

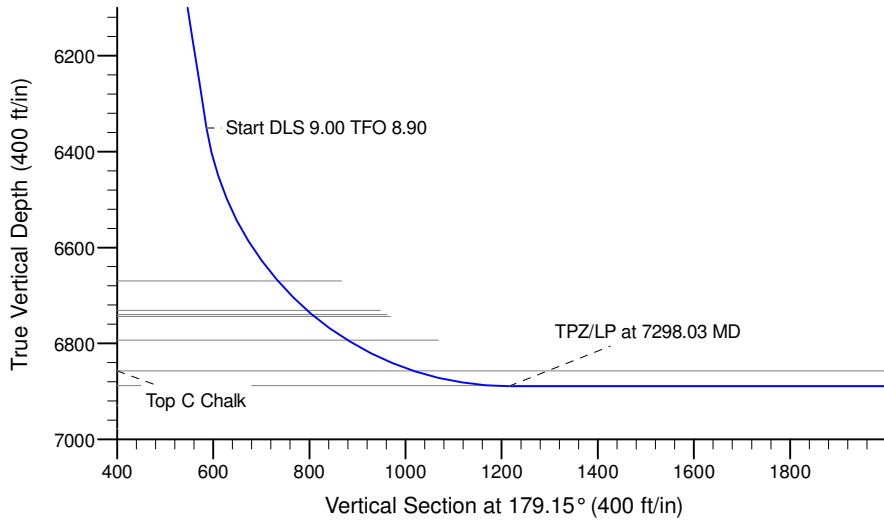
Project: Mustang
 Site: D Section 22
 Well: Gutteresen D34-729
 Wellbore: Wellbore #1
 Design: Plan 1

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

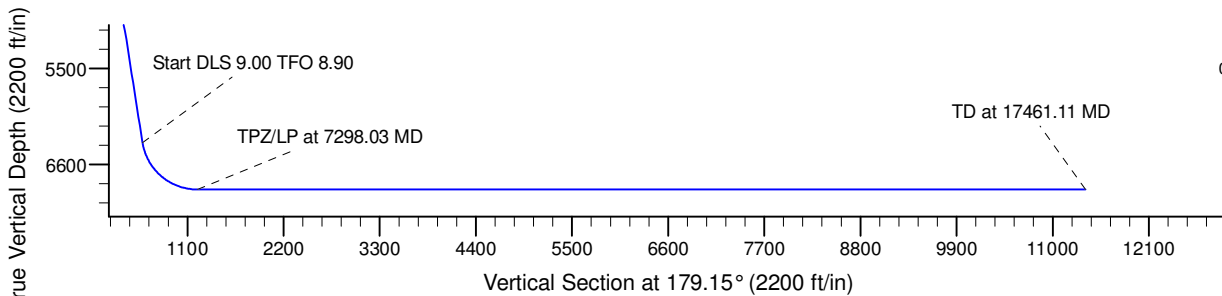
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	2400.00	0.00	0.00	2400.00	0.00	0.00	0.00	0.00	0.00	
3	2851.93	9.04	170.88	2850.05	-35.12	5.64	2.00	170.88	35.20	
4	6397.27	9.04	170.88	6351.38	-585.05	93.90	0.00	0.00	586.38	
5	7298.03	90.00	179.67	6889.00	-1213.87	110.55	9.00	8.90	1215.37	Gutteresen State D34-729 TPZ/LP
6	17461.11	90.00	179.67	6889.00	-11376.78	168.44	0.00	0.00	11378.03	Gutteresen State D34-729 BHL



Surface: 1015' FSL, 1375' FEL, Sec. 22

TPZ: 200' FNL, 1270' FEL, Sec. 27

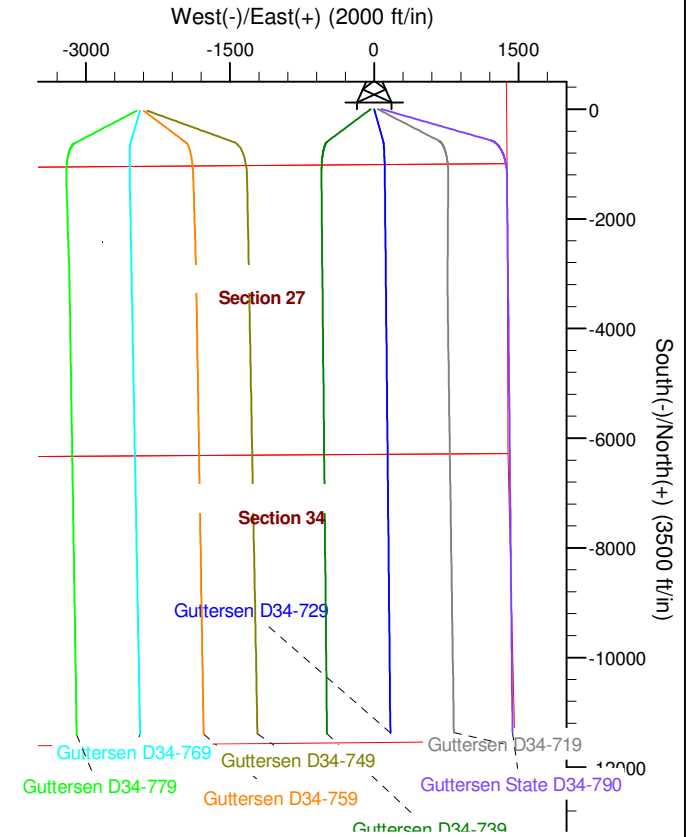
BHL: 200' FSL, 1270' FEL, Sec. 34



T G M

Azimuths to Grid North
 True North: -0.62°
 Magnetic North: 7.37°

Magnetic Field
 Strength: 52229.8snT
 Dip Angle: 66.72°
 Date: 3/19/2018
 Model: IGRF2015



WELL DETAILS: Gutteresen D34-729				
0.00	0.00	1319511.20	3270112.81	4832.00
				Latitude
				Longitude
		40.2064120	-104.5328940	
Plan: Plan 1 (Gutteresen D34-729/Wellbore #1)				
Created By: Colby Baxter		Date: 8:57, August 14 2018		
Checked: _____		Date: _____		
Reviewed: _____		Date: _____		
Approved: _____		Date: _____		

Northern Region - DJ Basin

Mustang

D Section 22

Guttersen D34-729

Wellbore #1

Plan: Plan 1

Standard Survey Report

14 August, 2018

Noble Energy, Inc.

Survey Report

Company: Northern Region - DJ Basin	Local Co-ordinate Reference: Well Guttersen D34-729
Project: Mustang	TVD Reference: KB @ 4862.00ft
Site: D Section 22	MD Reference: KB @ 4862.00ft
Well: Guttersen D34-729	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 D34-729					
Well Position	+N/-S 0.00 ft	Northing: 1,319,511.20 usft	Latitude:	40.2064120	
	+E/-W 0.00 ft	Easting: 3,270,112.81 usft	Longitude:	-104.5328940	
Position Uncertainty	0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,832.00 ft

Wellbore Wellbore #1					
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
	IGRF2015	3/19/2018	(°) 7.99	(°) 66.72	(nT) 52,229.82949362

Design Plan 1				
Audit Notes:				
Version:	Phase: PLAN	Tie On Depth:	0.00	
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(ft)	(ft)	(ft)	(°)
	0.00	0.00	0.00	179.15

Survey Tool Program		Date 8/13/2018
From	To	Survey (Wellbore)
(ft)	(ft)	
0.00	17,461.11	Plan 1 (Wellbore #1)
		Tool Name
		2_MWD+IFR1+MS
		Description
		A008Mb: IFR dec & multi-station analysis

Planned Survey										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Vertical	Dogleg	Build	Turn	
Depth	(°)	(°)	Depth	(ft)	(ft)	Section	Rate	Rate	Rate	
(ft)			(ft)			(ft)	(°/100ft)	(°/100ft)	(°/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 D34-729
Project:	Mustang	TVD Reference:	KB @ 4862.00ft
Site:	D Section 22	MD Reference:	KB @ 4862.00ft
Well:	Guttersen D34-729	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	170.88	2,499.98	-1.72	0.28	1.73	2.00	2.00	0.00
2,600.00	4.00	170.88	2,599.84	-6.89	1.11	6.91	2.00	2.00	0.00
2,700.00	6.00	170.88	2,699.45	-15.50	2.49	15.53	2.00	2.00	0.00
2,800.00	8.00	170.88	2,798.70	-27.53	4.42	27.59	2.00	2.00	0.00
2,851.93	9.04	170.88	2,850.05	-35.12	5.64	35.20	2.00	2.00	0.00
2,900.00	9.04	170.88	2,897.53	-42.58	6.83	42.68	0.00	0.00	0.00
3,000.00	9.04	170.88	2,996.29	-58.09	9.32	58.22	0.00	0.00	0.00
3,100.00	9.04	170.88	3,095.05	-73.60	11.81	73.77	0.00	0.00	0.00
3,200.00	9.04	170.88	3,193.81	-89.11	14.30	89.32	0.00	0.00	0.00
3,300.00	9.04	170.88	3,292.56	-104.62	16.79	104.86	0.00	0.00	0.00
3,400.00	9.04	170.88	3,391.32	-120.14	19.28	120.41	0.00	0.00	0.00
3,500.00	9.04	170.88	3,490.08	-135.65	21.77	135.95	0.00	0.00	0.00
3,600.00	9.04	170.88	3,588.84	-151.16	24.26	151.50	0.00	0.00	0.00
3,700.00	9.04	170.88	3,687.60	-166.67	26.75	167.05	0.00	0.00	0.00
3,800.00	9.04	170.88	3,786.36	-182.18	29.24	182.59	0.00	0.00	0.00
3,900.00	9.04	170.88	3,885.11	-197.69	31.73	198.14	0.00	0.00	0.00
4,000.00	9.04	170.88	3,983.87	-213.20	34.22	213.69	0.00	0.00	0.00
4,100.00	9.04	170.88	4,082.63	-228.72	36.71	229.23	0.00	0.00	0.00
4,200.00	9.04	170.88	4,181.39	-244.23	39.20	244.78	0.00	0.00	0.00
4,300.00	9.04	170.88	4,280.15	-259.74	41.69	260.33	0.00	0.00	0.00
4,400.00	9.04	170.88	4,378.91	-275.25	44.18	275.87	0.00	0.00	0.00
4,500.00	9.04	170.88	4,477.66	-290.76	46.67	291.42	0.00	0.00	0.00
4,600.00	9.04	170.88	4,576.42	-306.27	49.16	306.97	0.00	0.00	0.00
4,700.00	9.04	170.88	4,675.18	-321.78	51.65	322.51	0.00	0.00	0.00
4,800.00	9.04	170.88	4,773.94	-337.29	54.14	338.06	0.00	0.00	0.00
4,900.00	9.04	170.88	4,872.70	-352.81	56.62	353.61	0.00	0.00	0.00
5,000.00	9.04	170.88	4,971.46	-368.32	59.11	369.15	0.00	0.00	0.00
5,100.00	9.04	170.88	5,070.21	-383.83	61.60	384.70	0.00	0.00	0.00
5,200.00	9.04	170.88	5,168.97	-399.34	64.09	400.24	0.00	0.00	0.00

Noble Energy, Inc.

Survey Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersen D34-729
Project:	Mustang	TVD Reference:	KB @ 4862.00ft
Site:	D Section 22	MD Reference:	KB @ 4862.00ft
Well:	Guttersen D34-729	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	9.04	170.88	5,267.73	-414.85	66.58	415.79	0.00	0.00	0.00	
5,400.00	9.04	170.88	5,366.49	-430.36	69.07	431.34	0.00	0.00	0.00	
5,500.00	9.04	170.88	5,465.25	-445.87	71.56	446.88	0.00	0.00	0.00	
5,600.00	9.04	170.88	5,564.01	-461.38	74.05	462.43	0.00	0.00	0.00	
5,700.00	9.04	170.88	5,662.76	-476.90	76.54	477.98	0.00	0.00	0.00	
5,800.00	9.04	170.88	5,761.52	-492.41	79.03	493.52	0.00	0.00	0.00	
5,900.00	9.04	170.88	5,860.28	-507.92	81.52	509.07	0.00	0.00	0.00	
6,000.00	9.04	170.88	5,959.04	-523.43	84.01	524.62	0.00	0.00	0.00	
6,100.00	9.04	170.88	6,057.80	-538.94	86.50	540.16	0.00	0.00	0.00	
6,200.00	9.04	170.88	6,156.55	-554.45	88.99	555.71	0.00	0.00	0.00	
6,300.00	9.04	170.88	6,255.31	-569.96	91.48	571.26	0.00	0.00	0.00	
6,397.27	9.04	170.88	6,351.38	-585.05	93.90	586.38	0.00	0.00	0.00	
6,400.00	9.28	171.12	6,354.07	-585.48	93.97	586.81	9.00	8.89	8.63	
6,500.00	18.23	175.44	6,451.11	-609.09	96.46	610.45	9.00	8.95	4.32	
6,600.00	27.21	176.96	6,543.25	-647.59	98.92	648.98	9.00	8.98	1.52	
6,700.00	36.20	177.77	6,628.24	-700.04	101.29	701.46	9.00	8.99	0.81	
6,800.00	45.19	178.29	6,703.98	-765.14	103.50	766.58	9.00	8.99	0.52	
6,900.00	54.19	178.67	6,768.61	-841.29	105.50	842.76	9.00	9.00	0.38	
7,000.00	63.19	178.97	6,820.52	-926.62	107.25	928.10	9.00	9.00	0.30	
7,100.00	72.18	179.23	6,858.46	-1,019.02	108.70	1,020.52	9.00	9.00	0.26	
7,200.00	81.18	179.46	6,881.47	-1,116.23	109.81	1,117.73	9.00	9.00	0.23	
7,298.03	90.00	179.67	6,889.00	-1,213.87	110.55	1,215.37	9.00	9.00	0.22	
7,300.00	90.00	179.67	6,889.00	-1,215.84	110.56	1,217.34	0.00	0.00	0.00	
7,400.00	90.00	179.67	6,889.00	-1,315.83	111.13	1,317.34	0.00	0.00	0.00	
7,500.00	90.00	179.67	6,889.00	-1,415.83	111.70	1,417.33	0.00	0.00	0.00	
7,600.00	90.00	179.67	6,889.00	-1,515.83	112.27	1,517.33	0.00	0.00	0.00	
7,700.00	90.00	179.67	6,889.00	-1,615.83	112.84	1,617.32	0.00	0.00	0.00	
7,800.00	90.00	179.67	6,889.00	-1,715.83	113.41	1,717.32	0.00	0.00	0.00	
7,900.00	90.00	179.67	6,889.00	-1,815.83	113.98	1,817.31	0.00	0.00	0.00	
8,000.00	90.00	179.67	6,889.00	-1,915.82	114.55	1,917.31	0.00	0.00	0.00	
8,100.00	90.00	179.67	6,889.00	-2,015.82	115.12	2,017.31	0.00	0.00	0.00	
8,200.00	90.00	179.67	6,889.00	-2,115.82	115.69	2,117.30	0.00	0.00	0.00	
8,300.00	90.00	179.67	6,889.00	-2,215.82	116.26	2,217.30	0.00	0.00	0.00	
8,400.00	90.00	179.67	6,889.00	-2,315.82	116.83	2,317.29	0.00	0.00	0.00	
8,500.00	90.00	179.67	6,889.00	-2,415.82	117.40	2,417.29	0.00	0.00	0.00	
8,600.00	90.00	179.67	6,889.00	-2,515.81	117.97	2,517.29	0.00	0.00	0.00	
8,700.00	90.00	179.67	6,889.00	-2,615.81	118.54	2,617.28	0.00	0.00	0.00	
8,800.00	90.00	179.67	6,889.00	-2,715.81	119.11	2,717.28	0.00	0.00	0.00	
8,900.00	90.00	179.67	6,889.00	-2,815.81	119.68	2,817.27	0.00	0.00	0.00	
9,000.00	90.00	179.67	6,889.00	-2,915.81	120.25	2,917.27	0.00	0.00	0.00	
9,100.00	90.00	179.67	6,889.00	-3,015.81	120.82	3,017.26	0.00	0.00	0.00	
9,200.00	90.00	179.67	6,889.00	-3,115.80	121.39	3,117.26	0.00	0.00	0.00	
9,300.00	90.00	179.67	6,889.00	-3,215.80	121.96	3,217.26	0.00	0.00	0.00	

Noble Energy, Inc.

