233	CC
Guttersten D 33-23 (PR) - Wellbore #1 - Gyro Surveys	16,400.00	6,847.57	3,368.04	3,256.38	30.163	ES
Guttersten D 33-23 (PR) - Wellbore #1 - Gyro Surveys	16,800.00	6,845.81	3,396.47	3,282.78	29.874	SF
Guttersten D33-10 (SI) - Wellbore #1 - No Surveys	15,617.56	6,863.00	4,015.79	3,796.69	18.328	CC, ES
Guttersten D33-10 (SI) - Wellbore #1 - No Surveys	16,000.00	6,863.00	4,033.96	3,812.54	18.219	SF
Guttersten D33-15 (PR) - Wellbore #1 - No Surveys	16,943.55	6,868.00	4,011.13	3,781.45	17.464	CC, ES
Guttersten D33-15 (PR) - Wellbore #1 - No Surveys	17,300.00	6,868.00	4,026.94	3,795.10	17.370	SF
HSR Guttersten 11-33 (SI) - Wellbore #1 - No Surveys	15,604.79	6,857.00	5,315.08	5,096.20	24.283	CC, ES
HSR Guttersten 11-33 (SI) - Wellbore #1 - No Surveys	16,300.00	6,857.00	5,360.35	5,137.13	24.014	SF
HSR Guttersten 13-33 (SI) - Wellbore #1 - Gyro Surveys	17,002.81	6,886.07	6,724.55	6,607.89	57.642	CC
HSR Guttersten 13-33 (SI) - Wellbore #1 - Gyro Surveys	17,100.00	6,886.09	6,725.25	6,607.88	57.301	ES
HSR Guttersten 13-33 (SI) - Wellbore #1 - Gyro Surveys	17,482.90	6,886.15	6,741.66	6,621.68	56.188	SF
HSR Guttersten 14-33 (SI) - Wellbore #1 - Gyro Surveys	17,097.23	6,924.17	5,235.97	5,118.74	44.665	CC
HSR Guttersten 14-33 (SI) - Wellbore #1 - Gyro Surveys	17,100.00	6,924.17	5,235.97	5,118.73	44.657	ES
HSR Guttersten 14-33 (SI) - Wellbore #1 - Gyro Surveys	17,482.90	6,924.24	5,250.16	5,130.37	43.830	SF
HSR Guttersten 3-33 (SI) - Wellbore #1 - Gyro Surveys	12,700.00	12,700.00	5,300.53	5,196.76	51.081	ES, SF
HSR Guttersten 3-33 (SI) - Wellbore #1 - Gyro Surveys	13,052.44	6,928.69	5,288.85	5,202.85	61.496	CC
HSR Guttersten 4-33 (P&A) - Wellbore #1 - No Surveys	13,112.12	6,872.00	6,772.10	6,572.21	33.878	CC
HSR Guttersten 4-33 (P&A) - Wellbore #1 - No Surveys	13,200.00	6,872.00	6,772.67	6,572.16	33.777	ES
HSR Guttersten 4-33 (P&A) - Wellbore #1 - No Surveys	14,400.00	6,872.00	6,893.47	6,685.46	33.140	SF
HSR-Guttersten 12-33 (SI) - Wellbore #1 - Gyro Surveys	15,835.71	6,940.24	6,656.39	6,548.81	61.877	CC
HSR-Guttersten 12-33 (SI) - Wellbore #1 - Gyro Surveys	15,900.00	6,940.27	6,656.70	6,548.65	61.612	ES
HSR-Guttersten 12-33 (SI) - Wellbore #1 - Gyro Surveys	17,482.90	6,940.81	6,857.16	6,739.99	58.520	SF
