

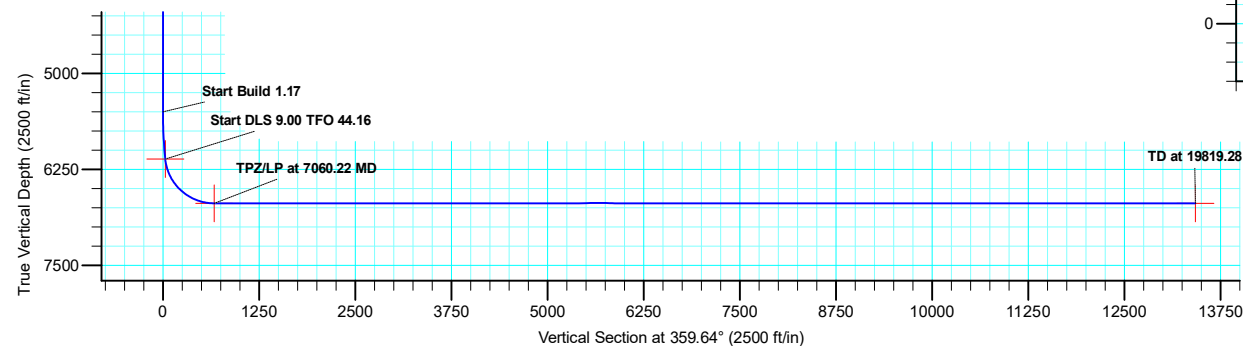
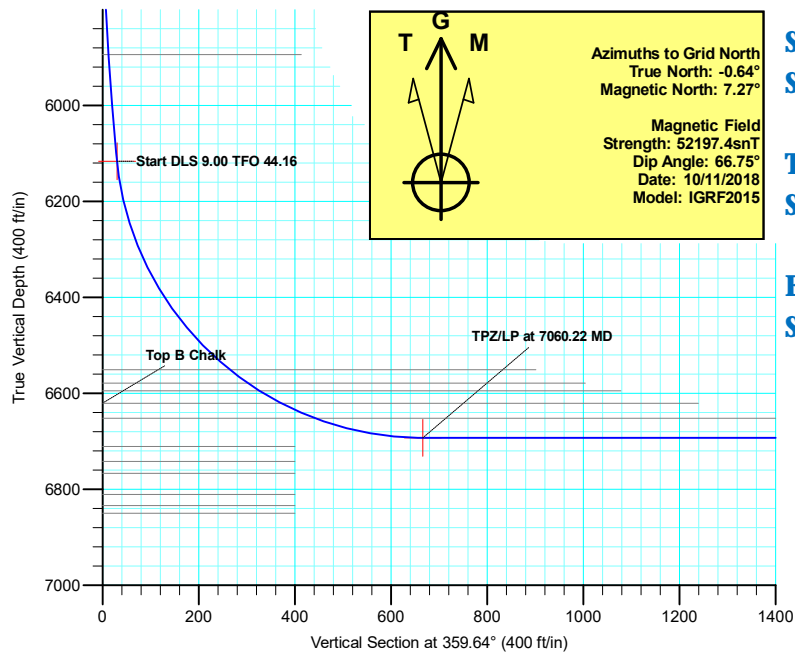
Project: Mustang
Site: D Section 01
Well: Gutttersen State C36-765
Wellbore: Wellbore #1
Design: Plan #1

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

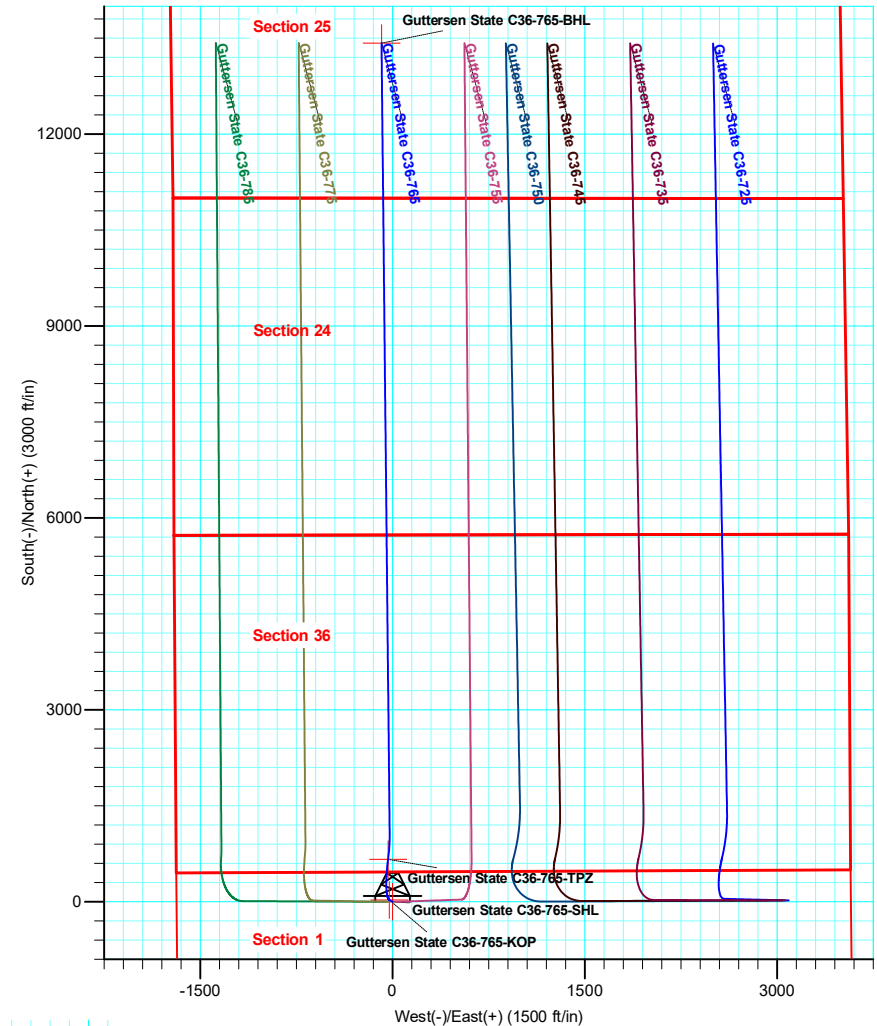
SECTION DETAILS

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	5500.00	0.00	0.00	5500.00	0.00	0.00	0.00	0.00	0.00	
3	6118.21	7.26	319.84	6116.56	29.90	-25.23	1.17	319.84	30.06	
4	7060.22	90.00	3.77	6693.00	665.88	-34.39	9.00	44.16	666.09	Gutttersen State C36-765-TPZ
5	7466.55	90.00	359.71	6693.00	1071.94	-22.07	1.00	-90.00	1072.06	Gutttersen State C36-765-BHL
6	11802.91	90.00	359.71	6693.00	5408.25	-44.27	0.00	0.00	5408.42	
7	11902.91	92.00	359.71	6691.25	5508.22	-44.78	2.00	0.00	5508.40	Gutttersen State C36-765-BHL
8	11952.91	92.00	359.71	6689.51	5558.19	-45.03	0.00	0.00	5558.37	
9	12152.91	88.00	359.71	6689.51	5758.15	-46.06	2.00	180.00	5758.33	Gutttersen State C36-765-BHL
10	12202.91	88.00	359.71	6691.25	5808.12	-46.31	0.00	0.00	5808.30	
11	12302.91	90.00	359.71	6693.00	5908.10	-46.82	2.00	0.00	5908.27	
12	19819.28	90.00	359.71	6693.00	13424.37	-85.30	0.00	0.00	13424.64	Gutttersen State C36-765-BHL



WELL DETAILS: Gutttersen State C36-765

	North	Ground Level:	4746.00	Longitude
0.00	0.00	Easting	3278297.48	-104.5027960
	1339287.59	Latitude	40.2604480	



Plan: Plan #1 (Gutttersen State C36-765/Wellbore #1)

Created By: Chad Stich Date: 10:49, October 12 2018

Checked: _____ Date: _____

Reviewed: _____ Date: _____

Approved: _____ Date: _____

Northern Region - DJ Basin

Mustang

D Section 01

Guttersen State C36-765

Wellbore #1

Plan: Plan #1

Standard Planning Report

12 October, 2018

Noble Energy, Inc.

Planning Report

Database:	EDMP	Local Co-ordinate Reference:	Well Guttersen State C36-765
Company:	Northern Region - DJ Basin	TVD Reference:	KB @ 4776.00ft
Project:	Mustang	MD Reference:	KB @ 4776.00ft
Site:	D Section 01	North Reference:	Grid
Well:	Guttersen State C36-765	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1		

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 01					
Site Position:		Northing:	1,336,284.99 usft	Latitude:	40.2522405	
From:	Map	Easting:	3,277,182.91 usft	Longitude:	-104.5069099	
Position Uncertainty:		0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.64 °

Well	Guttersen State C36-765					
Well Position	+N/-S	3,002.61 ft	Northing:	1,339,287.59 usft	Latitude:	40.2604480
	+E/-W	1,114.58 ft	Easting:	3,278,297.48 usft	Longitude:	-104.5027960
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	4,746.00 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	10/11/2018	7.92	66.75	52,197.36113715

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	359.64

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
6,118.21	7.26	319.84	6,116.56	29.90	-25.23	1.17	1.17	0.00	319.84	
7,060.22	90.00	3.77	6,693.00	665.88	-34.39	9.00	8.78	4.66	44.16	Guttersen State C36-
7,466.55	90.00	359.71	6,693.00	1,071.94	-22.07	1.00	0.00	-1.00	-90.00	Guttersen State C36-
11,802.91	90.00	359.71	6,693.00	5,408.25	-44.27	0.00	0.00	0.00	0.00	
11,902.91	92.00	359.71	6,691.25	5,508.22	-44.78	2.00	2.00	0.00	0.00	Guttersen State C36-
11,952.91	92.00	359.71	6,689.51	5,558.19	-45.03	0.00	0.00	0.00	0.00	
12,152.91	88.00	359.71	6,689.51	5,758.15	-46.06	2.00	-2.00	0.00	180.00	Guttersen State C36-
12,202.91	88.00	359.71	6,691.25	5,808.12	-46.31	0.00	0.00	0.00	0.00	
12,302.91	90.00	359.71	6,693.00	5,908.10	-46.82	2.00	2.00	0.00	0.00	
19,819.28	90.00	359.71	6,693.00	13,424.37	-85.30	0.00	0.00	0.00	0.00	Guttersen State C36-

Noble Energy, Inc.