Survey Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersen D34-729
Project:	Mustang	TVD Reference:	KB @ 4862.00ft
Site:	D Section 22	MD Reference:	KB @ 4862.00ft
Well:	Guttersen D34-729	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)	
9,400.00	90.00	179.67	6,889.00	-3,315.80	122.53	3,317.25	0.00	0.00	0.00	
9,500.00	90.00	179.67	6,889.00	-3,415.80	123.10	3,417.25	0.00	0.00	0.00	
9,600.00	90.00	179.67	6,889.00	-3,515.80	123.67	3,517.24	0.00	0.00	0.00	
9,700.00	90.00	179.67	6,889.00	-3,615.80	124.23	3,617.24	0.00	0.00	0.00	
9,800.00	90.00	179.67	6,889.00	-3,715.80	124.80	3,717.24	0.00	0.00	0.00	
9,900.00	90.00	179.67	6,889.00	-3,815.79	125.37	3,817.23	0.00	0.00	0.00	
10,000.00	90.00	179.67	6,889.00	-3,915.79	125.94	3,917.23	0.00	0.00	0.00	
10,100.00	90.00	179.67	6,889.00	-4,015.79	126.51	4,017.22	0.00	0.00	0.00	
10,200.00	90.00	179.67	6,889.00	-4,115.79	127.08	4,117.22	0.00	0.00	0.00	
10,300.00	90.00	179.67	6,889.00	-4,215.79	127.65	4,217.21	0.00	0.00	0.00	
10,400.00	90.00	179.67	6,889.00	-4,315.79	128.22	4,317.21	0.00	0.00	0.00	
10,500.00	90.00	179.67	6,889.00	-4,415.78	128.79	4,417.21	0.00	0.00	0.00	
10,600.00	90.00	179.67	6,889.00	-4,515.78	129.36	4,517.20	0.00	0.00	0.00	
10,700.00	90.00	179.67	6,889.00	-4,615.78	129.93	4,617.20	0.00	0.00	0.00	
10,800.00	90.00	179.67	6,889.00	-4,715.78	130.50	4,717.19	0.00	0.00	0.00	
10,900.00	90.00	179.67	6,889.00	-4,815.78	131.07	4,817.19	0.00	0.00	0.00	
11,000.00	90.00	179.67	6,889.00	-4,915.78	131.64	4,917.19	0.00	0.00	0.00	
11,100.00	90.00	179.67	6,889.00	-5,015.77	132.21	5,017.18	0.00	0.00	0.00	
11,200.00	90.00	179.67	6,889.00	-5,115.77	132.78	5,117.18	0.00	0.00	0.00	
11,300.00	90.00	179.67	6,889.00	-5,215.77	133.35	5,217.17	0.00	0.00	0.00	
11,400.00	90.00	179.67	6,889.00	-5,315.77	133.92	5,317.17	0.00	0.00	0.00	
11,500.00	90.00	179.67	6,889.00	-5,415.77	134.49	5,417.17	0.00	0.00	0.00	
11,600.00	90.00	179.67	6,889.00	-5,515.77	135.06	5,517.16	0.00	0.00	0.00	
11,700.00	90.00	179.67	6,889.00	-5,615.76	135.63	5,617.16	0.00	0.00	0.00	
11,800.00	90.00	179.67	6,889.00	-5,715.76	136.20	5,717.15	0.00	0.00	0.00	
11,900.00	90.00	179.67	6,889.00	-5,815.76	136.77	5,817.15	0.00	0.00	0.00	
12,000.00	90.00	179.67	6,889.00	-5,915.76	137.34	5,917.14	0.00	0.00	0.00	
12,100.00	90.00	179.67	6,889.00	-6,015.76	137.91	6,017.14	0.00	0.00	0.00	
12,200.00	90.00	179.67	6,889.00	-6,115.76	138.47	6,117.14	0.00	0.00	0.00	
12,300.00	90.00	179.67	6,889.00	-6,215.75	139.04	6,217.13	0.00	0.00	0.00	
12,400.00	90.00	179.67	6,889.00	-6,315.75	139.61	6,317.13	0.00	0.00	0.00	
12,500.00	90.00	179.67	6,889.00	-6,415.75	140.18	6,417.12	0.00	0.00	0.00	
12,600.00	90.00	179.67	6,889.00	-6,515.75	140.75	6,517.12	0.00	0.00	0.00	
12,700.00	90.00	179.67	6,889.00	-6,615.75	141.32	6,617.12	0.00	0.00	0.00	
12,800.00	90.00	179.67	6,889.00	-6,715.75	141.89	6,717.11	0.00	0.00	0.00	
12,900.00	90.00	179.67	6,889.00	-6,815.74	142.46	6,817.11	0.00	0.00	0.00	
13,000.00	90.00	179.67	6,889.00	-6,915.74	143.03	6,917.10	0.00	0.00	0.00	
13,100.00	90.00	179.67	6,889.00	-7,015.74	143.60	7,017.10	0.00	0.00	0.00	
13,200.00	90.00	179.67	6,889.00	-7,115.74	144.17	7,117.09	0.00	0.00	0.00	
13,300.00	90.00	179.67	6,889.00	-7,215.74	144.74	7,217.09	0.00	0.00	0.00	
13,400.00	90.00	179.67	6,889.00	-7,315.74	145.31	7,317.09	0.00	0.00	0.00	
13,500.00	90.00	179.67	6,889.00	-7,415.74	145.88	7,417.08	0.00	0.00	0.00	
13,600.00	90.00	179.67	6,889.00	-7,515.73	146.45	7,517.08	0.00	0.00	0.00	

Noble Energy, Inc.

Survey Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersen D34-729
Project:	Mustang	TVD Reference:	KB @ 4862.00ft
Site:	D Section 22	MD Reference:	KB @ 4862.00ft
Well:	Guttersen D34-729	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)	
13,700.00	90.00	179.67	6,889.00	-7,615.73	147.02	7,617.07	0.00	0.00	0.00	
13,800.00	90.00	179.67	6,889.00	-7,715.73	147.59	7,717.07	0.00	0.00	0.00	
13,900.00	90.00	179.67	6,889.00	-7,815.73	148.16	7,817.07	0.00	0.00	0.00	
14,000.00	90.00	179.67	6,889.00	-7,915.73	148.73	7,917.06	0.00	0.00	0.00	
14,100.00	90.00	179.67	6,889.00	-8,015.73	149.30	8,017.06	0.00	0.00	0.00	
14,200.00	90.00	179.67	6,889.00	-8,115.72	149.87	8,117.05	0.00	0.00	0.00	
14,300.00	90.00	179.67	6,889.00	-8,215.72	150.44	8,217.05	0.00	0.00	0.00	
14,400.00	90.00	179.67	6,889.00	-8,315.72	151.01	8,317.04	0.00	0.00	0.00	
14,500.00	90.00	179.67	6,889.00	-8,415.72	151.58	8,417.04	0.00	0.00	0.00	
14,600.00	90.00	179.67	6,889.00	-8,515.72	152.15	8,517.04	0.00	0.00	0.00	
14,700.00	90.00	179.67	6,889.00	-8,615.72	152.71	8,617.03	0.00	0.00	0.00	
14,800.00	90.00	179.67	6,889.00	-8,715.71	153.28	8,717.03	0.00	0.00	0.00	
14,900.00	90.00	179.67	6,889.00	-8,815.71	153.85	8,817.02	0.00	0.00	0.00	
15,000.00	90.00	179.67	6,889.00	-8,915.71	154.42	8,917.02	0.00	0.00	0.00	
15,100.00	90.00	179.67	6,889.00	-9,015.71	154.99	9,017.02	0.00	0.00	0.00	
15,200.00	90.00	179.67	6,889.00	-9,115.71	155.56	9,117.01	0.00	0.00	0.00	
15,300.00	90.00	179.67	6,889.00	-9,215.71	156.13	9,217.01	0.00	0.00	0.00	
15,400.00	90.00	179.67	6,889.00	-9,315.70	156.70	9,317.00	0.00	0.00	0.00	
15,500.00	90.00	179.67	6,889.00	-9,415.70	157.27	9,417.00	0.00	0.00	0.00	
15,600.00	90.00	179.67	6,889.00	-9,515.70	157.84	9,517.00	0.00	0.00	0.00	
15,700.00	90.00	179.67	6,889.00	-9,615.70	158.41	9,616.99	0.00	0.00	0.00	
15,800.00	90.00	179.67	6,889.00	-9,715.70	158.98	9,716.99	0.00	0.00	0.00	
15,900.00	90.00	179.67	6,889.00	-9,815.70	159.55	9,816.98	0.00	0.00	0.00	
16,000.00	90.00	179.67	6,889.00	-9,915.69	160.12	9,916.98	0.00	0.00	0.00	
16,100.00	90.00	179.67	6,889.00	-10,015.69	160.69	10,016.97	0.00	0.00	0.00	
16,200.00	90.00	179.67	6,889.00	-10,115.69	161.26	10,116.97	0.00	0.00	0.00	
16,300.00	90.00	179.67	6,889.00	-10,215.69	161.83	10,216.97	0.00	0.00	0.00	
16,400.00	90.00	179.67	6,889.00	-10,315.69	162.40	10,316.96	0.00	0.00	0.00	
16,500.00	90.00	179.67	6,889.00	-10,415.69	162.97	10,416.96	0.00	0.00	0.00	
16,600.00	90.00	179.67	6,889.00	-10,515.68	163.54	10,516.95	0.00	0.00	0.00	
16,700.00	90.00	179.67	6,889.00	-10,615.68	164.11	10,616.95	0.00	0.00	0.00	
16,800.00	90.00	179.67	6,889.00	-10,715.68	164.68	10,716.95	0.00	0.00	0.00	
16,900.00	90.00	179.67	6,889.00	-10,815.68	165.25	10,816.94	0.00	0.00	0.00	
17,000.00	90.00	179.67	6,889.00	-10,915.68	165.82	10,916.94	0.00	0.00	0.00	
17,100.00	90.00	179.67	6,889.00	-11,015.68	166.39	11,016.93	0.00	0.00	0.00	
17,200.00	90.00	179.67	6,889.00	-11,115.68	166.95	11,116.93	0.00	0.00	0.00	
17,300.00	90.00	179.67	6,889.00	-11,215.67	167.52	11,216.92	0.00	0.00	0.00	
17,400.00	90.00	179.67	6,889.00	-11,315.67	168.09	11,316.92	0.00	0.00	0.00	
17,461.11	90.00	179.67	6,889.00	-11,376.78	168.44	11,378.03	0.00	0.00	0.00	

Noble Energy, Inc.

Survey Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersen D34-729
Project:	Mustang	TVD Reference:	KB @ 4862.00ft
Site:	D Section 22	MD Reference:	KB @ 4862.00ft
Well:	Guttersen D34-729	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 D34-729 - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	1,319,511.20	3,270,112.81	40.2064120	-104.5328940
Guttersen State D34-729 - plan misses target center by 0.09ft at 6397.27ft MD (6351.37 TVD, -585.05 N, 93.90 E) - Point	0.00	0.00	6,351.37	-585.05	93.98	1,318,926.15	3,270,206.80	40.2048032	-104.5325804
Guttersen State D34-729 - plan hits target center - Point	0.00	0.00	6,889.00	-1,213.87	110.55	1,318,297.33	3,270,223.37	40.2030767	-104.5325456
Guttersen State D34-729 - plan hits target center - Point	0.00	0.00	6,889.00	-11,376.78	168.44	1,308,134.44	3,270,281.26	40.1751782	-104.5327352

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
642.00	642.00	Pierre				
761.00	761.00	Upper Pierre Aquifer Top				
1,643.00	1,643.00	Upper Pierre Aquifer Base				
3,756.10	3,743.00	Parkman				
4,345.42	4,325.00	Sussex				
4,989.41	4,961.00	Shannon				
6,061.73	6,020.00	Teepee Buttes				
6,753.45	6,670.00	Sharon Springs				
6,839.60	6,731.00	Top A Chalk				
6,853.43	6,740.00	Top A Marl				
6,859.69	6,744.00	Top B Chalk				
6,943.81	6,793.00	Top B Marl				
7,095.30	6,857.00	Top C Chalk				
7,262.34	6,888.00	Top C Marl				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
2400	2400	0	0	Start Build 2.00	
6397	6351	-585	94	Start DLS 9.00 TFO 8.90	
7298	6889	-1214	111	TPZ/LP at 7298.03 MD	
17,461	6889	-11,377	168	TD at 17461.11 MD	

Checked By: _____ Approved By: _____ Date: _____

Northern Region - DJ Basin

Mustang

D Section 22

Guttersen D34-729

Wellbore #1

Plan 1

Anticollision Summary Report

14 August, 2018

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersen D34-729
Project:	Mustang	TVD Reference:	KB @ 4862.00ft
Reference Site:	D Section 22	MD Reference:	KB @ 4862.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersen D34-729	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	8/13/2018		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	17,461.11	Plan 1 (Wellbore #1)	2_MWD+IFR1+MS	A008Mb: IFR dec & multi-station analysis