HSR-Guttersten 5-33 (SI) - Wellbore #1 - Gyro Surveys	14,566.42	6,866.25	6,343.62	6,246.18	65.101	CC
HSR-Guttersten 5-33 (SI) - Wellbore #1 - Gyro Surveys	14,600.00	6,865.98	6,343.71	6,246.03	64.942	ES
HSR-Guttersten 5-33 (SI) - Wellbore #1 - Gyro Surveys	16,200.00	6,853.49	6,550.57	6,443.73	61.315	SF
HSR-Guttersten 6-33 (SI) - Wellbore #1 - Gyro Surveys	14,483.37	6,875.64	5,199.01	5,102.44	53.836	CC
HSR-Guttersten 6-33 (SI) - Wellbore #1 - Gyro Surveys	14,500.00	6,875.82	5,199.04	5,102.35	53.771	ES
HSR-Guttersten 6-33 (SI) - Wellbore #1 - Gyro Surveys	15,600.00	6,887.26	5,317.56	5,214.64	51.668	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 Guttersen D34-759
Project:	Mustang	TVD Reference:	KB @ 4855.00ft
Reference Site:	D Section 22	MD Reference:	KB @ 4855.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersen D34-759	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
D Section 34						
HSR Waste Services 4-34 (SI) - Wellbore #1 - Gyro Surv	12,949.20	6,904.49	1,163.34	1,078.21	13.665	CC, ES
HSR Waste Services 4-34 (SI) - Wellbore #1 - Gyro Surv	13,000.00	6,903.14	1,164.45	1,079.14	13.649	SF
HSR Waste Services 5-34 (SI) - Wellbore #1 - Gyro Surv	14,175.03	6,913.16	1,577.55	1,482.97	16.680	CC, ES
HSR Waste Services 5-34 (SI) - Wellbore #1 - Gyro Surv	14,300.00	6,912.68	1,582.49	1,487.42	16.645	SF
Liam D 34-11 (PR) - Wellbore #1 - Gyro Surveys	15,774.67	6,917.06	48.85	-58.25	0.456	Level 1, CC, ES, SF
Liam D 34-12 (PR) - Wellbore #1 - Gyro Surveys	15,562.57	6,919.23	1,445.45	1,340.00	13.707	CC, ES
Liam D 34-12 (PR) - Wellbore #1 - Gyro Surveys	15,600.00	6,918.84	1,445.94	1,340.31	13.689	SF
Liam D 34-13 (PR) - Wellbore #1 - Gyro Surveys	16,945.29	6,899.25	1,402.11	1,285.88	12.063	CC, ES
Liam D 34-13 (PR) - Wellbore #1 - Gyro Surveys	17,000.00	6,899.17	1,403.18	1,286.72	12.049	SF
Liam D 34-14 (PR) - Wellbore #1 - Gyro Surveys	17,095.94	6,912.88	37.44	-80.07	0.319	Level 1, CC, ES, SF
Liam D 34-25 (SI) - Wellbore #1 - Gyro Surveys	16,342.96	6,909.09	733.90	622.36	6.580	CC, ES, SF
Liam D 34-33 (SI) - Wellbore #1 - Gyro Surveys	16,338.62	6,896.16	1,887.53	1,776.09	16.939	CC, ES
Liam D 34-33 (SI) - Wellbore #1 - Gyro Surveys	16,400.00	6,895.63	1,888.52	1,776.77	16.899	SF
D Section 35						
UPRR 1 (DA) - Wellbore #1 - No Surveys	13,063.22	6,937.00	3,881.06	3,680.24	19.326	CC
