

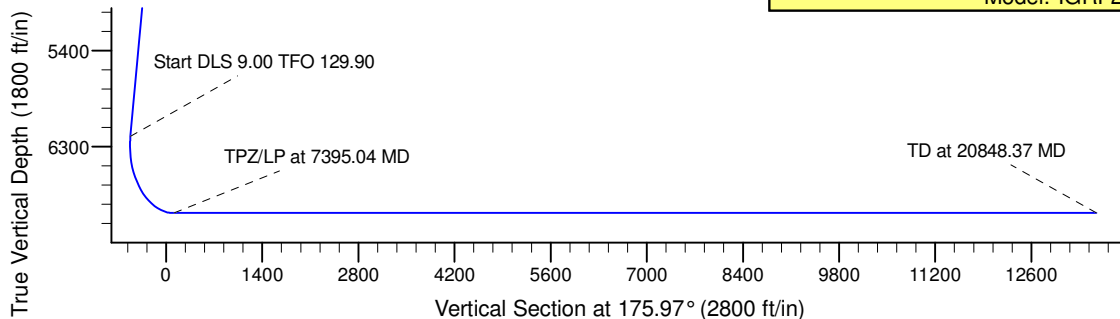
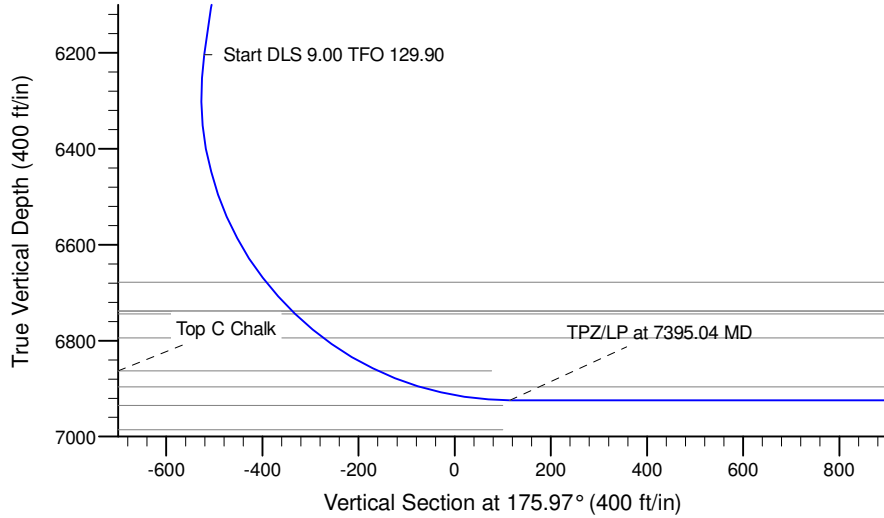
Project: Mustang
 Site: D Section 29
 Well: Gutteresen Y05-771
 Wellbore: Gutteresen Y05-771
 Design: Prelim - Rev 1

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

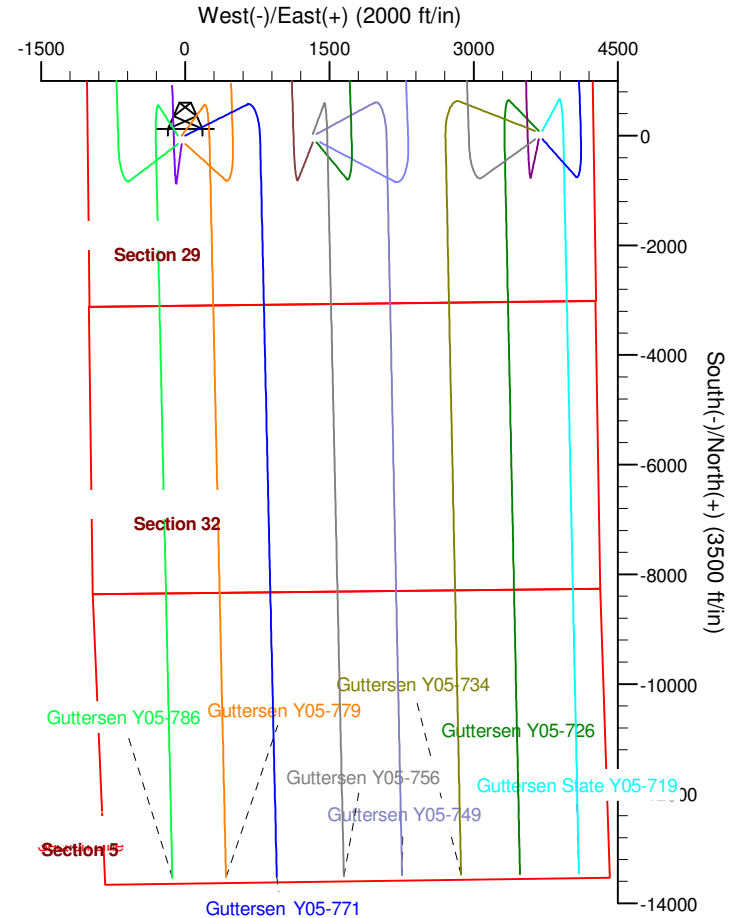
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	2200.00	0.00	0.00	2200.00	0.00	0.00	0.00	0.00	0.00	
3	2857.69	13.15	48.62	2851.93	49.69	56.39	2.00	48.62	-45.60	
4	6300.32	13.15	48.62	6204.23	567.62	644.19	0.00	0.00	-520.93	
5	7395.04	90.00	179.27	6924.00	-60.28	779.87	9.00	129.90	114.95	GUTTERSEN Y05-771 TPZ
6	20848.37	90.00	179.27	6924.00	-13512.50	952.26	0.00	0.00	13546.01	GUTTERSEN Y05-771 BHL



T G M

Azimuths to Grid North
 True North: -0.59°
 Magnetic North: 7.49°

Magnetic Field
 Strength: 52290.2snT
 Dip Angle: 66.72°
 Date: 8/8/2017
 Model: IGRF2015



WELL DETAILS: Gutteresen Y05-771				
0.00	0.00	1316099.11	3256722.40	4780.00
				Latitude
				Longitude
			40.1974368	-104.5809598
Plan: Prelim - Rev 1 (Gutteresen Y05-771/Gutteresen Y05-771)				
Created By: Colby Baxter		Date: 9:13, April 10 2018		
Checked: _____		Date: _____		
Reviewed: _____		Date: _____		
Approved: _____		Date: _____		

Northern Region - DJ Basin

Mustang

D Section 29

Guttersen Y05-771

Guttersen Y05-771

Plan: Prelim - Rev 1

Standard Survey Report

10 April, 2018

Noble Energy, Inc.

Survey Report

Company: Northern Region - DJ Basin	Local Co-ordinate Reference: Well Guttersen Y05-771
Project: Mustang	TVD Reference: Well @ 4810.00ft
Site: D Section 29	MD Reference: Well @ 4810.00ft
Well: Guttersen Y05-771	North Reference: Grid
Wellbore: Guttersen Y05-771	Survey Calculation Method: Minimum Curvature
Design: Prelim - Rev 1	Database: EDMF

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 29		
Site Position:	Northing: 1,313,628.85 usft	Latitude: 40.1907138
From: Map	Easting: 3,254,683.41 usft	Longitude: -104.5883496
Position Uncertainty: 0.00 ft	Slot Radius: 13.200 in	Grid Convergence: 0.59 °

Well Guttersen Y05-771			
Well Position	+N/-S 0.00 ft	Northing: 1,316,099.11 usft	Latitude: 40.1974368
	+E/-W 0.00 ft	Easting: 3,256,722.40 usft	Longitude: -104.5809598
Position Uncertainty	0.00 ft	Wellhead Elevation: ft	Ground Level: 4,780.00 ft

Wellbore Guttersen Y05-771					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	8/8/2017	8.08	66.72	52,290.21095225

Design Prelim - Rev 1				
Audit Notes:				
Version:	Phase: PLAN	Tie On Depth:	0.00	
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	175.97

Survey Tool Program		Date 4/10/2018		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	20,848.37	Prelim - Rev 1 (Guttersen Y05-771)	2_MWD+IFR1+MS	A008Mb: IFR dec & multi-station analysis

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

Noble Energy, Inc.

Survey Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersen Y05-771
Project:	Mustang	TVD Reference:	Well @ 4810.00ft
Site:	D Section 29	MD Reference:	Well @ 4810.00ft
Well:	Guttersen Y05-771	North Reference:	Grid
Wellbore:	Guttersen Y05-771	Survey Calculation Method:	Minimum Curvature
Design:	Prelim - Rev 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	2.00	48.62	2,299.98	1.15	1.31	-1.06	2.00	2.00	0.00	
2,400.00	4.00	48.62	2,399.84	4.61	5.24	-4.23	2.00	2.00	0.00	
2,500.00	6.00	48.62	2,499.45	10.38	11.77	-9.52	2.00	2.00	0.00	
2,600.00	8.00	48.62	2,598.70	18.43	20.92	-16.92	2.00	2.00	0.00	
2,700.00	10.00	48.62	2,697.47	28.77	32.65	-26.41	2.00	2.00	0.00	
2,800.00	12.00	48.62	2,795.62	41.39	46.97	-37.98	2.00	2.00	0.00	
2,857.69	13.15	48.62	2,851.93	49.69	56.39	-45.60	2.00	2.00	0.00	
2,900.00	13.15	48.62	2,893.13	56.06	63.62	-51.45	0.00	0.00	0.00	
3,000.00	13.15	48.62	2,990.50	71.10	80.69	-65.25	0.00	0.00	0.00	
3,100.00	13.15	48.62	3,087.88	86.15	97.77	-79.06	0.00	0.00	0.00	
3,200.00	13.15	48.62	3,185.26	101.19	114.84	-92.87	0.00	0.00	0.00	
3,300.00	13.15	48.62	3,282.63	116.24	131.92	-106.67	0.00	0.00	0.00	
3,400.00	13.15	48.62	3,380.01	131.28	148.99	-120.48	0.00	0.00	0.00	
3,500.00	13.15	48.62	3,477.39	146.32	166.06	-134.29	0.00	0.00	0.00	
3,600.00	13.15	48.62	3,574.76	161.37	183.14	-148.10	0.00	0.00	0.00	
3,700.00	13.15	48.62	3,672.14	176.41	200.21	-161.90	0.00	0.00	0.00	
3,800.00	13.15	48.62	3,769.51	191.46	217.29	-175.71	0.00	0.00	0.00	
3,900.00	13.15	48.62	3,866.89	206.50	234.36	-189.52	0.00	0.00	0.00	
4,000.00	13.15	48.62	3,964.27	221.55	251.43	-203.32	0.00	0.00	0.00	
4,100.00	13.15	48.62	4,061.64	236.59	268.51	-217.13	0.00	0.00	0.00	
4,200.00	13.15	48.62	4,159.02	251.64	285.58	-230.94	0.00	0.00	0.00	
4,300.00	13.15	48.62	4,256.40	266.68	302.66	-244.74	0.00	0.00	0.00	
4,400.00	13.15	48.62	4,353.77	281.73	319.73	-258.55	0.00	0.00	0.00	
4,500.00	13.15	48.62	4,451.15	296.77	336.80	-272.36	0.00	0.00	0.00	
4,600.00	13.15	48.62	4,548.52	311.81	353.88	-286.17	0.00	0.00	0.00	
4,700.00	13.15	48.62	4,645.90	326.86	370.95	-299.97	0.00	0.00	0.00	
4,800.00	13.15	48.62	4,743.28	341.90	388.03	-313.78	0.00	0.00	0.00	
4,900.00	13.15	48.62	4,840.65	356.95	405.10	-327.59	0.00	0.00	0.00	
5,000.00	13.15	48.62	4,938.03	371.99	422.17	-341.39	0.00	0.00	0.00	
5,100.00	13.15	48.62	5,035.41	387.04	439.25	-355.20	0.00	0.00	0.00	
5,200.00	13.15	48.62	5,132.78	402.08	456.32	-369.01	0.00	0.00	0.00	

Noble Energy, Inc.

