Project: Mustang
Site: CC Section 31
Well: Booth DD06-755
Wellbore: Wellbore #1
Design: APD-Rev 0

Northern Region - DJ Basin

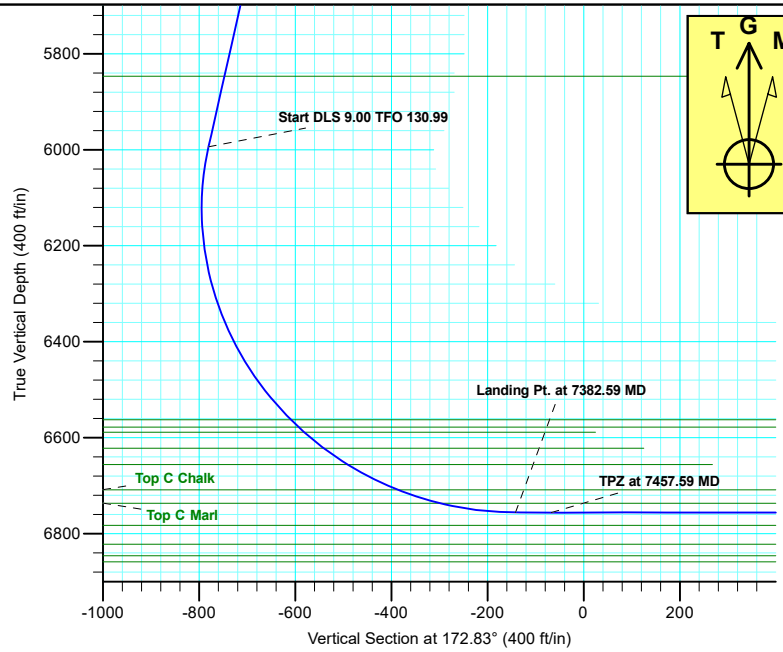
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Northern Zone
System Datum: Mean Sea Level

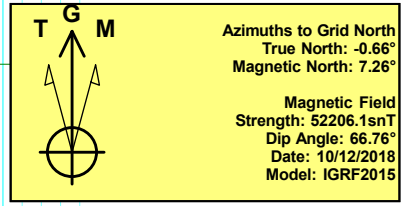
SECTION DETAILS

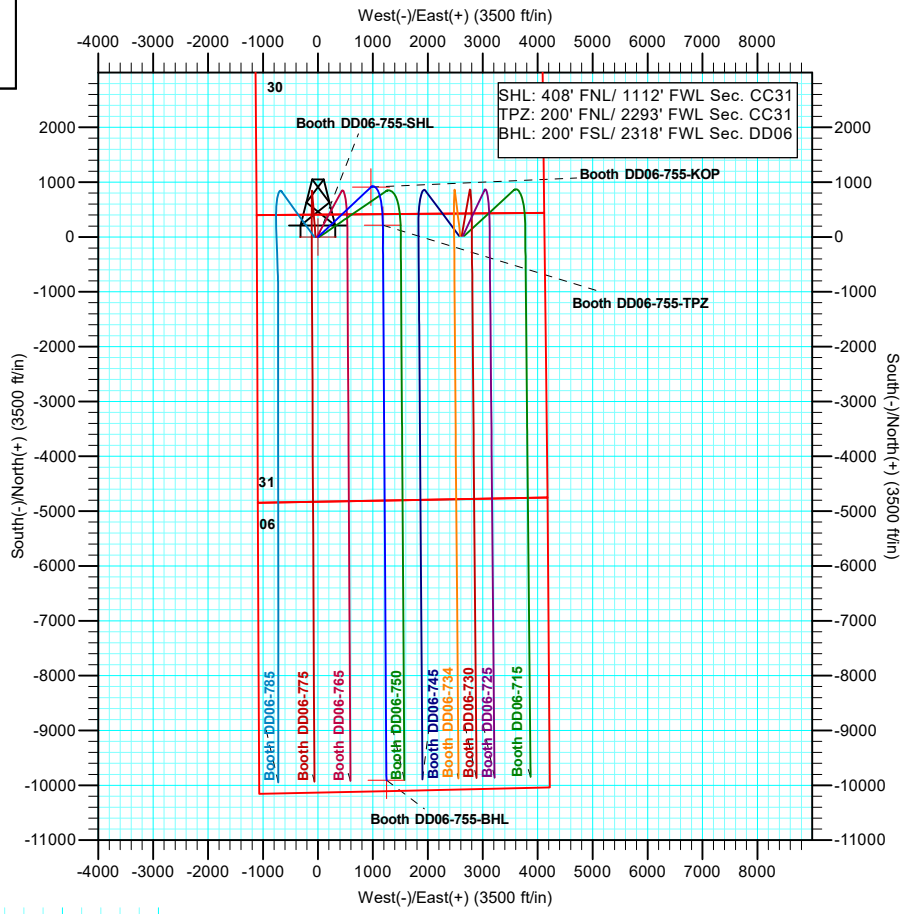
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	2000.00	0.00	0.00	2000.00	0.00	0.00	0.00	0.00	0.00
3	3045.16	20.90	46.70	3022.13	129.30	137.23	2.00	46.70	-111.16
4	6226.33	20.90	46.70	5993.93	907.68	963.29	0.00	0.00	-780.29
5	7382.59	90.00	179.63	6756.00	291.54	1180.42	9.00	130.99	-141.86
6	7457.59	90.00	179.63	6756.00	216.54	1180.90	0.00	0.00	-67.39
7	8357.59	90.00	179.63	6756.00	-683.44	1186.74	0.00	0.00	826.28
8	8365.05	90.15	179.63	6755.99	-690.90	1186.79	2.00	0.00	833.68
9	17579.42	90.15	179.63	6732.00	-9905.05	1246.59	0.00	0.00	9983.18

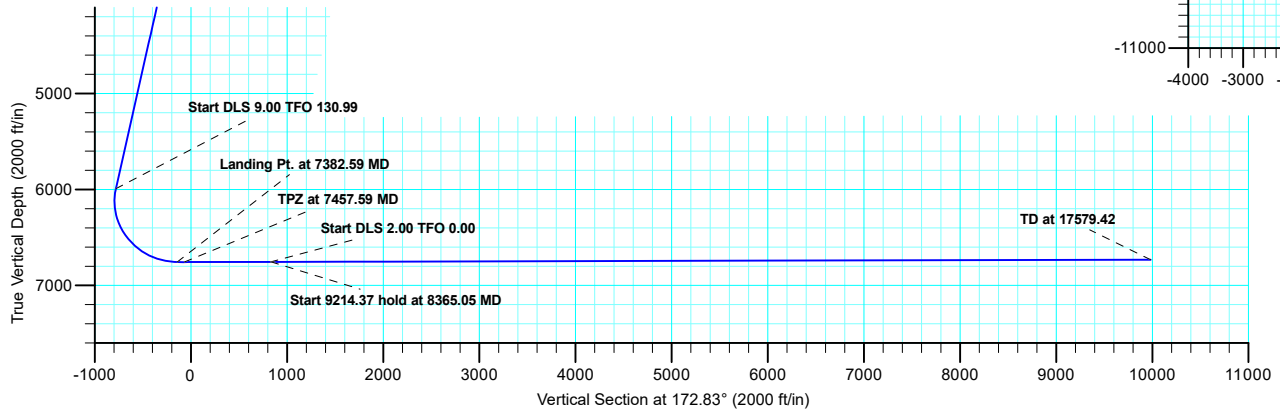
WELL DETAILS: Booth DD06-755

+N/-S	+E/-W	Northing	Ground Level: 4776.00 Easting	Latitude	Longitude	Slot
0.00	0.00	1344634.73	3282968.77	40.2749800	-104.4858400	









Plan: APD-Rev 0 (Booth DD06-755/Wellbore #1)

Created By: Shelly C. Peterkin Date: 9:31, October 15 2018

Northern Region - DJ Basin

Mustang
CC Section 31
Booth DD06-755

Wellbore #1

Plan: APD-Rev 0

Standard Planning Report

15 October, 2018

Database:	EDMP	**Local Co-ordinate Reference:**	Well Booth DD06-755
Company:	Northern Region - DJ Basin	**TVD Reference:**	KB @ 4806.00ft
Project:	Mustang	**MD Reference:**	KB @ 4806.00ft
Site:	CC Section 31	**North Reference:**	Grid
Well:	Booth DD06-755	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	APD-Rev 0		

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 CC Section 31

Site Position:		**Northing:**	1,340,296.58 usft	**Latitude:**	40.2630390
From:	Map	**Easting:**	3,284,024.52 usft	**Longitude:**	-104.4822350
Position Uncertainty:	0.00 ft	**Slot Radius:**	13.200 in	**Grid Convergence:**	0.66 °

Well Booth DD06-755

Well Position	**+N/-S**	4,338.16 ft	**Northing:**	1,344,634.73 usft	**Latitude:**	40.2749800
	+E/-W	-1,055.74 ft	**Easting:**	3,282,968.78 usft	**Longitude:**	-104.4858400
Position Uncertainty		0.00 ft	**Wellhead Elevation:**		**Ground Level:**	4,776.00 ft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	10/12/2018	7.91	66.76	52,206.09289756