Planning Report

Database:	EDMP	Local Co-ordinate Reference:	Well Guttersen State C36-765
Company:	Northern Region - DJ Basin	TVD Reference:	KB @ 4776.00ft
Project:	Mustang	MD Reference:	KB @ 4776.00ft
Site:	D Section 01	North Reference:	Grid
Well:	Guttersen State C36-765	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1		

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
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00

Noble Energy, Inc.

Planning Report

Database:	EDMP	Local Co-ordinate Reference:	Well Guttersten State C36-765
Company:	Northern Region - DJ Basin	TVD Reference:	KB @ 4776.00ft
Project:	Mustang	MD Reference:	KB @ 4776.00ft
Site:	D Section 01	North Reference:	Grid
Well:	Guttersten State C36-765	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1		

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)
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00
5,600.00	1.17	319.84	5,599.99	0.78	-0.66	0.79	1.17	1.17	0.00
5,700.00	2.35	319.84	5,699.94	3.13	-2.64	3.15	1.17	1.17	0.00
5,800.00	3.52	319.84	5,799.81	7.05	-5.95	7.09	1.17	1.17	0.00
5,900.00	4.70	319.84	5,899.55	12.53	-10.57	12.59	1.17	1.17	0.00
6,000.00	5.87	319.84	5,999.12	19.57	-16.51	19.67	1.17	1.17	0.00
6,100.00	7.05	319.84	6,098.49	28.17	-23.77	28.32	1.17	1.17	0.00
6,118.21	7.26	319.84	6,116.56	29.90	-25.23	30.06	1.17	1.17	0.00
6,150.00	9.52	331.97	6,148.01	33.76	-27.76	33.94	9.00	7.12	38.16
6,200.00	13.54	342.24	6,196.99	42.99	-31.49	43.19	9.00	8.04	20.54
6,250.00	17.79	347.78	6,245.13	56.04	-34.90	56.26	9.00	8.50	11.08
6,300.00	22.14	351.22	6,292.11	72.83	-37.95	73.07	9.00	8.69	6.88
6,350.00	26.53	353.57	6,337.66	93.25	-40.64	93.50	9.00	8.79	4.70
6,400.00	30.96	355.30	6,381.49	117.17	-42.95	117.44	9.00	8.85	3.45
6,450.00	35.40	356.62	6,423.32	144.46	-44.86	144.74	9.00	8.88	2.66
6,500.00	39.85	357.69	6,462.92	174.94	-46.36	175.23	9.00	8.91	2.13
6,550.00	44.31	358.57	6,500.02	208.42	-47.44	208.72	9.00	8.92	1.77
6,600.00	48.78	359.33	6,534.40	244.70	-48.09	245.00	9.00	8.93	1.51
6,650.00	53.25	359.98	6,565.85	283.56	-48.32	283.86	9.00	8.94	1.31
6,700.00	57.72	0.57	6,594.17	324.75	-48.11	325.04	9.00	8.95	1.17
6,750.00	62.20	1.10	6,619.19	368.01	-47.48	368.31	9.00	8.95	1.06
6,800.00	66.68	1.59	6,640.76	413.10	-46.42	413.38	9.00	8.96	0.97
6,850.00	71.16	2.04	6,658.74	459.71	-44.94	459.99	9.00	8.96	0.91
6,900.00	75.64	2.47	6,673.02	507.58	-43.05	507.84	9.00	8.96	0.86
6,950.00	80.12	2.89	6,683.52	556.40	-40.77	556.65	9.00	8.96	0.83
7,000.00	84.60	3.29	6,690.17	605.87	-38.09	606.10	9.00	8.96	0.81
7,050.00	89.08	3.69	6,692.92	655.69	-35.06	655.90	9.00	8.96	0.80
7,060.22	90.00	3.77	6,693.00	665.88	-34.39	666.09	9.00	8.96	0.79
7,100.00	90.00	3.37	6,693.00	705.59	-31.91	705.78	1.00	0.00	-1.00
7,200.00	90.00	2.37	6,693.00	805.46	-26.90	805.62	1.00	0.00	-1.00
7,300.00	90.00	1.37	6,693.00	905.41	-23.64	905.54	1.00	0.00	-1.00
7,400.00	90.00	0.37	6,693.00	1,005.40	-22.11	1,005.52	1.00	0.00	-1.00
7,466.55	90.00	359.71	6,693.00	1,071.94	-22.07	1,072.06	1.00	0.00	-1.00
7,500.00	90.00	359.71	6,693.00	1,105.39	-22.24	1,105.51	0.00	0.00	0.00
7,600.00	90.00	359.71	6,693.00	1,205.39	-22.75	1,205.51	0.00	0.00	0.00
7,700.00	90.00	359.71	6,693.00	1,305.39	-23.26	1,305.51	0.00	0.00	0.00
7,800.00	90.00	359.71	6,693.00	1,405.39	-23.77	1,405.51	0.00	0.00	0.00
7,900.00	90.00	359.71	6,693.00	1,505.39	-24.29	1,505.51	0.00	0.00	0.00
8,000.00	90.00	359.71	6,693.00	1,605.39	-24.80	1,605.51	0.00	0.00	0.00
8,100.00	90.00	359.71	6,693.00	1,705.39	-25.31	1,705.51	0.00	0.00	0.00
8,200.00	90.00	359.71	6,693.00	1,805.39	-25.82	1,805.51	0.00	0.00	0.00
8,300.00	90.00	359.71	6,693.00	1,905.38	-26.33	1,905.51	0.00	0.00	0.00
8,400.00	90.00	359.71	6,693.00	2,005.38	-26.85	2,005.51	0.00	0.00	0.00
8,500.00	90.00	359.71	6,693.00	2,105.38	-27.36	2,105.51	0.00	0.00	0.00
8,600.00	90.00	359.71	6,693.00	2,205.38	-27.87	2,205.51	0.00	0.00	0.00
8,700.00	90.00	359.71	6,693.00	2,305.38	-28.38	2,305.51	0.00	0.00	0.00
8,800.00	90.00	359.71	6,693.00	2,405.38	-28.89	2,405.51	0.00	0.00	0.00
8,900.00	90.00	359.71	6,693.00	2,505.38	-29.41	2,505.51	0.00	0.00	0.00
9,000.00	90.00	359.71	6,693.00	2,605.37	-29.92	2,605.51	0.00	0.00	0.00
9,100.00	90.00	359.71	6,693.00	2,705.37	-30.43	2,705.51	0.00	0.00	0.00
9,200.00	90.00	359.71	6,693.00	2,805.37	-30.94	2,805.51	0.00	0.00	0.00
9,300.00	90.00	359.71	6,693.00	2,905.37	-31.45	2,905.51	0.00	0.00	0.00
9,400.00	90.00	359.71	6,693.00	3,005.37	-31.97	3,005.51	0.00	0.00	0.00

Noble Energy, Inc.

Planning Report

Database:	EDMP	Local Co-ordinate Reference:	Well Guttersen State C36-765
Company:	Northern Region - DJ Basin	TVD Reference:	KB @ 4776.00ft
Project:	Mustang	MD Reference:	KB @ 4776.00ft
Site:	D Section 01	North Reference:	Grid
Well:	Guttersen State C36-765	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1		