Summary						
Site Name	Reference	Offset	Distance		Separation Factor	Warning
	Measured Depth (ft)	Measured Depth (ft)	Between Centres (ft)	Between Ellipses (ft)		
D Section 21						
Casey Blue D 21-11 (PR) - Wellbore #1 - No Surveys	2,400.00	2,352.00	7,269.47	7,214.06	131.193	CC
Casey Blue D 21-11 (PR) - Wellbore #1 - No Surveys	2,600.00	2,551.84	7,271.52	7,211.45	121.053	ES
Casey Blue D 21-11 (PR) - Wellbore #1 - No Surveys	7,200.00	6,833.47	7,611.40	7,449.21	46.929	SF
Casey Blue D21-13 (PR) - Wellbore #1 - Gyro Surveys	100.00	18.93	8,516.09	8,515.94	10,000.000	CC
Casey Blue D21-13 (PR) - Wellbore #1 - Gyro Surveys	2,400.00	2,272.40	8,526.65	8,510.50	527.935	ES
Casey Blue D21-13 (PR) - Wellbore #1 - Gyro Surveys	11,500.00	7,039.60	9,982.78	9,913.34	143.760	SF
Casey Blue D21-14 (SI) - Wellbore #1 - Gyro Surveys	411.04	363.05	7,097.46	7,095.12	3,038.751	CC
Casey Blue D21-14 (SI) - Wellbore #1 - Gyro Surveys	4,900.00	4,971.22	7,121.77	7,087.55	208.137	ES
Casey Blue D21-14 (SI) - Wellbore #1 - Gyro Surveys	10,800.00	6,876.40	8,398.51	8,334.08	130.360	SF
Casey Blue D21-3J (PR) - Wellbore #1 - Gyro Surveys	1,567.00	1,508.02	8,274.06	8,263.58	788.872	CC
Casey Blue D21-3J (PR) - Wellbore #1 - Gyro Surveys	2,500.00	2,451.28	8,276.02	8,258.92	483.989	ES
Casey Blue D21-3J (PR) - Wellbore #1 - Gyro Surveys	11,000.00	6,931.99	9,987.14	9,921.98	153.285	SF
Guttersen 21-31 (SI) - Wellbore #1 - Gyro Surveys	2,403.60	2,340.19	6,853.67	6,837.29	418.226	CC, ES
Guttersen 21-31 (SI) - Wellbore #1 - Gyro Surveys	7,100.00	6,833.27	7,507.96	7,459.35	154.432	SF
Guttersen 21-42 (SI) - Wellbore #1 - Gyro Surveys	2,510.40	2,571.70	5,075.96	5,058.42	289.303	CC, ES
Guttersen 21-42 (SI) - Wellbore #1 - Gyro Surveys	7,050.00	6,815.70	5,644.24	5,595.80	116.538	SF
Guttersen 32-21 (PR) - Wellbore #1 - No Surveys	2,400.00	2,356.00	6,281.09	6,225.60	113.192	CC
Guttersen 32-21 (PR) - Wellbore #1 - No Surveys	2,500.00	2,455.98	6,281.95	6,224.12	108.628	ES
Guttersen 32-21 (PR) - Wellbore #1 - No Surveys	7,050.00	6,797.30	6,776.37	6,615.54	42.133	SF
Guttersen 33-21 (PR) - Wellbore #1 - Gyro Surveys	412.78	370.78	5,953.48	5,951.11	2,513.577	CC
Guttersen 33-21 (PR) - Wellbore #1 - Gyro Surveys	2,413.10	2,379.76	5,959.07	5,942.52	359.901	ES
Guttersen 33-21 (PR) - Wellbore #1 - Gyro Surveys	7,298.03	6,882.62	6,332.94	6,283.32	127.617	SF
Guttersen 34-21 (PR) - Wellbore #1 - Gyro Surveys	100.00	50.41	5,888.36	5,888.15	10,000.000	CC
Guttersen 34-21 (PR) - Wellbore #1 - Gyro Surveys	5,500.00	5,561.77	5,899.03	5,860.52	153.178	ES
Guttersen 34-21 (PR) - Wellbore #1 - Gyro Surveys	9,400.00	6,995.24	6,643.45	6,585.11	113.869	SF
Guttersen 41-21 (PR) - Wellbore #1 - Gyro Surveys	100.00	30.98	5,800.20	5,800.02	10,000.000	CC
Guttersen 41-21 (PR) - Wellbore #1 - Gyro Surveys	1,900.00	1,815.67	5,808.04	5,795.29	455.511	ES
Guttersen 41-21 (PR) - Wellbore #1 - Gyro Surveys	6,950.00	6,772.98	6,448.02	6,400.14	134.673	SF
Guttersen 43-21 (PR) - Wellbore #1 - Gyro Surveys	708.46	666.46	4,712.22	4,707.76	1,056.363	CC
Guttersen 43-21 (PR) - Wellbore #1 - Gyro Surveys	2,400.00	2,326.36	4,719.16	4,702.84	289.127	ES
Guttersen 43-21 (PR) - Wellbore #1 - Gyro Surveys	7,200.00	6,786.04	5,205.13	5,156.17	106.297	SF
Guttersen D21-32D (SI) - Wellbore #1 - MWD Surveys	100.00	37.21	7,529.45	7,529.26	10,000.000	CC, ES
Guttersen D21-32D (SI) - Wellbore #1 - MWD Surveys	9,100.00	9,100.00	9,993.18	9,922.46	141.315	SF
Guttersen USX D21-17 (PR) - Wellbore #1 - No Surveys	2,400.00	2,340.00	5,957.20	5,902.02	107.978	CC
Guttersen USX D21-17 (PR) - Wellbore #1 - No Surveys	2,500.00	2,439.98	5,958.28	5,900.77	103.605	ES
Guttersen USX D21-17 (PR) - Wellbore #1 - No Surveys	6,950.00	6,736.24	6,523.64	6,364.44	40.977	SF
Guttersen USX D21-20D (PR) - Wellbore #1 - MWD Surv	1,038.71	999.68	7,465.21	7,458.36	1,089.330	CC

CC - Min centre to center distance or covergent 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 D34-729
Project:	Mustang	TVD Reference:	KB @ 4862.00ft
Reference Site:	D Section 22	MD Reference:	KB @ 4862.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersen D34-729	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
D Section 21						
Guttersen USX D21-20D (PR) - Wellbore #1 - MWD Surv	1,100.00	1,041.00	7,465.38	7,458.14	1,031.109	ES
Guttersen USX D21-20D (PR) - Wellbore #1 - MWD Surv	9,400.00	7,094.62	9,292.34	9,230.41	150.063	SF
Guttersen USX D21-21D (SI) - Wellbore #1 - MWD Surv	4,870.96	5,448.21	6,991.56	6,946.64	155.652	CC
Guttersen USX D21-21D (SI) - Wellbore #1 - MWD Surv	5,100.00	5,624.75	6,992.70	6,946.08	150.013	ES
Guttersen USX D21-21D (SI) - Wellbore #1 - MWD Surv	7,800.00	7,100.95	7,471.21	7,410.17	122.407	SF
Guttersen USX D21-24D (PR) - Wellbore #1 - MWD Surv	4,671.71	4,909.88	6,738.58	6,704.55	198.024	CC, ES
Guttersen USX D21-24D (PR) - Wellbore #1 - MWD Surv	10,100.00	7,040.31	8,006.15	7,943.45	127.687	SF
Guttersen USX D21-25 (PR) - Wellbore #1 - MWD Surv	1,220.84	1,180.95	7,489.96	7,481.80	917.292	CC
Guttersen USX D21-25 (PR) - Wellbore #1 - MWD Surv	2,000.00	1,920.41	7,491.66	7,478.06	551.138	ES
Guttersen USX D21-25 (PR) - Wellbore #1 - MWD Surv	10,800.00	6,926.95	9,108.40	9,043.91	141.227	SF
Guttersen USX D21-27D (PR) - Wellbore #1 - MWD Surv	896.65	835.65	5,951.38	5,945.71	1,051.064	CC
Guttersen USX D21-27D (PR) - Wellbore #1 - MWD Surv	1,000.00	903.67	5,951.60	5,945.33	949.456	ES
Guttersen USX D21-27D (PR) - Wellbore #1 - MWD Surv	6,950.00	6,882.42	7,323.15	7,270.79	139.853	SF
Guttersen USX D21-28D (PR) - Wellbore #1 - MWD Surv	100.00	35.71	5,962.02	5,961.83	10,000.000	CC
Guttersen USX D21-28D (PR) - Wellbore #1 - MWD Surv	300.00	214.27	5,962.52	5,961.30	4,860.354	ES
Guttersen USX D21-28D (PR) - Wellbore #1 - MWD Surv	9,100.00	9,100.00	9,503.52	9,437.11	143.114	SF
Guttersen USX D21-33D (SI) - Wellbore #1 - MWD Surv	100.00	57.37	7,511.65	7,511.42	10,000.000	CC
Guttersen USX D21-33D (SI) - Wellbore #1 - MWD Surv	600.00	517.46	7,513.36	7,509.79	2,107.674	ES
Guttersen USX D21-33D (SI) - Wellbore #1 - MWD Surv	10,000.00	3,602.88	9,993.34	9,942.95	198.346	SF
Guttersen USX D22-30D (PR) - Wellbore #1 - MWD Surv	2,790.96	3,454.33	5,631.33	5,603.16	199.939	CC
Guttersen USX D22-30D (PR) - Wellbore #1 - MWD Surv	2,800.00	3,457.64	5,631.34	5,603.12	199.538	ES
Guttersen USX D22-30D (PR) - Wellbore #1 - MWD Surv	6,750.00	6,964.35	6,339.88	6,278.71	103.645	SF
Gutterson 18-21 (SI) - Wellbore #1 - Gyro Surveys	2,388.47	2,336.62	8,224.82	8,208.50	503.923	CC
Gutterson 18-21 (SI) - Wellbore #1 - Gyro Surveys	2,400.00	2,343.19	8,224.82	8,208.44	501.949	ES
Gutterson 18-21 (SI) - Wellbore #1 - Gyro Surveys	7,250.00	6,916.32	8,827.78	8,778.85	180.421	SF
HSR Guttersen B 5-21 (PR) - Wellbore #1 - Gyro Survey	460.98	400.00	8,776.67	8,774.02	3,314.014	CC
HSR Guttersen B 5-21 (PR) - Wellbore #1 - Gyro Survey	2,100.00	1,985.84	8,779.80	8,765.75	624.775	ES
HSR Guttersen B 5-21 (PR) - Wellbore #1 - Gyro Survey	8,900.00	6,879.73	9,974.51	9,920.19	183.598	SF
HSR Gutterson 4-21 (PR) - Wellbore #1 - Gyro Surveys	2,083.43	2,030.34	9,189.42	9,175.12	642.735	CC
HSR Gutterson 4-21 (PR) - Wellbore #1 - Gyro Surveys	2,400.00	2,289.07	9,190.99	9,174.65	562.458	ES
HSR Gutterson 4-21 (PR) - Wellbore #1 - Gyro Surveys	7,600.00	6,876.84	9,990.46	9,940.46	199.805	SF
HSR-Guttersen 3-21 (SI) - Wellbore #1 - Gyro Surveys	2,481.27	2,555.00	8,002.68	7,985.28	459.854	CC
HSR-Guttersen 3-21 (SI) - Wellbore #1 - Gyro Surveys	2,500.00	2,575.82	8,002.72	7,985.18	456.281	ES
HSR-Guttersen 3-21 (SI) - Wellbore #1 - Gyro Surveys	7,100.00	7,148.00	8,450.97	8,399.91	165.509	SF
HSR-Guttersen 6-21 (SI) - Wellbore #1 - Gyro Surveys	773.38	714.40	7,520.23	7,515.36	1,546.191	CC
HSR-Guttersen 6-21 (SI) - Wellbore #1 - Gyro Surveys	2,200.00	2,089.48	7,523.71	7,508.93	509.212	ES
HSR-Guttersen 6-21 (SI) - Wellbore #1 - Gyro Surveys	7,250.00	6,806.86	8,011.98	7,962.97	163.487	SF
Two E Ranch 1-21C (SI) - Wellbore #1 - Gyro Surveys	416.16	373.17	4,926.38	4,923.99	2,060.792	CC
Two E Ranch 1-21C (SI) - Wellbore #1 - Gyro Surveys	1,600.00	1,526.85	4,932.31	4,921.65	462.502	ES
Two E Ranch 1-21C (SI) - Wellbore #1 - Gyro Surveys	7,150.00	6,948.22	5,248.52	5,198.87	105.712	SF
Vogler State D21-720 - Wellbore #1 - Plan 1	2,000.00	1,988.00	4,502.13	4,488.30	325.538	CC
Vogler State D21-720 - Wellbore #1 - Plan 1	2,200.00	2,164.64	4,502.62	4,487.48	297.445	ES
Vogler State D21-720 - Wellbore #1 - Plan 1	9,200.00	6,650.00	4,980.44	4,922.12	85.405	SF
Vogler State D21-731 - Wellbore #1 - Plan 1	6,813.88	7,684.76	5,375.21	5,324.11	105.210	CC
Vogler State D21-731 - Wellbore #1 - Plan 1	6,850.00	7,657.90	5,375.26	5,324.06	104.974	ES
Vogler State D21-731 - Wellbore #1 - Plan 1	9,700.00	7,050.00	5,911.86	5,850.30	96.030	SF
Vogler State D21-740 - Wellbore #1 - Plan 1	6,928.69	7,562.24	6,001.61	5,950.51	117.430	CC
Vogler State D21-740 - Wellbore #1 - Plan 1	6,950.00	7,550.00	6,001.64	5,950.46	117.255	ES
Vogler State D21-740 - Wellbore #1 - Plan 1	10,400.00	6,800.00	6,713.95	6,649.26	103.777	SF
Vogler State D21-750 - Wellbore #1 - Plan 1	2,000.00	1,992.00	6,432.14	6,418.29	464.610	CC
Vogler State D21-750 - Wellbore #1 - Plan 1	2,300.00	2,251.53	6,433.05	6,417.27	407.740	ES
Vogler State D21-750 - Wellbore #1 - Plan 1	11,000.00	6,550.00	7,487.43	7,420.27	111.477	SF
Vogler State D21-760 - Wellbore #1 - Plan 1	6,818.04	7,737.05	7,287.20	7,236.13	142.688	CC

