

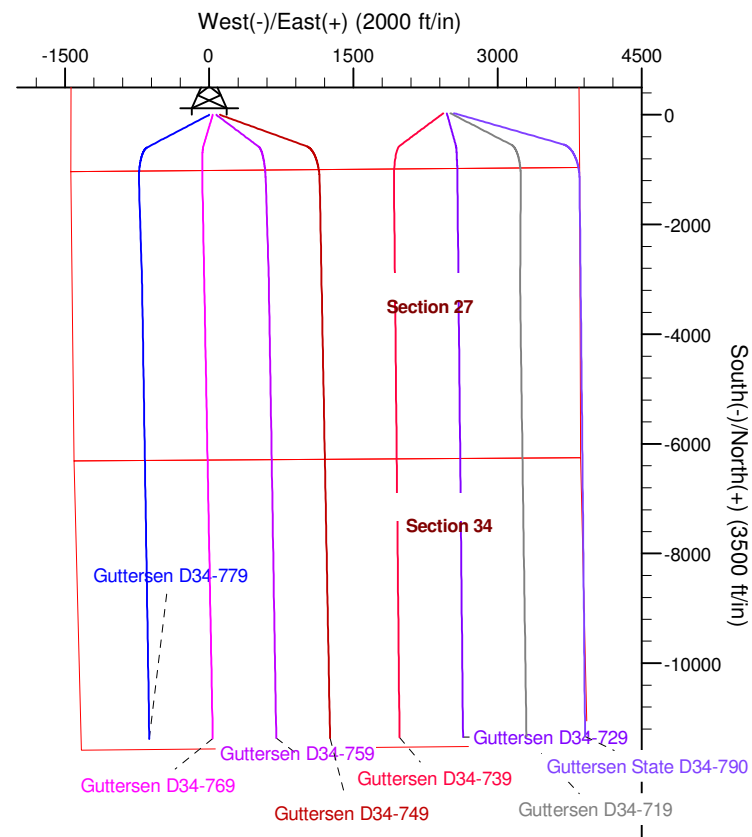
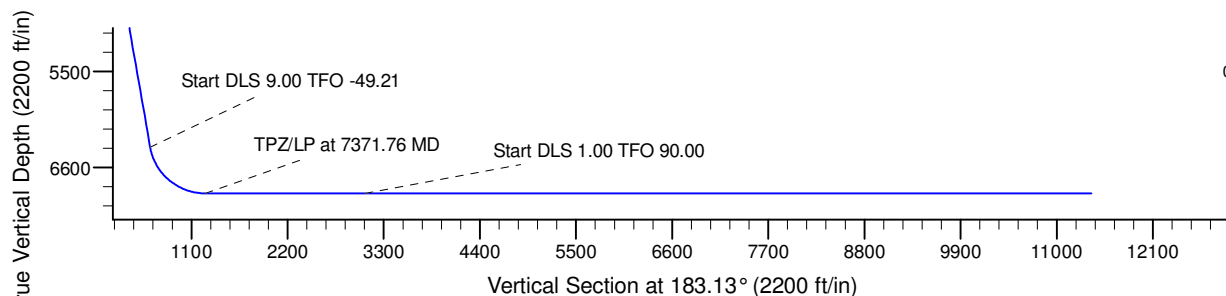
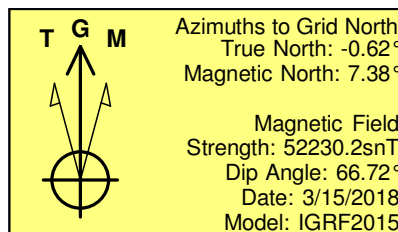
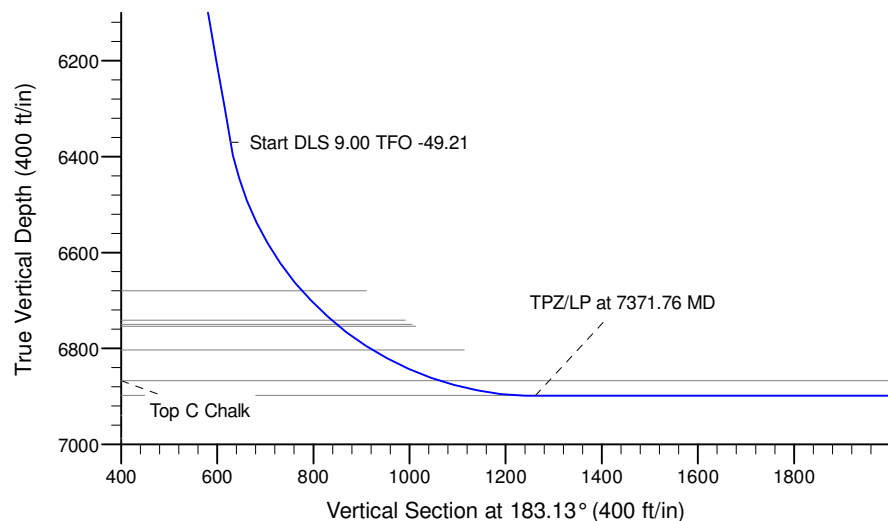
Project: Mustang
Site: D Section 22
Well: Gutteresen D34-779
Wellbore: Wellbore #1
Design: Plan 1

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	3079.13	13.58	227.41	3072.79	-54.22	-58.99	2.00	227.41	57.36	
4	6471.41	13.58	227.41	6370.19	-593.38	-645.49	0.00	0.00	627.73	
5	7371.76	90.00	179.00	6899.00	-1223.79	-730.06	9.00	-49.21	1261.81	Gutteresen State D34-779 TPZ/LP
6	9200.74	90.00	179.00	6899.00	-3052.50	-698.14	0.00	0.00	3086.05	
7	9248.55	90.00	179.48	6899.00	-3100.30	-697.50	1.00	90.00	3133.75	
8	17528.50	90.00	179.48	6899.00	-11379.91	-622.08	0.00	0.00	11396.90	Gutteresen State D34-779 BHL



WELL DETAILS: Gutteresen D34-779

	Northing	Easting	Latitude	Longitude
0.00	0.00	1319481.81	4824.00 40.2064050	-104.5417460

Plan: Plan 1 (Gutteresen D34-779/Wellbore #1)

Created By: Colby Baxter	Date: 13:58, August 13 2018
Checked: _____	Date: _____
Reviewed: _____	Date: _____
Approved: _____	Date: _____

Northern Region - DJ Basin

Mustang

D Section 22

Guttersen D34-779

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 D34-779
Project:	Mustang	TVD Reference:	KB @ 4854.00ft
Site:	D Section 22	MD Reference:	KB @ 4854.00ft
Well:	Guttersen D34-779	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 D34-779					
Well Position	+N/-S	0.00 ft	Northing:	1,319,481.81 usft	Latitude:	40.2064050
	+E/-W	0.00 ft	Easting:	3,267,640.57 usft	Longitude:	-104.5417460
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,824.00 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	3/15/2018	8.00	66.72	52,230.22196671

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	183.13	

Survey Tool Program	Date	8/1/2018			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.00	17,528.51	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 D34-779
Project:	Mustang	TVD Reference:	KB @ 4854.00ft
Site:	D Section 22	MD Reference:	KB @ 4854.00ft
Well:	Guttersen D34-779	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	227.41	2,499.98	-1.18	-1.28	1.25	2.00	2.00	0.00
2,600.00	4.00	227.41	2,599.84	-4.72	-5.14	5.00	2.00	2.00	0.00
2,700.00	6.00	227.41	2,699.45	-10.62	-11.55	11.24	2.00	2.00	0.00
2,800.00	8.00	227.41	2,798.70	-18.87	-20.53	19.96	2.00	2.00	0.00
2,900.00	10.00	227.41	2,897.47	-29.45	-32.04	31.16	2.00	2.00	0.00
3,000.00	12.00	227.41	2,995.62	-42.37	-46.09	44.82	2.00	2.00	0.00
3,079.13	13.58	227.41	3,072.79	-54.22	-58.99	57.36	2.00	2.00	0.00
3,100.00	13.58	227.41	3,093.07	-57.54	-62.59	60.87	0.00	0.00	0.00
3,200.00	13.58	227.41	3,190.28	-73.43	-79.88	77.68	0.00	0.00	0.00
3,300.00	13.58	227.41	3,287.48	-89.33	-97.17	94.50	0.00	0.00	0.00
3,400.00	13.58	227.41	3,384.68	-105.22	-114.46	111.31	0.00	0.00	0.00
3,500.00	13.58	227.41	3,481.89	-121.12	-131.75	128.13	0.00	0.00	0.00
3,600.00	13.58	227.41	3,579.09	-137.01	-149.04	144.94	0.00	0.00	0.00
3,700.00	13.58	227.41	3,676.29	-152.90	-166.33	161.75	0.00	0.00	0.00
3,800.00	13.58	227.41	3,773.50	-168.80	-183.62	178.57	0.00	0.00	0.00
3,900.00	13.58	227.41	3,870.70	-184.69	-200.91	195.38	0.00	0.00	0.00
4,000.00	13.58	227.41	3,967.90	-200.58	-218.20	212.19	0.00	0.00	0.00
4,100.00	13.58	227.41	4,065.11	-216.48	-235.49	229.01	0.00	0.00	0.00
4,200.00	13.58	227.41	4,162.31	-232.37	-252.78	245.82	0.00	0.00	0.00
4,300.00	13.58	227.41	4,259.51	-248.26	-270.07	262.64	0.00	0.00	0.00
4,400.00	13.58	227.41	4,356.72	-264.16	-287.36	279.45	0.00	0.00	0.00
4,500.00	13.58	227.41	4,453.92	-280.05	-304.65	296.26	0.00	0.00	0.00
4,600.00	13.58	227.41	4,551.12	-295.95	-321.94	313.08	0.00	0.00	0.00
4,700.00	13.58	227.41	4,648.32	-311.84	-339.22	329.89	0.00	0.00	0.00
4,800.00	13.58	227.41	4,745.53	-327.73	-356.51	346.70	0.00	0.00	0.00
4,900.00	13.58	227.41	4,842.73	-343.63	-373.80	363.52	0.00	0.00	0.00
5,000.00	13.58	227.41	4,939.93	-359.52	-391.09	380.33	0.00	0.00	0.00
5,100.00	13.58	227.41	5,037.14	-375.41	-408.38	397.15	0.00	0.00	0.00
5,200.00	13.58	227.41	5,134.34	-391.31	-425.67	413.96	0.00	0.00	0.00

Noble Energy, Inc.

Survey Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersen D34-779
Project:	Mustang	TVD Reference:	KB @ 4854.00ft
Site:	D Section 22	MD Reference:	KB @ 4854.00ft
Well:	Guttersen D34-779	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	13.58	227.41	5,231.54	-407.20	-442.96	430.77	0.00	0.00	0.00
5,400.00	13.58	227.41	5,328.75	-423.10	-460.25	447.59	0.00	0.00	0.00
5,500.00	13.58	227.41	5,425.95	-438.99	-477.54	464.40	0.00	0.00	0.00
5,600.00	13.58	227.41	5,523.15	-454.88	-494.83	481.21	0.00	0.00	0.00
5,700.00	13.58	227.41	5,620.36	-470.78	-512.12	498.03	0.00	0.00	0.00
5,800.00	13.58	227.41	5,717.56	-486.67	-529.41	514.84	0.00	0.00	0.00
5,900.00	13.58	227.41	5,814.76	-502.56	-546.70	531.66	0.00	0.00	0.00
6,000.00	13.58	227.41	5,911.97	-518.46	-563.99	548.47	0.00	0.00	0.00
6,100.00	13.58	227.41	6,009.17	-534.35	-581.28	565.28	0.00	0.00	0.00
6,200.00	13.58	227.41	6,106.37	-550.24	-598.57	582.10	0.00	0.00	0.00
6,300.00	13.58	227.41	6,203.58	-566.14	-615.86	598.91	0.00	0.00	0.00
6,400.00	13.58	227.41	6,300.78	-582.03	-633.15	615.72	0.00	0.00	0.00
6,471.41	13.58	227.41	6,370.19	-593.38	-645.49	627.73	0.00	0.00	0.00
6,500.00	15.39	220.05	6,397.87	-598.56	-650.40	633.17	9.00	6.30	-25.75
6,600.00	22.85	204.39	6,492.35	-626.46	-666.99	661.93	9.00	7.47	-15.66
6,700.00	31.12	196.42	6,581.42	-669.02	-682.35	705.26	9.00	8.26	-7.97
6,800.00	39.67	191.58	6,662.87	-725.19	-696.09	762.10	9.00	8.56	-4.84
6,900.00	48.37	188.24	6,734.72	-793.59	-707.88	831.04	9.00	8.70	-3.34
7,000.00	57.14	185.70	6,795.19	-872.53	-717.43	910.39	9.00	8.77	-2.54
7,100.00	65.96	183.62	6,842.78	-960.08	-724.50	998.19	9.00	8.81	-2.08
7,200.00	74.79	181.82	6,876.34	-1,054.06	-728.92	1,092.28	9.00	8.84	-1.81
7,300.00	83.65	180.15	6,895.02	-1,152.18	-730.59	1,190.34	9.00	8.85	-1.66
7,371.76	90.00	179.00	6,899.00	-1,223.79	-730.06	1,261.81	9.00	8.86	-1.61
7,400.00	90.00	179.00	6,899.00	-1,252.03	-729.56	1,289.99	0.00	0.00	0.00
7,500.00	90.00	179.00	6,899.00	-1,352.01	-727.82	1,389.73	0.00	0.00	0.00
7,600.00	90.00	179.00	6,899.00	-1,452.00	-726.07	1,489.47	0.00	0.00	0.00
7,700.00	90.00	179.00	6,899.00	-1,551.98	-724.33	1,589.21	0.00	0.00	0.00
7,800.00	90.00	179.00	6,899.00	-1,651.97	-722.58	1,688.95	0.00	0.00	0.00
7,900.00	90.00	179.00	6,899.00	-1,751.95	-720.84	1,788.69	0.00	0.00	0.00
8,000.00	90.00	179.00	6,899.00	-1,851.94	-719.09	1,888.43	0.00	0.00	0.00
8,100.00	90.00	179.00	6,899.00	-1,951.92	-717.35	1,988.17	0.00	0.00	0.00
8,200.00	90.00	179.00	6,899.00	-2,051.91	-715.60	2,087.91	0.00	0.00	0.00
8,300.00	90.00	179.00	6,899.00	-2,151.89	-713.86	2,187.65	0.00	0.00	0.00
8,400.00	90.00	179.00	6,899.00	-2,251.88	-712.11	2,287.39	0.00	0.00	0.00
8,500.00	90.00	179.00	6,899.00	-2,351.86	-710.37	2,387.13	0.00	0.00	0.00
8,600.00	90.00	179.00	6,899.00	-2,451.85	-708.62	2,486.87	0.00	0.00	0.00
8,700.00	90.00	179.00	6,899.00	-2,551.83	-706.88	2,586.61	0.00	0.00	0.00
8,800.00	90.00	179.00	6,899.00	-2,651.82	-705.13	2,686.35	0.00	0.00	0.00
8,900.00	90.00	179.00	6,899.00	-2,751.80	-703.38	2,786.09	0.00	0.00	0.00
9,000.00	90.00	179.00	6,899.00	-2,851.79	-701.64	2,885.83	0.00	0.00	0.00
9,100.00	90.00	179.00	6,899.00	-2,951.77	-699.89	2,985.57	0.00	0.00	0.00
9,200.00	90.00	179.00	6,899.00	-3,051.76	-698.15	3,085.31	0.00	0.00	0.00
9,200.74	90.00	179.00	6,899.00	-3,052.50	-698.14	3,086.05	0.00	0.00	0.00

Noble Energy, Inc.

