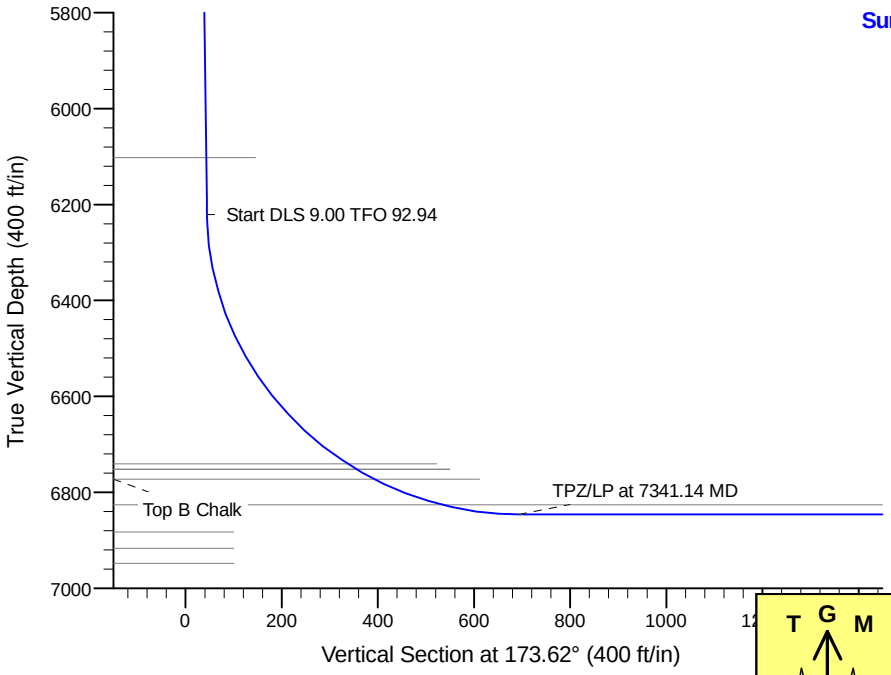
Project: Mustang
Site: Y Section 05
Well: Pioneer Y17-755
Wellbore: Pioneer Y17-755
Design: Plan #1

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

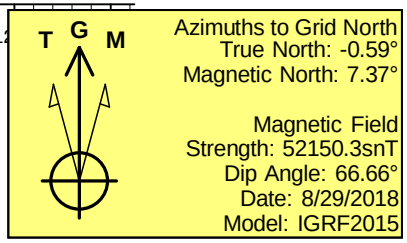
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	2200.00	0.00	0.00	2200.00	0.00	0.00	0.00	0.00	0.00	
3	2910.80	14.22	86.37	2903.53	5.55	87.55	2.00	86.37	4.20	
4	5332.87	14.22	86.37	6220.80	58.76	926.26	0.00	0.00	44.47	
5	7341.14	90.00	179.40	6846.00	-576.13	1091.03	9.00	92.94	693.73	Pioneer Y17-755-TPZ
6	17471.02	90.00	179.40	6846.00	-10705.45	1196.36	0.00	0.00	10772.09	Pioneer Y17-755-BHL



Surface:396' FSL,1209' FWL, Sec.5

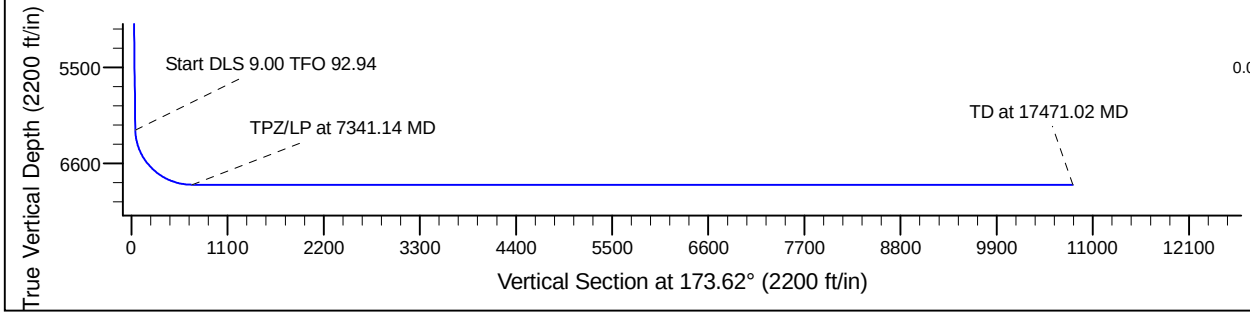
TPZ: 200' FNL, 2297' FWL, Sec.8

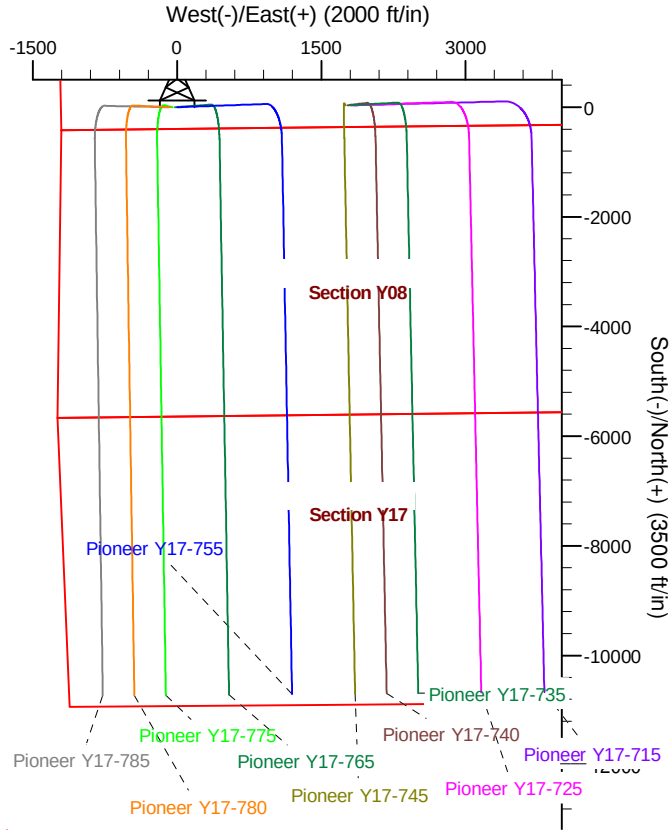
BHL: 200' FSL, 2319' FWL, Sec.17



Azimuths to Grid North
True North: -0.59°
Magnetic North: 7.37°

Magnetic Field
Strength: 52150.3snT
Dip Angle: 66.66°
Date: 8/29/2018
Model: IGRF2015





