

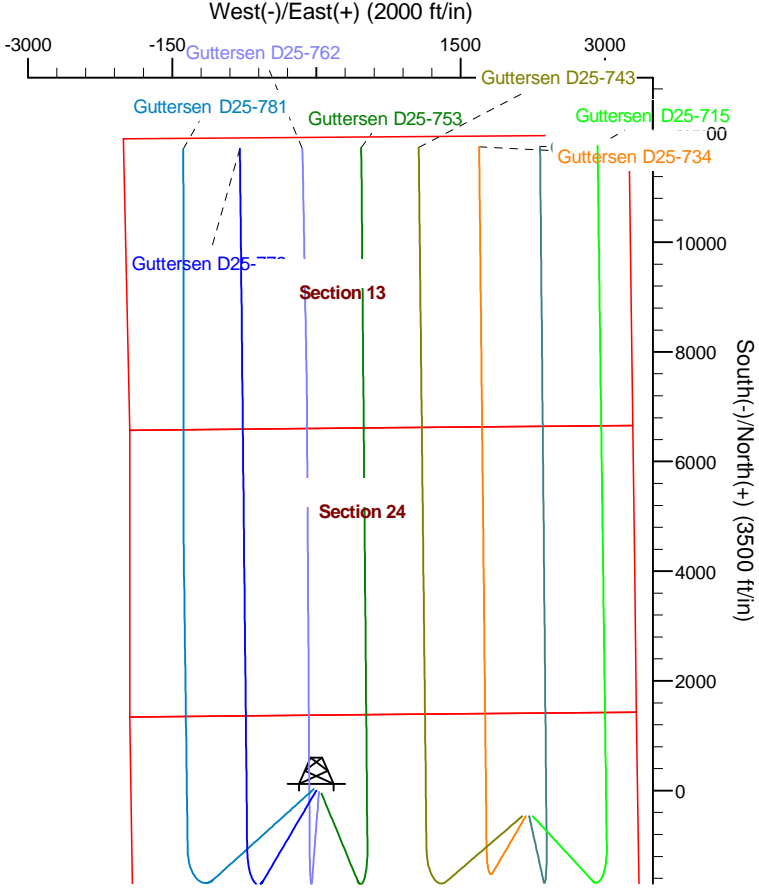
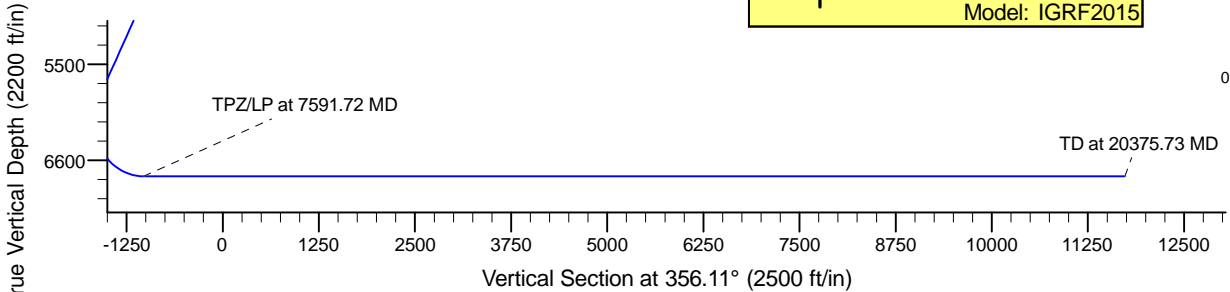
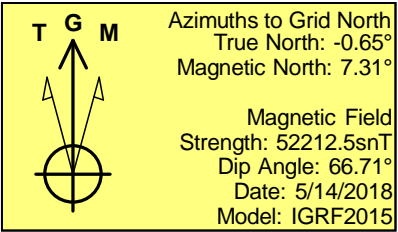
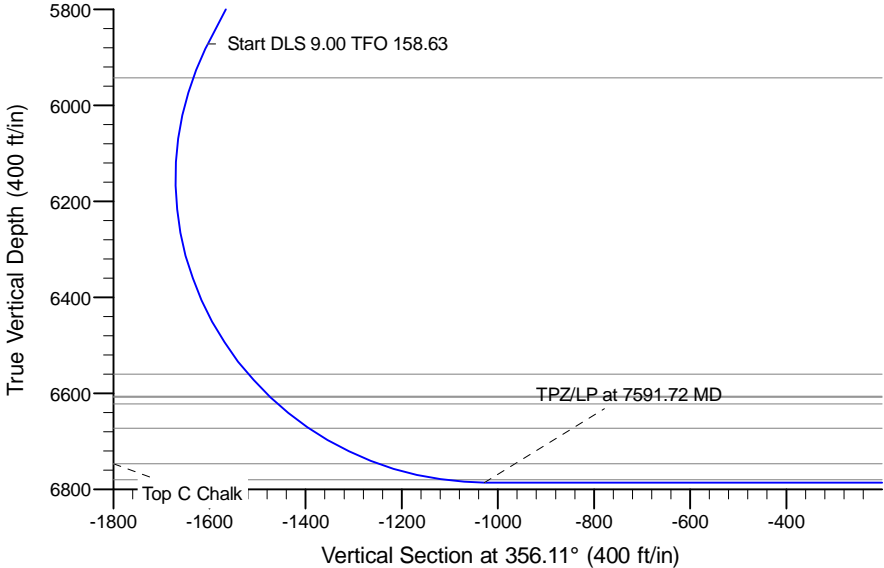
Project: Mustang
Site: D Section 25
Well: Gutteresen D25-772
Wellbore: Wellbore #1
Design: Plan #1

Northern Region - DJ Basin

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

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	2000.00	0.00	0.00	2000.00	0.00	0.00	0.00	0.00	0.00	
3	3448.78	28.98	198.55	3387.81	-339.96	-114.10	2.00	198.55	-331.45	
4	6288.61	28.98	198.55	5872.17	-1644.19	-551.81	0.00	0.00	-1603.01	
5	7591.72	90.00	359.66	6786.00	-1079.36	-719.03	9.00	158.63	-1028.14	Gutteresen D25-772 TPZ/LP
6	20375.73	90.00	359.66	6786.00	11704.43	-795.08	0.00	0.00	11731.40	Gutteresen D25-772 BHL



WELL DETAILS: Gutteresen D25-772

				4786.00	
		North	East	Latitude	Longitude
0.00	0.00	1317211.12	3278687.05	40.1998376	-104.5022902

Plan: Plan #1 (Gutteresen D25-772/Wellbore #1)

Created By: Colby Baxter Date: 12:16, August 15 2018

Checked: _____ Date: _____

Reviewed: _____ Date: _____

Approved: _____ Date: _____

Northern Region - DJ Basin

Mustang

D Section 25

Guttersen D25-772

Wellbore #1

Plan: Plan #1

Standard Survey Report

15 August, 2018

Noble Energy, Inc.

Survey Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersen D25-772
Project:	Mustang	TVD Reference:	KB @ 4816.00ft
Site:	D Section 25	MD Reference:	KB @ 4816.00ft
Well:	Guttersen D25-772	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 25						
Site Position:		Northing:	1,316,029.45	usft	Latitude:	40.1965730		
From:	Lat/Long	Easting:	3,279,365.57	usft	Longitude:	-104.4999090		
Position Uncertainty:	0.00	ft	Slot Radius:	13.200	in	Grid Convergence:	0.65	°

Well		Guttersen D25-772				
Well Position	+N/-S	0.00 ft	Northing:	1,317,211.12 usft	Latitude:	40.1998376
	+E/-W	0.00 ft	Easting:	3,278,687.05 usft	Longitude:	-104.5022902
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,786.00 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	5/14/2018	7.96	66.71	52,212.46020987

Design	Plan #1				
Audit Notes:					
Version:	Phase:	PLAN	Tie On Depth:	0.00	
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.00	0.00	0.00	356.11	

Survey Tool Program	Date	8/15/2018			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.00	20,375.73	Plan #1 (Wellbore #1)	2_MWD+IFR1+MS	A008Mb: IFR dec & multi-station analysis	

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

Noble Energy, Inc.