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)
9,500.00	90.00	359.71	6,693.00	3,105.37	-32.48	3,105.51	0.00	0.00	0.00
9,600.00	90.00	359.71	6,693.00	3,205.37	-32.99	3,205.51	0.00	0.00	0.00
9,700.00	90.00	359.71	6,693.00	3,305.37	-33.50	3,305.51	0.00	0.00	0.00
9,800.00	90.00	359.71	6,693.00	3,405.36	-34.01	3,405.51	0.00	0.00	0.00
9,900.00	90.00	359.71	6,693.00	3,505.36	-34.52	3,505.51	0.00	0.00	0.00
10,000.00	90.00	359.71	6,693.00	3,605.36	-35.04	3,605.51	0.00	0.00	0.00
10,100.00	90.00	359.71	6,693.00	3,705.36	-35.55	3,705.51	0.00	0.00	0.00
10,200.00	90.00	359.71	6,693.00	3,805.36	-36.06	3,805.51	0.00	0.00	0.00
10,300.00	90.00	359.71	6,693.00	3,905.36	-36.57	3,905.51	0.00	0.00	0.00
10,400.00	90.00	359.71	6,693.00	4,005.36	-37.08	4,005.51	0.00	0.00	0.00
10,500.00	90.00	359.71	6,693.00	4,105.36	-37.60	4,105.51	0.00	0.00	0.00
10,600.00	90.00	359.71	6,693.00	4,205.35	-38.11	4,205.51	0.00	0.00	0.00
10,700.00	90.00	359.71	6,693.00	4,305.35	-38.62	4,305.51	0.00	0.00	0.00
10,800.00	90.00	359.71	6,693.00	4,405.35	-39.13	4,405.51	0.00	0.00	0.00
10,900.00	90.00	359.71	6,693.00	4,505.35	-39.64	4,505.51	0.00	0.00	0.00
11,000.00	90.00	359.71	6,693.00	4,605.35	-40.16	4,605.51	0.00	0.00	0.00
11,100.00	90.00	359.71	6,693.00	4,705.35	-40.67	4,705.51	0.00	0.00	0.00
11,200.00	90.00	359.71	6,693.00	4,805.35	-41.18	4,805.51	0.00	0.00	0.00
11,300.00	90.00	359.71	6,693.00	4,905.34	-41.69	4,905.51	0.00	0.00	0.00
11,400.00	90.00	359.71	6,693.00	5,005.34	-42.20	5,005.51	0.00	0.00	0.00
11,500.00	90.00	359.71	6,693.00	5,105.34	-42.72	5,105.51	0.00	0.00	0.00
11,600.00	90.00	359.71	6,693.00	5,205.34	-43.23	5,205.51	0.00	0.00	0.00
11,700.00	90.00	359.71	6,693.00	5,305.34	-43.74	5,305.51	0.00	0.00	0.00
11,802.91	90.00	359.71	6,693.00	5,408.25	-44.27	5,408.42	0.00	0.00	0.00
11,902.91	92.00	359.71	6,691.25	5,508.22	-44.78	5,508.40	2.00	2.00	0.00
11,952.91	92.00	359.71	6,689.51	5,558.19	-45.03	5,558.37	0.00	0.00	0.00
12,000.00	91.06	359.71	6,688.25	5,605.27	-45.27	5,605.44	2.00	-2.00	0.00
12,100.00	89.06	359.71	6,688.15	5,705.26	-45.79	5,705.44	2.00	-2.00	0.00
12,152.91	88.00	359.71	6,689.51	5,758.15	-46.06	5,758.33	2.00	-2.00	0.00
12,202.91	88.00	359.71	6,691.25	5,808.12	-46.31	5,808.30	0.00	0.00	0.00
12,302.91	90.00	359.71	6,693.00	5,908.10	-46.82	5,908.27	2.00	2.00	0.00
12,400.00	90.00	359.71	6,693.00	6,005.19	-47.32	6,005.37	0.00	0.00	0.00
12,500.00	90.00	359.71	6,693.00	6,105.19	-47.83	6,105.37	0.00	0.00	0.00
12,600.00	90.00	359.71	6,693.00	6,205.19	-48.35	6,205.37	0.00	0.00	0.00
12,700.00	90.00	359.71	6,693.00	6,305.18	-48.86	6,305.37	0.00	0.00	0.00
12,800.00	90.00	359.71	6,693.00	6,405.18	-49.37	6,405.37	0.00	0.00	0.00
12,900.00	90.00	359.71	6,693.00	6,505.18	-49.88	6,505.37	0.00	0.00	0.00
13,000.00	90.00	359.71	6,693.00	6,605.18	-50.39	6,605.37	0.00	0.00	0.00
13,100.00	90.00	359.71	6,693.00	6,705.18	-50.91	6,705.37	0.00	0.00	0.00
13,200.00	90.00	359.71	6,693.00	6,805.18	-51.42	6,805.37	0.00	0.00	0.00
13,300.00	90.00	359.71	6,693.00	6,905.18	-51.93	6,905.37	0.00	0.00	0.00
13,400.00	90.00	359.71	6,693.00	7,005.18	-52.44	7,005.37	0.00	0.00	0.00
13,500.00	90.00	359.71	6,693.00	7,105.17	-52.95	7,105.37	0.00	0.00	0.00
13,600.00	90.00	359.71	6,693.00	7,205.17	-53.47	7,205.37	0.00	0.00	0.00
13,700.00	90.00	359.71	6,693.00	7,305.17	-53.98	7,305.37	0.00	0.00	0.00
13,800.00	90.00	359.71	6,693.00	7,405.17	-54.49	7,405.37	0.00	0.00	0.00
13,900.00	90.00	359.71	6,693.00	7,505.17	-55.00	7,505.37	0.00	0.00	0.00
14,000.00	90.00	359.71	6,693.00	7,605.17	-55.51	7,605.37	0.00	0.00	0.00
14,100.00	90.00	359.71	6,693.00	7,705.17	-56.02	7,705.37	0.00	0.00	0.00
14,200.00	90.00	359.71	6,693.00	7,805.16	-56.54	7,805.37	0.00	0.00	0.00
14,300.00	90.00	359.71	6,693.00	7,905.16	-57.05	7,905.37	0.00	0.00	0.00
14,400.00	90.00	359.71	6,693.00	8,005.16	-57.56	8,005.37	0.00	0.00	0.00
14,500.00	90.00	359.71	6,693.00	8,105.16	-58.07	8,105.37	0.00	0.00	0.00
14,600.00	90.00	359.71	6,693.00	8,205.16	-58.58	8,205.37	0.00	0.00	0.00

Noble Energy, Inc.

Planning Report

Database:	EDMP	Local Co-ordinate Reference:	Well Guttersen State C36-765
Company:	Northern Region - DJ Basin	TVD Reference:	KB @ 4776.00ft
Project:	Mustang	MD Reference:	KB @ 4776.00ft
Site:	D Section 01	North Reference:	Grid
Well:	Guttersen State C36-765	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1		

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)
14,700.00	90.00	359.71	6,693.00	8,305.16	-59.10	8,305.37	0.00	0.00	0.00
14,800.00	90.00	359.71	6,693.00	8,405.16	-59.61	8,405.37	0.00	0.00	0.00
14,900.00	90.00	359.71	6,693.00	8,505.16	-60.12	8,505.37	0.00	0.00	0.00
15,000.00	90.00	359.71	6,693.00	8,605.15	-60.63	8,605.37	0.00	0.00	0.00
15,100.00	90.00	359.71	6,693.00	8,705.15	-61.14	8,705.37	0.00	0.00	0.00
15,200.00	90.00	359.71	6,693.00	8,805.15	-61.66	8,805.37	0.00	0.00	0.00
15,300.00	90.00	359.71	6,693.00	8,905.15	-62.17	8,905.37	0.00	0.00	0.00
15,400.00	90.00	359.71	6,693.00	9,005.15	-62.68	9,005.37	0.00	0.00	0.00
15,500.00	90.00	359.71	6,693.00	9,105.15	-63.19	9,105.37	0.00	0.00	0.00
15,600.00	90.00	359.71	6,693.00	9,205.15	-63.70	9,205.37	0.00	0.00	0.00
15,700.00	90.00	359.71	6,693.00	9,305.14	-64.22	9,305.37	0.00	0.00	0.00
15,800.00	90.00	359.71	6,693.00	9,405.14	-64.73	9,405.37	0.00	0.00	0.00
15,900.00	90.00	359.71	6,693.00	9,505.14	-65.24	9,505.36	0.00	0.00	0.00
16,000.00	90.00	359.71	6,693.00	9,605.14	-65.75	9,605.36	0.00	0.00	0.00
16,100.00	90.00	359.71	6,693.00	9,705.14	-66.26	9,705.36	0.00	0.00	0.00
16,200.00	90.00	359.71	6,693.00	9,805.14	-66.77	9,805.36	0.00	0.00	0.00
16,300.00	90.00	359.71	6,693.00	9,905.14	-67.29	9,905.36	0.00	0.00	0.00
16,400.00	90.00	359.71	6,693.00	10,005.14	-67.80	10,005.36	0.00	0.00	0.00
16,500.00	90.00	359.71	6,693.00	10,105.13	-68.31	10,105.36	0.00	0.00	0.00
16,600.00	90.00	359.71	6,693.00	10,205.13	-68.82	10,205.36	0.00	0.00	0.00
16,700.00	90.00	359.71	6,693.00	10,305.13	-69.33	10,305.36	0.00	0.00	0.00
16,800.00	90.00	359.71	6,693.00	10,405.13	-69.85	10,405.36	0.00	0.00	0.00
16,900.00	90.00	359.71	6,693.00	10,505.13	-70.36	10,505.36	0.00	0.00	0.00
17,000.00	90.00	359.71	6,693.00	10,605.13	-70.87	10,605.36	0.00	0.00	0.00
17,100.00	90.00	359.71	6,693.00	10,705.13	-71.38	10,705.36	0.00	0.00	0.00
17,200.00	90.00	359.71	6,693.00	10,805.13	-71.89	10,805.36	0.00	0.00	0.00
17,300.00	90.00	359.71	6,693.00	10,905.12	-72.41	10,905.36	0.00	0.00	0.00
17,400.00	90.00	359.71	6,693.00	11,005.12	-72.92	11,005.36	0.00	0.00	0.00
17,500.00	90.00	359.71	6,693.00	11,105.12	-73.43	11,105.36	0.00	0.00	0.00
17,600.00	90.00	359.71	6,693.00	11,205.12	-73.94	11,205.36	0.00	0.00	0.00
17,700.00	90.00	359.71	6,693.00	11,305.12	-74.45	11,305.36	0.00	0.00	0.00
17,800.00	90.00	359.71	6,693.00	11,405.12	-74.97	11,405.36	0.00	0.00	0.00
17,900.00	90.00	359.71	6,693.00	11,505.12	-75.48	11,505.36	0.00	0.00	0.00
18,000.00	90.00	359.71	6,693.00	11,605.11	-75.99	11,605.36	0.00	0.00	0.00
18,100.00	90.00	359.71	6,693.00	11,705.11	-76.50	11,705.36	0.00	0.00	0.00
18,200.00	90.00	359.71	6,693.00	11,805.11	-77.01	11,805.36	0.00	0.00	0.00
18,300.00	90.00	359.71	6,693.00	11,905.11	-77.53	11,905.36	0.00	0.00	0.00
18,400.00	90.00	359.71	6,693.00	12,005.11	-78.04	12,005.36	0.00	0.00	0.00
18,500.00	90.00	359.71	6,693.00	12,105.11	-78.55	12,105.36	0.00	0.00	0.00
18,600.00	90.00	359.71	6,693.00	12,205.11	-79.06	12,205.36	0.00	0.00	0.00
18,700.00	90.00	359.71	6,693.00	12,305.11	-79.57	12,305.36	0.00	0.00	0.00
18,800.00	90.00	359.71	6,693.00	12,405.10	-80.08	12,405.36	0.00	0.00	0.00
18,900.00	90.00	359.71	6,693.00	12,505.10	-80.60	12,505.36	0.00	0.00	0.00
19,000.00	90.00	359.71	6,693.00	12,605.10	-81.11	12,605.36	0.00	0.00	0.00
19,100.00	90.00	359.71	6,693.00	12,705.10	-81.62	12,705.36	0.00	0.00	0.00
19,200.00	90.00	359.71	6,693.00	12,805.10	-82.13	12,805.36	0.00	0.00	0.00
19,300.00	90.00	359.71	6,693.00	12,905.10	-82.64	12,905.36	0.00	0.00	0.00
19,400.00	90.00	359.71	6,693.00	13,005.10	-83.16	13,005.36	0.00	0.00	0.00
19,500.00	90.00	359.71	6,693.00	13,105.10	-83.67	13,105.36	0.00	0.00	0.00
19,600.00	90.00	359.71	6,693.00	13,205.09	-84.18	13,205.36	0.00	0.00	0.00
19,700.00	90.00	359.71	6,693.00	13,305.09	-84.69	13,305.36	0.00	0.00	0.00
19,800.00	90.00	359.71	6,693.00	13,405.09	-85.20	13,405.36	0.00	0.00	0.00
19,819.28	90.00	359.71	6,693.00	13,424.37	-85.30	13,424.64	0.00	0.00	0.00