UPRR 1 (DA) - Wellbore #1 - No Surveys	13,100.00	6,937.00	3,881.24	3,680.10	19.297	ES
UPRR 1 (DA) - Wellbore #1 - No Surveys	13,600.00	6,937.00	3,918.01	3,713.13	19.123	SF
Waste Management 22-35 (SI) - Wellbore #1 - Gyro Surv	14,457.01	6,949.85	5,267.82	5,171.07	54.445	CC
Waste Management 22-35 (SI) - Wellbore #1 - Gyro Surv	14,500.00	6,949.92	5,268.00	5,170.88	54.244	ES
Waste Management 22-35 (SI) - Wellbore #1 - Gyro Surv	15,800.00	6,951.98	5,436.32	5,330.40	51.325	SF
Waste Management 31-35 (SI) - Wellbore #1 - Gyro Surv	12,938.73	6,977.16	6,288.32	6,203.39	74.044	CC
Waste Management 31-35 (SI) - Wellbore #1 - Gyro Surv	13,000.00	6,976.73	6,288.62	6,203.20	73.620	ES
Waste Management 31-35 (SI) - Wellbore #1 - Gyro Surv	15,100.00	6,961.87	6,649.35	6,550.26	67.105	SF
Waste Management 41-35 (SI) - Wellbore #1 - Gyro Surv	13,055.19	6,922.23	7,857.64	7,771.62	91.351	CC
Waste Management 41-35 (SI) - Wellbore #1 - Gyro Surv	13,100.00	6,921.92	7,857.76	7,771.39	90.974	ES
Waste Management 41-35 (SI) - Wellbore #1 - Gyro Surv	16,200.00	6,900.80	8,463.56	8,357.25	79.616	SF
Waste Management D 35-15 (PR) - Wellbore #1 - Gyro S	17,127.05	6,897.10	6,427.01	6,309.30	54.602	CC
Waste Management D 35-15 (PR) - Wellbore #1 - Gyro S	17,200.00	6,895.68	6,427.42	6,309.10	54.323	ES
Waste Management D 35-15 (PR) - Wellbore #1 - Gyro S	17,482.90	6,889.93	6,436.85	6,316.26	53.378	SF
Waste Management USX D 35-11 (SI) - Wellbore #1 - Gy	15,788.74	6,914.52	5,165.90	5,058.72	48.199	CC
Waste Management USX D 35-11 (SI) - Wellbore #1 - Gy	15,800.00	6,915.21	5,165.91	5,058.63	48.154	ES
Waste Management USX D 35-11 (SI) - Wellbore #1 - Gy	17,000.00	6,973.25	5,305.68	5,190.30	45.985	SF
Waste Management USX D 35-14 (SI) - Wellbore #1 - No	16,830.02	6,925.00	5,274.65	5,044.73	22.942	CC
Waste Management USX D 35-14 (SI) - Wellbore #1 - No	16,900.00	6,925.00	5,275.11	5,044.60	22.884	ES
Waste Management USX D 35-14 (SI) - Wellbore #1 - No	17,482.90	6,925.00	5,314.90	5,079.99	22.625	SF
Waste Management USX D 35-7 (PR) - Wellbore #1 - Gy	14,300.60	6,882.28	6,474.50	6,379.04	67.827	CC
Waste Management USX D 35-7 (PR) - Wellbore #1 - Gy	14,400.00	6,881.26	6,475.26	6,378.99	67.261	ES
Waste Management USX D 35-7 (PR) - Wellbore #1 - Gy	16,300.00	6,860.23	6,776.16	6,667.47	62.343	SF