WELL DETAILS: Pioneer Y17-755

	Northing	Easting	Latittude	Longitude
0.00	1302896.48	3257034.72	40.1611870	-104.5803320

4856.00

Plan: Plan #1 (Pioneer Y17-755/Pioneer Y17-755)

Created By: Colby Baxter Date: 16:38, September 25 2018

Checked: _____ Date: _____

Reviewed: _____ Date: _____

Approved: _____ Date: _____

Northern Region - DJ Basin

Mustang
Y Section 05
Pioneer Y17-755

Pioneer Y17-755

Plan: Plan #1

Standard Survey Report

25 September, 2018

Noble Energy, Inc.

Survey Report

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Pioneer Y17-755
Project:	Mustang	**TVD Reference:**	Well @ 4886.00ft
Site:	Y Section 05	**MD Reference:**	Well @ 4886.00ft
Well:	Pioneer Y17-755	**North Reference:**	Grid
Wellbore:	Pioneer Y17-755	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #1	**Database:**	EDMP

Project	Mustang, Weld County Colorado		
Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site	Y Section 05				
Site Position:		**Northing:**	1,305,805.36 usft	**Latitude:**	40.1691900
From:	Map	**Easting:**	3,256,395.86 usft	**Longitude:**	-104.5825100
Position Uncertainty:	0.00 ft	**Slot Radius:**	13.200 in	**Grid Convergence:**	0.59 °

Well	Pioneer Y17-755					
Well Position	**+N/-S**	0.00 ft	**Northing:**	1,302,896.47 usft	**Latitude:**	40.1611870
	+E/-W	0.00 ft	**Easting:**	3,257,034.72 usft	**Longitude:**	-104.5803320
Position Uncertainty		0.00 ft	**Wellhead Elevation:**	ft	**Ground Level:**	4,856.00 ft

Wellbore	Pioneer Y17-755			
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2015	8/29/2018	7.97	66.66	52,150.27890807

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	173.62

Survey Tool Program **Date** 9/25/2018

From (ft)	**To (ft)**	**Survey (Wellbore)**	**Tool Name**	**Description**
0.00	17,470.93	Plan #1 (Pioneer Y17-755)	2_MWD+IFR1+MS	A008Mb: IFR dec & multi-station analysis

Planned Survey

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

Noble Energy, Inc.

Survey Report

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Pioneer Y17-755
Project:	Mustang	**TVD Reference:**	Well @ 4886.00ft
Site:	Y Section 05	**MD Reference:**	Well @ 4886.00ft
Well:	Pioneer Y17-755	**North Reference:**	Grid
Wellbore:	Pioneer Y17-755	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #1	**Database:**	EDMP

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	2.00	86.37	2,299.98	0.11	1.74	0.08	2.00	2.00	0.00
2,400.00	4.00	86.37	2,399.84	0.44	6.96	0.33	2.00	2.00	0.00
2,500.00	6.00	86.37	2,499.45	0.99	15.66	0.75	2.00	2.00	0.00
2,600.00	8.00	86.37	2,598.70	1.77	27.82	1.34	2.00	2.00	0.00
2,700.00	10.00	86.37	2,697.47	2.76	43.44	2.09	2.00	2.00	0.00
2,800.00	12.00	86.37	2,795.62	3.96	62.48	3.00	2.00	2.00	0.00
2,900.00	14.00	86.37	2,893.06	5.39	84.93	4.08	2.00	2.00	0.00
2,910.80	14.22	86.37	2,903.53	5.55	87.55	4.20	2.00	2.00	0.00
3,000.00	14.22	86.37	2,990.00	6.94	109.41	5.25	0.00	0.00	0.00
3,100.00	14.22	86.37	3,086.94	8.50	133.92	6.43	0.00	0.00	0.00
3,200.00	14.22	86.37	3,183.87	10.05	158.43	7.61	0.00	0.00	0.00
3,300.00	14.22	86.37	3,280.81	11.61	182.94	8.78	0.00	0.00	0.00
3,400.00	14.22	86.37	3,377.75	13.16	207.45	9.96	0.00	0.00	0.00
3,500.00	14.22	86.37	3,474.69	14.72	231.96	11.14	0.00	0.00	0.00
3,600.00	14.22	86.37	3,571.62	16.27	256.47	12.31	0.00	0.00	0.00
3,700.00	14.22	86.37	3,668.56	17.83	280.98	13.49	0.00	0.00	0.00
3,800.00	14.22	86.37	3,765.50	19.38	305.48	14.67	0.00	0.00	0.00
3,900.00	14.22	86.37	3,862.44	20.93	329.99	15.84	0.00	0.00	0.00
4,000.00	14.22	86.37	3,959.37	22.49	354.50	17.02	0.00	0.00	0.00
4,100.00	14.22	86.37	4,056.31	24.04	379.01	18.20	0.00	0.00	0.00
4,200.00	14.22	86.37	4,153.25	25.60	403.52	19.37	0.00	0.00	0.00
4,300.00	14.22	86.37	4,250.19	27.15	428.03	20.55	0.00	0.00	0.00
4,400.00	14.22	86.37	4,347.12	28.71	452.54	21.73	0.00	0.00	0.00
4,500.00	14.22	86.37	4,444.06	30.26	477.05	22.90	0.00	0.00	0.00
4,600.00	14.22	86.37	4,541.00	31.82	501.55	24.08	0.00	0.00	0.00
4,700.00	14.22	86.37	4,637.94	33.37	526.06	25.26	0.00	0.00	0.00
4,800.00	14.22	86.37	4,734.88	34.93	550.57	26.43	0.00	0.00	0.00
4,900.00	14.22	86.37	4,831.81	36.48	575.08	27.61	0.00	0.00	0.00
5,000.00	14.22	86.37	4,928.75	38.04	599.59	28.79	0.00	0.00	0.00
5,100.00	14.22	86.37	5,025.69	39.59	624.10	29.97	0.00	0.00	0.00
5,200.00	14.22	86.37	5,122.63	41.15	648.61	31.14	0.00	0.00	0.00

Noble Energy, Inc.