Survey Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersen D34-779
Project:	Mustang	TVD Reference:	KB @ 4854.00ft
Site:	D Section 22	MD Reference:	KB @ 4854.00ft
Well:	Guttersen D34-779	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)
9,248.55	90.00	179.48	6,899.00	-3,100.30	-697.50	3,133.75	1.00	0.00	1.00
9,300.00	90.00	179.48	6,899.00	-3,151.75	-697.03	3,185.10	0.00	0.00	0.00
9,400.00	90.00	179.48	6,899.00	-3,251.75	-696.12	3,284.89	0.00	0.00	0.00
9,500.00	90.00	179.48	6,899.00	-3,351.74	-695.21	3,384.69	0.00	0.00	0.00
9,600.00	90.00	179.48	6,899.00	-3,451.74	-694.30	3,484.49	0.00	0.00	0.00
9,700.00	90.00	179.48	6,899.00	-3,551.73	-693.39	3,584.29	0.00	0.00	0.00
9,800.00	90.00	179.48	6,899.00	-3,651.73	-692.48	3,684.08	0.00	0.00	0.00
9,900.00	90.00	179.48	6,899.00	-3,751.72	-691.57	3,783.88	0.00	0.00	0.00
10,000.00	90.00	179.48	6,899.00	-3,851.72	-690.66	3,883.68	0.00	0.00	0.00
10,100.00	90.00	179.48	6,899.00	-3,951.72	-689.75	3,983.47	0.00	0.00	0.00
10,200.00	90.00	179.48	6,899.00	-4,051.71	-688.83	4,083.27	0.00	0.00	0.00
10,300.00	90.00	179.48	6,899.00	-4,151.71	-687.92	4,183.07	0.00	0.00	0.00
10,400.00	90.00	179.48	6,899.00	-4,251.70	-687.01	4,282.86	0.00	0.00	0.00
10,500.00	90.00	179.48	6,899.00	-4,351.70	-686.10	4,382.66	0.00	0.00	0.00
10,600.00	90.00	179.48	6,899.00	-4,451.70	-685.19	4,482.46	0.00	0.00	0.00
10,700.00	90.00	179.48	6,899.00	-4,551.69	-684.28	4,582.26	0.00	0.00	0.00
10,800.00	90.00	179.48	6,899.00	-4,651.69	-683.37	4,682.05	0.00	0.00	0.00
10,900.00	90.00	179.48	6,899.00	-4,751.68	-682.46	4,781.85	0.00	0.00	0.00
11,000.00	90.00	179.48	6,899.00	-4,851.68	-681.55	4,881.65	0.00	0.00	0.00
11,100.00	90.00	179.48	6,899.00	-4,951.67	-680.64	4,981.44	0.00	0.00	0.00
11,200.00	90.00	179.48	6,899.00	-5,051.67	-679.73	5,081.24	0.00	0.00	0.00
11,300.00	90.00	179.48	6,899.00	-5,151.67	-678.82	5,181.04	0.00	0.00	0.00
11,400.00	90.00	179.48	6,899.00	-5,251.66	-677.90	5,280.84	0.00	0.00	0.00
11,500.00	90.00	179.48	6,899.00	-5,351.66	-676.99	5,380.63	0.00	0.00	0.00
11,600.00	90.00	179.48	6,899.00	-5,451.65	-676.08	5,480.43	0.00	0.00	0.00
11,700.00	90.00	179.48	6,899.00	-5,551.65	-675.17	5,580.23	0.00	0.00	0.00
11,800.00	90.00	179.48	6,899.00	-5,651.65	-674.26	5,680.02	0.00	0.00	0.00
11,900.00	90.00	179.48	6,899.00	-5,751.64	-673.35	5,779.82	0.00	0.00	0.00
12,000.00	90.00	179.48	6,899.00	-5,851.64	-672.44	5,879.62	0.00	0.00	0.00
12,100.00	90.00	179.48	6,899.00	-5,951.63	-671.53	5,979.41	0.00	0.00	0.00
12,200.00	90.00	179.48	6,899.00	-6,051.63	-670.62	6,079.21	0.00	0.00	0.00
12,300.00	90.00	179.48	6,899.00	-6,151.62	-669.71	6,179.01	0.00	0.00	0.00
12,400.00	90.00	179.48	6,899.00	-6,251.62	-668.80	6,278.81	0.00	0.00	0.00
12,500.00	90.00	179.48	6,899.00	-6,351.62	-667.89	6,378.60	0.00	0.00	0.00
12,600.00	90.00	179.48	6,899.00	-6,451.61	-666.97	6,478.40	0.00	0.00	0.00
12,700.00	90.00	179.48	6,899.00	-6,551.61	-666.06	6,578.20	0.00	0.00	0.00
12,800.00	90.00	179.48	6,899.00	-6,651.60	-665.15	6,677.99	0.00	0.00	0.00
12,900.00	90.00	179.48	6,899.00	-6,751.60	-664.24	6,777.79	0.00	0.00	0.00
13,000.00	90.00	179.48	6,899.00	-6,851.60	-663.33	6,877.59	0.00	0.00	0.00
13,100.00	90.00	179.48	6,899.00	-6,951.59	-662.42	6,977.39	0.00	0.00	0.00
13,200.00	90.00	179.48	6,899.00	-7,051.59	-661.51	7,077.18	0.00	0.00	0.00
13,300.00	90.00	179.48	6,899.00	-7,151.58	-660.60	7,176.98	0.00	0.00	0.00
13,400.00	90.00	179.48	6,899.00	-7,251.58	-659.69	7,276.78	0.00	0.00	0.00

Noble Energy, Inc.

Survey Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersen D34-779
Project:	Mustang	TVD Reference:	KB @ 4854.00ft
Site:	D Section 22	MD Reference:	KB @ 4854.00ft
Well:	Guttersen D34-779	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	179.48	6,899.00	-7,351.58	-658.78	7,376.57	0.00	0.00	0.00
13,600.00	90.00	179.48	6,899.00	-7,451.57	-657.87	7,476.37	0.00	0.00	0.00
13,700.00	90.00	179.48	6,899.00	-7,551.57	-656.96	7,576.17	0.00	0.00	0.00
13,800.00	90.00	179.48	6,899.00	-7,651.56	-656.04	7,675.96	0.00	0.00	0.00
13,900.00	90.00	179.48	6,899.00	-7,751.56	-655.13	7,775.76	0.00	0.00	0.00
14,000.00	90.00	179.48	6,899.00	-7,851.55	-654.22	7,875.56	0.00	0.00	0.00
14,100.00	90.00	179.48	6,899.00	-7,951.55	-653.31	7,975.36	0.00	0.00	0.00
14,200.00	90.00	179.48	6,899.00	-8,051.55	-652.40	8,075.15	0.00	0.00	0.00
14,300.00	90.00	179.48	6,899.00	-8,151.54	-651.49	8,174.95	0.00	0.00	0.00
14,400.00	90.00	179.48	6,899.00	-8,251.54	-650.58	8,274.75	0.00	0.00	0.00
14,500.00	90.00	179.48	6,899.00	-8,351.53	-649.67	8,374.54	0.00	0.00	0.00
14,600.00	90.00	179.48	6,899.00	-8,451.53	-648.76	8,474.34	0.00	0.00	0.00
14,700.00	90.00	179.48	6,899.00	-8,551.53	-647.85	8,574.14	0.00	0.00	0.00
14,800.00	90.00	179.48	6,899.00	-8,651.52	-646.94	8,673.94	0.00	0.00	0.00
14,900.00	90.00	179.48	6,899.00	-8,751.52	-646.02	8,773.73	0.00	0.00	0.00
15,000.00	90.00	179.48	6,899.00	-8,851.51	-645.11	8,873.53	0.00	0.00	0.00
15,100.00	90.00	179.48	6,899.00	-8,951.51	-644.20	8,973.33	0.00	0.00	0.00
15,200.00	90.00	179.48	6,899.00	-9,051.50	-643.29	9,073.12	0.00	0.00	0.00
15,300.00	90.00	179.48	6,899.00	-9,151.50	-642.38	9,172.92	0.00	0.00	0.00
15,400.00	90.00	179.48	6,899.00	-9,251.50	-641.47	9,272.72	0.00	0.00	0.00
15,500.00	90.00	179.48	6,899.00	-9,351.49	-640.56	9,372.52	0.00	0.00	0.00
15,600.00	90.00	179.48	6,899.00	-9,451.49	-639.65	9,472.31	0.00	0.00	0.00
15,700.00	90.00	179.48	6,899.00	-9,551.48	-638.74	9,572.11	0.00	0.00	0.00
15,800.00	90.00	179.48	6,899.00	-9,651.48	-637.83	9,671.91	0.00	0.00	0.00
15,900.00	90.00	179.48	6,899.00	-9,751.48	-636.92	9,771.70	0.00	0.00	0.00
16,000.00	90.00	179.48	6,899.00	-9,851.47	-636.01	9,871.50	0.00	0.00	0.00
16,100.00	90.00	179.48	6,899.00	-9,951.47	-635.09	9,971.30	0.00	0.00	0.00
16,200.00	90.00	179.48	6,899.00	-10,051.46	-634.18	10,071.09	0.00	0.00	0.00
16,300.00	90.00	179.48	6,899.00	-10,151.46	-633.27	10,170.89	0.00	0.00	0.00
16,400.00	90.00	179.48	6,899.00	-10,251.45	-632.36	10,270.69	0.00	0.00	0.00
16,500.00	90.00	179.48	6,899.00	-10,351.45	-631.45	10,370.49	0.00	0.00	0.00
16,600.00	90.00	179.48	6,899.00	-10,451.45	-630.54	10,470.28	0.00	0.00	0.00
16,700.00	90.00	179.48	6,899.00	-10,551.44	-629.63	10,570.08	0.00	0.00	0.00
16,800.00	90.00	179.48	6,899.00	-10,651.44	-628.72	10,669.88	0.00	0.00	0.00
16,900.00	90.00	179.48	6,899.00	-10,751.43	-627.81	10,769.67	0.00	0.00	0.00
17,000.00	90.00	179.48	6,899.00	-10,851.43	-626.90	10,869.47	0.00	0.00	0.00
17,100.00	90.00	179.48	6,899.00	-10,951.43	-625.99	10,969.27	0.00	0.00	0.00
17,200.00	90.00	179.48	6,899.00	-11,051.42	-625.08	11,069.07	0.00	0.00	0.00
17,300.00	90.00	179.48	6,899.00	-11,151.42	-624.16	11,168.86	0.00	0.00	0.00
17,400.00	90.00	179.48	6,899.00	-11,251.41	-623.25	11,268.66	0.00	0.00	0.00
17,500.00	90.00	179.48	6,899.00	-11,351.41	-622.34	11,368.46	0.00	0.00	0.00
17,528.51	90.00	179.48	6,899.00	-11,379.91	-622.08	11,396.90	0.00	0.00	0.00

Noble Energy, Inc.

Survey Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersen D34-779
Project:	Mustang	TVD Reference:	KB @ 4854.00ft
Site:	D Section 22	MD Reference:	KB @ 4854.00ft
Well:	Guttersen D34-779	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 D34-779 - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	1,319,481.81	3,267,640.57	40.2064050	-104.5417460
Guttersen State D34-779 - plan hits target center - Point	0.00	0.00	6,370.19	-593.38	-645.49	1,318,888.43	3,266,995.08	40.2047953	-104.5440798
Guttersen State D34-779 - plan hits target center - Point	0.00	0.00	6,899.00	-11,379.91	-622.08	1,308,101.92	3,267,018.49	40.1751861	-104.5444121
Guttersen State D34-779 - plan hits target center - Point	0.00	0.01	6,899.00	-1,223.79	-730.06	1,318,258.02	3,266,910.52	40.2030674	-104.5444069

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
652.00	652.00	Pierre				
771.00	771.00	Upper Pierre Aquifer Top				
1,653.00	1,653.00	Upper Pierre Aquifer Base				
3,778.91	3,753.00	Parkman				
4,377.66	4,335.00	Sussex				
5,031.96	4,971.00	Shannon				
6,121.43	6,030.00	Teepee Buttes				
6,822.57	6,680.00	Sharon Springs				
6,909.53	6,741.00	Top A Chalk				
6,923.48	6,750.00	Top A Marl				
6,929.79	6,754.00	Top B Chalk				
7,014.66	6,803.00	Top B Marl				
7,167.40	6,867.00	Top C Chalk				
7,335.78	6,898.00	Top C Marl				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
2400	2400	0	0	Start Build 2.00	
6471	6370	-593	-645	Start DLS 9.00 TFO -49.21	
7372	6899	-1224	-730	TPZ/LP at 7371.76 MD	
9201	6899	-3052	-698	Start DLS 1.00 TFO 90.00	
17,529	6899	-11,380	-622	TD at 17528.51 MD	