Waste Management USX D 35-9 (SI) - Wellbore #1 - No	15,774.02	7,559.00	8,081.24	7,851.52	35.179	CC
Waste Management USX D 35-9 (SI) - Wellbore #1 - No	15,800.00	7,559.00	8,081.28	7,851.35	35.147	ES
Waste Management USX D 35-9 (SI) - Wellbore #1 - No	17,482.90	7,559.00	8,259.94	8,017.87	34.122	SF
Waste Services 21-35 (PR) - Wellbore #1 - Gyro Surveys	12,866.74	6,893.85	5,325.56	5,240.99	62.974	CC
Waste Services 21-35 (PR) - Wellbore #1 - Gyro Surveys	12,900.00	6,893.64	5,325.66	5,240.82	62.775	ES
Waste Services 21-35 (PR) - Wellbore #1 - Gyro Surveys	14,500.00	6,882.88	5,570.36	5,475.01	58.421	SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersten D34-759
Project:	Mustang	TVD Reference:	KB @ 4855.00ft
Reference Site:	D Section 22	MD Reference:	KB @ 4855.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersten D34-759	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Y Section 02						
Waste Management 2I-221 - Wellbore #1 - Wellbore #1 -	17,482.90	11,210.02	3,818.13	3,640.26	21.466	CC, ES, SF
Waste Management 2I-401 - Wellbore #1 - Wellbore #1 -	17,482.90	11,425.02	3,485.96	3,309.75	19.783	CC, ES, SF
Waste Management 2L-201 - Wellbore #1 - Wellbore #1	17,482.90	11,213.02	4,460.62	4,281.05	24.839	CC, ES, SF
Waste Management 2L-301 - Wellbore #1 - Wellbore #1	17,482.90	11,326.02	4,798.74	4,620.49	26.922	CC, ES, SF
Waste Management 2L-421 - Wellbore #1 - Wellbore #1	17,482.90	11,433.02	5,133.04	4,954.00	28.669	CC, ES, SF
Waste Management 2L-441 - Wellbore #1 - Wellbore #1	17,482.90	11,379.02	4,119.09	3,940.52	23.066	CC, ES, SF
Waste Management 2Q-201 - Wellbore #1 - Wellbore #1	17,482.90	11,274.02	6,070.72	5,892.15	33.996	CC, ES, SF
Waste Management 2Q-321 - Wellbore #1 - Wellbore #1	17,482.90	11,347.02	6,393.93	6,214.51	35.636	CC, ES, SF
Waste Management 2Q-341 - Wellbore #1 - Wellbore #1	17,482.90	11,345.02	5,478.20	5,298.24	30.440	CC, ES, SF
Waste Management 2Q-401 - Wellbore #1 - Wellbore #1	17,482.90	11,502.02	5,792.47	5,611.95	32.088	CC, ES, SF
Waste Management 2T-221 - Wellbore #1 - Wellbore #1	17,482.90	11,189.02	7,746.18	7,564.93	42.739	CC, ES, SF
Waste Management 2T-241 - Wellbore #1 - Wellbore #1	17,482.90	11,213.02	6,732.26	6,552.25	37.400	CC, ES, SF