Survey Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersen Y05-771
Project:	Mustang	TVD Reference:	Well @ 4810.00ft
Site:	D Section 29	MD Reference:	Well @ 4810.00ft
Well:	Guttersen Y05-771	North Reference:	Grid
Wellbore:	Guttersen Y05-771	Survey Calculation Method:	Minimum Curvature
Design:	Prelim - Rev 1	Database:	EDMP

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
5,300.00	13.15	48.62	5,230.16	417.13	473.40	-382.81	0.00	0.00	0.00	
5,400.00	13.15	48.62	5,327.54	432.17	490.47	-396.62	0.00	0.00	0.00	
5,500.00	13.15	48.62	5,424.91	447.21	507.54	-410.43	0.00	0.00	0.00	
5,600.00	13.15	48.62	5,522.29	462.26	524.62	-424.24	0.00	0.00	0.00	
5,700.00	13.15	48.62	5,619.66	477.30	541.69	-438.04	0.00	0.00	0.00	
5,800.00	13.15	48.62	5,717.04	492.35	558.77	-451.85	0.00	0.00	0.00	
5,900.00	13.15	48.62	5,814.42	507.39	575.84	-465.66	0.00	0.00	0.00	
6,000.00	13.15	48.62	5,911.79	522.44	592.91	-479.46	0.00	0.00	0.00	
6,100.00	13.15	48.62	6,009.17	537.48	609.99	-493.27	0.00	0.00	0.00	
6,200.00	13.15	48.62	6,106.55	552.53	627.06	-507.08	0.00	0.00	0.00	
6,300.00	13.15	48.62	6,203.92	567.57	644.14	-520.89	0.00	0.00	0.00	
6,300.32	13.15	48.62	6,204.23	567.62	644.19	-520.93	0.00	0.00	0.00	
6,400.00	10.06	91.82	6,302.04	574.86	661.44	-526.94	9.00	-3.10	43.34	
6,500.00	13.76	132.89	6,400.04	566.47	678.92	-517.34	9.00	3.70	41.07	
6,600.00	20.92	151.64	6,495.50	542.61	696.16	-492.33	9.00	7.16	18.75	
6,700.00	29.09	160.69	6,586.08	503.87	712.72	-452.52	9.00	8.17	9.05	
6,800.00	37.62	165.97	6,669.54	451.21	728.19	-398.90	9.00	8.53	5.28	
6,900.00	46.31	169.51	6,743.84	385.91	742.20	-332.78	9.00	8.68	3.55	
7,000.00	55.07	172.15	6,807.14	309.60	754.40	-255.80	9.00	8.77	2.64	
7,100.00	63.89	174.28	6,857.88	224.14	764.50	-169.84	9.00	8.81	2.13	
7,200.00	72.72	176.10	6,894.81	131.64	772.23	-77.03	9.00	8.84	1.83	
7,300.00	81.58	177.76	6,917.03	34.39	777.42	20.35	9.00	8.85	1.66	
7,395.04	90.00	179.27	6,924.00	-60.28	779.87	114.95	9.00	8.86	1.58	
7,400.00	90.00	179.27	6,924.00	-65.24	779.93	119.90	0.00	0.00	0.00	
7,500.00	90.00	179.27	6,924.00	-165.23	781.21	219.74	0.00	0.00	0.00	
7,600.00	90.00	179.27	6,924.00	-265.22	782.49	319.57	0.00	0.00	0.00	
7,700.00	90.00	179.27	6,924.00	-365.21	783.77	419.41	0.00	0.00	0.00	
7,800.00	90.00	179.27	6,924.00	-465.20	785.06	519.24	0.00	0.00	0.00	
7,900.00	90.00	179.27	6,924.00	-565.20	786.34	619.08	0.00	0.00	0.00	
8,000.00	90.00	179.27	6,924.00	-665.19	787.62	718.91	0.00	0.00	0.00	
8,100.00	90.00	179.27	6,924.00	-765.18	788.90	818.74	0.00	0.00	0.00	
8,200.00	90.00	179.27	6,924.00	-865.17	790.18	918.58	0.00	0.00	0.00	
8,300.00	90.00	179.27	6,924.00	-965.16	791.46	1,018.41	0.00	0.00	0.00	
8,400.00	90.00	179.27	6,924.00	-1,065.15	792.74	1,118.25	0.00	0.00	0.00	
8,500.00	90.00	179.27	6,924.00	-1,165.15	794.03	1,218.08	0.00	0.00	0.00	
8,600.00	90.00	179.27	6,924.00	-1,265.14	795.31	1,317.92	0.00	0.00	0.00	
8,700.00	90.00	179.27	6,924.00	-1,365.13	796.59	1,417.75	0.00	0.00	0.00	
8,800.00	90.00	179.27	6,924.00	-1,465.12	797.87	1,517.59	0.00	0.00	0.00	
8,900.00	90.00	179.27	6,924.00	-1,565.11	799.15	1,617.42	0.00	0.00	0.00	
9,000.00	90.00	179.27	6,924.00	-1,665.11	800.43	1,717.26	0.00	0.00	0.00	
9,100.00	90.00	179.27	6,924.00	-1,765.10	801.71	1,817.09	0.00	0.00	0.00	
9,200.00	90.00	179.27	6,924.00	-1,865.09	803.00	1,916.92	0.00	0.00	0.00	
9,300.00	90.00	179.27	6,924.00	-1,965.08	804.28	2,016.76	0.00	0.00	0.00	

Noble Energy, Inc.

Survey Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersen Y05-771
Project:	Mustang	TVD Reference:	Well @ 4810.00ft
Site:	D Section 29	MD Reference:	Well @ 4810.00ft
Well:	Guttersen Y05-771	North Reference:	Grid
Wellbore:	Guttersen Y05-771	Survey Calculation Method:	Minimum Curvature
Design:	Prelim - Rev 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	179.27	6,924.00	-2,065.07	805.56	2,116.59	0.00	0.00	0.00	
9,500.00	90.00	179.27	6,924.00	-2,165.06	806.84	2,216.43	0.00	0.00	0.00	
9,600.00	90.00	179.27	6,924.00	-2,265.06	808.12	2,316.26	0.00	0.00	0.00	
9,700.00	90.00	179.27	6,924.00	-2,365.05	809.40	2,416.10	0.00	0.00	0.00	
9,800.00	90.00	179.27	6,924.00	-2,465.04	810.68	2,515.93	0.00	0.00	0.00	
9,900.00	90.00	179.27	6,924.00	-2,565.03	811.97	2,615.77	0.00	0.00	0.00	
10,000.00	90.00	179.27	6,924.00	-2,665.02	813.25	2,715.60	0.00	0.00	0.00	
10,100.00	90.00	179.27	6,924.00	-2,765.01	814.53	2,815.43	0.00	0.00	0.00	
10,200.00	90.00	179.27	6,924.00	-2,865.01	815.81	2,915.27	0.00	0.00	0.00	
10,300.00	90.00	179.27	6,924.00	-2,965.00	817.09	3,015.10	0.00	0.00	0.00	
10,400.00	90.00	179.27	6,924.00	-3,064.99	818.37	3,114.94	0.00	0.00	0.00	
10,500.00	90.00	179.27	6,924.00	-3,164.98	819.65	3,214.77	0.00	0.00	0.00	
10,600.00	90.00	179.27	6,924.00	-3,264.97	820.94	3,314.61	0.00	0.00	0.00	
10,700.00	90.00	179.27	6,924.00	-3,364.97	822.22	3,414.44	0.00	0.00	0.00	
10,800.00	90.00	179.27	6,924.00	-3,464.96	823.50	3,514.28	0.00	0.00	0.00	
10,900.00	90.00	179.27	6,924.00	-3,564.95	824.78	3,614.11	0.00	0.00	0.00	
11,000.00	90.00	179.27	6,924.00	-3,664.94	826.06	3,713.94	0.00	0.00	0.00	
11,100.00	90.00	179.27	6,924.00	-3,764.93	827.34	3,813.78	0.00	0.00	0.00	
11,200.00	90.00	179.27	6,924.00	-3,864.92	828.62	3,913.61	0.00	0.00	0.00	
11,300.00	90.00	179.27	6,924.00	-3,964.92	829.91	4,013.45	0.00	0.00	0.00	
11,400.00	90.00	179.27	6,924.00	-4,064.91	831.19	4,113.28	0.00	0.00	0.00	
11,500.00	90.00	179.27	6,924.00	-4,164.90	832.47	4,213.12	0.00	0.00	0.00	
11,600.00	90.00	179.27	6,924.00	-4,264.89	833.75	4,312.95	0.00	0.00	0.00	
11,700.00	90.00	179.27	6,924.00	-4,364.88	835.03	4,412.79	0.00	0.00	0.00	
11,800.00	90.00	179.27	6,924.00	-4,464.88	836.31	4,512.62	0.00	0.00	0.00	
11,900.00	90.00	179.27	6,924.00	-4,564.87	837.60	4,612.46	0.00	0.00	0.00	
12,000.00	90.00	179.27	6,924.00	-4,664.86	838.88	4,712.29	0.00	0.00	0.00	
12,100.00	90.00	179.27	6,924.00	-4,764.85	840.16	4,812.12	0.00	0.00	0.00	
12,200.00	90.00	179.27	6,924.00	-4,864.84	841.44	4,911.96	0.00	0.00	0.00	
12,300.00	90.00	179.27	6,924.00	-4,964.83	842.72	5,011.79	0.00	0.00	0.00	
12,400.00	90.00	179.27	6,924.00	-5,064.83	844.00	5,111.63	0.00	0.00	0.00	
12,500.00	90.00	179.27	6,924.00	-5,164.82	845.28	5,211.46	0.00	0.00	0.00	
12,600.00	90.00	179.27	6,924.00	-5,264.81	846.57	5,311.30	0.00	0.00	0.00	
12,700.00	90.00	179.27	6,924.00	-5,364.80	847.85	5,411.13	0.00	0.00	0.00	
12,800.00	90.00	179.27	6,924.00	-5,464.79	849.13	5,510.97	0.00	0.00	0.00	
12,900.00	90.00	179.27	6,924.00	-5,564.79	850.41	5,610.80	0.00	0.00	0.00	
13,000.00	90.00	179.27	6,924.00	-5,664.78	851.69	5,710.63	0.00	0.00	0.00	
13,100.00	90.00	179.27	6,924.00	-5,764.77	852.97	5,810.47	0.00	0.00	0.00	
13,200.00	90.00	179.27	6,924.00	-5,864.76	854.25	5,910.30	0.00	0.00	0.00	
13,300.00	90.00	179.27	6,924.00	-5,964.75	855.54	6,010.14	0.00	0.00	0.00	
13,400.00	90.00	179.27	6,924.00	-6,064.74	856.82	6,109.97	0.00	0.00	0.00	
13,500.00	90.00	179.27	6,924.00	-6,164.74	858.10	6,209.81	0.00	0.00	0.00	
13,600.00	90.00	179.27	6,924.00	-6,264.73	859.38	6,309.64	0.00	0.00	0.00	

Noble Energy, Inc.

Survey Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersen Y05-771
Project:	Mustang	TVD Reference:	Well @ 4810.00ft
Site:	D Section 29	MD Reference:	Well @ 4810.00ft
Well:	Guttersen Y05-771	North Reference:	Grid
Wellbore:	Guttersen Y05-771	Survey Calculation Method:	Minimum Curvature
Design:	Prelim - Rev 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	179.27	6,924.00	-6,364.72	860.66	6,409.48	0.00	0.00	0.00	
13,800.00	90.00	179.27	6,924.00	-6,464.71	861.94	6,509.31	0.00	0.00	0.00	
13,900.00	90.00	179.27	6,924.00	-6,564.70	863.22	6,609.15	0.00	0.00	0.00	
14,000.00	90.00	179.27	6,924.00	-6,664.69	864.51	6,708.98	0.00	0.00	0.00	
14,100.00	90.00	179.27	6,924.00	-6,764.69	865.79	6,808.81	0.00	0.00	0.00	
14,200.00	90.00	179.27	6,924.00	-6,864.68	867.07	6,908.65	0.00	0.00	0.00	
14,300.00	90.00	179.27	6,924.00	-6,964.67	868.35	7,008.48	0.00	0.00	0.00	
14,400.00	90.00	179.27	6,924.00	-7,064.66	869.63	7,108.32	0.00	0.00	0.00	
14,500.00	90.00	179.27	6,924.00	-7,164.65	870.91	7,208.15	0.00	0.00	0.00	
14,600.00	90.00	179.27	6,924.00	-7,264.65	872.19	7,307.99	0.00	0.00	0.00	
14,700.00	90.00	179.27	6,924.00	-7,364.64	873.48	7,407.82	0.00	0.00	0.00	
14,800.00	90.00	179.27	6,924.00	-7,464.63	874.76	7,507.66	0.00	0.00	0.00	
14,900.00	90.00	179.27	6,924.00	-7,564.62	876.04	7,607.49	0.00	0.00	0.00	
15,000.00	90.00	179.27	6,924.00	-7,664.61	877.32	7,707.32	0.00	0.00	0.00	
15,100.00	90.00	179.27	6,924.00	-7,764.60	878.60	7,807.16	0.00	0.00	0.00	
15,200.00	90.00	179.27	6,924.00	-7,864.60	879.88	7,906.99	0.00	0.00	0.00	
15,300.00	90.00	179.27	6,924.00	-7,964.59	881.16	8,006.83	0.00	0.00	0.00	
15,400.00	90.00	179.27	6,924.00	-8,064.58	882.45	8,106.66	0.00	0.00	0.00	
15,500.00	90.00	179.27	6,924.00	-8,164.57	883.73	8,206.50	0.00	0.00	0.00	
15,600.00	90.00	179.27	6,924.00	-8,264.56	885.01	8,306.33	0.00	0.00	0.00	
15,700.00	90.00	179.27	6,924.00	-8,364.56	886.29	8,406.17	0.00	0.00	0.00	
15,800.00	90.00	179.27	6,924.00	-8,464.55	887.57	8,506.00	0.00	0.00	0.00	
15,900.00	90.00	179.27	6,924.00	-8,564.54	888.85	8,605.84	0.00	0.00	0.00	
16,000.00	90.00	179.27	6,924.00	-8,664.53	890.14	8,705.67	0.00	0.00	0.00	
16,100.00	90.00	179.27	6,924.00	-8,764.52	891.42	8,805.50	0.00	0.00	0.00	
16,200.00	90.00	179.27	6,924.00	-8,864.51	892.70	8,905.34	0.00	0.00	0.00	
16,300.00	90.00	179.27	6,924.00	-8,964.51	893.98	9,005.17	0.00	0.00	0.00	
16,400.00	90.00	179.27	6,924.00	-9,064.50	895.26	9,105.01	0.00	0.00	0.00	
16,500.00	90.00	179.27	6,924.00	-9,164.49	896.54	9,204.84	0.00	0.00	0.00	
16,600.00	90.00	179.27	6,924.00	-9,264.48	897.82	9,304.68	0.00	0.00	0.00	
16,700.00	90.00	179.27	6,924.00	-9,364.47	899.11	9,404.51	0.00	0.00	0.00	
16,800.00	90.00	179.27	6,924.00	-9,464.46	900.39	9,504.35	0.00	0.00	0.00	
16,900.00	90.00	179.27	6,924.00	-9,564.46	901.67	9,604.18	0.00	0.00	0.00	
17,000.00	90.00	179.27	6,924.00	-9,664.45	902.95	9,704.01	0.00	0.00	0.00	
17,100.00	90.00	179.27	6,924.00	-9,764.44	904.23	9,803.85	0.00	0.00	0.00	
17,200.00	90.00	179.27	6,924.00	-9,864.43	905.51	9,903.68	0.00	0.00	0.00	
17,300.00	90.00	179.27	6,924.00	-9,964.42	906.79	10,003.52	0.00	0.00	0.00	
17,400.00	90.00	179.27	6,924.00	-10,064.42	908.08	10,103.35	0.00	0.00	0.00	
17,500.00	90.00	179.27	6,924.00	-10,164.41	909.36	10,203.19	0.00	0.00	0.00	
17,600.00	90.00	179.27	6,924.00	-10,264.40	910.64	10,303.02	0.00	0.00	0.00	
17,700.00	90.00	179.27	6,924.00	-10,364.39	911.92	10,402.86	0.00	0.00	0.00	
17,800.00	90.00	179.27	6,924.00	-10,464.38	913.20	10,502.69	0.00	0.00	0.00	
17,900.00	90.00	179.27	6,924.00	-10,564.37	914.48	10,602.53	0.00	0.00	0.00	
18,000.00	90.00	179.27	6,924.00	-10,664.37	915.76	10,702.36	0.00	0.00	0.00	

Noble Energy, Inc.