Survey Report

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Pioneer Y17-755
Project:	Mustang	**TVD Reference:**	Well @ 4886.00ft
Site:	Y Section 05	**MD Reference:**	Well @ 4886.00ft
Well:	Pioneer Y17-755	**North Reference:**	Grid
Wellbore:	Pioneer Y17-755	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #1	**Database:**	EDMP

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
5,300.00	14.22	86.37	5,219.56	42.70	673.11	32.32	0.00	0.00	0.00
5,400.00	14.22	86.37	5,316.50	44.26	697.62	33.50	0.00	0.00	0.00
5,500.00	14.22	86.37	5,413.44	45.81	722.13	34.67	0.00	0.00	0.00
5,600.00	14.22	86.37	5,510.38	47.37	746.64	35.85	0.00	0.00	0.00
5,700.00	14.22	86.37	5,607.31	48.92	771.15	37.03	0.00	0.00	0.00
5,800.00	14.22	86.37	5,704.25	50.48	795.66	38.20	0.00	0.00	0.00
5,900.00	14.22	86.37	5,801.19	52.03	820.17	39.38	0.00	0.00	0.00
6,000.00	14.22	86.37	5,898.13	53.59	844.68	40.56	0.00	0.00	0.00
6,100.00	14.22	86.37	5,995.06	55.14	869.18	41.73	0.00	0.00	0.00
6,200.00	14.22	86.37	6,092.00	56.70	893.69	42.91	0.00	0.00	0.00
6,300.00	14.22	86.37	6,188.94	58.25	918.20	44.09	0.00	0.00	0.00
6,332.87	14.22	86.37	6,220.80	58.76	926.26	44.47	0.00	0.00	0.00
6,400.00	15.13	110.11	6,285.80	56.27	942.73	48.78	9.00	1.37	35.37
6,500.00	20.04	135.50	6,381.24	39.52	967.05	68.12	9.00	4.91	25.39
6,600.00	27.07	149.74	6,472.92	7.58	990.57	102.49	9.00	7.03	14.24
6,700.00	34.97	158.20	6,558.59	-38.78	1,012.73	151.02	9.00	7.89	8.46
6,800.00	43.25	163.80	6,636.14	-98.41	1,032.97	212.53	9.00	8.28	5.61
6,900.00	51.74	167.89	6,703.66	-169.84	1,050.80	285.50	9.00	8.48	4.09
7,000.00	60.33	171.12	6,759.49	-251.32	1,065.77	368.13	9.00	8.60	3.22
7,100.00	68.99	173.83	6,802.25	-340.83	1,077.52	458.40	9.00	8.66	2.71
7,200.00	77.69	176.24	6,830.89	-436.18	1,085.76	554.07	9.00	8.70	2.41
7,300.00	86.41	178.49	6,844.71	-535.02	1,090.28	652.79	9.00	8.72	2.25
7,341.14	90.00	179.40	6,846.00	-576.13	1,091.03	693.73	9.00	8.72	2.21
7,400.00	90.00	179.40	6,846.00	-634.98	1,091.64	752.29	0.00	0.00	0.00
7,500.00	90.00	179.40	6,846.00	-734.97	1,092.68	851.78	0.00	0.00	0.00
7,600.00	90.00	179.40	6,846.00	-834.97	1,093.72	951.27	0.00	0.00	0.00
7,700.00	90.00	179.40	6,846.00	-934.96	1,094.76	1,050.76	0.00	0.00	0.00
7,800.00	90.00	179.40	6,846.00	-1,034.96	1,095.80	1,150.26	0.00	0.00	0.00
7,900.00	90.00	179.40	6,846.00	-1,134.95	1,096.84	1,249.75	0.00	0.00	0.00
8,000.00	90.00	179.40	6,846.00	-1,234.95	1,097.88	1,349.24	0.00	0.00	0.00
8,100.00	90.00	179.40	6,846.00	-1,334.94	1,098.92	1,448.73	0.00	0.00	0.00
8,200.00	90.00	179.40	6,846.00	-1,434.94	1,099.96	1,548.22	0.00	0.00	0.00
8,300.00	90.00	179.40	6,846.00	-1,534.93	1,101.00	1,647.71	0.00	0.00	0.00
8,400.00	90.00	179.40	6,846.00	-1,634.92	1,102.04	1,747.20	0.00	0.00	0.00
8,500.00	90.00	179.40	6,846.00	-1,734.92	1,103.08	1,846.70	0.00	0.00	0.00
8,600.00	90.00	179.40	6,846.00	-1,834.91	1,104.12	1,946.19	0.00	0.00	0.00
8,700.00	90.00	179.40	6,846.00	-1,934.91	1,105.16	2,045.68	0.00	0.00	0.00
8,800.00	90.00	179.40	6,846.00	-2,034.90	1,106.20	2,145.17	0.00	0.00	0.00
8,900.00	90.00	179.40	6,846.00	-2,134.90	1,107.24	2,244.66	0.00	0.00	0.00
9,000.00	90.00	179.40	6,846.00	-2,234.89	1,108.28	2,344.15	0.00	0.00	0.00
9,100.00	90.00	179.40	6,846.00	-2,334.89	1,109.32	2,443.64	0.00	0.00	0.00
9,200.00	90.00	179.40	6,846.00	-2,434.88	1,110.36	2,543.14	0.00	0.00	0.00
9,300.00	90.00	179.40	6,846.00	-2,534.88	1,111.40	2,642.63	0.00	0.00	0.00

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Pioneer Y17-755
Project:	Mustang	**TVD Reference:**	Well @ 4886.00ft
Site:	Y Section 05	**MD Reference:**	Well @ 4886.00ft
Well:	Pioneer Y17-755	**North Reference:**	Grid
Wellbore:	Pioneer Y17-755	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #1	**Database:**	EDMP