Survey Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersen D25-772
Project:	Mustang	TVD Reference:	KB @ 4816.00ft
Site:	D Section 25	MD Reference:	KB @ 4816.00ft
Well:	Guttersen D25-772	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	2.00	198.55	2,099.98	-1.65	-0.56	-1.61	2.00	2.00	0.00
2,200.00	4.00	198.55	2,199.84	-6.62	-2.22	-6.45	2.00	2.00	0.00
2,300.00	6.00	198.55	2,299.45	-14.88	-4.99	-14.51	2.00	2.00	0.00
2,400.00	8.00	198.55	2,398.70	-26.43	-8.87	-25.77	2.00	2.00	0.00
2,500.00	10.00	198.55	2,497.47	-41.26	-13.85	-40.23	2.00	2.00	0.00
2,600.00	12.00	198.55	2,595.62	-59.35	-19.92	-57.86	2.00	2.00	0.00
2,700.00	14.00	198.55	2,693.06	-80.67	-27.08	-78.65	2.00	2.00	0.00
2,800.00	16.00	198.55	2,789.64	-105.21	-35.31	-102.57	2.00	2.00	0.00
2,900.00	18.00	198.55	2,885.27	-132.93	-44.61	-129.60	2.00	2.00	0.00
3,000.00	20.00	198.55	2,979.82	-163.79	-54.97	-159.69	2.00	2.00	0.00
3,100.00	22.00	198.55	3,073.17	-197.76	-66.37	-192.81	2.00	2.00	0.00
3,200.00	24.00	198.55	3,165.21	-234.80	-78.80	-228.92	2.00	2.00	0.00
3,300.00	26.00	198.55	3,255.84	-274.87	-92.25	-267.98	2.00	2.00	0.00
3,400.00	28.00	198.55	3,344.94	-317.90	-106.69	-309.94	2.00	2.00	0.00
3,448.78	28.98	198.55	3,387.81	-339.96	-114.10	-331.45	2.00	2.00	0.00
3,500.00	28.98	198.55	3,432.62	-363.48	-121.99	-354.38	0.00	0.00	0.00
3,600.00	28.98	198.55	3,520.10	-409.41	-137.40	-399.16	0.00	0.00	0.00
3,700.00	28.98	198.55	3,607.58	-455.34	-152.82	-443.93	0.00	0.00	0.00
3,800.00	28.98	198.55	3,695.07	-501.26	-168.23	-488.71	0.00	0.00	0.00
3,900.00	28.98	198.55	3,782.55	-547.19	-183.64	-533.49	0.00	0.00	0.00
4,000.00	28.98	198.55	3,870.03	-593.12	-199.06	-578.26	0.00	0.00	0.00
4,100.00	28.98	198.55	3,957.51	-639.04	-214.47	-623.04	0.00	0.00	0.00
4,200.00	28.98	198.55	4,045.00	-684.97	-229.88	-667.81	0.00	0.00	0.00
4,300.00	28.98	198.55	4,132.48	-730.89	-245.30	-712.59	0.00	0.00	0.00
4,400.00	28.98	198.55	4,219.96	-776.82	-260.71	-757.36	0.00	0.00	0.00
4,500.00	28.98	198.55	4,307.45	-822.75	-276.12	-802.14	0.00	0.00	0.00
4,600.00	28.98	198.55	4,394.93	-868.67	-291.54	-846.92	0.00	0.00	0.00
4,700.00	28.98	198.55	4,482.41	-914.60	-306.95	-891.69	0.00	0.00	0.00
4,800.00	28.98	198.55	4,569.89	-960.52	-322.37	-936.47	0.00	0.00	0.00
4,900.00	28.98	198.55	4,657.38	-1,006.45	-337.78	-981.24	0.00	0.00	0.00
5,000.00	28.98	198.55	4,744.86	-1,052.38	-353.19	-1,026.02	0.00	0.00	0.00
5,100.00	28.98	198.55	4,832.34	-1,098.30	-368.61	-1,070.80	0.00	0.00	0.00
5,200.00	28.98	198.55	4,919.82	-1,144.23	-384.02	-1,115.57	0.00	0.00	0.00

Noble Energy, Inc.

Survey Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersen D25-772
Project:	Mustang	TVD Reference:	KB @ 4816.00ft
Site:	D Section 25	MD Reference:	KB @ 4816.00ft
Well:	Guttersen D25-772	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	28.98	198.55	5,007.31	-1,190.16	-399.43	-1,160.35	0.00	0.00	0.00
5,400.00	28.98	198.55	5,094.79	-1,236.08	-414.85	-1,205.12	0.00	0.00	0.00
5,500.00	28.98	198.55	5,182.27	-1,282.01	-430.26	-1,249.90	0.00	0.00	0.00
5,600.00	28.98	198.55	5,269.75	-1,327.93	-445.67	-1,294.68	0.00	0.00	0.00
5,700.00	28.98	198.55	5,357.24	-1,373.86	-461.09	-1,339.45	0.00	0.00	0.00
5,800.00	28.98	198.55	5,444.72	-1,419.79	-476.50	-1,384.23	0.00	0.00	0.00
5,900.00	28.98	198.55	5,532.20	-1,465.71	-491.91	-1,429.00	0.00	0.00	0.00
6,000.00	28.98	198.55	5,619.69	-1,511.64	-507.33	-1,473.78	0.00	0.00	0.00
6,100.00	28.98	198.55	5,707.17	-1,557.56	-522.74	-1,518.56	0.00	0.00	0.00
6,200.00	28.98	198.55	5,794.65	-1,603.49	-538.15	-1,563.33	0.00	0.00	0.00
6,288.61	28.98	198.55	5,872.17	-1,644.19	-551.81	-1,603.01	0.00	0.00	0.00
6,300.00	28.02	199.35	5,882.18	-1,649.33	-553.58	-1,608.02	9.00	-8.36	6.98
6,400.00	19.95	209.27	5,973.50	-1,686.45	-569.73	-1,643.96	9.00	-8.08	9.92
6,500.00	13.07	230.24	6,069.41	-1,708.60	-586.79	-1,664.91	9.00	-6.88	20.97
6,600.00	10.19	273.87	6,167.53	-1,715.25	-604.35	-1,670.35	9.00	-2.87	43.64
6,700.00	14.05	313.88	6,265.44	-1,706.22	-621.96	-1,660.15	9.00	3.85	40.00
6,800.00	21.24	332.18	6,360.75	-1,681.74	-639.20	-1,634.56	9.00	7.19	18.30
6,900.00	29.41	341.11	6,451.10	-1,642.41	-655.63	-1,594.20	9.00	8.17	8.93
7,000.00	37.93	346.36	6,534.26	-1,589.20	-670.86	-1,540.08	9.00	8.52	5.25
7,100.00	46.62	349.90	6,608.19	-1,523.42	-684.51	-1,473.53	9.00	8.68	3.54
7,200.00	55.38	352.55	6,671.07	-1,446.69	-696.24	-1,396.18	9.00	8.76	2.65
7,300.00	64.19	354.68	6,721.36	-1,360.90	-705.77	-1,309.94	9.00	8.81	2.14
7,400.00	73.02	356.52	6,757.80	-1,268.16	-712.85	-1,216.93	9.00	8.84	1.84
7,500.00	81.88	358.19	6,779.51	-1,170.75	-717.32	-1,119.44	9.00	8.85	1.67
7,591.72	90.00	359.66	6,786.00	-1,079.36	-719.03	-1,028.14	9.00	8.86	1.60
7,600.00	90.00	359.66	6,786.00	-1,071.07	-719.08	-1,019.88	0.00	0.00	0.00
7,700.00	90.00	359.66	6,786.00	-971.08	-719.68	-920.07	0.00	0.00	0.00
7,800.00	90.00	359.66	6,786.00	-871.08	-720.27	-820.26	0.00	0.00	0.00
7,900.00	90.00	359.66	6,786.00	-771.08	-720.87	-720.45	0.00	0.00	0.00
8,000.00	90.00	359.66	6,786.00	-671.08	-721.46	-620.64	0.00	0.00	0.00
8,100.00	90.00	359.66	6,786.00	-571.08	-722.06	-520.83	0.00	0.00	0.00
8,200.00	90.00	359.66	6,786.00	-471.09	-722.65	-421.03	0.00	0.00	0.00
8,300.00	90.00	359.66	6,786.00	-371.09	-723.24	-321.22	0.00	0.00	0.00
8,400.00	90.00	359.66	6,786.00	-271.09	-723.84	-221.41	0.00	0.00	0.00
8,500.00	90.00	359.66	6,786.00	-171.09	-724.43	-121.60	0.00	0.00	0.00
8,600.00	90.00	359.66	6,786.00	-71.09	-725.03	-21.79	0.00	0.00	0.00
8,700.00	90.00	359.66	6,786.00	28.91	-725.62	78.02	0.00	0.00	0.00
8,800.00	90.00	359.66	6,786.00	128.90	-726.22	177.83	0.00	0.00	0.00
8,900.00	90.00	359.66	6,786.00	228.90	-726.81	277.63	0.00	0.00	0.00
9,000.00	90.00	359.66	6,786.00	328.90	-727.41	377.44	0.00	0.00	0.00
9,100.00	90.00	359.66	6,786.00	428.90	-728.00	477.25	0.00	0.00	0.00
9,200.00	90.00	359.66	6,786.00	528.90	-728.60	577.06	0.00	0.00	0.00
9,300.00	90.00	359.66	6,786.00	628.90	-729.19	676.87	0.00	0.00	0.00

Noble Energy, Inc.