Checked By: _____ Approved By: _____ Date: _____

Northern Region - DJ Basin

Mustang

D Section 22

Guttersen D34-779

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 D34-779
Project:	Mustang	TVD Reference:	KB @ 4854.00ft
Reference Site:	D Section 22	MD Reference:	KB @ 4854.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersen D34-779	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	17,528.51	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	6,620.14	6,470.80	4,387.43	4,234.08	28.611	CC
Casey Blue D 21-11 (PR) - Wellbore #1 - No Surveys	6,650.00	6,497.70	4,387.75	4,233.74	28.491	ES
Casey Blue D 21-11 (PR) - Wellbore #1 - No Surveys	7,100.00	6,802.78	4,473.06	4,311.17	27.630	SF
Casey Blue D21-13 (PR) - Wellbore #1 - Gyro Surveys	7,045.46	6,857.83	5,354.39	5,305.22	108.885	CC
Casey Blue D21-13 (PR) - Wellbore #1 - Gyro Surveys	7,050.00	6,860.10	5,354.40	5,305.20	108.829	ES
Casey Blue D21-13 (PR) - Wellbore #1 - Gyro Surveys	9,300.00	6,967.79	6,012.68	5,953.84	102.194	SF
Casey Blue D21-14 (SI) - Wellbore #1 - Gyro Surveys	6,945.89	6,752.99	3,898.57	3,850.25	80.683	CC
Casey Blue D21-14 (SI) - Wellbore #1 - Gyro Surveys	6,950.00	6,755.47	3,898.58	3,850.24	80.648	ES
Casey Blue D21-14 (SI) - Wellbore #1 - Gyro Surveys	7,500.00	6,885.19	3,983.47	3,932.88	78.737	SF
Casey Blue D21-3J (PR) - Wellbore #1 - Gyro Surveys	6,747.13	6,612.70	5,213.14	5,165.83	110.203	CC
Casey Blue D21-3J (PR) - Wellbore #1 - Gyro Surveys	6,750.00	6,615.07	5,213.14	5,165.82	110.156	ES
Casey Blue D21-3J (PR) - Wellbore #1 - Gyro Surveys	7,350.00	6,909.24	5,321.51	5,271.21	105.777	SF
Guttersen 21-31 (SI) - Wellbore #1 - Gyro Surveys	2,302.58	2,241.60	4,928.56	4,912.88	314.385	CC
Guttersen 21-31 (SI) - Wellbore #1 - Gyro Surveys	3,800.00	3,731.65	4,932.39	4,906.31	189.149	ES
Guttersen 21-31 (SI) - Wellbore #1 - Gyro Surveys	6,900.00	6,692.50	5,117.96	5,069.71	106.062	SF
Guttersen 21-42 (SI) - Wellbore #1 - Gyro Surveys	3,122.31	3,094.26	3,073.45	3,052.01	143.408	CC
Guttersen 21-42 (SI) - Wellbore #1 - Gyro Surveys	3,200.00	3,158.64	3,073.63	3,051.70	140.186	ES
Guttersen 21-42 (SI) - Wellbore #1 - Gyro Surveys	6,750.00	6,589.74	3,257.37	3,210.07	68.865	SF
Guttersen 32-21 (PR) - Wellbore #1 - No Surveys	6,478.80	6,341.37	3,942.56	3,792.27	26.234	CC
Guttersen 32-21 (PR) - Wellbore #1 - No Surveys	6,500.00	6,361.87	3,942.82	3,792.04	26.150	ES
Guttersen 32-21 (PR) - Wellbore #1 - No Surveys	6,850.00	6,664.12	4,022.69	3,864.49	25.427	SF
Guttersen 33-21 (PR) - Wellbore #1 - Gyro Surveys	6,549.04	6,423.51	3,154.65	3,108.68	68.626	CC
Guttersen 33-21 (PR) - Wellbore #1 - Gyro Surveys	6,550.00	6,424.46	3,154.65	3,108.67	68.615	ES
Guttersen 33-21 (PR) - Wellbore #1 - Gyro Surveys	6,950.00	6,746.14	3,229.92	3,181.22	66.323	SF
Guttersen 34-21 (PR) - Wellbore #1 - Gyro Surveys	6,862.68	6,753.13	2,669.14	2,620.94	55.378	CC, ES
Guttersen 34-21 (PR) - Wellbore #1 - Gyro Surveys	7,200.00	6,916.87	2,709.89	2,659.80	54.103	SF
Guttersen 41-21 (PR) - Wellbore #1 - Gyro Surveys	100.00	42.61	4,165.57	4,165.37	10,000.000	CC
Guttersen 41-21 (PR) - Wellbore #1 - Gyro Surveys	1,900.00	1,828.39	4,173.91	4,161.11	326.144	ES
Guttersen 41-21 (PR) - Wellbore #1 - Gyro Surveys	6,850.00	6,657.03	4,591.00	4,543.17	95.996	SF
Guttersen 43-21 (PR) - Wellbore #1 - Gyro Surveys	6,500.09	6,401.31	2,173.75	2,128.01	47.519	CC, ES
Guttersen 43-21 (PR) - Wellbore #1 - Gyro Surveys	6,750.00	6,585.76	2,213.06	2,165.66	46.691	SF
Guttersen D21-32D (SI) - Wellbore #1 - MWD Surveys	0.00	0.00	5,062.97			
Guttersen D21-32D (SI) - Wellbore #1 - MWD Surveys	100.00	48.13	5,062.98	5,062.77	10,000.000	ES
Guttersen D21-32D (SI) - Wellbore #1 - MWD Surveys	8,800.00	8,800.00	7,213.79	7,145.32	105.348	SF
Guttersen USX D21-17 (PR) - Wellbore #1 - No Surveys	2,400.00	2,348.00	4,016.04	3,960.71	72.583	CC
Guttersen USX D21-17 (PR) - Wellbore #1 - No Surveys	4,400.00	4,304.72	4,035.44	3,933.91	39.744	ES
Guttersen USX D21-17 (PR) - Wellbore #1 - No Surveys	6,800.00	6,610.87	4,201.58	4,044.69	26.781	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 D34-779
Project:	Mustang	TVD Reference:	KB @ 4854.00ft
Reference Site:	D Section 22	MD Reference:	KB @ 4854.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersen D34-779	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 21						
Guttersen USX D21-20D (PR) - Wellbore #1 - MWD Surv	784.34	751.00	4,998.38	4,993.39	1,002.484	CC
Guttersen USX D21-20D (PR) - Wellbore #1 - MWD Surv	1,100.00	1,024.06	4,999.36	4,992.19	697.101	ES
Guttersen USX D21-20D (PR) - Wellbore #1 - MWD Surv	7,100.00	6,997.71	5,258.29	5,204.00	96.852	SF
Guttersen USX D21-21D (SI) - Wellbore #1 - MWD Surv	6,551.90	6,627.78	4,096.48	4,039.94	72.448	CC, ES
Guttersen USX D21-21D (SI) - Wellbore #1 - MWD Surv	6,950.00	6,982.68	4,166.30	4,107.25	70.558	SF
Guttersen USX D21-24D (PR) - Wellbore #1 - MWD Surv	6,724.52	6,672.16	3,620.82	3,572.60	75.091	CC, ES
Guttersen USX D21-24D (PR) - Wellbore #1 - MWD Surv	7,250.00	6,985.03	3,712.05	3,660.52	72.041	SF
Guttersen USX D21-25 (PR) - Wellbore #1 - MWD Surv	6,748.70	6,621.13	4,405.49	4,357.86	92.496	CC
Guttersen USX D21-25 (PR) - Wellbore #1 - MWD Surv	6,750.00	6,622.26	4,405.49	4,357.85	92.478	ES
Guttersen USX D21-25 (PR) - Wellbore #1 - MWD Surv	7,300.00	6,902.50	4,499.58	4,448.88	88.737	SF
Guttersen USX D21-27D (PR) - Wellbore #1 - MWD Surv	841.90	791.79	4,018.03	4,012.72	756.024	CC
Guttersen USX D21-27D (PR) - Wellbore #1 - MWD Surv	1,000.00	904.63	4,018.59	4,012.31	640.754	ES
Guttersen USX D21-27D (PR) - Wellbore #1 - MWD Surv	6,800.00	6,743.35	5,310.08	5,260.23	106.523	SF
Guttersen USX D21-28D (PR) - Wellbore #1 - MWD Surv	100.00	44.07	4,014.60	4,014.39	10,000.000	CC
Guttersen USX D21-28D (PR) - Wellbore #1 - MWD Surv	300.00	227.70	4,015.20	4,013.95	3,209.858	ES
Guttersen USX D21-28D (PR) - Wellbore #1 - MWD Surv	10,500.00	10,500.00	8,962.26	8,880.05	109.027	SF
Guttersen USX D21-33D (SI) - Wellbore #1 - MWD Surv	100.00	65.22	5,044.69	5,044.44	10,000.000	CC
Guttersen USX D21-33D (SI) - Wellbore #1 - MWD Surv	600.00	536.23	5,046.55	5,042.91	1,389.496	ES
Guttersen USX D21-33D (SI) - Wellbore #1 - MWD Surv	9,900.00	6,946.53	7,189.96	7,121.69	105.314	SF
Guttersen USX D22-30D (PR) - Wellbore #1 - MWD Surv	2,713.34	2,840.00	3,950.97	3,927.17	165.980	CC
Guttersen USX D22-30D (PR) - Wellbore #1 - MWD Surv	2,800.00	2,904.10	3,951.59	3,926.97	160.495	ES
Guttersen USX D22-30D (PR) - Wellbore #1 - MWD Surv	6,700.00	6,842.58	4,903.83	4,845.67	84.318	SF
Guttersen 18-21 (SI) - Wellbore #1 - Gyro Surveys	6,513.13	6,408.19	5,824.02	5,778.25	127.232	CC, ES
Guttersen 18-21 (SI) - Wellbore #1 - Gyro Surveys	7,000.00	6,796.94	5,945.13	5,896.33	121.824	SF
HSR Guttersen B 5-21 (PR) - Wellbore #1 - Gyro Survey	6,579.00	6,484.06	6,076.41	6,030.15	131.374	CC, ES
HSR Guttersen B 5-21 (PR) - Wellbore #1 - Gyro Survey	7,100.00	6,822.27	6,190.99	6,142.01	126.411	SF
HSR Guttersen 4-21 (PR) - Wellbore #1 - Gyro Surveys	6,517.08	6,385.83	6,795.05	6,749.28	148.466	CC, ES
HSR Guttersen 4-21 (PR) - Wellbore #1 - Gyro Surveys	7,150.00	6,829.28	6,987.10	6,937.57	141.057	SF
HSR-Guttersen 3-21 (SI) - Wellbore #1 - Gyro Surveys	6,538.54	6,815.37	5,701.47	5,653.89	119.812	CC
HSR-Guttersen 3-21 (SI) - Wellbore #1 - Gyro Surveys	6,550.00	6,826.23	5,701.55	5,653.85	119.530	ES
HSR-Guttersen 3-21 (SI) - Wellbore #1 - Gyro Surveys	7,000.00	7,183.08	5,826.62	5,775.02	112.927	SF
HSR-Guttersen 6-21 (SI) - Wellbore #1 - Gyro Surveys	6,522.13	6,370.01	4,935.78	4,890.10	108.047	CC, ES
HSR-Guttersen 6-21 (SI) - Wellbore #1 - Gyro Surveys	6,900.00	6,736.14	5,005.60	4,957.16	103.347	SF
Two E Ranch 1-21C (SI) - Wellbore #1 - Gyro Surveys	6,586.02	6,458.94	2,052.44	2,006.21	44.392	CC
Two E Ranch 1-21C (SI) - Wellbore #1 - Gyro Surveys	6,600.00	6,471.54	2,052.53	2,006.19	44.297	ES
Two E Ranch 1-21C (SI) - Wellbore #1 - Gyro Surveys	6,900.00	6,715.20	2,097.08	2,048.68	43.327	SF
Vogler State D21-720 - Wellbore #1 - Plan 1	7,283.04	7,185.42	1,368.67	1,316.71	26.337	CC, ES
Vogler State D21-720 - Wellbore #1 - Plan 1	7,400.00	7,097.09	1,371.91	1,319.62	26.235	SF
Vogler State D21-731 - Wellbore #1 - Plan 1	7,157.55	7,522.58	2,073.16	2,020.74	39.549	CC, ES
Vogler State D21-731 - Wellbore #1 - Plan 1	7,350.00	7,434.85	2,083.21	2,030.33	39.395	SF
Vogler State D21-740 - Wellbore #1 - Plan 1	7,230.63	7,400.00	2,694.38	2,642.04	51.479	CC, ES
Vogler State D21-740 - Wellbore #1 - Plan 1	7,800.00	7,110.29	2,745.62	2,691.60	50.823	SF
Vogler State D21-750 - Wellbore #1 - Plan 1	7,289.26	7,133.68	3,315.26	3,263.30	63.810	CC
Vogler State D21-750 - Wellbore #1 - Plan 1	7,300.00	7,125.73	3,315.28	3,263.29	63.773	ES
Vogler State D21-750 - Wellbore #1 - Plan 1	8,500.00	6,700.00	3,479.93	3,423.75	61.944	SF
Vogler State D21-760 - Wellbore #1 - Plan 1	7,204.75	7,550.00	3,982.73	3,930.13	75.705	CC, ES
Vogler State D21-760 - Wellbore #1 - Plan 1	8,800.00	7,100.00	4,272.81	4,214.36	73.105	SF
Vogler State D21-770 - Wellbore #1 - Plan 1	7,225.38	7,307.61	4,640.74	4,588.96	89.636	CC, ES
Vogler State D21-770 - Wellbore #1 - Plan 1	9,500.00	6,700.00	5,102.28	5,041.36	83.743	SF
Vogler State D21-780 - Wellbore #1 - Plan 1	7,483.61	6,751.88	5,279.02	5,226.89	101.273	CC
Vogler State D21-780 - Wellbore #1 - Plan 1	7,500.00	6,745.35	5,279.04	5,226.87	101.191	ES
Vogler State D21-780 - Wellbore #1 - Plan 1	10,100.00	6,550.00	5,868.43	5,804.20	91.368	SF
Vogler State D21-790 - Wellbore #1 - Plan 1	7,122.51	7,332.47	727.56	676.26	14.183	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 D34-779
Project:	Mustang	TVD Reference:	KB @ 4854.00ft
Reference Site:	D Section 22	MD Reference:	KB @ 4854.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersen D34-779	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 21						
Vogler State D21-790 - Wellbore #1 - Plan 1	7,150.00	7,313.95	727.86	676.53	14.180	SF
Vogler State D33-711 - Wellbore #1 - Plan 1	17,528.51	17,490.70	740.08	546.91	3.831	CC, ES, SF
Vogler State D33-718 - Wellbore #1 - Plan 1	7,315.09	7,252.66	1,262.61	1,210.56	24.255	CC
Vogler State D33-718 - Wellbore #1 - Plan 1	17,200.00	17,117.05	1,358.52	1,170.93	7.242	ES
Vogler State D33-718 - Wellbore #1 - Plan 1	17,528.51	17,432.10	1,369.18	1,176.48	7.105	SF
Vogler State D33-728 - Wellbore #1 - Plan 1	7,342.51	7,468.43	1,922.81	1,868.80	35.595	CC
Vogler State D33-728 - Wellbore #1 - Plan 1	17,528.51	17,636.77	2,029.86	1,836.70	10.509	ES, SF
Vogler State D33-738 - Wellbore #1 - Plan 1	7,335.08	7,273.10	2,583.74	2,531.16	49.137	CC
Vogler State D33-738 - Wellbore #1 - Plan 1	17,000.00	16,919.90	2,668.65	2,483.93	14.447	ES
Vogler State D33-738 - Wellbore #1 - Plan 1	17,528.51	17,350.48	2,687.78	2,495.58	13.985	SF
Vogler State D33-752 - Wellbore #1 - Plan 1	7,309.18	7,268.72	3,234.54	3,182.28	61.885	CC
Vogler State D33-752 - Wellbore #1 - Plan 1	17,528.51	17,490.76	3,340.24	3,146.80	17.268	ES, SF
Vogler State D33-759 - Wellbore #1 - Plan 1	7,337.91	7,400.00	3,875.91	3,822.39	72.425	CC
Vogler State D33-759 - Wellbore #1 - Plan 1	17,528.51	17,557.24	3,991.08	3,798.15	20.686	ES, SF
Vogler State D33-769 - Wellbore #1 - Plan 1	7,327.51	7,300.00	4,535.88	4,483.37	86.367	CC
Vogler State D33-769 - Wellbore #1 - Plan 1	17,528.51	17,476.23	4,651.06	4,457.99	24.090	ES, SF
Vogler State D33-779 - Wellbore #1 - Plan 1	7,247.41	7,085.14	5,194.98	5,143.44	100.803	CC
Vogler State D33-779 - Wellbore #1 - Plan 1	17,528.51	17,459.21	5,311.01	5,117.71	27.475	ES, SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersten D34-779
Project:	Mustang	TVD Reference:	KB @ 4854.00ft
Reference Site:	D Section 22	MD Reference:	KB @ 4854.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersten D34-779	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 22						
Dalbey D22-05 (SI) - Wellbore #1 - Gyro Surveys	100.00	42.51	2,383.43	2,383.23	10,000.000	CC
Dalbey D22-05 (SI) - Wellbore #1 - Gyro Surveys	800.00	735.47	2,387.08	2,382.05	473.833	ES
Dalbey D22-05 (SI) - Wellbore #1 - Gyro Surveys	6,700.00	6,517.12	2,933.72	2,887.06	62.880	SF
O'SH D 22-11 (SI) - Wellbore #1 - No Surveys	2,400.00	2,375.00	773.91	718.04	13.852	CC
O'SH D 22-11 (SI) - Wellbore #1 - No Surveys	2,500.00	2,474.98	775.44	717.22	13.321	ES
O'SH D 22-11 (SI) - Wellbore #1 - No Surveys	6,500.00	6,372.87	1,606.35	1,455.88	10.676	SF
Dalbey D 22-04 (PR) - Wellbore #1 - Gyro Surveys	671.79	613.80	3,789.29	3,785.14	913.119	CC
Dalbey D 22-04 (PR) - Wellbore #1 - Gyro Surveys	1,000.00	923.53	3,790.10	3,783.70	591.909	ES
Dalbey D 22-04 (PR) - Wellbore #1 - Gyro Surveys	6,750.00	6,602.96	4,474.27	4,427.10	94.860	SF
Dalbey D 22-3 (SI) - Wellbore #1 - Gyro Surveys	201.97	153.97	3,799.96	3,799.10	4,433.485	CC
Dalbey D 22-3 (SI) - Wellbore #1 - Gyro Surveys	2,401.81	2,355.75	3,806.45	3,790.01	231.596	ES
Dalbey D 22-3 (SI) - Wellbore #1 - Gyro Surveys	6,750.00	6,575.85	4,654.65	4,607.81	99.375	SF