Noble Energy, Inc.

Planning Report

Database:	EDMP	Local Co-ordinate Reference:	Well Guttersen State C36-765
Company:	Northern Region - DJ Basin	TVD Reference:	KB @ 4776.00ft
Project:	Mustang	MD Reference:	KB @ 4776.00ft
Site:	D Section 01	North Reference:	Grid
Well:	Guttersen State C36-765	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1		

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(usft)	(usft)		
- Shape									
Guttersen State C36-76! - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	1,339,287.59	3,278,297.48	40.2604480	-104.5027960
Guttersen State C36-76! - plan hits target center - Point	0.00	0.00	6,116.56	29.90	-25.23	1,339,317.49	3,278,272.25	40.2605309	-104.5028852
Guttersen State C36-76! - plan hits target center - Point	0.00	0.00	6,693.00	665.88	-34.39	1,339,953.47	3,278,263.09	40.2622769	-104.5028924
Guttersen State C36-76! - plan hits target center - Point	0.00	0.00	6,693.00	13,424.37	-85.30	1,352,711.93	3,278,212.18	40.2972992	-104.5025606

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(ft)	(ft)			(°)	(°)	
337.00	337.00	Pierre				
611.00	611.00	Upper Pierre Aquifer Top				
1,545.00	1,545.00	Upper Pierre Aquifer Base				
2,666.00	2,666.00	Parkman				
3,966.00	3,966.00	Sussex				
4,804.00	4,804.00	Shannon				
5,894.43	5,894.00	Teepee Buttes				
6,625.79	6,551.00	Sharon Springs				
6,672.52	6,579.00	Top A Chalk				
6,701.56	6,595.00	Top A Marl				
6,753.90	6,621.00	Top B Chalk				
6,830.04	6,652.00	Top B Marl				

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	
5,500.00	5,500.00	0.00	0.00	Start Build 1.17
6,118.21	6,116.56	29.90	-25.23	Start DLS 9.00 TFO 44.16
7,060.22	6,693.00	665.88	-34.39	TPZ/LP at 7060.22 MD
19,819.28	6,693.00	13,424.37	-85.30	TD at 19819.28

Northern Region - DJ Basin

Mustang

D Section 01

Guttersen State C36-765

Wellbore #1

Plan #1

Anticollision Summary Report

12 October, 2018

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersten State C36-765
Project:	Mustang	TVD Reference:	KB @ 4776.00ft
Reference Site:	D Section 01	MD Reference:	KB @ 4776.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersten State C36-765	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:	MD Interval 100.00ft	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	10/11/2018		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.00	19,819.28	Plan #1 (Wellbore #1)	2_MWD+IFR1+MS	A008Mb: IFR dec & multi-station analysis	