Waste Management 2T-301 - Wellbore #1 - Wellbore #1	17,482.90	11,316.02	7,030.51	6,849.76	38.898	CC, ES, SF
Waste Management 2T-401 - Wellbore #1 - Wellbore #1	17,482.90	11,385.02	7,412.73	7,231.69	40.946	CC, ES, SF
Waste Management 2Y-201 - Wellbore #1 - Wellbore #1	17,482.90	11,229.02	8,404.74	8,222.98	46.241	CC, ES, SF
Waste Management 2Y-441 - Wellbore #1 - Wellbore #1	17,482.90	11,403.02	8,087.14	7,905.81	44.599	CC, ES, SF
Y Section 03						
Waste Management USX Y03-03 - Wellbore #1 - Wellbo	17,482.90	6,914.49	880.91	825.64	15.937	CC, ES, SF
Waste Management USX Y03-04 - Wellbore #1 - Wellbo	17,482.90	6,917.64	1,648.94	1,539.44	15.059	CC, ES, SF
Waste Management USX Y03-05 - Wellbore #1 - Wellbo	17,482.90	6,891.53	2,480.32	2,396.82	29.707	CC, ES, SF
Waste Management USX Y03-06 - Wellbore #1 - Wellbo	17,482.90	7,004.72	2,224.63	2,169.86	40.615	CC, ES, SF
Waste Management USX Y03-11 - Wellbore #1 - Wellbor	17,482.90	6,889.56	3,559.05	3,502.95	63.439	CC, ES, SF
Waste Management USX Y03-12 - Wellbore #1 - Wellbo	17,482.90	6,927.95	3,670.32	3,594.34	48.312	CC, ES, SF
Waste Management USX Y03-13 - Wellbore #1 - Wellbo	17,482.90	6,902.55	4,929.82	4,862.66	73.402	CC, ES, SF
Waste Management USX Y03-14 - Wellbore #1 - Wellbo	17,482.90	6,823.57	4,924.19	4,868.99	89.205	CC, ES, SF
Waste Management USX Y03-19 - Wellbore #1 - Wellbo	17,482.90	6,912.00	1,668.39	1,586.02	20.255	CC, ES, SF
Waste Management USX Y03-25 - Wellbore #1 - Wellbo	17,482.90	6,918.83	4,129.29	4,066.96	66.257	CC, ES, SF
Waste Management USX Y3-15 - Wellbore #1 - As Drille	17,482.90	6,926.72	4,979.16	4,917.09	80.217	CC, ES, SF
Y Section 04						
HSR-Guttersten 01-04 - Original Drilling - Original Drilling	17,482.90	6,800.00	3,060.88	2,943.13	25.995	CC, ES, SF
HSR-Guttersten 02-04 - Original Drilling - Original Drilling	17,482.90	6,908.47	4,133.37	4,013.73	34.547	CC, ES, SF
HSR-Guttersten 03-04 - Original Drilling - Original Drilling	17,482.90	6,963.03	5,563.57	5,443.37	46.288	CC, ES, SF
HSR-Guttersten 05-04 - Original Drilling - Original Drilling	17,482.90	7,226.00	6,973.37	6,855.19	59.004	CC, ES, SF
HSR-Guttersten 07-04 - Original Drilling - Original Drilling	17,482.90	6,924.11	4,682.56	4,569.21	41.309	CC, ES, SF
Melvin Y04-04 - Original Drilling - Original Drilling - As Dr	17,482.90	7,186.60	6,397.84	6,276.90	52.903	CC, ES, SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersen D34-759