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

Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersen D34-729
Project:	Mustang	TVD Reference:	KB @ 4862.00ft
Reference Site:	D Section 22	MD Reference:	KB @ 4862.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersen D34-729	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
D Section 21						
Vogler State D21-760 - Wellbore #1 - Plan 1	6,850.00	7,713.22	7,287.24	7,236.07	142.399	ES
Vogler State D21-760 - Wellbore #1 - Plan 1	11,500.00	6,950.00	8,406.61	8,335.78	118.699	SF
Vogler State D21-770 - Wellbore #1 - Plan 1	6,695.08	7,638.08	7,944.05	7,894.37	159.897	CC
Vogler State D21-770 - Wellbore #1 - Plan 1	6,750.00	7,604.13	7,944.19	7,894.32	159.304	ES
Vogler State D21-770 - Wellbore #1 - Plan 1	12,300.00	6,600.00	9,323.95	9,249.99	126.061	SF
Vogler State D21-780 - Wellbore #1 - Plan 1	2,000.64	1,958.64	8,193.03	8,179.30	596.859	CC
Vogler State D21-780 - Wellbore #1 - Plan 1	2,200.00	2,100.00	8,193.58	8,178.65	548.829	ES
Vogler State D21-780 - Wellbore #1 - Plan 1	12,600.00	6,500.00	9,962.18	9,885.96	130.707	SF
Vogler State D21-790 - Wellbore #1 - Plan 1	6,868.52	7,465.62	4,029.18	3,978.93	80.195	CC
Vogler State D21-790 - Wellbore #1 - Plan 1	6,900.00	7,450.00	4,029.24	3,978.89	80.024	ES
Vogler State D21-790 - Wellbore #1 - Plan 1	8,500.00	6,884.12	4,214.43	4,159.13	76.202	SF
Vogler State D33-711 - Wellbore #1 - Plan 1	17,461.11	17,485.93	4,003.05	3,809.29	20.660	CC, ES, SF
Vogler State D33-718 - Wellbore #1 - Plan 1	2,400.00	2,387.00	4,497.85	4,481.15	269.429	CC
Vogler State D33-718 - Wellbore #1 - Plan 1	17,100.00	17,075.90	4,621.83	4,434.30	24.646	ES
Vogler State D33-718 - Wellbore #1 - Plan 1	17,461.11	17,321.40	4,630.27	4,438.00	24.083	SF
Vogler State D33-728 - Wellbore #1 - Plan 1	7,303.63	7,476.53	5,236.08	5,182.37	97.484	CC
Vogler State D33-728 - Wellbore #1 - Plan 1	17,461.11	17,604.61	5,292.69	5,099.23	27.359	ES, SF
Vogler State D33-738 - Wellbore #1 - Plan 1	7,299.21	7,282.56	5,896.25	5,844.00	112.849	CC
Vogler State D33-738 - Wellbore #1 - Plan 1	17,000.00	16,927.58	5,932.91	5,747.16	31.942	ES
Vogler State D33-738 - Wellbore #1 - Plan 1	17,461.11	17,205.05	5,946.75	5,755.43	31.083	SF
Vogler State D33-752 - Wellbore #1 - Plan 1	2,400.00	2,397.00	6,430.54	6,413.81	384.375	CC
Vogler State D33-752 - Wellbore #1 - Plan 1	17,461.11	17,459.15	6,603.06	6,409.33	34.083	ES, SF
Vogler State D33-759 - Wellbore #1 - Plan 1	7,291.03	7,400.00	7,189.20	7,136.04	135.241	CC
Vogler State D33-759 - Wellbore #1 - Plan 1	17,461.11	17,522.49	7,253.88	7,060.68	37.547	ES, SF
Vogler State D33-769 - Wellbore #1 - Plan 1	7,235.07	7,279.90	7,849.15	7,797.21	151.109	CC
Vogler State D33-769 - Wellbore #1 - Plan 1	17,461.11	17,441.51	7,913.86	7,720.52	40.934	ES, SF
Vogler State D33-779 - Wellbore #1 - Plan 1	2,007.41	1,971.41	8,192.69	8,178.89	593.804	CC
Vogler State D33-779 - Wellbore #1 - Plan 1	2,100.00	2,035.83	8,192.80	8,178.45	570.805	ES
Vogler State D33-779 - Wellbore #1 - Plan 1	17,461.11	17,424.52	8,573.81	8,380.23	44.293	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 D34-729
Project:	Mustang	TVD Reference:	KB @ 4862.00ft
Reference Site:	D Section 22	MD Reference:	KB @ 4862.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersen D34-729	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						
Offset Well - Wellbore - Design						
Dalbey D22-05 (SI) - Wellbore #1 - Gyro Surveys	100.00	32.34	3,996.46	3,996.28	10,000.000	CC
Dalbey D22-05 (SI) - Wellbore #1 - Gyro Surveys	700.00	623.55	3,999.10	3,994.82	933.206	ES
Dalbey D22-05 (SI) - Wellbore #1 - Gyro Surveys	6,900.00	6,765.01	4,609.89	4,562.16	96.582	SF
O'SH D 22-11 (SI) - Wellbore #1 - No Surveys	2,400.00	2,367.00	2,332.98	2,277.27	41.877	CC
O'SH D 22-11 (SI) - Wellbore #1 - No Surveys	2,500.00	2,466.98	2,333.77	2,275.72	40.203	ES
O'SH D 22-11 (SI) - Wellbore #1 - No Surveys	6,700.00	6,595.24	2,716.43	2,560.90	17.466	SF
Dalbey D 22-04 (PR) - Wellbore #1 - Gyro Surveys	695.92	629.94	4,948.49	4,944.20	1,152.516	CC
Dalbey D 22-04 (PR) - Wellbore #1 - Gyro Surveys	1,000.00	907.98	4,949.40	4,943.05	779.526	ES
Dalbey D 22-04 (PR) - Wellbore #1 - Gyro Surveys	6,750.00	6,600.72	5,647.56	5,600.98	121.236	SF
Dalbey D 22-3 (SI) - Wellbore #1 - Gyro Surveys	229.95	173.95	4,121.28	4,120.26	4,018.490	CC
Dalbey D 22-3 (SI) - Wellbore #1 - Gyro Surveys	2,404.47	2,354.67	4,129.64	4,113.20	251.162	ES
Dalbey D 22-3 (SI) - Wellbore #1 - Gyro Surveys	6,750.00	6,617.66	4,835.94	4,789.38	103.865	SF
Dalbey D22-6 (SI) - Wellbore #1 - Gyro Surveys	100.00	37.36	3,449.64	3,449.45	10,000.000	CC
Dalbey D22-6 (SI) - Wellbore #1 - Gyro Surveys	1,100.00	1,019.85	3,455.58	3,448.47	486.272	ES
Dalbey D22-6 (SI) - Wellbore #1 - Gyro Surveys	6,800.00	6,665.40	4,137.43	4,090.48	88.120	SF
Guttersen D 22-18 (SI) - Wellbore #1 - Gyro Surveys	690.34	642.35	3,167.82	3,163.50	733.929	CC
Guttersen D 22-18 (SI) - Wellbore #1 - Gyro Surveys	2,406.71	2,366.17	3,172.98	3,156.49	192.409	ES
Guttersen D 22-18 (SI) - Wellbore #1 - Gyro Surveys	6,700.00	6,578.53	3,900.20	3,853.93	84.298	SF
Guttersen D34-719 - Wellbore #1 - Plan 1	2,577.98	2,577.87	37.02	19.05	2.060	CC
Guttersen D34-719 - Wellbore #1 - Plan 1	2,600.00	2,599.84	37.05	18.93	2.045	ES, SF
Guttersen D34-739 - Wellbore #1 - Plan 1	2,200.00	2,200.00	37.43	22.12	2.445	CC, ES
Guttersen D34-739 - Wellbore #1 - Plan 1	2,300.00	2,299.16	38.52	22.52	2.407	SF
Guttersen D34-749 - Wellbore #1 - Plan 1	17,461.11	17,565.85	1,382.91	1,189.59	7.154	CC, ES, SF
Guttersen D34-759 - Wellbore #1 - Plan 1	17,461.11	17,481.52	1,942.92	1,749.49	10.045	CC, ES, SF
Guttersen D34-769 - Wellbore #1 - Plan 1	2,200.00	2,192.00	2,434.71	2,419.44	159.360	CC
Guttersen D34-769 - Wellbore #1 - Plan 1	17,461.11	17,465.77	2,602.99	2,409.22	13.434	ES, SF
Guttersen D34-779 - Wellbore #1 - Plan 1	2,400.00	2,392.00	2,472.42	2,455.71	147.943	CC, ES
Guttersen D34-779 - Wellbore #1 - Plan 1	17,461.11	17,525.70	3,262.98	3,069.94	16.903	SF
Guttersen State D 22-22 (SI) - Wellbore #1 - Gyro Survey	100.00	72.25	1,552.41	1,552.15	6,160.019	CC
Guttersen State D 22-22 (SI) - Wellbore #1 - Gyro Survey	500.00	463.88	1,553.99	1,550.99	516.626	ES
Guttersen State D 22-22 (SI) - Wellbore #1 - Gyro Survey	6,500.00	6,439.48	2,212.20	2,167.12	49.070	SF
Guttersen State D 22-24 (SI) - Wellbore #1 - Gyro Survey	2,043.56	2,007.82	1,226.46	1,212.51	87.939	CC
Guttersen State D 22-24 (SI) - Wellbore #1 - Gyro Survey	2,200.00	2,157.28	1,226.72	1,211.69	81.626	ES
Guttersen State D 22-24 (SI) - Wellbore #1 - Gyro Survey	6,550.00	6,464.66	1,669.72	1,624.21	36.686	SF
Guttersen State D22-730 - Wellbore #1 - Plan 1	7,215.94	7,258.83	114.96	64.90	2.296	CC, ES
Guttersen State D22-730 - Wellbore #1 - Plan 1	7,250.00	7,231.40	117.01	65.59	2.275	SF
Guttersen State D22-740 - Wellbore #1 - Plan 1	2,200.00	2,201.00	154.68	139.37	10.103	CC, ES
Guttersen State D22-740 - Wellbore #1 - Plan 1	2,400.00	2,390.47	161.33	144.70	9.702	SF
Guttersen State D22-750 - Wellbore #1 - Plan 1	6,886.69	7,522.31	1,378.95	1,327.93	27.027	CC, ES
Guttersen State D22-750 - Wellbore #1 - Plan 1	6,950.00	7,479.16	1,379.87	1,328.76	27.001	SF
Guttersen State D22-760 - Wellbore #1 - Plan 1	6,976.52	7,451.05	2,041.81	1,991.01	40.193	CC
Guttersen State D22-760 - Wellbore #1 - Plan 1	7,000.00	7,435.62	2,041.87	1,991.00	40.134	ES
Guttersen State D22-760 - Wellbore #1 - Plan 1	7,400.00	7,188.22	2,060.55	2,008.72	39.757	SF
Guttersen State D22-770 - Wellbore #1 - Plan 1	2,200.00	2,192.00	2,439.50	2,424.22	159.673	CC
Guttersen State D22-770 - Wellbore #1 - Plan 1	2,300.00	2,280.35	2,439.72	2,423.78	153.077	ES
Guttersen State D22-770 - Wellbore #1 - Plan 1	7,800.00	6,787.74	2,737.63	2,685.42	52.429	SF
Guttersen State D22-780 - Wellbore #1 - Plan 1	2,000.00	1,992.00	2,476.85	2,463.01	178.910	CC
Guttersen State D22-780 - Wellbore #1 - Plan 1	2,100.00	2,063.96	2,477.38	2,462.93	171.463	ES
Guttersen State D22-780 - Wellbore #1 - Plan 1	8,400.00	6,550.00	3,411.90	3,357.30	62.495	SF
Guttersen State D34-790 - Wellbore #1 - Plan 1	2,200.00	2,201.00	75.13	59.82	4.907	CC, ES
Guttersen State D34-790 - Wellbore #1 - Plan 1	2,300.00	2,298.66	76.68	60.68	4.793	SF
OSH D 22-12 (SI) - Wellbore #1 - Gyro Surveys	1,317.14	1,270.15	3,513.49	3,504.73	401.500	CC
OSH D 22-12 (SI) - Wellbore #1 - Gyro Surveys	2,000.00	1,933.33	3,516.08	3,502.57	260.247	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 D34-729
Project:	Mustang	TVD Reference:	KB @ 4862.00ft
Reference Site:	D Section 22	MD Reference:	KB @ 4862.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersen D34-729	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	6,950.00	6,770.06	3,957.91	3,909.89	82.420	SF
OSH D 22-13 (SI) - Wellbore #1 - Gyro Surveys	1,529.92	1,496.98	3,431.77	3,421.46	332.695	CC
OSH D 22-13 (SI) - Wellbore #1 - Gyro Surveys	3,200.00	3,151.62	3,438.14	3,416.30	157.428	ES
OSH D 22-13 (SI) - Wellbore #1 - Gyro Surveys	7,298.03	6,855.09	3,609.23	3,559.77	72.969	SF
OSH D 22-14 (PR) - Wellbore #1 - Gyro Surveys	3,135.42	3,080.85	1,901.60	1,880.22	88.931	CC
OSH D 22-14 (PR) - Wellbore #1 - Gyro Surveys	3,500.00	3,437.21	1,902.34	1,878.46	79.681	ES
OSH D 22-14 (PR) - Wellbore #1 - Gyro Surveys	7,000.00	6,802.61	1,999.35	1,950.88	41.243	SF
Sevendust State D 22-1 (SI) - Wellbore #1 - Gyro Survey	2,247.80	2,216.13	3,802.82	3,787.41	246.772	CC
Sevendust State D 22-1 (SI) - Wellbore #1 - Gyro Survey	2,500.00	2,542.19	3,803.39	3,785.95	218.159	ES
Sevendust State D 22-1 (SI) - Wellbore #1 - Gyro Survey	6,700.00	6,554.89	4,486.55	4,440.38	97.176	SF
Spike ST GWS D 22-07 (SI) - Wellbore #1 - No Surveys	2,400.00	2,360.00	2,254.54	2,198.97	40.571	CC
Spike ST GWS D 22-07 (SI) - Wellbore #1 - No Surveys	2,500.00	2,459.98	2,256.25	2,198.34	38.961	ES
Spike ST GWS D 22-07 (SI) - Wellbore #1 - No Surveys	6,600.00	6,503.25	2,897.90	2,744.73	18.920	SF
Spike ST GWS D 22-08 (SI) - Wellbore #1 - Gyro Survey	2,056.15	2,028.17	2,308.85	2,294.80	164.301	CC
Spike ST GWS D 22-08 (SI) - Wellbore #1 - Gyro Survey	2,200.00	2,161.55	2,309.09	2,294.06	153.608	ES
Spike ST GWS D 22-08 (SI) - Wellbore #1 - Gyro Survey	6,600.00	6,532.93	2,904.08	2,858.30	63.436	SF
Spike ST GWS D 22-09 (PA) - Wellbore #1 - No Surveys	2,400.00	2,374.00	1,394.86	1,339.01	24.975	CC
Spike ST GWS D 22-09 (PA) - Wellbore #1 - No Surveys	2,500.00	2,473.98	1,396.01	1,337.82	23.990	ES
Spike ST GWS D 22-09 (PA) - Wellbore #1 - No Surveys	6,500.00	6,425.11	1,858.64	1,707.35	12.285	SF
Spike ST GWS D 22-15 (PR) - Wellbore #1 - Gyro Surve	4,221.54	4,175.43	717.91	688.91	24.754	CC
Spike ST GWS D 22-15 (PR) - Wellbore #1 - Gyro Surve	4,300.00	4,247.86	718.42	688.89	24.322	ES
Spike ST GWS D 22-15 (PR) - Wellbore #1 - Gyro Surve	6,500.00	6,428.76	849.81	804.63	18.808	SF
Spike ST GWS D 22-4J (PR) - Wellbore #1 - Gyro Surve	2,262.70	2,234.89	364.64	349.12	23.485	CC
Spike ST GWS D 22-4J (PR) - Wellbore #1 - Gyro Surve	2,851.93	2,814.63	368.08	348.57	18.869	ES
Spike ST GWS D 22-4J (PR) - Wellbore #1 - Gyro Surve	4,800.00	4,739.38	475.49	442.46	14.394	SF
Spike State D22-1J (PA) - Wellbore #1 - Gyro Surveys	100.00	59.48	2,912.26	2,912.03	10,000.000	CC
Spike State D22-1J (PA) - Wellbore #1 - Gyro Surveys	2,452.57	2,472.47	2,927.57	2,910.56	172.070	ES
Spike State D22-1J (PA) - Wellbore #1 - Gyro Surveys	6,650.00	6,581.20	3,598.59	3,552.51	78.086	SF
Spike State GWS D 22-10 (PA) - Wellbore #1 - Gyro Sur	425.52	384.53	1,245.13	1,242.66	505.074	CC
Spike State GWS D 22-10 (PA) - Wellbore #1 - Gyro Sur	1,900.00	1,850.48	1,253.00	1,240.13	97.330	ES
Spike State GWS D 22-10 (PA) - Wellbore #1 - Gyro Sur	6,500.00	6,432.27	1,778.28	1,733.23	39.473	SF
Spike State GWS D 22-2 (PR) - Wellbore #1 - Gyro Sur	2,415.75	2,388.91	3,844.86	3,828.27	231.715	CC, ES
Spike State GWS D 22-2 (PR) - Wellbore #1 - Gyro Sur	6,700.00	6,583.12	4,597.40	4,551.14	99.379	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 D34-729
Project:	Mustang	TVD Reference:	KB @ 4862.00ft
Reference Site:	D Section 22	MD Reference:	KB @ 4862.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersen D34-729	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 23						
Guttersen 23-20 (SI) - Wellbore #1 - Gyro Surveys	2,170.47	2,154.66	3,220.76	3,205.84	215.924	CC
Guttersen 23-20 (SI) - Wellbore #1 - Gyro Surveys	2,300.00	2,257.10	3,221.31	3,205.58	204.713	ES
Guttersen 23-20 (SI) - Wellbore #1 - Gyro Surveys	6,800.00	6,696.28	3,615.93	3,568.74	76.619	SF
Guttersen 23-32 (SI) - Wellbore #1 - Gyro Surveys	100.00	20.38	5,401.90	5,401.74	10,000.000	CC
Guttersen 23-32 (SI) - Wellbore #1 - Gyro Surveys	2,600.00	2,615.52	5,405.75	5,387.75	300.346	ES
Guttersen 23-32 (SI) - Wellbore #1 - Gyro Surveys	7,100.00	6,709.79	5,764.90	5,716.59	119.323	SF
Guttersen 23-41 (PR) - Wellbore #1 - Gyro Surveys	100.00	7.86	6,997.04	6,996.90	10,000.000	CC
Guttersen 23-41 (PR) - Wellbore #1 - Gyro Surveys	2,517.24	2,535.96	6,999.46	6,982.01	401.084	ES
Guttersen 23-41 (PR) - Wellbore #1 - Gyro Surveys	7,100.00	6,691.79	7,475.84	7,427.66	155.141	SF
Guttersen 31-23 (PR) - Wellbore #1 - Gyro Surveys	2,517.03	2,612.25	5,892.27	5,874.55	332.507	CC, ES
Guttersen 31-23 (PR) - Wellbore #1 - Gyro Surveys	7,000.00	6,786.02	6,401.41	6,353.24	132.893	SF
Guttersen 42-23 (PR) - Wellbore #1 - Gyro Surveys	2,956.85	3,124.17	6,427.49	6,406.56	307.204	CC
Guttersen 42-23 (PR) - Wellbore #1 - Gyro Surveys	3,400.00	3,531.59	6,428.83	6,404.99	269.582	ES
Guttersen 42-23 (PR) - Wellbore #1 - Gyro Surveys	7,200.00	6,785.91	6,758.69	6,709.75	138.097	SF
Guttersen USX D 23-17 (PR) - Wellbore #1 - Gyro Surveys	2,478.62	2,491.01	6,032.15	6,014.96	350.824	CC
Guttersen USX D 23-17 (PR) - Wellbore #1 - Gyro Surveys	2,500.00	2,500.00	6,032.19	6,014.90	348.713	ES
Guttersen USX D 23-17 (PR) - Wellbore #1 - Gyro Surveys	9,700.00	9,700.00	8,323.76	8,258.90	128.331	SF
Parker Blue D 23-09 (SI) - Wellbore #1 - Gyro Surveys	5,240.38	5,139.16	6,244.45	6,208.37	173.079	CC
Parker Blue D 23-09 (SI) - Wellbore #1 - Gyro Surveys	6,400.00	6,303.94	6,248.20	6,203.78	140.650	ES
Parker Blue D 23-09 (SI) - Wellbore #1 - Gyro Surveys	9,000.00	6,862.31	7,062.80	7,007.27	127.185	SF
Parker Blue D 23-10 (SI) - Wellbore #1 - Gyro Surveys	3,993.93	3,965.33	5,036.53	5,009.05	183.271	CC
Parker Blue D 23-10 (SI) - Wellbore #1 - Gyro Surveys	5,700.00	5,678.42	5,039.10	4,999.43	127.030	ES
Parker Blue D 23-10 (SI) - Wellbore #1 - Gyro Surveys	7,100.00	6,805.80	5,181.03	5,132.22	106.138	SF
Parker Blue D 23-11 (SI) - Wellbore #1 - Gyro Surveys	2,474.45	2,466.36	3,752.56	3,735.48	219.750	CC
Parker Blue D 23-11 (SI) - Wellbore #1 - Gyro Surveys	2,500.00	2,488.37	3,752.59	3,735.35	217.665	ES
Parker Blue D 23-11 (SI) - Wellbore #1 - Gyro Surveys	6,950.00	6,761.42	3,977.51	3,929.45	82.762	SF
Parker Blue D 23-13 (SI) - Wellbore #1 - Gyro Surveys	5,007.35	4,971.62	1,933.43	1,898.81	55.840	CC
Parker Blue D 23-13 (SI) - Wellbore #1 - Gyro Surveys	5,100.00	5,052.74	1,933.78	1,898.54	54.864	ES
Parker Blue D 23-13 (SI) - Wellbore #1 - Gyro Surveys	6,800.00	6,708.55	2,009.77	1,962.41	42.435	SF
Parker Blue D 23-14 (SI) - Wellbore #1 - Gyro Surveys	6,294.39	6,211.94	3,391.86	3,348.14	77.595	CC
Parker Blue D 23-14 (SI) - Wellbore #1 - Gyro Surveys	6,397.27	6,290.97	3,392.23	3,347.87	76.458	ES
Parker Blue D 23-14 (SI) - Wellbore #1 - Gyro Surveys	7,150.00	6,822.71	3,487.96	3,438.87	71.053	SF
Parker Blue D 23-15 (SI) - Wellbore #1 - Gyro Surveys	6,538.82	6,368.17	4,640.00	4,594.84	102.743	CC
Parker Blue D 23-15 (SI) - Wellbore #1 - Gyro Surveys	6,750.00	6,632.75	4,641.00	4,594.07	98.900	ES
Parker Blue D 23-15 (SI) - Wellbore #1 - Gyro Surveys	8,500.00	6,865.19	5,004.75	4,950.69	92.578	SF
Parker Blue D 23-3J (SI) - Wellbore #1 - Gyro Surveys	125.90	111.21	2,654.29	2,653.86	6,169.365	CC
Parker Blue D 23-3J (SI) - Wellbore #1 - Gyro Surveys	2,500.00	2,490.90	2,659.94	2,642.70	154.306	ES
Parker Blue D 23-3J (SI) - Wellbore #1 - Gyro Surveys	6,800.00	6,653.73	2,977.05	2,926.99	59.468	SF
Parker Red D 23-05 (PR) - Wellbore #1 - Gyro Surveys	419.65	409.65	2,969.71	2,967.18	1,174.478	CC
Parker Red D 23-05 (PR) - Wellbore #1 - Gyro Surveys	2,100.00	2,067.91	2,978.07	2,963.72	207.549	ES
Parker Red D 23-05 (PR) - Wellbore #1 - Gyro Surveys	6,700.00	6,644.78	3,525.87	3,479.23	75.607	SF
Parker Red D 23-2J (SI) - Wellbore #1 - Gyro Surveys	2,198.82	2,182.92	3,878.25	3,863.14	256.706	CC
Parker Red D 23-2J (SI) - Wellbore #1 - Gyro Surveys	2,300.00	2,250.45	3,878.70	3,862.99	246.965	ES
Parker Red D 23-2J (SI) - Wellbore #1 - Gyro Surveys	6,950.00	6,860.78	4,449.80	4,401.57	92.250	SF
Parker Red D 23-3 (PR) - Wellbore #1 - Gyro Surveys	2,096.38	2,057.78	4,961.99	4,947.68	346.727	CC
Parker Red D 23-3 (PR) - Wellbore #1 - Gyro Surveys	2,100.00	2,059.39	4,961.99	4,947.66	346.277	ES
Parker Red D 23-3 (PR) - Wellbore #1 - Gyro Surveys	6,900.00	6,835.08	5,492.86	5,444.83	114.357	SF
Parker Red D 23-4 (SI) - Wellbore #1 - Gyro Surveys	100.00	69.57	4,034.12	4,033.87	10,000.000	CC
Parker Red D 23-4 (SI) - Wellbore #1 - Gyro Surveys	2,000.00	1,943.20	4,036.00	4,022.45	297.882	ES
Parker Red D 23-4 (SI) - Wellbore #1 - Gyro Surveys	6,750.00	6,632.20	4,646.04	4,599.31	99.423	SF
Two E Ranch 1-23 (SI) - Wellbore #1 - Gyro Surveys	5,142.26	4,997.66	5,651.33	5,616.09	160.370	CC
Two E Ranch 1-23 (SI) - Wellbore #1 - Gyro Surveys	5,400.00	5,216.22	5,652.49	5,615.55	152.993	ES
Two E Ranch 1-23 (SI) - Wellbore #1 - Gyro Surveys	8,900.00	6,829.73	6,341.01	6,285.32	113.861	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 D34-729
Project:	Mustang	TVD Reference:	KB @ 4862.00ft
Reference Site:	D Section 22	MD Reference:	KB @ 4862.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersen D34-729	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						