Survey Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersen Y05-771
Project:	Mustang	TVD Reference:	Well @ 4810.00ft
Site:	D Section 29	MD Reference:	Well @ 4810.00ft
Well:	Guttersen Y05-771	North Reference:	Grid
Wellbore:	Guttersen Y05-771	Survey Calculation Method:	Minimum Curvature
Design:	Prelim - Rev 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)	
18,100.00	90.00	179.27	6,924.00	-10,764.36	917.05	10,802.19	0.00	0.00	0.00	
18,200.00	90.00	179.27	6,924.00	-10,864.35	918.33	10,902.03	0.00	0.00	0.00	
18,300.00	90.00	179.27	6,924.00	-10,964.34	919.61	11,001.86	0.00	0.00	0.00	
18,400.00	90.00	179.27	6,924.00	-11,064.33	920.89	11,101.70	0.00	0.00	0.00	
18,500.00	90.00	179.27	6,924.00	-11,164.33	922.17	11,201.53	0.00	0.00	0.00	
18,600.00	90.00	179.27	6,924.00	-11,264.32	923.45	11,301.37	0.00	0.00	0.00	
18,700.00	90.00	179.27	6,924.00	-11,364.31	924.73	11,401.20	0.00	0.00	0.00	
18,800.00	90.00	179.27	6,924.00	-11,464.30	926.02	11,501.04	0.00	0.00	0.00	
18,900.00	90.00	179.27	6,924.00	-11,564.29	927.30	11,600.87	0.00	0.00	0.00	
19,000.00	90.00	179.27	6,924.00	-11,664.28	928.58	11,700.70	0.00	0.00	0.00	
19,100.00	90.00	179.27	6,924.00	-11,764.28	929.86	11,800.54	0.00	0.00	0.00	
19,200.00	90.00	179.27	6,924.00	-11,864.27	931.14	11,900.37	0.00	0.00	0.00	
19,300.00	90.00	179.27	6,924.00	-11,964.26	932.42	12,000.21	0.00	0.00	0.00	
19,400.00	90.00	179.27	6,924.00	-12,064.25	933.70	12,100.04	0.00	0.00	0.00	
19,500.00	90.00	179.27	6,924.00	-12,164.24	934.99	12,199.88	0.00	0.00	0.00	
19,600.00	90.00	179.27	6,924.00	-12,264.24	936.27	12,299.71	0.00	0.00	0.00	
19,700.00	90.00	179.27	6,924.00	-12,364.23	937.55	12,399.55	0.00	0.00	0.00	
19,800.00	90.00	179.27	6,924.00	-12,464.22	938.83	12,499.38	0.00	0.00	0.00	
19,900.00	90.00	179.27	6,924.00	-12,564.21	940.11	12,599.22	0.00	0.00	0.00	
20,000.00	90.00	179.27	6,924.00	-12,664.20	941.39	12,699.05	0.00	0.00	0.00	
20,100.00	90.00	179.27	6,924.00	-12,764.19	942.67	12,798.88	0.00	0.00	0.00	
20,200.00	90.00	179.27	6,924.00	-12,864.19	943.96	12,898.72	0.00	0.00	0.00	
20,300.00	90.00	179.27	6,924.00	-12,964.18	945.24	12,998.55	0.00	0.00	0.00	
20,400.00	90.00	179.27	6,924.00	-13,064.17	946.52	13,098.39	0.00	0.00	0.00	
20,500.00	90.00	179.27	6,924.00	-13,164.16	947.80	13,198.22	0.00	0.00	0.00	
20,600.00	90.00	179.27	6,924.00	-13,264.15	949.08	13,298.06	0.00	0.00	0.00	
20,700.00	90.00	179.27	6,924.00	-13,364.14	950.36	13,397.89	0.00	0.00	0.00	
20,800.00	90.00	179.27	6,924.00	-13,464.14	951.65	13,497.73	0.00	0.00	0.00	
20,848.37	90.00	179.27	6,924.00	-13,512.50	952.26	13,546.01	0.00	0.00	0.00	

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
GUTTERSEN Y05-771 E - hit/miss target - Shape - Point	0.00	0.00	6,924.00	-13,512.50	952.26	1,302,586.63	3,257,674.67	40.1603183	-104.5780539
GUTTERSEN Y05-771 1 - plan hits target center - Point	0.00	0.00	6,924.00	-60.28	779.87	1,316,038.83	3,257,502.27	40.1972492	-104.5781704

Noble Energy, Inc.

Survey Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersen Y05-771
Project:	Mustang	TVD Reference:	Well @ 4810.00ft
Site:	D Section 29	MD Reference:	Well @ 4810.00ft
Well:	Guttersen Y05-771	North Reference:	Grid
Wellbore:	Guttersen Y05-771	Survey Calculation Method:	Minimum Curvature
Design:	Prelim - Rev 1	Database:	EDMP

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
568.00	568.00	Pierre				
669.00	669.00	Upper Pierre Aquifer Top				
1,567.00	1,567.00	Upper Pierre Aquifer Base				
3,794.34	3,764.00	Parkman				
4,161.98	4,122.00	Sussex				
4,958.89	4,898.00	Shannon				
6,016.64	5,928.00	Teepee Buttes				
6,810.74	6,678.00	Sharon Springs				
6,891.60	6,738.00	Top A Chalk				
6,891.60	6,738.00	Top A Marl				
6,900.23	6,744.00	Top B Chalk				
6,977.60	6,794.00	Top B Marl				
7,111.86	6,863.00	Top C Chalk				
7,204.05	6,896.00	Top C Marl				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
2200	2200	0	0	Start Build 2.00	
6300	6204	50	56	Start DLS 9.00 TFO 129.90	
7395	6924	568	644	TPZ/LP at 7395.04 MD	
20,848	6924	-60	780	TD at 20848.37 MD	

Checked By: _____ Approved By: _____ Date: _____

Northern Region - DJ Basin

Mustang

D Section 29

Guttersen Y05-771

Guttersen Y05-771

Prelim - Rev 1

Anticollision Summary Report

10 April, 2018

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersen Y05-771
Project:	Mustang	TVD Reference:	Well @ 4810.00ft
Reference Site:	D Section 29	MD Reference:	Well @ 4810.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersen Y05-771	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Guttersen Y05-771	Database:	EDMP
Reference Design:	Prelim - Rev 1	Offset TVD Reference:	Offset Datum

Reference	Prelim - Rev 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	4/10/2018		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	20,848.37	Prelim - Rev 1 (Guttersen Y05-771)	2_MWD+IFR1+MS	A008Mb: IFR dec & multi-station analysis

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
D Section 16						
Diggin State D 16-07 (SI) - Wellbore #1 - No Surveys						Out of range
Diggin State D 16-19J (PR) - Wellbore #1 - No Surveys						Out of range
Guttersen ST D 15-32 (SI) - Wellbore #1 - Gyro Surveys						Out of range
Guttersen ST D 16-21 (SI) - Wellbore #1 - Gyro Surveys						Out of range
Guttersen ST D 16-22D (SI) - Wellbore #1 - MWD Surveys						Out of range
Guttersen ST D 16-33 (SI) - Wellbore #1 - No Surveys	6,443.02	6,286.36	9,202.24	9,053.21	61.745	CC
Guttersen ST D 16-33 (SI) - Wellbore #1 - No Surveys	6,450.00	6,293.20	9,202.28	9,053.08	61.678	ES
Guttersen ST D 16-33 (SI) - Wellbore #1 - No Surveys	7,000.00	6,749.14	9,414.29	9,254.70	58.990	SF
Guttersen State D 15-31 (PR) - Wellbore #1 - Gyro Survey						Out of range
Guttersen State D 16-18 (SI) - Wellbore #1 - No Surveys						Out of range
Guttersen State D 16-20 (SI) - Wellbore #1 - Gyro Survey						Out of range
Guttersen State D 16-27 (PR) - Wellbore #1 - No Survey						Out of range
Guttersen State D 16-31 (PR) - Wellbore #1 - No Survey						Out of range
Guttersen State D 16-32D (SI) - Wellbore #1 - MWD Surveys						Out of range
Guttersen State D16-63-1HN - Original Drilling - Original	6,489.22	11,243.02	8,992.21	8,864.94	70.650	CC, ES
Guttersen State D16-63-1HN - Original Drilling - Original	6,700.00	11,243.02	9,025.56	8,897.17	70.299	SF
Guttersen State D16-65-1HN - Original Drilling - Original						Out of range
Spike ST GWS D 16-01 (SI) - Wellbore #1 - Gyro Survey						Out of range
Spike ST GWS D 16-02 (P&A) - Wellbore #1 - Gyro Survey						Out of range
Spike ST GWS D 16-03 (PR) - Wellbore #1 - No Surveys						Out of range
Spike ST GWS D 16-04 (SI) - Wellbore #1 - No Surveys						Out of range
Spike ST GWS D 16-05 (PR) - Wellbore #1 - Gyro Survey						Out of range
Spike ST GWS D 16-06 (SI) - Wellbore #1 - No Surveys						Out of range
Spike ST GWS D 16-08 (PR) - Wellbore #1 - Gyro Survey						Out of range
Spike ST GWS D 16-12 (PA) - Wellbore #1 - Gyro Survey						Out of range
Spike State D16-99HZ - Original Drilling - Original Drilling	6,481.77	11,150.02	9,450.89	9,324.95	75.043	CC, ES
Spike State D16-99HZ - Original Drilling - Original Drilling	6,700.00	11,150.02	9,486.73	9,359.70	74.677	SF
Spike State GWS D 16-7J (PR) - Wellbore #1 - No Survey						Out of range