Project:	Mustang	TVD Reference:	KB @ 4855.00ft
Reference Site:	D Section 22	MD Reference:	KB @ 4855.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersen D34-759	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Y Section 10						
Bison Ridge Y22-711 - Original Drilling - As-Drilled	17,482.90	6,329.00	8,879.83	8,818.52	144.813	CC, ES, SF
Bison Ridge Y22-719 - Original Drilling - Original Drilling	17,482.90	6,297.00	8,686.11	8,628.32	150.308	CC, ES, SF
Bison Ridge Y22-771 - Original Drilling - As-Drilled	17,482.90	6,375.07	8,348.65	8,296.80	161.018	CC, ES, SF
Oscar Y10-72-1HC - Original Drilling - Original Drilling - A	17,482.90	14,600.03	2,802.36	2,640.49	17.312	CC, ES, SF
Oscar Y10-72-1HN - Original Drilling - Original Drilling - A	17,482.90	14,333.03	2,948.26	2,778.89	17.407	CC, ES, SF
Oscar Y10-72HN - Original Drilling - Original Drilling - As	17,482.90	14,445.03	2,704.53	2,535.95	16.043	CC, ES, SF
Oscar Y10-73-1HC - Original Drilling - Original Drilling - A	17,482.90	14,438.03	2,131.88	1,964.99	12.774	CC, ES, SF
Oscar Y10-73-1HN - Original Drilling - Original Drilling - A	17,482.90	14,398.03	2,315.45	2,147.05	13.750	CC, ES, SF
Oscar Y10-73HN - Original Drilling - Original Drilling - As	17,482.90	14,549.00	2,007.20	1,840.44	12.037	CC, ES, SF
Oscar Y10-74-1HC - Original Drilling - Original Drilling - A	17,482.90	14,684.00	1,481.15	1,321.36	9.270	CC, ES, SF
Oscar Y10-74-1HN - Original Drilling - Original Drilling - A	17,482.90	14,377.03	1,666.38	1,505.55	10.361	CC, ES, SF
Oscar Y10-74HN - Original Drilling - Original Drilling - As	17,482.90	12,678.03	2,401.51	2,308.94	25.942	CC, ES, SF
Oscar Y10-75-1HC - Original Drilling - Original Drilling - A	17,482.90	14,440.00	878.72	723.61	5.665	CC, ES, SF
Oscar Y10-75-1HN - Original Drilling - Original Drilling - A	17,482.90	14,437.03	1,001.75	845.06	6.393	CC, ES, SF
Oscar Y10-75HN - Original Drilling - Original Drilling - As	17,482.90	14,544.00	687.12	536.80	4.571	CC, ES, SF
Oscar Y10-76-1HC - Original Drilling - Original Drilling - A	17,482.90	14,399.00	474.19	338.37	3.491	CC, ES, SF
Oscar Y10-76HN - Original Drilling - Original Drilling - As	17,482.90	14,574.99	280.55	218.62	4.530	CC, ES, SF