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
9,400.00	90.00	179.40	6,846.00	-2,634.87	1,112.44	2,742.12	0.00	0.00	0.00
9,500.00	90.00	179.40	6,846.00	-2,734.87	1,113.48	2,841.61	0.00	0.00	0.00
9,600.00	90.00	179.40	6,846.00	-2,834.86	1,114.52	2,941.10	0.00	0.00	0.00
9,700.00	90.00	179.40	6,846.00	-2,934.85	1,115.56	3,040.59	0.00	0.00	0.00
9,800.00	90.00	179.40	6,846.00	-3,034.85	1,116.60	3,140.08	0.00	0.00	0.00
9,900.00	90.00	179.40	6,846.00	-3,134.84	1,117.64	3,239.58	0.00	0.00	0.00
10,000.00	90.00	179.40	6,846.00	-3,234.84	1,118.68	3,339.07	0.00	0.00	0.00
10,100.00	90.00	179.40	6,846.00	-3,334.83	1,119.72	3,438.56	0.00	0.00	0.00
10,200.00	90.00	179.40	6,846.00	-3,434.83	1,120.76	3,538.05	0.00	0.00	0.00
10,300.00	90.00	179.40	6,846.00	-3,534.82	1,121.80	3,637.54	0.00	0.00	0.00
10,400.00	90.00	179.40	6,846.00	-3,634.82	1,122.84	3,737.03	0.00	0.00	0.00
10,500.00	90.00	179.40	6,846.00	-3,734.81	1,123.88	3,836.53	0.00	0.00	0.00
10,600.00	90.00	179.40	6,846.00	-3,834.81	1,124.92	3,936.02	0.00	0.00	0.00
10,700.00	90.00	179.40	6,846.00	-3,934.80	1,125.96	4,035.51	0.00	0.00	0.00
10,800.00	90.00	179.40	6,846.00	-4,034.79	1,127.00	4,135.00	0.00	0.00	0.00
10,900.00	90.00	179.40	6,846.00	-4,134.79	1,128.04	4,234.49	0.00	0.00	0.00
11,000.00	90.00	179.40	6,846.00	-4,234.78	1,129.08	4,333.98	0.00	0.00	0.00
11,100.00	90.00	179.40	6,846.00	-4,334.78	1,130.12	4,433.47	0.00	0.00	0.00
11,200.00	90.00	179.40	6,846.00	-4,434.77	1,131.16	4,532.97	0.00	0.00	0.00
11,300.00	90.00	179.40	6,846.00	-4,534.77	1,132.20	4,632.46	0.00	0.00	0.00
11,400.00	90.00	179.40	6,846.00	-4,634.76	1,133.24	4,731.95	0.00	0.00	0.00
11,500.00	90.00	179.40	6,846.00	-4,734.76	1,134.27	4,831.44	0.00	0.00	0.00
11,600.00	90.00	179.40	6,846.00	-4,834.75	1,135.31	4,930.93	0.00	0.00	0.00
11,700.00	90.00	179.40	6,846.00	-4,934.75	1,136.35	5,030.42	0.00	0.00	0.00
11,800.00	90.00	179.40	6,846.00	-5,034.74	1,137.39	5,129.91	0.00	0.00	0.00
11,900.00	90.00	179.40	6,846.00	-5,134.74	1,138.43	5,229.41	0.00	0.00	0.00
12,000.00	90.00	179.40	6,846.00	-5,234.73	1,139.47	5,328.90	0.00	0.00	0.00
12,100.00	90.00	179.40	6,846.00	-5,334.72	1,140.51	5,428.39	0.00	0.00	0.00
12,200.00	90.00	179.40	6,846.00	-5,434.72	1,141.55	5,527.88	0.00	0.00	0.00
12,300.00	90.00	179.40	6,846.00	-5,534.71	1,142.59	5,627.37	0.00	0.00	0.00
12,400.00	90.00	179.40	6,846.00	-5,634.71	1,143.63	5,726.86	0.00	0.00	0.00
12,500.00	90.00	179.40	6,846.00	-5,734.70	1,144.67	5,826.35	0.00	0.00	0.00
12,600.00	90.00	179.40	6,846.00	-5,834.70	1,145.71	5,925.85	0.00	0.00	0.00
12,700.00	90.00	179.40	6,846.00	-5,934.69	1,146.75	6,025.34	0.00	0.00	0.00
12,800.00	90.00	179.40	6,846.00	-6,034.69	1,147.79	6,124.83	0.00	0.00	0.00
12,900.00	90.00	179.40	6,846.00	-6,134.68	1,148.83	6,224.32	0.00	0.00	0.00
13,000.00	90.00	179.40	6,846.00	-6,234.68	1,149.87	6,323.81	0.00	0.00	0.00
13,100.00	90.00	179.40	6,846.00	-6,334.67	1,150.91	6,423.30	0.00	0.00	0.00
13,200.00	90.00	179.40	6,846.00	-6,434.67	1,151.95	6,522.79	0.00	0.00	0.00
13,300.00	90.00	179.40	6,846.00	-6,534.66	1,152.99	6,622.29	0.00	0.00	0.00
13,400.00	90.00	179.40	6,846.00	-6,634.65	1,154.03	6,721.78	0.00	0.00	0.00
13,500.00	90.00	179.40	6,846.00	-6,734.65	1,155.07	6,821.27	0.00	0.00	0.00
13,600.00	90.00	179.40	6,846.00	-6,834.64	1,156.11	6,920.76	0.00	0.00	0.00

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Pioneer Y17-755
Project:	Mustang	**TVD Reference:**	Well @ 4886.00ft
Site:	Y Section 05	**MD Reference:**	Well @ 4886.00ft
Well:	Pioneer Y17-755	**North Reference:**	Grid
Wellbore:	Pioneer Y17-755	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #1	**Database:**	EDMP