Dalbey D22-6 (SI) - Wellbore #1 - Gyro Surveys	631.42	583.44	2,626.57	2,622.67	673.928	CC
Dalbey D22-6 (SI) - Wellbore #1 - Gyro Surveys	1,800.00	1,733.14	2,628.71	2,616.61	217.220	ES
Dalbey D22-6 (SI) - Wellbore #1 - Gyro Surveys	6,700.00	6,498.05	3,434.79	3,388.41	74.056	SF
Guttersten D 22-18 (SI) - Wellbore #1 - Gyro Surveys	1,996.71	1,956.86	3,219.99	3,206.40	236.791	CC
Guttersten D 22-18 (SI) - Wellbore #1 - Gyro Surveys	2,100.00	2,032.65	3,220.45	3,206.22	226.290	ES
Guttersten D 22-18 (SI) - Wellbore #1 - Gyro Surveys	6,800.00	6,629.35	4,197.48	4,150.37	89.098	SF
Guttersten D34-719 - Wellbore #1 - Plan 1	2,400.00	2,408.00	2,509.85	2,493.08	149.669	CC, ES
Guttersten D34-719 - Wellbore #1 - Plan 1	17,528.51	17,517.73	3,923.05	3,730.41	20.365	SF
Guttersten D34-729 - Wellbore #1 - Plan 1	2,400.00	2,408.00	2,472.42	2,455.65	147.437	CC, ES
Guttersten D34-729 - Wellbore #1 - Plan 1	17,520.57	17,467.11	3,262.98	3,069.92	16.901	SF
Guttersten D34-739 - Wellbore #1 - Plan 1	2,849.82	3,139.18	2,399.95	2,379.37	116.626	CC
Guttersten D34-739 - Wellbore #1 - Plan 1	2,900.00	3,189.32	2,400.27	2,379.35	114.735	ES
Guttersten D34-739 - Wellbore #1 - Plan 1	17,528.51	17,457.29	2,603.37	2,410.80	13.519	SF
Guttersten D34-749 - Wellbore #1 - Plan 1	2,200.00	2,201.00	112.56	97.25	7.352	CC, ES
Guttersten D34-749 - Wellbore #1 - Plan 1	2,400.00	2,394.29	118.33	101.68	7.104	SF
Guttersten D34-759 - Wellbore #1 - Plan 1	2,400.00	2,401.00	75.13	58.39	4.487	CC, ES
Guttersten D34-759 - Wellbore #1 - Plan 1	2,500.00	2,499.39	77.48	60.06	4.447	SF
Guttersten D34-769 - Wellbore #1 - Plan 1	2,396.26	2,396.42	37.10	20.44	2.227	CC
Guttersten D34-769 - Wellbore #1 - Plan 1	2,400.00	2,400.14	37.10	20.42	2.223	ES, SF
Guttersten State D 22-22 (SI) - Wellbore #1 - Gyro Survey	2,353.51	2,334.74	2,972.28	2,956.09	183.547	CC
Guttersten State D 22-22 (SI) - Wellbore #1 - Gyro Survey	2,400.00	2,371.08	2,972.36	2,955.88	180.285	ES
Guttersten State D 22-22 (SI) - Wellbore #1 - Gyro Survey	6,850.00	6,717.87	4,028.71	3,981.12	84.645	SF
Guttersten State D 22-24 (SI) - Wellbore #1 - Gyro Survey	337.76	311.03	1,316.47	1,314.58	696.640	CC
Guttersten State D 22-24 (SI) - Wellbore #1 - Gyro Survey	500.00	462.07	1,317.10	1,314.10	438.571	ES
Guttersten State D 22-24 (SI) - Wellbore #1 - Gyro Survey	6,650.00	6,518.76	2,318.37	2,272.08	50.087	SF
Guttersten State D22-730 - Wellbore #1 - Plan 1	2,400.23	2,409.37	2,477.10	2,460.33	147.682	CC, ES
Guttersten State D22-730 - Wellbore #1 - Plan 1	8,100.00	6,750.00	3,194.82	3,142.28	60.804	SF
Guttersten State D22-740 - Wellbore #1 - Plan 1	2,611.67	2,747.69	2,433.85	2,415.33	131.444	CC
Guttersten State D22-740 - Wellbore #1 - Plan 1	2,700.00	2,860.65	2,434.35	2,415.18	126.947	ES
Guttersten State D22-740 - Wellbore #1 - Plan 1	7,100.00	7,342.44	2,598.90	2,547.88	50.940	SF
Guttersten State D22-750 - Wellbore #1 - Plan 1	2,200.00	2,200.00	187.77	172.46	12.267	CC, ES
Guttersten State D22-750 - Wellbore #1 - Plan 1	2,400.00	2,387.45	194.31	177.68	11.689	SF
Guttersten State D22-760 - Wellbore #1 - Plan 1	2,400.00	2,400.00	167.84	151.10	10.026	CC, ES
Guttersten State D22-760 - Wellbore #1 - Plan 1	2,600.00	2,588.89	172.54	154.53	9.580	SF
Guttersten State D22-770 - Wellbore #1 - Plan 1	2,200.00	2,200.00	154.75	139.44	10.110	CC, ES
Guttersten State D22-770 - Wellbore #1 - Plan 1	2,400.00	2,390.08	160.99	144.36	9.681	SF
Guttersten State D22-780 - Wellbore #1 - Plan 1	7,180.15	7,327.93	45.96	-6.47	0.877	Level 1, CC, ES, SF
Guttersten State D34-790 - Wellbore #1 - Plan 1	2,200.00	2,209.00	2,547.55	2,532.21	166.083	CC, ES
Guttersten State D34-790 - Wellbore #1 - Plan 1	17,528.51	17,636.91	4,532.42	4,339.67	23.515	SF
OSH D 22-12 (SI) - Wellbore #1 - Gyro Surveys	1,362.61	1,323.62	1,347.85	1,338.75	148.083	CC
OSH D 22-12 (SI) - Wellbore #1 - Gyro Surveys	2,000.00	1,952.23	1,350.22	1,336.65	99.451	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 Guttersten D34-779
Project:	Mustang	TVD Reference:	KB @ 4854.00ft
Reference Site:	D Section 22	MD Reference:	KB @ 4854.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersten D34-779	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 22						
OSH D 22-12 (SI) - Wellbore #1 - Gyro Surveys	6,550.00	6,410.21	1,674.52	1,628.76	36.592	SF
OSH D 22-13 (SI) - Wellbore #1 - Gyro Surveys	6,555.65	6,426.00	333.36	287.37	7.247	CC, ES
OSH D 22-13 (SI) - Wellbore #1 - Gyro Surveys	6,600.00	6,467.62	334.55	288.21	7.220	SF
OSH D 22-14 (PR) - Wellbore #1 - Gyro Surveys	2,575.68	2,559.49	775.56	757.82	43.721	CC
OSH D 22-14 (PR) - Wellbore #1 - Gyro Surveys	2,600.00	2,582.23	775.61	757.71	43.333	ES
OSH D 22-14 (PR) - Wellbore #1 - Gyro Surveys	5,500.00	5,378.00	1,086.41	1,048.37	28.562	SF
Sevendust State D 22-1 (SI) - Wellbore #1 - Gyro Survey	2,489.64	2,620.65	4,950.51	4,932.83	279.985	CC
Sevendust State D 22-1 (SI) - Wellbore #1 - Gyro Survey	2,500.00	2,632.99	4,950.53	4,932.77	278.747	ES
Sevendust State D 22-1 (SI) - Wellbore #1 - Gyro Survey	6,900.00	6,714.87	6,006.16	5,958.48	125.977	SF
Spike ST GWS D 22-07 (SI) - Wellbore #1 - No Surveys	2,400.00	2,368.00	2,705.79	2,650.06	48.551	CC
Spike ST GWS D 22-07 (SI) - Wellbore #1 - No Surveys	2,500.00	2,467.98	2,707.51	2,649.44	46.622	ES
Spike ST GWS D 22-07 (SI) - Wellbore #1 - No Surveys	6,700.00	6,549.42	3,655.14	3,500.41	23.622	SF
Spike ST GWS D 22-08 (SI) - Wellbore #1 - Gyro Survey	2,146.49	2,126.51	3,993.13	3,978.40	271.168	CC
Spike ST GWS D 22-08 (SI) - Wellbore #1 - Gyro Survey	2,400.00	2,357.88	3,994.04	3,977.60	242.957	ES
Spike ST GWS D 22-08 (SI) - Wellbore #1 - Gyro Survey	6,900.00	6,783.96	5,021.50	4,973.51	104.627	SF
Spike ST GWS D 22-09 (PA) - Wellbore #1 - No Surveys	2,400.00	2,382.00	3,543.28	3,487.27	63.261	CC
Spike ST GWS D 22-09 (PA) - Wellbore #1 - No Surveys	2,500.00	2,481.98	3,544.87	3,486.52	60.749	ES
Spike ST GWS D 22-09 (PA) - Wellbore #1 - No Surveys	6,950.00	6,748.48	4,515.02	4,355.36	28.279	SF
Spike ST GWS D 22-15 (PR) - Wellbore #1 - Gyro Survey	100.00	72.98	1,814.64	1,814.38	7,154.175	CC
Spike ST GWS D 22-15 (PR) - Wellbore #1 - Gyro Survey	2,400.00	2,375.05	1,817.55	1,801.06	110.199	ES
Spike ST GWS D 22-15 (PR) - Wellbore #1 - Gyro Survey	7,050.00	6,792.00	2,597.39	2,548.67	53.311	SF
Spike ST GWS D 22-4J (PR) - Wellbore #1 - Gyro Survey	2,252.19	2,232.38	2,836.86	2,821.38	183.261	CC
Spike ST GWS D 22-4J (PR) - Wellbore #1 - Gyro Survey	2,400.00	2,359.37	2,837.39	2,820.94	172.486	ES
Spike ST GWS D 22-4J (PR) - Wellbore #1 - Gyro Survey	7,100.00	6,899.69	3,718.37	3,669.09	75.465	SF
Spike State D22-1J (PA) - Wellbore #1 - Gyro Surveys	2,447.80	2,483.68	3,734.99	3,717.95	219.176	CC, ES
Spike State D22-1J (PA) - Wellbore #1 - Gyro Surveys	6,850.00	6,740.12	4,760.02	4,712.37	99.908	SF
Spike State GWS D 22-10 (PA) - Wellbore #1 - Gyro Survey	2,419.98	2,400.42	1,959.59	1,942.94	117.704	CC, ES
Spike State GWS D 22-10 (PA) - Wellbore #1 - Gyro Survey	6,700.00	6,543.76	2,927.51	2,881.07	63.041	SF
Spike State GWS D 22-2 (PR) - Wellbore #1 - Gyro Survey	1,681.38	1,641.41	4,150.77	4,139.42	365.664	CC
Spike State GWS D 22-2 (PR) - Wellbore #1 - Gyro Survey	2,400.00	2,356.28	4,151.68	4,135.26	252.793	ES
Spike State GWS D 22-2 (PR) - Wellbore #1 - Gyro Survey	6,800.00	6,627.91	5,144.30	5,097.18	109.174	SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersen D34-779
Project:	Mustang	TVD Reference:	KB @ 4854.00ft
Reference Site:	D Section 22	MD Reference:	KB @ 4854.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersen D34-779	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 23						
Guttersen 23-20 (SI) - Wellbore #1 - Gyro Surveys	2,183.42	2,175.61	5,459.75	5,444.72	363.227	CC
Guttersen 23-20 (SI) - Wellbore #1 - Gyro Surveys	2,300.00	2,263.20	5,460.09	5,444.34	346.586	ES
Guttersen 23-20 (SI) - Wellbore #1 - Gyro Surveys	7,200.00	6,872.71	6,530.05	6,480.85	132.728	SF
Guttersen 23-32 (SI) - Wellbore #1 - Gyro Surveys	100.00	23.53	7,712.19	7,712.02	10,000.000	CC
Guttersen 23-32 (SI) - Wellbore #1 - Gyro Surveys	2,500.00	2,576.95	7,715.01	7,697.47	439.842	ES
Guttersen 23-32 (SI) - Wellbore #1 - Gyro Surveys	9,700.00	6,697.96	9,919.94	9,864.58	179.219	SF
Guttersen 23-41 (PR) - Wellbore #1 - Gyro Surveys	100.00	12.76	9,212.33	9,212.18	10,000.000	CC
Guttersen 23-41 (PR) - Wellbore #1 - Gyro Surveys	2,451.01	2,524.26	9,213.02	9,195.83	536.041	ES
Guttersen 23-41 (PR) - Wellbore #1 - Gyro Surveys	6,300.00	6,104.18	9,986.33	9,942.91	229.985	SF
Guttersen 31-23 (PR) - Wellbore #1 - Gyro Surveys	2,464.63	2,624.86	7,996.62	7,979.03	454.535	CC
Guttersen 31-23 (PR) - Wellbore #1 - Gyro Surveys	2,500.00	2,657.51	7,996.84	7,979.01	448.538	ES
Guttersen 31-23 (PR) - Wellbore #1 - Gyro Surveys	7,200.00	6,786.33	9,126.36	9,077.57	187.065	SF
Guttersen 42-23 (PR) - Wellbore #1 - Gyro Surveys	100.00	36.47	8,787.93	8,787.74	10,000.000	CC
Guttersen 42-23 (PR) - Wellbore #1 - Gyro Surveys	2,506.86	2,753.19	8,789.33	8,771.17	483.856	ES
Guttersen 42-23 (PR) - Wellbore #1 - Gyro Surveys	7,800.00	6,772.07	9,968.26	9,918.01	198.344	SF
Guttersen USX D 23-17 (PR) - Wellbore #1 - Gyro Surveys	2,437.24	2,500.00	8,283.03	8,265.94	484.794	CC, ES
Guttersen USX D 23-17 (PR) - Wellbore #1 - Gyro Surveys	8,500.00	8,500.00	9,962.04	9,904.41	172.848	SF
Parker Blue D 23-09 (SI) - Wellbore #1 - Gyro Surveys	2,389.21	2,313.75	8,756.14	8,739.88	538.533	CC
Parker Blue D 23-09 (SI) - Wellbore #1 - Gyro Surveys	2,400.00	2,322.32	8,756.14	8,739.81	536.275	ES
Parker Blue D 23-11 (SI) - Wellbore #1 - Gyro Surveys	8,900.00	6,880.76	9,999.93	9,945.28	182.980	SF
Parker Blue D 23-10 (SI) - Wellbore #1 - Gyro Surveys	2,451.05	2,511.54	7,510.41	7,493.26	437.703	CC
Parker Blue D 23-10 (SI) - Wellbore #1 - Gyro Surveys	2,500.00	2,579.00	7,510.69	7,493.13	427.656	ES
Parker Blue D 23-10 (SI) - Wellbore #1 - Gyro Surveys	11,100.00	6,863.38	9,965.74	9,903.06	158.993	SF
Parker Blue D 23-11 (SI) - Wellbore #1 - Gyro Surveys	2,424.51	2,452.02	6,144.57	6,127.71	364.491	CC, ES
Parker Blue D 23-11 (SI) - Wellbore #1 - Gyro Surveys	7,200.00	6,855.93	7,069.33	7,020.02	143.358	SF
Parker Blue D 23-13 (SI) - Wellbore #1 - Gyro Surveys	2,313.65	2,300.00	4,432.58	4,416.64	278.088	CC
Parker Blue D 23-13 (SI) - Wellbore #1 - Gyro Surveys	2,400.00	2,359.52	4,432.84	4,416.38	269.378	ES
Parker Blue D 23-13 (SI) - Wellbore #1 - Gyro Surveys	7,500.00	6,916.26	5,338.44	5,288.13	106.104	SF
Parker Blue D 23-14 (SI) - Wellbore #1 - Gyro Surveys	2,454.38	2,511.25	5,952.10	5,934.93	346.597	CC
Parker Blue D 23-14 (SI) - Wellbore #1 - Gyro Surveys	2,500.00	2,557.45	5,952.37	5,934.88	340.306	ES
Parker Blue D 23-14 (SI) - Wellbore #1 - Gyro Surveys	9,800.00	6,842.93	7,539.61	7,481.56	129.874	SF
Parker Blue D 23-15 (SI) - Wellbore #1 - Gyro Surveys	100.00	28.49	7,288.68	7,288.50	10,000.000	CC
Parker Blue D 23-15 (SI) - Wellbore #1 - Gyro Surveys	2,419.89	2,410.31	7,289.53	7,272.85	436.854	ES
Parker Blue D 23-15 (SI) - Wellbore #1 - Gyro Surveys	11,600.00	6,915.68	9,331.96	9,265.37	140.148	SF
Parker Blue D 23-3J (SI) - Wellbore #1 - Gyro Surveys	0.00	0.00	5,026.64			
Parker Blue D 23-3J (SI) - Wellbore #1 - Gyro Surveys	2,420.54	2,442.78	5,034.95	5,018.15	299.653	ES
Parker Blue D 23-3J (SI) - Wellbore #1 - Gyro Surveys	7,250.00	6,807.17	6,074.50	6,022.07	115.857	SF
Parker Red D 23-05 (PR) - Wellbore #1 - Gyro Surveys	393.58	391.58	4,983.23	4,980.86	2,101.344	CC
Parker Red D 23-05 (PR) - Wellbore #1 - Gyro Surveys	2,100.00	2,070.72	4,992.14	4,977.78	347.620	ES
Parker Red D 23-05 (PR) - Wellbore #1 - Gyro Surveys	7,050.00	6,843.12	6,116.83	6,068.17	125.706	SF
Parker Red D 23-2J (SI) - Wellbore #1 - Gyro Surveys	2,231.83	2,223.93	5,957.24	5,941.87	387.564	CC
Parker Red D 23-2J (SI) - Wellbore #1 - Gyro Surveys	2,300.00	2,261.12	5,957.42	5,941.68	378.373	ES
Parker Red D 23-2J (SI) - Wellbore #1 - Gyro Surveys	7,150.00	7,071.37	7,061.64	7,011.56	141.009	SF
Parker Red D 23-3 (PR) - Wellbore #1 - Gyro Surveys	2,130.57	2,100.00	6,904.92	6,890.34	473.622	CC
Parker Red D 23-3 (PR) - Wellbore #1 - Gyro Surveys	2,200.00	2,132.29	6,905.11	6,890.17	462.140	ES
Parker Red D 23-3 (PR) - Wellbore #1 - Gyro Surveys	6,900.00	6,858.17	7,869.63	7,821.36	163.040	SF
Parker Red D 23-4 (SI) - Wellbore #1 - Gyro Surveys	1,911.82	1,891.82	5,668.06	5,655.01	434.280	CC
Parker Red D 23-4 (SI) - Wellbore #1 - Gyro Surveys	2,400.00	2,358.80	5,669.63	5,653.20	345.006	ES
Parker Red D 23-4 (SI) - Wellbore #1 - Gyro Surveys	7,000.00	6,767.19	6,805.38	6,757.17	141.171	SF
Two E Ranch 1-23 (SI) - Wellbore #1 - Gyro Surveys	2,490.28	2,637.14	8,209.43	8,191.70	463.036	CC
Two E Ranch 1-23 (SI) - Wellbore #1 - Gyro Surveys	2,500.00	2,647.00	8,209.44	8,191.64	461.271	ES
Two E Ranch 1-23 (SI) - Wellbore #1 - Gyro Surveys	10,500.00	6,840.83	9,971.64	9,909.46	160.365	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 D34-779
Project:	Mustang	TVD Reference:	KB @ 4854.00ft