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersen D34-729
Project:	Mustang	TVD Reference:	KB @ 4862.00ft
Reference Site:	D Section 22	MD Reference:	KB @ 4862.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersen D34-729	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 26						
Adam Red D 26-11 (PR) - Wellbore #1 - Gyro Surveys	10,366.31	6,827.90	3,080.69	3,014.25	46.365	CC
Adam Red D 26-11 (PR) - Wellbore #1 - Gyro Surveys	10,400.00	6,827.93	3,080.87	3,014.20	46.205	ES
Adam Red D 26-11 (PR) - Wellbore #1 - Gyro Surveys	11,100.00	6,828.53	3,166.85	3,096.07	44.744	SF
Adam Red D 26-12 (PR) - Wellbore #1 - Gyro Surveys	10,357.75	6,906.89	1,877.37	1,803.35	25.365	CC, ES
Adam Red D 26-12 (PR) - Wellbore #1 - Gyro Surveys	10,600.00	6,905.69	1,892.93	1,817.42	25.067	SF
Adam Red D 26-13 (PR) - Wellbore #1 - Gyro Surveys	11,503.56	6,900.00	2,056.86	1,982.11	27.517	CC, ES
Adam Red D 26-13 (PR) - Wellbore #1 - Gyro Surveys	11,800.00	6,900.00	2,078.11	2,001.52	27.133	SF
Adam Red D 26-14 (PR) - Wellbore #1 - Gyro Surveys	11,518.81	6,865.26	3,421.50	3,342.02	43.044	CC, ES
Adam Red D 26-14 (PR) - Wellbore #1 - Gyro Surveys	12,200.00	6,873.18	3,488.64	3,404.81	41.612	SF
Coors Energy 14-25H (PR) - Wellbore #1 - MWD Survey	11,194.38	5,938.00	6,635.89	6,568.44	98.376	CC
Coors Energy 14-25H (PR) - Wellbore #1 - MWD Survey	11,200.00	5,938.00	6,635.90	6,568.40	98.317	ES
Coors Energy 14-25H (PR) - Wellbore #1 - MWD Survey	13,900.00	5,938.00	7,166.27	7,082.84	85.891	SF
Heyde 1-26 (PR) - Wellbore #1 - Gyro Surveys	8,039.19	6,852.08	5,563.55	5,510.86	105.585	CC, ES
Heyde 1-26 (PR) - Wellbore #1 - Gyro Surveys	10,600.00	6,856.81	6,124.61	6,058.89	93.203	SF
Heyde 26ND (PR) - Wellbore #1 - MWD Surveys	869.58	847.73	3,582.85	3,577.37	653.607	CC
Heyde 26ND (PR) - Wellbore #1 - MWD Surveys	900.00	865.68	3,582.90	3,577.25	633.590	ES
Heyde 26ND (PR) - Wellbore #1 - MWD Surveys	10,000.00	6,947.67	4,307.04	4,239.83	64.080	SF
Heyde 26RD (PR) - Wellbore #1 - MWD Surveys	7,150.69	6,853.11	5,266.85	5,215.48	102.518	CC, ES
Heyde 26RD (PR) - Wellbore #1 - MWD Surveys	9,500.00	6,884.44	5,774.27	5,712.32	93.217	SF
Heyde 26VD (PR) - Wellbore #1 - MWD Surveys	100.00	51.18	5,884.20	5,883.99	10,000.000	CC
Heyde 26VD (PR) - Wellbore #1 - MWD Surveys	1,000.00	920.15	5,886.85	5,881.84	1,174.650	ES
Heyde 26VD (PR) - Wellbore #1 - MWD Surveys	11,800.00	7,095.28	7,306.27	7,227.89	93.208	SF
Heyde 31-26 (PR) - Wellbore #1 - No Surveys	7,757.14	6,834.43	4,306.43	4,255.10	83.899	CC, ES
Heyde 31-26 (PR) - Wellbore #1 - No Surveys	9,400.00	6,835.13	4,609.16	4,550.14	78.099	SF
Heyde 32-26 (SI) - Wellbore #1 - Gyro Surveys	9,052.60	6,769.44	4,469.02	4,411.21	77.297	CC
Heyde 32-26 (SI) - Wellbore #1 - Gyro Surveys	9,100.00	6,769.78	4,469.27	4,411.17	76.923	ES
Heyde 32-26 (SI) - Wellbore #1 - Gyro Surveys	10,600.00	6,780.94	4,729.32	4,662.87	71.168	SF
Heyde 41-26 (PR) - Wellbore #1 - Gyro Surveys	7,552.07	6,859.57	5,940.71	5,890.00	117.149	CC, ES
Heyde 41-26 (PR) - Wellbore #1 - Gyro Surveys	10,500.00	6,919.38	6,631.65	6,566.81	102.273	SF
Heyde 42-26 (PR) - Wellbore #1 - Gyro Surveys	9,004.08	6,906.57	5,869.34	5,811.34	101.188	CC, ES
Heyde 42-26 (PR) - Wellbore #1 - Gyro Surveys	11,600.00	6,934.51	6,417.73	6,345.18	88.459	SF
HSR-Waste Services 10-26 (SI) - Wellbore #1 - No Surveys	10,579.14	6,873.00	4,787.37	4,605.67	26.348	CC
HSR-Waste Services 10-26 (SI) - Wellbore #1 - No Surveys	10,600.00	6,873.00	4,787.42	4,605.57	26.327	ES
HSR-Waste Services 10-26 (SI) - Wellbore #1 - No Surveys	11,300.00	6,873.00	4,841.34	4,654.85	25.900	SF
HSR-Waste Services 15-26 (SI) - Wellbore #1 - No Surveys	11,574.99	6,889.00	4,538.53	4,349.42	24.000	CC
HSR-Waste Services 15-26 (SI) - Wellbore #1 - No Surveys	11,600.00	6,889.00	4,538.60	4,349.31	23.977	ES
HSR-Waste Services 15-26 (SI) - Wellbore #1 - No Surveys	12,200.00	6,889.00	4,581.36	4,387.97	23.689	SF
HSR-Waste Services 16-26 (SI) - Wellbore #1 - Gyro Surveys	11,585.98	6,959.08	5,788.26	5,713.01	76.921	CC
HSR-Waste Services 16-26 (SI) - Wellbore #1 - Gyro Surveys	11,600.00	6,959.02	5,788.27	5,712.92	76.816	ES
HSR-Waste Services 16-26 (SI) - Wellbore #1 - Gyro Surveys	13,600.00	6,949.22	6,128.63	6,041.08	70.006	SF
HSR-Waste Services 9-26 (PA) - Wellbore #1 - Gyro Surveys	10,331.29	6,812.78	5,966.33	5,900.21	90.232	CC
HSR-Waste Services 9-26 (PA) - Wellbore #1 - Gyro Surveys	10,400.00	6,813.13	5,966.73	5,900.13	89.596	ES
HSR-Waste Services 9-26 (PA) - Wellbore #1 - Gyro Surveys	12,700.00	6,824.99	6,419.32	6,339.15	80.072	SF
Waste Management 11-26 (PR) - Wellbore #1 - Gyro Surveys	7,850.09	6,965.41	1,876.70	1,824.55	35.983	CC, ES
Waste Management 11-26 (PR) - Wellbore #1 - Gyro Surveys	8,100.00	6,962.10	1,893.27	1,840.00	35.547	SF
Waste Management 12-26 (PR) - Wellbore #1 - Gyro Surveys	9,150.58	6,921.90	1,825.61	1,766.65	30.967	CC, ES
Waste Management 12-26 (PR) - Wellbore #1 - Gyro Surveys	9,400.00	6,933.44	1,842.53	1,782.11	30.495	SF
Waste Management 12-26A (PR) - Wellbore #1 - Gyro Surveys	8,589.66	6,869.82	2,470.25	2,414.71	44.472	CC
Waste Management 12-26A (PR) - Wellbore #1 - Gyro Surveys	8,600.00	6,870.48	2,470.27	2,414.67	44.425	ES
Waste Management 12-26A (PR) - Wellbore #1 - Gyro Surveys	9,100.00	6,907.03	2,522.09	2,463.75	43.228	SF
Waste Management 21-26 (PR) - Wellbore #1 - Gyro Surveys	7,629.71	6,817.37	3,350.58	3,299.88	66.083	CC, ES
Waste Management 21-26 (PR) - Wellbore #1 - Gyro Surveys	8,600.00	6,826.80	3,488.23	3,433.30	63.505	SF
Waste Management 22-26 (PR) - Wellbore #1 - Gyro Surveys	9,086.20	6,828.40	3,233.45	3,175.34	55.639	CC