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

Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersen Y05-771
Project:	Mustang	TVD Reference:	Well @ 4810.00ft
Reference Site:	D Section 29	MD Reference:	Well @ 4810.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersen Y05-771	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Guttersen Y05-771	Database:	EDMP
Reference Design:	Prelim - Rev 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 17						
Butterball D19-27D - Wellbore #1 - Gyro Surveys	6,358.98	6,567.30	7,679.64	7,599.57	95.909	CC, ES
Butterball D19-27D - Wellbore #1 - Gyro Surveys	6,600.00	6,812.88	7,721.28	7,640.16	95.174	SF
Guttersen State D16-33 (SI) - Wellbore #1 - No Surveys	6,443.02	6,286.36	9,202.24	9,124.07	117.722	CC
Guttersen State D16-33 (SI) - Wellbore #1 - No Surveys	6,450.00	6,293.20	9,202.28	9,124.02	117.596	ES
Guttersen State D16-33 (SI) - Wellbore #1 - No Surveys	7,000.00	6,749.14	9,414.29	9,330.78	112.739	SF
HSR LDS 6-17 (SI) - Wellbore #1 - No Surveys						Out of range
HSR LDS B5-17 (SI) - Wellbore #1 - No Surveys						Out of range
HSR Mike Guttersen 16-17X (SI) - Wellbore #1 - No Su	6,438.60	6,287.01	8,090.14	8,011.97	103.494	CC
HSR Mike Guttersen 16-17X (SI) - Wellbore #1 - No Su	6,450.00	6,298.20	8,090.24	8,011.93	103.314	ES
HSR Mike Guttersen 16-17X (SI) - Wellbore #1 - No Su	6,950.00	6,723.97	8,273.15	8,189.93	99.410	SF
HSR Weeks 10-17 - Wellbore #1 - Gyro Surveys	6,419.78	6,323.56	9,083.34	9,038.15	200.992	CC, ES
HSR Weeks 10-17 - Wellbore #1 - Gyro Surveys	6,850.00	6,700.00	9,221.55	9,173.92	193.590	SF
HSR Weeks 15-17 (SI) - Wellbore #1 - No Surveys	6,419.38	6,266.11	7,810.60	7,732.63	100.182	CC, ES
HSR Weeks 15-17 (SI) - Wellbore #1 - No Surveys	6,900.00	6,688.84	7,980.50	7,897.63	96.311	SF
HSR Weeks 9-17 - Wellbore #1 - Gyro Surveys	6,430.24	6,285.16	9,404.47	9,359.40	208.660	CC, ES
HSR Weeks 9-17 - Wellbore #1 - Gyro Surveys	6,850.00	6,662.14	9,532.73	9,485.27	200.889	SF
HSR-LDS 3-17 (SI) - Wellbore #1 - No Surveys						Out of range
HSR-LDS 4-17 (SI) - Wellbore #1 - No Surveys						Out of range
LDS 18-17 (SI) - Wellbore #1 - No Surveys						Out of range
LDS D17-13 - Wellbore #1 - Gyro Surveys	6,382.30	6,320.02	7,412.29	7,367.10	164.024	CC, ES
LDS D17-13 - Wellbore #1 - Gyro Surveys	6,750.00	6,559.76	7,516.41	7,469.31	159.603	SF
LDS D17-18 (SI) - Wellbore #1 - No Surveys						Out of range
LDS D17-20 - Wellbore #1 - No Surveys	6,391.65	6,239.82	9,448.84	9,371.16	121.638	CC
LDS D17-20 - Wellbore #1 - No Surveys	6,400.00	6,248.04	9,448.90	9,371.12	121.479	ES
LDS D17-20 - Wellbore #1 - No Surveys	6,950.00	6,722.97	9,678.61	9,595.38	116.281	SF
LDS D17-21 - Wellbore #1 - No Surveys	6,405.15	6,249.11	9,429.52	9,351.73	121.214	CC, ES
LDS D17-21 - Wellbore #1 - No Surveys	6,950.00	6,718.97	9,648.47	9,565.27	115.969	SF
LDS D17-22 (SI) - Wellbore #1 - No Surveys						Out of range
LDS D17-24D - Wellbore #1 - LDS D17-24D - As Drilled	6,406.36	6,382.29	8,413.17	8,366.94	181.980	CC, ES
LDS D17-24D - Wellbore #1 - LDS D17-24D - As Drilled	6,800.00	6,869.22	8,525.26	8,476.30	174.134	SF
LDS D17-25D - Wellbore #1 - LDS D17-25D - As Drilled	6,386.94	6,418.48	8,617.90	8,563.68	158.952	CC, ES
LDS D17-25D - Wellbore #1 - LDS D17-25D - As Drilled	6,850.00	6,881.78	8,778.88	8,722.25	155.033	SF
LDS D17-31D - LDS D17-31D - LDS D17-31D - As Drille						Out of range
LDS D17-32D - LDS D17-32D - LDS D17-32D - As Drille	6,373.44	6,226.62	9,928.95	9,883.79	219.855	CC, ES
LDS D17-32D - LDS D17-32D - LDS D17-32D - As Drille	6,650.00	6,547.00	9,986.17	9,939.13	212.313	SF
LDS D17-33 - LDS D17-33 - LDS D17-33 - As Drilled	6,356.12	5,954.64	8,489.19	8,445.40	193.861	CC, ES
LDS D17-33 - LDS D17-33 - LDS D17-33 - As Drilled	6,850.00	6,745.78	8,666.55	8,618.69	181.085	SF
LDS D17-7 - Wellbore #1 - No Surveys						Out of range
LDS D20-29D - Wellbore #1 - LDS D20-29D - As Drilled	6,387.33	6,396.64	6,797.27	6,746.23	133.160	CC, ES
LDS D20-29D - Wellbore #1 - LDS D20-29D - As Drilled	6,750.00	6,756.33	6,896.88	6,843.87	130.109	SF
LDS D20-30D - Wellbore #1 - LDS D20-30D - As Drilled	6,377.32	6,427.94	7,055.79	7,009.68	153.031	CC, ES
LDS D20-30D - Wellbore #1 - LDS D20-30D - As Drilled	6,800.00	6,719.01	7,189.10	7,140.84	148.964	SF
LDS RED D17-11 (SI) - Wellbore #1 - No Surveys	6,401.46	6,246.48	8,957.27	8,879.51	115.188	CC, ES
LDS RED D17-11 (SI) - Wellbore #1 - No Surveys	6,950.00	6,719.97	9,179.48	9,096.27	110.320	SF
LDS Red D17-12 - Wellbore #1 - No Surveys	6,381.24	6,229.57	9,209.04	9,131.48	118.736	CC, ES
LDS Red D17-12 - Wellbore #1 - No Surveys	6,950.00	6,722.97	9,445.08	9,361.85	113.477	SF
LDS Red D17-14X (SI) - Wellbore #1 - No Surveys	6,402.94	6,251.94	7,787.79	7,709.98	100.084	CC, ES
LDS Red D17-14X (SI) - Wellbore #1 - No Surveys	6,900.00	6,690.84	7,972.25	7,889.36	96.179	SF
LDS Red D17-3J - Wellbore #1 - Gyro Surveys	6,385.93	6,251.65	8,018.49	7,973.59	178.579	CC, ES
LDS Red D17-3J - Wellbore #1 - Gyro Surveys	6,800.00	6,644.45	8,147.49	8,100.08	171.875	SF
LDS White D17-1 - Wellbore #1 - Gyro Surveys						Out of range
LDS White D17-2 - Wellbore #1 - No Surveys						Out of range
LDS White D17-8 - Wellbore #1 - No Surveys						Out of range

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

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Gutteresen Y05-771
Project:	Mustang	TVD Reference:	Well @ 4810.00ft
Reference Site:	D Section 29	MD Reference:	Well @ 4810.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Gutteresen Y05-771	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Gutteresen Y05-771	Database:	EDMP
Reference Design:	Prelim - Rev 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 17						
Thomson D20-31D - Wellbore #1 - Gyro Surveys	6,401.03	6,923.91	5,824.21	5,770.44	108.317	CC, ES
Thomson D20-31D - Wellbore #1 - Gyro Surveys	6,700.00	7,128.05	5,891.20	5,835.91	106.548	SF
Weeks 20-17 (SI) - Wellbore #1 - Gyro Surveys	6,426.14	6,275.63	8,482.64	8,437.57	188.202	CC, ES
Weeks 20-17 (SI) - Wellbore #1 - Gyro Surveys	6,850.00	6,647.40	8,614.96	8,567.48	181.439	SF

Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersen Y05-771
Project:	Mustang	TVD Reference:	Well @ 4810.00ft
Reference Site:	D Section 29	MD Reference:	Well @ 4810.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersen Y05-771	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Guttersen Y05-771	Database:	EDMP
Reference Design:	Prelim - Rev 1	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
D Section 18						
Horton D18-20D - Horton D18-20D - Horton D18-20D - A	643.07	608.08	9,790.64	9,786.62	2,433.575	CC
Horton D18-20D - Horton D18-20D - Horton D18-20D - A	1,000.00	900.00	9,791.96	9,785.64	1,549.189	ES
Horton D18-20D - Horton D18-20D - Horton D18-20D - A	4,300.00	2,100.00	9,999.32	9,975.95	427.923	SF
Horton D18-22D - Horton D18-22D - Horton D18-22D - A	174.64	138.64	9,780.73	9,780.03	10,000.000	CC
Horton D18-22D - Horton D18-22D - Horton D18-22D - A	900.00	800.00	9,784.04	9,778.42	1,742.224	ES
Horton D18-22D - Horton D18-22D - Horton D18-22D - A	6,750.00	6,733.39	9,990.20	9,934.73	180.096	SF
LSWD 1 - LSWD 1 - LSWD 1 - As Drilled						Out of range
Mick D18-03 - Mick D18-03 - Mick D18-03 - As Drilled						Out of range
Mick D18-04 - Wellbore #1 - Wellbore #1 - As Drilled						Out of range
Mick D18-05 - Wellbore #1 - Wellbore #1 - As Drilled						Out of range
Mick D18-06 - Mick D18-06 - Mick D18-06 - As Drilled						Out of range
Mick D18-11 - Mick D18-11 - Mick D18-11 - As Drilled	6,324.06	6,324.06	9,963.73	9,918.87	222.092	CC, ES
Mick D18-11 - Mick D18-11 - Mick D18-11 - As Drilled	6,550.00	6,299.78	9,999.01	9,953.46	219.535	SF
Mick D18-12 - Wellbore #1 - Wellbore #1 - As Drilled						Out of range
Mick D18-13 - Wellbore #1 - Wellbore #1 - As Drilled	4,417.06	4,175.57	9,758.22	9,728.07	323.722	CC
Mick D18-13 - Wellbore #1 - Wellbore #1 - As Drilled	4,800.00	4,508.70	9,759.99	9,727.24	298.011	ES
Mick D18-13 - Wellbore #1 - Wellbore #1 - As Drilled	6,900.00	6,905.50	9,969.76	9,921.33	205.893	SF
Mick D18-14 - Mick D18-14 - Mick D18-14 - As Drilled	6,325.77	6,235.27	8,982.49	8,937.91	201.484	CC, ES
Mick D18-14 - Mick D18-14 - Mick D18-14 - As Drilled	7,100.00	7,013.15	9,340.61	9,291.61	190.661	SF
Mick D18-19 - Mick D18-19 - Mick D18-19 - As Drilled						Out of range
Mick D18-25 - Mick D18-25 - Mick D18-25 - As Drilled	6,313.99	6,048.68	9,787.57	9,743.67	222.925	CC, ES
Mick D18-25 - Mick D18-25 - Mick D18-25 - As Drilled	6,850.00	6,491.50	9,968.17	9,921.23	212.390	SF
Scooter D18-02 - Scooter D18-02 - Scooter D18-02 - As						Out of range
Scooter D18-07 - Scooter D18-07 - Scooter D18-07 - As						Out of range
Scooter D18-10 - Scooter D18-10 - Scooter D18-10 - As	6,338.47	6,062.76	9,429.67	9,385.64	214.124	CC, ES
Scooter D18-10 - Scooter D18-10 - Scooter D18-10 - As	6,900.00	6,900.00	9,641.64	9,593.24	199.192	SF
Scooter D18-15 - Scooter D18-15 - Scooter D18-15 - As	6,355.95	6,389.08	8,352.11	8,306.91	184.796	CC, ES
Scooter D18-15 - Scooter D18-15 - Scooter D18-15 - As	6,900.00	7,070.10	8,545.94	8,496.99	174.589	SF
Scooter D18-16 - Scooter D18-16 - Scooter D18-16 - As	6,362.12	6,215.75	7,936.45	7,859.08	102.583	CC, ES
Scooter D18-16 - Scooter D18-16 - Scooter D18-16 - As	6,900.00	6,694.84	8,141.97	8,059.05	98.191	SF
Scooter D18-17 JI - Scooter D18-17 JI - Scooter D18-17						Out of range
Scooter D18-1JI - Scooter D18-1JI - Scooter D18-1JI - A						Out of range
Scooter D18-4J - Scooter D18-4J - Scooter D18-4J - As	6,366.22	6,366.22	8,858.39	8,813.21	196.084	CC, ES
Scooter D18-4J - Scooter D18-4J - Scooter D18-4J - As	6,850.00	6,689.48	9,027.98	8,980.38	189.656	SF
Scooter D18-78-1HN - Original Drilling - Original Drilling -						Out of range
Scooter D18-78-1HN - Original Drilling - ST01 - Original D	6,366.33	11,297.00	9,421.37	9,348.29	128.920	CC, ES
Scooter D18-78-1HN - Original Drilling - ST01 - Original D	6,600.00	11,297.00	9,457.79	9,383.82	127.858	SF
Scooter D18-79-1HN - Original Drilling - Original Drilling -	6,348.27	11,265.00	9,823.06	9,740.83	119.466	CC
Scooter D18-79-1HN - Original Drilling - Original Drilling -	6,350.00	11,265.00	9,823.06	9,740.83	119.454	ES
Scooter D18-79-1HN - Original Drilling - Original Drilling -	6,600.00	11,265.00	9,863.57	9,780.39	118.577	SF
Scooter D18-79HN - Original Drilling - Original Drilling - A						Out of range
Scooter D18-8JI - Scooter D18-8JI - Scooter D18-8JI - A	469.03	376.04	9,336.40	9,333.81	3,608.217	CC
Scooter D18-8JI - Scooter D18-8JI - Scooter D18-8JI - A	700.00	549.85	9,337.00	9,332.97	2,321.463	ES
Scooter D18-8JI - Scooter D18-8JI - Scooter D18-8JI - A	6,100.00	2,487.78	9,996.73	9,965.67	321.830	SF
Scooter D18-9JI - Scooter D18-9JI - Scooter D18-9JI - A	606.50	512.51	9,254.28	9,250.71	2,598.391	CC
Scooter D18-9JI - Scooter D18-9JI - Scooter D18-9JI - A	900.00	734.71	9,255.49	9,250.11	1,718.473	ES
Scooter D18-9JI - Scooter D18-9JI - Scooter D18-9JI - A	6,900.00	6,743.00	9,512.28	9,462.36	190.554	SF
Shianne D18-29D - Shianne D18-29D - Shianne D18-29D						Out of range

