

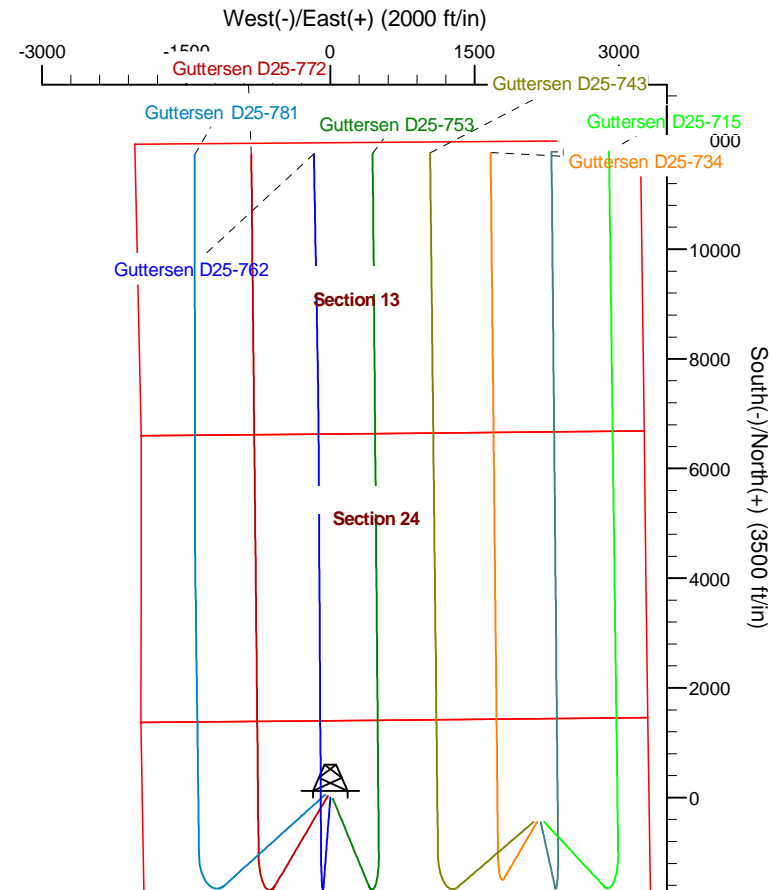
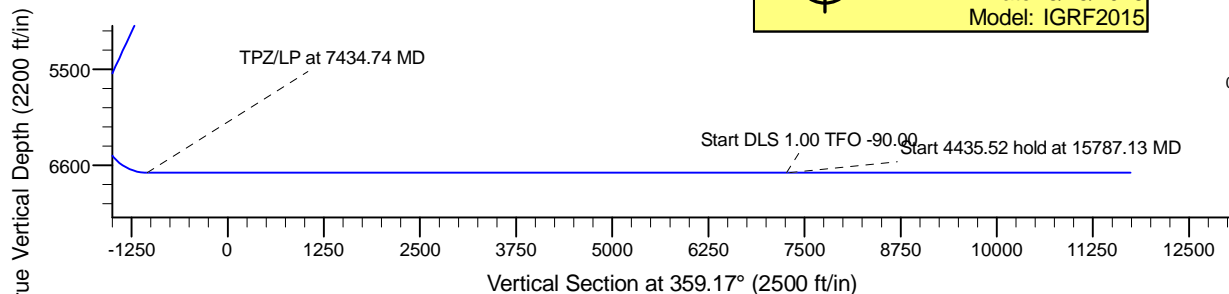
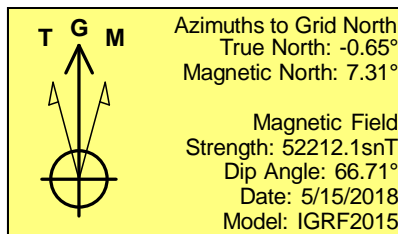
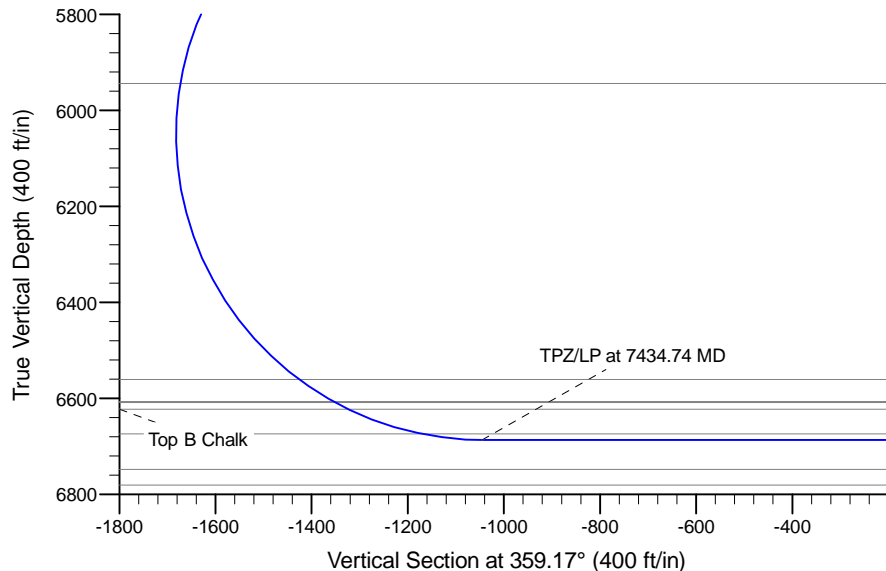
Project: Mustang
Site: D Section 25
Well: Gutteresen D25-762
Wellbore: Wellbore #1
Design: Plan #1

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	3395.43	27.91	182.51	3340.90	-332.87	-14.58	2.00	182.51	-332.62	
4	6125.02	27.91	182.51	5753.03	-1609.26	-70.49	0.00	0.00	-1608.06	
5	7434.74	90.00	359.80	6687.00	-1046.59	-95.83	9.00	176.94	-1045.08	Gutteresen D25-762 TPZ/LP
6	15747.74	90.00	359.80	6687.00	7266.36	-124.85	0.00	0.00	7267.41	
7	15787.13	90.00	359.41	6687.00	7305.75	-125.12	1.00	-90.00	7306.80	
8	20222.65	90.00	359.41	6687.00	11741.03	-171.10	0.00	0.00	11742.28	Gutteresen D25-762 BHL



WELL DETAILS: Gutteresen D25-762

	North	East	Latitude	Longitude
0.00	0.00	1317184.86	40.1997647	-104.5021954

Plan: Plan #1 (Gutteresen D25-762/Wellbore #1)

Created By: Colby Baxter Date: 10:48, August 15 2018

Checked: _____ Date: _____

Reviewed: _____ Date: _____

Approved: _____ Date: _____

Northern Region - DJ Basin

Mustang

D Section 25

Guttersen D25-762

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 D25-762
Project:	Mustang	TVD Reference:	KB @ 4817.00ft
Site:	D Section 25	MD Reference:	KB @ 4817.00ft
Well:	Guttersen D25-762	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 D25-762				
Well Position	+N/-S	0.00 ft	Northing:	1,317,184.86 usft	Latitude:	40.1997647
	+E/-W	0.00 ft	Easting:	3,278,713.82 usft	Longitude:	-104.5021954
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,787.00 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	5/15/2018	7.96	66.71	52,212.11369576

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	359.17	

Survey Tool Program	Date	8/15/2018			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.00	20,222.45	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 D25-762
Project:	Mustang	TVD Reference:	KB @ 4817.00ft
Site:	D Section 25	MD Reference:	KB @ 4817.00ft
Well:	Guttersen D25-762	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	182.51	2,099.98	-1.74	-0.08	-1.74	2.00	2.00	0.00
2,200.00	4.00	182.51	2,199.84	-6.97	-0.31	-6.97	2.00	2.00	0.00
2,300.00	6.00	182.51	2,299.45	-15.68	-0.69	-15.67	2.00	2.00	0.00
2,400.00	8.00	182.51	2,398.70	-27.85	-1.22	-27.83	2.00	2.00	0.00
2,500.00	10.00	182.51	2,497.47	-43.48	-1.90	-43.45	2.00	2.00	0.00
2,600.00	12.00	182.51	2,595.62	-62.54	-2.74	-62.50	2.00	2.00	0.00
2,700.00	14.00	182.51	2,693.06	-85.01	-3.72	-84.95	2.00	2.00	0.00
2,800.00	16.00	182.51	2,789.64	-110.87	-4.86	-110.79	2.00	2.00	0.00
2,900.00	18.00	182.51	2,885.27	-140.08	-6.14	-139.97	2.00	2.00	0.00
3,000.00	20.00	182.51	2,979.82	-172.60	-7.56	-172.47	2.00	2.00	0.00
3,100.00	22.00	182.51	3,073.17	-208.40	-9.13	-208.25	2.00	2.00	0.00
3,200.00	24.00	182.51	3,165.21	-247.44	-10.84	-247.25	2.00	2.00	0.00
3,300.00	26.00	182.51	3,255.84	-289.66	-12.69	-289.44	2.00	2.00	0.00
3,395.43	27.91	182.51	3,340.90	-332.87	-14.58	-332.62	2.00	2.00	0.00
3,400.00	27.91	182.51	3,344.94	-335.01	-14.68	-334.76	0.00	0.00	0.00
3,500.00	27.91	182.51	3,433.31	-381.77	-16.72	-381.48	0.00	0.00	0.00
3,600.00	27.91	182.51	3,521.68	-428.53	-18.77	-428.21	0.00	0.00	0.00
3,700.00	27.91	182.51	3,610.05	-475.29	-20.82	-474.94	0.00	0.00	0.00
3,800.00	27.91	182.51	3,698.42	-522.05	-22.87	-521.66	0.00	0.00	0.00
3,900.00	27.91	182.51	3,786.79	-568.81	-24.92	-568.39	0.00	0.00	0.00
4,000.00	27.91	182.51	3,875.16	-615.57	-26.97	-615.12	0.00	0.00	0.00
4,100.00	27.91	182.51	3,963.53	-662.33	-29.01	-661.84	0.00	0.00	0.00
4,200.00	27.91	182.51	4,051.90	-709.10	-31.06	-708.57	0.00	0.00	0.00
4,300.00	27.91	182.51	4,140.27	-755.86	-33.11	-755.29	0.00	0.00	0.00
4,400.00	27.91	182.51	4,228.63	-802.62	-35.16	-802.02	0.00	0.00	0.00
4,500.00	27.91	182.51	4,317.00	-849.38	-37.21	-848.75	0.00	0.00	0.00
4,600.00	27.91	182.51	4,405.37	-896.14	-39.26	-895.47	0.00	0.00	0.00
4,700.00	27.91	182.51	4,493.74	-942.90	-41.30	-942.20	0.00	0.00	0.00
4,800.00	27.91	182.51	4,582.11	-989.66	-43.35	-988.93	0.00	0.00	0.00
4,900.00	27.91	182.51	4,670.48	-1,036.43	-45.40	-1,035.65	0.00	0.00	0.00
5,000.00	27.91	182.51	4,758.85	-1,083.19	-47.45	-1,082.38	0.00	0.00	0.00
5,100.00	27.91	182.51	4,847.22	-1,129.95	-49.50	-1,129.11	0.00	0.00	0.00
5,200.00	27.91	182.51	4,935.59	-1,176.71	-51.55	-1,175.83	0.00	0.00	0.00