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

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersen D34-729
Project:	Mustang	TVD Reference:	KB @ 4862.00ft
Reference Site:	D Section 22	MD Reference:	KB @ 4862.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersen D34-729	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 26						
Waste Management 22-26 (PR) - Wellbore #1 - Gyro Sur	9,100.00	6,828.44	3,233.48	3,175.28	55.560	ES
Waste Management 22-26 (PR) - Wellbore #1 - Gyro Sur	9,900.00	6,830.89	3,334.29	3,271.65	53.228	SF
Waste Management 26FD (PR) - Wellbore #1 - MWD Su	8,427.46	7,028.74	1,331.40	1,275.51	23.819	CC, ES
Waste Management 26FD (PR) - Wellbore #1 - MWD Su	8,600.00	7,027.48	1,342.54	1,285.49	23.532	SF
Waste Management 26KD (PR) - Wellbore #1 - MWD Su	9,686.92	7,028.37	2,560.28	2,491.10	37.012	CC
Waste Management 26KD (PR) - Wellbore #1 - MWD Su	9,700.00	7,028.51	2,560.31	2,491.05	36.963	ES
Waste Management 26KD (PR) - Wellbore #1 - MWD Su	10,100.00	7,033.07	2,593.38	2,521.66	36.160	SF
Waste Management D 26-25 (SI) - Wellbore #1 - Gyro S	11,030.27	6,829.52	2,754.58	2,683.49	38.747	CC, ES
Waste Management D 26-25 (SI) - Wellbore #1 - Gyro S	12,600.00	12,600.00	3,169.93	3,072.75	32.621	SF
Waste Mangement 26JD (PR) - Wellbore #1 - MWD Surv	7,166.01	6,979.75	2,595.34	2,542.43	49.057	CC, ES
Waste Mangement 26JD (PR) - Wellbore #1 - MWD Surv	7,700.00	6,991.69	2,652.65	2,597.44	48.046	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 D34-729
Project:	Mustang	TVD Reference:	KB @ 4862.00ft
Reference Site:	D Section 22	MD Reference:	KB @ 4862.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersen D34-729	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	11,431.80	6,800.00	3,059.75	2,985.93	41.444	CC, ES
Camolo Red 27-3J (SI) - Wellbore #1 - Gyro Surveys	12,000.00	6,809.17	3,112.05	3,034.89	40.330	SF
Camolo Red D 27-02J (SI) - Wellbore #1 - Gyro Surveys	8,045.53	6,850.06	2,379.44	2,330.44	48.565	CC, ES
Camolo Red D 27-02J (SI) - Wellbore #1 - Gyro Surveys	8,500.00	6,844.20	2,422.45	2,371.51	47.556	SF
Camolo Red D 27-04 (SI) - Wellbore #1 - Gyro Surveys	7,681.82	6,847.11	3,531.72	3,480.55	69.018	CC
Camolo Red D 27-04 (SI) - Wellbore #1 - Gyro Surveys	7,700.00	6,847.30	3,531.77	3,480.53	68.923	ES
Camolo Red D 27-04 (SI) - Wellbore #1 - Gyro Surveys	8,700.00	6,856.63	3,675.55	3,620.05	66.224	SF
Camolo Red D 27-05 (SI) - Wellbore #1 - Gyro Surveys	9,121.49	7,025.72	3,313.30	3,254.14	56.005	CC, ES
Camolo Red D 27-05 (SI) - Wellbore #1 - Gyro Surveys	10,000.00	7,083.42	3,427.31	3,363.27	53.520	SF
Camolo Red D 27-06 (SI) - Wellbore #1 - Gyro Surveys	8,978.88	6,936.62	1,992.20	1,934.23	34.366	CC
Camolo Red D 27-06 (SI) - Wellbore #1 - Gyro Surveys	9,000.00	6,936.65	1,992.31	1,934.23	34.298	ES
Camolo Red D 27-06 (SI) - Wellbore #1 - Gyro Surveys	9,300.00	6,937.09	2,017.92	1,958.32	33.860	SF
Camolo Red D 27-11 (PA) - Wellbore #1 - No Surveys	10,433.71	6,905.00	2,041.79	1,860.46	11.260	CC, ES
Camolo Red D 27-11 (PA) - Wellbore #1 - No Surveys	10,600.00	6,905.00	2,048.55	1,866.22	11.235	SF
Camolo Red D 27-12 (SI) - Wellbore #1 - Gyro Surveys	10,398.33	6,808.08	3,420.83	3,354.21	51.355	CC
Camolo Red D 27-12 (SI) - Wellbore #1 - Gyro Surveys	10,400.00	6,808.09	3,420.83	3,354.20	51.346	ES
Camolo Red D 27-12 (SI) - Wellbore #1 - Gyro Surveys	11,200.00	6,809.95	3,513.51	3,442.36	49.387	SF
Camolo Red D 27-14 (PR) - Wellbore #1 - Gyro Surveys	11,683.78	6,927.24	2,044.01	1,967.87	26.843	CC
Camolo Red D 27-14 (PR) - Wellbore #1 - Gyro Surveys	11,700.00	6,927.18	2,044.08	1,967.82	26.805	ES
Camolo Red D 27-14 (PR) - Wellbore #1 - Gyro Surveys	11,900.00	6,926.43	2,055.42	1,977.99	26.545	SF
Estes D 27-10 (SI) - Wellbore #1 - Gyro Surveys	10,621.48	6,947.62	691.46	622.85	10.078	CC, ES, SF
Estes D27-07 (SI) - Wellbore #1 - Gyro Surveys	9,036.54	6,893.27	861.47	803.36	14.825	CC, ES
Estes D27-07 (SI) - Wellbore #1 - Gyro Surveys	9,100.00	6,892.19	863.80	805.40	14.790	SF
Hippo D 27-23 D (PR) - Wellbore #1 - MWD Surveys	11,000.00	7,163.61	139.36	63.17	1.829	ES, SF
Hippo D 27-23 D (PR) - Wellbore #1 - MWD Surveys	11,004.19	7,163.60	139.30	63.38	1.835	CC
Hippo D 27-24 D (PR) - Wellbore #1 - MWD Surveys	11,079.83	6,982.13	1,478.71	1,404.93	20.041	CC, ES
Hippo D 27-24 D (PR) - Wellbore #1 - MWD Surveys	11,200.00	6,983.84	1,483.59	1,409.20	19.945	SF
Hippo D 27-25 D (PR) - Wellbore #1 - MWD Surveys	11,096.46	7,210.16	2,704.77	2,629.48	35.927	CC
Hippo D 27-25 D (PR) - Wellbore #1 - MWD Surveys	11,100.00	7,210.28	2,704.77	2,629.45	35.910	ES
Hippo D 27-25 D (PR) - Wellbore #1 - MWD Surveys	11,700.00	7,232.00	2,771.17	2,690.89	34.516	SF
Hippo D 34-27 D (PR) - Wellbore #1 - MWD Surveys	12,300.00	7,489.36	82.65	-22.06	0.789	Level 1, ES, SF
Hippo D 34-27 D (PR) - Wellbore #1 - MWD Surveys	12,318.62	7,489.35	80.52	-21.19	0.792	Level 1, CC
Hippo D 34-28 D (PR) - Wellbore #1 - MWD Surveys	12,316.56	7,318.41	1,495.35	1,397.37	15.261	CC, ES
Hippo D 34-28 D (PR) - Wellbore #1 - MWD Surveys	12,400.00	7,317.87	1,497.68	1,399.32	15.227	SF
Hippo D 34-29 D (PR) - Wellbore #1 - MWD Surveys	12,317.03	7,403.20	2,757.18	2,657.47	27.653	CC, ES
Hippo D 34-29 D (PR) - Wellbore #1 - MWD Surveys	12,800.00	7,405.22	2,799.16	2,694.70	26.796	SF
Hippo D 34-30 D (PR) - Wellbore #1 - MWD Surveys	12,000.00	12,000.00	4,174.04	4,040.19	31.186	ES, SF
Hippo D 34-30 D (PR) - Wellbore #1 - MWD Surveys	12,450.85	7,771.34	4,151.43	4,045.01	39.008	CC
Kyle D 27-16 (PR) - Wellbore #1 - Gyro Surveys	11,361.53	6,922.32	232.66	158.86	3.152	CC, ES, SF
Kyle White D 27-1 (PR) - Wellbore #1 - Gyro Surveys	7,614.38	6,870.23	761.01	710.06	14.937	CC, ES
Kyle White D 27-1 (PR) - Wellbore #1 - Gyro Surveys	7,700.00	6,870.64	765.81	714.52	14.932	SF
Kyle White D 27-15 (SI) - Wellbore #1 - Gyro Surveys	11,801.46	6,918.07	844.16	767.19	10.968	CC, ES, SF
Kyle White D 27-2 (SI) - Wellbore #1 - Gyro Surveys	7,655.22	6,873.90	725.24	674.35	14.249	CC, ES
Kyle White D 27-2 (SI) - Wellbore #1 - Gyro Surveys	7,700.00	6,875.62	726.62	675.57	14.232	SF
Kyle White D 27-8 (PR) - Wellbore #1 - Gyro Surveys	9,217.13	6,899.41	662.25	602.99	11.176	CC, ES, SF
Kyle White D 27-9 (PR) - Wellbore #1 - Gyro Surveys	10,324.04	6,885.57	699.67	633.26	10.536	CC, ES
Kyle White D 27-9 (PR) - Wellbore #1 - Gyro Surveys	10,400.00	6,891.87	703.76	636.90	10.527	SF
Rhino D 27 18 D (PR) - Wellbore #1 - MWD Surveys	8,429.29	7,125.53	1,468.71	1,405.34	23.175	CC, ES
Rhino D 27 18 D (PR) - Wellbore #1 - MWD Surveys	8,500.00	7,125.98	1,470.41	1,406.73	23.087	SF
Rhino D 27-19 D (PR) - Wellbore #1 - MWD Surveys	8,433.87	7,265.25	2,693.04	2,627.79	41.270	CC, ES, SF
Rhino D 27-20 D (PR) - Wellbore #1 - MWD Surveys	9,677.80	7,090.43	2,712.77	2,650.25	43.390	CC
Rhino D 27-20 D (PR) - Wellbore #1 - MWD Surveys	9,700.00	7,091.20	2,712.86	2,650.21	43.302	ES
Rhino D 27-20 D (PR) - Wellbore #1 - MWD Surveys	10,300.00	7,112.52	2,783.09	2,717.09	42.167	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 D34-729
Project:	Mustang	TVD Reference:	KB @ 4862.00ft
Reference Site:	D Section 22	MD Reference:	KB @ 4862.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersen D34-729	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
D Section 27						
Rhino D 27-21 (PR) - Wellbore #1 - Gyro Surveys	9,858.84	6,968.49	1,524.04	1,460.47	23.972	CC, ES
Rhino D 27-21 (PR) - Wellbore #1 - Gyro Surveys	10,000.00	6,979.40	1,530.53	1,466.12	23.764	SF
Rhino D 27-22 D (PR) - Wellbore #1 - MWD Surveys	9,685.29	7,131.55	38.60	-24.59	0.611	Level 1, CC, ES, SF
Rhino State D 27-27 D (PR) - Wellbore #1 - MWD Surve	7,027.82	7,718.94	44.66	-34.22	0.566	Level 1, CC, SF
Rhino State D 27-27 D (PR) - Wellbore #1 - MWD Surve	7,050.00	7,727.51	49.11	-34.50	0.587	Level 1, ES
Rhino State D 27-28 D (PR) - Wellbore #1 - MWD Surve	7,214.86	7,547.23	1,463.28	1,387.67	19.353	CC, ES
Rhino State D 27-28 D (PR) - Wellbore #1 - MWD Surve	7,298.03	7,551.72	1,465.59	1,389.73	19.320	SF
UPRR Amoco 1 63 (PA) - Wellbore #1 - No Surveys	10,753.05	6,907.00	391.64	208.05	2.133	CC, ES, SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersen D34-729
Project:	Mustang	TVD Reference:	KB @ 4862.00ft
Reference Site:	D Section 22	MD Reference:	KB @ 4862.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersen D34-729	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						
O'SH D 28-7 (P&A) - Wellbore #1 - No Surveys	9,080.27	6,837.00	5,987.48	5,816.23	34.964	CC
O'SH D 28-7 (P&A) - Wellbore #1 - No Surveys	9,100.00	6,837.00	5,987.51	5,816.15	34.940	ES
O'SH D 28-7 (P&A) - Wellbore #1 - No Surveys	10,300.00	6,837.00	6,110.45	5,932.05	34.252	SF
Spike ST GWS D 28-12 (SI) - Wellbore #1 - Gyro Surve	10,450.87	6,800.00	8,722.54	8,655.60	130.313	CC
Spike ST GWS D 28-12 (SI) - Wellbore #1 - Gyro Surve	10,500.00	6,800.00	8,722.68	8,655.41	129.670	ES
Spike ST GWS D 28-12 (SI) - Wellbore #1 - Gyro Surve	14,800.00	6,841.63	9,746.57	9,654.19	105.496	SF
Guttersen D State 28-29D (PR) - Wellbore #1 - MWD Su	5,602.56	5,701.87	7,910.00	7,869.56	195.561	CC
Guttersen D State 28-29D (PR) - Wellbore #1 - MWD Su	7,000.00	6,899.90	7,915.38	7,865.63	159.109	ES
Guttersen D State 28-29D (PR) - Wellbore #1 - MWD Su	12,000.00	6,967.11	9,349.62	9,275.13	125.520	SF
Guttersen D State 28-30D - Wellbore #1 - Guttersen D S	857.83	830.59	8,587.55	8,583.24	1,995.153	CC, ES
Guttersen D State 28-30D - Wellbore #1 - Guttersen D S	10,600.00	7,005.96	9,975.90	9,909.58	150.427	SF
Guttersen State D28-18D (PR) - Wellbore #1 - MWD Sur	8,258.99	6,889.13	6,805.11	6,748.30	119.774	CC
Guttersen State D28-18D (PR) - Wellbore #1 - MWD Sur	8,300.00	6,888.79	6,805.24	6,748.24	119.388	ES
Guttersen State D28-18D (PR) - Wellbore #1 - MWD Sur	11,500.00	6,861.17	7,537.43	7,465.17	104.310	SF
Guttersen State D28-21D (SI) - Wellbore #1 - MWD Surv	9,582.35	7,151.22	6,694.81	6,629.90	103.139	CC
Guttersen State D28-21D (SI) - Wellbore #1 - MWD Surv	9,600.00	7,151.22	6,694.83	6,629.81	102.955	ES
Guttersen State D28-21D (SI) - Wellbore #1 - MWD Surv	12,500.00	7,151.15	7,302.95	7,220.93	89.034	SF
Guttersen State D28-24D (SI) - Wellbore #1 - MWD Surv	11,139.81	6,859.43	6,711.75	6,635.12	87.588	CC
Guttersen State D28-24D (SI) - Wellbore #1 - MWD Surv	11,200.00	6,860.40	6,712.02	6,634.99	87.138	ES
Guttersen State D28-24D (SI) - Wellbore #1 - MWD Surv	13,500.00	6,901.73	7,114.45	7,024.73	79.299	SF
Guttersen State D28-28D (PR) - Wellbore #1 - MWD Sur	4,717.43	4,774.00	6,710.03	6,674.13	186.933	CC
Guttersen State D28-28D (PR) - Wellbore #1 - MWD Sur	4,800.00	4,803.01	6,710.29	6,674.00	184.889	ES
Guttersen State D28-28D (PR) - Wellbore #1 - MWD Sur	10,700.00	6,923.37	7,717.65	7,649.37	113.031	SF
Guttersen State D28-79HN - Wellbore #1 - Actual	7,300.00	11,086.00	9,190.43	9,080.56	83.655	SF
Guttersen State D28-79HN - Wellbore #1 - Actual	11,152.16	7,593.00	9,025.64	8,948.34	116.758	CC
Guttersen State D28-79HN - Wellbore #1 - Actual	11,200.00	7,593.00	9,025.76	8,948.13	116.253	ES
HSR Guttersen State 10-28 (SI) - Wellbore #1 - Gyro Su	10,367.18	6,362.82	6,244.45	6,179.77	96.542	CC
HSR Guttersen State 10-28 (SI) - Wellbore #1 - Gyro Su	10,400.00	6,363.08	6,244.54	6,179.64	96.217	ES
HSR Guttersen State 10-28 (SI) - Wellbore #1 - Gyro Su	12,900.00	6,400.00	6,738.57	6,659.34	85.044	SF
HSR Guttersen State 15-28 (SI) - Wellbore #1 - Gyro Su	12,030.74	7,111.56	5,658.30	5,577.47	70.004	CC
HSR Guttersen State 15-28 (SI) - Wellbore #1 - Gyro Su	12,100.00	7,119.83	5,658.72	5,577.30	69.503	ES
HSR Guttersen State 15-28 (SI) - Wellbore #1 - Gyro Su	13,800.00	7,194.00	5,926.10	5,833.75	64.168	SF
HSR Guttersen State 7-28 (PR) - Wellbore #1 - Gyro Sur	9,004.89	7,147.00	6,178.16	6,117.91	102.536	CC, ES
HSR Guttersen State 7-28 (PR) - Wellbore #1 - Gyro Sur	11,600.00	7,167.97	6,701.04	6,626.29	89.647	SF
O'SH D 28-1 (SI) - Wellbore #1 - Gyro Surveys	8,111.56	6,853.30	4,991.72	4,938.69	94.129	CC, ES
O'SH D 28-1 (SI) - Wellbore #1 - Gyro Surveys	10,100.00	6,833.30	5,373.16	5,310.51	85.756	SF
O'SH D 28-2 (SI) - Wellbore #1 - Gyro Surveys	7,740.32	6,836.53	5,972.56	5,921.51	116.982	CC, ES
O'SH D 28-2 (SI) - Wellbore #1 - Gyro Surveys	10,600.00	6,834.39	6,621.88	6,557.20	102.384	SF
O'SH D 28-8 (SI) - Wellbore #1 - Gyro Surveys	9,150.27	6,951.91	4,633.32	4,574.44	78.694	CC
O'SH D 28-8 (SI) - Wellbore #1 - Gyro Surveys	9,200.00	6,953.93	4,633.58	4,574.41	78.300	ES
O'SH D 28-8 (SI) - Wellbore #1 - Gyro Surveys	10,800.00	7,018.73	4,917.80	4,849.84	72.359	SF
Spike ST GWS D 28-03 (PR) - Wellbore #1 - Gyro Surve	7,600.68	6,784.11	7,214.40	7,148.27	109.098	CC, ES
Spike ST GWS D 28-03 (PR) - Wellbore #1 - Gyro Surve	11,100.00	6,759.22	8,018.24	7,935.13	96.478	SF
Spike ST GWS D 28-4 (SI) - Wellbore #1 - Gyro Surveys	7,563.22	6,840.40	8,592.45	8,541.82	169.712	CC
Spike ST GWS D 28-4 (SI) - Wellbore #1 - Gyro Surveys	7,600.00	6,840.30	8,592.53	8,541.76	169.253	ES
Spike ST GWS D 28-4 (SI) - Wellbore #1 - Gyro Surveys	12,600.00	6,828.11	9,959.88	9,883.99	131.250	SF
Spike State D 28-13 (SI) - Wellbore #1 - Gyro Surveys	11,894.44	6,809.85	8,642.16	8,564.89	111.846	CC
Spike State D 28-13 (SI) - Wellbore #1 - Gyro Surveys	12,000.00	6,809.94	8,642.80	8,564.76	110.755	ES
Spike State D 28-13 (SI) - Wellbore #1 - Gyro Surveys	15,700.00	6,814.28	9,442.94	9,342.91	94.402	SF
Spike State D28-05 (PR) - Wellbore #1 - Gyro Surveys	8,907.53	6,855.05	8,734.01	8,676.78	152.605	CC
Spike State D28-05 (PR) - Wellbore #1 - Gyro Surveys	9,000.00	6,855.85	8,734.50	8,676.74	151.211	ES
Spike State D28-05 (PR) - Wellbore #1 - Gyro Surveys	13,700.00	6,896.57	9,962.38	9,878.58	118.887	SF
Spike State D28-06 (SI) - Wellbore #1 - Gyro Surveys	8,946.29	6,934.80	7,042.38	6,984.70	122.083	CC