Reference Site:	D Section 22	MD Reference:	KB @ 4854.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersen D34-779	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	10,441.08	6,723.28	6,367.41	6,301.67	96.856	CC
Adam Red D 26-11 (PR) - Wellbore #1 - Gyro Surveys	10,500.00	6,724.26	6,367.68	6,301.58	96.333	ES
Adam Red D 26-11 (PR) - Wellbore #1 - Gyro Surveys	12,900.00	6,757.20	6,825.67	6,747.02	86.786	SF
Adam Red D 26-12 (PR) - Wellbore #1 - Gyro Surveys	10,428.59	6,946.37	5,164.34	5,090.25	69.698	CC, ES
Adam Red D 26-12 (PR) - Wellbore #1 - Gyro Surveys	11,900.00	6,939.07	5,369.86	5,288.19	65.746	SF
Adam Red D 26-13 (PR) - Wellbore #1 - Gyro Surveys	11,575.21	6,900.00	5,340.15	5,265.74	71.769	CC
Adam Red D 26-13 (PR) - Wellbore #1 - Gyro Surveys	11,600.00	6,900.00	5,340.21	5,265.65	71.619	ES
Adam Red D 26-13 (PR) - Wellbore #1 - Gyro Surveys	13,100.00	6,900.00	5,553.58	5,471.11	67.344	SF
Adam Red D 26-14 (PR) - Wellbore #1 - Gyro Surveys	11,595.00	6,855.10	6,704.73	6,625.62	84.753	CC
Adam Red D 26-14 (PR) - Wellbore #1 - Gyro Surveys	11,600.00	6,855.16	6,704.73	6,625.59	84.718	ES
Adam Red D 26-14 (PR) - Wellbore #1 - Gyro Surveys	13,900.00	6,881.96	7,089.83	6,997.95	77.163	SF
Coors Energy 14-25H (PR) - Wellbore #1 - MWD Survey	11,281.38	5,920.20	9,900.19	9,833.37	148.155	CC
Coors Energy 14-25H (PR) - Wellbore #1 - MWD Survey	11,300.00	5,920.20	9,900.21	9,833.26	147.886	ES
Coors Energy 14-25H (PR) - Wellbore #1 - MWD Survey	12,600.00	5,920.20	9,987.62	9,912.29	132.583	SF
Heyde 1-26 (PR) - Wellbore #1 - Gyro Surveys	194.92	150.92	8,398.96	8,398.14	10,000.000	CC
Heyde 1-26 (PR) - Wellbore #1 - Gyro Surveys	1,900.00	1,803.11	8,401.39	8,388.69	661.594	ES
Heyde 1-26 (PR) - Wellbore #1 - Gyro Surveys	12,700.00	6,887.30	9,971.15	9,895.80	132.329	SF
Heyde 26ND (PR) - Wellbore #1 - MWD Surveys	908.83	895.00	5,822.72	5,816.93	1,005.526	CC, ES
Heyde 26ND (PR) - Wellbore #1 - MWD Surveys	12,400.00	6,918.11	8,279.64	8,201.36	105.776	SF
Heyde 26RD (PR) - Wellbore #1 - MWD Surveys	2,846.01	3,652.85	8,070.08	8,045.99	334.959	CC, ES
Heyde 26RD (PR) - Wellbore #1 - MWD Surveys	12,300.00	6,890.76	9,960.52	9,886.52	134.606	SF
Heyde 26VD (PR) - Wellbore #1 - MWD Surveys	100.00	58.99	8,277.09	8,276.85	10,000.000	CC
Heyde 26VD (PR) - Wellbore #1 - MWD Surveys	1,000.00	929.23	8,278.92	8,273.89	1,646.453	ES
Heyde 26VD (PR) - Wellbore #1 - MWD Surveys	10,600.00	7,127.00	9,992.04	9,921.67	141.998	SF
Heyde 31-26 (PR) - Wellbore #1 - No Surveys	2,424.96	2,426.12	7,101.91	7,085.13	423.263	CC, ES
Heyde 31-26 (PR) - Wellbore #1 - No Surveys	12,000.00	6,844.01	8,667.92	8,597.67	123.393	SF
Heyde 32-26 (SI) - Wellbore #1 - Gyro Surveys	2,584.70	2,778.62	7,660.01	7,641.46	413.057	CC
Heyde 32-26 (SI) - Wellbore #1 - Gyro Surveys	2,600.00	2,794.73	7,660.02	7,641.37	410.692	ES
Heyde 32-26 (SI) - Wellbore #1 - Gyro Surveys	13,000.00	6,750.41	8,670.71	8,593.53	112.344	SF
Heyde 41-26 (PR) - Wellbore #1 - Gyro Surveys	2,453.24	2,509.68	8,714.31	8,697.15	507.922	CC
Heyde 41-26 (PR) - Wellbore #1 - Gyro Surveys	2,500.00	2,551.46	8,714.56	8,697.10	499.008	ES
Heyde 41-26 (PR) - Wellbore #1 - Gyro Surveys	11,400.00	6,965.05	9,973.89	9,904.90	144.556	SF
Heyde 42-26 (PR) - Wellbore #1 - Gyro Surveys	2,500.61	2,617.05	8,964.12	8,946.42	506.439	CC
Heyde 42-26 (PR) - Wellbore #1 - Gyro Surveys	2,600.00	2,734.13	8,964.81	8,946.37	486.234	ES
Heyde 42-26 (PR) - Wellbore #1 - Gyro Surveys	13,000.00	6,905.60	9,960.98	9,881.71	125.660	SF
HSR-Waste Services 10-26 (SI) - Wellbore #1 - No Surve	10,660.11	6,891.00	8,073.76	7,891.86	44.385	CC
HSR-Waste Services 10-26 (SI) - Wellbore #1 - No Surve	10,700.00	6,891.00	8,073.86	7,891.70	44.324	ES
HSR-Waste Services 10-26 (SI) - Wellbore #1 - No Surve	12,600.00	6,891.00	8,303.54	8,110.04	42.911	SF
HSR-Waste Services 15-26 (SI) - Wellbore #1 - No Surve	11,655.11	6,907.00	7,821.52	7,632.30	41.337	CC
HSR-Waste Services 15-26 (SI) - Wellbore #1 - No Surve	11,700.00	6,907.00	7,821.65	7,632.14	41.272	ES
HSR-Waste Services 15-26 (SI) - Wellbore #1 - No Surve	13,400.00	6,907.00	8,013.79	7,813.90	40.091	SF
HSR-Waste Services 16-26 (SI) - Wellbore #1 - Gyro Su	11,670.03	7,026.53	9,070.56	8,995.37	120.632	CC
HSR-Waste Services 16-26 (SI) - Wellbore #1 - Gyro Su	11,700.00	7,026.38	9,070.61	8,995.22	120.311	ES
HSR-Waste Services 16-26 (SI) - Wellbore #1 - Gyro Su	15,700.00	7,006.58	9,925.49	9,827.79	101.597	SF
HSR-Waste Services 9-26 (PA) - Wellbore #1 - Gyro Sur	10,416.26	6,806.46	9,253.60	9,187.62	140.247	CC
HSR-Waste Services 9-26 (PA) - Wellbore #1 - Gyro Sur	10,500.00	6,806.89	9,253.98	9,187.47	139.146	ES
HSR-Waste Services 9-26 (PA) - Wellbore #1 - Gyro Sur	14,200.00	6,826.07	9,997.27	9,909.73	114.198	SF
Waste Management 11-26 (PR) - Wellbore #1 - Gyro Sur	2,384.78	2,380.83	4,785.92	4,769.44	290.436	CC
Waste Management 11-26 (PR) - Wellbore #1 - Gyro Sur	2,400.00	2,392.93	4,785.93	4,769.35	288.741	ES
Waste Management 11-26 (PR) - Wellbore #1 - Gyro Sur	9,900.00	7,021.02	5,536.73	5,476.13	91.362	SF
Waste Management 12-26 (PR) - Wellbore #1 - Gyro Sur	9,236.17	7,001.23	5,116.03	5,056.60	86.083	CC
Waste Management 12-26 (PR) - Wellbore #1 - Gyro Sur	9,248.55	7,001.80	5,116.06	5,056.56	85.987	ES
Waste Management 12-26 (PR) - Wellbore #1 - Gyro Sur	11,000.00	7,082.74	5,414.52	5,346.27	79.338	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 D34-779
Project:	Mustang	TVD Reference:	KB @ 4854.00ft
Reference Site:	D Section 22	MD Reference:	KB @ 4854.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersten D34-779	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	2,196.76	2,192.86	5,586.40	5,571.26	368.932	CC
Waste Management 12-26A (PR) - Wellbore #1 - Gyro S	2,400.00	2,358.63	5,587.03	5,570.58	339.710	ES
Waste Management 12-26A (PR) - Wellbore #1 - Gyro S	11,000.00	7,000.00	6,217.07	6,150.06	92.771	SF
Waste Management 21-26 (PR) - Wellbore #1 - Gyro Sur	945.74	931.77	6,099.89	6,093.65	977.075	CC
Waste Management 21-26 (PR) - Wellbore #1 - Gyro Sur	2,400.00	2,370.54	6,102.20	6,085.72	370.370	ES
Waste Management 21-26 (PR) - Wellbore #1 - Gyro Sur	11,000.00	6,818.62	7,418.53	7,353.68	114.388	SF
Waste Management 22-26 (PR) - Wellbore #1 - Gyro Sur	9,207.98	6,796.48	6,525.15	6,466.90	112.029	CC, ES
Waste Management 22-26 (PR) - Wellbore #1 - Gyro Sur	12,000.00	6,805.17	7,115.40	7,043.44	98.881	SF
Waste Management 26FD (PR) - Wellbore #1 - MWD Su	8,535.08	7,071.74	4,630.91	4,574.53	82.138	CC, ES
Waste Management 26FD (PR) - Wellbore #1 - MWD Su	10,200.00	7,066.90	4,928.75	4,864.11	76.249	SF
Waste Management 26KD (PR) - Wellbore #1 - MWD Su	0.00	0.98	5,588.52			
Waste Management 26KD (PR) - Wellbore #1 - MWD Su	700.00	656.07	5,590.46	5,586.28	1,338.716	ES
Waste Management 26KD (PR) - Wellbore #1 - MWD Su	11,700.00	7,059.43	6,162.82	6,083.86	78.045	SF
Waste Management D 26-25 (SI) - Wellbore #1 - Gyro S	11,103.91	6,779.54	6,038.90	5,968.36	85.617	CC, ES
Waste Management D 26-25 (SI) - Wellbore #1 - Gyro S	14,000.00	14,000.00	6,697.32	6,587.50	60.985	SF
Waste Management 26JD (PR) - Wellbore #1 - MWD Surv	3,336.27	4,166.07	5,527.68	5,499.35	195.127	CC
Waste Management 26JD (PR) - Wellbore #1 - MWD Surv	3,400.00	4,210.18	5,527.81	5,499.02	191.968	ES
Waste Management 26JD (PR) - Wellbore #1 - MWD Surv	9,700.00	7,030.59	6,392.29	6,329.28	101.451	SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersen D34-779
Project:	Mustang	TVD Reference:	KB @ 4854.00ft
Reference Site:	D Section 22	MD Reference:	KB @ 4854.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersen D34-779	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 27						
Camolo Red 27-3J (SI) - Wellbore #1 - Gyro Surveys	11,488.43	6,921.50	221.85	147.87	2.999	CC, ES, SF
Camolo Red D 27-02J (SI) - Wellbore #1 - Gyro Surveys	8,109.08	6,900.54	924.64	875.34	18.753	CC, ES, SF
Camolo Red D 27-04 (SI) - Wellbore #1 - Gyro Surveys	7,732.74	6,882.65	223.06	171.52	4.328	CC, ES, SF
Camolo Red D 27-05 (SI) - Wellbore #1 - Gyro Surveys	9,166.28	6,898.74	23.77	-34.48	0.408	Level 1, CC, ES, SF
Camolo Red D 27-06 (SI) - Wellbore #1 - Gyro Surveys	9,047.37	6,848.33	1,300.06	1,242.65	22.643	CC, ES
Camolo Red D 27-06 (SI) - Wellbore #1 - Gyro Surveys	9,100.00	6,848.46	1,301.13	1,243.57	22.606	SF
Camolo Red D 27-11 (PA) - Wellbore #1 - No Surveys	10,491.37	6,923.00	1,245.13	1,063.73	6.864	CC, ES
Camolo Red D 27-11 (PA) - Wellbore #1 - No Surveys	10,500.00	6,923.00	1,245.16	1,063.73	6.863	SF
Camolo Red D 27-12 (SI) - Wellbore #1 - Gyro Surveys	10,451.47	6,904.51	135.34	68.57	2.027	CC, ES, SF
Camolo Red D 27-14 (PR) - Wellbore #1 - Gyro Surveys	11,741.42	6,970.78	1,238.68	1,162.88	16.341	CC, ES
Camolo Red D 27-14 (PR) - Wellbore #1 - Gyro Surveys	11,800.00	6,970.95	1,240.07	1,164.10	16.323	SF
Estes D 27-10 (SI) - Wellbore #1 - Gyro Surveys	10,675.63	6,745.64	2,588.88	2,521.72	38.547	CC
Estes D 27-10 (SI) - Wellbore #1 - Gyro Surveys	10,700.00	6,746.48	2,589.00	2,521.71	38.475	ES
Estes D 27-10 (SI) - Wellbore #1 - Gyro Surveys	11,000.00	6,757.12	2,609.10	2,540.43	37.994	SF
Estes D27-07 (SI) - Wellbore #1 - Gyro Surveys	9,118.95	6,868.32	2,431.14	2,373.12	41.901	CC, ES
Estes D27-07 (SI) - Wellbore #1 - Gyro Surveys	9,400.00	6,863.58	2,448.78	2,389.68	41.430	SF
Hippo D 27-23 D (PR) - Wellbore #1 - MWD Surveys	11,068.21	7,075.16	3,145.09	3,069.86	41.808	CC
Hippo D 27-23 D (PR) - Wellbore #1 - MWD Surveys	11,100.00	7,075.72	3,145.25	3,069.74	41.656	ES
Hippo D 27-23 D (PR) - Wellbore #1 - MWD Surveys	11,900.00	7,086.56	3,253.21	3,171.63	39.877	SF
Hippo D 27-24 D (PR) - Wellbore #1 - MWD Surveys	11,139.42	6,982.30	1,806.05	1,732.65	24.604	CC, ES
Hippo D 27-24 D (PR) - Wellbore #1 - MWD Surveys	11,300.00	6,984.53	1,813.18	1,739.07	24.467	SF
Hippo D 27-25 D (PR) - Wellbore #1 - MWD Surveys	11,100.00	7,053.77	576.86	502.32	7.738	SF
Hippo D 27-25 D (PR) - Wellbore #1 - MWD Surveys	11,142.60	7,055.64	575.29	501.21	7.765	CC, ES
Hippo D 34-27 D (PR) - Wellbore #1 - MWD Surveys	12,382.97	7,495.77	3,200.00	3,098.64	31.570	CC
Hippo D 34-27 D (PR) - Wellbore #1 - MWD Surveys	12,400.00	7,495.76	3,200.05	3,098.48	31.505	ES
Hippo D 34-27 D (PR) - Wellbore #1 - MWD Surveys	13,100.00	7,495.27	3,279.35	3,170.87	30.228	SF
Hippo D 34-28 D (PR) - Wellbore #1 - MWD Surveys	12,376.08	7,318.81	1,785.19	1,687.68	18.308	CC, ES
Hippo D 34-28 D (PR) - Wellbore #1 - MWD Surveys	12,500.00	7,318.08	1,789.49	1,691.43	18.249	SF
Hippo D 34-29 D (PR) - Wellbore #1 - MWD Surveys	12,300.00	7,393.68	528.32	427.89	5.261	SF
Hippo D 34-29 D (PR) - Wellbore #1 - MWD Surveys	12,372.20	7,394.06	523.36	424.25	5.281	CC, ES
Hippo D 34-30 D (PR) - Wellbore #1 - MWD Surveys	12,501.42	7,843.64	871.85	765.91	8.230	CC, ES
Hippo D 34-30 D (PR) - Wellbore #1 - MWD Surveys	12,700.00	7,844.19	894.18	779.78	7.816	SF
Kyle D 27-16 (PR) - Wellbore #1 - Gyro Surveys	11,426.94	6,927.25	3,516.45	3,442.99	47.869	CC, ES
Kyle D 27-16 (PR) - Wellbore #1 - Gyro Surveys	12,100.00	6,925.92	3,580.28	3,503.53	46.649	SF
Kyle White D 27-1 (PR) - Wellbore #1 - Gyro Surveys	2,532.04	2,587.04	3,615.12	3,597.44	204.492	CC, ES
Kyle White D 27-1 (PR) - Wellbore #1 - Gyro Surveys	8,800.00	6,896.46	4,212.23	4,156.97	76.226	SF
Kyle White D 27-15 (SI) - Wellbore #1 - Gyro Surveys	11,863.23	6,922.45	2,438.14	2,361.58	31.846	CC, ES
Kyle White D 27-15 (SI) - Wellbore #1 - Gyro Surveys	12,100.00	6,923.95	2,449.61	2,371.94	31.539	SF
Kyle White D 27-2 (SI) - Wellbore #1 - Gyro Surveys	2,640.30	2,657.90	2,380.14	2,361.86	130.161	CC
Kyle White D 27-2 (SI) - Wellbore #1 - Gyro Surveys	2,800.00	2,818.39	2,380.76	2,361.38	122.855	ES
Kyle White D 27-2 (SI) - Wellbore #1 - Gyro Surveys	8,100.00	6,919.97	2,608.44	2,556.05	49.797	SF
Kyle White D 27-8 (PR) - Wellbore #1 - Gyro Surveys	9,282.62	6,873.34	3,953.27	3,894.24	66.971	CC
Kyle White D 27-8 (PR) - Wellbore #1 - Gyro Surveys	9,300.00	6,874.36	3,953.30	3,894.18	66.869	ES
Kyle White D 27-8 (PR) - Wellbore #1 - Gyro Surveys	10,400.00	6,970.86	4,107.68	4,043.26	63.768	SF
Kyle White D 27-9 (PR) - Wellbore #1 - Gyro Surveys	10,386.29	6,818.44	3,986.69	3,920.91	60.604	CC
Kyle White D 27-9 (PR) - Wellbore #1 - Gyro Surveys	10,400.00	6,820.27	3,986.71	3,920.84	60.525	ES
Kyle White D 27-9 (PR) - Wellbore #1 - Gyro Surveys	11,100.00	11,100.00	4,049.42	3,964.75	47.825	SF
Rhino D 27 18 D (PR) - Wellbore #1 - MWD Surveys	8,504.12	7,116.28	1,831.16	1,767.72	28.866	CC, ES
Rhino D 27 18 D (PR) - Wellbore #1 - MWD Surveys	8,600.00	7,116.88	1,833.67	1,769.93	28.769	SF
Rhino D 27-19 D (PR) - Wellbore #1 - MWD Surveys	8,494.93	7,293.14	606.76	541.22	9.259	CC
Rhino D 27-19 D (PR) - Wellbore #1 - MWD Surveys	8,500.00	7,293.24	606.78	541.13	9.243	ES
Rhino D 27-19 D (PR) - Wellbore #1 - MWD Surveys	8,600.00	7,295.11	615.78	548.19	9.110	SF
Rhino D 27-20 D (PR) - Wellbore #1 - MWD Surveys	9,732.00	7,066.31	576.67	514.54	9.281	CC, ES, SF