Survey Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersen D25-772
Project:	Mustang	TVD Reference:	KB @ 4816.00ft
Site:	D Section 25	MD Reference:	KB @ 4816.00ft
Well:	Guttersen D25-772	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	359.66	6,786.00	728.89	-729.79	776.68	0.00	0.00	0.00
9,500.00	90.00	359.66	6,786.00	828.89	-730.38	876.49	0.00	0.00	0.00
9,600.00	90.00	359.66	6,786.00	928.89	-730.98	976.30	0.00	0.00	0.00
9,700.00	90.00	359.66	6,786.00	1,028.89	-731.57	1,076.10	0.00	0.00	0.00
9,800.00	90.00	359.66	6,786.00	1,128.89	-732.17	1,175.91	0.00	0.00	0.00
9,900.00	90.00	359.66	6,786.00	1,228.88	-732.76	1,275.72	0.00	0.00	0.00
10,000.00	90.00	359.66	6,786.00	1,328.88	-733.36	1,375.53	0.00	0.00	0.00
10,100.00	90.00	359.66	6,786.00	1,428.88	-733.95	1,475.34	0.00	0.00	0.00
10,200.00	90.00	359.66	6,786.00	1,528.88	-734.55	1,575.15	0.00	0.00	0.00
10,300.00	90.00	359.66	6,786.00	1,628.88	-735.14	1,674.96	0.00	0.00	0.00
10,400.00	90.00	359.66	6,786.00	1,728.88	-735.74	1,774.76	0.00	0.00	0.00
10,500.00	90.00	359.66	6,786.00	1,828.87	-736.33	1,874.57	0.00	0.00	0.00
10,600.00	90.00	359.66	6,786.00	1,928.87	-736.93	1,974.38	0.00	0.00	0.00
10,700.00	90.00	359.66	6,786.00	2,028.87	-737.52	2,074.19	0.00	0.00	0.00
10,800.00	90.00	359.66	6,786.00	2,128.87	-738.12	2,174.00	0.00	0.00	0.00
10,900.00	90.00	359.66	6,786.00	2,228.87	-738.71	2,273.81	0.00	0.00	0.00
11,000.00	90.00	359.66	6,786.00	2,328.87	-739.31	2,373.62	0.00	0.00	0.00
11,100.00	90.00	359.66	6,786.00	2,428.86	-739.90	2,473.42	0.00	0.00	0.00
11,200.00	90.00	359.66	6,786.00	2,528.86	-740.50	2,573.23	0.00	0.00	0.00
11,300.00	90.00	359.66	6,786.00	2,628.86	-741.09	2,673.04	0.00	0.00	0.00
11,400.00	90.00	359.66	6,786.00	2,728.86	-741.69	2,772.85	0.00	0.00	0.00
11,500.00	90.00	359.66	6,786.00	2,828.86	-742.28	2,872.66	0.00	0.00	0.00
11,600.00	90.00	359.66	6,786.00	2,928.85	-742.88	2,972.47	0.00	0.00	0.00
11,700.00	90.00	359.66	6,786.00	3,028.85	-743.47	3,072.28	0.00	0.00	0.00
11,800.00	90.00	359.66	6,786.00	3,128.85	-744.07	3,172.08	0.00	0.00	0.00
11,900.00	90.00	359.66	6,786.00	3,228.85	-744.66	3,271.89	0.00	0.00	0.00
12,000.00	90.00	359.66	6,786.00	3,328.85	-745.26	3,371.70	0.00	0.00	0.00
12,100.00	90.00	359.66	6,786.00	3,428.85	-745.85	3,471.51	0.00	0.00	0.00
12,200.00	90.00	359.66	6,786.00	3,528.84	-746.45	3,571.32	0.00	0.00	0.00
12,300.00	90.00	359.66	6,786.00	3,628.84	-747.04	3,671.13	0.00	0.00	0.00
12,400.00	90.00	359.66	6,786.00	3,728.84	-747.63	3,770.94	0.00	0.00	0.00
12,500.00	90.00	359.66	6,786.00	3,828.84	-748.23	3,870.75	0.00	0.00	0.00
12,600.00	90.00	359.66	6,786.00	3,928.84	-748.82	3,970.55	0.00	0.00	0.00
12,700.00	90.00	359.66	6,786.00	4,028.83	-749.42	4,070.36	0.00	0.00	0.00
12,800.00	90.00	359.66	6,786.00	4,128.83	-750.01	4,170.17	0.00	0.00	0.00
12,900.00	90.00	359.66	6,786.00	4,228.83	-750.61	4,269.98	0.00	0.00	0.00
13,000.00	90.00	359.66	6,786.00	4,328.83	-751.20	4,369.79	0.00	0.00	0.00
13,100.00	90.00	359.66	6,786.00	4,428.83	-751.80	4,469.60	0.00	0.00	0.00
13,200.00	90.00	359.66	6,786.00	4,528.83	-752.39	4,569.41	0.00	0.00	0.00
13,300.00	90.00	359.66	6,786.00	4,628.82	-752.99	4,669.21	0.00	0.00	0.00
13,400.00	90.00	359.66	6,786.00	4,728.82	-753.58	4,769.02	0.00	0.00	0.00
13,500.00	90.00	359.66	6,786.00	4,828.82	-754.18	4,868.83	0.00	0.00	0.00
13,600.00	90.00	359.66	6,786.00	4,928.82	-754.77	4,968.64	0.00	0.00	0.00

Noble Energy, Inc.

Survey Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersen D25-772
Project:	Mustang	TVD Reference:	KB @ 4816.00ft
Site:	D Section 25	MD Reference:	KB @ 4816.00ft
Well:	Guttersen D25-772	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	359.66	6,786.00	5,028.82	-755.37	5,068.45	0.00	0.00	0.00
13,800.00	90.00	359.66	6,786.00	5,128.82	-755.96	5,168.26	0.00	0.00	0.00
13,900.00	90.00	359.66	6,786.00	5,228.81	-756.56	5,268.07	0.00	0.00	0.00
14,000.00	90.00	359.66	6,786.00	5,328.81	-757.15	5,367.87	0.00	0.00	0.00
14,100.00	90.00	359.66	6,786.00	5,428.81	-757.75	5,467.68	0.00	0.00	0.00
14,200.00	90.00	359.66	6,786.00	5,528.81	-758.34	5,567.49	0.00	0.00	0.00
14,300.00	90.00	359.66	6,786.00	5,628.81	-758.94	5,667.30	0.00	0.00	0.00
14,400.00	90.00	359.66	6,786.00	5,728.80	-759.53	5,767.11	0.00	0.00	0.00
14,500.00	90.00	359.66	6,786.00	5,828.80	-760.13	5,866.92	0.00	0.00	0.00
14,600.00	90.00	359.66	6,786.00	5,928.80	-760.72	5,966.73	0.00	0.00	0.00
14,700.00	90.00	359.66	6,786.00	6,028.80	-761.32	6,066.53	0.00	0.00	0.00
14,800.00	90.00	359.66	6,786.00	6,128.80	-761.91	6,166.34	0.00	0.00	0.00
14,900.00	90.00	359.66	6,786.00	6,228.80	-762.51	6,266.15	0.00	0.00	0.00
15,000.00	90.00	359.66	6,786.00	6,328.79	-763.10	6,365.96	0.00	0.00	0.00
15,100.00	90.00	359.66	6,786.00	6,428.79	-763.70	6,465.77	0.00	0.00	0.00
15,200.00	90.00	359.66	6,786.00	6,528.79	-764.29	6,565.58	0.00	0.00	0.00
15,300.00	90.00	359.66	6,786.00	6,628.79	-764.89	6,665.39	0.00	0.00	0.00
15,400.00	90.00	359.66	6,786.00	6,728.79	-765.48	6,765.20	0.00	0.00	0.00
15,500.00	90.00	359.66	6,786.00	6,828.79	-766.08	6,865.00	0.00	0.00	0.00
15,600.00	90.00	359.66	6,786.00	6,928.78	-766.67	6,964.81	0.00	0.00	0.00
15,700.00	90.00	359.66	6,786.00	7,028.78	-767.27	7,064.62	0.00	0.00	0.00
15,800.00	90.00	359.66	6,786.00	7,128.78	-767.86	7,164.43	0.00	0.00	0.00
15,900.00	90.00	359.66	6,786.00	7,228.78	-768.46	7,264.24	0.00	0.00	0.00
16,000.00	90.00	359.66	6,786.00	7,328.78	-769.05	7,364.05	0.00	0.00	0.00
16,100.00	90.00	359.66	6,786.00	7,428.77	-769.65	7,463.86	0.00	0.00	0.00
16,200.00	90.00	359.66	6,786.00	7,528.77	-770.24	7,563.66	0.00	0.00	0.00
16,300.00	90.00	359.66	6,786.00	7,628.77	-770.83	7,663.47	0.00	0.00	0.00
16,400.00	90.00	359.66	6,786.00	7,728.77	-771.43	7,763.28	0.00	0.00	0.00
16,500.00	90.00	359.66	6,786.00	7,828.77	-772.02	7,863.09	0.00	0.00	0.00
16,600.00	90.00	359.66	6,786.00	7,928.77	-772.62	7,962.90	0.00	0.00	0.00
16,700.00	90.00	359.66	6,786.00	8,028.76	-773.21	8,062.71	0.00	0.00	0.00
16,800.00	90.00	359.66	6,786.00	8,128.76	-773.81	8,162.52	0.00	0.00	0.00
16,900.00	90.00	359.66	6,786.00	8,228.76	-774.40	8,262.32	0.00	0.00	0.00
17,000.00	90.00	359.66	6,786.00	8,328.76	-775.00	8,362.13	0.00	0.00	0.00
17,100.00	90.00	359.66	6,786.00	8,428.76	-775.59	8,461.94	0.00	0.00	0.00
17,200.00	90.00	359.66	6,786.00	8,528.76	-776.19	8,561.75	0.00	0.00	0.00
17,300.00	90.00	359.66	6,786.00	8,628.75	-776.78	8,661.56	0.00	0.00	0.00
17,400.00	90.00	359.66	6,786.00	8,728.75	-777.38	8,761.37	0.00	0.00	0.00
17,500.00	90.00	359.66	6,786.00	8,828.75	-777.97	8,861.18	0.00	0.00	0.00
17,600.00	90.00	359.66	6,786.00	8,928.75	-778.57	8,960.99	0.00	0.00	0.00
17,700.00	90.00	359.66	6,786.00	9,028.75	-779.16	9,060.79	0.00	0.00	0.00
17,800.00	90.00	359.66	6,786.00	9,128.74	-779.76	9,160.60	0.00	0.00	0.00
17,900.00	90.00	359.66	6,786.00	9,228.74	-780.35	9,260.41	0.00	0.00	0.00
18,000.00	90.00	359.66	6,786.00	9,328.74	-780.95	9,360.22	0.00	0.00	0.00

Noble Energy, Inc.