Noble Energy, Inc.

Survey Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersen D25-762
Project:	Mustang	TVD Reference:	KB @ 4817.00ft
Site:	D Section 25	MD Reference:	KB @ 4817.00ft
Well:	Guttersen D25-762	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	27.91	182.51	5,023.96	-1,223.47	-53.59	-1,222.56	0.00	0.00	0.00
5,400.00	27.91	182.51	5,112.33	-1,270.23	-55.64	-1,269.29	0.00	0.00	0.00
5,500.00	27.91	182.51	5,200.70	-1,316.99	-57.69	-1,316.01	0.00	0.00	0.00
5,600.00	27.91	182.51	5,289.07	-1,363.75	-59.74	-1,362.74	0.00	0.00	0.00
5,700.00	27.91	182.51	5,377.44	-1,410.52	-61.79	-1,409.47	0.00	0.00	0.00
5,800.00	27.91	182.51	5,465.81	-1,457.28	-63.84	-1,456.19	0.00	0.00	0.00
5,900.00	27.91	182.51	5,554.18	-1,504.04	-65.89	-1,502.92	0.00	0.00	0.00
6,000.00	27.91	182.51	5,642.55	-1,550.80	-67.93	-1,549.64	0.00	0.00	0.00
6,100.00	27.91	182.51	5,730.92	-1,597.56	-69.98	-1,596.37	0.00	0.00	0.00
6,125.02	27.91	182.51	5,753.03	-1,609.26	-70.49	-1,608.06	0.00	0.00	0.00
6,200.00	21.17	183.50	5,821.20	-1,640.34	-72.09	-1,639.12	9.00	-8.98	1.33
6,300.00	12.21	186.44	5,916.89	-1,668.93	-74.39	-1,667.67	9.00	-8.96	2.94
6,400.00	3.44	204.41	6,015.87	-1,682.20	-76.82	-1,680.90	9.00	-8.77	17.97
6,500.00	6.05	346.13	6,115.71	-1,679.82	-79.33	-1,678.48	9.00	2.61	141.72
6,600.00	14.94	354.42	6,213.94	-1,661.84	-81.85	-1,660.47	9.00	8.90	8.29
6,700.00	23.91	356.56	6,308.15	-1,628.71	-84.32	-1,627.30	9.00	8.97	2.15
6,800.00	32.90	357.58	6,396.02	-1,581.24	-86.68	-1,579.81	9.00	8.99	1.02
6,900.00	41.89	358.20	6,475.38	-1,520.61	-88.88	-1,519.15	9.00	8.99	0.62
7,000.00	50.89	358.63	6,544.29	-1,448.31	-90.86	-1,446.83	9.00	8.99	0.43
7,100.00	59.88	358.97	6,601.03	-1,366.11	-92.57	-1,364.61	9.00	9.00	0.33
7,200.00	68.88	359.25	6,644.22	-1,276.04	-93.96	-1,274.54	9.00	9.00	0.28
7,300.00	77.88	359.49	6,672.80	-1,180.32	-95.01	-1,178.81	9.00	9.00	0.25
7,400.00	86.87	359.72	6,686.05	-1,081.31	-95.69	-1,079.80	9.00	9.00	0.23
7,434.74	90.00	359.80	6,687.00	-1,046.59	-95.83	-1,045.08	9.00	9.00	0.23
7,500.00	90.00	359.80	6,687.00	-981.33	-96.06	-979.83	0.00	0.00	0.00
7,600.00	90.00	359.80	6,687.00	-881.33	-96.41	-879.83	0.00	0.00	0.00
7,700.00	90.00	359.80	6,687.00	-781.33	-96.76	-779.84	0.00	0.00	0.00
7,800.00	90.00	359.80	6,687.00	-681.33	-97.11	-679.84	0.00	0.00	0.00
7,900.00	90.00	359.80	6,687.00	-581.33	-97.46	-579.85	0.00	0.00	0.00
8,000.00	90.00	359.80	6,687.00	-481.33	-97.81	-479.86	0.00	0.00	0.00
8,100.00	90.00	359.80	6,687.00	-381.33	-98.16	-379.86	0.00	0.00	0.00
8,200.00	90.00	359.80	6,687.00	-281.33	-98.50	-279.87	0.00	0.00	0.00
8,300.00	90.00	359.80	6,687.00	-181.34	-98.85	-179.88	0.00	0.00	0.00
8,400.00	90.00	359.80	6,687.00	-81.34	-99.20	-79.88	0.00	0.00	0.00
8,500.00	90.00	359.80	6,687.00	18.66	-99.55	20.11	0.00	0.00	0.00
8,600.00	90.00	359.80	6,687.00	118.66	-99.90	120.11	0.00	0.00	0.00
8,700.00	90.00	359.80	6,687.00	218.66	-100.25	220.10	0.00	0.00	0.00
8,800.00	90.00	359.80	6,687.00	318.66	-100.60	320.09	0.00	0.00	0.00
8,900.00	90.00	359.80	6,687.00	418.66	-100.95	420.09	0.00	0.00	0.00
9,000.00	90.00	359.80	6,687.00	518.66	-101.30	520.08	0.00	0.00	0.00
9,100.00	90.00	359.80	6,687.00	618.66	-101.65	620.08	0.00	0.00	0.00
9,200.00	90.00	359.80	6,687.00	718.66	-102.00	720.07	0.00	0.00	0.00
9,300.00	90.00	359.80	6,687.00	818.66	-102.34	820.06	0.00	0.00	0.00

Noble Energy, Inc.