Design APD-Rev 0

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	172.83

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	
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,045.16	20.90	46.70	3,022.13	129.30	137.23	2.00	2.00	0.00	46.70	
6,226.33	20.90	46.70	5,993.93	907.68	963.29	0.00	0.00	0.00	0.00	
7,382.59	90.00	179.63	6,756.00	291.54	1,180.42	9.00	5.98	11.50	130.99	
7,457.59	90.00	179.63	6,756.00	216.54	1,180.90	0.00	0.00	0.00	0.00	Booth DD06-755-TPZ
8,357.59	90.00	179.63	6,756.00	-683.44	1,186.74	0.00	0.00	0.00	0.00	
8,365.05	90.15	179.63	6,755.99	-690.90	1,186.79	2.00	2.00	0.00	0.00	
17,579.42	90.15	179.63	6,732.00	-9,905.05	1,246.59	0.00	0.00	0.00	0.00	Booth DD06-755-BHL

Database:	EDMP	**Local Co-ordinate Reference:**	Well Booth DD06-755
Company:	Northern Region - DJ Basin	**TVD Reference:**	KB @ 4806.00ft
Project:	Mustang	**MD Reference:**	KB @ 4806.00ft
Site:	CC Section 31	**North Reference:**	Grid
Well:	Booth DD06-755	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	APD-Rev 0		

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
417.00	0.00	0.00	417.00	0.00	0.00	0.00	0.00	0.00	0.00
Pierre									
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
683.00	0.00	0.00	683.00	0.00	0.00	0.00	0.00	0.00	0.00
Upper Pierre Aquifer Top									
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
1,603.00	0.00	0.00	1,603.00	0.00	0.00	0.00	0.00	0.00	0.00
Upper Pierre Aquifer Base									
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
Start Build 2.00									
2,100.00	2.00	46.70	2,099.98	1.20	1.27	-1.03	2.00	2.00	0.00
2,200.00	4.00	46.70	2,199.84	4.79	5.08	-4.11	2.00	2.00	0.00
2,300.00	6.00	46.70	2,299.45	10.76	11.42	-9.25	2.00	2.00	0.00
2,400.00	8.00	46.70	2,398.70	19.12	20.29	-16.44	2.00	2.00	0.00
2,500.00	10.00	46.70	2,497.47	29.85	31.68	-25.66	2.00	2.00	0.00
2,600.00	12.00	46.70	2,595.62	42.93	45.56	-36.91	2.00	2.00	0.00
2,700.00	14.00	46.70	2,693.06	58.36	61.93	-50.17	2.00	2.00	0.00
2,800.00	16.00	46.70	2,789.64	76.11	80.77	-65.43	2.00	2.00	0.00
2,900.00	18.00	46.70	2,885.27	96.16	102.05	-82.66	2.00	2.00	0.00
3,000.00	20.00	46.70	2,979.82	118.48	125.74	-101.85	2.00	2.00	0.00
3,045.16	20.90	46.70	3,022.13	129.30	137.23	-111.16	2.00	2.00	0.00
Start 3181.17 hold at 3045.16 MD									
3,100.00	20.90	46.70	3,073.36	142.72	151.47	-122.69	0.00	0.00	0.00
3,200.00	20.90	46.70	3,166.78	167.19	177.43	-143.73	0.00	0.00	0.00
3,300.00	20.90	46.70	3,260.20	191.66	203.40	-164.76	0.00	0.00	0.00
3,400.00	20.90	46.70	3,353.61	216.13	229.37	-185.79	0.00	0.00	0.00
3,500.00	20.90	46.70	3,447.03	240.60	255.33	-206.83	0.00	0.00	0.00
3,600.00	20.90	46.70	3,540.45	265.06	281.30	-227.86	0.00	0.00	0.00
3,700.00	20.90	46.70	3,633.87	289.53	307.27	-248.90	0.00	0.00	0.00
3,744.03	20.90	46.70	3,675.00	300.30	318.70	-258.16	0.00	0.00	0.00
Parkman									
3,800.00	20.90	46.70	3,727.29	314.00	333.24	-269.93	0.00	0.00	0.00
3,900.00	20.90	46.70	3,820.71	338.47	359.20	-290.97	0.00	0.00	0.00
4,000.00	20.90	46.70	3,914.13	362.94	385.17	-312.00	0.00	0.00	0.00
4,100.00	20.90	46.70	4,007.54	387.41	411.14	-333.03	0.00	0.00	0.00

Database:	EDMP	**Local Co-ordinate Reference:**	Well Booth DD06-755
Company:	Northern Region - DJ Basin	**TVD Reference:**	KB @ 4806.00ft
Project:	Mustang	**MD Reference:**	KB @ 4806.00ft
Site:	CC Section 31	**North Reference:**	Grid
Well:	Booth DD06-755	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	APD-Rev 0		

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)
4,200.00	20.90	46.70	4,100.96	411.87	437.11	-354.07	0.00	0.00	0.00
4,300.00	20.90	46.70	4,194.38	436.34	463.07	-375.10	0.00	0.00	0.00
4,400.00	20.90	46.70	4,287.80	460.81	489.04	-396.14	0.00	0.00	0.00
4,400.22	20.90	46.70	4,288.00	460.86	489.10	-396.18	0.00	0.00	0.00
Sussex									
4,500.00	20.90	46.70	4,381.22	485.28	515.01	-417.17	0.00	0.00	0.00
4,600.00	20.90	46.70	4,474.64	509.75	540.98	-438.21	0.00	0.00	0.00
4,700.00	20.90	46.70	4,568.05	534.21	566.94	-459.24	0.00	0.00	0.00
4,800.00	20.90	46.70	4,661.47	558.68	592.91	-480.27	0.00	0.00	0.00
4,900.00	20.90	46.70	4,754.89	583.15	618.88	-501.31	0.00	0.00	0.00
5,000.00	20.90	46.70	4,848.31	607.62	644.84	-522.34	0.00	0.00	0.00
5,070.32	20.90	46.70	4,914.00	624.83	663.10	-537.13	0.00	0.00	0.00
Shannon									
5,100.00	20.90	46.70	4,941.73	632.09	670.81	-543.38	0.00	0.00	0.00
5,200.00	20.90	46.70	5,035.15	656.56	696.78	-564.41	0.00	0.00	0.00
5,300.00	20.90	46.70	5,128.56	681.02	722.75	-585.45	0.00	0.00	0.00
5,400.00	20.90	46.70	5,221.98	705.49	748.71	-606.48	0.00	0.00	0.00
5,500.00	20.90	46.70	5,315.40	729.96	774.68	-627.51	0.00	0.00	0.00
5,600.00	20.90	46.70	5,408.82	754.43	800.65	-648.55	0.00	0.00	0.00
5,700.00	20.90	46.70	5,502.24	778.90	826.62	-669.58	0.00	0.00	0.00
5,800.00	20.90	46.70	5,595.66	803.37	852.58	-690.62	0.00	0.00	0.00
5,900.00	20.90	46.70	5,689.07	827.83	878.55	-711.65	0.00	0.00	0.00
6,000.00	20.90	46.70	5,782.49	852.30	904.52	-732.69	0.00	0.00	0.00
6,069.05	20.90	46.70	5,847.00	869.20	922.45	-747.21	0.00	0.00	0.00
Teepee Buttes									
6,100.00	20.90	46.70	5,875.91	876.77	930.49	-753.72	0.00	0.00	0.00
6,200.00	20.90	46.70	5,969.33	901.24	956.45	-774.75	0.00	0.00	0.00
6,226.33	20.90	46.70	5,993.93	907.68	963.29	-780.29	0.00	0.00	0.00
Start DLS 9.00 TFO 130.99									
6,250.00	19.57	51.51	6,016.14	913.05	969.47	-784.84	9.00	-5.64	20.30
6,300.00	17.26	63.78	6,063.59	921.54	982.68	-791.62	9.00	-4.61	24.55
6,350.00	15.89	78.86	6,111.53	926.14	996.06	-794.52	9.00	-2.74	30.15
6,400.00	15.70	95.43	6,159.67	926.83	1,009.52	-793.51	9.00	-0.38	33.14
6,450.00	16.73	111.16	6,207.70	923.58	1,022.97	-788.62	9.00	2.07	31.47
6,500.00	18.79	124.34	6,255.34	916.44	1,036.34	-779.86	9.00	4.11	26.34
6,550.00	21.57	134.62	6,302.28	905.44	1,049.54	-767.30	9.00	5.57	20.56
6,600.00	24.85	142.48	6,348.24	890.64	1,062.49	-751.00	9.00	6.55	15.72
6,650.00	28.44	148.54	6,392.93	872.15	1,075.11	-731.07	9.00	7.18	12.12
6,700.00	32.24	153.31	6,436.08	850.06	1,087.32	-707.64	9.00	7.61	9.54
6,750.00	36.19	157.15	6,477.42	824.53	1,099.05	-680.84	9.00	7.90	7.69
6,800.00	40.24	160.33	6,516.70	795.70	1,110.22	-650.84	9.00	8.10	6.35
6,850.00	44.36	163.01	6,553.68	763.76	1,120.77	-617.84	9.00	8.25	5.36
6,863.16	45.46	163.65	6,563.00	754.86	1,123.43	-608.67	9.00	8.32	4.86
Sharon Springs									
6,884.90	47.27	164.66	6,578.00	739.73	1,127.73	-593.12	9.00	8.35	4.63
Top A Chalk									
6,900.00	48.54	165.32	6,588.12	728.90	1,130.63	-582.02	9.00	8.39	4.40
6,901.33	48.65	165.38	6,589.00	727.94	1,130.88	-581.03	9.00	8.40	4.31
Top A Marl									
6,950.00	52.76	167.35	6,619.82	691.34	1,139.74	-543.61	9.00	8.44	4.05
6,953.61	53.06	167.49	6,622.00	688.53	1,140.36	-540.74	9.00	8.47	3.81
Top B Chalk									
7,000.00	57.01	169.17	6,648.58	651.31	1,148.04	-502.86	9.00	8.50	3.61