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
13,700.00	90.00	179.40	6,846.00	-6,934.64	1,157.15	7,020.25	0.00	0.00	0.00
13,800.00	90.00	179.40	6,846.00	-7,034.63	1,158.19	7,119.74	0.00	0.00	0.00
13,900.00	90.00	179.40	6,846.00	-7,134.63	1,159.23	7,219.23	0.00	0.00	0.00
14,000.00	90.00	179.40	6,846.00	-7,234.62	1,160.27	7,318.73	0.00	0.00	0.00
14,100.00	90.00	179.40	6,846.00	-7,334.62	1,161.31	7,418.22	0.00	0.00	0.00
14,200.00	90.00	179.40	6,846.00	-7,434.61	1,162.35	7,517.71	0.00	0.00	0.00
14,300.00	90.00	179.40	6,846.00	-7,534.61	1,163.39	7,617.20	0.00	0.00	0.00
14,400.00	90.00	179.40	6,846.00	-7,634.60	1,164.43	7,716.69	0.00	0.00	0.00
14,500.00	90.00	179.40	6,846.00	-7,734.60	1,165.47	7,816.18	0.00	0.00	0.00
14,600.00	90.00	179.40	6,846.00	-7,834.59	1,166.51	7,915.68	0.00	0.00	0.00
14,700.00	90.00	179.40	6,846.00	-7,934.58	1,167.55	8,015.17	0.00	0.00	0.00
14,800.00	90.00	179.40	6,846.00	-8,034.58	1,168.59	8,114.66	0.00	0.00	0.00
14,900.00	90.00	179.40	6,846.00	-8,134.57	1,169.63	8,214.15	0.00	0.00	0.00
15,000.00	90.00	179.40	6,846.00	-8,234.57	1,170.67	8,313.64	0.00	0.00	0.00
15,100.00	90.00	179.40	6,846.00	-8,334.56	1,171.71	8,413.13	0.00	0.00	0.00
15,200.00	90.00	179.40	6,846.00	-8,434.56	1,172.75	8,512.62	0.00	0.00	0.00
15,300.00	90.00	179.40	6,846.00	-8,534.55	1,173.79	8,612.12	0.00	0.00	0.00
15,400.00	90.00	179.40	6,846.00	-8,634.55	1,174.83	8,711.61	0.00	0.00	0.00
15,500.00	90.00	179.40	6,846.00	-8,734.54	1,175.87	8,811.10	0.00	0.00	0.00
15,600.00	90.00	179.40	6,846.00	-8,834.54	1,176.91	8,910.59	0.00	0.00	0.00
15,700.00	90.00	179.40	6,846.00	-8,934.53	1,177.95	9,010.08	0.00	0.00	0.00
15,800.00	90.00	179.40	6,846.00	-9,034.52	1,178.99	9,109.57	0.00	0.00	0.00
15,900.00	90.00	179.40	6,846.00	-9,134.52	1,180.03	9,209.06	0.00	0.00	0.00
16,000.00	90.00	179.40	6,846.00	-9,234.51	1,181.06	9,308.56	0.00	0.00	0.00
16,100.00	90.00	179.40	6,846.00	-9,334.51	1,182.10	9,408.05	0.00	0.00	0.00
16,200.00	90.00	179.40	6,846.00	-9,434.50	1,183.14	9,507.54	0.00	0.00	0.00
16,300.00	90.00	179.40	6,846.00	-9,534.50	1,184.18	9,607.03	0.00	0.00	0.00
16,400.00	90.00	179.40	6,846.00	-9,634.49	1,185.22	9,706.52	0.00	0.00	0.00
16,500.00	90.00	179.40	6,846.00	-9,734.49	1,186.26	9,806.01	0.00	0.00	0.00
16,600.00	90.00	179.40	6,846.00	-9,834.48	1,187.30	9,905.50	0.00	0.00	0.00
16,700.00	90.00	179.40	6,846.00	-9,934.48	1,188.34	10,005.00	0.00	0.00	0.00
16,800.00	90.00	179.40	6,846.00	-10,034.47	1,189.38	10,104.49	0.00	0.00	0.00
16,900.00	90.00	179.40	6,846.00	-10,134.47	1,190.42	10,203.98	0.00	0.00	0.00
17,000.00	90.00	179.40	6,846.00	-10,234.46	1,191.46	10,303.47	0.00	0.00	0.00
17,100.00	90.00	179.40	6,846.00	-10,334.45	1,192.50	10,402.96	0.00	0.00	0.00
17,200.00	90.00	179.40	6,846.00	-10,434.45	1,193.54	10,502.45	0.00	0.00	0.00
17,300.00	90.00	179.40	6,846.00	-10,534.44	1,194.58	10,601.94	0.00	0.00	0.00
17,400.00	90.00	179.40	6,846.00	-10,634.44	1,195.62	10,701.44	0.00	0.00	0.00
17,471.02	90.00	179.40	6,846.00	-10,705.45	1,196.36	10,772.09	0.00	0.00	0.00

Noble Energy, Inc.

Survey Report

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Pioneer Y17-755
Project:	Mustang	**TVD Reference:**	Well @ 4886.00ft
Site:	Y Section 05	**MD Reference:**	Well @ 4886.00ft
Well:	Pioneer Y17-755	**North Reference:**	Grid
Wellbore:	Pioneer Y17-755	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #1	**Database:**	EDMP

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
Pioneer Y17-755-SHL - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	1,302,896.47	3,257,034.72	40.1611870	-104.5803320
Pioneer Y17-755-KOP - plan hits target center - Point	0.00	0.00	6,220.80	58.76	926.26	1,302,955.24	3,257,960.98	40.1613219	-104.5770159
Pioneer Y17-755-BHL - plan hits target center - Point	0.00	0.00	6,846.00	-10,705.45	1,196.36	1,292,191.04	3,258,231.08	40.1317666	-104.5764507
Pioneer Y17-755-TPZ - plan hits target center - Point	0.00	0.00	6,846.00	-576.13	1,091.03	1,302,320.35	3,258,125.75	40.1595744	-104.5764500