Survey Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersen D25-762
Project:	Mustang	TVD Reference:	KB @ 4817.00ft
Site:	D Section 25	MD Reference:	KB @ 4817.00ft
Well:	Guttersen D25-762	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	359.80	6,687.00	918.66	-102.69	920.06	0.00	0.00	0.00
9,500.00	90.00	359.80	6,687.00	1,018.66	-103.04	1,020.05	0.00	0.00	0.00
9,600.00	90.00	359.80	6,687.00	1,118.66	-103.39	1,120.04	0.00	0.00	0.00
9,700.00	90.00	359.80	6,687.00	1,218.66	-103.74	1,220.04	0.00	0.00	0.00
9,800.00	90.00	359.80	6,687.00	1,318.66	-104.09	1,320.03	0.00	0.00	0.00
9,900.00	90.00	359.80	6,687.00	1,418.66	-104.44	1,420.03	0.00	0.00	0.00
10,000.00	90.00	359.80	6,687.00	1,518.65	-104.79	1,520.02	0.00	0.00	0.00
10,100.00	90.00	359.80	6,687.00	1,618.65	-105.14	1,620.01	0.00	0.00	0.00
10,200.00	90.00	359.80	6,687.00	1,718.65	-105.49	1,720.01	0.00	0.00	0.00
10,300.00	90.00	359.80	6,687.00	1,818.65	-105.83	1,820.00	0.00	0.00	0.00
10,400.00	90.00	359.80	6,687.00	1,918.65	-106.18	1,920.00	0.00	0.00	0.00
10,500.00	90.00	359.80	6,687.00	2,018.65	-106.53	2,019.99	0.00	0.00	0.00
10,600.00	90.00	359.80	6,687.00	2,118.65	-106.88	2,119.98	0.00	0.00	0.00
10,700.00	90.00	359.80	6,687.00	2,218.65	-107.23	2,219.98	0.00	0.00	0.00
10,800.00	90.00	359.80	6,687.00	2,318.65	-107.58	2,319.97	0.00	0.00	0.00
10,900.00	90.00	359.80	6,687.00	2,418.65	-107.93	2,419.96	0.00	0.00	0.00
11,000.00	90.00	359.80	6,687.00	2,518.65	-108.28	2,519.96	0.00	0.00	0.00
11,100.00	90.00	359.80	6,687.00	2,618.65	-108.63	2,619.95	0.00	0.00	0.00
11,200.00	90.00	359.80	6,687.00	2,718.65	-108.98	2,719.95	0.00	0.00	0.00
11,300.00	90.00	359.80	6,687.00	2,818.65	-109.33	2,819.94	0.00	0.00	0.00
11,400.00	90.00	359.80	6,687.00	2,918.65	-109.67	2,919.93	0.00	0.00	0.00
11,500.00	90.00	359.80	6,687.00	3,018.65	-110.02	3,019.93	0.00	0.00	0.00
11,600.00	90.00	359.80	6,687.00	3,118.64	-110.37	3,119.92	0.00	0.00	0.00
11,700.00	90.00	359.80	6,687.00	3,218.64	-110.72	3,219.92	0.00	0.00	0.00
11,800.00	90.00	359.80	6,687.00	3,318.64	-111.07	3,319.91	0.00	0.00	0.00
11,900.00	90.00	359.80	6,687.00	3,418.64	-111.42	3,419.90	0.00	0.00	0.00
12,000.00	90.00	359.80	6,687.00	3,518.64	-111.77	3,519.90	0.00	0.00	0.00
12,100.00	90.00	359.80	6,687.00	3,618.64	-112.12	3,619.89	0.00	0.00	0.00
12,200.00	90.00	359.80	6,687.00	3,718.64	-112.47	3,719.89	0.00	0.00	0.00
12,300.00	90.00	359.80	6,687.00	3,818.64	-112.82	3,819.88	0.00	0.00	0.00
12,400.00	90.00	359.80	6,687.00	3,918.64	-113.17	3,919.87	0.00	0.00	0.00
12,500.00	90.00	359.80	6,687.00	4,018.64	-113.51	4,019.87	0.00	0.00	0.00
12,600.00	90.00	359.80	6,687.00	4,118.64	-113.86	4,119.86	0.00	0.00	0.00
12,700.00	90.00	359.80	6,687.00	4,218.64	-114.21	4,219.85	0.00	0.00	0.00
12,800.00	90.00	359.80	6,687.00	4,318.64	-114.56	4,319.85	0.00	0.00	0.00
12,900.00	90.00	359.80	6,687.00	4,418.64	-114.91	4,419.84	0.00	0.00	0.00
13,000.00	90.00	359.80	6,687.00	4,518.64	-115.26	4,519.84	0.00	0.00	0.00
13,100.00	90.00	359.80	6,687.00	4,618.64	-115.61	4,619.83	0.00	0.00	0.00
13,200.00	90.00	359.80	6,687.00	4,718.64	-115.96	4,719.82	0.00	0.00	0.00
13,300.00	90.00	359.80	6,687.00	4,818.63	-116.31	4,819.82	0.00	0.00	0.00
13,400.00	90.00	359.80	6,687.00	4,918.63	-116.66	4,919.81	0.00	0.00	0.00
13,500.00	90.00	359.80	6,687.00	5,018.63	-117.00	5,019.81	0.00	0.00	0.00
13,600.00	90.00	359.80	6,687.00	5,118.63	-117.35	5,119.80	0.00	0.00	0.00

Noble Energy, Inc.

Survey Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersen D25-762
Project:	Mustang	TVD Reference:	KB @ 4817.00ft
Site:	D Section 25	MD Reference:	KB @ 4817.00ft
Well:	Guttersen D25-762	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	359.80	6,687.00	5,218.63	-117.70	5,219.79	0.00	0.00	0.00
13,800.00	90.00	359.80	6,687.00	5,318.63	-118.05	5,319.79	0.00	0.00	0.00
13,900.00	90.00	359.80	6,687.00	5,418.63	-118.40	5,419.78	0.00	0.00	0.00
14,000.00	90.00	359.80	6,687.00	5,518.63	-118.75	5,519.77	0.00	0.00	0.00
14,100.00	90.00	359.80	6,687.00	5,618.63	-119.10	5,619.77	0.00	0.00	0.00
14,200.00	90.00	359.80	6,687.00	5,718.63	-119.45	5,719.76	0.00	0.00	0.00
14,300.00	90.00	359.80	6,687.00	5,818.63	-119.80	5,819.76	0.00	0.00	0.00
14,400.00	90.00	359.80	6,687.00	5,918.63	-120.15	5,919.75	0.00	0.00	0.00
14,500.00	90.00	359.80	6,687.00	6,018.63	-120.50	6,019.74	0.00	0.00	0.00
14,600.00	90.00	359.80	6,687.00	6,118.63	-120.84	6,119.74	0.00	0.00	0.00
14,700.00	90.00	359.80	6,687.00	6,218.63	-121.19	6,219.73	0.00	0.00	0.00
14,800.00	90.00	359.80	6,687.00	6,318.63	-121.54	6,319.73	0.00	0.00	0.00
14,900.00	90.00	359.80	6,687.00	6,418.62	-121.89	6,419.72	0.00	0.00	0.00
15,000.00	90.00	359.80	6,687.00	6,518.62	-122.24	6,519.71	0.00	0.00	0.00
15,100.00	90.00	359.80	6,687.00	6,618.62	-122.59	6,619.71	0.00	0.00	0.00
15,200.00	90.00	359.80	6,687.00	6,718.62	-122.94	6,719.70	0.00	0.00	0.00
15,300.00	90.00	359.80	6,687.00	6,818.62	-123.29	6,819.69	0.00	0.00	0.00
15,400.00	90.00	359.80	6,687.00	6,918.62	-123.64	6,919.69	0.00	0.00	0.00
15,500.00	90.00	359.80	6,687.00	7,018.62	-123.99	7,019.68	0.00	0.00	0.00
15,600.00	90.00	359.80	6,687.00	7,118.62	-124.34	7,119.68	0.00	0.00	0.00
15,700.00	90.00	359.80	6,687.00	7,218.62	-124.68	7,219.67	0.00	0.00	0.00
15,747.74	90.00	359.80	6,687.00	7,266.36	-124.85	7,267.41	0.00	0.00	0.00
15,787.13	90.00	359.41	6,687.00	7,305.75	-125.12	7,306.80	1.00	0.00	-1.00
15,800.00	90.00	359.41	6,687.00	7,318.62	-125.26	7,319.67	0.00	0.00	0.00
15,900.00	90.00	359.41	6,687.00	7,418.61	-126.29	7,419.67	0.00	0.00	0.00
16,000.00	90.00	359.41	6,687.00	7,518.61	-127.33	7,519.66	0.00	0.00	0.00
16,100.00	90.00	359.41	6,687.00	7,618.60	-128.37	7,619.66	0.00	0.00	0.00
16,200.00	90.00	359.41	6,687.00	7,718.60	-129.40	7,719.66	0.00	0.00	0.00
16,300.00	90.00	359.41	6,687.00	7,818.59	-130.44	7,819.66	0.00	0.00	0.00
16,400.00	90.00	359.41	6,687.00	7,918.59	-131.48	7,919.66	0.00	0.00	0.00
16,500.00	90.00	359.41	6,687.00	8,018.58	-132.51	8,019.66	0.00	0.00	0.00
16,600.00	90.00	359.41	6,687.00	8,118.57	-133.55	8,119.66	0.00	0.00	0.00
16,700.00	90.00	359.41	6,687.00	8,218.57	-134.59	8,219.66	0.00	0.00	0.00
16,800.00	90.00	359.41	6,687.00	8,318.56	-135.62	8,319.66	0.00	0.00	0.00
16,900.00	90.00	359.41	6,687.00	8,418.56	-136.66	8,419.66	0.00	0.00	0.00
17,000.00	90.00	359.41	6,687.00	8,518.55	-137.70	8,519.66	0.00	0.00	0.00
17,100.00	90.00	359.41	6,687.00	8,618.55	-138.73	8,619.65	0.00	0.00	0.00
17,200.00	90.00	359.41	6,687.00	8,718.54	-139.77	8,719.65	0.00	0.00	0.00
17,300.00	90.00	359.41	6,687.00	8,818.54	-140.81	8,819.65	0.00	0.00	0.00
17,400.00	90.00	359.41	6,687.00	8,918.53	-141.84	8,919.65	0.00	0.00	0.00
17,500.00	90.00	359.41	6,687.00	9,018.53	-142.88	9,019.65	0.00	0.00	0.00
17,600.00	90.00	359.41	6,687.00	9,118.52	-143.92	9,119.65	0.00	0.00	0.00
17,700.00	90.00	359.41	6,687.00	9,218.52	-144.95	9,219.65	0.00	0.00	0.00
17,800.00	90.00	359.41	6,687.00	9,318.51	-145.99	9,319.65	0.00	0.00	0.00

Noble Energy, Inc.