Survey Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersen D25-772
Project:	Mustang	TVD Reference:	KB @ 4816.00ft
Site:	D Section 25	MD Reference:	KB @ 4816.00ft
Well:	Guttersen D25-772	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)
18,100.00	90.00	359.66	6,786.00	9,428.74	-781.54	9,460.03	0.00	0.00	0.00
18,200.00	90.00	359.66	6,786.00	9,528.74	-782.14	9,559.84	0.00	0.00	0.00
18,300.00	90.00	359.66	6,786.00	9,628.74	-782.73	9,659.65	0.00	0.00	0.00
18,400.00	90.00	359.66	6,786.00	9,728.73	-783.33	9,759.45	0.00	0.00	0.00
18,500.00	90.00	359.66	6,786.00	9,828.73	-783.92	9,859.26	0.00	0.00	0.00
18,600.00	90.00	359.66	6,786.00	9,928.73	-784.52	9,959.07	0.00	0.00	0.00
18,700.00	90.00	359.66	6,786.00	10,028.73	-785.11	10,058.88	0.00	0.00	0.00
18,800.00	90.00	359.66	6,786.00	10,128.73	-785.71	10,158.69	0.00	0.00	0.00
18,900.00	90.00	359.66	6,786.00	10,228.73	-786.30	10,258.50	0.00	0.00	0.00
19,000.00	90.00	359.66	6,786.00	10,328.72	-786.90	10,358.31	0.00	0.00	0.00
19,100.00	90.00	359.66	6,786.00	10,428.72	-787.49	10,458.11	0.00	0.00	0.00
19,200.00	90.00	359.66	6,786.00	10,528.72	-788.09	10,557.92	0.00	0.00	0.00
19,300.00	90.00	359.66	6,786.00	10,628.72	-788.68	10,657.73	0.00	0.00	0.00
19,400.00	90.00	359.66	6,786.00	10,728.72	-789.28	10,757.54	0.00	0.00	0.00
19,500.00	90.00	359.66	6,786.00	10,828.71	-789.87	10,857.35	0.00	0.00	0.00
19,600.00	90.00	359.66	6,786.00	10,928.71	-790.47	10,957.16	0.00	0.00	0.00
19,700.00	90.00	359.66	6,786.00	11,028.71	-791.06	11,056.97	0.00	0.00	0.00
19,800.00	90.00	359.66	6,786.00	11,128.71	-791.66	11,156.77	0.00	0.00	0.00
19,900.00	90.00	359.66	6,786.00	11,228.71	-792.25	11,256.58	0.00	0.00	0.00
20,000.00	90.00	359.66	6,786.00	11,328.71	-792.85	11,356.39	0.00	0.00	0.00
20,100.00	90.00	359.66	6,786.00	11,428.70	-793.44	11,456.20	0.00	0.00	0.00
20,200.00	90.00	359.66	6,786.00	11,528.70	-794.04	11,556.01	0.00	0.00	0.00
20,300.00	90.00	359.66	6,786.00	11,628.70	-794.63	11,655.82	0.00	0.00	0.00
20,375.73	90.00	359.66	6,786.00	11,704.43	-795.08	11,731.40	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
- hit/miss target									
- Shape									
Guttersen D25-772 SHL - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	1,317,211.12	3,278,687.05	40.1998376	-104.5022902
Guttersen D25-772 KOP - plan hits target center - Point	0.00	0.00	5,872.17	-1,644.19	-551.81	1,315,566.94	3,278,135.24	40.1953415	-104.5043316
Guttersen D25-772 BHL - plan misses target center by 30.87ft at 20375.73ft MD (6786.00 TVD, 11704.43 N, -795.08 E) - Point	0.00	0.00	6,786.00	11,706.52	-764.28	1,328,917.62	3,277,922.78	40.2319948	-104.5045556
Guttersen D25-772 TPZ/LP - plan hits target center - Point	0.00	0.00	6,786.00	-1,079.36	-719.03	1,316,131.77	3,277,968.02	40.1968970	-104.5049075

Noble Energy, Inc.

Survey Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersen D25-772
Project:	Mustang	TVD Reference:	KB @ 4816.00ft
Site:	D Section 25	MD Reference:	KB @ 4816.00ft
Well:	Guttersen D25-772	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDMP

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
679.00	679.00	Upper Pierre Aquifer Top				
717.00	717.00	Pierre				
1,616.00	1,616.00	Upper Pierre Aquifer Base				
3,769.06	3,668.00	Parkman				
4,251.44	4,090.00	Sussex				
4,462.91	4,275.00	Shannon				
6,367.27	5,943.00	Teepee Buttes				
7,033.30	6,560.00	Sharon Springs				
7,096.82	6,606.00	Top A Chalk				
7,099.72	6,608.00	Top A Marl				
7,120.44	6,622.00	Top B Chalk				
7,203.40	6,673.00	Top B Marl				
7,365.93	6,747.00	Top C Chalk				
7,503.55	6,780.00	Top C Marl				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
2000	2000	0	0	Start Build 2.00	
6289	5872	-340	-114	Start DLS 9.00 TFO 158.63	
7592	6786	-1644	-552	TPZ/LP at 7591.72 MD	
20,376	6786	-1079	-719	TD at 20375.73 MD	

Checked By: _____ Approved By: _____ Date: _____

Northern Region - DJ Basin

Mustang

D Section 25

Guttersen D25-772

Wellbore #1

Plan #1

Anticollision Summary Report

15 August, 2018

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersen D25-772
Project:	Mustang	TVD Reference:	KB @ 4816.00ft
Reference Site:	D Section 25	MD Reference:	KB @ 4816.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersen D25-772	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 8/15/2018			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	20,375.73	Plan #1 (Wellbore #1)	2_MWD+IFR1+MS	A008Mb: IFR dec & multi-station analysis