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

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersen D34-729
Project:	Mustang	TVD Reference:	KB @ 4862.00ft
Reference Site:	D Section 22	MD Reference:	KB @ 4862.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersen D34-729	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						
Offset Well - Wellbore - Design						
Spike State D28-06 (SI) - Wellbore #1 - Gyro Surveys	9,000.00	6,935.18	7,042.59	6,984.59	121.437	ES
Spike State D28-06 (SI) - Wellbore #1 - Gyro Surveys	12,400.00	6,959.30	7,843.64	7,767.08	102.447	SF
Spike State D28-11 (SI) - Wellbore #1 - Gyro Surveys	10,241.90	6,632.37	7,124.73	7,059.81	109.760	CC
Spike State D28-11 (SI) - Wellbore #1 - Gyro Surveys	10,300.00	6,633.89	7,124.96	7,059.66	109.105	ES
Spike State D28-11 (SI) - Wellbore #1 - Gyro Surveys	14,000.00	14,000.00	8,053.09	7,941.47	72.151	SF
Spike State GWS D 28-14 (P&A) - Wellbore #1 - Gyro Su	11,956.39	6,851.43	7,108.01	7,030.12	91.257	CC
Spike State GWS D 28-14 (P&A) - Wellbore #1 - Gyro Su	12,000.00	6,852.97	7,108.14	7,029.93	90.883	ES
Spike State GWS D 28-14 (P&A) - Wellbore #1 - Gyro Su	14,600.00	6,955.22	7,582.61	7,488.43	80.516	SF

Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersen D34-729
Project:	Mustang	TVD Reference:	KB @ 4862.00ft
Reference Site:	D Section 22	MD Reference:	KB @ 4862.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersen D34-729	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 33						
Cydney White D33-01 (PR) - Wellbore #1 - Gyro Surveys	13,127.33	6,856.69	4,629.32	4,542.64	53.412	CC, ES
Cydney White D33-01 (PR) - Wellbore #1 - Gyro Surveys	14,200.00	6,866.27	4,751.96	4,658.75	50.980	SF
Cydney White D33-02 (PR) - Wellbore #1 - Gyro Surveys	13,074.54	6,833.95	5,939.11	5,852.91	68.899	CC
Cydney White D33-02 (PR) - Wellbore #1 - Gyro Surveys	13,100.00	6,834.15	5,939.17	5,852.78	68.748	ES
Cydney White D33-02 (PR) - Wellbore #1 - Gyro Surveys	14,900.00	6,851.57	6,213.31	6,116.10	63.916	SF
Cydney White D33-07 (PR) - Wellbore #1 - Gyro Surveys	14,364.78	6,924.08	6,011.16	5,914.75	62.352	CC
Cydney White D33-07 (PR) - Wellbore #1 - Gyro Surveys	14,400.00	6,924.33	6,011.26	5,914.59	62.180	ES
Cydney White D33-07 (PR) - Wellbore #1 - Gyro Surveys	16,000.00	6,869.42	6,229.61	6,123.40	58.652	SF
Guttersen D 33-09 (PR) - Wellbore #1 - Gyro Surveys	15,896.93	6,867.46	4,507.97	4,399.76	41.656	CC
Guttersen D 33-09 (PR) - Wellbore #1 - Gyro Surveys	15,900.00	6,867.47	4,507.98	4,399.73	41.647	ES
Guttersen D 33-09 (PR) - Wellbore #1 - Gyro Surveys	16,700.00	6,870.25	4,578.95	4,465.76	40.456	SF
Guttersen D 33-16 (PR) - Wellbore #1 - Gyro Surveys	17,077.06	6,837.19	4,641.31	4,540.78	46.167	CC
Guttersen D 33-16 (PR) - Wellbore #1 - Gyro Surveys	17,100.00	6,836.86	4,641.37	4,540.66	46.087	ES
Guttersen D 33-16 (PR) - Wellbore #1 - Gyro Surveys	17,461.11	6,831.63	4,657.17	4,553.97	45.127	SF
Guttersen D 33-23 (PR) - Wellbore #1 - Gyro Surveys	16,358.21	6,830.11	5,314.60	5,202.88	47.569	CC
Guttersen D 33-23 (PR) - Wellbore #1 - Gyro Surveys	16,400.00	6,829.94	5,314.77	5,202.72	47.434	ES
Guttersen D 33-23 (PR) - Wellbore #1 - Gyro Surveys	17,461.11	6,825.69	5,427.83	5,309.35	45.813	SF
Guttersen D33-10 (SI) - Wellbore #1 - No Surveys	15,618.40	6,858.00	5,965.31	5,745.93	27.191	CC
Guttersen D33-10 (SI) - Wellbore #1 - No Surveys	15,700.00	6,858.00	5,965.87	5,745.86	27.117	ES
Guttersen D33-10 (SI) - Wellbore #1 - No Surveys	16,500.00	6,858.00	6,030.10	5,804.73	26.756	SF
Guttersen D33-15 (PR) - Wellbore #1 - No Surveys	16,944.36	6,863.00	5,955.92	5,725.95	25.899	CC
Guttersen D33-15 (PR) - Wellbore #1 - No Surveys	17,000.00	6,863.00	5,956.18	5,725.78	25.851	ES
Guttersen D33-15 (PR) - Wellbore #1 - No Surveys	17,461.11	6,863.00	5,978.30	5,744.61	25.583	SF
HSR Guttersen 11-33 (SI) - Wellbore #1 - No Surveys	15,610.25	6,852.00	7,264.64	7,045.44	33.142	CC
HSR Guttersen 11-33 (SI) - Wellbore #1 - No Surveys	15,700.00	6,852.00	7,265.19	7,045.30	33.040	ES
HSR Guttersen 11-33 (SI) - Wellbore #1 - No Surveys	17,000.00	6,852.00	7,396.37	7,167.82	32.361	SF
HSR Guttersen 13-33 (SI) - Wellbore #1 - Gyro Surveys	17,013.29	6,878.34	8,669.10	8,551.99	74.026	CC
HSR Guttersen 13-33 (SI) - Wellbore #1 - Gyro Surveys	17,100.00	6,878.36	8,669.53	8,551.75	73.604	ES
HSR Guttersen 13-33 (SI) - Wellbore #1 - Gyro Surveys	17,461.11	6,878.47	8,680.66	8,560.15	72.030	SF
HSR Guttersen 14-33 (SI) - Wellbore #1 - Gyro Surveys	17,102.41	6,936.85	7,180.18	7,062.54	61.035	CC
HSR Guttersen 14-33 (SI) - Wellbore #1 - Gyro Surveys	17,200.00	6,936.86	7,180.84	7,062.44	60.650	ES
HSR Guttersen 14-33 (SI) - Wellbore #1 - Gyro Surveys	17,461.11	6,936.90	7,189.13	7,068.78	59.736	SF
HSR Guttersen 3-33 (SI) - Wellbore #1 - Gyro Surveys	12,400.00	12,400.00	7,277.20	7,176.67	72.393	SF
HSR Guttersen 3-33 (SI) - Wellbore #1 - Gyro Surveys	13,059.04	6,952.99	7,247.37	7,161.01	83.919	CC
HSR Guttersen 3-33 (SI) - Wellbore #1 - Gyro Surveys	13,100.00	6,955.03	7,247.48	7,160.81	83.621	ES
HSR Guttersen 4-33 (P&A) - Wellbore #1 - No Surveys	13,122.79	6,867.00	8,730.53	8,530.32	43.607	CC
HSR Guttersen 4-33 (P&A) - Wellbore #1 - No Surveys	13,200.00	6,867.00	8,730.87	8,530.08	43.483	ES
HSR Guttersen 4-33 (P&A) - Wellbore #1 - No Surveys	15,300.00	6,867.00	8,997.91	8,783.10	41.888	SF
HSR-Guttersen 12-33 (SI) - Wellbore #1 - Gyro Surveys	15,845.96	6,950.64	8,605.09	8,497.07	79.666	CC
HSR-Guttersen 12-33 (SI) - Wellbore #1 - Gyro Surveys	15,900.00	6,950.66	8,605.26	8,496.82	79.359	ES
HSR-Guttersen 12-33 (SI) - Wellbore #1 - Gyro Surveys	17,461.11	6,951.15	8,755.36	8,636.17	73.460	SF
HSR-Guttersen 5-33 (SI) - Wellbore #1 - Gyro Surveys	14,575.60	6,860.44	8,296.87	8,199.02	84.788	CC
HSR-Guttersen 5-33 (SI) - Wellbore #1 - Gyro Surveys	14,600.00	6,860.23	8,296.91	8,198.87	84.627	ES
HSR-Guttersen 5-33 (SI) - Wellbore #1 - Gyro Surveys	17,461.11	6,836.95	8,784.30	8,668.88	76.109	SF
HSR-Guttersen 6-33 (SI) - Wellbore #1 - Gyro Surveys	14,488.47	6,879.66	7,152.57	7,055.61	73.772	CC
HSR-Guttersen 6-33 (SI) - Wellbore #1 - Gyro Surveys	14,500.00	6,879.78	7,152.58	7,055.53	73.706	ES
HSR-Guttersen 6-33 (SI) - Wellbore #1 - Gyro Surveys	16,700.00	6,902.63	7,486.62	7,376.14	67.763	SF