Database:	EDMP	**Local Co-ordinate Reference:**	Well Booth DD06-755
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Site:	CC Section 31	**North Reference:**	Grid
Well:	Booth DD06-755	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	APD-Rev 0		

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)
7,013.85	58.19	169.64	6,656.00	639.81	1,150.19	-491.18	9.00	8.53	3.40
Top B Marl									
7,050.00	61.28	170.81	6,674.22	609.05	1,155.48	-460.00	9.00	8.55	3.25
7,100.00	65.57	172.33	6,696.58	564.82	1,162.03	-415.30	9.00	8.58	3.03
7,131.69	68.30	173.24	6,709.00	535.90	1,165.69	-386.15	9.00	8.61	2.86
Top C Chalk									
7,150.00	69.87	173.75	6,715.54	518.91	1,167.62	-369.05	9.00	8.62	2.78
7,200.00	74.19	175.09	6,730.96	471.58	1,172.24	-321.52	9.00	8.63	2.68
7,223.68	76.24	175.70	6,737.00	448.76	1,174.08	-298.64	9.00	8.64	2.59
Top C Marl									
7,250.00	78.51	176.37	6,742.75	423.14	1,175.86	-273.00	9.00	8.65	2.55
7,300.00	82.84	177.62	6,750.85	373.88	1,178.44	-223.81	9.00	8.66	2.49
7,350.00	87.18	178.84	6,755.20	324.11	1,179.98	-174.23	9.00	8.66	2.44
7,382.59	90.00	179.63	6,756.00	291.54	1,180.42	-141.86	9.00	8.67	2.43
Landing Pt. at 7382.59 MD									
7,400.00	90.00	179.63	6,756.00	274.13	1,180.53	-124.57	0.00	0.00	0.00
7,457.59	90.00	179.63	6,756.00	216.54	1,180.90	-67.39	0.00	0.00	0.00
TPZ at 7457.59 MD									
7,500.00	90.00	179.63	6,756.00	174.13	1,181.18	-25.27	0.00	0.00	0.00
7,600.00	90.00	179.63	6,756.00	74.13	1,181.83	74.02	0.00	0.00	0.00
7,700.00	90.00	179.63	6,756.00	-25.87	1,182.48	173.32	0.00	0.00	0.00
7,800.00	90.00	179.63	6,756.00	-125.86	1,183.12	272.61	0.00	0.00	0.00
7,900.00	90.00	179.63	6,756.00	-225.86	1,183.77	371.91	0.00	0.00	0.00
8,000.00	90.00	179.63	6,756.00	-325.86	1,184.42	471.21	0.00	0.00	0.00
8,100.00	90.00	179.63	6,756.00	-425.86	1,185.07	570.50	0.00	0.00	0.00
8,200.00	90.00	179.63	6,756.00	-525.86	1,185.72	669.80	0.00	0.00	0.00
8,300.00	90.00	179.63	6,756.00	-625.85	1,186.37	769.10	0.00	0.00	0.00
8,357.59	90.00	179.63	6,756.00	-683.44	1,186.74	826.28	0.00	0.00	0.00
Start DLS 2.00 TFO 0.00									
8,365.05	90.15	179.63	6,755.99	-690.90	1,186.79	833.68	2.00	2.00	0.00
Start 9214.37 hold at 8365.05 MD									
8,400.00	90.15	179.63	6,755.90	-725.85	1,187.02	868.39	0.00	0.00	0.00
8,500.00	90.15	179.63	6,755.64	-825.85	1,187.67	967.69	0.00	0.00	0.00
8,600.00	90.15	179.63	6,755.38	-925.85	1,188.32	1,066.98	0.00	0.00	0.00
8,700.00	90.15	179.63	6,755.12	-1,025.84	1,188.97	1,166.28	0.00	0.00	0.00
8,800.00	90.15	179.63	6,754.86	-1,125.84	1,189.61	1,265.58	0.00	0.00	0.00
8,900.00	90.15	179.63	6,754.60	-1,225.84	1,190.26	1,364.87	0.00	0.00	0.00
9,000.00	90.15	179.63	6,754.34	-1,325.84	1,190.91	1,464.17	0.00	0.00	0.00
9,100.00	90.15	179.63	6,754.08	-1,425.83	1,191.56	1,563.46	0.00	0.00	0.00
9,200.00	90.15	179.63	6,753.82	-1,525.83	1,192.21	1,662.76	0.00	0.00	0.00
9,300.00	90.15	179.63	6,753.56	-1,625.83	1,192.86	1,762.06	0.00	0.00	0.00
9,400.00	90.15	179.63	6,753.30	-1,725.83	1,193.51	1,861.35	0.00	0.00	0.00
9,500.00	90.15	179.63	6,753.04	-1,825.82	1,194.16	1,960.65	0.00	0.00	0.00
9,600.00	90.15	179.63	6,752.78	-1,925.82	1,194.81	2,059.94	0.00	0.00	0.00
9,700.00	90.15	179.63	6,752.51	-2,025.82	1,195.45	2,159.24	0.00	0.00	0.00
9,800.00	90.15	179.63	6,752.25	-2,125.82	1,196.10	2,258.54	0.00	0.00	0.00
9,900.00	90.15	179.63	6,751.99	-2,225.82	1,196.75	2,357.83	0.00	0.00	0.00
10,000.00	90.15	179.63	6,751.73	-2,325.81	1,197.40	2,457.13	0.00	0.00	0.00
10,100.00	90.15	179.63	6,751.47	-2,425.81	1,198.05	2,556.42	0.00	0.00	0.00
10,200.00	90.15	179.63	6,751.21	-2,525.81	1,198.70	2,655.72	0.00	0.00	0.00
10,300.00	90.15	179.63	6,750.95	-2,625.81	1,199.35	2,755.02	0.00	0.00	0.00
10,400.00	90.15	179.63	6,750.69	-2,725.80	1,200.00	2,854.31	0.00	0.00	0.00
10,500.00	90.15	179.63	6,750.43	-2,825.80	1,200.65	2,953.61	0.00	0.00	0.00

Database:	EDMP	**Local Co-ordinate Reference:**	Well Booth DD06-755
Company:	Northern Region - DJ Basin	**TVD Reference:**	KB @ 4806.00ft
Project:	Mustang	**MD Reference:**	KB @ 4806.00ft
Site:	CC Section 31	**North Reference:**	Grid
Well:	Booth DD06-755	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	APD-Rev 0		