Survey Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersen D25-762
Project:	Mustang	TVD Reference:	KB @ 4817.00ft
Site:	D Section 25	MD Reference:	KB @ 4817.00ft
Well:	Guttersen D25-762	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)
17,900.00	90.00	359.41	6,687.00	9,418.51	-147.03	9,419.65	0.00	0.00	0.00
18,000.00	90.00	359.41	6,687.00	9,518.50	-148.06	9,519.65	0.00	0.00	0.00
18,100.00	90.00	359.41	6,687.00	9,618.49	-149.10	9,619.65	0.00	0.00	0.00
18,200.00	90.00	359.41	6,687.00	9,718.49	-150.14	9,719.64	0.00	0.00	0.00
18,300.00	90.00	359.41	6,687.00	9,818.48	-151.17	9,819.64	0.00	0.00	0.00
18,400.00	90.00	359.41	6,687.00	9,918.48	-152.21	9,919.64	0.00	0.00	0.00
18,500.00	90.00	359.41	6,687.00	10,018.47	-153.25	10,019.64	0.00	0.00	0.00
18,600.00	90.00	359.41	6,687.00	10,118.47	-154.28	10,119.64	0.00	0.00	0.00
18,700.00	90.00	359.41	6,687.00	10,218.46	-155.32	10,219.64	0.00	0.00	0.00
18,800.00	90.00	359.41	6,687.00	10,318.46	-156.36	10,319.64	0.00	0.00	0.00
18,900.00	90.00	359.41	6,687.00	10,418.45	-157.39	10,419.64	0.00	0.00	0.00
19,000.00	90.00	359.41	6,687.00	10,518.45	-158.43	10,519.64	0.00	0.00	0.00
19,100.00	90.00	359.41	6,687.00	10,618.44	-159.47	10,619.64	0.00	0.00	0.00
19,200.00	90.00	359.41	6,687.00	10,718.44	-160.50	10,719.64	0.00	0.00	0.00
19,300.00	90.00	359.41	6,687.00	10,818.43	-161.54	10,819.64	0.00	0.00	0.00
19,400.00	90.00	359.41	6,687.00	10,918.42	-162.58	10,919.63	0.00	0.00	0.00
19,500.00	90.00	359.41	6,687.00	11,018.42	-163.61	11,019.63	0.00	0.00	0.00
19,600.00	90.00	359.41	6,687.00	11,118.41	-164.65	11,119.63	0.00	0.00	0.00
19,700.00	90.00	359.41	6,687.00	11,218.41	-165.69	11,219.63	0.00	0.00	0.00
19,800.00	90.00	359.41	6,687.00	11,318.40	-166.72	11,319.63	0.00	0.00	0.00
19,900.00	90.00	359.41	6,687.00	11,418.40	-167.76	11,419.63	0.00	0.00	0.00
20,000.00	90.00	359.41	6,687.00	11,518.39	-168.80	11,519.63	0.00	0.00	0.00
20,100.00	90.00	359.41	6,687.00	11,618.39	-169.83	11,619.63	0.00	0.00	0.00
20,200.00	90.00	359.41	6,687.00	11,718.38	-170.87	11,719.63	0.00	0.00	0.00
20,222.65	90.00	359.41	6,687.00	11,741.03	-171.10	11,742.28	0.00	0.00	0.00

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Guttersen D25-762 SHL - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	1,317,184.86	3,278,713.82	40.1997647	-104.5021954
Guttersen D25-762 KOP - plan hits target center - Point	0.00	0.00	5,753.03	-1,609.26	-70.49	1,315,575.60	3,278,643.33	40.1953496	-104.5025125
Guttersen D25-762 BHL - plan hits target center - Point	0.00	0.00	6,687.00	11,741.03	-171.10	1,328,925.87	3,278,542.72	40.2319983	-104.5023350
Guttersen D25-762 TPZ/LP - plan hits target center - Point	0.00	0.00	6,687.00	-1,046.59	-95.83	1,316,138.27	3,278,617.99	40.1968948	-104.5025806

Noble Energy, Inc.

Survey Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersen D25-762
Project:	Mustang	TVD Reference:	KB @ 4817.00ft
Site:	D Section 25	MD Reference:	KB @ 4817.00ft
Well:	Guttersen D25-762	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 (°)	
680.00	680.00	Upper Pierre Aquifer Top				
718.00	718.00	Pierre				
1,617.00	1,617.00	Upper Pierre Aquifer Base				
3,766.71	3,669.00	Parkman				
4,244.25	4,091.00	Sussex				
4,453.60	4,276.00	Shannon				
6,327.62	5,944.00	Teepee Buttes				
7,027.22	6,561.00	Sharon Springs				
7,112.09	6,607.00	Top A Chalk				
7,116.24	6,609.00	Top A Marl				
7,146.79	6,623.00	Top B Chalk				
7,305.84	6,674.00	Top B 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	
6125	5753	-333	-15	Start DLS 9.00 TFO 176.94	
7435	6687	-1609	-70	TPZ/LP at 7434.74 MD	
15,748	6687	-1047	-96	Start DLS 1.00 TFO -90.00	
15,787	6687	7266	-125	Start 4435.52 hold at 15787.13 MD	
20,223	6687	7306	-125	TD at 20222.65 MD	