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

Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersen Y05-771
Project:	Mustang	TVD Reference:	Well @ 4810.00ft
Reference Site:	D Section 29	MD Reference:	Well @ 4810.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersen Y05-771	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Guttersen Y05-771	Database:	EDMP
Reference Design:	Prelim - Rev 1	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
D Section 19						
Butterball 13-19 - Butterball 13-19 - Butterball 13-19 - As	0.00	0.00	6,861.18			
Butterball 13-19 - Butterball 13-19 - Butterball 13-19 - As	2,300.00	2,262.79	6,869.49	6,853.73	436.010	ES
Butterball 13-19 - Butterball 13-19 - Butterball 13-19 - As	6,900.00	6,780.14	7,220.42	7,172.50	150.687	SF
Butterball 14-19 - Butterball 14-19 - Butterball 14-19 - As	2,436.98	2,594.88	6,117.01	6,099.61	351.585	CC
Butterball 14-19 - Butterball 14-19 - Butterball 14-19 - As	2,500.00	2,658.04	6,117.26	6,099.42	342.856	ES
Butterball 14-19 - Butterball 14-19 - Butterball 14-19 - As	7,000.00	6,951.99	6,560.67	6,511.93	134.625	SF
Butterball 23-19 - Butterball 23-19 - Butterball 23-19 - As	665.72	632.76	5,904.20	5,900.00	1,406.257	CC
Butterball 23-19 - Butterball 23-19 - Butterball 23-19 - As	2,857.69	2,909.07	5,914.88	5,894.91	296.204	ES
Butterball 23-19 - Butterball 23-19 - Butterball 23-19 - As	6,850.00	6,692.69	6,214.74	6,167.22	130.773	SF
Butterball B04-19 - Butterball B04-19 - Butterball B04-19	1,254.96	1,227.97	6,836.70	6,828.32	815.961	CC
Butterball B04-19 - Butterball B04-19 - Butterball B04-19	2,300.00	2,268.99	6,839.11	6,823.36	434.061	ES
Butterball B04-19 - Butterball B04-19 - Butterball B04-19	7,000.00	6,853.76	7,334.35	7,286.06	151.895	SF
Butterball D18-75HN - Original Drilling - Original Drilling -	1,923.92	1,910.00	7,810.83	7,798.63	640.347	CC, ES
Butterball D18-75HN - Original Drilling - Original Drilling -	6,750.00	6,279.00	8,167.29	8,121.21	177.253	SF
Butterball D19-17D - Butterball D19-17D - Butterball D19	6,342.68	6,800.00	6,479.52	6,331.76	43.851	CC, ES
Butterball D19-17D - Butterball D19-17D - Butterball D19	6,450.00	6,880.50	6,488.11	6,340.04	43.816	SF
Butterball D19-18D - Butterball D19-18D - Butterball D19	6,308.26	6,242.60	7,407.31	7,357.20	147.807	CC, ES
Butterball D19-18D - Butterball D19-18D - Butterball D19	6,850.00	6,746.82	7,582.09	7,529.06	142.967	SF
Butterball D19-19D - Butterball D19-19D - Butterball D19	5,003.01	5,080.41	7,635.81	7,597.00	196.748	CC
Butterball D19-19D - Butterball D19-19D - Butterball D19	5,100.00	5,136.43	7,636.08	7,596.74	194.097	ES
Butterball D19-19D - Butterball D19-19D - Butterball D19	6,900.00	6,820.06	7,850.71	7,800.07	155.028	SF
Butterball D19-20D - Butterball D19-20D - Butterball D19	4,986.62	5,230.60	6,890.64	6,851.77	177.260	CC
Butterball D19-20D - Butterball D19-20D - Butterball D19	5,100.00	5,300.00	6,890.93	6,851.47	174.620	ES
Butterball D19-20D - Butterball D19-20D - Butterball D19	6,900.00	6,908.93	7,104.90	7,054.53	141.068	SF
Butterball D19-22D - Wellbore #1 - Wellbore #1 - As Drill	6,314.79	6,228.57	5,289.76	5,238.84	103.876	CC, ES
Butterball D19-22D - Wellbore #1 - Wellbore #1 - As Drill	6,700.00	6,632.01	5,382.61	5,329.41	101.176	SF
Butterball D19-75HN - Original Drilling - Original Drilling -	6,357.19	11,767.00	4,467.73	4,356.72	40.247	CC, ES
Butterball D19-75HN - Original Drilling - Original Drilling -	6,550.00	11,767.00	4,481.46	4,369.39	39.986	SF
Butterball D24-19 - Butterball D24-19 - Butterball D24-19	221.50	190.50	5,054.25	5,053.20	4,804.310	CC
Butterball D24-19 - Butterball D24-19 - Butterball D24-19	400.00	335.66	5,054.77	5,052.58	2,299.120	ES
Butterball D24-19 - Butterball D24-19 - Butterball D24-19	6,900.00	6,776.32	5,586.59	5,538.69	116.620	SF
Butterball H24-69HN - Original Drilling - Original Drilling -	6,333.31	6,184.00	7,821.07	7,777.02	177.531	CC, ES
Butterball H24-69HN - Original Drilling - Original Drilling -	6,650.00	6,279.00	7,894.06	7,848.68	173.955	SF
Champlin 366 Amoco F 1 - Wellbore #1 - Wellbore #1 - A	5,205.35	5,076.29	4,421.39	4,385.17	122.076	CC
Champlin 366 Amoco F 1 - Wellbore #1 - Wellbore #1 - A	5,400.00	5,245.46	4,421.91	4,384.36	117.779	ES
Champlin 366 Amoco F 1 - Wellbore #1 - Wellbore #1 - A	6,750.00	6,602.29	4,547.50	4,500.44	96.621	SF
Dechant D19-32D - Dechant D19-32D - Dechant D19-32	2,388.95	2,510.61	7,887.79	7,849.56	206.305	CC
Dechant D19-32D - Dechant D19-32D - Dechant D19-32	3,000.00	3,028.14	7,897.14	7,845.13	151.844	ES
Dechant D19-32D - Dechant D19-32D - Dechant D19-32	6,600.00	7,037.06	8,090.39	7,975.09	70.169	SF
Graznak 01-19 - Graznak 01-19 - Graznak 01-19 - As Dr	2,200.00	2,173.00	6,158.23	6,131.61	231.369	CC
Graznak 01-19 - Graznak 01-19 - Graznak 01-19 - As Dr	2,300.00	2,272.98	6,158.67	6,130.83	221.184	ES
Graznak 01-19 - Graznak 01-19 - Graznak 01-19 - As Dr	7,000.00	6,780.14	6,646.77	6,563.08	79.426	SF
Higgins D19-720 - Original Drilling - Original Drilling - As	6,359.67	6,303.98	7,221.29	7,178.89	170.298	CC, ES
Higgins D19-720 - Original Drilling - Original Drilling - As	6,650.00	6,566.63	7,282.59	7,239.06	167.312	SF
Higgins D19-720 - Sidetrack Curve/Horizontal - ST01 - A	6,545.65	11,660.02	3,376.61	3,318.98	58.591	CC
Higgins D19-720 - Sidetrack Curve/Horizontal - ST01 - A	6,550.00	11,660.02	3,376.63	3,318.98	58.571	ES
Higgins D19-720 - Sidetrack Curve/Horizontal - ST01 - A	6,700.00	11,660.02	3,392.53	3,334.31	58.274	SF
Independence D18-712 - Independence D18-712 - Plan 1	6,377.44	6,500.00	6,652.54	6,606.05	143.108	CC, ES
Independence D18-712 - Independence D18-712 - Plan 1	6,600.00	6,500.00	6,693.00	6,645.79	141.758	SF
Independence D18-717 - Independence D18-717 - Plan 1	6,353.66	6,250.00	6,755.46	6,710.35	149.754	CC, ES
Independence D18-717 - Independence D18-717 - Plan 1	6,600.00	6,300.00	6,803.93	6,757.85	147.664	SF
Independence D18-725 - Independence D18-725 - Plan 1	6,348.00	6,250.00	6,920.98	6,876.17	154.458	CC
Independence D18-725 - Independence D18-725 - Plan 1	6,350.00	6,250.00	6,920.98	6,876.17	154.432	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 Y05-771
Project:	Mustang	TVD Reference:	Well @ 4810.00ft
Reference Site:	D Section 29	MD Reference:	Well @ 4810.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersen Y05-771	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Guttersen Y05-771	Database:	EDMP
Reference Design:	Prelim - Rev 1	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
D Section 19						
Independence D18-725 - Independence D18-725 - Plan 1	6,600.00	6,300.00	6,970.04	6,924.24	152.180	SF
Independence D18-732 - Independence D18-732 - Plan 1	6,334.37	6,175.30	7,071.18	7,026.40	157.920	CC, ES
Independence D18-732 - Independence D18-732 - Plan 1	6,750.00	6,250.00	7,198.52	7,152.26	155.638	SF
Independence D18-739 - Independence D18-739 - Plan 1	6,307.97	5,937.33	7,184.22	7,140.11	162.870	CC, ES
Independence D18-739 - Independence D18-739 - Plan 1	6,750.00	6,333.41	7,316.88	7,269.98	155.979	SF
Independence D18-744 - Independence D18-744 - Plan 1	5,014.83	4,534.83	7,277.92	7,243.71	212.751	CC
Independence D18-744 - Independence D18-744 - Plan 1	5,300.00	4,789.09	7,279.07	7,242.78	200.630	ES
Independence D18-744 - Independence D18-744 - Plan 1	6,850.00	6,152.73	7,517.02	7,470.05	160.015	SF
Independence D18-759 - Independence D18-759 - Plan 1	6,319.28	6,300.00	7,845.64	7,800.54	173.951	CC, ES
Independence D18-759 - Independence D18-759 - Plan 1	6,650.00	6,350.00	7,919.59	7,873.29	171.058	SF
Independence D18-767 - Independence D18-767 - Plan 1	6,300.32	6,227.73	8,147.81	8,103.27	182.921	CC, ES
Independence D18-767 - Independence D18-767 - Plan 1	6,650.00	6,250.00	8,224.89	8,179.17	179.894	SF
Independence D30-711 - Independence D30-711 - Plan 1	6,829.90	14,606.92	1,828.82	1,739.21	20.409	CC
Independence D30-711 - Independence D30-711 - Plan 1	10,400.00	18,060.85	1,862.26	1,734.39	14.564	ES, SF
Independence D30-718 - Independence D30-718 - Plan 1	6,632.87	14,321.65	2,238.93	2,151.63	25.647	CC
Independence D30-718 - Independence D30-718 - Plan 1	6,650.00	14,328.08	2,238.99	2,151.61	25.625	ES
Independence D30-718 - Independence D30-718 - Plan 1	10,400.00	17,906.67	2,320.69	2,193.63	18.266	SF
Independence D30-724 - Independence D30-724 - Plan 1	6,485.37	14,167.94	2,663.11	2,577.27	31.024	CC
Independence D30-724 - Independence D30-724 - Plan 1	6,500.00	14,170.14	2,663.15	2,577.24	31.000	ES
Independence D30-724 - Independence D30-724 - Plan 1	10,500.00	17,790.74	2,763.50	2,636.27	21.722	SF
Independence D30-731 - Independence D30-731 - Plan 1	6,415.13	14,127.81	3,071.64	2,986.85	36.228	CC, ES
Independence D30-731 - Independence D30-731 - Plan 1	10,600.00	17,787.32	3,215.96	3,088.24	25.180	SF
Independence D30-737 - Independence D30-737 - Plan 1	6,347.95	14,200.00	3,472.67	3,388.30	41.157	CC
Independence D30-737 - Independence D30-737 - Plan 1	6,350.00	14,200.15	3,472.67	3,388.28	41.150	ES
Independence D30-737 - Independence D30-737 - Plan 1	10,700.00	17,823.24	3,586.44	3,457.89	27.900	SF
Independence D30-743 - Independence D30-743 - Plan 1	6,282.45	14,246.47	3,870.38	3,786.72	46.263	CC
Independence D30-743 - Independence D30-743 - Plan 1	6,300.32	14,243.78	3,870.42	3,786.67	46.215	ES
Independence D30-743 - Independence D30-743 - Plan 1	10,800.00	17,886.63	4,016.05	3,886.78	31.067	SF
Independence D30-758 - Independence D30-758 - Plan 1	6,137.06	14,247.43	4,661.38	4,576.27	54.767	CC, ES
Independence D30-758 - Independence D30-758 - Plan 1	10,900.00	17,840.49	4,799.16	4,670.43	37.281	SF
Independence D30-765 - Independence D30-765 - Plan 1	6,240.08	14,344.37	5,136.16	5,051.35	60.560	CC, ES
Independence D30-765 - Independence D30-765 - Plan 1	11,000.00	17,973.12	5,272.31	5,142.51	40.620	SF
Independence D30-770 - Independence D30-770 - Plan 1	5,975.95	14,226.52	5,457.65	5,373.99	65.239	CC
Independence D30-770 - Independence D30-770 - Plan 1	6,000.00	14,222.93	5,457.70	5,373.96	65.177	ES
Independence D30-770 - Independence D30-770 - Plan 1	11,200.00	17,787.74	5,636.89	5,506.32	43.171	SF
Independence D30-777 - Independence D30-777 - Plan 1	5,919.49	14,267.24	5,890.19	5,807.32	71.080	CC, ES
Independence D30-777 - Independence D30-777 - Plan 1	11,400.00	17,842.76	6,112.95	5,981.12	46.372	SF
Independence State D30-784 - Independence State D30	5,901.03	14,517.23	6,411.05	6,328.31	77.481	CC, ES
Independence State D30-784 - Independence State D30	11,600.00	18,074.89	6,646.21	6,512.69	49.777	SF
LDS White D19-10 - LDS White D19-10 - LDS White D19	367.64	332.64	5,250.83	5,248.76	2,530.594	CC
LDS White D19-10 - LDS White D19-10 - LDS White D19	3,600.00	3,468.49	5,261.01	5,236.39	213.687	ES
LDS White D19-10 - LDS White D19-10 - LDS White D19	6,800.00	6,656.53	5,453.78	5,406.42	115.162	SF
LDS White D19-15 - LDS White D19-15 - LDS White D19	1,774.88	1,741.89	4,162.59	4,150.55	345.725	CC
LDS White D19-15 - LDS White D19-15 - LDS White D19	2,000.00	1,940.42	4,163.23	4,149.69	307.495	ES
LDS White D19-15 - LDS White D19-15 - LDS White D19	6,800.00	6,617.08	4,522.62	4,475.48	95.954	SF
LDS White D19-16 - Wellbore #1 - Wellbore #1 - As Drill	4,591.23	4,505.77	3,358.22	3,326.32	105.259	CC
LDS White D19-16 - Wellbore #1 - Wellbore #1 - As Drill	4,700.00	4,592.42	3,358.59	3,325.97	102.979	ES
LDS White D19-16 - Wellbore #1 - Wellbore #1 - As Drill	6,700.00	6,550.52	3,473.01	3,426.27	74.304	SF
Mile High 02-19 - Wellbore #1 - Wellbore #1 - As Drilled	6,328.22	6,212.66	6,228.64	6,184.15	140.022	CC, ES
Mile High 02-19 - Wellbore #1 - Wellbore #1 - As Drilled	6,850.00	6,692.96	6,401.72	6,354.13	134.512	SF
Sean D19-09 - Wellbore #1 - Wellbore #1 - As Drilled	6,332.67	6,198.84	4,346.39	4,199.43	29.575	CC
Sean D19-09 - Wellbore #1 - Wellbore #1 - As Drilled	6,350.00	6,215.84	4,346.59	4,199.23	29.495	ES
Sean D19-09 - Wellbore #1 - Wellbore #1 - As Drilled	6,750.00	6,591.83	4,461.95	4,305.90	28.592	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 Y05-771
Project:	Mustang	TVD Reference:	Well @ 4810.00ft
Reference Site:	D Section 29	MD Reference:	Well @ 4810.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersen Y05-771	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Guttersen Y05-771	Database:	EDMP
Reference Design:	Prelim - Rev 1	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
D Section 19						
Turk Blue D19-02J - Turk Blue D19-02J - Turk Blue D19-02J	2,030.14	2,007.19	7,950.11	7,936.23	572.697	CC