Oscar Y10-77-1HC - Original Drilling - Original Drilling - A	17,482.90	14,740.00	413.51	277.85	3.048	CC, ES, SF
Oscar Y10-77HN - Original Drilling - Original Drilling - As	17,482.90	14,600.00	713.50	558.36	4.599	CC, ES, SF
Oscar Y10-78-1HC - Original Drilling - Original Drilling - A	17,482.90	14,759.00	1,010.79	782.79	4.433	CC, ES, SF
Oscar Y10-78-1HN - Original Drilling - Original Drilling - As	17,482.90	14,469.00	1,012.41	785.63	4.464	CC, ES, SF
Oscar Y10-78HN - Original Drilling - Original Drilling - As	17,482.90	13,936.00	1,616.81	1,478.13	11.659	CC, ES, SF
Oscar Y10-79-1HC - Original Drilling - Original Drilling - A	17,482.90	14,740.00	1,644.11	1,409.17	6.998	CC, ES, SF
Oscar Y10-79-1HN - Original Drilling - Original Drilling - A	17,482.90	14,437.00	1,642.45	1,407.94	7.004	CC, ES, SF
Oscar Y10-79HN - Original Drilling - Original Drilling - As	17,482.90	7,926.00	7,227.70	7,158.48	104.412	CC, ES, SF
Oscar Y10-79HN - Original Drilling - ST01 - ST01 - As Dr	17,482.90	14,611.00	1,890.79	1,655.28	8.028	CC, ES, SF
Oscar Y11-79HN - Original Drilling - Original Drilling - As	17,482.90	8,396.02	7,099.84	7,021.56	90.691	CC, ES, SF
Oscar Y11-79HN - ST01 Original Drilling - ST01 Original	17,482.90	14,458.03	3,240.09	3,070.99	19.162	CC, ES, SF

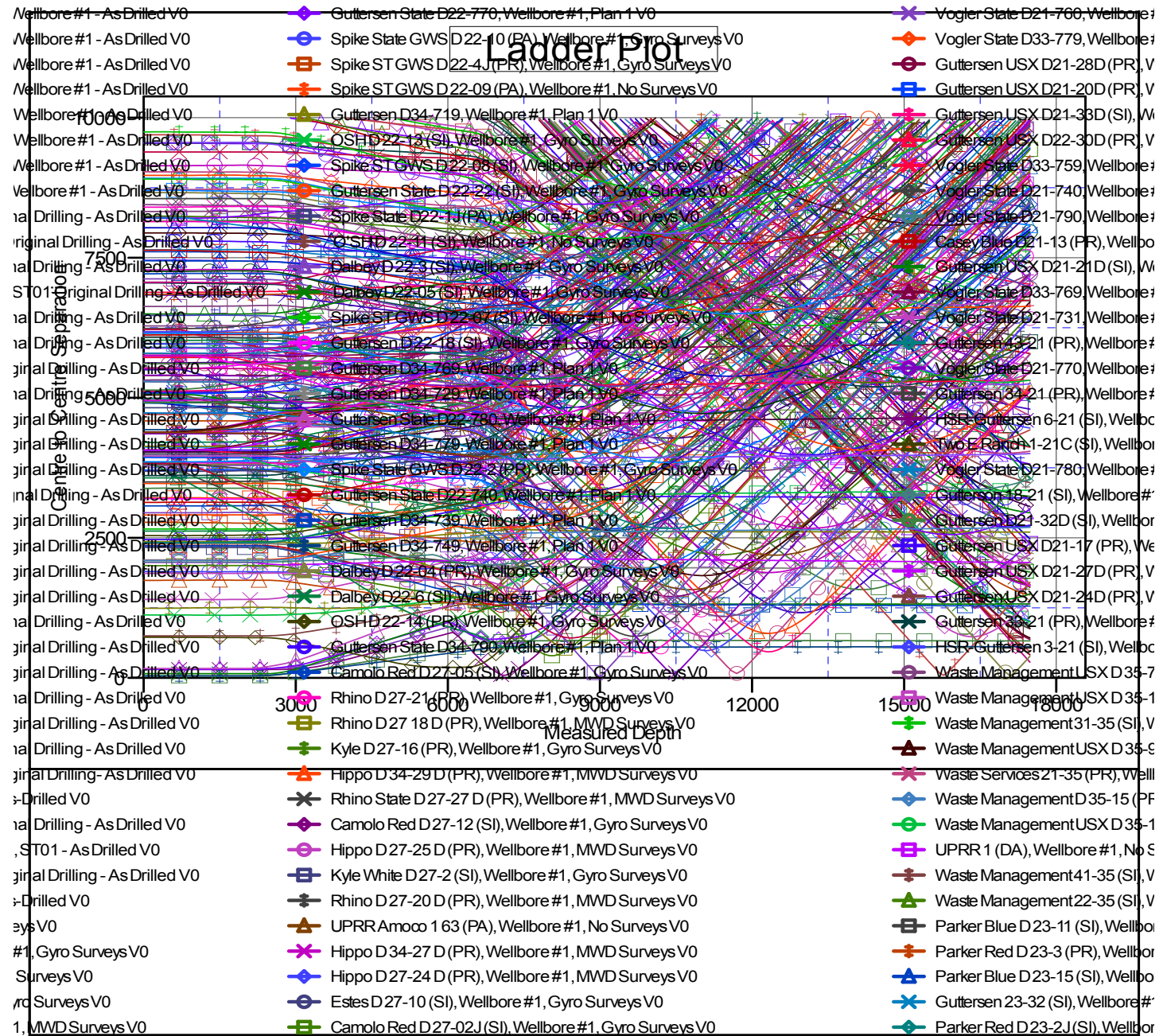
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersen D34-759
Project:	Mustang	TVD Reference:	KB @ 4855.00ft
Reference Site:	D Section 22	MD Reference:	KB @ 4855.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersen D34-759	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Coordinates are relative to: Guttersen D34-759

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.62°



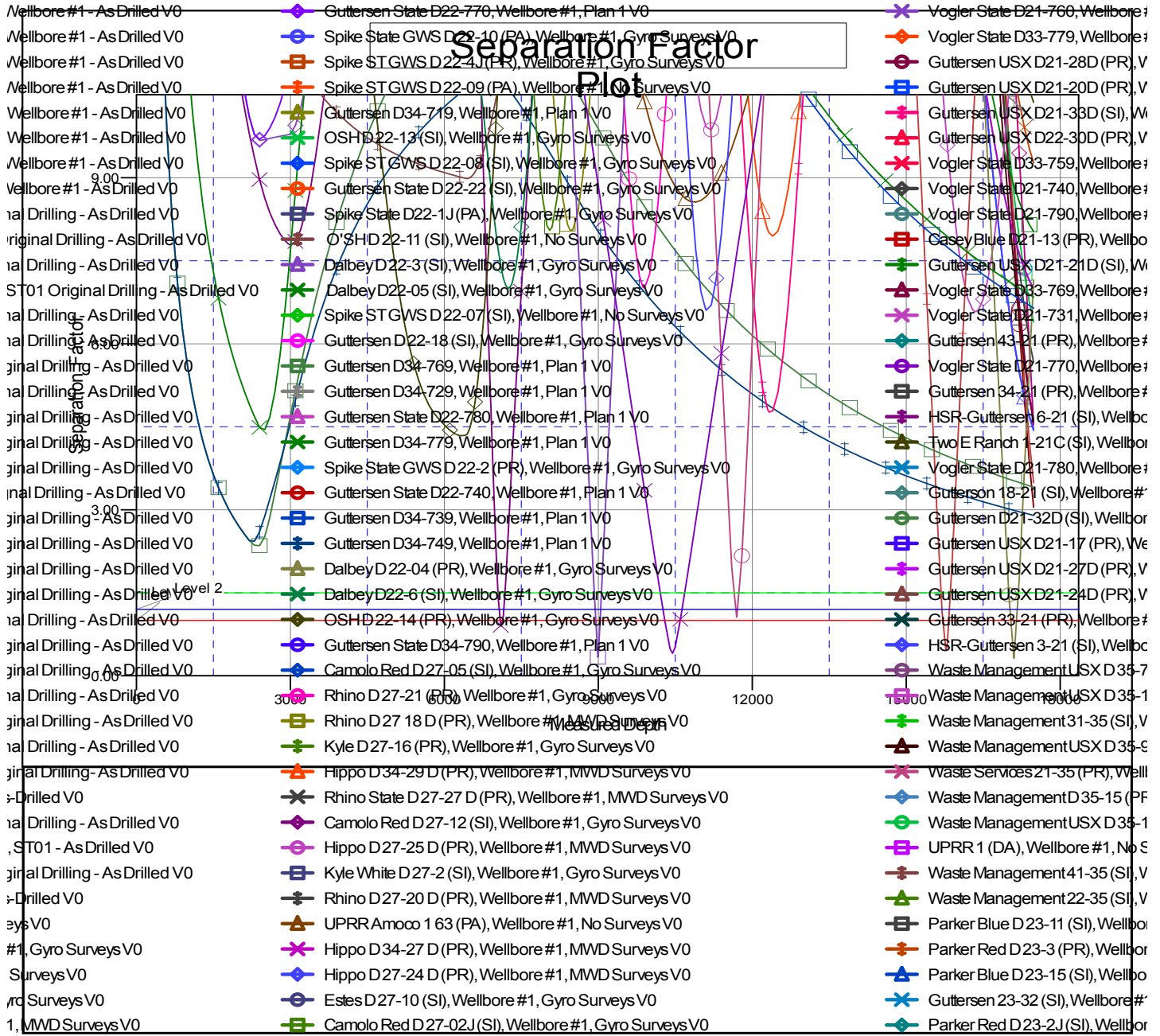
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersen D34-759
Project:	Mustang	TVD Reference:	KB @ 4855.00ft
Reference Site:	D Section 22	MD Reference:	KB @ 4855.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersen D34-759	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to KB @ 4855.00ft
Offset Depths are relative to Offset Datum
Central Meridian is -105.5000000

Coordinates are relative to: Guttersen D34-759
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.62°



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