Checked By: _____ Approved By: _____ Date: _____

Northern Region - DJ Basin

Mustang

D Section 25

Guttersen D25-762

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 D25-762
Project:	Mustang	TVD Reference:	KB @ 4817.00ft
Reference Site:	D Section 25	MD Reference:	KB @ 4817.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersen D25-762	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	20,222.45	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	17,143.30	6,607.98	215.41	108.42	2.013	CC, ES, SF
Dalbey D 13-12 (PR) - Wellbore #1 - Gyro Surveys	16,669.06	6,620.94	935.72	832.33	9.050	CC, ES
Dalbey D 13-12 (PR) - Wellbore #1 - Gyro Surveys	16,700.00	6,621.21	936.23	832.65	9.039	SF
Dalbey D 13-13 (PR) - Wellbore #1 - No Surveys	15,740.54	6,616.00	1,200.85	995.29	5.842	CC
Dalbey D 13-13 (PR) - Wellbore #1 - No Surveys	15,747.74	6,616.00	1,200.87	995.26	5.840	ES
Dalbey D 13-13 (PR) - Wellbore #1 - No Surveys	15,787.13	6,616.00	1,201.62	995.74	5.837	SF
Dalbey D 13-14 (PA) - Wellbore #1 - Gyro Surveys	15,747.92	6,613.85	19.84	-76.40	0.206	Level 1, CC, ES, SF
Guttersen 12-13 (SI) - Wellbore #1 - Gyro Surveys	18,348.80	6,654.36	1,299.98	1,183.36	11.147	CC, ES
Guttersen 12-13 (SI) - Wellbore #1 - Gyro Surveys	18,400.00	6,653.64	1,300.99	1,184.06	11.126	SF
Guttersen 13C (PR) - Wellbore #1 - Gyro Surveys	19,103.62	6,576.85	2,108.82	1,986.50	17.240	CC, ES
Guttersen 13C (PR) - Wellbore #1 - Gyro Surveys	19,300.00	6,575.48	2,117.94	1,994.42	17.146	SF
Guttersen 13D (PR) - Wellbore #1 - Gyro Surveys	16,500.35	6,597.48	2,080.55	1,978.57	20.401	CC, ES
Guttersen 13D (PR) - Wellbore #1 - Gyro Surveys	16,700.00	6,598.80	2,090.11	1,986.86	20.244	SF
Guttersen 13N (PR) - Wellbore #1 - Gyro Surveys	19,093.84	6,604.43	548.32	425.98	4.482	CC
Guttersen 13N (PR) - Wellbore #1 - Gyro Surveys	19,100.00	6,604.37	548.35	425.96	4.480	ES, SF
Guttersen 13S (PR) - Wellbore #1 - Gyro Surveys	17,843.85	6,574.91	2,086.21	1,973.84	18.565	CC, ES
Guttersen 13S (PR) - Wellbore #1 - Gyro Surveys	18,000.00	6,576.01	2,092.05	1,978.63	18.447	SF
Guttersen 13T (PR) - Wellbore #1 - Gyro Surveys	15,292.33	6,610.94	1,971.70	1,878.90	21.247	CC
Guttersen 13T (PR) - Wellbore #1 - Gyro Surveys	15,300.00	6,610.93	1,971.71	1,878.86	21.234	ES
Guttersen 13T (PR) - Wellbore #1 - Gyro Surveys	15,500.00	6,610.70	1,982.61	1,888.58	21.086	SF
Guttersen 21-13 (SI) - Wellbore #1 - Gyro Surveys	19,707.28	6,612.34	13.32	-113.95	0.105	Level 1, CC, ES, SF
Guttersen 22-13 (SI) - Wellbore #1 - Gyro Surveys	18,447.28	6,608.15	130.22	12.98	1.111	Level 2, CC, ES, SF
Guttersen 31-13 (PR) - Wellbore #1 - Gyro Surveys	19,738.17	6,636.68	1,374.75	1,247.10	10.770	CC, ES
Guttersen 31-13 (PR) - Wellbore #1 - Gyro Surveys	19,800.00	6,635.97	1,376.14	1,248.10	10.748	SF
Guttersen 32-13 (PR) - Wellbore #1 - Gyro Surveys	18,550.71	6,610.42	1,463.94	1,345.82	12.394	CC, ES
Guttersen 32-13 (PR) - Wellbore #1 - Gyro Surveys	18,600.00	6,610.15	1,464.77	1,346.30	12.364	SF
Guttersen 34-13 (PR) - Wellbore #1 - Gyro Surveys	15,789.84	6,618.05	1,334.64	1,238.09	13.823	CC
Guttersen 34-13 (PR) - Wellbore #1 - Gyro Surveys	15,800.00	6,618.12	1,334.68	1,238.05	13.812	ES
Guttersen 34-13 (PR) - Wellbore #1 - Gyro Surveys	15,900.00	6,618.82	1,339.18	1,241.98	13.777	SF
Guttersen 41-13 (PR) - Wellbore #1 - Gyro Surveys	19,666.14	6,479.55	2,762.18	2,635.73	21.844	CC
Guttersen 41-13 (PR) - Wellbore #1 - Gyro Surveys	19,700.00	6,479.42	2,762.38	2,635.66	21.799	ES
Guttersen 41-13 (PR) - Wellbore #1 - Gyro Surveys	19,900.00	6,478.63	2,772.06	2,644.02	21.651	SF
Guttersen 42-13 (PR) - Wellbore #1 - Gyro Surveys	18,396.53	6,508.07	2,849.53	2,733.00	24.454	CC
Guttersen 42-13 (PR) - Wellbore #1 - Gyro Surveys	18,400.00	6,508.14	2,849.53	2,732.98	24.448	ES
Guttersen 42-13 (PR) - Wellbore #1 - Gyro Surveys	18,700.00	6,514.60	2,865.63	2,747.10	24.176	SF
Guttersen 43-13 - Wellbore #1 - Wellbore #1 - As Drilled	17,126.92	6,632.15	2,743.20	2,636.28	25.655	CC, ES
Guttersen 43-13 - Wellbore #1 - Wellbore #1 - As Drilled	17,500.00	6,636.28	2,768.45	2,659.27	25.356	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 D25-762
Project:	Mustang	TVD Reference:	KB @ 4817.00ft
Reference Site:	D Section 25	MD Reference:	KB @ 4817.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersten D25-762	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Separation Factor	Warning
D Section 13						
Guttersten 44-13 - Wellbore #1 - Wellbore #1 - As Drilled	15,780.59	6,655.16	2,675.93	2,575.80	26.725	CC
Guttersten 44-13 - Wellbore #1 - Wellbore #1 - As Drilled	15,800.00	6,655.14	2,676.02	2,575.74	26.687	ES
Guttersten 44-13 - Wellbore #1 - Wellbore #1 - As Drilled	16,100.00	6,654.84	2,695.28	2,593.16	26.393	SF
L F Ranch 1-13 (PR) - Wellbore #1 - Gyro Surveys	16,829.20	6,616.83	1,314.32	1,209.59	12.550	CC, ES
L F Ranch 1-13 (PR) - Wellbore #1 - Gyro Surveys	16,900.00	6,617.24	1,316.23	1,211.03	12.512	SF
L. F. Ranch 13-4 (SI) - Wellbore #1 - Gyro Surveys	19,374.37	6,667.14	903.63	778.87	7.243	CC, ES
L. F. Ranch 13-4 (SI) - Wellbore #1 - Gyro Surveys	19,400.00	6,666.16	904.00	779.10	7.238	SF
D Section 24						
Dalbey D 24-10 (PR) - Wellbore #1 - Gyro Surveys	11,504.36	6,618.58	1,780.14	1,714.54	27.136	CC, ES
Dalbey D 24-10 (PR) - Wellbore #1 - Gyro Surveys	11,700.00	6,617.55	1,790.86	1,724.16	26.853	SF
Dalbey D 24-15 (SI) - Wellbore #1 - Gyro Surveys	10,543.05	6,630.26	1,312.55	1,252.78	21.963	CC, ES
Dalbey D 24-15 (SI) - Wellbore #1 - Gyro Surveys	10,700.00	6,630.99	1,321.90	1,261.40	21.850	SF
Glazier 2-24 (SI) - Wellbore #1 - Gyro Surveys	13,718.41	6,614.99	2,421.91	2,340.91	29.900	CC, ES
Glazier 2-24 (SI) - Wellbore #1 - Gyro Surveys	14,000.00	6,613.77	2,438.23	2,355.51	29.476	SF
Guttersten 11-24 (PR) - Wellbore #1 - Gyro Surveys	14,490.60	6,652.77	1,259.82	1,172.99	14.510	CC
Guttersten 11-24 (PR) - Wellbore #1 - Gyro Surveys	14,500.00	6,652.79	1,259.85	1,172.96	14.498	ES
Guttersten 11-24 (PR) - Wellbore #1 - Gyro Surveys	14,600.00	6,652.99	1,264.56	1,177.12	14.462	SF
Guttersten 12-24 (PR) - Wellbore #1 - Gyro Surveys	13,193.83	6,645.11	1,272.28	1,195.01	16.464	CC
Guttersten 12-24 (PR) - Wellbore #1 - Gyro Surveys	13,200.00	6,645.11	1,272.30	1,194.98	16.455	ES
Guttersten 12-24 (PR) - Wellbore #1 - Gyro Surveys	13,300.00	6,645.00	1,276.71	1,198.81	16.390	SF
Guttersten 21-24 (PR) - Wellbore #1 - Gyro Surveys	14,506.30	6,621.92	59.97	-26.89	0.690	Level 1, CC, ES, SF
Guttersten 22-24 (PR) - Wellbore #1 - Gyro Surveys	13,277.68	6,620.07	112.68	34.87	1.448	Level 3, CC, ES, SF
Guttersten 24A (PR) - Wellbore #1 - Gyro Surveys	13,830.65	6,626.35	566.91	485.08	6.928	CC, ES, SF
Guttersten 24J (PR) - Wellbore #1 - Gyro Surveys	15,131.50	6,624.05	479.80	388.24	5.240	CC, ES, SF
Guttersten 24N (PR) - Wellbore #1 - MWD Surveys	13,871.69	6,626.45	662.38	581.29	8.169	CC, ES
Guttersten 24N (PR) - Wellbore #1 - MWD Surveys	13,900.00	6,626.29	662.98	581.74	8.161	SF
Guttersten 24S (PR) - Wellbore #1 - MWD Surveys	12,387.20	6,594.16	2,126.61	2,056.09	30.157	CC
Guttersten 24S (PR) - Wellbore #1 - MWD Surveys	12,400.00	6,594.07	2,126.65	2,056.04	30.121	ES
Guttersten 24S (PR) - Wellbore #1 - MWD Surveys	12,700.00	6,591.88	2,149.49	2,077.21	29.739	SF
Guttersten 43-24 (PR) - Wellbore #1 - Gyro Surveys	11,763.94	6,651.04	2,671.15	2,603.69	39.595	CC, ES
Guttersten 43-24 (PR) - Wellbore #1 - Gyro Surveys	12,200.00	6,649.53	2,706.51	2,636.62	38.722	SF
Guttersten 44-24 (PR) - Wellbore #1 - Gyro Surveys	10,525.92	6,605.70	2,745.94	2,686.37	46.096	CC, ES
Guttersten 44-24 (PR) - Wellbore #1 - Gyro Surveys	11,100.00	6,606.15	2,805.31	2,742.86	44.917	SF
Karch Blue D 24-12 (PA) - Wellbore #1 - Gyro Surveys	12,015.42	6,643.16	1,214.70	1,145.65	17.591	CC, ES
Karch Blue D 24-12 (PA) - Wellbore #1 - Gyro Surveys	12,100.00	6,643.22	1,217.64	1,148.10	17.508	SF
Karch Blue D 24-14 (PR) - Wellbore #1 - No Surveys	10,492.15	6,635.00	353.53	184.35	2.090	CC, ES, SF
Karch Blue D24-11 (PA) - Wellbore #1 - Gyro Surveys	12,016.03	6,621.12	202.40	126.96	2.683	CC, ES, SF
Koerner 31-24 (SI) - Wellbore #1 - Gyro Surveys	14,558.98	6,631.73	1,383.16	1,295.88	15.846	CC, ES
Koerner 31-24 (SI) - Wellbore #1 - Gyro Surveys	14,700.00	6,632.97	1,390.33	1,302.29	15.792	SF
Koerner 32-24 (SI) - Wellbore #1 - Gyro Surveys	13,125.12	6,566.14	1,394.21	1,317.73	18.229	CC, ES
Koerner 32-24 (SI) - Wellbore #1 - Gyro Surveys	13,200.00	6,566.16	1,396.22	1,319.24	18.138	SF
Koerner 42-24 (SI) - Wellbore #1 - Gyro Surveys	13,116.10	6,630.82	2,703.62	2,626.95	35.262	CC, ES
Koerner 42-24 (SI) - Wellbore #1 - Gyro Surveys	13,500.00	6,627.02	2,730.74	2,651.79	34.587	SF
LF Ranch 1-24 (SI) - Wellbore #1 - Gyro Surveys	10,908.06	6,678.49	872.89	810.84	14.068	CC, ES
LF Ranch 1-24 (SI) - Wellbore #1 - Gyro Surveys	11,000.00	6,679.70	877.72	815.28	14.057	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 D25-762
Project:	Mustang	TVD Reference:	KB @ 4817.00ft
Reference Site:	D Section 25	MD Reference:	KB @ 4817.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersten D25-762	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	6,401.31	6,168.17	1,199.83	1,144.36	21.632	CC, ES
Coors Energy 13-25D (PR) - Wellbore #1 - MWD Survey	6,800.00	6,569.92	1,223.07	1,165.31	21.175	SF
Coors Energy 14-25D (PR) - Wellbore #1 - MWD Survey	6,460.07	6,226.64	1,935.16	1,887.62	40.704	CC, ES