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

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersen D34-779
Project:	Mustang	TVD Reference:	KB @ 4854.00ft
Reference Site:	D Section 22	MD Reference:	KB @ 4854.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersen D34-779	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 27						
Rhino D 27-21 (PR) - Wellbore #1 - Gyro Surveys	9,910.23	6,864.43	1,763.13	1,700.41	28.113	CC, ES
Rhino D 27-21 (PR) - Wellbore #1 - Gyro Surveys	10,100.00	6,876.65	1,773.26	1,709.79	27.938	SF
Rhino D 27-22 D (PR) - Wellbore #1 - MWD Surveys	9,745.32	7,035.94	3,249.33	3,186.84	51.997	CC, ES
Rhino D 27-22 D (PR) - Wellbore #1 - MWD Surveys	10,500.00	7,065.71	3,335.67	3,269.54	50.440	SF
Rhino State D 27-27 D (PR) - Wellbore #1 - MWD Surve	4,309.72	5,145.73	2,817.64	2,760.73	49.508	CC
Rhino State D 27-27 D (PR) - Wellbore #1 - MWD Surve	4,400.00	5,203.74	2,818.42	2,760.47	48.637	ES
Rhino State D 27-27 D (PR) - Wellbore #1 - MWD Surve	6,700.00	7,434.13	3,224.27	3,145.03	40.694	SF
Rhino State D 27-28 D (PR) - Wellbore #1 - MWD Surve	5,561.82	6,287.23	1,781.77	1,718.46	28.144	CC
Rhino State D 27-28 D (PR) - Wellbore #1 - MWD Surve	5,600.00	6,312.39	1,781.93	1,718.25	27.983	ES
Rhino State D 27-28 D (PR) - Wellbore #1 - MWD Surve	7,350.00	7,514.92	1,851.45	1,775.39	24.343	SF
UPRR Amoco 1 63 (PA) - Wellbore #1 - No Surveys	10,816.34	6,925.00	2,894.19	2,710.54	15.759	CC, ES
UPRR Amoco 1 63 (PA) - Wellbore #1 - No Surveys	11,000.00	6,925.00	2,900.01	2,715.41	15.710	SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersen D34-779
Project:	Mustang	TVD Reference:	KB @ 4854.00ft
Reference Site:	D Section 22	MD Reference:	KB @ 4854.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersen D34-779	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	9,101.99	6,855.00	2,694.98	2,523.69	15.734	CC, ES
O'SH D 28-7 (P&A) - Wellbore #1 - No Surveys	9,400.00	6,855.00	2,709.95	2,536.64	15.636	SF
Spike ST GWS D 28-12 (SI) - Wellbore #1 - Gyro Surve	10,486.06	6,829.53	5,435.74	5,369.13	81.606	CC
Spike ST GWS D 28-12 (SI) - Wellbore #1 - Gyro Surve	10,500.00	6,829.68	5,435.76	5,369.04	81.479	ES
Spike ST GWS D 28-12 (SI) - Wellbore #1 - Gyro Surve	12,600.00	6,850.39	5,832.29	5,751.95	72.602	SF
Guttersen D State 28-29D (PR) - Wellbore #1 - MWD Su	7,224.26	6,935.37	4,607.20	4,556.16	90.265	CC, ES
Guttersen D State 28-29D (PR) - Wellbore #1 - MWD Su	9,200.74	6,955.71	5,088.40	5,027.43	83.458	SF
Guttersen D State 28-30D - Wellbore #1 - Guttersen D S	7,294.38	6,989.30	6,056.73	6,006.00	119.400	CC
Guttersen D State 28-30D - Wellbore #1 - Guttersen D S	7,300.00	6,990.60	6,056.74	6,005.99	119.355	ES
Guttersen D State 28-30D - Wellbore #1 - Guttersen D S	10,700.00	7,001.28	7,004.18	6,937.76	105.463	SF
Guttersen State D28-18D (PR) - Wellbore #1 - MWD Sur	8,270.95	6,912.33	3,502.94	3,446.15	61.682	CC
Guttersen State D28-18D (PR) - Wellbore #1 - MWD Sur	8,300.00	6,912.08	3,503.06	3,446.14	61.539	ES
Guttersen State D28-18D (PR) - Wellbore #1 - MWD Sur	9,248.55	6,904.04	3,636.60	3,575.14	59.170	SF
Guttersen State D28-21D (SI) - Wellbore #1 - MWD Surv	9,623.31	7,032.95	3,406.72	3,342.65	53.168	CC, ES
Guttersen State D28-21D (SI) - Wellbore #1 - MWD Surv	10,900.00	10,900.00	3,637.99	3,553.12	42.864	SF
Guttersen State D28-24D (SI) - Wellbore #1 - MWD Surv	11,182.78	6,904.40	3,427.80	3,351.41	44.872	CC
Guttersen State D28-24D (SI) - Wellbore #1 - MWD Surv	11,200.00	6,904.78	3,427.85	3,351.33	44.798	ES
Guttersen State D28-24D (SI) - Wellbore #1 - MWD Surv	11,900.00	6,920.65	3,501.99	3,421.09	43.292	SF
Guttersen State D28-28D (PR) - Wellbore #1 - MWD Sur	7,166.03	6,899.47	3,437.80	3,385.54	65.785	CC, ES
Guttersen State D28-28D (PR) - Wellbore #1 - MWD Sur	8,000.00	6,930.86	3,580.06	3,524.01	63.878	SF
Guttersen State D28-79HN - Wellbore #1 - Actual	7,500.00	11,086.00	5,875.84	5,765.18	53.097	SF
Guttersen State D28-79HN - Wellbore #1 - Actual	11,185.99	7,593.00	5,741.09	5,664.34	74.800	CC
Guttersen State D28-79HN - Wellbore #1 - Actual	11,200.00	7,593.00	5,741.11	5,664.25	74.695	ES
HSR Guttersen State 10-28 (SI) - Wellbore #1 - Gyro Su	10,410.91	6,682.56	2,967.59	2,901.81	45.112	CC, ES
HSR Guttersen State 10-28 (SI) - Wellbore #1 - Gyro Su	11,100.00	6,664.71	3,046.51	2,976.01	43.214	SF
HSR Guttersen State 15-28 (SI) - Wellbore #1 - Gyro Su	12,059.95	6,976.46	2,379.40	2,300.92	30.316	CC
HSR Guttersen State 15-28 (SI) - Wellbore #1 - Gyro Su	12,100.00	6,981.24	2,379.74	2,300.85	30.165	ES
HSR Guttersen State 15-28 (SI) - Wellbore #1 - Gyro Su	12,500.00	7,029.02	2,419.18	2,336.90	29.399	SF
HSR Guttersen State 7-28 (PR) - Wellbore #1 - Gyro Sur	9,028.27	7,057.42	2,890.99	2,832.12	49.111	CC, ES
HSR Guttersen State 7-28 (PR) - Wellbore #1 - Gyro Sur	9,800.00	7,024.25	2,987.41	2,923.74	46.925	SF
O'SH D 28-1 (SI) - Wellbore #1 - Gyro Surveys	8,144.92	6,873.70	1,687.90	1,634.78	31.778	CC, ES
O'SH D 28-1 (SI) - Wellbore #1 - Gyro Surveys	8,400.00	6,872.03	1,707.06	1,652.47	31.272	SF
O'SH D 28-2 (SI) - Wellbore #1 - Gyro Surveys	7,762.29	6,858.59	2,664.34	2,613.14	52.042	CC, ES
O'SH D 28-2 (SI) - Wellbore #1 - Gyro Surveys	8,400.00	6,858.10	2,739.59	2,685.29	50.448	SF
O'SH D 28-8 (SI) - Wellbore #1 - Gyro Surveys	9,185.98	6,904.58	1,342.00	1,283.61	22.984	CC
O'SH D 28-8 (SI) - Wellbore #1 - Gyro Surveys	9,200.74	6,905.18	1,342.08	1,283.57	22.937	ES
O'SH D 28-8 (SI) - Wellbore #1 - Gyro Surveys	9,400.00	6,913.26	1,357.48	1,297.48	22.626	SF
Spike ST GWS D 28-03 (PR) - Wellbore #1 - Gyro Surve	7,607.84	6,818.10	3,904.54	3,838.03	58.706	CC, ES
Spike ST GWS D 28-03 (PR) - Wellbore #1 - Gyro Surve	8,800.00	6,809.56	4,082.48	4,010.35	56.596	SF
Spike ST GWS D 28-4 (SI) - Wellbore #1 - Gyro Surveys	7,554.39	6,846.82	5,281.90	5,231.19	104.156	CC, ES
Spike ST GWS D 28-4 (SI) - Wellbore #1 - Gyro Surveys	10,200.00	6,839.17	5,900.13	5,836.28	92.403	SF
Spike State D 28-13 (SI) - Wellbore #1 - Gyro Surveys	11,929.62	6,847.42	5,360.24	5,283.43	69.781	CC
Spike State D 28-13 (SI) - Wellbore #1 - Gyro Surveys	12,000.00	6,847.61	5,360.70	5,283.32	69.274	ES
Spike State D 28-13 (SI) - Wellbore #1 - Gyro Surveys	13,700.00	6,852.71	5,645.03	5,556.24	63.573	SF
Spike State D28-05 (PR) - Wellbore #1 - Gyro Surveys	8,897.02	6,860.75	5,439.25	5,382.50	95.835	CC
Spike State D28-05 (PR) - Wellbore #1 - Gyro Surveys	8,900.00	6,860.77	5,439.25	5,382.48	95.805	ES
Spike State D28-05 (PR) - Wellbore #1 - Gyro Surveys	11,400.00	6,882.46	5,970.96	5,899.38	83.412	SF
Spike State D28-06 (SI) - Wellbore #1 - Gyro Surveys	8,955.38	6,901.00	3,748.36	3,691.14	65.506	CC
Spike State D28-06 (SI) - Wellbore #1 - Gyro Surveys	9,000.00	6,901.34	3,748.62	3,691.12	65.185	ES
Spike State D28-06 (SI) - Wellbore #1 - Gyro Surveys	10,300.00	6,910.83	3,973.77	3,908.37	60.761	SF
Spike State D28-11 (SI) - Wellbore #1 - Gyro Surveys	10,286.23	6,731.56	3,839.01	3,773.95	59.008	CC
Spike State D28-11 (SI) - Wellbore #1 - Gyro Surveys	10,300.00	6,732.25	3,839.03	3,773.86	58.912	ES
Spike State D28-11 (SI) - Wellbore #1 - Gyro Surveys	11,500.00	6,809.06	4,025.75	3,952.50	54.963	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 D34-779
Project:	Mustang	TVD Reference:	KB @ 4854.00ft
Reference Site:	D Section 22	MD Reference:	KB @ 4854.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersen D34-779	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 28						
Spike State GWS D 28-14 (P&A) - Wellbore #1 - Gyro Su	11,997.11	6,857.40	3,826.21	3,748.88	49.476	CC
Spike State GWS D 28-14 (P&A) - Wellbore #1 - Gyro Su	12,000.00	6,857.52	3,826.21	3,748.86	49.460	ES
Spike State GWS D 28-14 (P&A) - Wellbore #1 - Gyro Su	13,000.00	6,905.39	3,955.09	3,870.61	46.815	SF
D Section 33						
Cydney White D33-01 (PR) - Wellbore #1 - Gyro Surveys	13,176.45	6,890.28	1,351.69	1,265.45	15.673	CC
Cydney White D33-01 (PR) - Wellbore #1 - Gyro Surveys	13,200.00	6,890.49	1,351.90	1,265.40	15.630	ES
Cydney White D33-01 (PR) - Wellbore #1 - Gyro Surveys	13,300.00	6,891.37	1,357.33	1,269.94	15.532	SF
Cydney White D33-02 (PR) - Wellbore #1 - Gyro Surveys	13,119.10	6,865.54	2,661.22	2,575.51	31.048	CC, ES
Cydney White D33-02 (PR) - Wellbore #1 - Gyro Surveys	13,600.00	6,869.98	2,704.32	2,614.97	30.267	SF
Cydney White D33-07 (PR) - Wellbore #1 - Gyro Surveys	14,408.76	6,908.04	2,737.62	2,641.92	28.606	CC, ES
Cydney White D33-07 (PR) - Wellbore #1 - Gyro Surveys	14,900.00	6,911.54	2,781.34	2,681.98	27.992	SF
Guttersen D 33-09 (PR) - Wellbore #1 - Gyro Surveys	15,946.27	6,900.08	1,239.81	1,132.12	11.512	CC, ES
Guttersen D 33-09 (PR) - Wellbore #1 - Gyro Surveys	16,000.00	6,900.28	1,240.97	1,132.71	11.463	SF
Guttersen D 33-16 (PR) - Wellbore #1 - Gyro Surveys	17,125.16	6,885.83	1,377.27	1,277.23	13.767	CC, ES
Guttersen D 33-16 (PR) - Wellbore #1 - Gyro Surveys	17,200.00	6,884.81	1,379.30	1,278.52	13.686	SF
Guttersen D 33-23 (PR) - Wellbore #1 - Gyro Surveys	16,404.50	6,869.30	2,048.06	1,936.87	18.418	CC, ES
Guttersen D 33-23 (PR) - Wellbore #1 - Gyro Surveys	16,600.00	6,868.36	2,057.37	1,944.52	18.231	SF
Guttersen D33-10 (SI) - Wellbore #1 - No Surveys	15,662.65	6,876.00	2,696.05	2,477.01	12.309	CC
Guttersen D33-10 (SI) - Wellbore #1 - No Surveys	15,700.00	6,876.00	2,696.31	2,476.92	12.290	ES
Guttersen D33-10 (SI) - Wellbore #1 - No Surveys	15,900.00	6,876.00	2,706.48	2,485.43	12.243	SF
Guttersen D33-15 (PR) - Wellbore #1 - No Surveys	16,988.63	6,881.00	2,691.19	2,461.59	11.721	CC
Guttersen D33-15 (PR) - Wellbore #1 - No Surveys	17,000.00	6,881.00	2,691.22	2,461.51	11.716	ES
Guttersen D33-15 (PR) - Wellbore #1 - No Surveys	17,200.00	6,881.00	2,699.48	2,468.07	11.665	SF
HSR Guttersen 11-33 (SI) - Wellbore #1 - No Surveys	15,650.07	6,870.00	3,995.35	3,776.53	18.258	CC
HSR Guttersen 11-33 (SI) - Wellbore #1 - No Surveys	15,700.00	6,870.00	3,995.66	3,776.39	18.223	ES
HSR Guttersen 11-33 (SI) - Wellbore #1 - No Surveys	16,100.00	6,870.00	4,020.60	3,798.16	18.075	SF
HSR Guttersen 13-33 (SI) - Wellbore #1 - Gyro Surveys	17,048.31	6,900.56	5,404.63	5,288.24	46.435	CC
HSR Guttersen 13-33 (SI) - Wellbore #1 - Gyro Surveys	17,100.00	6,900.56	5,404.88	5,288.03	46.257	ES
HSR Guttersen 13-33 (SI) - Wellbore #1 - Gyro Surveys	17,528.51	6,900.51	5,425.92	5,305.61	45.100	SF
HSR Guttersen 14-33 (SI) - Wellbore #1 - Gyro Surveys	17,142.50	6,925.17	3,915.95	3,799.14	33.525	CC
HSR Guttersen 14-33 (SI) - Wellbore #1 - Gyro Surveys	17,200.00	6,925.18	3,916.37	3,799.04	33.379	ES
HSR Guttersen 14-33 (SI) - Wellbore #1 - Gyro Surveys	17,528.51	6,925.23	3,934.93	3,814.98	32.803	SF
HSR Guttersen 3-33 (SI) - Wellbore #1 - Gyro Surveys	13,097.43	6,922.87	3,969.45	3,883.85	46.370	CC
HSR Guttersen 3-33 (SI) - Wellbore #1 - Gyro Surveys	13,100.00	6,923.00	3,969.45	3,883.83	46.358	ES
HSR Guttersen 3-33 (SI) - Wellbore #1 - Gyro Surveys	14,100.00	6,972.81	4,093.80	4,001.14	44.183	SF
HSR Guttersen 4-33 (P&A) - Wellbore #1 - No Surveys	13,157.62	6,885.00	5,452.74	5,252.86	27.279	CC
HSR Guttersen 4-33 (P&A) - Wellbore #1 - No Surveys	13,200.00	6,885.00	5,452.91	5,252.67	27.231	ES
HSR Guttersen 4-33 (P&A) - Wellbore #1 - No Surveys	14,100.00	6,885.00	5,533.58	5,326.54	26.727	SF
HSR-Guttersen 12-33 (SI) - Wellbore #1 - Gyro Surveys	15,881.20	6,942.81	5,336.56	5,229.37	49.789	CC
HSR-Guttersen 12-33 (SI) - Wellbore #1 - Gyro Surveys	15,900.00	6,942.81	5,336.59	5,229.24	49.713	ES
HSR-Guttersen 12-33 (SI) - Wellbore #1 - Gyro Surveys	17,200.00	6,943.26	5,497.10	5,380.73	47.238	SF
HSR-Guttersen 5-33 (SI) - Wellbore #1 - Gyro Surveys	14,611.76	6,880.85	5,024.04	4,926.85	51.694	CC, ES
HSR-Guttersen 5-33 (SI) - Wellbore #1 - Gyro Surveys	15,900.00	6,870.94	5,186.56	5,080.42	48.864	SF