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
D Section 13						
Dalbey D 13-11 (SI) - Wellbore #1 - Gyro Surveys	17,303.95	6,702.09	880.78	773.74	8.228	CC, ES, SF
Dalbey D 13-12 (PR) - Wellbore #1 - Gyro Surveys	16,825.56	6,718.27	268.40	164.97	2.595	CC, ES, SF
Dalbey D 13-13 (PR) - Wellbore #1 - No Surveys	15,903.09	6,716.00	530.43	323.04	2.558	CC, ES, SF
Dalbey D 13-14 (PA) - Wellbore #1 - Gyro Surveys	15,908.53	6,712.58	650.60	554.21	6.749	CC, ES, SF
Guttersen 12-13 (SI) - Wellbore #1 - Gyro Surveys	18,501.56	6,731.95	637.16	520.83	5.477	CC, ES, SF
Guttersen 13C (PR) - Wellbore #1 - Gyro Surveys	19,271.82	6,743.77	2,766.63	2,644.10	22.579	CC
Guttersen 13C (PR) - Wellbore #1 - Gyro Surveys	19,300.00	6,744.09	2,766.78	2,644.04	22.543	ES
Guttersen 13C (PR) - Wellbore #1 - Gyro Surveys	19,500.00	6,746.35	2,776.03	2,652.14	22.408	SF
Guttersen 13D (PR) - Wellbore #1 - Gyro Surveys	16,669.84	6,729.83	2,747.99	2,645.65	26.854	CC
Guttersen 13D (PR) - Wellbore #1 - Gyro Surveys	16,700.00	6,730.00	2,748.15	2,645.61	26.801	ES
Guttersen 13D (PR) - Wellbore #1 - Gyro Surveys	17,000.00	6,731.64	2,767.75	2,663.61	26.577	SF
Guttersen 13N (PR) - Wellbore #1 - Gyro Surveys	19,254.56	6,683.31	1,205.92	1,083.71	9.868	CC, ES
Guttersen 13N (PR) - Wellbore #1 - Gyro Surveys	19,300.00	6,682.45	1,206.78	1,084.35	9.857	SF
Guttersen 13S (PR) - Wellbore #1 - Gyro Surveys	18,013.26	6,662.86	2,749.54	2,637.14	24.463	CC, ES
Guttersen 13S (PR) - Wellbore #1 - Gyro Surveys	18,300.00	6,664.82	2,764.45	2,650.42	24.244	SF
Guttersen 13T (PR) - Wellbore #1 - Gyro Surveys	15,446.84	6,690.97	2,641.82	2,549.03	28.469	CC, ES
Guttersen 13T (PR) - Wellbore #1 - Gyro Surveys	15,800.00	6,689.59	2,665.33	2,570.63	28.147	SF
Guttersen 21-13 (SI) - Wellbore #1 - Gyro Surveys	19,865.41	6,701.84	641.67	514.52	5.047	CC, ES, SF
Guttersen 22-13 (SI) - Wellbore #1 - Gyro Surveys	18,607.87	6,695.98	790.65	673.46	6.747	CC, ES, SF
Guttersen 31-13 (PR) - Wellbore #1 - Gyro Surveys	19,902.66	6,753.59	2,025.68	1,897.82	15.843	CC, ES
Guttersen 31-13 (PR) - Wellbore #1 - Gyro Surveys	20,000.00	6,754.56	2,028.02	1,899.61	15.794	SF
Guttersen 32-13 (PR) - Wellbore #1 - Gyro Surveys	18,716.24	6,710.96	2,122.70	2,004.49	17.957	CC, ES
Guttersen 32-13 (PR) - Wellbore #1 - Gyro Surveys	18,900.00	6,710.03	2,130.64	2,011.48	17.881	SF
Guttersen 34-13 (PR) - Wellbore #1 - Gyro Surveys	15,956.02	6,715.17	2,005.33	1,908.60	20.730	CC, ES
Guttersen 34-13 (PR) - Wellbore #1 - Gyro Surveys	16,100.00	6,716.40	2,010.49	1,912.95	20.612	SF
Guttersen 41-13 (PR) - Wellbore #1 - Gyro Surveys	19,837.76	6,520.99	3,419.94	3,293.84	27.121	CC, ES
Guttersen 41-13 (PR) - Wellbore #1 - Gyro Surveys	20,200.00	6,520.97	3,439.07	3,310.77	26.806	SF
Guttersen 42-13 (PR) - Wellbore #1 - Gyro Surveys	18,570.32	6,568.53	3,511.95	3,395.59	30.181	CC
Guttersen 42-13 (PR) - Wellbore #1 - Gyro Surveys	18,600.00	6,569.24	3,512.08	3,395.49	30.124	ES
Guttersen 42-13 (PR) - Wellbore #1 - Gyro Surveys	19,000.00	6,579.11	3,538.12	3,419.15	29.739	SF
Guttersen 43-13 - Wellbore #1 - Wellbore #1 - As Drilled	17,299.90	6,700.35	3,408.57	3,301.61	31.868	CC
Guttersen 43-13 - Wellbore #1 - Wellbore #1 - As Drilled	17,300.00	6,700.35	3,408.57	3,301.61	31.868	ES
Guttersen 43-13 - Wellbore #1 - Wellbore #1 - As Drilled	17,800.00	6,712.64	3,445.04	3,335.23	31.371	SF
Guttersen 44-13 - Wellbore #1 - Wellbore #1 - As Drilled	15,948.84	6,757.27	3,346.01	3,243.26	32.566	CC, ES
Guttersen 44-13 - Wellbore #1 - Wellbore #1 - As Drilled	16,400.00	6,756.81	3,376.29	3,270.96	32.055	SF
L F Ranch 1-13 (PR) - Wellbore #1 - Gyro Surveys	16,995.22	6,709.92	1,981.03	1,876.22	18.900	CC
L F Ranch 1-13 (PR) - Wellbore #1 - Gyro Surveys	17,000.00	6,709.96	1,981.04	1,876.19	18.895	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 Gutttersen D25-772
Project:	Mustang	TVD Reference:	KB @ 4816.00ft
Reference Site:	D Section 25	MD Reference:	KB @ 4816.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Gutttersen D25-772	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 13						
L F Ranch 1-13 (PR) - Wellbore #1 - Gyro Surveys	17,100.00	6,710.71	1,983.80	1,878.37	18.816	SF
L. F. Ranch 13-4 (SI) - Wellbore #1 - Gyro Surveys	19,527.89	6,722.64	243.51	119.27	1.960	CC, ES, SF
D Section 24						
Dalbey D 24-10 (PR) - Wellbore #1 - Gyro Surveys	11,659.41	6,712.51	2,440.83	2,374.95	37.047	CC, ES
Dalbey D 24-10 (PR) - Wellbore #1 - Gyro Surveys	12,000.00	6,712.74	2,464.48	2,396.85	36.442	SF
Dalbey D 24-15 (SI) - Wellbore #1 - Gyro Surveys	10,700.02	6,732.46	1,969.90	1,909.63	32.681	CC, ES
Dalbey D 24-15 (SI) - Wellbore #1 - Gyro Surveys	10,900.00	6,733.96	1,980.03	1,918.82	32.349	SF
Glazier 2-24 (SI) - Wellbore #1 - Gyro Surveys	13,871.63	6,705.42	3,088.05	3,006.93	38.068	CC
Glazier 2-24 (SI) - Wellbore #1 - Gyro Surveys	13,900.00	6,705.28	3,088.18	3,006.87	37.981	ES
Glazier 2-24 (SI) - Wellbore #1 - Gyro Surveys	14,400.00	6,702.78	3,132.93	3,048.96	37.310	SF
Gutttersen 11-24 (PR) - Wellbore #1 - Gyro Surveys	14,653.35	6,743.45	590.82	504.01	6.806	CC, ES
Gutttersen 11-24 (PR) - Wellbore #1 - Gyro Surveys	14,700.00	6,743.46	592.66	505.54	6.803	SF
Gutttersen 12-24 (PR) - Wellbore #1 - Gyro Surveys	13,356.40	6,738.47	607.26	529.89	7.849	CC, ES
Gutttersen 12-24 (PR) - Wellbore #1 - Gyro Surveys	13,400.00	6,738.39	608.83	531.14	7.837	SF
Gutttersen 21-24 (PR) - Wellbore #1 - Gyro Surveys	14,666.01	6,724.99	727.12	640.04	8.350	CC, ES
Gutttersen 21-24 (PR) - Wellbore #1 - Gyro Surveys	14,700.00	6,725.10	727.91	640.72	8.348	SF
Gutttersen 22-24 (PR) - Wellbore #1 - Gyro Surveys	13,437.15	6,718.67	777.29	699.28	9.965	CC, ES, SF
Gutttersen 24A (PR) - Wellbore #1 - Gyro Surveys	13,992.48	6,720.29	99.72	17.75	1.217	Level 3, CC, ES, SF
Gutttersen 24J (PR) - Wellbore #1 - Gyro Surveys	15,291.34	6,721.77	189.49	97.78	2.066	CC, ES, SF
Gutttersen 24N (PR) - Wellbore #1 - MWD Surveys	14,029.19	6,734.98	1,327.24	1,245.86	16.308	CC, ES
Gutttersen 24N (PR) - Wellbore #1 - MWD Surveys	14,100.00	6,734.75	1,329.13	1,247.39	16.261	SF
Gutttersen 24S (PR) - Wellbore #1 - MWD Surveys	12,540.85	6,697.35	2,789.83	2,719.06	39.421	CC, ES
Gutttersen 24S (PR) - Wellbore #1 - MWD Surveys	13,000.00	6,693.56	2,827.35	2,754.18	38.636	SF
Gutttersen 43-24 (PR) - Wellbore #1 - Gyro Surveys	11,916.56	6,748.81	3,331.26	3,263.66	49.282	CC, ES
Gutttersen 43-24 (PR) - Wellbore #1 - Gyro Surveys	12,600.00	6,745.74	3,400.64	3,329.51	47.809	SF
Gutttersen 44-24 (PR) - Wellbore #1 - Gyro Surveys	792.88	736.90	3,375.19	3,370.17	673.604	CC
Gutttersen 44-24 (PR) - Wellbore #1 - Gyro Surveys	10,700.00	6,709.13	3,404.36	3,344.23	56.614	ES
Gutttersen 44-24 (PR) - Wellbore #1 - Gyro Surveys	11,500.00	6,710.93	3,501.91	3,438.00	54.796	SF
Karch Blue D 24-12 (PA) - Wellbore #1 - Gyro Surveys	12,178.05	6,741.67	553.19	484.02	7.998	CC, ES
Karch Blue D 24-12 (PA) - Wellbore #1 - Gyro Surveys	12,200.00	6,741.68	553.62	484.29	7.985	SF
Karch Blue D 24-14 (PR) - Wellbore #1 - No Surveys	10,650.89	6,735.00	1,011.04	839.70	5.901	CC, ES
Karch Blue D 24-14 (PR) - Wellbore #1 - No Surveys	10,700.00	6,735.00	1,012.24	840.69	5.901	SF
Karch Blue D24-11 (PA) - Wellbore #1 - Gyro Surveys	12,176.19	6,726.94	862.75	786.58	11.327	CC, ES
Karch Blue D24-11 (PA) - Wellbore #1 - Gyro Surveys	12,200.00	6,727.17	863.08	786.80	11.315	SF
Koerner 31-24 (SI) - Wellbore #1 - Gyro Surveys	14,715.64	6,733.81	2,049.97	1,962.55	23.449	CC, ES
Koerner 31-24 (SI) - Wellbore #1 - Gyro Surveys	14,900.00	6,734.22	2,058.25	1,969.83	23.279	SF
Koerner 32-24 (SI) - Wellbore #1 - Gyro Surveys	13,281.30	6,645.50	2,061.65	1,985.18	26.960	CC
Koerner 32-24 (SI) - Wellbore #1 - Gyro Surveys	13,300.00	6,645.46	2,061.73	1,985.14	26.919	ES
Koerner 32-24 (SI) - Wellbore #1 - Gyro Surveys	13,500.00	6,645.08	2,073.22	1,995.55	26.692	SF
Koerner 42-24 (SI) - Wellbore #1 - Gyro Surveys	13,268.00	6,727.34	3,367.64	3,290.90	43.882	CC
Koerner 42-24 (SI) - Wellbore #1 - Gyro Surveys	13,300.00	6,726.98	3,367.79	3,290.84	43.764	ES
Koerner 42-24 (SI) - Wellbore #1 - Gyro Surveys	13,900.00	6,720.20	3,426.42	3,346.25	42.735	SF
LF Ranch 1-24 (SI) - Wellbore #1 - Gyro Surveys	11,070.80	6,758.46	211.73	149.41	3.397	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 D25-772
Project:	Mustang	TVD Reference:	KB @ 4816.00ft
Reference Site:	D Section 25	MD Reference:	KB @ 4816.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersten D25-772	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 25						
Coors Energy 13-25D (PR) - Wellbore #1 - MWD Survey	6,824.17	6,566.98	649.09	590.55	11.087	CC, ES
Coors Energy 13-25D (PR) - Wellbore #1 - MWD Survey	6,900.00	6,637.41	651.66	592.73	11.059	SF
Coors Energy 14-25D (PR) - Wellbore #1 - MWD Survey	6,655.56	6,380.97	1,639.03	1,589.55	33.123	CC, ES
Coors Energy 14-25D (PR) - Wellbore #1 - MWD Survey	6,800.00	6,498.59	1,655.21	1,604.86	32.870	SF
Coors Energy 23-25D (PR) - Wellbore #1 - MWD Survey	6,331.15	6,069.18	690.01	637.10	13.041	CC, ES
Coors Energy 23-25D (PR) - Wellbore #1 - MWD Survey	6,450.00	6,181.17	695.63	641.91	12.951	SF
Coors Energy 24-25 (PR) - Wellbore #1 - Gyro Surveys	6,540.55	6,112.04	1,958.50	1,912.41	42.486	CC, ES
Coors Energy 24-25 (PR) - Wellbore #1 - Gyro Surveys	6,700.00	6,263.76	1,977.18	1,930.05	41.949	SF
Coors Energy 25HD (PR) - Wellbore #1 - MWD Surveys	6,738.57	6,531.79	1,404.86	1,347.69	24.572	CC, ES
Coors Energy 25HD (PR) - Wellbore #1 - MWD Surveys	6,850.00	6,634.30	1,411.76	1,353.95	24.418	SF
Coors Energy 25LD (PR) - Wellbore #1 - MWD Surveys	6,590.58	6,226.59	2,003.81	1,958.38	44.109	CC, ES
Coors Energy 25LD (PR) - Wellbore #1 - MWD Surveys	6,750.00	6,361.34	2,025.08	1,978.67	43.632	SF
Coors Energy 25TD (PR) - Wellbore #1 - MWD Surveys	6,454.20	6,069.32	3,442.46	3,396.13	74.307	CC, ES
Coors Energy 25TD (PR) - Wellbore #1 - MWD Surveys	6,800.00	6,392.26	3,500.84	3,452.45	72.356	SF
Coors Energy 25XD (PR) - Wellbore #1 - MWD Surveys	4,301.72	3,620.11	3,639.19	3,607.60	115.219	CC, ES
Coors Energy 25XD (PR) - Wellbore #1 - MWD Surveys	7,050.00	6,759.91	4,055.46	4,000.18	73.352	SF
Coors Energy 25YD (PR) - Wellbore #1 - MWD Surveys	868.38	901.11	3,786.62	3,782.13	842.213	CC, ES
Coors Energy 25YD (PR) - Wellbore #1 - MWD Surveys	6,950.00	6,799.15	4,509.20	4,458.56	89.055	SF
Coors Energy 33-25D (PR) - Wellbore #1 - MWD Survey	5,914.58	5,799.44	1,958.10	1,907.98	39.072	CC, ES
Coors Energy 33-25D (PR) - Wellbore #1 - MWD Survey	6,700.00	6,458.62	2,029.29	1,973.11	36.119	SF
Coors Energy 34-25 (PR) - Wellbore #1 - Gyro Surveys	6,470.54	5,996.83	2,544.08	2,497.87	55.048	CC, ES
Coors Energy 34-25 (PR) - Wellbore #1 - Gyro Surveys	6,750.00	6,285.17	2,586.70	2,538.63	53.816	SF
Coors Energy 43-25D (PR) - Wellbore #1 - MWD Survey	4,866.31	4,719.40	3,119.88	3,077.05	72.831	CC
Coors Energy 43-25D (PR) - Wellbore #1 - MWD Survey	4,900.00	4,733.21	3,120.01	3,076.95	72.445	ES
Coors Energy 43-25D (PR) - Wellbore #1 - MWD Survey	7,150.00	6,864.69	3,402.13	3,343.19	57.720	SF
Coors Energy 44-25D (PR) - Wellbore #1 - MWD Survey	6,365.17	5,994.17	3,621.41	3,575.34	78.618	CC, ES
Coors Energy 44-25D (PR) - Wellbore #1 - MWD Survey	6,900.00	6,488.04	3,718.50	3,669.23	75.465	SF
Dalbey D 25-03 (SI) - Wellbore #1 - Gyro Surveys	1,451.03	1,425.05	422.01	412.23	43.171	CC
Dalbey D 25-03 (SI) - Wellbore #1 - Gyro Surveys	2,000.00	1,971.77	423.71	410.06	31.048	ES
Dalbey D 25-03 (SI) - Wellbore #1 - Gyro Surveys	9,007.78	6,738.64	463.19	410.82	8.844	SF
Dalbey D 25-05 (SI) - Wellbore #1 - Gyro Surveys	8,079.44	6,818.09	729.65	678.84	14.361	CC, ES, SF
Guttersten 11-25 (PR) - Wellbore #1 - MWD Surveys	9,428.97	6,779.62	533.76	480.67	10.053	CC, ES, SF
Guttersten 22-25 (PR) - Wellbore #1 - MWD Surveys	3,575.82	3,478.03	341.35	318.13	14.702	CC, ES
Guttersten 22-25 (PR) - Wellbore #1 - MWD Surveys	3,700.00	3,586.19	346.66	322.57	14.391	SF
Guttersten 25E (PR) - Wellbore #1 - MWD Surveys	10,023.76	6,772.64	938.30	882.30	16.755	CC, ES
Guttersten 25E (PR) - Wellbore #1 - MWD Surveys	10,100.00	6,771.72	941.39	885.02	16.700	SF
Guttersten 25KD (PR) - Wellbore #1 - MWD Surveys	5,105.55	4,957.23	124.61	87.29	3.339	CC
Guttersten 25KD (PR) - Wellbore #1 - MWD Surveys	7,550.00	6,942.84	137.16	86.08	2.685	ES, SF
Guttersten 25O (PR) - Wellbore #1 - MWD Surveys	4,338.38	4,172.21	968.97	939.94	33.377	CC
Guttersten 25O (PR) - Wellbore #1 - MWD Surveys	4,400.00	4,228.09	969.38	939.87	32.857	ES
Guttersten 25O (PR) - Wellbore #1 - MWD Surveys	7,700.00	6,759.89	1,331.65	1,282.04	26.840	SF
Guttersten D 25-17 (SI) - Wellbore #1 - Gyro Surveys	2,091.03	2,068.13	1,913.29	1,898.97	133.624	CC
Guttersten D 25-17 (SI) - Wellbore #1 - Gyro Surveys	2,100.00	2,076.24	1,913.30	1,898.92	133.077	ES
Guttersten D 25-17 (SI) - Wellbore #1 - Gyro Surveys	9,100.00	6,816.65	2,582.98	2,530.14	48.881	SF
Guttersten D25-715 - Wellbore #1 - Plan #1	2,000.00	1,987.00	2,301.12	2,287.30	166.432	CC, ES
Guttersten D25-715 - Wellbore #1 - Plan #1	20,375.73	20,124.33	3,721.22	3,503.87	17.121	SF
Guttersten D25-724 - Wellbore #1 - Plan #1	2,000.00	1,986.00	2,264.54	2,250.72	163.828	CC
Guttersten D25-724 - Wellbore #1 - Plan #1	2,100.00	2,068.31	2,265.07	2,250.63	156.811	ES
Guttersten D25-724 - Wellbore #1 - Plan #1	20,375.73	19,967.97	3,125.54	2,908.31	14.388	SF
Guttersten D25-734 - Wellbore #1 - Plan #1	2,821.22	2,877.48	2,227.51	2,207.98	114.084	CC
Guttersten D25-734 - Wellbore #1 - Plan #1	3,000.00	3,056.16	2,228.11	2,207.33	107.223	ES
Guttersten D25-734 - Wellbore #1 - Plan #1	20,375.73	19,988.07	2,490.72	2,273.91	11.488	SF
Guttersten D25-743 - Wellbore #1 - Plan #1	6,540.99	6,762.58	1,839.15	1,787.95	35.916	CC