Turk Blue D19-02J - Turk Blue D19-02J - Turk Blue D19-02J	4,400.00	4,206.56	7,960.13	7,929.98	263.990	ES
Turk Blue D19-02J - Turk Blue D19-02J - Turk Blue D19-02J	6,850.00	6,816.38	8,145.64	8,097.65	169.720	SF
Turk Blue D19-04 - Turk Blue D19-04 - Turk Blue D19-04	4,262.62	4,221.34	8,868.69	8,838.99	298.613	CC
Turk Blue D19-04 - Turk Blue D19-04 - Turk Blue D19-04	6,100.00	6,045.05	8,873.73	8,830.74	206.403	ES
Turk Blue D19-04 - Turk Blue D19-04 - Turk Blue D19-04	6,850.00	6,704.04	9,046.45	8,998.85	190.033	SF
Turk Blue D19-05 - Turk Blue D19-05 - Turk Blue D19-05	2,310.47	2,320.79	7,636.68	7,620.69	477.791	CC
Turk Blue D19-05 - Turk Blue D19-05 - Turk Blue D19-05	2,400.00	2,378.37	7,637.01	7,620.51	462.869	ES
Turk Blue D19-05 - Turk Blue D19-05 - Turk Blue D19-05	7,000.00	6,844.89	8,003.80	7,955.45	165.543	SF
Turk Blue D19-06 - Turk Blue D19-06 - Turk Blue D19-06	5,249.34	5,218.30	6,848.45	6,811.59	185.805	CC
Turk Blue D19-06 - Turk Blue D19-06 - Turk Blue D19-06	5,300.00	5,246.44	6,848.53	6,811.38	184.357	ES
Turk Blue D19-06 - Turk Blue D19-06 - Turk Blue D19-06	6,950.00	6,773.89	7,087.87	7,039.90	147.737	SF
Turk White D19-01 - Wellbore #1 - Wellbore #1 - As Drill	6,352.91	6,173.84	6,663.29	6,618.78	149.717	CC, ES
Turk White D19-01 - Wellbore #1 - Wellbore #1 - As Drill	6,800.00	6,659.36	6,803.02	6,755.58	143.410	SF
Turk White D19-02 - Wellbore #1 - Wellbore #1 - As Drill	6,349.25	6,377.58	7,355.60	7,310.48	163.009	CC
Turk White D19-02 - Wellbore #1 - Wellbore #1 - As Drill	6,350.00	6,378.08	7,355.60	7,310.47	162.993	ES
Turk White D19-02 - Wellbore #1 - Wellbore #1 - As Drill	6,850.00	6,668.42	7,524.78	7,477.26	158.362	SF
Turk White D19-08 - Wellbore #1 - Wellbore #1 - As Drill	6,340.62	6,187.30	5,328.54	5,284.09	119.862	CC
Turk White D19-08 - Wellbore #1 - Wellbore #1 - As Drill	6,350.00	6,197.03	5,328.60	5,284.08	119.677	ES
Turk White D19-08 - Wellbore #1 - Wellbore #1 - As Drill	6,750.00	6,566.71	5,444.47	5,397.48	115.879	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 Y05-771
Project:	Mustang	TVD Reference:	Well @ 4810.00ft
Reference Site:	D Section 29	MD Reference:	Well @ 4810.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersen Y05-771	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Guttersen Y05-771	Database:	EDMP
Reference Design:	Prelim - Rev 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 20						
Bohlender D20-2J - Wellbore #1 - No Surveys	6,381.53	6,241.85	5,342.93	5,265.26	68.793	CC, ES
Bohlender D20-2J - Wellbore #1 - No Surveys	6,800.00	6,627.54	5,474.90	5,392.71	66.616	SF
Bohlender D20-3 - Wellbore #1 - Gyro Surveys	6,398.52	6,250.76	6,322.99	6,278.08	140.781	CC
Bohlender D20-3 - Wellbore #1 - Gyro Surveys	6,400.00	6,251.72	6,322.99	6,278.07	140.753	ES
Bohlender D20-3 - Wellbore #1 - Gyro Surveys	6,900.00	6,717.95	6,511.34	6,463.55	136.231	SF
Bohlender D20-4 (P&A) - Wellbore #1 - No Surveys	6,376.60	6,239.00	6,533.49	6,385.53	44.157	CC
Bohlender D20-4 (P&A) - Wellbore #1 - No Surveys	6,400.00	6,262.04	6,533.91	6,385.41	43.998	ES
Bohlender D20-4 (P&A) - Wellbore #1 - No Surveys	6,850.00	6,667.96	6,699.52	6,541.73	42.458	SF
Bohlender D20-6 - Wellbore#1 - Gyro Surveys	6,393.94	6,190.17	4,976.57	4,931.87	111.344	CC
Bohlender D20-6 - Wellbore#1 - Gyro Surveys	6,400.00	6,195.98	4,976.60	4,931.86	111.239	ES
Bohlender D20-6 - Wellbore#1 - Gyro Surveys	6,750.00	6,557.95	5,073.03	5,026.04	107.965	SF
Butterball D19-27D - Butterball D19-27D - Butterball D19	6,358.98	6,567.30	7,679.64	7,599.57	95.914	CC, ES
Butterball D19-27D - Butterball D19-27D - Butterball D19	6,600.00	6,812.88	7,721.28	7,640.16	95.179	SF
Duncan D20-1 (P&A) - Wellbore #1 - No Surveys	6,448.53	6,308.76	7,106.30	6,956.81	47.536	CC
Duncan D20-1 (P&A) - Wellbore #1 - No Surveys	6,450.00	6,310.20	7,106.30	6,956.78	47.526	ES
Duncan D20-1 (P&A) - Wellbore #1 - No Surveys	6,950.00	6,735.97	7,277.67	7,118.41	45.698	SF
Duncan D20-10 - Wellbore #1 - Gyro Surveys	6,463.47	6,352.55	3,806.80	3,761.45	83.935	CC, ES
Duncan D20-10 - Wellbore #1 - Gyro Surveys	6,750.00	6,601.54	3,862.82	3,815.77	82.101	SF
Duncan D20-11 (SI) - Wellbore #1 - No Surveys	6,406.64	6,273.57	3,710.86	3,632.85	47.570	CC, ES
Duncan D20-11 (SI) - Wellbore #1 - No Surveys	6,700.00	6,551.08	3,777.34	3,696.04	46.462	SF
Duncan D20-12 (SI) - Wellbore #1 - No Surveys	6,365.06	6,230.64	3,778.02	3,700.51	48.743	CC, ES
Duncan D20-12 (SI) - Wellbore #1 - No Surveys	6,700.00	6,549.08	3,861.40	3,780.11	47.499	SF
Duncan D20-13 (SI) - Wellbore #1 - No Surveys	6,341.71	6,212.70	2,344.57	2,267.33	30.352	CC
Duncan D20-13 (SI) - Wellbore #1 - No Surveys	6,350.00	6,220.84	2,344.62	2,267.27	30.313	ES
Duncan D20-13 (SI) - Wellbore #1 - No Surveys	6,600.00	6,463.50	2,391.46	2,311.19	29.791	SF
Duncan D20-14 (SI) - Wellbore #1 - Gyro Surveys	6,396.04	6,267.93	2,649.65	2,604.70	58.950	CC
Duncan D20-14 (SI) - Wellbore #1 - Gyro Surveys	6,400.00	6,271.85	2,649.66	2,604.68	58.914	ES
Duncan D20-14 (SI) - Wellbore #1 - Gyro Surveys	6,600.00	6,475.57	2,681.59	2,635.27	57.898	SF
Duncan D20-15 (P&A) - Wellbore #1 - Gyro Surveys	6,462.28	6,320.11	2,715.61	2,670.38	60.030	CC, ES
Duncan D20-15 (P&A) - Wellbore #1 - Gyro Surveys	6,700.00	6,539.79	2,753.58	2,706.87	58.951	SF
Duncan D20-16 (SI) - Wellbore #1 - Gyro Surveys	6,535.69	6,391.86	3,837.46	3,791.86	84.150	CC, ES
Duncan D20-16 (SI) - Wellbore #1 - Gyro Surveys	6,900.00	6,681.87	3,904.27	3,856.71	82.096	SF
Duncan D20-2 - Wellbore #1 - Gyro Surveys	6,433.48	6,378.04	6,527.49	6,482.10	143.801	CC, ES
Duncan D20-2 - Wellbore #1 - Gyro Surveys	6,850.00	6,699.05	6,658.70	6,611.08	139.831	SF
Duncan D20-7 - Wellbore #1 - Gyro Surveys	6,434.87	6,279.33	5,636.91	5,591.82	125.014	CC, ES
Duncan D20-7 - Wellbore #1 - Gyro Surveys	6,850.00	6,667.24	5,760.47	5,712.94	121.198	SF
Duncan D20-8 - Wellbore #1 - Gyro Surveys	6,461.18	6,325.56	5,755.72	5,710.48	127.216	CC, ES
Duncan D20-8 - Wellbore #1 - Gyro Surveys	6,950.00	6,768.26	5,910.40	5,862.43	123.197	SF
Duncan D20-9 (P&A) - Wellbore #1 - Gyro Surveys	6,492.33	6,383.69	4,770.67	4,725.20	104.905	CC
Duncan D20-9 (P&A) - Wellbore #1 - Gyro Surveys	6,500.00	6,391.80	4,770.71	4,725.18	104.782	ES
Duncan D20-9 (P&A) - Wellbore #1 - Gyro Surveys	6,850.00	6,697.02	4,848.28	4,800.76	102.035	SF
E Ranches (P&A) - Wellbore #1 - No Surveys	6,370.23	6,232.73	2,376.47	2,228.66	16.078	CC
E Ranches (P&A) - Wellbore #1 - No Surveys	6,400.00	6,262.04	2,377.15	2,228.65	16.007	ES
E Ranches (P&A) - Wellbore #1 - No Surveys	6,600.00	6,455.50	2,416.73	2,263.73	15.795	SF
Guttersen 10-20 - Wellbore #1 - Gyro Surveys	6,441.05	6,323.47	4,091.55	4,046.33	90.487	CC
Guttersen 10-20 - Wellbore #1 - Gyro Surveys	6,450.00	6,331.98	4,091.61	4,046.33	90.365	ES
Guttersen 10-20 - Wellbore #1 - Gyro Surveys	6,750.00	6,618.00	4,161.88	4,114.80	88.388	SF
LDS D20-30D - LDS D20-30D - LDS D20-30D - As Drille	6,378.21	6,424.50	7,061.61	7,013.68	147.326	CC, ES
LDS D20-30D - LDS D20-30D - LDS D20-30D - As Drille	6,750.00	6,700.00	7,164.65	7,114.76	143.612	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 Gutteresen Y05-771
Project:	Mustang	TVD Reference:	Well @ 4810.00ft
Reference Site:	D Section 29	MD Reference:	Well @ 4810.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Gutteresen Y05-771	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Gutteresen Y05-771	Database:	EDMP
Reference Design:	Prelim - Rev 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	7,271.04	6,912.15	6,755.11	6,592.01	41.415	CC, ES
O'SH D 28-7 (P&A) - Wellbore #1 - No Surveys	7,395.04	6,924.00	6,758.38	6,594.92	41.346	SF
Spike ST GWS D 28-12 (SI) - Wellbore #1 - Gyro Surve	8,391.62	6,935.56	4,003.82	3,953.01	78.794	CC
Spike ST GWS D 28-12 (SI) - Wellbore #1 - Gyro Surve	8,400.00	6,935.63	4,003.83	3,952.99	78.749	ES
Spike ST GWS D 28-12 (SI) - Wellbore #1 - Gyro Surve	9,900.00	6,947.24	4,278.51	4,220.94	74.315	SF
Gutteresen D State 28-29D (PR) - Wellbore #1 - MWD Su	6,670.61	6,626.84	5,233.58	5,186.91	112.130	CC, ES
Gutteresen D State 28-29D (PR) - Wellbore #1 - MWD Su	7,150.00	6,906.26	5,312.90	5,264.40	109.544	SF
Gutteresen D State 28-30D - Wellbore #1 - Gutteresen D S	6,652.34	6,749.15	3,848.55	3,799.14	77.899	CC, ES
Gutteresen D State 28-30D - Wellbore #1 - Gutteresen D S	7,000.00	6,907.57	3,903.55	3,852.63	76.658	SF
Gutteresen State D28-18D (PR) - Wellbore #1 - MWD Sur	6,979.50	6,859.88	6,013.05	5,961.53	116.712	CC, ES
Gutteresen State D28-18D (PR) - Wellbore #1 - MWD Sur	9,200.00	6,974.98	6,646.81	6,588.92	114.805	SF
Gutteresen State D28-28D (PR) - Wellbore #1 - MWD Sur	6,703.40	6,602.68	6,366.38	6,317.99	131.579	CC, ES
Gutteresen State D28-28D (PR) - Wellbore #1 - MWD Sur	7,200.00	6,908.03	6,440.09	6,389.86	128.231	SF
Gutteresen State D28-79HN - Wellbore #1 - Actual	6,800.00	9,960.90	3,628.15	3,539.42	40.890	SF
Gutteresen State D28-79HN - Wellbore #1 - Actual	7,150.00	9,731.43	3,600.60	3,514.88	42.008	ES
Gutteresen State D28-79HN - Wellbore #1 - Actual	7,172.45	9,719.92	3,600.49	3,514.94	42.086	CC
HSR Gutteresen State 7-28 (PR) - Wellbore #1 - Gyro Sur	7,221.18	6,600.00	6,543.88	6,496.10	136.974	CC, ES
HSR Gutteresen State 7-28 (PR) - Wellbore #1 - Gyro Sur	11,100.00	6,600.00	7,724.87	7,662.79	124.437	SF
O'SH D 28-1 (SI) - Wellbore #1 - Gyro Surveys	7,005.94	6,829.63	7,829.84	7,781.66	162.503	CC, ES
O'SH D 28-1 (SI) - Wellbore #1 - Gyro Surveys	11,900.00	6,900.16	9,694.97	9,628.82	146.570	SF
O'SH D 28-2 (SI) - Wellbore #1 - Gyro Surveys	6,884.08	6,746.90	6,919.09	6,871.51	145.432	CC, ES
O'SH D 28-2 (SI) - Wellbore #1 - Gyro Surveys	10,300.00	6,935.50	8,188.01	8,129.91	140.908	SF
O'SH D 28-8 (SI) - Wellbore #1 - Gyro Surveys	7,300.91	6,791.76	8,105.22	8,056.79	167.364	CC, ES
O'SH D 28-8 (SI) - Wellbore #1 - Gyro Surveys	12,900.00	7,026.15	9,954.01	9,881.68	137.617	SF
Spike ST GWS D 28-4 (SI) - Wellbore #1 - Gyro Surveys	6,718.63	6,588.20	4,416.97	4,370.23	94.518	CC, ES
Spike ST GWS D 28-4 (SI) - Wellbore #1 - Gyro Surveys	7,150.00	6,834.84	4,478.99	4,430.52	92.411	SF
Spike State D28-05 (PR) - Wellbore #1 - Gyro Surveys	7,135.96	6,845.92	4,023.80	3,975.36	83.060	CC
Spike State D28-05 (PR) - Wellbore #1 - Gyro Surveys	7,150.00	6,858.27	4,023.85	3,975.35	82.961	ES
Spike State D28-05 (PR) - Wellbore #1 - Gyro Surveys	7,300.00	6,893.80	4,030.75	3,982.13	82.906	SF
Spike State D28-06 (SI) - Wellbore #1 - Gyro Surveys	7,193.93	6,803.72	5,707.91	5,659.50	117.914	CC
Spike State D28-06 (SI) - Wellbore #1 - Gyro Surveys	7,200.00	6,805.44	5,707.92	5,659.50	117.880	ES
Spike State D28-06 (SI) - Wellbore #1 - Gyro Surveys	10,000.00	6,853.74	6,485.39	6,427.86	112.732	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 Y05-771
Project:	Mustang	TVD Reference:	Well @ 4810.00ft
Reference Site:	D Section 29	MD Reference:	Well @ 4810.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersen Y05-771	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Guttersen Y05-771	Database:	EDMP
Reference Design:	Prelim - Rev 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 29						
Guttersen D29-30D - Wellbore #1 - Design #1	800.54	802.55	1,166.66	1,161.37	220.483	CC
Guttersen D29-30D - Wellbore #1 - Design #1	900.00	887.52	1,166.98	1,161.03	196.060	ES
Guttersen D29-30D - Wellbore #1 - Design #1	6,550.00	6,605.49	2,258.99	2,209.44	45.590	SF
Guttersen D29-31D - Wellbore #1 - Guttersen D29-31D	100.00	73.60	447.44	447.18	1,735.561	CC
Guttersen D29-31D - Wellbore #1 - Guttersen D29-31D	500.00	471.41	448.78	446.37	186.533	ES
Guttersen D29-31D - Wellbore #1 - Guttersen D29-31D	6,500.00	6,449.97	1,575.85	1,529.03	33.658	SF
Guttersen D29-33D - Wellbore #1 - Guttersen D29-33D -	872.39	872.86	926.25	921.65	201.523	CC
Guttersen D29-33D - Wellbore #1 - Guttersen D29-33D -	900.00	894.08	926.31	921.54	194.355	ES
Guttersen D29-33D - Wellbore #1 - Guttersen D29-33D -	9,200.00	7,142.90	1,633.97	1,572.37	26.528	SF
Guttersen D29-65HN - Original Drilling - Original Drilling	7,817.64	8,102.16	126.67	97.49	4.340	CC, ES
Guttersen D29-65HN - Original Drilling - Original Drilling	7,900.00	8,104.85	151.07	103.66	3.186	SF
Guttersen D29-67HN - Original Drilling - Original Drilling	6,741.94	7,895.96	516.46	464.61	9.961	CC
Guttersen D29-67HN - Original Drilling - Original Drilling	6,750.00	7,896.88	516.57	464.27	9.876	ES
Guttersen D29-67HN - Original Drilling - Original Drilling	6,850.00	7,907.49	536.32	479.31	9.407	SF
Guttersen D29-69HN - Original Drilling - Original Drilling	950.03	941.04	1,148.13	1,143.14	230.414	CC