HSR-Guttersen 6-33 (SI) - Wellbore #1 - Gyro Surveys	14,528.71	6,882.74	3,879.40	3,783.18	40.316	CC, ES
HSR-Guttersen 6-33 (SI) - Wellbore #1 - Gyro Surveys	15,300.00	6,890.76	3,955.32	3,853.47	38.833	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 D34-779
Project:	Mustang	TVD Reference:	KB @ 4854.00ft
Reference Site:	D Section 22	MD Reference:	KB @ 4854.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersen D34-779	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 34						
HSR Waste Services 4-34 (SI) - Wellbore #1 - Gyro Surv	12,993.74	6,908.71	156.05	71.23	1.840	CC, ES, SF
HSR Waste Services 5-34 (SI) - Wellbore #1 - Gyro Surv	14,219.76	6,910.67	257.97	163.80	2.739	CC, ES, SF
Liam D 34-11 (PR) - Wellbore #1 - Gyro Surveys	15,819.16	6,915.86	1,270.98	1,164.31	11.915	CC, ES, SF
Liam D 34-12 (PR) - Wellbore #1 - Gyro Surveys	15,607.32	6,914.58	125.68	20.67	1.197	Level 2, CC, ES, SF
Liam D 34-13 (PR) - Wellbore #1 - Gyro Surveys	16,989.94	6,915.06	82.21	-33.76	0.709	Level 1, CC, ES, SF
Liam D 34-14 (PR) - Wellbore #1 - Gyro Surveys	17,140.30	6,919.43	1,282.56	1,165.41	10.948	CC, ES
Liam D 34-14 (PR) - Wellbore #1 - Gyro Surveys	17,200.00	6,918.50	1,283.95	1,166.66	10.946	SF
Liam D 34-25 (SI) - Wellbore #1 - Gyro Surveys	16,387.54	6,911.17	586.01	474.87	5.273	CC, ES, SF
Liam D 34-33 (SI) - Wellbore #1 - Gyro Surveys	16,383.25	6,910.82	567.69	456.54	5.107	CC, ES
Liam D 34-33 (SI) - Wellbore #1 - Gyro Surveys	16,400.00	6,910.66	567.94	456.54	5.098	SF
D Section 35						
UPRR 1 (DA) - Wellbore #1 - No Surveys	13,107.11	6,950.00	5,200.41	4,999.61	25.898	CC, ES
UPRR 1 (DA) - Wellbore #1 - No Surveys	13,800.00	6,950.00	5,246.37	5,041.41	25.597	SF
Waste Management 22-35 (SI) - Wellbore #1 - Gyro Surv	14,500.72	6,967.47	6,587.33	6,490.85	68.275	CC, ES
Waste Management 22-35 (SI) - Wellbore #1 - Gyro Surv	16,300.00	6,970.32	6,828.64	6,722.08	64.080	SF
Waste Management 31-35 (SI) - Wellbore #1 - Gyro Surv	12,982.04	7,006.84	7,607.38	7,522.53	89.658	CC
Waste Management 31-35 (SI) - Wellbore #1 - Gyro Surv	13,000.00	7,006.72	7,607.40	7,522.43	89.528	ES
Waste Management 31-35 (SI) - Wellbore #1 - Gyro Surv	15,600.00	6,988.33	8,045.22	7,945.69	80.830	SF
Waste Management 41-35 (SI) - Wellbore #1 - Gyro Surv	13,098.35	6,941.67	9,176.90	9,091.09	106.945	CC
Waste Management 41-35 (SI) - Wellbore #1 - Gyro Surv	13,200.00	6,940.98	9,177.47	9,090.95	106.072	ES
Waste Management 41-35 (SI) - Wellbore #1 - Gyro Surv	16,800.00	6,916.45	9,895.31	9,788.51	92.656	SF
Waste Management D 35-15 (PR) - Wellbore #1 - Gyro S	16,900.00	16,900.00	7,751.71	7,601.57	51.628	ES, SF
Waste Management D 35-15 (PR) - Wellbore #1 - Gyro S	17,170.36	6,916.56	7,747.00	7,629.60	65.988	CC
Waste Management USX D 35-11 (SI) - Wellbore #1 - Gy	15,832.73	6,920.59	6,485.70	6,378.93	60.743	CC
Waste Management USX D 35-11 (SI) - Wellbore #1 - Gy	15,900.00	6,923.99	6,486.05	6,378.80	60.476	ES
Waste Management USX D 35-11 (SI) - Wellbore #1 - Gy	17,400.00	6,999.81	6,671.91	6,556.20	57.662	SF
Waste Management USX D 35-14 (SI) - Wellbore #1 - No	16,873.69	6,938.00	6,594.57	6,364.74	28.694	CC
Waste Management USX D 35-14 (SI) - Wellbore #1 - No	16,900.00	6,938.00	6,594.62	6,364.60	28.670	ES
Waste Management USX D 35-14 (SI) - Wellbore #1 - No	17,528.51	6,938.00	6,627.00	6,392.89	28.308	SF
Waste Management USX D 35-7 (PR) - Wellbore #1 - Gy	14,344.00	6,892.65	7,794.07	7,698.92	81.911	CC
Waste Management USX D 35-7 (PR) - Wellbore #1 - Gy	14,400.00	6,892.09	7,794.27	7,698.72	81.576	ES
Waste Management USX D 35-7 (PR) - Wellbore #1 - Gy	16,800.00	6,865.16	8,171.83	8,062.80	74.945	SF
Waste Management USX D 35-9 (SI) - Wellbore #1 - No	15,817.31	7,559.00	9,367.30	9,138.57	40.953	CC
Waste Management USX D 35-9 (SI) - Wellbore #1 - No	15,900.00	7,559.00	9,367.67	9,138.34	40.849	ES
Waste Management USX D 35-9 (SI) - Wellbore #1 - No	17,528.51	7,559.00	9,522.32	9,282.42	39.693	SF
Waste Services 21-35 (PR) - Wellbore #1 - Gyro Surveys	12,910.37	6,899.68	6,644.92	6,560.66	78.855	CC, ES
Waste Services 21-35 (PR) - Wellbore #1 - Gyro Surveys	15,000.00	6,886.02	6,965.73	6,870.00	72.764	SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersen D34-779
Project:	Mustang	TVD Reference:	KB @ 4854.00ft
Reference Site:	D Section 22	MD Reference:	KB @ 4854.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersen D34-779	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
Y Section 02						
Waste Management 2I-221 - Wellbore #1 - Wellbore #1 -	17,528.51	11,210.02	5,121.08	4,941.26	28.478	CC, ES, SF
Waste Management 2I-401 - Wellbore #1 - Wellbore #1 -	17,528.51	11,425.02	4,786.29	4,607.04	26.701	CC, ES, SF
Waste Management 2L-201 - Wellbore #1 - Wellbore #1	17,528.51	11,213.02	5,767.46	5,586.74	31.914	CC, ES, SF
Waste Management 2L-301 - Wellbore #1 - Wellbore #1	17,528.51	11,326.02	6,107.95	5,928.29	33.999	CC, ES, SF
Waste Management 2L-421 - Wellbore #1 - Wellbore #1	17,528.51	11,433.02	6,443.28	6,262.86	35.713	CC, ES, SF
Waste Management 2L-441 - Wellbore #1 - Wellbore #1	17,528.51	11,379.02	5,424.47	5,243.93	30.045	CC, ES, SF
Waste Management 2Q-201 - Wellbore #1 - Wellbore #1	17,528.51	11,274.02	7,383.52	7,204.02	41.136	CC, ES, SF
Waste Management 2Q-321 - Wellbore #1 - Wellbore #1	17,528.51	11,347.02	7,707.76	7,527.49	42.757	CC, ES, SF
Waste Management 2Q-341 - Wellbore #1 - Wellbore #1	17,528.51	11,345.02	6,789.64	6,608.71	37.526	CC, ES, SF
Waste Management 2Q-401 - Wellbore #1 - Wellbore #1	17,528.51	11,502.02	7,104.84	6,923.38	39.154	CC, ES, SF
Waste Management 2T-221 - Wellbore #1 - Wellbore #1	17,528.51	11,189.02	9,061.57	8,880.03	49.916	CC, ES, SF
Waste Management 2T-241 - Wellbore #1 - Wellbore #1	17,528.51	11,213.02	8,046.43	7,865.83	44.554	CC, ES, SF
Waste Management 2T-301 - Wellbore #1 - Wellbore #1	17,528.51	11,316.02	8,345.26	8,163.90	46.016	CC, ES, SF
Waste Management 2T-401 - Wellbore #1 - Wellbore #1	17,528.51	11,385.02	8,727.82	8,546.12	48.034	CC, ES, SF
Waste Management 2Y-201 - Wellbore #1 - Wellbore #1	17,528.51	11,229.02	9,720.80	9,538.89	53.437	CC, ES, SF
Waste Management 2Y-441 - Wellbore #1 - Wellbore #1	17,528.51	11,403.02	9,402.91	9,221.10	51.718	CC, ES, SF
Y Section 03						
Waste Management USX Y03-03 - Wellbore #1 - Wellbo	17,528.51	6,917.99	1,552.38	1,444.39	14.375	CC, ES, SF
Waste Management USX Y03-04 - Wellbore #1 - Wellbo	17,528.51	6,915.64	875.16	820.71	16.073	CC, ES, SF
Waste Management USX Y03-05 - Wellbore #1 - Wellbo	17,528.51	6,907.83	2,114.70	2,059.56	38.355	CC, ES, SF
Waste Management USX Y03-06 - Wellbore #1 - Wellbo	17,528.51	7,020.00	2,562.46	2,479.54	30.903	CC, ES, SF
Waste Management USX Y03-11 - Wellbore #1 - Wellbor	17,528.51	6,895.56	3,706.33	3,638.57	54.696	CC, ES, SF
Waste Management USX Y03-12 - Wellbore #1 - Wellbo	17,528.51	6,962.50	3,336.54	3,281.91	61.076	CC, ES, SF
Waste Management USX Y03-13 - Wellbore #1 - Wellbo	17,528.51	6,899.64	4,714.11	4,659.41	86.194	CC, ES, SF
Waste Management USX Y03-14 - Wellbore #1 - Wellbo	17,528.51	6,862.56	5,048.16	4,984.39	79.165	CC, ES, SF
Waste Management USX Y03-19 - Wellbore #1 - Wellbo	17,528.51	6,930.63	1,512.84	1,443.47	21.811	CC, ES, SF
Waste Management USX Y03-25 - Wellbore #1 - Wellbo	17,528.51	6,915.21	4,056.29	3,998.27	69.911	CC, ES, SF
Waste Management USX Y3-15 - Wellbore #1 - As Drille	17,528.51	17,528.51	5,508.73	5,388.69	45.889	CC, ES, SF
Y Section 04						
HSR-Guttersen 01-04 - Original Drilling - Original Drilling	17,528.51	6,849.85	1,829.72	1,721.54	16.914	CC, ES, SF
HSR-Guttersen 02-04 - Original Drilling - Original Drilling	17,528.51	6,915.93	2,853.17	2,738.12	24.800	CC, ES, SF
HSR-Guttersen 03-04 - Original Drilling - Original Drilling	17,528.51	6,964.05	4,266.94	4,149.72	36.401	CC, ES, SF
HSR-Guttersen 05-04 - Original Drilling - Original Drilling	17,528.51	7,226.00	5,743.03	5,631.21	51.358	CC, ES, SF
HSR-Guttersen 07-04 - Original Drilling - Original Drilling	17,528.51	6,932.20	3,546.66	3,445.37	35.016	CC, ES, SF
Melvin Y04-04 - Original Drilling - Original Drilling - As Dr	17,528.51	7,155.76	5,104.05	4,986.52	43.429	CC, ES, SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersten D34-779
Project:	Mustang	TVD Reference:	KB @ 4854.00ft
Reference Site:	D Section 22	MD Reference:	KB @ 4854.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersten D34-779	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	17,528.51	5,194.00	9,343.49	9,274.32	135.085	CC, ES, SF
Bison Ridge Y22-719 - Original Drilling - Original Drilling	17,528.51	6,234.62	9,135.34	9,064.45	128.860	CC, ES, SF
Bison Ridge Y22-771 - Original Drilling - As-Drilled	17,528.51	6,426.00	8,342.41	8,290.27	159.988	CC, ES, SF
Oscar Y10-72-1HC - Original Drilling - Original Drilling - A	17,528.51	14,600.03	4,117.11	3,954.26	25.283	CC, ES, SF
Oscar Y10-72-1HN - Original Drilling - Original Drilling - A	17,528.51	14,333.03	4,263.45	4,093.92	25.149	CC, ES, SF
Oscar Y10-72HN - Original Drilling - Original Drilling - As	17,528.51	14,445.03	4,019.26	3,850.29	23.787	CC, ES, SF
Oscar Y10-73-1HC - Original Drilling - Original Drilling - A	17,528.51	14,438.03	3,444.41	3,276.48	20.511	CC, ES, SF
Oscar Y10-73-1HN - Original Drilling - Original Drilling - A	17,528.51	14,398.03	3,629.48	3,460.12	21.430	CC, ES, SF
Oscar Y10-73HN - Original Drilling - Original Drilling - As	17,528.51	14,549.00	3,319.88	3,151.61	19.729	CC, ES, SF
Oscar Y10-74-1HC - Original Drilling - Original Drilling - A	17,528.51	14,684.00	2,787.00	2,624.18	17.117	CC, ES, SF
Oscar Y10-74-1HN - Original Drilling - Original Drilling - A	17,528.51	14,377.03	2,974.89	2,812.44	18.312	CC, ES, SF
Oscar Y10-74HN - Original Drilling - Original Drilling - As	17,528.51	12,678.03	3,306.42	3,179.73	26.099	CC, ES, SF
Oscar Y10-75-1HC - Original Drilling - Original Drilling - A	17,528.51	14,440.00	2,166.45	2,004.66	13.390	CC, ES, SF
Oscar Y10-75-1HN - Original Drilling - Original Drilling - A	17,528.51	14,437.03	2,299.52	2,137.44	14.188	CC, ES, SF
Oscar Y10-75HN - Original Drilling - Original Drilling - As	17,528.51	14,544.00	1,970.07	1,807.98	12.154	CC, ES, SF
Oscar Y10-76-1HN - Original Drilling - Original Drilling - A	17,528.51	14,399.00	1,714.16	1,552.78	10.622	CC, ES, SF
Oscar Y10-76HN - Original Drilling - Original Drilling - As	17,528.51	14,574.99	1,373.26	1,212.13	8.523	CC, ES, SF
Oscar Y10-77-1HC - Original Drilling - Original Drilling - A	17,528.51	14,740.00	1,066.66	902.04	6.479	CC, ES, SF
Oscar Y10-77HN - Original Drilling - Original Drilling - As	17,528.51	14,600.00	713.18	559.44	4.639	CC, ES, SF
Oscar Y10-78-1HC - Original Drilling - Original Drilling - A	17,528.51	14,759.00	463.21	268.35	2.377	CC, ES, SF
Oscar Y10-78-1HN - Original Drilling - Original Drilling - As	17,528.51	14,469.00	466.30	273.18	2.415	CC, ES, SF
Oscar Y10-78HN - Original Drilling - Original Drilling - As	17,528.51	13,936.00	949.55	889.64	15.848	CC, ES, SF
Oscar Y10-79-1HC - Original Drilling - Original Drilling - A	17,528.51	14,740.00	416.99	243.72	2.407	CC, ES, SF
Oscar Y10-79-1HN - Original Drilling - Original Drilling - A	17,528.51	14,437.00	422.97	245.43	2.382	CC, ES, SF
Oscar Y10-79HN - Original Drilling - Original Drilling - As	17,528.51	7,926.00	6,982.19	6,925.55	123.281	CC, ES, SF
Oscar Y10-79HN - Original Drilling - ST01 - ST01 - As Dr	17,528.51	14,611.00	614.73	401.20	2.879	CC, ES, SF
Oscar Y11-79HN - Original Drilling - Original Drilling - As	17,528.51	8,396.02	7,781.51	7,686.00	81.475	CC, ES, SF
Oscar Y11-79HN - ST01 Original Drilling - ST01 Original	17,528.51	14,458.03	4,555.77	4,386.69	26.945	CC, ES, SF