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Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersten D25-772
Project:	Mustang	TVD Reference:	KB @ 4816.00ft
Reference Site:	D Section 25	MD Reference:	KB @ 4816.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersten D25-772	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 25						
Guttersten D25-743 - Wellbore #1 - Plan #1	20,375.73	20,123.26	1,862.80	1,646.58	8.615	ES, SF
Guttersten D25-753 - Wellbore #1 - Plan #1	2,000.00	2,001.00	75.00	61.12	5.405	CC, ES
Guttersten D25-753 - Wellbore #1 - Plan #1	2,200.00	2,196.58	77.83	62.65	5.130	SF
Guttersten D25-762 - Wellbore #1 - Plan #1	2,000.00	2,001.00	37.50	23.62	2.702	CC
Guttersten D25-762 - Wellbore #1 - Plan #1	2,100.00	2,100.12	37.92	23.37	2.606	ES
Guttersten D25-762 - Wellbore #1 - Plan #1	2,200.00	2,199.24	39.14	23.95	2.577	SF
Guttersten D25-781 - Wellbore #1 - Plan #1	2,002.61	2,003.63	37.50	23.61	2.699	CC
Guttersten D25-781 - Wellbore #1 - Plan #1	2,100.00	2,101.39	37.71	23.16	2.591	ES
Guttersten D25-781 - Wellbore #1 - Plan #1	2,200.00	2,201.64	38.54	23.33	2.534	SF
Guttersten State D36-714 - Wellbore #1 - Plan #1	2,000.00	1,986.00	2,273.30	2,259.47	164.462	CC
Guttersten State D36-714 - Wellbore #1 - Plan #1	2,100.00	2,085.98	2,273.61	2,259.09	156.573	ES
Guttersten State D36-714 - Wellbore #1 - Plan #1	8,000.00	6,128.55	3,737.78	3,689.57	77.538	SF
Guttersten State D36-724 - Wellbore #1 - Plan #1	2,000.00	1,987.00	2,236.25	2,222.42	161.739	CC
Guttersten State D36-724 - Wellbore #1 - Plan #1	2,100.00	2,086.98	2,236.56	2,222.03	153.983	ES
Guttersten State D36-724 - Wellbore #1 - Plan #1	6,900.00	7,349.02	3,117.78	3,065.14	59.237	SF
Guttersten State D36-733 - Wellbore #1 - Plan #1	2,880.92	3,002.53	2,193.74	2,173.57	108.744	CC
Guttersten State D36-733 - Wellbore #1 - Plan #1	3,000.00	3,114.61	2,194.36	2,173.39	104.618	ES
Guttersten State D36-733 - Wellbore #1 - Plan #1	6,900.00	7,345.35	2,496.46	2,443.60	47.225	SF
Guttersten State D36-743 - Wellbore #1 - Plan #1	6,846.55	7,430.79	1,876.83	1,823.16	34.969	CC
Guttersten State D36-743 - Wellbore #1 - Plan #1	6,850.00	7,429.44	1,876.83	1,823.15	34.967	ES
Guttersten State D36-743 - Wellbore #1 - Plan #1	6,900.00	7,407.98	1,877.46	1,823.76	34.961	SF
Guttersten State D36-752 - Wellbore #1 - Plan #1	2,000.00	2,001.00	167.70	160.77	24.177	CC, ES
Guttersten State D36-752 - Wellbore #1 - Plan #1	2,300.00	2,300.45	177.70	169.77	22.417	SF
Guttersten State D36-762 - Wellbore #1 - Plan #1	2,000.00	2,001.00	154.61	140.74	11.142	CC, ES
Guttersten State D36-762 - Wellbore #1 - Plan #1	2,500.00	2,512.56	178.38	161.15	10.352	SF
Guttersten State D36-771 - Wellbore #1 - Plan #1	7,332.82	7,164.75	54.22	0.15	1.003	Level 2, CC, ES, SF
Guttersten State D36-781 - Wellbore #1 - Plan #1	2,201.09	2,212.78	154.52	139.29	10.145	CC
Guttersten State D36-781 - Wellbore #1 - Plan #1	2,400.00	2,421.67	155.03	138.53	9.394	ES
Guttersten State D36-781 - Wellbore #1 - Plan #1	2,800.00	2,837.99	166.14	147.05	8.702	SF
Karch Blue D 25-02 (DA) - Wellbore #1 - No Surveys	2,000.00	1,945.00	1,535.27	1,489.43	33.494	CC
Karch Blue D 25-02 (DA) - Wellbore #1 - No Surveys	2,100.00	2,044.98	1,536.53	1,488.35	31.894	ES
Karch Blue D 25-02 (DA) - Wellbore #1 - No Surveys	9,500.00	6,731.00	2,094.24	1,928.59	12.643	SF
Karch Blue D 25-08 (SI) - Wellbore #1 - Gyro Surveys	2,044.22	2,001.15	2,743.97	2,730.06	197.341	CC
Karch Blue D 25-08 (SI) - Wellbore #1 - Gyro Surveys	2,300.00	2,276.88	2,744.27	2,728.56	174.708	ES
Karch Blue D 25-08 (SI) - Wellbore #1 - Gyro Surveys	10,600.00	10,600.00	4,204.57	4,135.43	60.812	SF
Karch Blue D25-07 (SI) - Wellbore #1 - Gyro Surveys	2,682.25	2,627.23	1,483.85	1,465.64	81.475	CC
Karch Blue D25-07 (SI) - Wellbore #1 - Gyro Surveys	2,800.00	2,738.12	1,484.20	1,465.21	78.127	ES
Karch Blue D25-07 (SI) - Wellbore #1 - Gyro Surveys	8,200.00	6,740.55	2,060.12	2,009.45	40.653	SF
L F Ranch 2-25 (PR) - Wellbore #1 - Gyro Surveys	100.00	42.20	2,727.36	2,727.16	10,000.000	CC
L F Ranch 2-25 (PR) - Wellbore #1 - Gyro Surveys	2,000.00	1,935.03	2,733.99	2,720.45	202.008	ES
L F Ranch 2-25 (PR) - Wellbore #1 - Gyro Surveys	10,100.00	6,755.78	3,452.97	3,396.33	60.965	SF
LF Ranches 1 (PA) - Wellbore #1 - No Surveys	2,000.00	1,949.00	2,385.33	2,339.41	51.949	CC
LF Ranches 1 (PA) - Wellbore #1 - No Surveys	2,100.00	2,048.98	2,386.15	2,337.89	49.447	ES
LF Ranches 1 (PA) - Wellbore #1 - No Surveys	9,200.00	6,735.00	3,084.74	2,920.12	18.739	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 D25-772
Project:	Mustang	TVD Reference:	KB @ 4816.00ft
Reference Site:	D Section 25	MD Reference:	KB @ 4816.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersen D25-772	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 @ 4816.00ft