Guttersen D29-69HN - Original Drilling - Original Drilling	1,000.00	984.12	1,148.28	1,142.96	216.191	ES
Guttersen D29-69HN - Original Drilling - Original Drilling	6,750.00	8,060.25	1,704.51	1,644.79	28.538	SF
Guttersen D29-722 - Guttersen D29-722 - Prelim - Rev 1	7,374.62	7,513.85	2,783.45	2,733.53	55.756	CC, ES
Guttersen D29-722 - Guttersen D29-722 - Prelim - Rev 1	8,600.00	6,750.00	2,865.83	2,813.93	55.222	SF
Guttersen D29-730 - Guttersen D29-730 - Prelim - Rev 1	7,364.53	7,440.41	2,174.16	2,124.45	43.741	CC, ES
Guttersen D29-730 - Guttersen D29-730 - Prelim - Rev 1	7,800.00	7,128.79	2,184.46	2,134.46	43.692	SF
Guttersen D29-738 - Guttersen D29-738 - Prelim - Rev 1	2,918.80	2,714.12	1,402.03	1,382.64	72.335	CC, ES
Guttersen D29-738 - Guttersen D29-738 - Prelim - Rev 1	8,300.00	6,718.41	1,518.41	1,466.54	29.277	SF
Guttersen D29-746 - Guttersen D29-746 - Prelim - Rev 1	7,250.00	7,489.01	960.16	910.31	19.260	SF
Guttersen D29-746 - Guttersen D29-746 - Prelim - Rev 1	7,316.32	7,423.74	959.94	910.12	19.269	CC, ES
Guttersen D29-754 - Guttersen D29-754 - Prelim - Rev 1	7,821.00	7,125.93	353.25	303.33	7.077	CC, ES
Guttersen D29-754 - Guttersen D29-754 - Prelim - Rev 1	7,900.00	7,060.32	355.62	305.28	7.065	SF
Guttersen D29-770 - Guttersen D29-770 - Prelim - Rev 1	2,200.00	2,200.00	150.03	134.72	9.801	CC, ES
Guttersen D29-770 - Guttersen D29-770 - Prelim - Rev 1	6,950.00	7,806.79	263.22	213.01	5.242	SF
Guttersen D29-778 - Guttersen D29-778 - Prelim - Rev 1	2,200.00	2,200.00	155.23	139.92	10.141	CC, ES
Guttersen D29-778 - Guttersen D29-778 - Prelim - Rev 1	2,300.00	2,294.83	158.29	142.31	9.907	SF
Guttersen D29-786 - Guttersen D29-786 - Prelim - Rev 1	2,200.00	2,200.00	169.05	153.74	11.044	CC, ES
Guttersen D29-786 - Guttersen D29-786 - Prelim - Rev 1	2,300.00	2,294.42	172.28	156.30	10.782	SF
Guttersen D29-99HZ - Wellbore #1 - MWD Surveys	9,100.00	7,963.19	40.93	-10.72	0.792	Level 1, ES
Guttersen D29-99HZ - Wellbore #1 - MWD Surveys	9,130.05	7,961.42	27.84	-8.74	0.761	Level 1, CC, SF
Guttersen D30-68-1HN - Original Drilling - Original Drilling	1,029.69	1,019.70	1,108.70	1,103.15	199.587	CC, ES
Guttersen D30-68-1HN - Original Drilling - Original Drilling	6,350.00	6,206.20	1,711.80	1,668.62	39.642	SF
Guttersen D30-69-1HN - Original Drilling - Original Drilling	1,129.66	1,119.67	1,126.51	1,120.26	180.245	CC
Guttersen D30-69-1HN - Original Drilling - Original Drilling	1,200.00	1,181.74	1,126.77	1,120.04	167.635	ES
Guttersen D30-69-1HN - Original Drilling - Original Drilling	6,450.00	6,347.86	2,228.10	2,181.69	48.006	SF
Guttersen State D29-714 - Guttersen D29-714 - Prelim -	8,075.25	6,746.17	3,320.01	3,269.67	65.948	CC, ES
Guttersen State D29-714 - Guttersen D29-714 - Prelim -	9,100.00	6,573.51	3,463.80	3,409.78	64.130	SF
Guttersen State Y05-719 - Guttersen Y05-719 - Prelim -	20,829.85	20,810.66	3,143.53	2,912.24	13.591	CC
Guttersen State Y05-719 - Guttersen Y05-719 - Prelim -	20,848.37	20,810.66	3,143.59	2,912.12	13.581	ES, SF
Guttersen Y05-726 - Guttersen Y05-726 - Prelim - Rev 1	20,834.28	20,832.42	2,530.41	2,299.14	10.942	CC
Guttersen Y05-726 - Guttersen Y05-726 - Prelim - Rev 1	20,848.37	20,829.50	2,530.45	2,299.08	10.937	ES, SF
Guttersen Y05-734 - Guttersen Y05-734 - Prelim - Rev 1	20,845.39	20,908.77	1,917.35	1,685.88	8.283	CC, ES, SF
Guttersen Y05-749 - Guttersen Y05-749 - Prelim - Rev 1	20,844.01	20,852.36	1,304.30	1,072.98	5.639	CC
Guttersen Y05-749 - Guttersen Y05-749 - Prelim - Rev 1	20,848.37	20,847.99	1,304.33	1,072.96	5.637	ES, SF
Guttersen Y05-756 - Guttersen Y05-756 - Prelim - Rev 1	20,848.37	20,794.20	698.01	466.78	3.019	CC, ES, SF
Guttersen Y05-779 - Guttersen Y05-779 - Prelim - Rev 1	2,200.00	2,200.00	37.01	21.70	2.418	CC
Guttersen Y05-779 - Guttersen Y05-779 - Prelim - Rev 1	2,300.00	2,300.53	37.63	21.61	2.349	ES
Guttersen Y05-779 - Guttersen Y05-779 - Prelim - Rev 1	20,848.37	20,877.17	535.79	303.31	2.305	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 Y05-771
Project:	Mustang	TVD Reference:	Well @ 4810.00ft
Reference Site:	D Section 29	MD Reference:	Well @ 4810.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersen Y05-771	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Guttersen Y05-771	Database:	EDMP
Reference Design:	Prelim - Rev 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 29						
Guttersen Y05-786 - Guttersen Y05-786 - Prelim - Rev 1	2,200.00	2,204.00	75.01	59.69	4.896	CC, ES
Guttersen Y05-786 - Guttersen Y05-786 - Prelim - Rev 1	20,848.37	20,779.05	1,086.02	854.91	4.699	SF
Jessie D29-1J - Wellbore #1 - Gyro Surveys	6,656.58	6,516.28	2,038.68	1,992.35	43.996	CC, ES
Jessie D29-1J - Wellbore #1 - Gyro Surveys	6,900.00	6,711.09	2,062.15	2,014.54	43.315	SF
Jessie D29-4J - Wellbore #1 - Gyro Surveys	8,738.54	6,864.22	1,880.20	1,828.12	36.102	CC, ES
Jessie D29-4J - Wellbore #1 - Gyro Surveys	9,100.00	6,882.12	1,914.56	1,860.65	35.517	SF
Kate Red D29-03J - Kate Red D29-03J - Kate Red D29-0	8,743.10	6,911.38	884.48	832.33	16.960	CC, ES, SF
Kate Red D29-11 - Wellbore #1 - Gyro Surveys	8,380.51	6,904.62	89.46	38.71	1.763	CC, ES, SF
Kate Red D29-13 - Wellbore #1 - Gyro Surveys	9,817.74	6,930.31	1,239.19	1,181.94	21.646	CC, ES
Kate Red D29-13 - Wellbore #1 - Gyro Surveys	9,900.00	6,930.74	1,241.92	1,184.44	21.608	SF
Kate Red D29-14 - Wellbore #1 - Gyro Surveys	9,713.74	6,925.73	126.71	70.07	2.237	CC, ES, SF
Kate Red D29-2J - Wellbore #1 - Kate Red D29-2J	6,314.44	6,197.61	818.15	773.81	18.451	CC, ES
Kate Red D29-2J - Wellbore #1 - Kate Red D29-2J	6,400.00	6,285.64	822.56	777.60	18.296	SF
Kate Red D29-3 - Wellbore #1 - Kate Red D29-3	6,436.81	6,310.42	1,080.64	1,035.48	23.927	CC, ES
Kate Red D29-3 - Wellbore #1 - Kate Red D29-3	6,550.00	6,419.69	1,090.46	1,044.54	23.747	SF
Kate Red D29-5 - Wellbore #1 - Gyro Surveys	100.00	69.78	413.97	413.72	1,659.419	CC
Kate Red D29-5 - Wellbore #1 - Gyro Surveys	800.00	768.06	416.72	411.57	80.948	ES
Kate Red D29-5 - Wellbore #1 - Gyro Surveys	7,000.00	6,799.58	1,109.23	1,061.13	23.059	SF
Kate Red D29-6 - Wellbore #1 - Gyro Surveys	7,102.71	6,826.30	240.30	191.95	4.971	CC, ES, SF
Kate White D29-1 - Wellbore #1 - Gyro Surveys	6,675.63	6,559.04	3,187.83	3,141.31	68.530	CC, ES
Kate White D29-1 - Wellbore #1 - Gyro Surveys	7,000.00	6,795.05	3,226.23	3,178.16	67.115	SF
Kate White D29-15 - Wellbore #1 - Gyro Surveys	9,610.46	6,860.05	1,378.75	1,322.55	24.535	CC, ES
Kate White D29-15 - Wellbore #1 - Gyro Surveys	9,800.00	6,859.19	1,391.72	1,334.24	24.213	SF
Kate White D29-16 - Wellbore #1 - Gyro Surveys	9,696.82	6,894.79	2,784.20	2,727.62	49.207	CC
Kate White D29-16 - Wellbore #1 - Gyro Surveys	9,700.00	6,894.79	2,784.20	2,727.60	49.189	ES
Kate White D29-16 - Wellbore #1 - Gyro Surveys	10,400.00	6,895.14	2,871.63	2,810.86	47.254	SF
Kate White D29-7 - Wellbore #1 - Gyro Surveys	7,186.71	6,848.90	1,721.66	1,673.08	35.439	CC, ES
Kate White D29-7 - Wellbore #1 - Gyro Surveys	7,250.00	6,865.00	1,723.28	1,674.56	35.371	SF
Kate White D29-8 - Wellbore #1 - Gyro Surveys	7,219.56	6,907.61	2,854.18	2,805.42	58.541	CC, ES
Kate White D29-8 - Wellbore #1 - Gyro Surveys	7,300.00	6,925.45	2,856.23	2,807.40	58.488	SF
Kate White D29-9 (SI) - Wellbore #1 - Gyro Surveys	8,469.94	6,863.23	2,810.27	2,759.19	55.022	CC, ES
Kate White D29-9 (SI) - Wellbore #1 - Gyro Surveys	9,200.00	6,884.96	2,903.46	2,849.10	53.412	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 Y05-771
Project:	Mustang	TVD Reference:	Well @ 4810.00ft
Reference Site:	D Section 29	MD Reference:	Well @ 4810.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersen Y05-771	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Guttersen Y05-771	Database:	EDMP
Reference Design:	Prelim - Rev 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 32						
HP D32-21D - Wellbore #1 - MWD Surveys	12,994.09	7,063.90	895.87	813.89	10.928	CC
HP D32-21D - Wellbore #1 - MWD Surveys	13,000.00	7,064.09	895.89	813.82	10.916	ES
HP D32-21D - Wellbore #1 - MWD Surveys	13,100.00	7,067.36	902.10	818.77	10.826	SF
HP D32-23D - Wellbore #1 - MWD Surveys	14,076.56	7,005.30	2,066.03	1,977.85	23.431	CC
HP D32-23D - Wellbore #1 - MWD Surveys	14,100.00	7,005.32	2,066.16	1,977.74	23.367	ES
HP D32-23D - Wellbore #1 - MWD Surveys	14,400.00	7,005.51	2,091.19	2,000.18	22.978	SF
HP Farms D 32-22D - Wellbore #1 - MWD Surveys	12,924.72	7,221.56	2,173.66	2,083.90	24.217	CC, ES
HP Farms D 32-22D - Wellbore #1 - MWD Surveys	13,200.00	7,224.48	2,191.02	2,098.97	23.802	SF
HP Farms D32-03 - Wellbore #1 - Gyro Surveys	11,222.96	6,932.78	329.34	263.34	4.990	CC, ES, SF
HP Farms D32-18D - Wellbore #1 - MWD Surveys	11,742.62	7,144.23	935.79	864.13	13.058	CC, ES
HP Farms D32-18D - Wellbore #1 - MWD Surveys	11,900.00	7,145.15	948.94	875.27	12.881	SF
HP Farms D32-24D - Wellbore #1 - MWD Surveys	14,340.64	7,203.07	922.91	832.03	10.156	CC, ES
HP Farms D32-24D - Wellbore #1 - MWD Surveys	14,400.00	7,203.30	924.81	833.10	10.084	SF
Norris 14-32 - Wellbore #1 - Projection Survey	15,210.27	6,941.00	1,269.53	1,137.96	9.649	CC, ES, SF
Norris A Unit 2 - Wellbore #1 - Projection Survey	14,474.15	6,946.00	637.33	511.36	5.059	CC, ES, SF
Norris D32-1 (SI) - Wellbore #1 - Gyro Surveys	11,114.21	6,917.08	2,812.08	2,746.90	43.142	CC, ES
Norris D32-1 (SI) - Wellbore #1 - Gyro Surveys	11,800.00	6,906.14	2,894.48	2,824.74	41.503	SF
Norris D32-10 - Wellbore #1 - Gyro Surveys	13,792.13	6,750.00	1,483.50	1,399.27	17.612	CC
Norris D32-10 - Wellbore #1 - Gyro Surveys	13,800.00	6,750.00	1,483.52	1,399.21	17.595	ES
Norris D32-10 - Wellbore #1 - Gyro Surveys	14,000.00	6,750.00	1,498.00	1,412.11	17.441	SF
Norris D32-15 - Wellbore #1 - Gyro Surveys	15,078.06	6,800.00	1,469.51	1,375.39	15.614	CC
Norris D32-15 - Wellbore #1 - Gyro Surveys	15,100.00	6,800.00	1,469.67	1,375.33	15.578	ES
Norris D32-15 - Wellbore #1 - Gyro Surveys	15,200.00	6,800.00	1,474.56	1,379.36	15.489	SF
Norris D32-1J - Wellbore #1 - Gyro Surveys	11,906.50	6,965.54	2,382.75	2,312.04	33.697	CC, ES
Norris D32-1J - Wellbore #1 - Gyro Surveys	12,400.00	6,950.34	2,433.27	2,359.12	32.816	SF
Norris D32-2 - Wellbore #1 - Gyro Surveys	11,035.08	6,958.83	1,499.57	1,434.87	23.176	CC, ES
Norris D32-2 - Wellbore #1 - Gyro Surveys	11,300.00	6,957.86	1,522.79	1,456.14	22.849	SF
Norris D32-2J - Wellbore #1 - Gyro Surveys	11,514.23	6,948.54	404.97	336.97	5.955	CC, ES, SF
Norris D32-4 (P&A) - Wellbore #1 - No Surveys	11,075.54	6,924.00	1,166.56	987.20	6.504	CC, ES
Norris D32-4 (P&A) - Wellbore #1 - No Surveys	11,100.00	6,924.00	1,166.82	987.37	6.502	SF
Norris D32-5 - Wellbore #1 - Gyro Surveys	12,419.88	6,929.73	1,139.96	1,065.84	15.381	CC, ES
Norris D32-5 - Wellbore #1 - Gyro Surveys	12,500.00	6,929.01	1,142.77	1,068.43	15.374	SF
Norris D32-6 - Wellbore #1 - Gyro Surveys	12,444.74	6,953.49	77.55	3.17	1.043	Level 2, CC, ES, SF
Norris D32-7 - Wellbore #1 - Gyro Surveys	12,412.76	6,900.00	1,422.45	1,348.36	19.197	CC, ES
Norris D32-7 - Wellbore #1 - Gyro Surveys	12,600.00	6,913.01	1,434.65	1,359.06	18.980	SF
Norris D32-9 (SI) - Wellbore #1 - Gyro Surveys	13,770.11	6,922.57	2,883.44	2,799.40	34.307	CC
Norris D32-9 (SI) - Wellbore #1 - Gyro Surveys	13,800.00	6,922.47	2,883.60	2,799.29	34.202	ES
Norris D32-9 (SI) - Wellbore #1 - Gyro Surveys	14,300.00	6,920.75	2,931.73	2,843.85	33.360	SF
Y Section 05						
Olsen Red Y05-02D - Olsen Red Y05-02D - Olsen Red Y	16,636.79	6,956.87	206.68	100.43	1.945	CC, ES, SF
Olsen Y5-05JI - Olsen Y5-05JI - Olsen Y5-05JI - As Drille	17,613.52	6,944.00	1,237.46	1,135.54	12.141	CC, ES, SF
Perkins 32-05 - Perkins 32-05 - Perkins 32-05 - As Drille	17,623.68	6,996.00	1,459.30	1,308.37	9.669	CC, ES
Perkins 32-05 - Perkins 32-05 - Perkins 32-05 - As Drille	17,700.00	6,996.00	1,461.30	1,309.66	9.637	SF
Perkins 42-05 - Perkins 42-05 - Perkins 42-05 - As Drille	17,630.37	7,013.00	2,764.37	2,613.23	18.291	CC, ES
Perkins 42-05 - Perkins 42-05 - Perkins 42-05 - As Drille	17,900.00	7,013.00	2,777.49	2,624.21	18.121	SF
Perkins 43-05 - Perkins 43-05 - Perkins 43-05 - As Drille	18,938.12	7,018.00	2,755.76	2,594.19	17.056	CC, ES
Perkins 43-05 - Perkins 43-05 - Perkins 43-05 - As Drille	19,200.00	7,018.00	2,768.18	2,604.55	16.917	SF
Perkins USX Y05-16 - Perkins USX Y05-16 - Perkins US	19,861.77	6,979.19	2,217.34	2,085.34	16.798	CC
Perkins USX Y05-16 - Perkins USX Y05-16 - Perkins US	19,900.00	6,979.41	2,217.67	2,085.31	16.754	ES
Perkins USX Y05-16 - Perkins USX Y05-16 - Perkins US	20,100.00	6,980.54	2,230.11	2,096.33	16.670	SF