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)
10,600.00	90.15	179.63	6,750.17	-2,925.80	1,201.30	3,052.90	0.00	0.00	0.00
10,700.00	90.15	179.63	6,749.91	-3,025.80	1,201.94	3,152.20	0.00	0.00	0.00
10,800.00	90.15	179.63	6,749.65	-3,125.79	1,202.59	3,251.49	0.00	0.00	0.00
10,900.00	90.15	179.63	6,749.39	-3,225.79	1,203.24	3,350.79	0.00	0.00	0.00
11,000.00	90.15	179.63	6,749.13	-3,325.79	1,203.89	3,450.09	0.00	0.00	0.00
11,100.00	90.15	179.63	6,748.87	-3,425.79	1,204.54	3,549.38	0.00	0.00	0.00
11,200.00	90.15	179.63	6,748.61	-3,525.78	1,205.19	3,648.68	0.00	0.00	0.00
11,300.00	90.15	179.63	6,748.35	-3,625.78	1,205.84	3,747.97	0.00	0.00	0.00
11,400.00	90.15	179.63	6,748.09	-3,725.78	1,206.49	3,847.27	0.00	0.00	0.00
11,500.00	90.15	179.63	6,747.83	-3,825.78	1,207.14	3,946.57	0.00	0.00	0.00
11,600.00	90.15	179.63	6,747.57	-3,925.77	1,207.79	4,045.86	0.00	0.00	0.00
11,700.00	90.15	179.63	6,747.31	-4,025.77	1,208.43	4,145.16	0.00	0.00	0.00
11,800.00	90.15	179.63	6,747.05	-4,125.77	1,209.08	4,244.45	0.00	0.00	0.00
11,900.00	90.15	179.63	6,746.79	-4,225.77	1,209.73	4,343.75	0.00	0.00	0.00
12,000.00	90.15	179.63	6,746.53	-4,325.76	1,210.38	4,443.05	0.00	0.00	0.00
12,100.00	90.15	179.63	6,746.27	-4,425.76	1,211.03	4,542.34	0.00	0.00	0.00
12,200.00	90.15	179.63	6,746.01	-4,525.76	1,211.68	4,641.64	0.00	0.00	0.00
12,300.00	90.15	179.63	6,745.75	-4,625.76	1,212.33	4,740.93	0.00	0.00	0.00
12,400.00	90.15	179.63	6,745.49	-4,725.75	1,212.98	4,840.23	0.00	0.00	0.00
12,500.00	90.15	179.63	6,745.22	-4,825.75	1,213.63	4,939.53	0.00	0.00	0.00
12,600.00	90.15	179.63	6,744.96	-4,925.75	1,214.27	5,038.82	0.00	0.00	0.00
12,700.00	90.15	179.63	6,744.70	-5,025.75	1,214.92	5,138.12	0.00	0.00	0.00
12,800.00	90.15	179.63	6,744.44	-5,125.74	1,215.57	5,237.41	0.00	0.00	0.00
12,900.00	90.15	179.63	6,744.18	-5,225.74	1,216.22	5,336.71	0.00	0.00	0.00
13,000.00	90.15	179.63	6,743.92	-5,325.74	1,216.87	5,436.01	0.00	0.00	0.00
13,100.00	90.15	179.63	6,743.66	-5,425.74	1,217.52	5,535.30	0.00	0.00	0.00
13,200.00	90.15	179.63	6,743.40	-5,525.73	1,218.17	5,634.60	0.00	0.00	0.00
13,300.00	90.15	179.63	6,743.14	-5,625.73	1,218.82	5,733.89	0.00	0.00	0.00
13,400.00	90.15	179.63	6,742.88	-5,725.73	1,219.47	5,833.19	0.00	0.00	0.00
13,500.00	90.15	179.63	6,742.62	-5,825.73	1,220.12	5,932.49	0.00	0.00	0.00
13,600.00	90.15	179.63	6,742.36	-5,925.72	1,220.76	6,031.78	0.00	0.00	0.00
13,700.00	90.15	179.63	6,742.10	-6,025.72	1,221.41	6,131.08	0.00	0.00	0.00
13,800.00	90.15	179.63	6,741.84	-6,125.72	1,222.06	6,230.37	0.00	0.00	0.00
13,900.00	90.15	179.63	6,741.58	-6,225.72	1,222.71	6,329.67	0.00	0.00	0.00
14,000.00	90.15	179.63	6,741.32	-6,325.72	1,223.36	6,428.96	0.00	0.00	0.00
14,100.00	90.15	179.63	6,741.06	-6,425.71	1,224.01	6,528.26	0.00	0.00	0.00
14,200.00	90.15	179.63	6,740.80	-6,525.71	1,224.66	6,627.56	0.00	0.00	0.00
14,300.00	90.15	179.63	6,740.54	-6,625.71	1,225.31	6,726.85	0.00	0.00	0.00
14,400.00	90.15	179.63	6,740.28	-6,725.71	1,225.96	6,826.15	0.00	0.00	0.00
14,500.00	90.15	179.63	6,740.02	-6,825.70	1,226.60	6,925.44	0.00	0.00	0.00
14,600.00	90.15	179.63	6,739.76	-6,925.70	1,227.25	7,024.74	0.00	0.00	0.00
14,700.00	90.15	179.63	6,739.50	-7,025.70	1,227.90	7,124.04	0.00	0.00	0.00
14,800.00	90.15	179.63	6,739.24	-7,125.70	1,228.55	7,223.33	0.00	0.00	0.00
14,900.00	90.15	179.63	6,738.98	-7,225.69	1,229.20	7,322.63	0.00	0.00	0.00
15,000.00	90.15	179.63	6,738.72	-7,325.69	1,229.85	7,421.92	0.00	0.00	0.00
15,100.00	90.15	179.63	6,738.46	-7,425.69	1,230.50	7,521.22	0.00	0.00	0.00
15,200.00	90.15	179.63	6,738.20	-7,525.69	1,231.15	7,620.52	0.00	0.00	0.00
15,300.00	90.15	179.63	6,737.93	-7,625.68	1,231.80	7,719.81	0.00	0.00	0.00
15,400.00	90.15	179.63	6,737.67	-7,725.68	1,232.45	7,819.11	0.00	0.00	0.00
15,500.00	90.15	179.63	6,737.41	-7,825.68	1,233.09	7,918.40	0.00	0.00	0.00
15,600.00	90.15	179.63	6,737.15	-7,925.68	1,233.74	8,017.70	0.00	0.00	0.00
15,700.00	90.15	179.63	6,736.89	-8,025.67	1,234.39	8,117.00	0.00	0.00	0.00
15,800.00	90.15	179.63	6,736.63	-8,125.67	1,235.04	8,216.29	0.00	0.00	0.00
15,900.00	90.15	179.63	6,736.37	-8,225.67	1,235.69	8,315.59	0.00	0.00	0.00

Database:	EDMP	**Local Co-ordinate Reference:**	Well Booth DD06-755
Company:	Northern Region - DJ Basin	**TVD Reference:**	KB @ 4806.00ft
Project:	Mustang	**MD Reference:**	KB @ 4806.00ft
Site:	CC Section 31	**North Reference:**	Grid
Well:	Booth DD06-755	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	APD-Rev 0		

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)
16,000.00	90.15	179.63	6,736.11	-8,325.67	1,236.34	8,414.88	0.00	0.00	0.00
16,100.00	90.15	179.63	6,735.85	-8,425.66	1,236.99	8,514.18	0.00	0.00	0.00
16,200.00	90.15	179.63	6,735.59	-8,525.66	1,237.64	8,613.48	0.00	0.00	0.00
16,300.00	90.15	179.63	6,735.33	-8,625.66	1,238.29	8,712.77	0.00	0.00	0.00
16,400.00	90.15	179.63	6,735.07	-8,725.66	1,238.94	8,812.07	0.00	0.00	0.00
16,500.00	90.15	179.63	6,734.81	-8,825.65	1,239.58	8,911.36	0.00	0.00	0.00
16,600.00	90.15	179.63	6,734.55	-8,925.65	1,240.23	9,010.66	0.00	0.00	0.00
16,700.00	90.15	179.63	6,734.29	-9,025.65	1,240.88	9,109.96	0.00	0.00	0.00
16,800.00	90.15	179.63	6,734.03	-9,125.65	1,241.53	9,209.25	0.00	0.00	0.00
16,900.00	90.15	179.63	6,733.77	-9,225.64	1,242.18	9,308.55	0.00	0.00	0.00
17,000.00	90.15	179.63	6,733.51	-9,325.64	1,242.83	9,407.84	0.00	0.00	0.00
17,100.00	90.15	179.63	6,733.25	-9,425.64	1,243.48	9,507.14	0.00	0.00	0.00
17,200.00	90.15	179.63	6,732.99	-9,525.64	1,244.13	9,606.43	0.00	0.00	0.00
17,300.00	90.15	179.63	6,732.73	-9,625.63	1,244.78	9,705.73	0.00	0.00	0.00
17,400.00	90.15	179.63	6,732.47	-9,725.63	1,245.42	9,805.03	0.00	0.00	0.00
17,500.00	90.15	179.63	6,732.21	-9,825.63	1,246.07	9,904.32	0.00	0.00	0.00
17,579.42	90.15	179.63	6,732.00	-9,905.05	1,246.59	9,983.18	0.00	0.00	0.00
TD at 17579.42									

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
Booth DD06-755-SHL - plan hits target center - Point	0.00	0.01	0.00	0.00	0.00	1,344,634.73	3,282,968.78	40.2749800	-104.4858400
Booth DD06-755-KOP - plan hits target center - Point	0.00	0.00	5,993.93	907.68	963.29	1,345,542.41	3,283,932.06	40.2774412	-104.4823505
Booth DD06-755-BHL - plan hits target center - Point	0.00	0.00	6,732.00	-9,905.05	1,246.59	1,334,729.70	3,284,215.36	40.2477524	-104.4817802
Booth DD06-755-TPZ - plan hits target center - Point	0.00	0.00	6,756.00	216.54	1,180.90	1,344,851.27	3,284,149.68	40.2755372	-104.4815991

Database:	EDMP	**Local Co-ordinate Reference:**	Well Booth DD06-755
Company:	Northern Region - DJ Basin	**TVD Reference:**	KB @ 4806.00ft
Project:	Mustang	**MD Reference:**	KB @ 4806.00ft
Site:	CC Section 31	**North Reference:**	Grid
Well:	Booth DD06-755	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	APD-Rev 0		

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
417.00	417.00	Pierre			
683.00	683.00	Upper Pierre Aquifer Top			
1,603.00	1,603.00	Upper Pierre Aquifer Base			
3,744.03	3,675.00	Parkman			
4,400.22	4,288.00	Sussex			
5,070.32	4,914.00	Shannon			
6,069.05	5,847.00	Teepee Buttes			
6,863.16	6,563.00	Sharon Springs			
6,884.90	6,578.00	Top A Chalk			
6,901.33	6,589.00	Top A Marl			
6,953.61	6,622.00	Top B Chalk			
7,013.85	6,656.00	Top B Marl			
7,131.69	6,709.00	Top C Chalk			
7,223.68	6,737.00	Top C Marl			

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
2,000.00	2,000.00	0.00	0.00	Start Build 2.00
3,045.16	3,022.13	129.30	137.23	Start 3181.17 hold at 3045.16 MD
6,226.33	5,993.93	907.68	963.29	Start DLS 9.00 TFO 130.99
7,382.59	6,756.00	291.54	1,180.42	Landing Pt. at 7382.59 MD
7,457.59	6,756.00	216.54	1,180.90	TPZ at 7457.59 MD
8,357.59	6,756.00	-683.44	1,186.74	Start DLS 2.00 TFO 0.00
8,365.05	6,755.99	-690.90	1,186.79	Start 9214.37 hold at 8365.05 MD
17,579.42	6,732.00	-9,905.05	1,246.59	TD at 17579.42

Northern Region - DJ Basin

Mustang
CC Section 31
Booth DD06-755

Wellbore #1
APD-Rev 0

Anticollision Summary Report

15 October, 2018

Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Booth DD06-755
Project:	Mustang	**TVD Reference:**	KB @ 4806.00ft
Reference Site:	CC Section 31	**MD Reference:**	KB @ 4806.00ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Booth DD06-755	**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:	APD-Rev 0	**Offset TVD Reference:**	Offset Datum

Reference	APD-Rev 0		
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** 10/15/2018

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	17,579.42	APD-Rev 0 (Wellbore #1)	2_MWD+IFR1+MS	A008Mb: IFR dec & multi-station analysis