Offset Depths are relative to Offset Datum

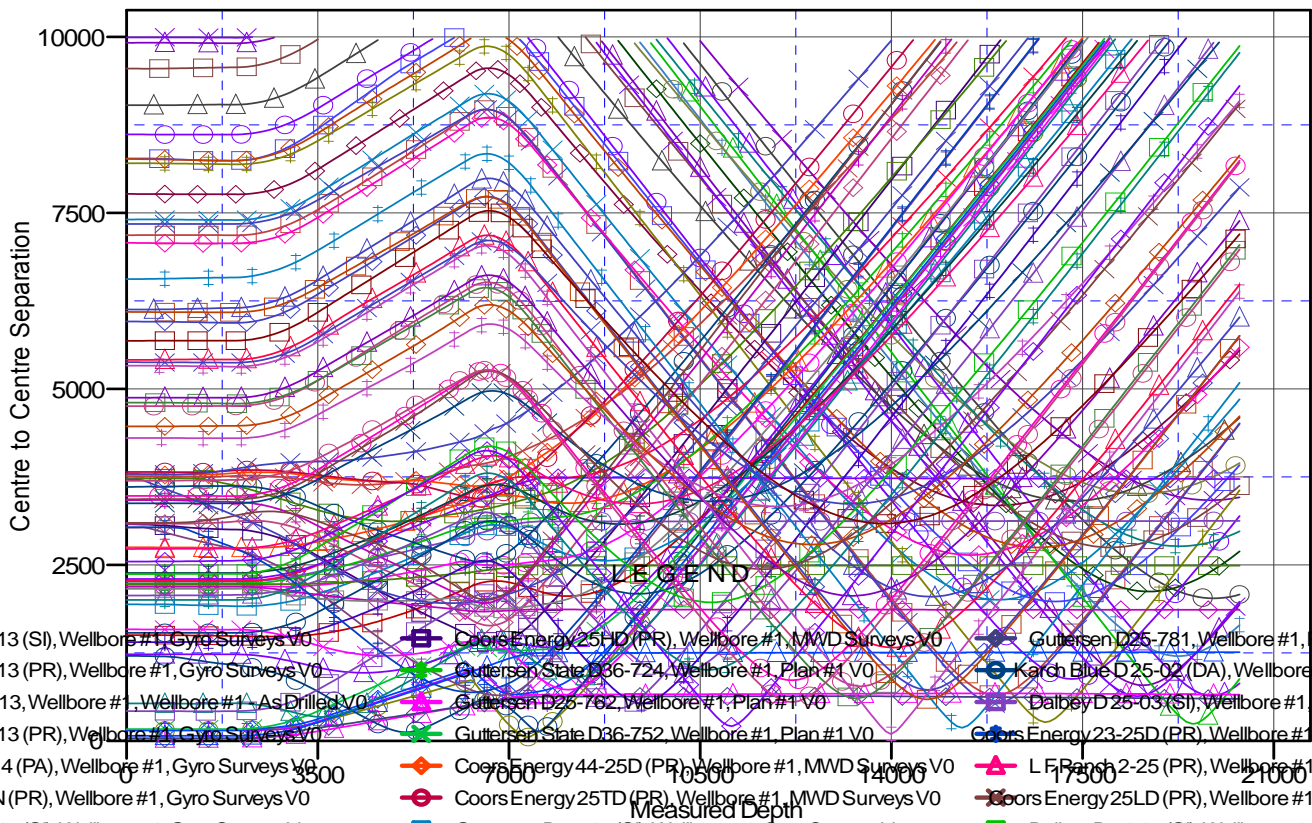
Central Meridian is -105.5000000

Coordinates are relative to: Guttersen D25-772

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.64°

Ladder Plot



Guttersen 21-13 (SI), Wellbore #1, Gyro Surveys V0	Coors Energy 25HD (PR), Wellbore #1, MWD Surveys V0	Guttersen D25-781, Wellbore #1, Plan #1 V0
Guttersen 41-13 (PR), Wellbore #1, Gyro Surveys V0	Guttersen State D36-724, Wellbore #1, Plan #1 V0	Karch Blue D25-02 (DA), Wellbore #1, No Surveys V0
Guttersen 44-13, Wellbore #1, As Drilled V0	Guttersen D25-762, Wellbore #1, Plan #1 V0	Dalbey D 25-03 (SI), Wellbore #1, Gyro Surveys V0
Guttersen 31-13 (PR), Wellbore #1, Gyro Surveys V0	Guttersen State D36-752, Wellbore #1, Plan #1 V0	Coors Energy 23-25D (PR), Wellbore #1, MWD Surveys V0
Dalbey D 13-14 (PA), Wellbore #1, Gyro Surveys V0	Coors Energy 44-25D (PR), Wellbore #1, MWD Surveys V0	L F Ranch 2-25 (PR), Wellbore #1, Gyro Surveys V0
Guttersen 13N (PR), Wellbore #1, Gyro Surveys V0	Coors Energy 25TD (PR), Wellbore #1, MWD Surveys V0	Coors Energy 25LD (PR), Wellbore #1, MWD Surveys V0
Guttersen 22-13 (SI), Wellbore #1, Gyro Surveys V0	Guttersen D 25-17 (SI), Wellbore #1, Gyro Surveys V0	Dalbey D 24-15 (SI), Wellbore #1, Gyro Surveys V0
Guttersen 34-13 (PR), Wellbore #1, Gyro Surveys V0	Coors Energy 24-25 (PR), Wellbore #1, Gyro Surveys V0	Guttersen 24J (PR), Wellbore #1, Gyro Surveys V0
Guttersen 32-13 (PR), Wellbore #1, Gyro Surveys V0	Guttersen 25E (PR), Wellbore #1, MWD Surveys V0	Guttersen 24N (PR), Wellbore #1, MWD Surveys V0
Guttersen 42-13 (PR), Wellbore #1, Gyro Surveys V0	Guttersen State D36-714, Wellbore #1, Plan #1 V0	Guttersen 44-24 (PR), Wellbore #1, Gyro Surveys V0
L F Ranch 1-13 (PR), Wellbore #1, Gyro Surveys V0	Guttersen D25-715, Wellbore #1, Plan #1 V0	Guttersen 21-24 (PR), Wellbore #1, Gyro Surveys V0
Dalbey D 13-12 (PR), Wellbore #1, Gyro Surveys V0	Guttersen State D36-733, Wellbore #1, Plan #1 V0	Guttersen 22-24 (PR), Wellbore #1, Gyro Surveys V0
L F Ranch 13-4 (SI), Wellbore #1, Gyro Surveys V0	Coors Energy 43-25D (PR), Wellbore #1, MWD Surveys V0	Guttersen 12-24 (PR), Wellbore #1, Gyro Surveys V0
Dalbey D 13-13 (PR), Wellbore #1, No Surveys V0	Coors Energy 13-25D (PR), Wellbore #1, MWD Surveys V0	Guttersen 43-24 (PR), Wellbore #1, Gyro Surveys V0
Guttersen 13T (PR), Wellbore #1, Gyro Surveys V0	Guttersen 25O (PR), Wellbore #1, MWD Surveys V0	Koerner 31-24 (SI), Wellbore #1, Gyro Surveys V0
Dalbey D 13-11 (SI), Wellbore #1, Gyro Surveys V0	Dalbey D 25-05 (SI), Wellbore #1, Gyro Surveys V0	Koerner 42-24 (SI), Wellbore #1, Gyro Surveys V0
Guttersen 13S (PR), Wellbore #1, Gyro Surveys V0	Coors Energy 14-25D (PR), Wellbore #1, MWD Surveys V0	Guttersen 24S (PR), Wellbore #1, MWD Surveys V0
Guttersen 13C (PR), Wellbore #1, Gyro Surveys V0	Guttersen 25KD (PR), Wellbore #1, MWD Surveys V0	Karch Blue D24-11 (PA), Wellbore #1, Gyro Surveys V0
Guttersen 43-13, Wellbore #1, Wellbore #1 - As Drilled V0	Guttersen D25-734, Wellbore #1, Plan #1 V0	Guttersen 11-24 (PR), Wellbore #1, Gyro Surveys V0
Guttersen 12-13 (SI), Wellbore #1, Gyro Surveys V0	L F Ranches 1 (PA), Wellbore #1, No Surveys V0	Karch Blue D24-14 (PR), Wellbore #1, No Surveys V0
Guttersen 13D (PR), Wellbore #1, Gyro Surveys V0	Guttersen D25-753, Wellbore #1, Plan #1 V0	Koerner 32-24 (SI), Wellbore #1, Gyro Surveys V0
Guttersen State D36-771, Wellbore #1, Plan #1 V0	Coors Energy 25TD (PR), Wellbore #1, MWD Surveys V0	Dalbey D 24-10 (PR), Wellbore #1, Gyro Surveys V0
Karch Blue D25-07 (SI), Wellbore #1, Gyro Surveys V0	Guttersen D25-743, Wellbore #1, Plan #1 V0	L F Ranch 1-24 (SI), Wellbore #1, Gyro Surveys V0
Guttersen State D36-781, Wellbore #1, Plan #1 V0	Coors Energy 34-25 (PR), Wellbore #1, Gyro Surveys V0	Karch Blue D24-12 (PA), Wellbore #1, Gyro Surveys V0
Karch Blue D25-08 (SI), Wellbore #1, Gyro Surveys V0	Guttersen State D36-743, Wellbore #1, Plan #1 V0	Glazier 2-24 (SI), Wellbore #1, Gyro Surveys V0
Coors Energy 25XD (PR), Wellbore #1, MWD Surveys V0	Guttersen 11-25 (PR), Wellbore #1, MWD Surveys V0	Guttersen 24A (PR), Wellbore #1, Gyro Surveys V0