Coors Energy 14-25D (PR) - Wellbore #1 - MWD Survey	6,650.00	6,415.74	1,957.00	1,908.44	40.300	SF
Coors Energy 23-25D (PR) - Wellbore #1 - MWD Survey	6,425.45	6,199.01	246.67	196.84	4.950	CC, ES
Coors Energy 23-25D (PR) - Wellbore #1 - MWD Survey	6,450.00	6,223.34	247.08	197.10	4.943	SF
Coors Energy 24-25 (PR) - Wellbore #1 - Gyro Surveys	6,430.97	6,044.49	1,801.59	1,757.27	40.650	CC, ES
Coors Energy 24-25 (PR) - Wellbore #1 - Gyro Surveys	6,550.00	6,164.25	1,812.44	1,767.40	40.241	SF
Coors Energy 25HD (PR) - Wellbore #1 - MWD Surveys	6,460.40	6,286.08	1,885.85	1,831.38	34.621	CC, ES
Coors Energy 25HD (PR) - Wellbore #1 - MWD Surveys	6,750.00	6,587.45	1,914.35	1,858.32	34.167	SF
Coors Energy 25LD (PR) - Wellbore #1 - MWD Surveys	6,450.64	6,171.04	2,077.27	2,033.42	47.366	CC, ES
Coors Energy 25LD (PR) - Wellbore #1 - MWD Surveys	6,600.00	6,280.62	2,095.39	2,050.68	46.856	SF
Coors Energy 25TD (PR) - Wellbore #1 - MWD Surveys	6,423.06	6,083.15	3,034.65	2,989.61	67.378	CC, ES
Coors Energy 25TD (PR) - Wellbore #1 - MWD Surveys	6,700.00	6,340.60	3,076.32	3,029.87	66.226	SF
Coors Energy 25XD (PR) - Wellbore #1 - MWD Surveys	5,211.06	4,345.92	3,369.11	3,329.62	85.301	CC
Coors Energy 25XD (PR) - Wellbore #1 - MWD Surveys	5,300.00	4,430.33	3,369.69	3,329.37	83.570	ES
Coors Energy 25XD (PR) - Wellbore #1 - MWD Surveys	7,000.00	6,737.94	3,487.77	3,432.88	63.537	SF
Coors Energy 25YD (PR) - Wellbore #1 - MWD Surveys	870.66	901.86	3,750.21	3,745.70	832.346	CC, ES
Coors Energy 25YD (PR) - Wellbore #1 - MWD Surveys	6,850.00	6,708.37	4,013.04	3,963.82	81.541	SF
Coors Energy 33-25D (PR) - Wellbore #1 - MWD Survey	6,392.20	6,192.18	1,465.28	1,411.52	27.258	CC
Coors Energy 33-25D (PR) - Wellbore #1 - MWD Survey	6,400.00	6,199.93	1,465.28	1,411.48	27.232	ES
Coors Energy 33-25D (PR) - Wellbore #1 - MWD Survey	6,650.00	6,446.94	1,473.46	1,418.50	26.811	SF
Coors Energy 34-25 (PR) - Wellbore #1 - Gyro Surveys	6,414.87	5,991.57	2,193.82	2,148.97	48.916	CC, ES
Coors Energy 34-25 (PR) - Wellbore #1 - Gyro Surveys	6,600.00	6,185.11	2,215.25	2,169.30	48.205	SF
Coors Energy 43-25D (PR) - Wellbore #1 - MWD Survey	6,327.31	6,184.48	2,747.94	2,693.31	50.306	CC
Coors Energy 43-25D (PR) - Wellbore #1 - MWD Survey	6,400.00	6,258.62	2,748.25	2,693.20	49.919	ES
Coors Energy 43-25D (PR) - Wellbore #1 - MWD Survey	7,050.00	6,799.27	2,790.50	2,732.36	47.998	SF
Coors Energy 44-25D (PR) - Wellbore #1 - MWD Survey	6,406.60	6,075.53	3,147.05	3,101.10	68.482	CC, ES
Coors Energy 44-25D (PR) - Wellbore #1 - MWD Survey	6,800.00	6,439.84	3,204.68	3,156.66	66.726	SF
Dalbey D 25-03 (SI) - Wellbore #1 - Gyro Surveys	8,850.43	6,669.45	194.26	142.33	3.741	CC, ES, SF
Dalbey D 25-05 (SI) - Wellbore #1 - Gyro Surveys	7,923.25	6,748.14	1,384.72	1,334.67	27.664	CC, ES, SF
Guttersten 11-25 (PR) - Wellbore #1 - MWD Surveys	9,267.17	6,689.34	1,189.70	1,137.21	22.663	CC, ES
Guttersten 11-25 (PR) - Wellbore #1 - MWD Surveys	9,400.00	6,688.45	1,197.10	1,144.15	22.609	SF
Guttersten 22-25 (PR) - Wellbore #1 - MWD Surveys	3,683.24	3,570.64	185.21	161.26	7.731	CC, ES
Guttersten 22-25 (PR) - Wellbore #1 - MWD Surveys	8,008.60	6,657.62	240.31	191.59	4.932	SF
Guttersten 25E (PR) - Wellbore #1 - MWD Surveys	9,861.49	6,668.59	1,594.27	1,538.87	28.778	CC, ES
Guttersten 25E (PR) - Wellbore #1 - MWD Surveys	10,000.00	6,666.76	1,600.28	1,544.24	28.559	SF
Guttersten 25KD (PR) - Wellbore #1 - MWD Surveys	4,567.58	4,393.52	375.47	341.82	11.159	CC, ES
Guttersten 25KD (PR) - Wellbore #1 - MWD Surveys	7,350.00	6,864.46	517.50	467.11	10.269	SF
Guttersten 25O (PR) - Wellbore #1 - MWD Surveys	7,523.30	6,658.99	681.58	633.01	14.034	CC, ES, SF
Guttersten D 25-17 (SI) - Wellbore #1 - Gyro Surveys	2,191.60	2,160.21	1,887.62	1,872.65	126.123	CC
Guttersten D 25-17 (SI) - Wellbore #1 - Gyro Surveys	8,610.56	6,700.92	1,911.57	1,860.37	37.336	ES
Guttersten D 25-17 (SI) - Wellbore #1 - Gyro Surveys	8,800.00	6,698.26	1,920.93	1,869.23	37.152	SF
Guttersten D25-715 - Wellbore #1 - Plan #1	2,000.00	1,986.00	2,269.65	2,255.82	164.197	CC
Guttersten D25-715 - Wellbore #1 - Plan #1	2,100.00	2,057.33	2,269.92	2,255.52	157.558	ES
Guttersten D25-715 - Wellbore #1 - Plan #1	20,222.65	20,129.82	3,070.64	2,852.99	14.108	SF
Guttersten D25-724 - Wellbore #1 - Plan #1	2,038.42	2,018.76	2,232.97	2,218.91	158.738	CC
Guttersten D25-724 - Wellbore #1 - Plan #1	2,200.00	2,148.18	2,233.43	2,218.40	148.613	ES
Guttersten D25-724 - Wellbore #1 - Plan #1	20,222.65	19,974.82	2,471.93	2,254.10	11.348	SF
Guttersten D25-734 - Wellbore #1 - Plan #1	15,762.18	15,534.07	1,828.48	1,681.38	12.431	CC
Guttersten D25-734 - Wellbore #1 - Plan #1	20,222.65	19,994.50	1,847.75	1,630.48	8.504	ES, SF
Guttersten D25-743 - Wellbore #1 - Plan #1	15,764.04	15,670.90	1,191.39	1,044.26	8.098	CC
Guttersten D25-743 - Wellbore #1 - Plan #1	20,222.65	20,129.48	1,209.31	992.02	5.565	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 D25-762
Project:	Mustang	TVD Reference:	KB @ 4817.00ft
Reference Site:	D Section 25	MD Reference:	KB @ 4817.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersten D25-762	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
D Section 25						
Guttersten D25-753 - Wellbore #1 - Plan #1	2,000.00	2,000.00	37.50	23.63	2.703	CC
Guttersten D25-753 - Wellbore #1 - Plan #1	2,100.00	2,098.90	37.80	23.25	2.599	ES
Guttersten D25-753 - Wellbore #1 - Plan #1	2,300.00	2,296.66	40.28	24.48	2.550	SF
Guttersten D25-772 - Wellbore #1 - Plan #1	2,000.00	1,999.00	37.50	23.63	2.704	CC
Guttersten D25-772 - Wellbore #1 - Plan #1	2,100.00	2,099.57	37.92	23.37	2.606	ES
Guttersten D25-772 - Wellbore #1 - Plan #1	2,200.00	2,200.13	39.14	23.95	2.576	SF
Guttersten D25-781 - Wellbore #1 - Plan #1	2,000.00	2,000.00	75.00	61.13	5.406	CC
Guttersten D25-781 - Wellbore #1 - Plan #1	2,100.00	2,100.80	75.62	61.07	5.195	ES
Guttersten D25-781 - Wellbore #1 - Plan #1	2,200.00	2,201.39	77.62	62.41	5.105	SF
Guttersten State D36-714 - Wellbore #1 - Plan #1	2,255.52	2,223.67	2,242.39	2,226.88	144.547	CC
Guttersten State D36-714 - Wellbore #1 - Plan #1	2,300.00	2,249.76	2,242.54	2,226.80	142.419	ES
Guttersten State D36-714 - Wellbore #1 - Plan #1	7,900.00	6,147.94	3,083.62	3,035.21	63.694	SF
Guttersten State D36-724 - Wellbore #1 - Plan #1	2,279.03	2,246.52	2,205.19	2,189.52	140.760	CC
Guttersten State D36-724 - Wellbore #1 - Plan #1	2,300.00	2,261.56	2,205.21	2,189.42	139.701	ES
Guttersten State D36-724 - Wellbore #1 - Plan #1	7,000.00	7,187.37	2,521.81	2,470.33	48.993	SF
Guttersten State D36-733 - Wellbore #1 - Plan #1	7,050.00	7,142.38	1,897.91	1,846.34	36.802	SF
Guttersten State D36-733 - Wellbore #1 - Plan #1	7,166.47	7,046.65	1,896.26	1,844.87	36.899	CC, ES
Guttersten State D36-743 - Wellbore #1 - Plan #1	7,100.00	7,169.78	1,273.51	1,221.21	24.350	SF
Guttersten State D36-743 - Wellbore #1 - Plan #1	7,163.60	7,127.78	1,272.58	1,220.36	24.371	CC, ES
Guttersten State D36-752 - Wellbore #1 - Plan #1	2,000.00	2,000.00	154.62	147.69	22.291	CC, ES
Guttersten State D36-752 - Wellbore #1 - Plan #1	7,250.00	6,973.82	649.49	611.72	17.197	SF
Guttersten State D36-762 - Wellbore #1 - Plan #1	7,364.09	6,910.33	52.04	0.43	1.008	Level 2, CC, ES, SF
Guttersten State D36-771 - Wellbore #1 - Plan #1	2,000.00	2,000.00	154.62	140.75	11.146	CC, ES
Guttersten State D36-771 - Wellbore #1 - Plan #1	2,700.00	2,729.30	189.18	170.72	10.246	SF
Guttersten State D36-781 - Wellbore #1 - Plan #1	2,000.00	2,000.00	167.70	153.83	12.089	CC
Guttersten State D36-781 - Wellbore #1 - Plan #1	2,200.00	2,210.19	168.35	153.13	11.058	ES
Guttersten State D36-781 - Wellbore #1 - Plan #1	2,600.00	2,626.15	180.60	162.76	10.118	SF
Karch Blue D 25-02 (DA) - Wellbore #1 - No Surveys	9,213.90	6,631.00	1,435.83	1,273.01	8.818	CC, ES
Karch Blue D 25-02 (DA) - Wellbore #1 - No Surveys	9,300.00	6,631.00	1,438.41	1,275.26	8.816	SF
Karch Blue D 25-08 (SI) - Wellbore #1 - Gyro Surveys	3,231.90	3,094.72	2,695.10	2,673.34	123.885	CC
Karch Blue D 25-08 (SI) - Wellbore #1 - Gyro Surveys	3,300.00	3,149.02	2,695.29	2,673.09	121.426	ES
Karch Blue D 25-08 (SI) - Wellbore #1 - Gyro Surveys	8,200.00	6,684.93	2,742.20	2,691.88	54.498	SF
Karch Blue D25-07 (SI) - Wellbore #1 - Gyro Surveys	3,648.37	3,506.04	1,379.83	1,355.02	55.617	CC
Karch Blue D25-07 (SI) - Wellbore #1 - Gyro Surveys	3,700.00	3,557.98	1,379.94	1,354.74	54.758	ES
Karch Blue D25-07 (SI) - Wellbore #1 - Gyro Surveys	8,000.00	6,636.60	1,407.52	1,357.69	28.247	SF
L F Ranch 2-25 (PR) - Wellbore #1 - Gyro Surveys	100.00	41.36	2,708.47	2,708.27	10,000.000	CC
L F Ranch 2-25 (PR) - Wellbore #1 - Gyro Surveys	9,200.00	6,665.63	2,713.74	2,660.49	50.957	ES
L F Ranch 2-25 (PR) - Wellbore #1 - Gyro Surveys	9,700.00	6,655.34	2,762.45	2,707.32	50.109	SF
LF Ranches 1 (PA) - Wellbore #1 - No Surveys	2,000.00	1,948.00	2,363.42	2,317.52	51.494	CC
LF Ranches 1 (PA) - Wellbore #1 - No Surveys	8,900.00	6,635.00	2,427.24	2,265.50	15.007	ES
LF Ranches 1 (PA) - Wellbore #1 - No Surveys	9,000.00	6,635.00	2,429.70	2,267.62	14.991	SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersen D25-762
Project:	Mustang	TVD Reference:	KB @ 4817.00ft
Reference Site:	D Section 25	MD Reference:	KB @ 4817.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersen D25-762	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 @ 4817.00ft