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
C Section 36						
Ava State C36-18 (SI) - Wellbore #1 - No Surveys	2,000.00	1,930.00	3,794.39	3,712.25	46.196	CC
Ava State C36-18 (SI) - Wellbore #1 - No Surveys	2,100.00	2,029.98	3,795.90	3,709.41	43.888	ES
Ava State C36-18 (SI) - Wellbore #1 - No Surveys	8,800.00	6,684.86	4,885.41	4,592.18	16.661	SF
Ava State C36-20 (PR) - Wellbore #1 - No Surveys	2,000.00	1,920.00	5,623.53	5,541.79	68.801	CC
Ava State C36-20 (PR) - Wellbore #1 - No Surveys	2,100.00	2,019.98	5,625.19	5,539.10	65.340	ES
Ava State C36-20 (PR) - Wellbore #1 - No Surveys	10,700.00	6,669.91	6,294.39	5,992.58	20.856	SF
Ava State C36-21 (SI) - Wellbore #1 - No Surveys	2,000.00	1,925.00	4,392.20	4,310.26	53.605	CC
Ava State C36-21 (SI) - Wellbore #1 - No Surveys	2,100.00	2,024.98	4,393.89	4,307.60	50.919	ES
Ava State C36-21 (SI) - Wellbore #1 - No Surveys	10,100.00	6,676.47	5,046.75	4,747.93	16.889	SF
Ava State C36-22 (SI) - Wellbore #1 - No Surveys	2,000.00	1,946.00	3,392.00	3,309.22	40.978	CC
Ava State C36-22 (SI) - Wellbore #1 - No Surveys	2,100.00	2,045.98	3,393.74	3,306.61	38.950	ES
Ava State C36-22 (SI) - Wellbore #1 - No Surveys	10,100.00	6,702.53	3,708.88	3,408.92	12.365	SF
Ava State C36-24 (PR) - Wellbore #1 - No Surveys	11,238.57	6,683.51	4,888.77	4,582.47	15.961	CC, ES
Ava State C36-24 (PR) - Wellbore #1 - No Surveys	11,600.00	6,682.57	4,902.12	4,593.91	15.906	SF
Ava State C36-31 (PR) - Wellbore #1 - No Surveys	2,000.00	1,910.00	6,300.72	6,219.38	77.465	CC
Ava State C36-31 (PR) - Wellbore #1 - No Surveys	2,200.00	2,109.84	6,306.50	6,216.46	70.043	ES
Ava State C36-31 (PR) - Wellbore #1 - No Surveys	9,300.00	6,663.56	7,436.15	7,141.91	25.273	SF
Booth CC31-68-1HN (PR) - Original Drilling - Original Dri	8,285.33	8,884.69	48.26	11.25	1.304	Level 3, CC
Booth CC31-68-1HN (PR) - Original Drilling - Original Dri	8,300.00	8,884.09	50.43	5.15	1.114	Level 2, ES, SF
Booth State C36-69HN (PR) - Original Drilling - Original D	2,128.21	2,133.29	1,370.11	1,357.67	110.133	CC, ES
Booth State C36-69HN (PR) - Original Drilling - Original D	6,200.00	5,939.00	2,328.32	2,286.99	56.333	SF
Booth State CC30-79HN (PR) - Original Drilling - Orignal	2,600.77	2,754.03	1,298.89	1,282.11	77.383	CC, ES
Booth State CC30-79HN (PR) - Original Drilling - Orignal	6,700.00	6,706.09	2,127.65	2,078.88	43.629	SF
Booth State CC31-69HN (PR) - Original Drilling - Origina	7,250.00	8,555.29	51.06	-21.66	0.702	Level 1, ES, SF
Booth State CC31-69HN (PR) - Original Drilling - Origina	7,291.60	8,557.06	31.02	1.00	1.033	Level 2, CC
State 36-04I4 (PR) - Wellbore #1 - No Surveys	2,000.00	1,918.00	5,369.60	5,287.95	65.758	CC
State 36-04I4 (PR) - Wellbore #1 - No Surveys	2,200.00	2,117.84	5,375.37	5,285.01	59.490	ES
State 36-04I4 (PR) - Wellbore #1 - No Surveys	8,900.00	6,672.60	6,505.27	6,212.20	22.197	SF
State 36-07I4 (SI) - Wellbore #1 - No Surveys	2,000.00	1,938.00	3,606.61	3,524.16	43.740	CC
State 36-07I4 (SI) - Wellbore #1 - No Surveys	2,100.00	2,037.98	3,608.29	3,521.47	41.565	ES
State 36-07I4 (SI) - Wellbore #1 - No Surveys	9,500.00	6,708.96	4,426.45	4,129.35	14.899	SF
State 36-10I4 (SI) - Wellbore #1 - No Surveys	2,000.00	1,934.00	4,375.89	4,293.60	53.172	CC
State 36-10I4 (SI) - Wellbore #1 - No Surveys	10,542.26	6,684.32	4,480.50	4,178.52	14.837	ES
State 36-10I4 (SI) - Wellbore #1 - No Surveys	10,900.00	6,683.39	4,494.76	4,191.06	14.800	SF
State 36-11I4 (PR) - Wellbore #1 - No Surveys	2,000.00	1,923.00	5,372.82	5,290.97	65.637	CC
State 36-11I4 (PR) - Wellbore #1 - No Surveys	2,100.00	2,022.98	5,374.55	5,288.34	62.342	ES
State 36-11I4 (PR) - Wellbore #1 - No Surveys	11,300.00	6,671.35	5,624.12	5,318.52	18.404	SF

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

Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Booth DD06-755
Project:	Mustang	**TVD Reference:**	KB @ 4806.00ft
Reference Site:	CC Section 31	**MD Reference:**	KB @ 4806.00ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Booth DD06-755	**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:	APD-Rev 0	**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
C Section 36						
State 36-12I4 (PR) - Wellbore #1 - No Surveys	2,000.00	1,938.00	6,580.67	6,498.43	80.021	CC
State 36-12I4 (PR) - Wellbore #1 - No Surveys	2,100.00	2,037.98	6,582.34	6,495.75	76.016	ES
State 36-12I4 (PR) - Wellbore #1 - No Surveys	11,500.00	6,685.83	7,140.22	6,833.19	23.256	SF
State 36-14I4 (PR) - Wellbore #1 - No Surveys	12,042.28	6,671.42	5,591.54	5,280.33	17.967	CC
State 36-14I4 (PR) - Wellbore #1 - No Surveys	12,100.00	6,671.27	5,591.84	5,280.29	17.949	ES
State 36-14I4 (PR) - Wellbore #1 - No Surveys	12,600.00	6,669.96	5,619.29	5,304.93	17.875	SF
State 36-15I4 (PR) - Wellbore #1 - No Surveys	11,501.50	6,672.82	3,962.39	3,654.79	12.882	CC, ES
State 36-15I4 (PR) - Wellbore #1 - No Surveys	11,800.00	6,672.05	3,973.62	3,664.51	12.855	SF
State 36-16I4 (PR) - Wellbore #1 - No Surveys	12,033.28	6,714.44	3,192.36	2,879.49	10.204	CC, ES
State 36-16I4 (PR) - Wellbore #1 - No Surveys	12,200.00	6,714.01	3,196.71	2,883.02	10.191	SF
State 36-2I4 (SI) - Wellbore #1 - No Surveys	2,000.00	1,926.00	3,112.58	3,030.60	37.969	CC
State 36-2I4 (SI) - Wellbore #1 - No Surveys	2,200.00	2,125.84	3,118.23	3,027.55	34.388	ES
State 36-2I4 (SI) - Wellbore #1 - No Surveys	8,200.00	6,682.00	4,275.01	3,983.58	14.669	SF
State 36-3I4 (SI) - Wellbore #1 - No Surveys	2,000.00	1,916.00	4,401.10	4,319.52	53.951	CC
State 36-3I4 (SI) - Wellbore #1 - No Surveys	2,200.00	2,115.84	4,406.57	4,316.29	48.811	ES
State 36-3I4 (SI) - Wellbore #1 - No Surveys	8,200.00	6,672.00	5,572.88	5,281.85	19.148	SF
State 36-6I4 (PR) - Wellbore #1 - No Surveys	2,000.00	1,912.00	4,600.57	4,519.15	56.507	CC
State 36-6I4 (PR) - Wellbore #1 - No Surveys	2,100.00	2,011.98	4,602.14	4,516.37	53.656	ES
State 36-6I4 (PR) - Wellbore #1 - No Surveys	9,400.00	6,665.30	5,591.73	5,296.89	18.966	SF
State 36-8I4 (SI) - Wellbore #1 - No Surveys	2,000.00	1,957.00	2,225.84	2,142.62	26.748	CC
State 36-8I4 (SI) - Wellbore #1 - No Surveys	2,100.00	2,056.98	2,227.57	2,140.00	25.437	ES
State 36-8I4 (SI) - Wellbore #1 - No Surveys	9,100.00	6,711.08	2,951.14	2,655.63	9.987	SF
State 36-9I4 (PR) - Wellbore #1 - No Surveys	10,728.61	6,714.84	3,165.78	2,861.45	10.402	CC, ES
State 36-9I4 (PR) - Wellbore #1 - No Surveys	10,900.00	6,714.39	3,170.41	2,865.32	10.392	SF
State B14-36 (PA) - Wellbore #1 - No Surveys	11,467.00	6,679.91	6,652.80	6,345.14	21.624	CC
State B14-36 (PA) - Wellbore #1 - No Surveys	11,500.00	6,679.83	6,652.88	6,345.04	21.611	ES
State B14-36 (PA) - Wellbore #1 - No Surveys	12,300.00	6,677.75	6,704.74	6,392.40	21.466	SF
State B41-36 (SI) - Wellbore #1 - No Surveys	2,000.00	1,948.00	2,178.67	2,095.81	26.295	CC
State B41-36 (SI) - Wellbore #1 - No Surveys	2,100.00	2,047.98	2,180.23	2,093.02	25.000	ES
State B41-36 (SI) - Wellbore #1 - No Surveys	8,357.59	6,704.00	3,272.55	2,979.83	11.180	SF
State C36-01 (SI) - Wellbore #1 - No Surveys	2,000.00	1,948.00	1,585.57	1,502.71	19.136	CC
State C36-01 (SI) - Wellbore #1 - No Surveys	2,200.00	2,147.84	1,590.85	1,499.29	17.375	ES
State C36-01 (SI) - Wellbore #1 - No Surveys	7,721.62	6,704.00	2,766.89	2,475.33	9.490	SF
State C36-04 (PR) - Wellbore #1 - No Surveys	2,000.00	1,919.00	5,918.03	5,836.34	72.439	CC
State C36-04 (PR) - Wellbore #1 - No Surveys	2,200.00	2,118.84	5,923.31	5,832.91	65.525	ES
State C36-04 (PR) - Wellbore #1 - No Surveys	8,200.00	6,675.00	7,104.20	6,813.07	24.402	SF
State C36-13 (SI) - Wellbore #1 - No Surveys	12,033.81	6,706.56	7,110.60	6,798.04	22.750	CC
State C36-13 (SI) - Wellbore #1 - No Surveys	12,100.00	6,706.73	7,110.90	6,797.93	22.721	ES
State C36-13 (SI) - Wellbore #1 - No Surveys	13,000.00	6,709.08	7,175.94	6,857.52	22.536	SF
State C36-15 (PR) - Wellbore #1 - No Surveys	12,043.13	6,707.59	4,476.07	4,163.40	14.316	CC, ES
State C36-15 (PR) - Wellbore #1 - No Surveys	12,400.00	6,708.52	4,490.27	4,175.61	14.270	SF
State C36-32D (SI) - Wellbore #1 - As Drilled	100.00	51.30	6,632.33	6,632.11	10,000.000	CC
State C36-32D (SI) - Wellbore #1 - As Drilled	600.00	517.59	6,633.88	6,631.06	2,355.423	ES
State C36-32D (SI) - Wellbore #1 - As Drilled	13,100.00	6,863.27	8,143.98	8,069.63	109.534	SF
State C36-33D (SI) - Wellbore #1 - Original Drilling	958.00	913.00	6,632.70	6,627.58	1,294.811	CC
State C36-33D (SI) - Wellbore #1 - Original Drilling	1,000.00	913.00	6,632.83	6,627.56	1,257.853	ES
State C36-33D (SI) - Wellbore #1 - Original Drilling	14,600.00	6,816.73	8,223.41	8,141.06	99.857	SF
State C36-99HZ (PR) - Wellbore #1 - As Drilled	11,083.27	10,537.02	2,772.12	2,709.34	44.156	CC, ES
State C36-99HZ (PR) - Wellbore #1 - As Drilled	13,200.00	10,537.02	3,487.86	3,378.06	31.767	SF
State D01-30D (SI) - Wellbore #1 - Original Drilling	100.00	50.78	6,639.00	6,638.78	10,000.000	CC
State D01-30D (SI) - Wellbore #1 - Original Drilling	500.00	420.02	6,640.18	6,637.89	2,904.364	ES
State D01-30D (SI) - Wellbore #1 - Original Drilling	15,300.00	7,129.28	8,098.59	7,994.43	77.757	SF