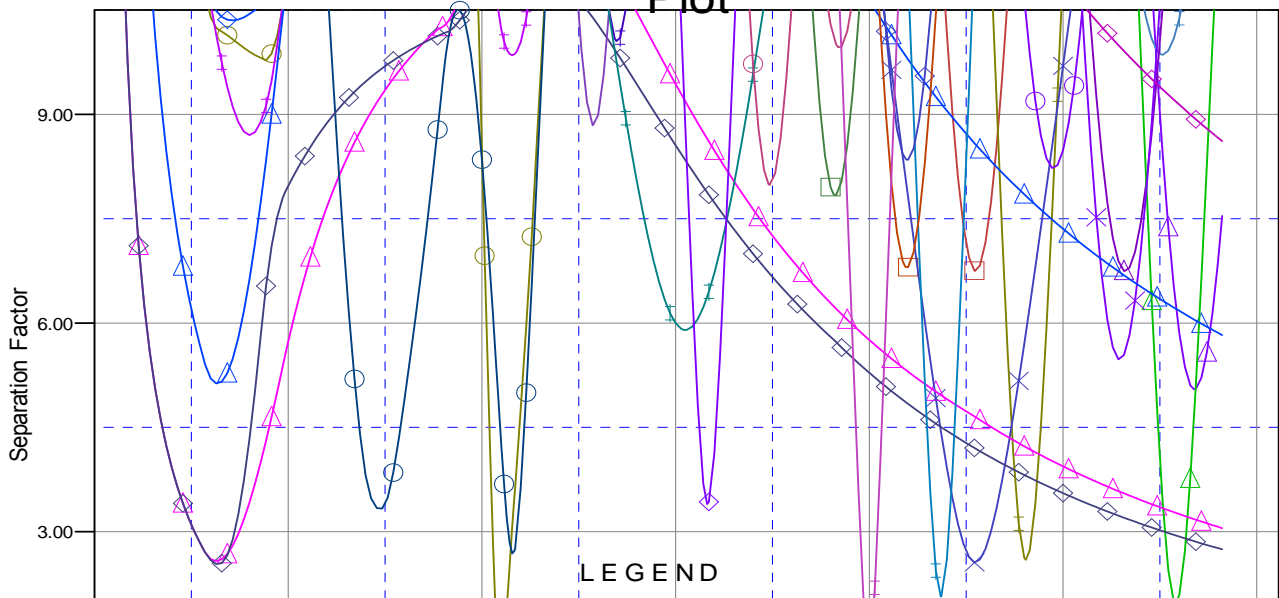
Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersten D25-772
Project:	Mustang	TVD Reference:	KB @ 4816.00ft
Reference Site:	D Section 25	MD Reference:	KB @ 4816.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersten D25-772	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 @ 4816.00ft
Offset Depths are relative to Offset Datum
Central Meridian is -105.5000000

Coordinates are relative to: Guttersten D25-772
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.64°

Separation Factor
Plot



LEGEND

Guttersten 21-13 (SI), Wellbore #1, Gyro Surveys V0	Coors Energy 25HD (PR), Wellbore #1, MWD Surveys V0	Guttersten D25-781, Wellbore #1, Plan #1 V0
Guttersten 41-13 (PR), Wellbore #1, Gyro Surveys V0	Guttersten State D36-724, Wellbore #1, Plan #1 V0	Karch Blue D25-02 (DA), Wellbore #1, No Surveys V0
Guttersten 44-13, Wellbore #1, Wellbore #1 - As Drilled V0	Guttersten D25-762, Wellbore #1, Plan #1 V0	Dalbey D25-03 (SI), Wellbore #1, Gyro Surveys V0
Guttersten 31-13 (PR), Wellbore #1, Gyro Surveys V0	Guttersten State D36-752, Wellbore #1, Plan #1 V0	Coors Energy 23-25D (PR), Wellbore #1, MWD Surveys V0
Dalbey D13-14 (PA), Wellbore #1, Gyro Surveys V0	Coors Energy 44-25D (PR), Wellbore #1, MWD Surveys V0	L F Ranch 2-25 (PR), Wellbore #1, Gyro Surveys V0
Guttersten 13N (PR), Wellbore #1, Gyro Surveys V0	Coors Energy 25TD (PR), Wellbore #1, MWD Surveys V0	Coors Energy 25LD (PR), Wellbore #1, MWD Surveys V0
Guttersten 22-13 (SI), Wellbore #1, Gyro Surveys V0	Guttersten D25-17 (SI), Wellbore #1, Gyro Surveys V0	Dalbey D24-15 (SI), Wellbore #1, Gyro Surveys V0
Guttersten 34-13 (PR), Wellbore #1, Gyro Surveys V0	Coors Energy 24-25 (PR), Wellbore #1, Gyro Surveys V0	Guttersten 24J (PR), Wellbore #1, Gyro Surveys V0
Guttersten 32-13 (PR), Wellbore #1, Gyro Surveys V0	Guttersten 25E (PR), Wellbore #1, MWD Surveys V0	Guttersten 24N (PR), Wellbore #1, MWD Surveys V0
Guttersten 42-13 (PR), Wellbore #1, Gyro Surveys V0	Guttersten State D36-714, Wellbore #1, Plan #1 V0	Guttersten 44-24 (PR), Wellbore #1, Gyro Surveys V0
L F Ranch 1-13 (PR), Wellbore #1, Gyro Surveys V0	Guttersten D25-715, Wellbore #1, Plan #1 V0	Guttersten 21-24 (PR), Wellbore #1, Gyro Surveys V0
Dalbey D13-12 (PR), Wellbore #1, Gyro Surveys V0	Guttersten State D36-733, Wellbore #1, Plan #1 V0	Guttersten 22-24 (PR), Wellbore #1, Gyro Surveys V0
L F Ranch 13-4 (SI), Wellbore #1, Gyro Surveys V0	Coors Energy 43-25D (PR), Wellbore #1, MWD Surveys V0	Guttersten 12-24 (PR), Wellbore #1, Gyro Surveys V0
Dalbey D13-13 (PR), Wellbore #1, No Surveys V0	Coors Energy 13-25D (PR), Wellbore #1, MWD Surveys V0	Guttersten 43-24 (PR), Wellbore #1, Gyro Surveys V0
Guttersten 13T (PR), Wellbore #1, Gyro Surveys V0	Guttersten 25O (PR), Wellbore #1, MWD Surveys V0	Koerner 31-24 (SI), Wellbore #1, Gyro Surveys V0
Dalbey D13-11 (SI), Wellbore #1, Gyro Surveys V0	Dalbey D25-05 (SI), Wellbore #1, Gyro Surveys V0	Koerner 42-24 (SI), Wellbore #1, Gyro Surveys V0
Guttersten 13S (PR), Wellbore #1, Gyro Surveys V0	Coors Energy 14-25D (PR), Wellbore #1, MWD Surveys V0	Guttersten 24S (PR), Wellbore #1, MWD Surveys V0
Guttersten 13C (PR), Wellbore #1, Gyro Surveys V0	Guttersten 25KD (PR), Wellbore #1, MWD Surveys V0	Karch Blue D24-11 (PA), Wellbore #1, Gyro Surveys V0
Guttersten 43-13, Wellbore #1, Wellbore #1 - As Drilled V0	Guttersten D25-734, Wellbore #1, Plan #1 V0	Guttersten 11-24 (PR), Wellbore #1, Gyro Surveys V0
Guttersten 12-13 (SI), Wellbore #1, Gyro Surveys V0	L F Ranches 1 (PA), Wellbore #1, No Surveys V0	Karch Blue D24-14 (PR), Wellbore #1, No Surveys V0
Guttersten 13D (PR), Wellbore #1, Gyro Surveys V0	Guttersten D25-753, Wellbore #1, Plan #1 V0	Koerner 32-24 (SI), Wellbore #1, Gyro Surveys V0
Guttersten State D36-771, Wellbore #1, Plan #1 V0	Coors Energy 25D (PR), Wellbore #1, MWD Surveys V0	Dalbey D24-10 (PR), Wellbore #1, Gyro Surveys V0
Karch Blue D25-07 (SI), Wellbore #1, Gyro Surveys V0	Guttersten D25-743, Wellbore #1, Plan #1 V0	L F Ranch 1-24 (SI), Wellbore #1, Gyro Surveys V0
Guttersten State D36-781, Wellbore #1, Plan #1 V0	Coors Energy 34-25 (PR), Wellbore #1, Gyro Surveys V0	Karch Blue D24-12 (PA), Wellbore #1, Gyro Surveys V0
Karch Blue D25-08 (SI), Wellbore #1, Gyro Surveys V0	Guttersten State D36-743, Wellbore #1, Plan #1 V0	Glazier 2-24 (SI), Wellbore #1, Gyro Surveys V0
Coors Energy 25XD (PR), Wellbore #1, MWD Surveys V0	Guttersten 11-25 (PR), Wellbore #1, MWD Surveys V0	Guttersten 24A (PR), Wellbore #1, Gyro Surveys V0