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
C Section 24						
Elise State C24-08 (TA) - Wellbore #1 - No Surveys	19,819.28	6,614.00	3,161.28	2,789.25	8.497	CC, ES, SF
Elise State C24-11 (PR) - Wellbore #1 - No Surveys	19,487.35	6,610.00	479.19	107.73	1.290	Level 3, CC, ES, SF
Elise State C24-18 (SI) - Wellbore #1 - No Surveys	19,819.28	6,606.00	1,866.55	1,544.89	5.803	CC, ES, SF
Elise State C24-19 (SI) - Wellbore #1 - Gyro Surveys	19,819.28	6,603.78	1,528.59	1,467.82	25.156	CC, ES, SF
Elise State C24-20 (PR) - Wellbore #1 - No Surveys	19,819.28	6,630.00	459.80	105.75	1.299	Level 3, CC, ES, SF
Elise State C24-21 (SI) - Wellbore #1 - No Surveys	19,819.28	6,607.00	1,113.87	743.08	3.004	CC, ES, SF
Elise State C24-22 (PR) - Wellbore #1 - No Surveys	19,819.28	6,625.00	2,345.37	1,971.26	6.269	CC, ES, SF
Elise State C24-23 (PR) - Wellbore #1 - No Surveys	18,700.59	6,635.00	2,266.52	1,900.38	6.190	CC, ES
Elise State C24-23 (PR) - Wellbore #1 - No Surveys	18,800.00	6,635.00	2,268.70	1,901.85	6.184	SF
Elise State C24-24 (SI) - Wellbore #1 - No Surveys	18,688.08	6,627.00	833.63	468.16	2.281	CC
Elise State C24-24 (SI) - Wellbore #1 - No Surveys	18,700.00	6,627.00	833.71	468.16	2.281	ES, SF
Spike ST GWS C24-05 (PR) - Wellbore #1 - Gyro Survey	19,819.28	6,605.92	1,290.28	1,182.34	11.954	CC, ES, SF
Spike ST GWS C24-07 (SI) - Wellbore #1 - Gyro Surveys	19,819.28	6,629.95	1,941.55	1,816.14	15.481	CC, ES, SF
Spike ST GWS C24-13 (PA) - Wellbore #1 - Gyro Survey	18,090.98	6,607.94	1,007.63	886.82	8.341	CC
Spike ST GWS C24-13 (PA) - Wellbore #1 - Gyro Survey	18,100.00	6,608.07	1,007.67	886.79	8.336	ES, SF
Spike ST GWS C24-14 (SI) - Wellbore #1 - Gyro Surveys	18,044.78	6,634.23	224.26	103.76	1.861	CC, ES, SF
Spike ST GWS C24-15 (PR) - Wellbore #1 - Gyro Survey	18,173.75	6,625.82	1,499.11	1,377.59	12.336	CC, ES
Spike ST GWS C24-15 (PR) - Wellbore #1 - Gyro Survey	18,300.00	6,628.40	1,504.41	1,382.20	12.310	SF
Spike ST GWS C24-16 (SI) - Wellbore #1 - Gyro Surveys	18,074.66	6,602.70	2,892.65	2,772.02	23.980	CC
Spike ST GWS C24-16 (SI) - Wellbore #1 - Gyro Surveys	18,100.00	6,603.81	2,892.76	2,771.93	23.940	ES
Spike ST GWS C24-16 (SI) - Wellbore #1 - Gyro Surveys	18,400.00	6,617.01	2,910.85	2,788.14	23.722	SF
Spike State GWS C24-01 (PA) - Wellbore #1 - No Survey	19,819.28	6,614.00	3,615.73	3,261.27	10.201	CC, ES, SF
Spike State GWS C24-02 (SI) - Wellbore #1 - No Survey	19,819.28	6,604.00	2,699.14	2,364.76	8.072	CC, ES, SF
Spike State GWS C24-03 (SI) - Wellbore #1 - No Survey	19,819.28	6,576.00	2,172.35	1,876.19	7.335	CC, ES, SF
Spike State GWS C24-04 (SI) - Wellbore #1 - No Survey	19,819.28	6,574.00	2,351.68	2,036.68	7.466	CC, ES, SF
Spike State GWS C24-06 (PA) - Wellbore #1 - No Survey	19,819.28	6,602.00	922.37	609.30	2.946	CC, ES, SF
Spike State GWS C24-09 (SI) - Wellbore #1 - No Survey	19,269.06	6,632.00	2,759.79	2,389.20	7.447	CC
Spike State GWS C24-09 (SI) - Wellbore #1 - No Survey	19,300.00	6,632.00	2,759.96	2,389.14	7.443	ES
Spike State GWS C24-09 (SI) - Wellbore #1 - No Survey	19,400.00	6,632.00	2,762.89	2,391.37	7.437	SF
Spike State GWS C24-10 (PR) - Wellbore #1 - No Survey	19,363.27	6,617.00	1,623.62	1,252.88	4.379	CC, ES
Spike State GWS C24-10 (PR) - Wellbore #1 - No Survey	19,400.00	6,617.00	1,624.04	1,253.03	4.377	SF
Spike State GWS C24-11J (PA) - Wellbore #1 - No Survey	18,717.29	6,639.00	341.77	-24.67	0.933	Level 1, CC, ES, SF
Spike State GWS C24-12 (SI) - Wellbore #1 - No Survey	19,387.80	6,622.00	906.55	535.41	2.443	CC
Spike State GWS C24-12 (SI) - Wellbore #1 - No Survey	19,400.00	6,622.00	906.63	535.40	2.442	ES, SF
Spike State GWS C24-8J (PA) - Wellbore #1 - No Survey	19,819.28	6,606.00	2,687.31	2,330.39	7.529	CC, ES, SF
State C24-28 (PR) - Wellbore #1 - No Surveys	19,819.28	6,575.00	2,849.85	2,539.70	9.189	CC, ES, SF
State C24-99HZ - Wellbore #1 - Original Drilling	19,819.28	7,723.95	1,196.28	1,122.02	16.111	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 State C36-765
Project:	Mustang	TVD Reference:	KB @ 4776.00ft
Reference Site:	D Section 01	MD Reference:	KB @ 4776.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersten State C36-765	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						
C Section 25						
Booth 14-25 (SI) - Wellbore #1 - No Surveys	12,759.43	6,659.00	226.19	-94.27	0.706	Level 1, CC, ES, SF
Booth 9-25 (SI) - Wellbore #1 - No Surveys	14,099.69	6,679.00	2,934.90	2,603.47	8.855	CC
Booth 9-25 (SI) - Wellbore #1 - No Surveys	14,100.00	6,679.00	2,934.90	2,603.47	8.855	ES
Booth 9-25 (SI) - Wellbore #1 - No Surveys	14,300.00	6,679.00	2,941.72	2,608.90	8.839	SF
Booth C 25-19 (PR) - Wellbore #1 - No Surveys	16,175.33	6,630.00	325.95	-19.65	0.943	Level 1, CC, ES, SF
UNI UPR C 25-5 (SI) - Wellbore #1 - Gyro Surveys	15,387.49	6,603.36	1,074.10	974.65	10.800	CC
UNI UPR C 25-5 (SI) - Wellbore #1 - Gyro Surveys	15,400.00	6,603.69	1,074.17	974.63	10.791	ES, SF
UNI UPR C 25-6 (PR) - Wellbore #1 - No Surveys	15,515.38	6,632.00	294.37	193.92	2.931	CC, ES, SF
UNI-UPR C 25-3 (PR) - Wellbore #1 - Gyro Surveys	16,781.90	6,624.87	209.00	98.52	1.892	CC, ES, SF
UNI-UPRR 4-25 (PR) - Wellbore #1 - Gyro Surveys	16,672.20	6,606.86	1,116.72	1,007.22	10.198	CC, ES
UNI-UPRR 4-25 (PR) - Wellbore #1 - Gyro Surveys	16,700.00	6,606.99	1,117.07	1,007.36	10.183	SF
UPRR 66 Amoco 1 (SI) - Wellbore #1 - No Surveys	13,114.41	6,666.00	2,607.35	2,283.95	8.062	CC, ES
UPRR 66 Amoco 1 (SI) - Wellbore #1 - No Surveys	13,300.00	6,666.00	2,613.95	2,289.27	8.051	SF
UPV 25-114 (PA) - Wellbore #1 - Gyro Surveys	16,747.60	6,780.83	2,904.19	2,793.49	26.235	CC, ES
UPV 25-114 (PA) - Wellbore #1 - Gyro Surveys	17,100.00	6,779.08	2,925.49	2,812.59	25.913	SF
UPV 25-214 (PR) - Wellbore #1 - Gyro Surveys	16,969.46	6,666.27	1,480.06	1,367.97	13.204	CC, ES
UPV 25-214 (PR) - Wellbore #1 - Gyro Surveys	17,100.00	6,668.24	1,485.80	1,372.98	13.170	SF
UPV 25-714 (PR) - Wellbore #1 - No Surveys	15,745.36	6,678.00	2,139.83	1,795.64	6.217	CC, ES
UPV 25-714 (PR) - Wellbore #1 - No Surveys	15,800.00	6,678.00	2,140.53	1,795.93	6.212	SF
UPV 25-814 (PA) - Wellbore #1 - Gyro Surveys	15,434.06	6,573.96	3,198.20	3,098.59	32.106	CC, ES
UPV 25-814 (PA) - Wellbore #1 - Gyro Surveys	15,900.00	6,577.31	3,231.96	3,129.43	31.522	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 State C36-765
Project:	Mustang	TVD Reference:	KB @ 4776.00ft
Reference Site:	D Section 01	MD Reference:	KB @ 4776.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersten State C36-765	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						
C Section 36						
Ava State C36-18 (SI) - Wellbore #1 - No Surveys	10,851.99	6,653.00	1,020.88	714.15	3.328	CC, ES, SF
Ava State C36-20 (PR) - Wellbore #1 - No Surveys	9,301.07	6,643.00	362.60	66.11	1.223	Level 3, CC, ES, SF
Ava State C36-21 (SI) - Wellbore #1 - No Surveys	9,605.50	6,648.00	864.21	565.73	2.895	CC, ES, SF
Ava State C36-22 (SI) - Wellbore #1 - No Surveys	9,446.89	6,669.00	2,195.44	1,897.06	7.358	CC, ES
Ava State C36-22 (SI) - Wellbore #1 - No Surveys	9,500.00	6,669.00	2,196.08	1,897.40	7.353	SF
Ava State C36-24 (PR) - Wellbore #1 - No Surveys	8,140.50	6,658.00	1,013.60	722.21	3.479	CC, ES, SF
Ava State C36-31 (PR) - Wellbore #1 - No Surveys	10,733.43	6,633.00	1,508.17	1,203.05	4.943	CC, ES
Ava State C36-31 (PR) - Wellbore #1 - No Surveys	10,800.00	6,633.00	1,509.64	1,204.09	4.941	SF
Booth CC31-68-1HN (PR) - Original Drilling - Original Dri	11,143.29	6,128.00	3,555.30	3,489.28	53.847	CC, ES
Booth CC31-68-1HN (PR) - Original Drilling - Original Dri	12,000.00	6,128.00	3,656.23	3,585.47	51.670	SF
Booth State C36-69HN (PR) - Original Drilling - Original D	12,049.49	9,785.05	51.17	-16.78	0.753	Level 1, CC
Booth State C36-69HN (PR) - Original Drilling - Original D	12,100.00	9,785.31	71.58	-26.40	0.731	Level 1, ES, SF
Booth State CC30-79HN (PR) - Original Drilling - Original	16,832.02	11,026.00	3,656.47	3,481.15	20.856	CC, ES
Booth State CC30-79HN (PR) - Original Drilling - Original	17,200.00	11,026.00	3,674.94	3,497.12	20.666	SF
Booth State CC31-69HN (PR) - Original Drilling - Original	12,059.56	6,128.00	3,826.42	3,755.97	54.314	CC
Booth State CC31-69HN (PR) - Original Drilling - Original	12,100.00	6,128.00	3,826.68	3,755.93	54.085	ES
Booth State CC31-69HN (PR) - Original Drilling - Original	13,000.00	6,128.00	3,940.75	3,864.39	51.612	SF
State 36-0414 (PR) - Wellbore #1 - No Surveys	10,905.12	6,641.00	592.57	285.96	1.933	CC, ES, SF
State 36-0714 (SI) - Wellbore #1 - No Surveys	10,123.69	6,661.00	1,479.94	1,177.73	4.897	CC, ES
State 36-0714 (SI) - Wellbore #1 - No Surveys	10,200.00	6,661.00	1,481.91	1,179.23	4.896	SF
State 36-1014 (SI) - Wellbore #1 - No Surveys	8,837.36	6,657.00	1,420.92	1,126.38	4.824	CC, ES
State 36-1014 (SI) - Wellbore #1 - No Surveys	8,900.00	6,657.00	1,422.30	1,127.45	4.824	SF
State 36-1114 (PR) - Wellbore #1 - No Surveys	8,646.89	6,646.00	306.40	13.25	1.045	Level 2, CC, ES, SF
State 36-1214 (PR) - Wellbore #1 - No Surveys	8,792.64	6,661.00	1,179.66	885.40	4.009	CC
State 36-1214 (PR) - Wellbore #1 - No Surveys	8,800.00	6,661.00	1,179.68	885.39	4.009	ES, SF
State 36-1414 (PR) - Wellbore #1 - No Surveys	7,342.60	6,648.00	313.35	24.86	1.086	Level 2, CC, ES, SF
State 36-1514 (PR) - Wellbore #1 - No Surveys	7,878.84	6,648.00	1,940.35	1,650.33	6.690	CC, ES
State 36-1514 (PR) - Wellbore #1 - No Surveys	7,900.00	6,648.00	1,940.46	1,650.37	6.689	SF
State 36-1614 (PR) - Wellbore #1 - No Surveys	7,386.16	6,709.00	2,711.94	2,420.90	9.318	CC, ES
State 36-1614 (PR) - Wellbore #1 - No Surveys	7,400.00	6,709.00	2,711.99	2,420.93	9.318	SF
State 36-214 (SI) - Wellbore #1 - No Surveys	11,337.69	6,649.00	1,625.90	1,315.96	5.246	CC, ES
State 36-214 (SI) - Wellbore #1 - No Surveys	11,400.00	6,649.00	1,627.09	1,316.74	5.243	SF
State 36-314 (SI) - Wellbore #1 - No Surveys	11,365.39	6,639.00	328.22	18.49	1.060	Level 2, CC, ES, SF
State 36-614 (PR) - Wellbore #1 - No Surveys	10,356.98	6,635.00	320.46	17.77	1.059	Level 2, CC, ES, SF
State 36-814 (SI) - Wellbore #1 - No Surveys	10,362.69	6,680.00	2,949.31	2,644.78	9.685	CC
State 36-814 (SI) - Wellbore #1 - No Surveys	10,400.00	6,680.00	2,949.54	2,644.78	9.678	ES
State 36-814 (SI) - Wellbore #1 - No Surveys	10,500.00	6,680.00	2,952.50	2,647.10	9.668	SF
State 36-914 (PR) - Wellbore #1 - No Surveys	8,652.82	6,688.00	2,735.90	2,441.03	9.278	CC, ES
State 36-914 (PR) - Wellbore #1 - No Surveys	8,800.00	6,688.00	2,739.86	2,444.28	9.270	SF
State B14-36 (PA) - Wellbore #1 - No Surveys	7,909.65	6,655.00	750.10	459.70	2.583	CC, ES, SF
State B41-36 (SI) - Wellbore #1 - No Surveys	11,097.65	6,671.00	2,626.62	2,317.48	8.497	CC
State B41-36 (SI) - Wellbore #1 - No Surveys	11,100.00	6,671.00	2,626.62	2,317.46	8.496	ES
State B41-36 (SI) - Wellbore #1 - No Surveys	11,200.00	6,671.00	2,628.61	2,318.78	8.484	SF
State C36-01 (SI) - Wellbore #1 - No Surveys	11,660.35	6,671.00	3,130.66	2,817.55	9.998	CC
State C36-01 (SI) - Wellbore #1 - No Surveys	11,700.00	6,671.00	3,130.92	2,817.52	9.990	ES
State C36-01 (SI) - Wellbore #1 - No Surveys	11,800.00	6,671.00	3,133.78	2,819.70	9.978	SF
State C36-04 (PR) - Wellbore #1 - No Surveys	11,502.51	6,642.00	1,198.92	888.10	3.857	CC, ES, SF
State C36-13 (SI) - Wellbore #1 - No Surveys	7,309.07	6,670.00	1,205.42	916.12	4.167	CC, ES, SF
State C36-15 (PR) - Wellbore #1 - No Surveys	7,362.45	6,669.00	1,428.60	1,139.22	4.937	CC, ES, SF
State C36-32D (SI) - Wellbore #1 - As Drilled	9,422.17	6,837.71	1,610.95	1,549.73	26.312	CC, ES
State C36-32D (SI) - Wellbore #1 - As Drilled	9,700.00	6,839.68	1,634.73	1,571.41	25.817	SF
State C36-33D (SI) - Wellbore #1 - Original Drilling	8,162.67	6,735.14	1,591.65	1,541.32	31.622	CC, ES
State C36-33D (SI) - Wellbore #1 - Original Drilling	8,300.00	6,734.39	1,597.56	1,546.84	31.494	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 Gutttersen State C36-765
Project:	Mustang	TVD Reference:	KB @ 4776.00ft
Reference Site:	D Section 01	MD Reference:	KB @ 4776.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Gutttersen State C36-765	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						
C Section 36						
State C36-99HZ (PR) - Wellbore #1 - As Drilled	8,463.16	7,397.13	48.66	18.20	1.597	CC, ES
State C36-99HZ (PR) - Wellbore #1 - As Drilled	8,500.00	7,394.96	61.00	18.29	1.428	Level 3, SF
State D01-30D (SI) - Wellbore #1 - Original Drilling	6,700.00	6,973.95	1,704.97	1,644.27	28.088	SF
State D01-30D (SI) - Wellbore #1 - Original Drilling	6,727.01	6,988.50	1,704.75	1,644.07	28.094	CC, ES