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
590.00	590.00	Pierre			
938.00	938.00	Upper Pierre Aquifer Top			
1,747.00	1,747.00	Upper Pierre Aquifer Base			
3,862.41	3,826.00	Parkman			
4,447.32	4,393.00	Sussex			
5,253.00	5,174.00	Shannon			
6,210.31	6,102.00	Teepee Buttes			
6,964.31	6,741.00	Sharon Springs			
6,985.16	6,752.00	Top A Chalk			
6,985.16	6,752.00	Top A Marl			
7,028.37	6,773.00	Top B Chalk			
7,178.63	6,826.00	Top B Marl			

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
2200	2200	0	0	Start Build 2.00
6333	6221	59	926	Start DLS 9.00 TFO 92.94
7341	6846	-576	1091	TPZ/LP at 7341.14 MD
17,471	6846	-10,705	1196	TD at 17471.02 MD

Checked By: _____ Approved By: _____ Date: _____

Northern Region - DJ Basin

Mustang
Y Section 05
Pioneer Y17-755

Pioneer Y17-755
Plan #1

Anticollision Summary Report

26 September, 2018

Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Pioneer Y17-755
Project:	Mustang	**TVD Reference:**	Well @ 4886.00ft
Reference Site:	Y Section 05	**MD Reference:**	Well @ 4886.00ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Pioneer Y17-755	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Pioneer Y17-755	**Database:**	EDMP
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Reference	Plan #1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	**Error Model:**	ISCWSA
Depth Range:	Unlimited	**Scan Method:**	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 10,000.00 ft	**Error Surface:**	Pedal Curve
Warning Levels Evaluated at:	2.00 **Sigma**	**Casing Method:**	Not applied

Survey Tool Program **Date** 9/26/2018

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	17,470.93	Plan #1 (Pioneer Y17-755)	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
Y Section 05						
Olsen Red Y05-02D - Olsen Red Y05-02D - Olsen Red Y	4,611.68	4,483.40	3,854.32	3,822.31	120.407	CC
Olsen Red Y05-02D - Olsen Red Y05-02D - Olsen Red Y	4,900.00	4,762.27	3,854.66	3,820.57	113.046	ES
Olsen Red Y05-02D - Olsen Red Y05-02D - Olsen Red Y	6,650.00	6,494.13	3,964.42	3,917.56	84.600	SF
Olsen Y5-05JI - Olsen Y5-05JI - Olsen Y5-05JI - As Drille	2,200.00	2,144.00	2,978.21	2,966.80	260.982	CC
Olsen Y5-05JI - Olsen Y5-05JI - Olsen Y5-05JI - As Drille	2,300.00	2,243.98	2,978.48	2,966.54	249.509	ES
Olsen Y5-05JI - Olsen Y5-05JI - Olsen Y5-05JI - As Drille	6,600.00	6,416.92	3,327.56	3,292.35	94.505	SF
Perkins 32-05 - Perkins 32-05 - Perkins 32-05 - As Drille	6,403.28	6,284.97	3,085.54	3,007.17	39.371	CC, ES
Perkins 32-05 - Perkins 32-05 - Perkins 32-05 - As Drille	6,700.00	6,554.59	3,150.45	3,068.67	38.519	SF
Perkins 42-05 - Perkins 42-05 - Perkins 42-05 - As Drille	6,471.53	6,367.34	3,764.06	3,684.84	47.515	CC, ES
Perkins 42-05 - Perkins 42-05 - Perkins 42-05 - As Drille	6,800.00	6,649.14	3,831.51	3,748.68	46.258	SF
Perkins 43-05 - Perkins 43-05 - Perkins 43-05 - As Drille	6,567.14	6,461.35	2,883.35	2,803.13	35.945	CC, ES
Perkins 43-05 - Perkins 43-05 - Perkins 43-05 - As Drille	6,850.00	6,689.26	2,924.08	2,840.89	35.153	SF
Perkins USX Y05-16 - Perkins USX Y05-16 - Perkins US	6,689.57	6,544.82	1,973.12	1,926.29	42.137	CC
Perkins USX Y05-16 - Perkins USX Y05-16 - Perkins US	6,700.00	6,552.78	1,973.17	1,926.28	42.079	ES
Perkins USX Y05-16 - Perkins USX Y05-16 - Perkins US	6,900.00	6,692.57	1,993.18	1,945.13	41.477	SF
Pioneer Y17-715 - Pioneer Y17-715 - Plan #1	3,352.84	2,913.08	1,788.04	1,766.70	83.779	CC, ES
Pioneer Y17-715 - Pioneer Y17-715 - Plan #1	17,471.02	17,720.83	2,624.89	2,440.98	14.273	SF
Pioneer Y17-725 - Pioneer Y17-725 - Plan #1	3,344.15	2,910.61	1,766.09	1,744.78	82.889	CC, ES
Pioneer Y17-725 - Pioneer Y17-725 - Plan #1	17,471.02	17,652.91	1,972.97	1,790.52	10.814	SF
Pioneer Y17-735 - Pioneer Y17-735 - Plan #1	7,335.82	7,280.37	1,298.27	1,248.05	25.852	CC
Pioneer Y17-735 - Pioneer Y17-735 - Plan #1	17,471.02	17,410.72	1,312.61	1,129.54	7.170	ES, SF
Pioneer Y17-740 - Pioneer Y17-740 - Plan #1	6,833.64	6,612.55	980.12	932.28	20.485	CC
Pioneer Y17-740 - Pioneer Y17-740 - Plan #1	17,471.02	17,590.41	1,008.01	827.94	5.598	ES, SF
Pioneer Y17-745 - Pioneer Y17-745 - Plan #1	7,339.98	7,317.73	655.99	606.82	13.341	CC
Pioneer Y17-745 - Pioneer Y17-745 - Plan #1	17,471.02	17,448.77	663.09	481.97	3.661	ES, SF
Pioneer Y17-765 - Pioneer Y17-765 - Plan #1	2,200.00	2,200.00	22.64	7.33	1.479	Level 3, CC, ES, SF
Pioneer Y17-775 - Pioneer Y17-775 - Plan #1	2,200.00	2,200.00	45.00	29.69	2.940	CC, ES
Pioneer Y17-775 - Pioneer Y17-775 - Plan #1	2,300.00	2,300.02	46.74	30.73	2.919	SF
Pioneer Y17-780 - Pioneer Y17-780 - Plan #1	2,200.00	2,200.00	67.64	52.33	4.419	CC, ES
Pioneer Y17-780 - Pioneer Y17-780 - Plan #1	2,300.00	2,300.02	69.38	53.37	4.332	SF
Pioneer Y17-785 - Pioneer Y17-785 - Plan #1	2,200.00	2,199.00	90.00	74.70	5.881	CC, ES
Pioneer Y17-785 - Pioneer Y17-785 - Plan #1	2,300.00	2,295.88	93.40	77.41	5.843	SF

Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Pioneer Y17-755
Project:	Mustang	**TVD Reference:**	Well @ 4886.00ft
Reference Site:	Y Section 05	**MD Reference:**	Well @ 4886.00ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Pioneer Y17-755	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Pioneer Y17-755	**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
Y Section 08						
Alfred Krough 1 (PA) - Wellbore #1 - No Surveys	11,445.28	6,831.00	1,381.98	1,199.37	7.568	CC, ES, SF
Lazy 15-8 (PR) - Wellbore #1 - Gyro Surveys	11,277.51	6,882.53	1,352.59	1,284.14	19.761	CC
Lazy 15-8 (PR) - Wellbore #1 - Gyro Surveys	11,300.00	6,883.08	1,352.77	1,284.09	19.695	ES
Lazy 15-8 (PR) - Wellbore #1 - Gyro Surveys	11,500.00	6,887.85	1,370.75	1,300.29	19.453	SF
Norris C Unit 01 (SI) - Wellbore #1 - Gyro Surveys	8,206.33	6,829.57	1,994.71	1,943.23	38.748	CC, ES
Norris C Unit 01 (SI) - Wellbore #1 - Gyro Surveys	8,600.00	6,832.17	2,033.18	1,979.64	37.973	SF
Norris C Unit 02 (PA) - Wellbore #1 - Gyro Surveys	8,156.98	6,839.68	1,429.60	1,378.27	27.852	CC, ES
Norris C Unit 02 (PA) - Wellbore #1 - Gyro Surveys	8,200.00	6,840.22	1,430.25	1,378.85	27.829	SF
Pioneer Y 08-02 (PR) - Wellbore #1 - Gyro Surveys	7,906.93	6,816.84	819.61	769.18	16.253	CC, ES
Pioneer Y 08-02 (PR) - Wellbore #1 - Gyro Surveys	8,000.00	6,816.21	824.88	773.91	16.184	SF
Pioneer Y 08-03 (SI) - Wellbore #1 - Gyro Surveys	7,685.19	6,817.81	260.42	210.59	5.226	CC, ES, SF
Pioneer Y 08-05 (SI) - Wellbore #1 - Gyro Surveys	9,139.09	6,840.33	1,799.88	1,744.34	32.408	CC, ES
Pioneer Y 08-05 (SI) - Wellbore #1 - Gyro Surveys	9,300.00	6,841.43	1,807.05	1,751.11	32.299	SF
Pioneer Y 08-08 (PR) - Wellbore #1 - No Surveys	9,238.34	6,872.00	2,273.66	2,103.92	13.395	CC, ES
Pioneer Y 08-08 (PR) - Wellbore #1 - No Surveys	9,400.00	6,872.00	2,279.40	2,108.53	13.340	SF
Y Section 17						
UPRC 17-15Q (PA) - Wellbore #1 - No Surveys	16,675.58	6,835.00	1,322.70	1,100.63	5.956	CC
UPRC 17-15Q (PA) - Wellbore #1 - No Surveys	16,700.00	6,835.00	1,322.93	1,100.56	5.949	ES
UPRC 17-15Q (PA) - Wellbore #1 - No Surveys	16,800.00	6,835.00	1,328.54	1,105.22	5.949	SF
UPRC 17-5Q (PR) - Wellbore #1 - No Surveys	13,934.78	6,835.00	1,377.33	1,176.47	6.857	CC, ES, SF
HP Farms Y 17-03 (PR) - Wellbore #1 - No Surveys	12,944.68	6,830.00	301.82	108.47	1.561	CC, ES, SF
HP Farms Y 17-04 (PR) - Wellbore #1 - Gyro Surveys	12,852.59	6,810.84	1,478.65	1,399.12	18.592	CC, ES
HP Farms Y 17-04 (PR) - Wellbore #1 - Gyro Surveys	12,900.00	6,809.68	1,479.41	1,399.75	18.574	SF
HP Farms Y 17-06 (PR) - Wellbore #1 - Gyro Surveys	14,377.93	6,843.56	177.52	85.99	1.939	CC, ES, SF
Lana Y 17-14JI (SI) - Wellbore #1 - Gyro Surveys	17,152.20	6,860.32	463.80	350.76	4.103	CC, ES, SF
Semmen USX Y 17-07 (PR) - Wellbore #1 - Gyro Survey	13,925.55	6,835.16	1,364.44	1,276.64	15.540	CC, ES
Semmen USX Y 17-07 (PR) - Wellbore #1 - Gyro Survey	14,100.00	6,837.97	1,375.55	1,286.07	15.374	SF
Sloan 41-17 - Wellbore #1 - Wellbore #1 - As Drilled	12,922.95	6,834.52	2,385.88	2,305.55	29.701	CC, ES
Sloan 41-17 - Wellbore #1 - Wellbore #1 - As Drilled	13,400.00	6,832.99	2,433.10	2,348.96	28.918	SF
UPRC 17-12Q (SI) - Wellbore #1 - Gyro Surveys	15,618.77	6,841.55	1,241.74	1,140.68	12.287	CC, ES, SF
UPRC 17-13Q (SI) - Wellbore #1 - Wellbore #1	16,675.63	6,847.00	1,227.29	1,004.97	5.521	CC, ES
UPRC 17-13Q (SI) - Wellbore #1 - Wellbore #1	16,700.00	6,847.00	1,227.53	1,005.17	5.520	SF
UPRR USX Y 17-02 (PR) - Wellbore #1 - Gyro Surveys	12,863.01	6,834.37	723.16	643.34	9.059	CC, ES
UPRR USX Y 17-02 (PR) - Wellbore #1 - Gyro Surveys	12,900.00	6,835.13	724.11	643.77	9.013	SF