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

Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Booth DD06-755
Project:	Mustang	**TVD Reference:**	KB @ 4806.00ft
Reference Site:	CC Section 31	**MD Reference:**	KB @ 4806.00ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Booth DD06-755	**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:	APD-Rev 0	**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
CC Section 30						
JIGGER STATE CC #30-01(PR) - JIGGER STATE CC #3	6,485.59	6,156.67	4,982.09	4,835.02	33.876	CC
JIGGER STATE CC #30-01(PR) - JIGGER STATE CC #3	6,500.00	6,170.34	4,982.24	4,834.84	33.803	ES
JIGGER STATE CC #30-01(PR) - JIGGER STATE CC #3	6,850.00	6,468.68	5,072.41	4,918.18	32.890	SF
SPIKE ST GWS #CC 30-03(PA) - SPIKE ST GWS #CC 3	6,372.46	6,084.15	4,115.97	3,970.24	28.244	CC
SPIKE ST GWS #CC 30-03(PA) - SPIKE ST GWS #CC 3	6,400.00	6,110.67	4,116.57	3,970.21	28.126	ES
SPIKE ST GWS #CC 30-03(PA) - SPIKE ST GWS #CC 3	6,700.00	6,387.08	4,199.02	4,046.26	27.488	SF
SPIKE ST GWS #CC 30-04(PA) - SPIKE ST GWS #CC 3	6,336.28	6,132.47	4,455.38	4,417.63	117.998	CC, ES
SPIKE ST GWS #CC 30-04(PA) - SPIKE ST GWS #CC 3	6,550.00	6,320.16	4,489.68	4,451.14	116.482	SF
SPIKE ST GWS #CC 30-05(PA) - SPIKE ST GWS #CC 3	6,291.67	6,014.64	3,147.30	3,003.12	21.830	CC
SPIKE ST GWS #CC 30-05(PA) - SPIKE ST GWS #CC 3	6,300.00	6,022.59	3,147.35	3,002.98	21.801	ES
SPIKE ST GWS #CC 30-05(PA) - SPIKE ST GWS #CC 3	6,600.00	6,307.24	3,213.07	3,062.02	21.271	SF
SPIKE ST GWS #CC 30-06(SI) - SPIKE ST GWS #CC 30	6,370.07	6,078.85	2,800.29	2,654.66	19.230	CC, ES
SPIKE ST GWS #CC 30-06(SI) - SPIKE ST GWS #CC 30	6,600.00	6,296.24	2,841.85	2,691.12	18.855	SF
SPIKE ST GWS #CC 30-08(PR) - SPIKE ST GWS #CC 3	6,524.83	6,217.76	3,704.38	3,556.08	24.979	CC
SPIKE ST GWS #CC 30-08(PR) - SPIKE ST GWS #CC 3	6,550.00	6,241.28	3,704.78	3,555.93	24.889	ES
SPIKE ST GWS #CC 30-08(PR) - SPIKE ST GWS #CC 3	6,850.00	6,492.68	3,771.22	3,616.62	24.392	SF
SPIKE ST GWS #CC 30-09(SI) - SPIKE ST GWS #CC 30	6,632.72	6,346.64	2,787.44	2,636.38	18.452	CC
SPIKE ST GWS #CC 30-09(SI) - SPIKE ST GWS #CC 30	6,650.00	6,361.93	2,787.59	2,636.18	18.410	ES
SPIKE ST GWS #CC 30-09(SI) - SPIKE ST GWS #CC 30	6,900.00	6,557.12	2,824.49	2,668.63	18.122	SF
SPIKE ST GWS #CC 30-10(SI) - SPIKE ST GWS #CC 30	6,504.28	6,251.38	1,811.71	1,662.75	12.162	CC, ES
SPIKE ST GWS #CC 30-10(SI) - SPIKE ST GWS #CC 30	6,700.00	6,428.08	1,838.08	1,685.01	12.008	SF
SPIKE ST GWS #CC 30-12(PR) - SPIKE ST GWS #CC 3	5,787.27	5,566.76	2,144.37	2,011.34	16.119	CC
SPIKE ST GWS #CC 30-12(PR) - SPIKE ST GWS #CC 3	6,200.00	5,952.33	2,149.42	2,006.97	15.088	ES
SPIKE ST GWS #CC 30-12(PR) - SPIKE ST GWS #CC 3	6,500.00	6,238.34	2,198.71	2,049.43	14.728	SF
SPIKE ST GWS #CC 30-14(PR) - SPIKE ST GWS #CC 3	6,247.54	5,984.82	206.12	62.75	1.438	Level 3, CC
SPIKE ST GWS #CC 30-14(PR) - SPIKE ST GWS #CC 3	6,250.00	5,987.14	206.12	62.70	1.437	Level 3, ES, SF
SPIKE ST GWS #CC 30-15(SI) - SPIKE ST GWS #CC 30	6,826.39	6,522.52	985.27	830.24	6.355	CC
SPIKE ST GWS #CC 30-15(SI) - SPIKE ST GWS #CC 30	6,850.00	6,539.68	985.57	830.16	6.342	ES
SPIKE ST GWS #CC 30-15(SI) - SPIKE ST GWS #CC 30	6,900.00	6,574.12	988.35	832.17	6.328	SF
SPIKE ST GWS #CC 30-16(SI) - SPIKE ST GWS #CC 30	6,996.52	6,631.67	2,278.23	2,120.71	14.463	CC
SPIKE ST GWS #CC 30-16(SI) - SPIKE ST GWS #CC 30	7,000.00	6,633.58	2,278.23	2,120.67	14.460	ES
SPIKE ST GWS #CC 30-16(SI) - SPIKE ST GWS #CC 30	7,150.00	6,700.54	2,288.24	2,129.19	14.387	SF
SPIKE ST GWS CC #30-07(SI) - SPIKE ST GWS CC #30	6,455.09	6,176.57	3,044.74	2,897.25	20.644	CC, ES
SPIKE ST GWS CC #30-07(SI) - SPIKE ST GWS CC #30	6,700.00	6,400.08	3,089.05	2,936.37	20.233	SF
Spike State #CC30-19(SI) - Spike State #CC30-19 - No S	6,345.16	6,046.88	3,493.88	3,348.91	24.101	CC
Spike State #CC30-19(SI) - Spike State #CC30-19 - No S	6,350.00	6,051.53	3,493.90	3,348.82	24.082	ES
Spike State #CC30-19(SI) - Spike State #CC30-19 - No S	6,650.00	6,332.93	3,564.58	3,412.93	23.506	SF
Spike State #CC30-24(PR) - Spike State #CC30-24 - We	6,665.94	6,340.38	1,931.02	1,895.47	54.323	CC, ES
Spike State #CC30-24(PR) - Spike State #CC30-24 - We	6,850.00	6,480.82	1,947.57	1,911.30	53.702	SF
Spike State #CC30-24(SI) - Spike State #CC30-24 - No S	6,450.33	6,195.02	960.92	813.06	6.499	CC, ES
Spike State #CC30-24(SI) - Spike State #CC30-24 - No S	6,550.00	6,289.28	968.71	818.61	6.454	SF
SPIKE STATE CC #30-11J(PA) - SPIKE STATE CC #30-1	6,307.96	6,047.20	1,220.23	1,075.34	8.422	CC, ES
SPIKE STATE CC #30-11J(PA) - SPIKE STATE CC #30-1	6,450.00	6,183.70	1,235.29	1,087.14	8.338	SF
SPIKE STATE CC #30-13(PR) - SPIKE STATE CC #30-1	3,521.52	3,437.13	1,081.25	1,000.06	13.317	CC
SPIKE STATE CC #30-13(PR) - SPIKE STATE CC #30-1	3,700.00	3,603.87	1,083.12	997.91	12.711	ES
SPIKE STATE CC #30-13(PR) - SPIKE STATE CC #30-1	6,100.00	5,845.91	1,419.67	1,280.25	10.183	SF
Spike State CC #30-18(SI) - Spike State CC #30-18 - No	6,406.02	6,113.47	3,463.10	3,316.81	23.673	CC, ES
Spike State CC #30-18(SI) - Spike State CC #30-18 - No	6,700.00	6,384.08	3,530.24	3,377.67	23.138	SF
SPIKE STATE CC #30-20(PR) - SPIKE STATE CC #30-2	6,327.40	6,048.83	2,135.33	1,990.36	14.729	CC
SPIKE STATE CC #30-20(PR) - SPIKE STATE CC #30-2	6,350.00	6,070.53	2,135.73	1,990.23	14.679	ES
SPIKE STATE CC #30-20(PR) - SPIKE STATE CC #30-2	6,550.00	6,261.28	2,172.72	2,022.73	14.486	SF
SPIKE STATE CC #30-21(PR) - SPIKE STATE CC #30-2	6,399.06	6,129.77	1,796.55	1,649.93	12.253	CC
SPIKE STATE CC #30-21(PR) - SPIKE STATE CC #30-2	6,400.00	6,130.67	1,796.55	1,649.90	12.251	ES