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersten State C36-765
Project:	Mustang	TVD Reference:	KB @ 4776.00ft
Reference Site:	D Section 01	MD Reference:	KB @ 4776.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersten State C36-765	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 01						
Abbey D 1-3 (PR) - Wellbore #1 - No Surveys	5,500.00	5,469.00	338.55	102.30	1.433	Level 3, CC
Abbey D 1-3 (PR) - Wellbore #1 - No Surveys	5,700.00	5,668.94	342.49	97.54	1.398	Level 3, ES
Abbey D 1-3 (PR) - Wellbore #1 - No Surveys	5,800.00	5,768.81	347.42	98.12	1.394	Level 3, SF
Abbey D 1-4 (PR) - Wellbore #1 - No Surveys	6,231.48	6,184.42	1,044.53	777.10	3.906	CC
Abbey D 1-4 (PR) - Wellbore #1 - No Surveys	6,300.00	6,249.11	1,045.94	775.69	3.870	ES
Abbey D 1-4 (PR) - Wellbore #1 - No Surveys	6,400.00	6,338.49	1,053.64	779.50	3.843	SF
Abbey D 1-5 (PR) - Wellbore #1 - No Surveys	5,500.00	5,455.00	1,887.19	1,651.51	8.007	CC
Abbey D 1-5 (PR) - Wellbore #1 - No Surveys	6,100.00	6,053.49	1,896.95	1,635.20	7.247	ES
Abbey D 1-5 (PR) - Wellbore #1 - No Surveys	6,300.00	6,247.11	1,926.41	1,656.22	7.130	SF
Abbey D 1-6 (PR) - Wellbore #1 - No Surveys	5,500.00	5,485.00	1,653.27	1,416.39	6.979	CC
Abbey D 1-6 (PR) - Wellbore #1 - No Surveys	5,700.00	5,684.94	1,656.89	1,411.30	6.747	ES
Abbey D 1-6 (PR) - Wellbore #1 - No Surveys	6,200.00	6,181.99	1,702.05	1,434.80	6.369	SF
Abbey D 1-7Jl (SI) - Wellbore #1 - No Surveys	5,500.00	5,481.00	2,192.78	1,956.06	9.263	CC
Abbey D 1-7Jl (SI) - Wellbore #1 - No Surveys	5,700.00	5,680.94	2,196.86	1,951.43	8.951	ES
Abbey D 1-7Jl (SI) - Wellbore #1 - No Surveys	6,300.00	6,273.11	2,270.52	1,999.31	8.372	SF
Abbey D01-08J1 - Abbey D01-08J1 OH - As-Drilled	5,536.20	5,552.80	3,165.97	3,127.09	81.436	CC, ES
Abbey D01-08J1 - Abbey D01-08J1 OH - As-Drilled	6,500.00	6,415.38	3,275.30	3,230.16	72.569	SF
Abbey D01-08J1 (PR) - Wellbore #1 - No Surveys	5,500.00	5,509.00	3,193.84	2,955.99	13.428	CC
Abbey D01-08J1 (PR) - Wellbore #1 - No Surveys	5,700.00	5,709.06	3,197.53	2,950.97	12.969	ES
Abbey D01-08J1 (PR) - Wellbore #1 - No Surveys	6,600.00	6,525.40	3,343.33	3,061.18	11.850	SF
Abbey D01-18 (SI) - Wellbore #1 - No Surveys	5,500.00	5,474.00	1,208.69	972.24	5.112	CC
Abbey D01-18 (SI) - Wellbore #1 - No Surveys	5,700.00	5,673.94	1,212.78	967.63	4.947	ES
Abbey D01-18 (SI) - Wellbore #1 - No Surveys	6,200.00	6,170.99	1,261.48	994.68	4.728	SF
Abbey D01-19 (TA) - Wellbore #1 - No Surveys	5,500.00	5,472.00	1,176.74	940.38	4.979	CC
Abbey D01-19 (TA) - Wellbore #1 - No Surveys	5,900.00	5,871.55	1,185.99	932.23	4.674	ES
Abbey D01-19 (TA) - Wellbore #1 - No Surveys	6,200.00	6,168.99	1,210.26	943.53	4.537	SF
Abbey D01-23 (PR) - Wellbore #1 - No Surveys	5,500.00	5,524.00	4,134.14	3,895.70	17.338	CC
Abbey D01-23 (PR) - Wellbore #1 - No Surveys	5,700.00	5,723.94	4,138.22	3,891.07	16.744	ES
Abbey D01-23 (PR) - Wellbore #1 - No Surveys	6,500.00	6,486.92	4,305.31	4,024.95	15.357	SF
Abbey D01-27 (SI) - Wellbore #1 - No Surveys	5,500.00	5,486.00	2,216.39	1,979.47	9.355	CC
Abbey D01-27 (SI) - Wellbore #1 - No Surveys	6,700.00	6,580.17	2,250.96	1,966.36	7.909	ES
Abbey D01-27 (SI) - Wellbore #1 - No Surveys	6,900.00	6,659.02	2,259.03	1,970.88	7.840	SF
Abbey D01-28 (SI) - Wellbore #1 - No Surveys	5,500.00	5,468.00	1,113.26	877.05	4.713	CC
Abbey D01-28 (SI) - Wellbore #1 - No Surveys	6,600.00	6,502.40	1,146.37	865.13	4.076	ES
Abbey D01-28 (SI) - Wellbore #1 - No Surveys	6,700.00	6,562.17	1,153.00	869.13	4.062	SF
Abbey D01-29 (SI) - Wellbore #1 - No Surveys	6,663.37	6,544.73	330.12	47.03	1.166	Level 2, CC, ES, SF
Abbey D01-32D - Wellbore #1 - Wellbore #1 - As Drilled	359.74	352.78	1,874.93	1,872.87	913.850	CC
Abbey D01-32D - Wellbore #1 - Wellbore #1 - As Drilled	800.00	782.14	1,876.37	1,871.26	367.221	ES
Abbey D01-32D - Wellbore #1 - Wellbore #1 - As Drilled	6,400.00	6,533.35	2,692.80	2,647.40	59.324	SF
Guttersten D01-31D (PR) - Guttersten D01-31D OH - As-D	2,565.76	2,578.97	1,841.13	1,821.11	91.978	CC
Guttersten D01-31D (PR) - Guttersten D01-31D OH - As-D	2,600.00	2,603.93	1,841.23	1,820.94	90.760	ES
Guttersten D01-31D (PR) - Guttersten D01-31D OH - As-D	6,400.00	6,525.36	1,976.88	1,927.37	39.931	SF
Guttersten D12-715 - Wellbore #1 - Plan #1	2,310.32	2,326.32	3,118.40	3,102.25	193.030	CC
Guttersten D12-715 - Wellbore #1 - Plan #1	2,500.00	2,496.03	3,118.77	3,101.33	178.807	ES
Guttersten D12-715 - Wellbore #1 - Plan #1	7,400.00	6,567.88	3,270.34	3,222.03	67.696	SF
Guttersten D12-725 - Wellbore #1 - Plan #1	6,900.00	6,987.99	2,643.01	2,594.32	54.282	SF
Guttersten D12-725 - Wellbore #1 - Plan #1	7,100.00	6,876.60	2,641.18	2,592.57	54.332	CC, ES
Guttersten D12-735 - Wellbore #1 - Plan #1	6,800.00	7,269.34	1,999.54	1,949.84	40.226	SF
Guttersten D12-735 - Wellbore #1 - Plan #1	6,877.37	7,232.65	1,999.00	1,949.33	40.246	CC, ES
Guttersten D12-745 - Wellbore #1 - Plan #1	6,700.00	7,500.00	1,356.80	1,305.69	26.547	SF
Guttersten D12-745 - Wellbore #1 - Plan #1	6,821.45	7,434.89	1,354.07	1,303.20	26.619	CC, ES
Guttersten D12-750 - Wellbore #1 - Plan #1	6,800.00	7,633.68	1,046.19	993.61	19.896	SF
Guttersten D12-750 - Wellbore #1 - Plan #1	6,900.00	7,575.37	1,043.17	990.78	19.911	ES