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

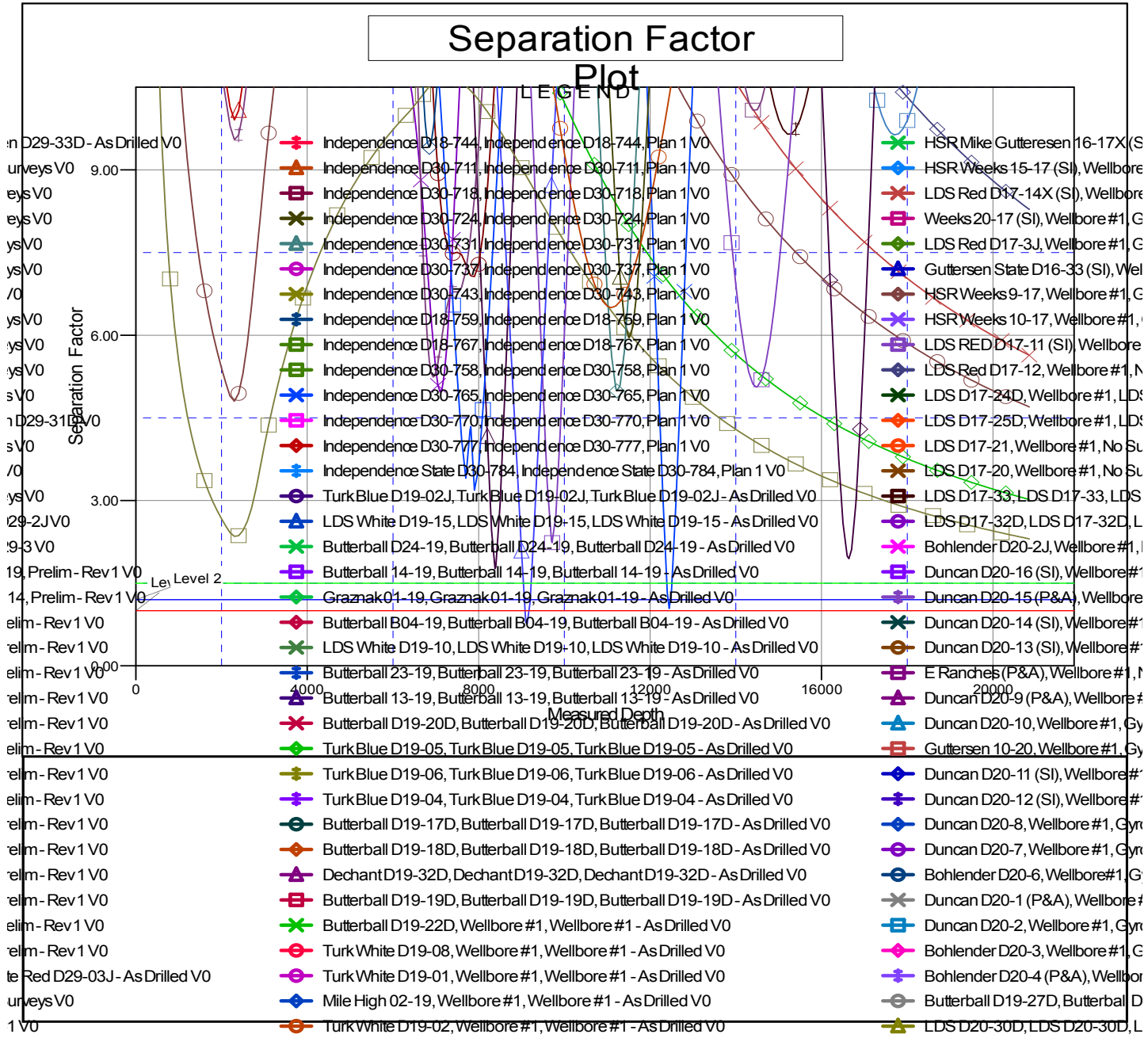
Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersen Y05-771
Project:	Mustang	TVD Reference:	Well @ 4810.00ft
Reference Site:	D Section 29	MD Reference:	Well @ 4810.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersen Y05-771	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Guttersen Y05-771	Database:	EDMP
Reference Design:	Prelim - Rev 1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to Well @ 4810.00ft
 Offset Depths are relative to Offset Datum
 Central Meridian is -105.5000000

Coordinates are relative to: Guttersen Y05-771
 Coordinate System is US State Plane 1983, Colorado Northern Zone
 Grid Convergence at Surface is: 0.59°



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