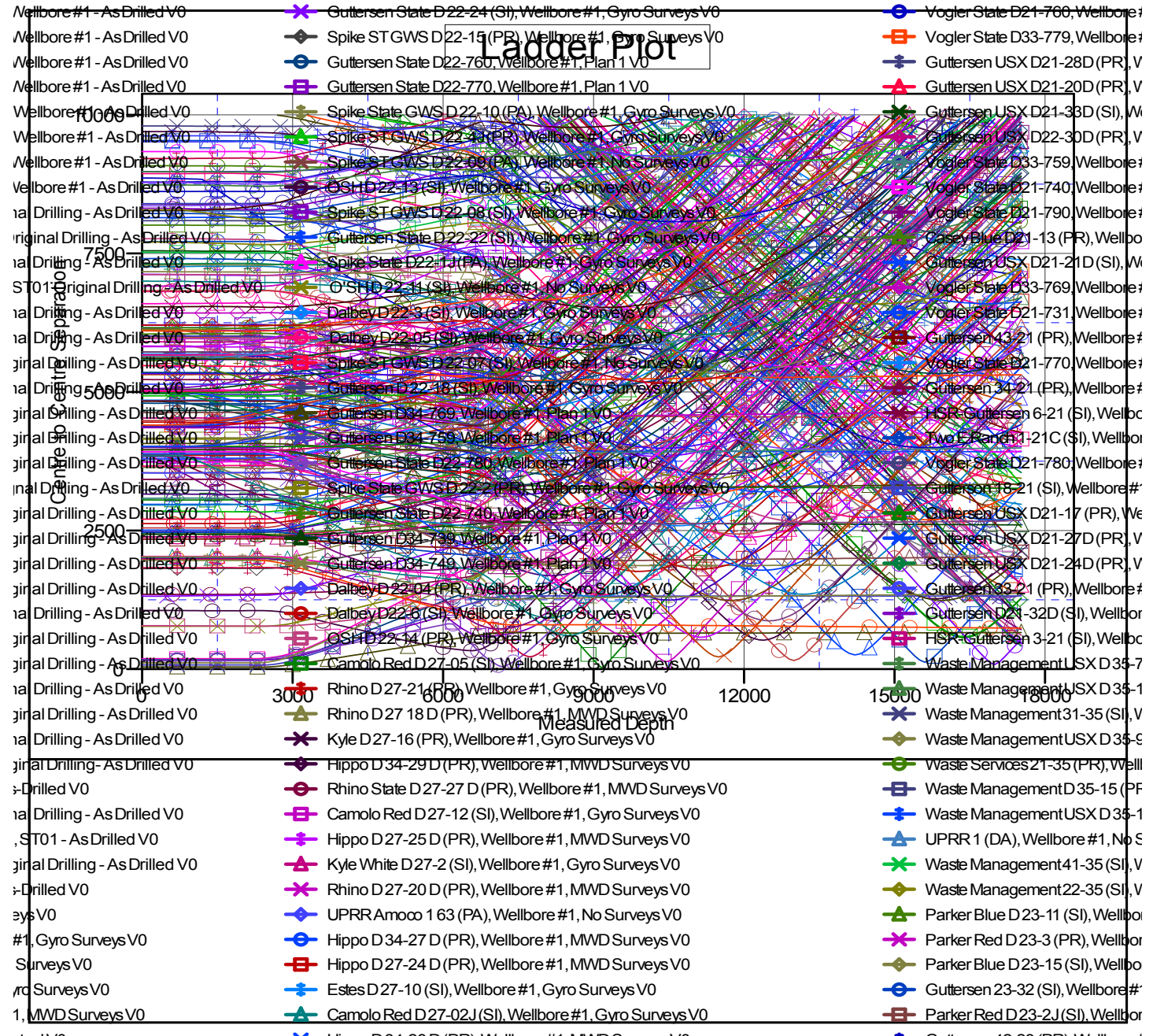
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersen D34-779
Project:	Mustang	TVD Reference:	KB @ 4854.00ft
Reference Site:	D Section 22	MD Reference:	KB @ 4854.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersen D34-779	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 D34-779

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

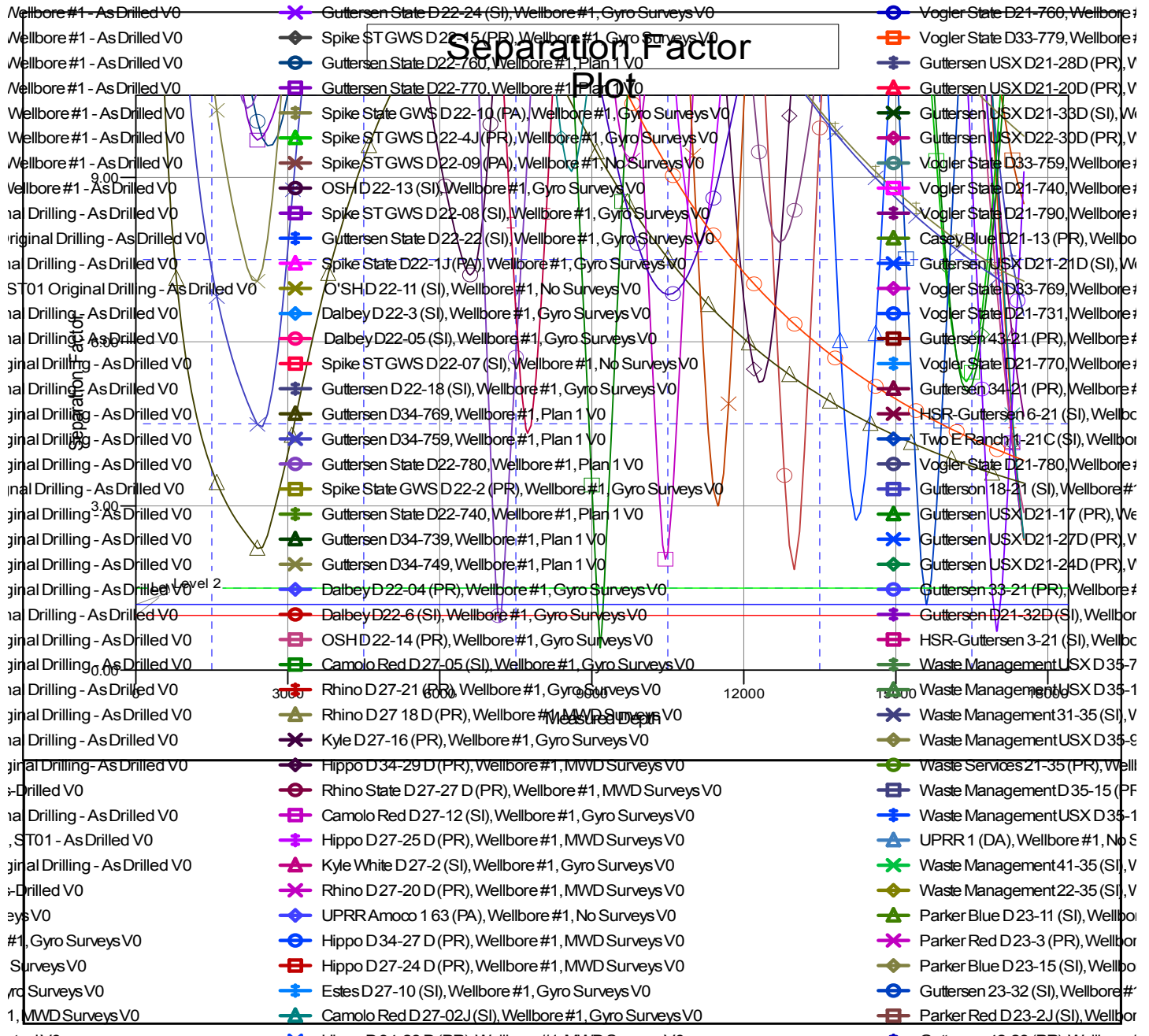
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersen D34-779
Project:	Mustang	TVD Reference:	KB @ 4854.00ft
Reference Site:	D Section 22	MD Reference:	KB @ 4854.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersen D34-779	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 D34-779

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