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Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Guttersen State C36-765
Project:	Mustang	TVD Reference:	KB @ 4776.00ft
Reference Site:	D Section 01	MD Reference:	KB @ 4776.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Guttersen State C36-765	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 01						
Guttersen D12-750 - Wellbore #1 - Plan #1	6,904.20	7,572.94	1,043.17	990.78	19.914	CC
Guttersen D12-755 - Wellbore #1 - Plan #1	2,200.00	2,199.00	151.63	136.32	9.908	CC, ES
Guttersen D12-755 - Wellbore #1 - Plan #1	2,400.00	2,389.69	157.57	140.90	9.449	SF
Guttersen D12-765 - Wellbore #1 - Plan #1	6,948.90	6,898.69	48.78	0.44	1.009	Level 2, CC, ES, SF
Guttersen D12-770 - Wellbore #1 - Plan #1	2,400.00	2,399.00	151.88	135.15	9.075	CC, ES
Guttersen D12-770 - Wellbore #1 - Plan #1	7,057.62	6,845.65	270.62	221.99	5.565	SF
Guttersen D12-775 - Wellbore #1 - Plan #1	2,400.00	2,399.00	156.62	139.88	9.357	CC, ES
Guttersen D12-775 - Wellbore #1 - Plan #1	2,600.00	2,588.81	162.92	144.82	9.001	SF
Guttersen D12-785 - Wellbore #1 - Plan #1	2,000.00	1,999.00	164.56	150.69	11.865	CC, ES
Guttersen D12-785 - Wellbore #1 - Plan #1	2,300.00	2,283.89	177.57	161.67	11.166	SF
Guttersen State C36-725 - Wellbore #1 - Plan #1	19,795.36	19,872.77	2,586.11	2,362.33	11.556	CC
Guttersen State C36-725 - Wellbore #1 - Plan #1	19,819.28	19,866.28	2,586.20	2,362.30	11.551	ES, SF
Guttersen State C36-735 - Wellbore #1 - Plan #1	19,804.17	20,021.33	1,939.73	1,715.49	8.650	CC
Guttersen State C36-735 - Wellbore #1 - Plan #1	19,819.28	20,021.33	1,939.79	1,715.48	8.648	ES, SF
Guttersen State C36-745 - Wellbore #1 - Plan #1	19,808.46	20,244.41	1,293.22	1,068.38	5.752	CC, ES, SF
Guttersen State C36-750 - Wellbore #1 - Plan #1	19,814.49	20,475.00	979.80	752.90	4.318	CC, ES, SF
Guttersen State C36-755 - Wellbore #1 - Plan #1	2,000.00	2,000.00	22.33	8.45	1.609	CC, ES, SF
Guttersen State C36-775 - Wellbore #1 - Plan #1	2,000.00	2,000.00	22.61	8.74	1.630	CC, ES, SF
Guttersen State C36-785 - Wellbore #1 - Plan #1	2,000.00	2,000.00	45.22	31.34	3.259	CC, ES
Guttersen State C36-785 - Wellbore #1 - Plan #1	2,100.00	2,098.41	46.94	32.37	3.222	SF
HSR-Guttersen 11-1 (PR) - Wellbore #1 - No Surveys	5,500.00	5,502.00	2,812.30	2,574.74	11.838	CC
HSR-Guttersen 11-1 (PR) - Wellbore #1 - No Surveys	5,800.00	5,802.19	2,819.92	2,569.29	11.251	ES
HSR-Guttersen 11-1 (PR) - Wellbore #1 - No Surveys	6,300.00	6,309.89	2,888.78	2,616.08	10.593	SF
HSR-Guttersen 12-1 (PR) - Wellbore #1 - No Surveys	5,500.00	5,448.00	3,007.33	2,771.93	12.775	CC
HSR-Guttersen 12-1 (PR) - Wellbore #1 - No Surveys	5,900.00	5,847.55	3,015.49	2,762.68	11.928	ES
HSR-Guttersen 12-1 (PR) - Wellbore #1 - No Surveys	6,400.00	6,329.49	3,103.60	2,829.79	11.335	SF
HSR-Guttersen 14-1 (SI) - Wellbore #1 - No Surveys	5,500.00	5,478.00	4,151.43	3,914.83	17.546	CC
HSR-Guttersen 14-1 (SI) - Wellbore #1 - No Surveys	5,800.00	5,777.81	4,158.87	3,909.21	16.658	ES
HSR-Guttersen 14-1 (SI) - Wellbore #1 - No Surveys	6,400.00	6,359.49	4,271.38	3,996.38	15.532	SF
HSR-Guttersen 15-1 (SI) - Wellbore #1 - Wellbore #1	5,500.00	5,516.00	4,674.36	4,436.24	19.630	CC
HSR-Guttersen 15-1 (SI) - Wellbore #1 - Wellbore #1	5,700.00	5,715.94	4,678.27	4,431.44	18.953	ES
HSR-Guttersen 15-1 (SI) - Wellbore #1 - Wellbore #1	6,500.00	6,478.92	4,853.83	4,573.79	17.333	SF
HSR-Guttersen 16-1 (SI) - Wellbore #1 - No Surveys	5,500.00	5,530.00	5,314.74	5,076.05	22.267	CC
HSR-Guttersen 16-1 (SI) - Wellbore #1 - No Surveys	5,700.00	5,729.94	5,318.83	5,071.43	21.500	ES
HSR-Guttersen 16-1 (SI) - Wellbore #1 - No Surveys	6,500.00	6,507.08	5,484.19	5,203.03	19.506	SF
Keisha White D01-01 - Wellbore #1 - Wellbore #1 - As D	5,625.38	5,674.55	2,877.86	2,838.31	72.763	CC, ES
Keisha White D01-01 - Wellbore #1 - Wellbore #1 - As D	6,900.00	6,668.15	2,975.98	2,929.10	63.480	SF
Keisha White D01-07 (PR) - Wellbore #1 - No Surveys	5,500.00	5,483.00	2,714.96	2,478.16	11.465	CC
Keisha White D01-07 (PR) - Wellbore #1 - No Surveys	5,700.00	5,682.94	2,719.05	2,473.54	11.075	ES
Keisha White D01-07 (PR) - Wellbore #1 - No Surveys	6,400.00	6,364.49	2,835.05	2,559.87	10.302	SF
Keisha White D01-08 (PR) - Wellbore #1 - No Surveys	5,500.00	5,500.00	3,627.34	3,389.85	15.274	CC
Keisha White D01-08 (PR) - Wellbore #1 - No Surveys	5,700.00	5,700.06	3,631.36	3,385.16	14.750	ES
Keisha White D01-08 (PR) - Wellbore #1 - No Surveys	6,500.00	6,462.92	3,774.36	3,494.97	13.509	SF
UPV 1-2J4 (PR) - Wellbore #1 - No Surveys	5,500.00	5,483.00	2,008.26	1,771.46	8.481	CC
UPV 1-2J4 (PR) - Wellbore #1 - No Surveys	5,800.00	5,782.81	2,015.82	1,765.96	8.068	ES
UPV 1-2J4 (PR) - Wellbore #1 - No Surveys	6,500.00	6,445.92	2,103.65	1,824.94	7.548	SF
Woody D01-09 - Wellbore #1 - Wellbore #1 - As Drilled	5,568.09	5,658.96	4,276.05	4,236.75	108.818	CC
Woody D01-09 - Wellbore #1 - Wellbore #1 - As Drilled	5,600.00	5,692.47	4,276.15	4,236.62	108.185	ES
Woody D01-09 - Wellbore #1 - Wellbore #1 - As Drilled	6,500.00	6,541.60	4,421.64	4,376.10	97.094	SF
Woody D01-10 (PR) - Wellbore #1 - No Surveys	5,500.00	5,516.00	3,120.09	2,881.97	13.103	CC
Woody D01-10 (PR) - Wellbore #1 - No Surveys	5,700.00	5,715.94	3,124.08	2,877.25	12.657	ES
Woody D01-10 (PR) - Wellbore #1 - No Surveys	6,400.00	6,402.52	3,244.01	2,967.30	11.724	SF