Offset Depths are relative to Offset Datum

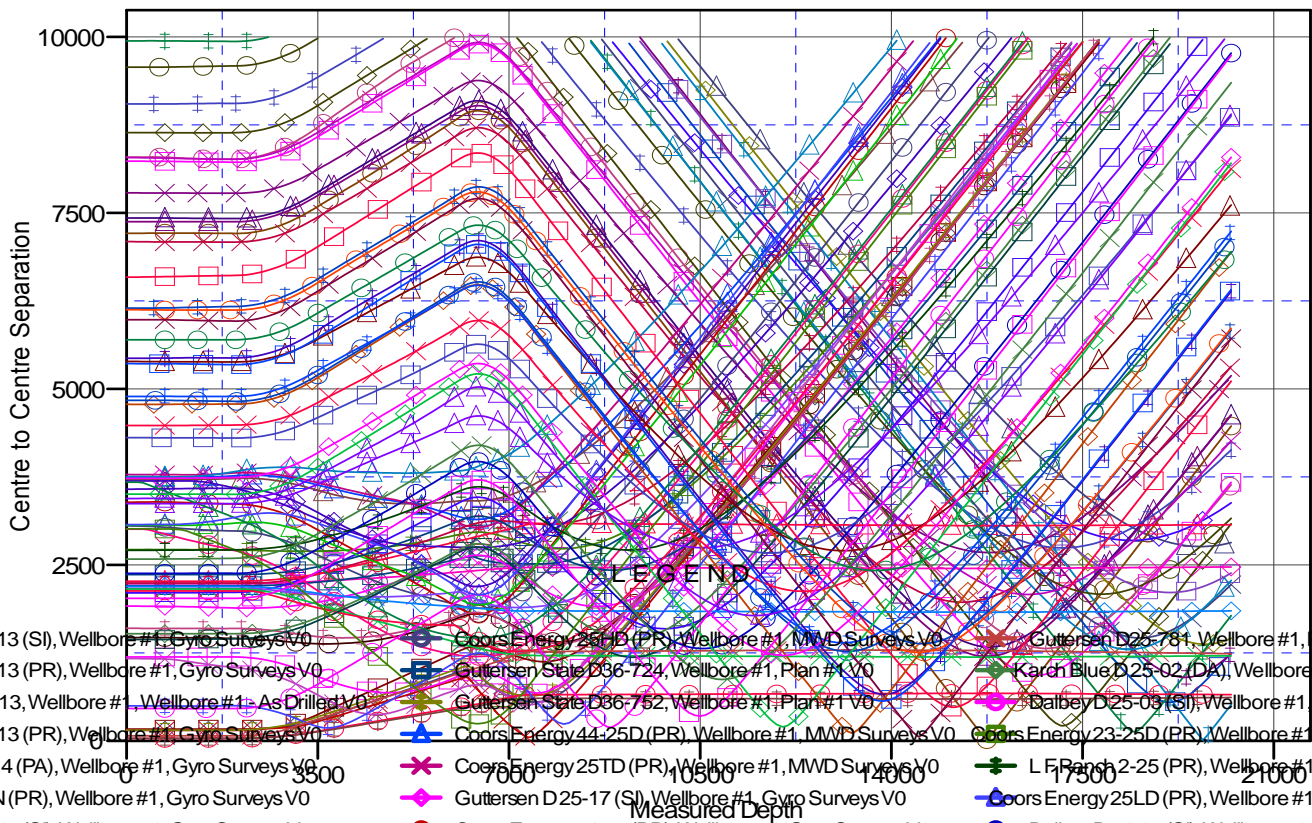
Central Meridian is -105.5000000

Coordinates are relative to: Guttersen D25-762

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 D25-761, 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 State D36-752, Wellbore #1, Plan #1 V0	Dalbey D25-03 (SI), Wellbore #1, Gyro Surveys V0
Guttersen 31-13 (PR), Wellbore #1, Gyro Surveys V0	Coors Energy 44-25D (PR), Wellbore #1, MWD Surveys V0	Coors Energy 23-25D (PR), Wellbore #1, MWD Surveys V0
Dalbey D13-14 (PA), Wellbore #1, Gyro Surveys V0	Coors Energy 25TD (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	Guttersen D25-17 (SI), Wellbore #1, Gyro Surveys V0	Coors Energy 25LD (PR), Wellbore #1, MWD Surveys V0
Guttersen 22-13 (SI), Wellbore #1, Gyro Surveys V0	Coors Energy 24-25 (PR), Wellbore #1, Gyro Surveys V0	Dalbey D24-15 (SI), Wellbore #1, Gyro Surveys V0
Guttersen 34-13 (PR), Wellbore #1, Gyro Surveys V0	Guttersen 25E (PR), Wellbore #1, MWD Surveys V0	Guttersen 24J (PR), Wellbore #1, Gyro Surveys V0
Guttersen 32-13 (PR), Wellbore #1, Gyro Surveys V0	Guttersen State D36-714, Wellbore #1, Plan #1 V0	Guttersen 24N (PR), Wellbore #1, MWD Surveys V0
Guttersen 42-13 (PR), Wellbore #1, Gyro Surveys V0	Guttersen D25-715, 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 State D36-733, Wellbore #1, Plan #1 V0	Guttersen 21-24 (PR), Wellbore #1, Gyro Surveys V0
Dalbey D13-12 (PR), Wellbore #1, Gyro Surveys V0	Coors Energy 43-25D (PR), Wellbore #1, MWD Surveys V0	Guttersen 22-24 (PR), Wellbore #1, Gyro Surveys V0
L.F. Ranch 3-4 (SI), Wellbore #1, Gyro Surveys V0	Coors Energy 13-25D (PR), Wellbore #1, MWD Surveys V0	Guttersen 12-24 (PR), Wellbore #1, Gyro Surveys V0
Dalbey D13-13 (PR), Wellbore #1, No Surveys V0	Guttersen 25O (PR), Wellbore #1, MWD Surveys V0	Guttersen 43-24 (PR), Wellbore #1, Gyro Surveys V0
Guttersen 13T (PR), Wellbore #1, Gyro Surveys V0	Dalbey D25-05 (SI), Wellbore #1, Gyro Surveys V0	Koerner 31-24 (SI), Wellbore #1, Gyro Surveys V0
Dalbey D13-11 (SI), Wellbore #1, Gyro Surveys V0	Coors Energy 14-25D (PR), Wellbore #1, MWD Surveys V0	Koerner 42-24 (SI), Wellbore #1, Gyro Surveys V0
Guttersen 13S (PR), Wellbore #1, Gyro Surveys V0	Guttersen 25KD (PR), Wellbore #1, MWD Surveys V0	Guttersen 24S (PR), Wellbore #1, MWD Surveys V0
Guttersen 13C (PR), Wellbore #1, Gyro Surveys V0	Guttersen D25-734, Wellbore #1, Plan #1 V0	Karch Blue D24-11 (PA), Wellbore #1, Gyro Surveys V0
Guttersen 43-13, Wellbore #1, Wellbore #1 - As Drilled V0	Guttersen D25-772, 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 25MD (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	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