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

Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Booth DD06-755
Project:	Mustang	**TVD Reference:**	KB @ 4806.00ft
Reference Site:	CC Section 31	**MD Reference:**	KB @ 4806.00ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Booth DD06-755	**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:	APD-Rev 0	**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
CC Section 30						
SPIKE STATE CC #30-21(PR) - SPIKE STATE CC #30-2	6,550.00	6,273.28	1,814.77	1,664.76	12.097	SF
SPIKE STATE CC #30-22(SI) - SPIKE STATE CC #30-22	6,498.08	6,115.95	2,860.29	2,824.51	79.930	CC
SPIKE STATE CC #30-22(SI) - SPIKE STATE CC #30-22	6,500.00	6,117.62	2,860.29	2,824.50	79.910	ES
SPIKE STATE CC #30-22(SI) - SPIKE STATE CC #30-22	6,700.00	6,273.66	2,886.76	2,850.13	78.806	SF
SPIKE STATE CC #30-IJ(PR) - SPIKE STATE CC #30-IJ	6,454.61	6,068.69	3,952.33	3,917.80	114.441	CC, ES
SPIKE STATE CC #30-IJ(PR) - SPIKE STATE CC #30-IJ	6,750.00	6,332.33	4,014.84	3,979.04	112.166	SF
SPIKE STATE GWS CC #30-02(PR) - SPIKE STATE GW	6,431.65	6,126.10	4,210.10	4,063.60	28.737	CC
SPIKE STATE GWS CC #30-02(PR) - SPIKE STATE GW	6,450.00	6,143.70	4,210.36	4,063.44	28.656	ES
SPIKE STATE GWS CC #30-02(PR) - SPIKE STATE GW	6,750.00	6,413.42	4,286.55	4,133.40	27.990	SF

Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Booth DD06-755
Project:	Mustang	**TVD Reference:**	KB @ 4806.00ft
Reference Site:	CC Section 31	**MD Reference:**	KB @ 4806.00ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Booth DD06-755	**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:	APD-Rev 0	**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
CC Section 31						
BOOTH 11-31U (SI) - BOOTH #11-31U - No Surveys	2,000.00	1,964.00	516.17	469.95	11.168	CC
BOOTH 11-31U (SI) - BOOTH #11-31U - No Surveys	2,100.00	2,063.98	517.86	469.29	10.662	ES
BOOTH 11-31U (SI) - BOOTH #11-31U - No Surveys	2,700.00	2,657.06	598.96	536.42	9.577	SF
Booth 12-31U (SI) - Wellbore #1 - No Surveys	2,000.00	1,984.00	1,589.97	1,505.67	18.862	CC
Booth 12-31U (SI) - Wellbore #1 - No Surveys	9,200.00	6,737.82	1,607.22	1,310.14	5.410	ES, SF
BOOTH 21-31U (SI) - BOOTH #21-31U - No Surveys	7,906.37	6,750.00	341.21	180.57	2.124	CC, ES, SF
Booth 22-31U (SI) - Wellbore #1 - No Surveys	9,141.26	6,737.97	329.48	32.63	1.110	Level 2, CC, ES, SF
BOOTH 31-31 (SI) - BOOTH #31-31 - No Surveys	7,903.42	6,735.00	975.80	815.46	6.086	CC, ES, SF
BOOTH 31-AU (SI) - BOOTH #31-AU - No Surveys	2,000.00	1,974.00	956.37	909.95	20.604	CC
BOOTH 31-AU (SI) - BOOTH #31-AU - No Surveys	8,609.19	6,729.35	1,021.36	859.43	6.308	ES, SF
Booth 31DU (SI) - Wellbore #1 - No Surveys	11,167.81	6,847.31	1,634.09	1,321.69	5.231	CC, ES
Booth 31DU (SI) - Wellbore #1 - No Surveys	11,200.00	6,847.39	1,634.40	1,321.71	5.227	SF
Booth 32-31 (SI) - Wellbore #1 - No Surveys	9,034.92	6,743.25	757.14	460.52	2.553	CC, ES, SF
Booth 33-31U (SI) - Wellbore #1 - No Surveys	10,511.73	6,845.60	980.56	672.31	3.181	CC, ES, SF
Booth 34-31U (SI) - Wellbore #1 - No Surveys	11,849.40	6,829.08	839.38	523.19	2.655	CC, ES
Booth 34-31U (SI) - Wellbore #1 - No Surveys	11,900.00	6,829.21	840.90	524.11	2.654	SF
BOOTH 41-31 (SI) - BOOTH #41-31 - No Surveys	7,975.24	6,741.00	2,187.99	2,027.41	13.625	CC, ES
BOOTH 41-31 (SI) - BOOTH #41-31 - No Surveys	8,100.00	6,741.00	2,191.55	2,030.65	13.621	SF
Booth 42-31 (PA) - Wellbore #1 - No Surveys	9,126.63	6,743.01	2,287.05	1,990.06	7.701	CC, ES
Booth 42-31 (PA) - Wellbore #1 - No Surveys	9,200.00	6,742.82	2,288.22	1,990.83	7.694	SF
Booth 43-31U (SI) - Wellbore #1 - No Surveys	10,505.03	6,845.58	2,306.06	1,997.85	7.482	CC, ES
Booth 43-31U (SI) - Wellbore #1 - No Surveys	10,600.00	6,845.83	2,308.01	1,999.06	7.470	SF
Booth 44-31U (SI) - Wellbore #1 - No Surveys	11,809.23	6,838.98	2,298.74	1,982.43	7.267	CC, ES
Booth 44-31U (SI) - Wellbore #1 - No Surveys	11,900.00	6,839.21	2,300.53	1,983.41	7.254	SF
Booth CC31-13 (PR) - Wellbore #1 - No Surveys	11,813.86	6,759.01	1,532.93	1,219.79	4.895	CC, ES, SF
Booth CC31-17D (SI) - Booth #CC31-17D - Wellbore #1 -	8,573.98	6,800.01	1,657.96	1,613.07	36.933	CC, ES
Booth CC31-17D (SI) - Booth #CC31-17D - Wellbore #1 -	8,900.00	6,800.01	1,689.71	1,642.94	36.128	SF
Booth DD06-715 - Wellbore #1 - APD-Rev 0	6,818.92	6,105.07	2,520.81	2,473.26	53.025	CC
Booth DD06-715 - Wellbore #1 - APD-Rev 0	17,579.42	17,396.06	2,624.04	2,448.01	14.906	ES, SF
Booth DD06-725 - Wellbore #1 - APD-Rev 0	7,345.98	6,995.80	1,946.76	1,897.36	39.406	CC
Booth DD06-725 - Wellbore #1 - APD-Rev 0	17,579.42	17,222.12	1,970.52	1,794.05	11.166	ES, SF
Booth DD06-730 - Wellbore #1 - APD-Rev 0	7,341.72	7,147.07	1,619.99	1,570.73	32.889	CC
Booth DD06-730 - Wellbore #1 - APD-Rev 0	17,579.42	17,391.85	1,642.52	1,467.23	9.371	ES, SF
Booth DD06-734 - Wellbore #1 - APD-Rev 0	7,427.25	7,183.38	1,295.61	1,246.30	26.275	CC
Booth DD06-734 - Wellbore #1 - APD-Rev 0	17,579.42	17,315.22	1,312.01	1,136.02	7.455	ES, SF
Booth DD06-745 - Wellbore #1 - APD-Rev 0	7,454.83	7,177.47	657.40	608.15	13.349	CC
Booth DD06-745 - Wellbore #1 - APD-Rev 0	17,579.42	17,287.37	661.85	485.43	3.752	ES, SF
Booth DD06-750 - Wellbore #1 - APD-Rev 0	2,000.00	2,000.00	22.32	8.45	1.609	CC
Booth DD06-750 - Wellbore #1 - APD-Rev 0	2,200.00	2,198.71	22.97	7.71	1.505	ES
Booth DD06-750 - Wellbore #1 - APD-Rev 0	2,300.00	2,298.05	23.82	7.88	1.495	Level 3, SF
Booth DD06-765 - Wellbore #1 - APD-Rev 0	2,001.98	2,002.99	22.32	8.43	1.607	CC
Booth DD06-765 - Wellbore #1 - APD-Rev 0	2,100.00	2,101.38	22.74	8.15	1.559	ES, SF
Booth DD06-775 - Wellbore #1 - APD-Rev 0	2,000.00	2,001.00	44.64	30.77	3.217	CC, ES
Booth DD06-775 - Wellbore #1 - APD-Rev 0	2,100.00	2,100.88	46.04	31.45	3.156	SF
Booth DD06-785 - Wellbore #1 - APD-Rev 0	2,000.00	2,000.00	66.97	53.09	4.827	CC, ES
Booth DD06-785 - Wellbore #1 - APD-Rev 0	2,100.00	2,098.63	69.24	54.66	4.750	SF
Sadie CC31-11 (PR) - Wellbore #1 - No Surveys	10,423.52	6,756.63	244.96	-59.21	0.805	Level 1, CC, ES, SF
Sadie CC31-12 (PR) - Wellbore #1 - No Surveys	10,597.84	6,825.82	1,458.28	1,150.31	4.735	CC
Sadie CC31-12 (PR) - Wellbore #1 - No Surveys	10,600.00	6,825.83	1,458.28	1,150.30	4.735	ES, SF
Sadie CC31-14 (PR) - Wellbore #1 - Wellbore #1 - As Dri	11,978.06	6,805.91	160.06	90.15	2.289	CC, ES, SF
UPV 31-13I3 (PR) - Wellbore #1 - No Surveys	11,494.81	6,748.84	1,105.85	795.26	3.560	CC, ES
UPV 31-13I3 (PR) - Wellbore #1 - No Surveys	11,500.00	6,748.83	1,105.87	795.26	3.560	SF