CC - Min centre to center distance or covergent 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 D34-729
Project:	Mustang	TVD Reference:	KB @ 4862.00ft
Reference Site:	D Section 22	MD Reference:	KB @ 4862.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersen D34-729	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 34						
HSR Waste Services 4-34 (SI) - Wellbore #1 - Gyro Surv	12,939.68	6,912.24	3,122.38	3,036.98	36.563	CC, ES
HSR Waste Services 4-34 (SI) - Wellbore #1 - Gyro Surv	13,500.00	6,897.31	3,172.22	3,083.59	35.790	SF
HSR Waste Services 5-34 (SI) - Wellbore #1 - Gyro Surv	14,167.12	6,931.06	3,532.15	3,437.29	37.235	CC
HSR Waste Services 5-34 (SI) - Wellbore #1 - Gyro Surv	14,200.00	6,930.93	3,532.30	3,437.20	37.140	ES
HSR Waste Services 5-34 (SI) - Wellbore #1 - Gyro Surv	14,800.00	6,928.61	3,588.40	3,489.77	36.382	SF
Liam D 34-11 (PR) - Wellbore #1 - Gyro Surveys	15,761.30	6,975.27	1,997.76	1,890.25	18.584	CC, ES
Liam D 34-11 (PR) - Wellbore #1 - Gyro Surveys	15,900.00	6,976.84	2,002.56	1,894.20	18.480	SF
Liam D 34-12 (PR) - Wellbore #1 - Gyro Surveys	15,554.19	6,933.60	3,395.13	3,289.36	32.098	CC
Liam D 34-12 (PR) - Wellbore #1 - Gyro Surveys	15,600.00	6,933.37	3,395.44	3,289.32	31.997	ES
Liam D 34-12 (PR) - Wellbore #1 - Gyro Surveys	16,000.00	6,931.31	3,424.27	3,315.73	31.547	SF
Liam D 34-13 (PR) - Wellbore #1 - Gyro Surveys	16,936.82	6,891.94	3,346.90	3,230.37	28.721	CC, ES
Liam D 34-13 (PR) - Wellbore #1 - Gyro Surveys	17,400.00	6,891.15	3,378.80	3,259.51	28.326	SF
Liam D 34-14 (PR) - Wellbore #1 - Gyro Surveys	17,082.52	6,916.67	1,981.72	1,863.92	16.823	CC
Liam D 34-14 (PR) - Wellbore #1 - Gyro Surveys	17,100.00	6,916.25	1,981.80	1,863.87	16.805	ES
Liam D 34-14 (PR) - Wellbore #1 - Gyro Surveys	17,200.00	6,913.85	1,985.20	1,866.67	16.749	SF
Liam D 34-25 (SI) - Wellbore #1 - Gyro Surveys	16,332.00	6,924.13	2,680.81	2,568.95	23.965	CC, ES
Liam D 34-25 (SI) - Wellbore #1 - Gyro Surveys	16,600.00	6,921.93	2,694.17	2,580.67	23.736	SF
Liam D 34-33 (SI) - Wellbore #1 - Gyro Surveys	16,331.93	6,887.51	3,834.48	3,722.75	34.318	CC, ES
Liam D 34-33 (SI) - Wellbore #1 - Gyro Surveys	16,900.00	6,883.04	3,876.33	3,761.12	33.646	SF
D Section 35						
UPRR 1 (DA) - Wellbore #1 - No Surveys	13,035.93	6,932.00	1,922.39	1,721.54	9.571	CC, ES
UPRR 1 (DA) - Wellbore #1 - No Surveys	13,200.00	6,932.00	1,929.38	1,727.41	9.553	SF
Waste Management 22-35 (SI) - Wellbore #1 - Gyro Surv	14,424.75	6,938.00	3,314.14	3,217.27	34.213	CC, ES
Waste Management 22-35 (SI) - Wellbore #1 - Gyro Surv	15,000.00	6,938.92	3,363.69	3,263.18	33.467	SF
Waste Management 31-35 (SI) - Wellbore #1 - Gyro Surv	12,903.07	6,947.51	4,329.41	4,244.47	50.975	CC, ES
Waste Management 31-35 (SI) - Wellbore #1 - Gyro Surv	13,900.00	6,940.50	4,442.70	4,351.46	48.693	SF
Waste Management 41-35 (SI) - Wellbore #1 - Gyro Surv	13,013.83	6,907.82	5,898.96	5,812.93	68.574	CC
Waste Management 41-35 (SI) - Wellbore #1 - Gyro Surv	13,100.00	6,907.23	5,899.59	5,812.90	68.060	ES
Waste Management 41-35 (SI) - Wellbore #1 - Gyro Surv	14,800.00	6,898.94	6,163.44	6,066.25	63.420	SF
Waste Management D 35-15 (PR) - Wellbore #1 - Gyro S	17,090.65	6,898.14	4,482.79	4,364.99	38.054	CC
Waste Management D 35-15 (PR) - Wellbore #1 - Gyro S	17,100.00	6,897.99	4,482.80	4,364.93	38.030	ES
Waste Management D 35-15 (PR) - Wellbore #1 - Gyro S	17,461.11	6,892.17	4,498.07	4,377.58	37.330	SF
Waste Management USX D 35-11 (SI) - Wellbore #1 - Gy	15,756.84	6,914.46	3,216.93	3,109.63	29.982	CC
Waste Management USX D 35-11 (SI) - Wellbore #1 - Gy	15,800.00	6,916.91	3,217.21	3,109.56	29.886	ES
Waste Management USX D 35-11 (SI) - Wellbore #1 - Gy	16,200.00	6,935.31	3,247.24	3,137.10	29.482	SF
Waste Management USX D 35-14 (SI) - Wellbore #1 - No	16,797.73	6,920.00	3,329.39	3,099.44	14.479	CC
Waste Management USX D 35-14 (SI) - Wellbore #1 - No	16,800.00	6,920.00	3,329.39	3,099.43	14.478	ES
Waste Management USX D 35-14 (SI) - Wellbore #1 - No	17,100.00	6,920.00	3,343.08	3,111.01	14.405	SF
Waste Management USX D 35-7 (PR) - Wellbore #1 - Gy	14,264.04	6,884.05	4,520.21	4,424.69	47.319	CC
Waste Management USX D 35-7 (PR) - Wellbore #1 - Gy	14,300.00	6,883.71	4,520.36	4,424.55	47.181	ES
Waste Management USX D 35-7 (PR) - Wellbore #1 - Gy	15,200.00	6,874.73	4,616.09	4,514.58	45.473	SF
Waste Management USX D 35-9 (SI) - Wellbore #1 - No	15,732.67	7,559.00	6,212.54	5,987.30	27.582	CC
Waste Management USX D 35-9 (SI) - Wellbore #1 - No	15,800.00	7,559.00	6,212.91	5,987.15	27.520	ES
Waste Management USX D 35-9 (SI) - Wellbore #1 - No	16,800.00	7,559.00	6,303.56	6,070.96	27.101	SF
Waste Services 21-35 (PR) - Wellbore #1 - Gyro Surveys	12,834.27	6,898.80	3,366.17	3,281.52	39.765	CC, ES
Waste Services 21-35 (PR) - Wellbore #1 - Gyro Surveys	13,500.00	6,894.45	3,431.37	3,342.57	38.642	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 D34-729
Project:	Mustang	TVD Reference:	KB @ 4862.00ft
Reference Site:	D Section 22	MD Reference:	KB @ 4862.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersen D34-729	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
Y Section 02						
Waste Management 2I-221 - Wellbore #1 - Wellbore #1 -	17,461.11	11,210.02	1,944.04	1,773.94	11.429	CC, ES, SF
Waste Management 2I-401 - Wellbore #1 - Wellbore #1 -	17,461.11	11,425.02	1,630.14	1,466.43	9.957	CC, ES, SF
Waste Management 2L-201 - Wellbore #1 - Wellbore #1	17,461.11	11,213.02	2,562.93	2,386.37	14.516	CC, ES, SF
Waste Management 2L-301 - Wellbore #1 - Wellbore #1	17,461.11	11,326.02	2,890.24	2,714.96	16.489	CC, ES, SF
Waste Management 2L-421 - Wellbore #1 - Wellbore #1	17,461.11	11,433.02	3,218.92	3,041.73	18.166	CC, ES, SF
Waste Management 2L-441 - Wellbore #1 - Wellbore #1	17,461.11	11,379.02	2,229.04	2,055.35	12.834	CC, ES, SF
Waste Management 2Q-201 - Wellbore #1 - Wellbore #1	17,461.11	11,274.02	4,147.50	3,970.46	23.426	CC, ES, SF
Waste Management 2Q-321 - Wellbore #1 - Wellbore #1	17,461.11	11,347.02	4,467.07	4,288.57	25.026	CC, ES, SF
Waste Management 2Q-341 - Wellbore #1 - Wellbore #1	17,461.11	11,345.02	3,559.82	3,381.01	19.909	CC, ES, SF
Waste Management 2Q-401 - Wellbore #1 - Wellbore #1	17,461.11	11,502.02	3,870.15	3,690.21	21.508	CC, ES, SF
Waste Management 2T-221 - Wellbore #1 - Wellbore #1	17,461.11	11,189.02	5,814.44	5,633.24	32.089	CC, ES, SF
Waste Management 2T-241 - Wellbore #1 - Wellbore #1	17,461.11	11,213.02	4,804.37	4,624.99	26.783	CC, ES, SF
Waste Management 2T-301 - Wellbore #1 - Wellbore #1	17,461.11	11,316.02	5,100.53	4,920.12	28.271	CC, ES, SF
Waste Management 2T-401 - Wellbore #1 - Wellbore #1	17,461.11	11,385.02	5,481.28	5,300.35	30.295	CC, ES, SF
Waste Management 2Y-201 - Wellbore #1 - Wellbore #1	17,461.11	11,229.02	6,471.06	6,289.04	35.552	CC, ES, SF
Waste Management 2Y-441 - Wellbore #1 - Wellbore #1	17,461.11	11,403.02	6,153.71	5,972.18	33.899	CC, ES, SF
Y Section 03						
Waste Management USX Y03-03 - Wellbore #1 - Wellbo	17,461.11	6,922.75	2,170.43	2,056.93	19.122	CC, ES, SF
Waste Management USX Y03-04 - Wellbore #1 - Wellbo	17,461.11	6,965.53	3,454.37	3,336.11	29.210	CC, ES, SF
Waste Management USX Y03-05 - Wellbore #1 - Wellbo	17,461.11	6,880.53	3,868.39	3,761.55	36.207	CC, ES, SF
Waste Management USX Y03-06 - Wellbore #1 - Wellbo	17,461.11	6,981.73	2,984.21	2,891.40	32.155	CC, ES, SF
Waste Management USX Y03-11 - Wellbore #1 - Wellbor	17,461.11	6,896.17	4,175.26	4,093.90	51.321	CC, ES, SF
Waste Management USX Y03-12 - Wellbore #1 - Wellbo	17,461.11	6,927.92	4,822.17	4,724.77	49.511	CC, ES, SF
Waste Management USX Y03-13 - Wellbore #1 - Wellbo	17,461.11	6,920.01	5,805.62	5,719.59	67.489	CC, ES, SF
Waste Management USX Y03-14 - Wellbore #1 - Wellbo	17,461.11	6,778.46	5,363.50	5,291.96	74.975	CC, ES, SF
Waste Management USX Y03-19 - Wellbore #1 - Wellbo	17,461.11	6,898.71	3,138.60	3,027.32	28.204	CC, ES, SF
Waste Management USX Y03-25 - Wellbore #1 - Wellbo	17,461.11	6,922.22	4,926.52	4,841.36	57.855	CC, ES, SF
Waste Management USX Y3-15 - Wellbore #1 - As Drille	17,461.11	6,960.01	4,791.26	4,735.27	85.575	CC, ES, SF
Y Section 04						
HSR-Guttersen 01-04 - Original Drilling - Original Drilling	17,461.11	6,746.61	4,956.28	4,837.30	41.655	CC, ES, SF
HSR-Guttersen 02-04 - Original Drilling - Original Drilling	17,461.11	6,911.34	6,048.88	5,928.76	50.354	CC, ES, SF
HSR-Guttersen 03-04 - Original Drilling - Original Drilling	17,461.11	6,975.21	7,486.84	7,366.44	62.185	CC, ES, SF
HSR-Guttersen 05-04 - Original Drilling - Original Drilling	17,461.11	7,226.00	8,831.05	8,712.04	74.201	CC, ES, SF
HSR-Guttersen 07-04 - Original Drilling - Original Drilling	17,461.11	6,926.33	6,482.61	6,366.18	55.679	CC, ES, SF
Melvin Y04-04 - Original Drilling - Original Drilling - As Dr	17,461.11	7,231.90	8,316.36	8,195.21	68.646	CC, ES, SF

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

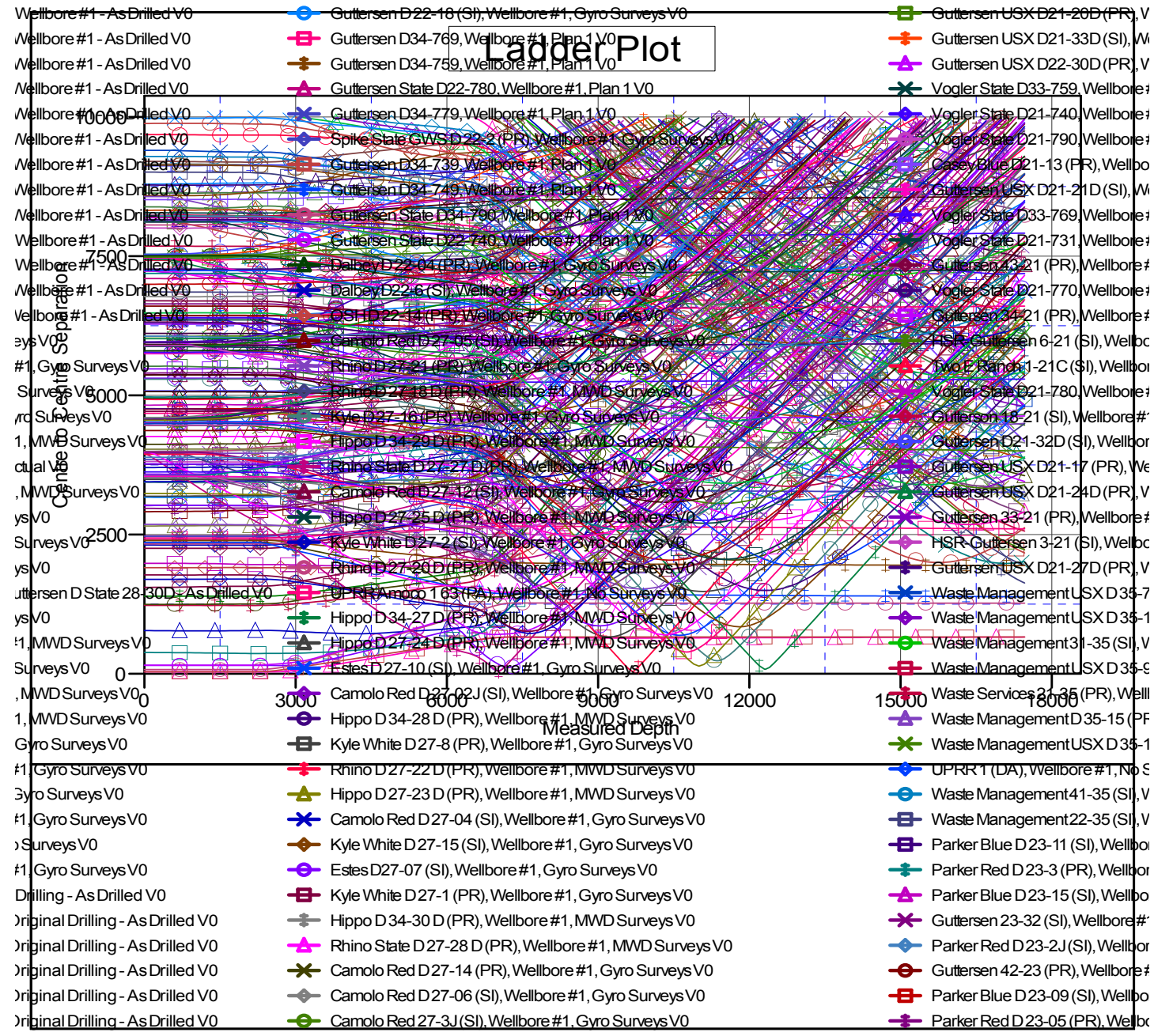
Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersten D34-729
Project:	Mustang	TVD Reference:	KB @ 4862.00ft
Reference Site:	D Section 22	MD Reference:	KB @ 4862.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersten D34-729	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to KB @ 4862.00ft
 Offset Depths are relative to Offset Datum
 Central Meridian is -105.5000000

Coordinates are relative to: Guttersten D34-729
 Coordinate System is US State Plane 1983, Colorado Northern Zone
 Grid Convergence at Surface is: 0.62°



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

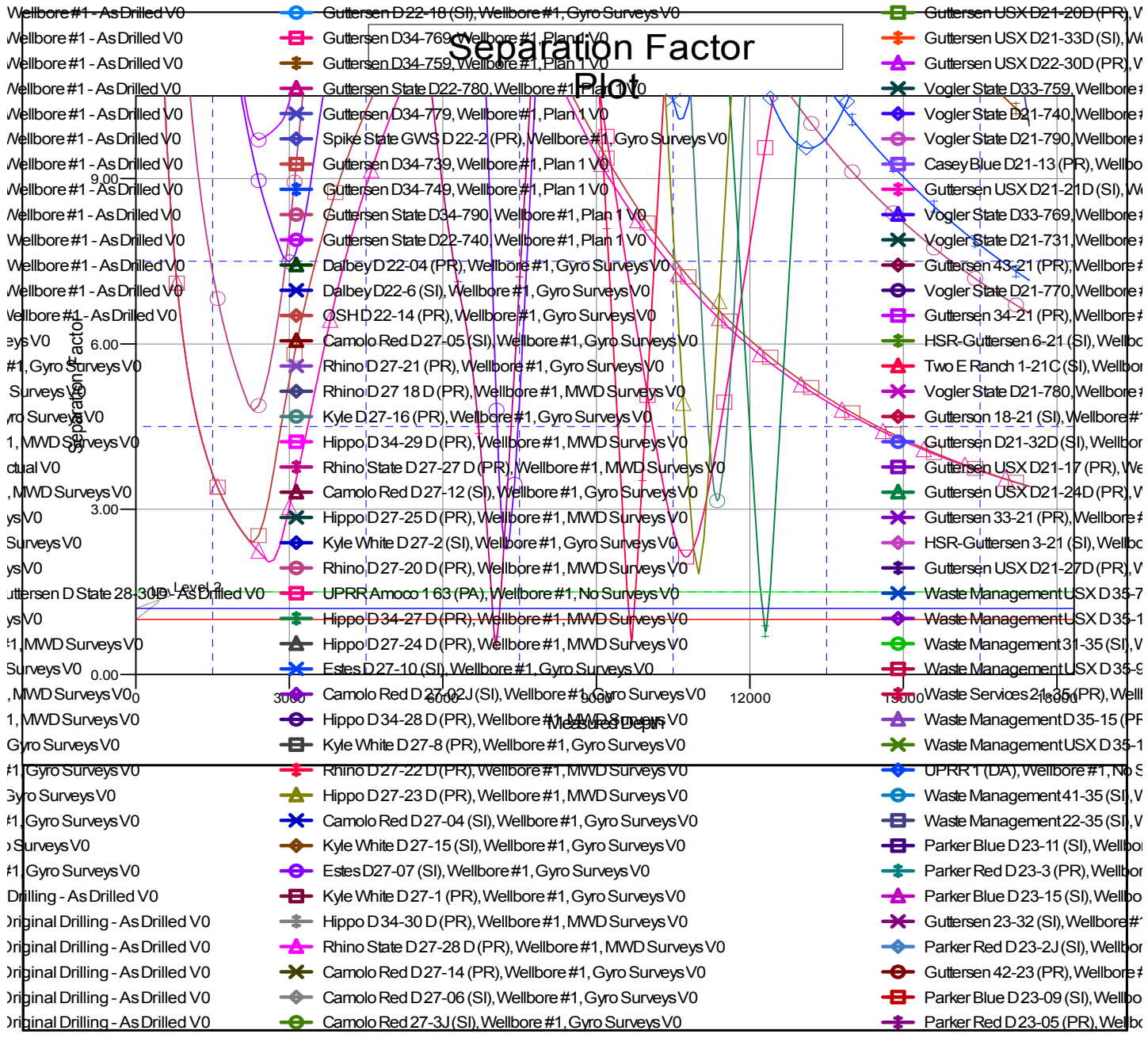
Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersen D34-729
Project:	Mustang	TVD Reference:	KB @ 4862.00ft
Reference Site:	D Section 22	MD Reference:	KB @ 4862.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersen D34-729	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to KB @ 4862.00ft
 Offset Depths are relative to Offset Datum
 Central Meridian is -105.5000000

Coordinates are relative to: Guttersen D34-729
 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