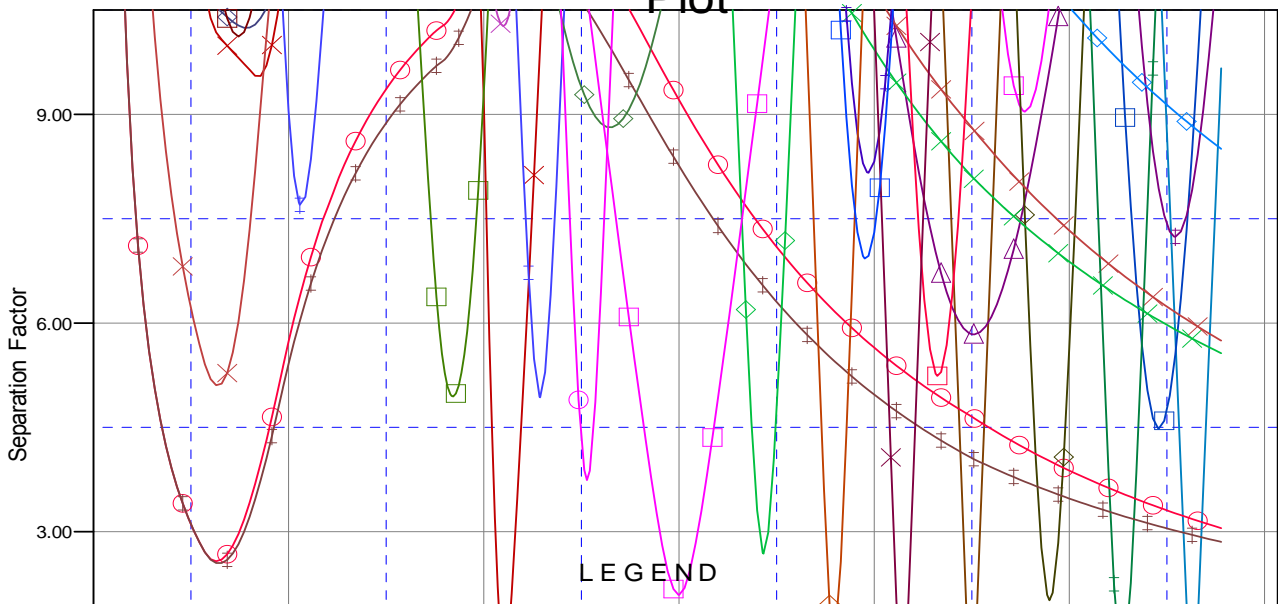
Company: Northern Region - DJ Basin
Project: Mustang
Reference Site: D Section 25
Site Error: 0.00 ft
Reference Well: Guttersen D25-762
Well Error: 0.00 ft
Reference Wellbore Wellbore #1
Reference Design: Plan #1

Local Co-ordinate Reference: Well Guttersen D25-762
TVD Reference: KB @ 4817.00ft
MD Reference: KB @ 4817.00ft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDMF
Offset TVD Reference: Offset Datum

Reference Depths are relative to KB @ 4817.00ft
Offset Depths are relative to Offset Datum
Central Meridian is -105.5000000

Coordinates are relative to: Guttersen D25-762
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.64°

Separation Factor
Plot



Guttersen 21-13 (SI), Wellbore #1, Gyro Surveys V0
Guttersen 41-13 (PR), Wellbore #1, Gyro Surveys V0
Guttersen 44-13, Wellbore #1, Wellbore #1 - As Drilled V0
Guttersen 31-13 (PR), Wellbore #1, Gyro Surveys V0
Dalbey D 13-14 (PA), Wellbore #1, Gyro Surveys V0
Guttersen 13N (PR), Wellbore #1, Gyro Surveys V0
Guttersen 22-13 (SI), Wellbore #1, Gyro Surveys V0
Guttersen 34-13 (PR), Wellbore #1, Gyro Surveys V0
Guttersen 32-13 (PR), Wellbore #1, Gyro Surveys V0
Guttersen 42-13 (PR), Wellbore #1, Gyro Surveys V0
L.F.Ranch 1-13 (PR), Wellbore #1, Gyro Surveys V0
Dalbey D 13-12 (PR), Wellbore #1, Gyro Surveys V0
L.F.Ranch 13-4 (SI), Wellbore #1, Gyro Surveys V0
Dalbey D 13-13 (PR), Wellbore #1, No Surveys V0
Guttersen 13T (PR), Wellbore #1, Gyro Surveys V0
Dalbey D 13-11 (SI), Wellbore #1, Gyro Surveys V0
Guttersen 13S (PR), Wellbore #1, Gyro Surveys V0
Guttersen 13C (PR), Wellbore #1, Gyro Surveys V0
Guttersen 43-13, Wellbore #1, Wellbore #1 - As Drilled V0
Guttersen 12-13 (SI), Wellbore #1, Gyro Surveys V0
Guttersen 13D (PR), Wellbore #1, Gyro Surveys V0
Guttersen State D36-771, Wellbore #1, Plan #1 V0
Karch Blue D25-07 (SI), Wellbore #1, Gyro Surveys V0
Guttersen State D36-781, Wellbore #1, Plan #1 V0
Karch Blue D25-08 (SI), Wellbore #1, Gyro Surveys V0
Coors Energy 25XD (PR), Wellbore #1, MWD Surveys V0
Coors Energy 25HD (PR), Wellbore #1, MWD Surveys V0
Guttersen State D36-724, Wellbore #1, Plan #1 V0
Guttersen State D36-752, Wellbore #1, Plan #1 V0
Coors Energy 44-25D (PR), Wellbore #1, MWD Surveys V0
Coors Energy 25TD (PR), Wellbore #1, MWD Surveys V0
Guttersen D25-17 (SI), Wellbore #1, Gyro Surveys V0
Coors Energy 24-25 (PR), Wellbore #1, Gyro Surveys V0
Guttersen 25E (PR), Wellbore #1, MWD Surveys V0
Guttersen State D36-714, Wellbore #1, Plan #1 V0
Guttersen D25-715, Wellbore #1, Plan #1 V0
Guttersen State D36-733, Wellbore #1, Plan #1 V0
Coors Energy 43-25D (PR), Wellbore #1, MWD Surveys V0
Coors Energy 13-25D (PR), Wellbore #1, MWD Surveys V0
Guttersen 25O (PR), Wellbore #1, MWD Surveys V0
Dalbey D 25-05 (SI), Wellbore #1, Gyro Surveys V0
Coors Energy 14-25D (PR), Wellbore #1, MWD Surveys V0
Guttersen 25KD (PR), Wellbore #1, MWD Surveys V0
Guttersen D25-734, Wellbore #1, Plan #1 V0
Guttersen D25-772, Wellbore #1, Plan #1 V0
L.F.Ranches 1 (PA), Wellbore #1, No Surveys V0
Guttersen D25-753, Wellbore #1, Plan #1 V0
Coors Energy 25D (PR), Wellbore #1, MWD Surveys V0
Guttersen D25-743, Wellbore #1, Plan #1 V0
Coors Energy 34-25 (PR), Wellbore #1, Gyro Surveys V0
Guttersen State D36-743, Wellbore #1, Plan #1 V0
Guttersen 11-25 (PR), Wellbore #1, MWD Surveys V0
Guttersen D25-781, Wellbore #1, Plan #1 V0
Karch Blue D25-02 (DA), Wellbore #1, No Surveys V0
Dalbey D 25-03 (SI), Wellbore #1, Gyro Surveys V0
Coors Energy 23-25D (PR), Wellbore #1, MWD Surveys V0
L.F.Ranch 2-25 (PR), Wellbore #1, Gyro Surveys V0
Coors Energy 25LD (PR), Wellbore #1, MWD Surveys V0
Dalbey D 24-15 (SI), Wellbore #1, Gyro Surveys V0
Guttersen 24J (PR), Wellbore #1, Gyro Surveys V0
Guttersen 24N (PR), Wellbore #1, MWD Surveys V0
Guttersen 44-24 (PR), Wellbore #1, Gyro Surveys V0
Guttersen 21-24 (PR), Wellbore #1, Gyro Surveys V0
Guttersen 22-24 (PR), Wellbore #1, Gyro Surveys V0
Guttersen 12-24 (PR), Wellbore #1, Gyro Surveys V0
Guttersen 43-24 (PR), Wellbore #1, Gyro Surveys V0
Koerner 31-24 (SI), Wellbore #1, Gyro Surveys V0
Koerner 42-24 (SI), Wellbore #1, Gyro Surveys V0
Guttersen 24S (PR), Wellbore #1, MWD Surveys V0
Karch Blue D24-11 (PA), Wellbore #1, Gyro Surveys V0
Guttersen 11-24 (PR), Wellbore #1, Gyro Surveys V0
Karch Blue D24-14 (PR), Wellbore #1, No Surveys V0
Koerner 32-24 (SI), Wellbore #1, Gyro Surveys V0
Dalbey D 24-10 (PR), Wellbore #1, Gyro Surveys V0
L.F.Ranch 1-24 (SI), Wellbore #1, Gyro Surveys V0
Karch Blue D24-12 (PA), Wellbore #1, Gyro Surveys V0
Glazier 2-24 (SI), Wellbore #1, Gyro Surveys V0
Guttersen 24A (PR), Wellbore #1, Gyro Surveys V0