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

Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Booth DD06-755
Project:	Mustang	**TVD Reference:**	KB @ 4806.00ft
Reference Site:	CC Section 31	**MD Reference:**	KB @ 4806.00ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Booth DD06-755	**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:	APD-Rev 0	**Offset TVD Reference:**	Offset Datum

Summary

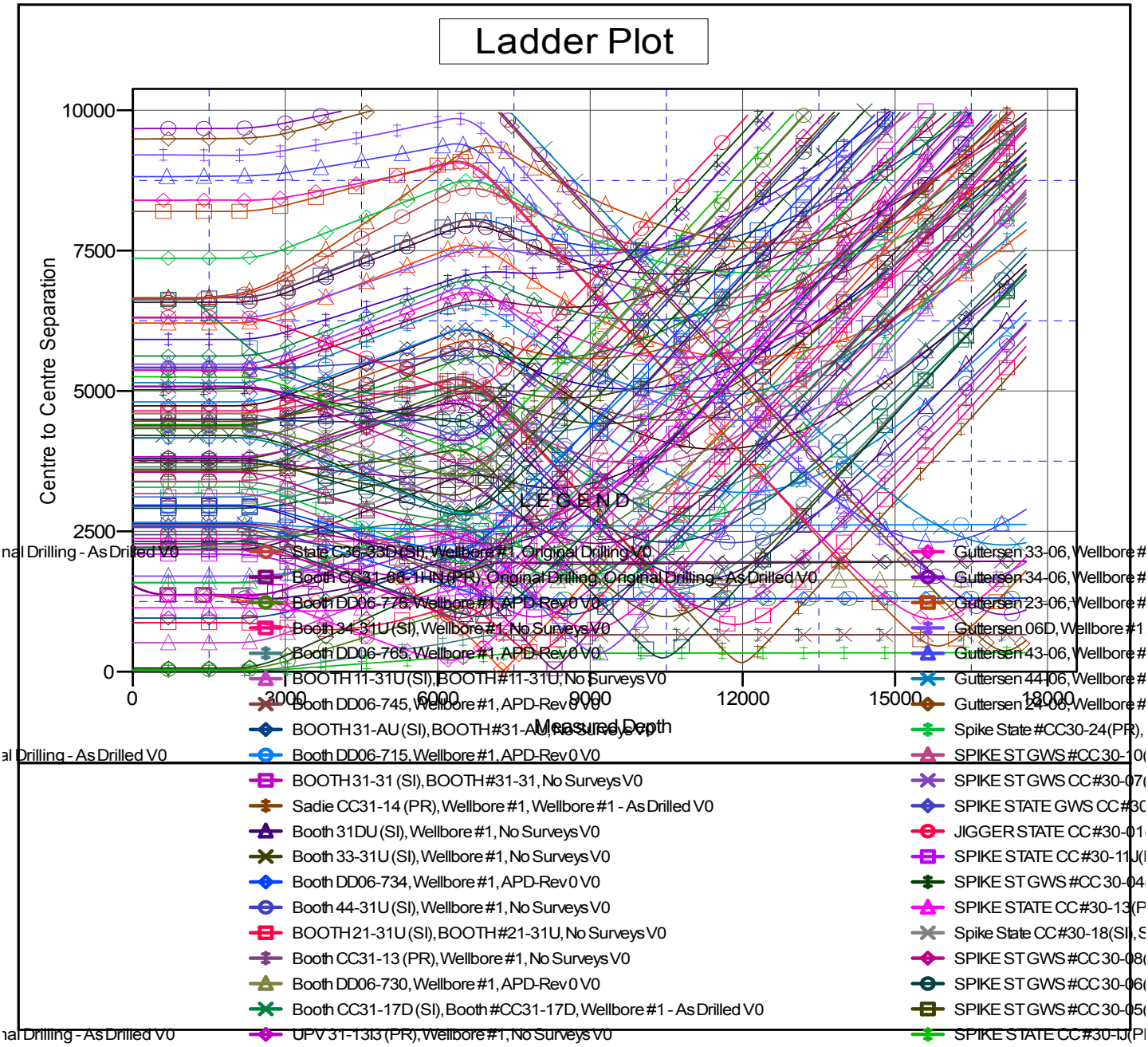
Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
DD Section 06						
Guttersen 06D - Wellbore #1 - Wellbore #1 - As Drilled	16,453.83	6,657.83	1,593.75	1,490.79	15.480	CC, ES
Guttersen 06D - Wellbore #1 - Wellbore #1 - As Drilled	16,600.00	6,659.81	1,600.43	1,496.07	15.335	SF
Guttersen 23-06 - Wellbore #1 - Wellbore #1 - As Drilled	15,839.54	6,781.69	458.41	360.11	4.663	CC, ES, SF
Guttersen 24-06 - Wellbore #1 - Wellbore #1 - As Drilled	17,164.96	6,735.71	373.62	265.42	3.453	CC, ES, SF
Guttersen 33-06 - Wellbore #1 - Wellbore #1 - As Drilled	15,761.11	6,772.57	937.44	840.07	9.628	CC, ES
Guttersen 33-06 - Wellbore #1 - Wellbore #1 - As Drilled	15,800.00	6,773.86	938.24	840.40	9.589	SF
Guttersen 34-06 - Wellbore #1 - Wellbore #1 - As Drilled	17,158.73	6,749.62	1,018.57	910.23	9.402	CC, ES
Guttersen 34-06 - Wellbore #1 - Wellbore #1 - As Drilled	17,200.00	6,750.28	1,019.41	910.57	9.366	SF
Guttersen 43-06 - Wellbore #1 - Wellbore #1 - As Drilled	15,837.88	6,676.94	2,311.08	2,213.00	23.562	CC, ES
Guttersen 43-06 - Wellbore #1 - Wellbore #1 - As Drilled	16,200.00	6,677.20	2,339.28	2,238.27	23.157	SF
Guttersen 44-06 - Wellbore #1 - Wellbore #1 - As Drilled	17,144.18	6,758.01	2,257.18	2,148.99	20.862	CC, ES
Guttersen 44-06 - Wellbore #1 - Wellbore #1 - As Drilled	17,400.00	6,756.37	2,271.63	2,161.25	20.580	SF

Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Booth DD06-755
Project:	Mustang	**TVD Reference:**	KB @ 4806.00ft
Reference Site:	CC Section 31	**MD Reference:**	KB @ 4806.00ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Booth DD06-755	**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:	APD-Rev 0	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to KB @ 4806.00ft	Coordinates are relative to: Booth DD06-755
Offset Depths are relative to Offset Datum	Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is -105.5000000	Grid Convergence at Surface is: 0.66°



Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Booth DD06-755
Project:	Mustang	**TVD Reference:**	KB @ 4806.00ft
Reference Site:	CC Section 31	**MD Reference:**	KB @ 4806.00ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Booth DD06-755	**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:	APD-Rev 0	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to KB @ 4806.00ft	Coordinates are relative to: Booth DD06-755
Offset Depths are relative to Offset Datum	Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is -105.5000000	Grid Convergence at Surface is: 0.66°