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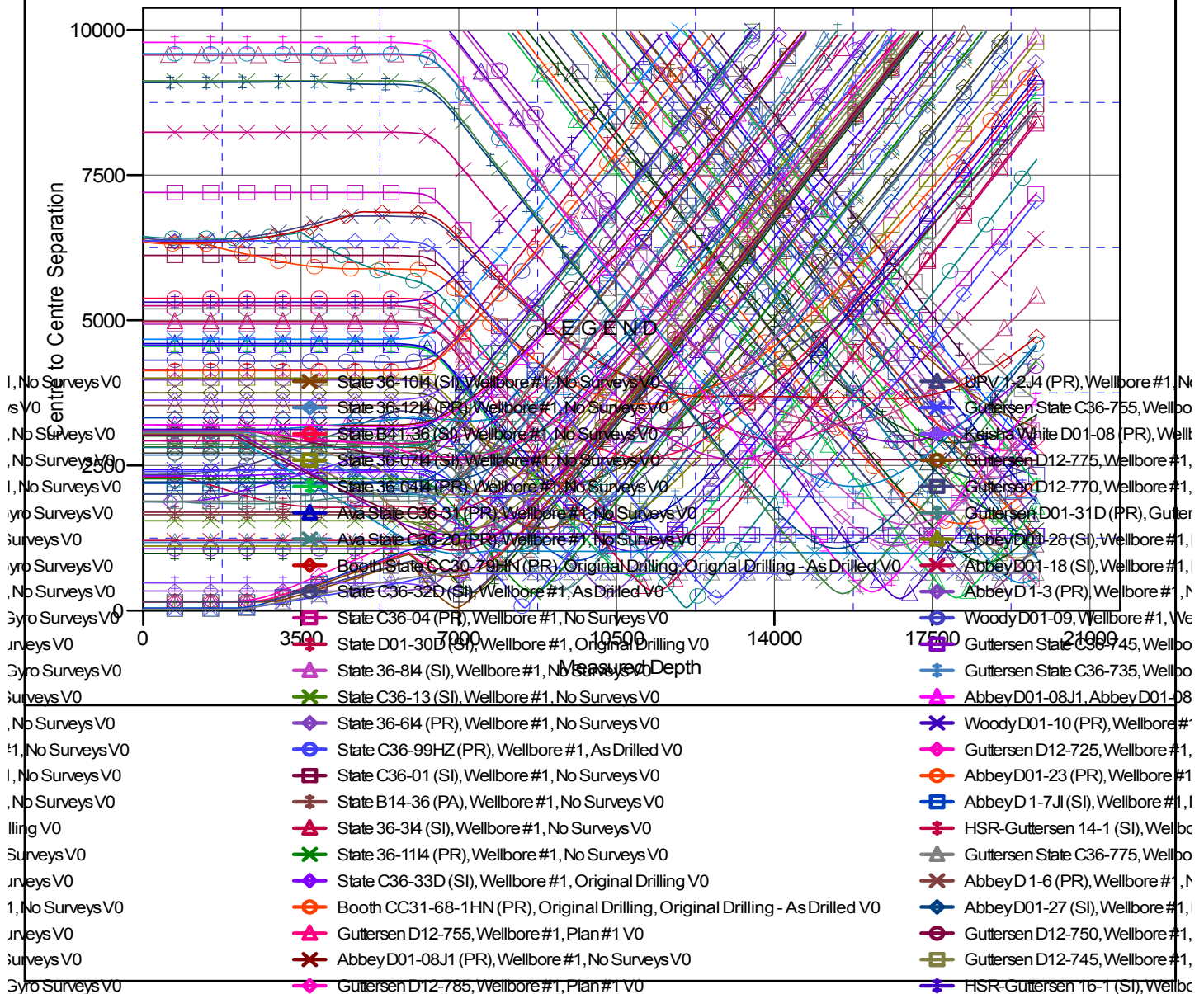
Noble Energy, Inc.
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Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to KB @ 4776.00ft
Offset Depths are relative to Offset Datum
Central Meridian is -105.5000000

Coordinates are relative to: Guttersen State C36-765
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.64°

Ladder Plot



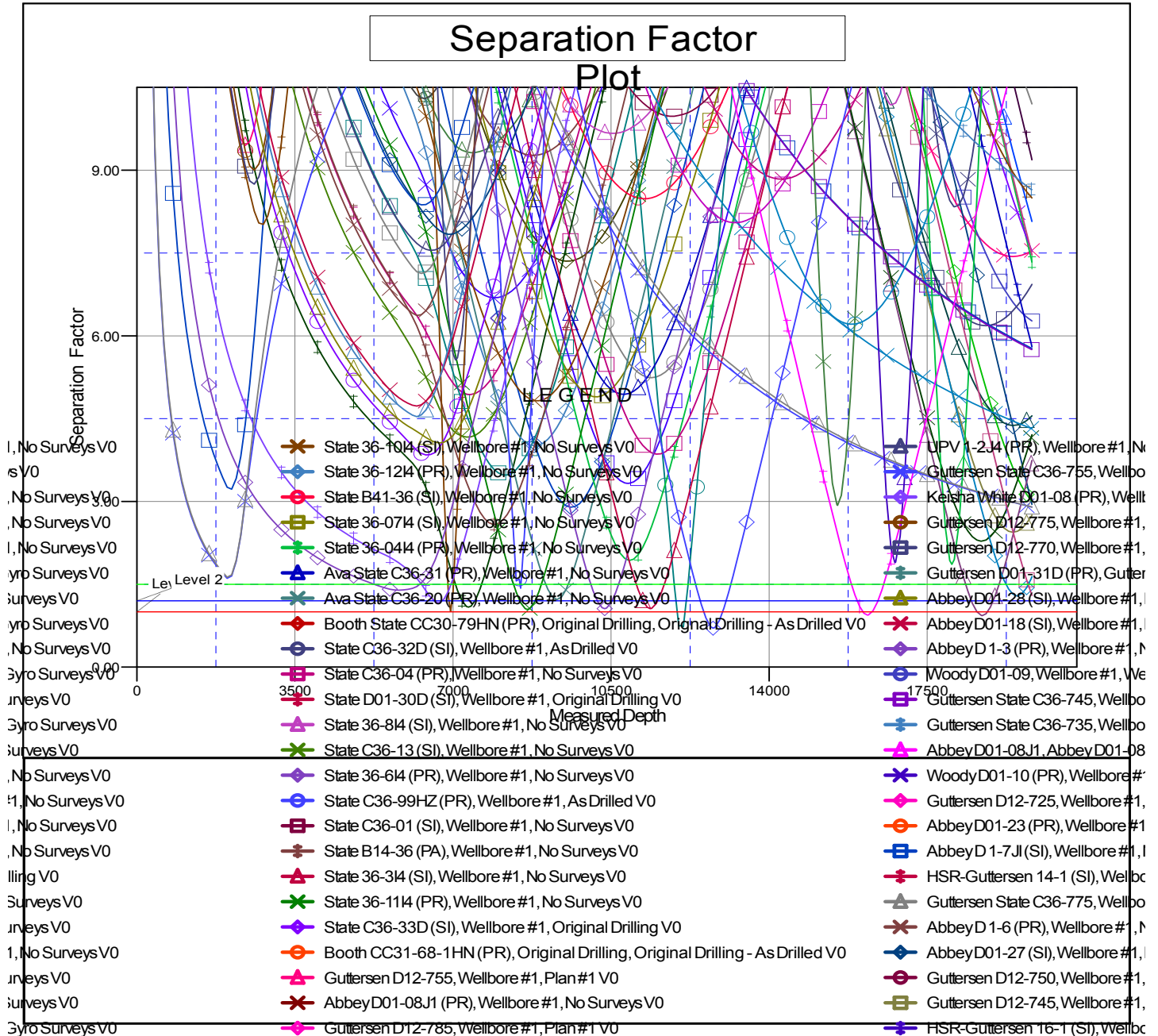
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