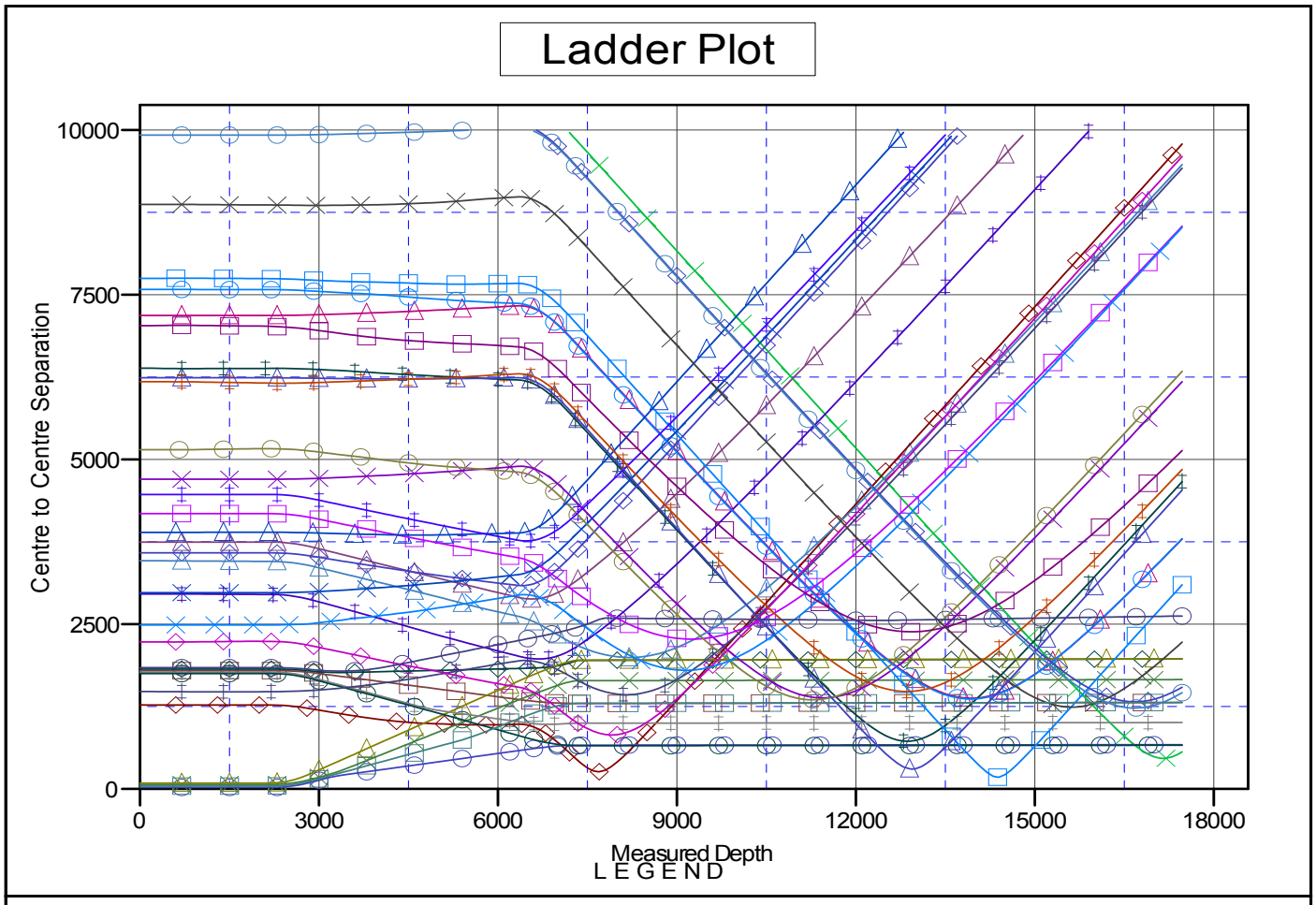
Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Pioneer Y17-755
Project:	Mustang	**TVD Reference:**	Well @ 4886.00ft
Reference Site:	Y Section 05	**MD Reference:**	Well @ 4886.00ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Pioneer Y17-755	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Pioneer Y17-755	**Database:**	EDMP
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to Well @ 4886.00ft
Offset Depths are relative to Offset Datum
Central Meridian is -105.5000000

Coordinates are relative to: Pioneer Y17-755
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.59°



urveys V0
3-05 - As Drilled V0
-16, Perkins USX Y05-16 - As Drilled V0
n#1 V0
Surveys V0
rveys V0
Gyro Surveys V0
n#1 V0
n#1 V0
n#1 V0

Norris C Unit 01 (SI), Wellbore #1, Gyro Surveys V0
Pioneer Y17-740, Pioneer Y17-740, Plan #1 V0
Pioneer Y17-745, Pioneer Y17-745, Plan #1 V0
Perkins 32-05, Perkins 32-05, Perkins 32-05 - As Drilled V0
Norris C Unit 02 (PA), Wellbore #1, Gyro Surveys V0
HP Farms Y 17-06 (PR), Wellbore #1, Gyro Surveys V0
Olsen Y5-05JI, Olsen Y5-05JI, Olsen Y5-05JI - As Drilled V0
Pioneer Y 08-08 (PR), Wellbore #1, No Surveys V0
Lazy 15-8 (PR), Wellbore #1, Gyro Surveys V0
Semmen USX Y 17-07 (PR), Wellbore #1, Gyro Surveys V0

Pioneer Y 08-02 (PR), Wellbore #
Perkins 42-05, Perkins 42-05, Per
UPRC 17-12Q (SI), Wellbore #1, (
Pioneer Y17-775, Pioneer Y17-77
Pioneer Y 08-05 (SI), Wellbore #1
HP Farms Y 17-03 (PR), Wellbore
HP Farms Y 17-04 (PR), Wellbore
Sloan 41-17, Wellbore #1, Wellbo
UPRC 17-13Q (SI), Wellbore #1, \
Pioneer Y17-715, Pioneer Y17-71

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

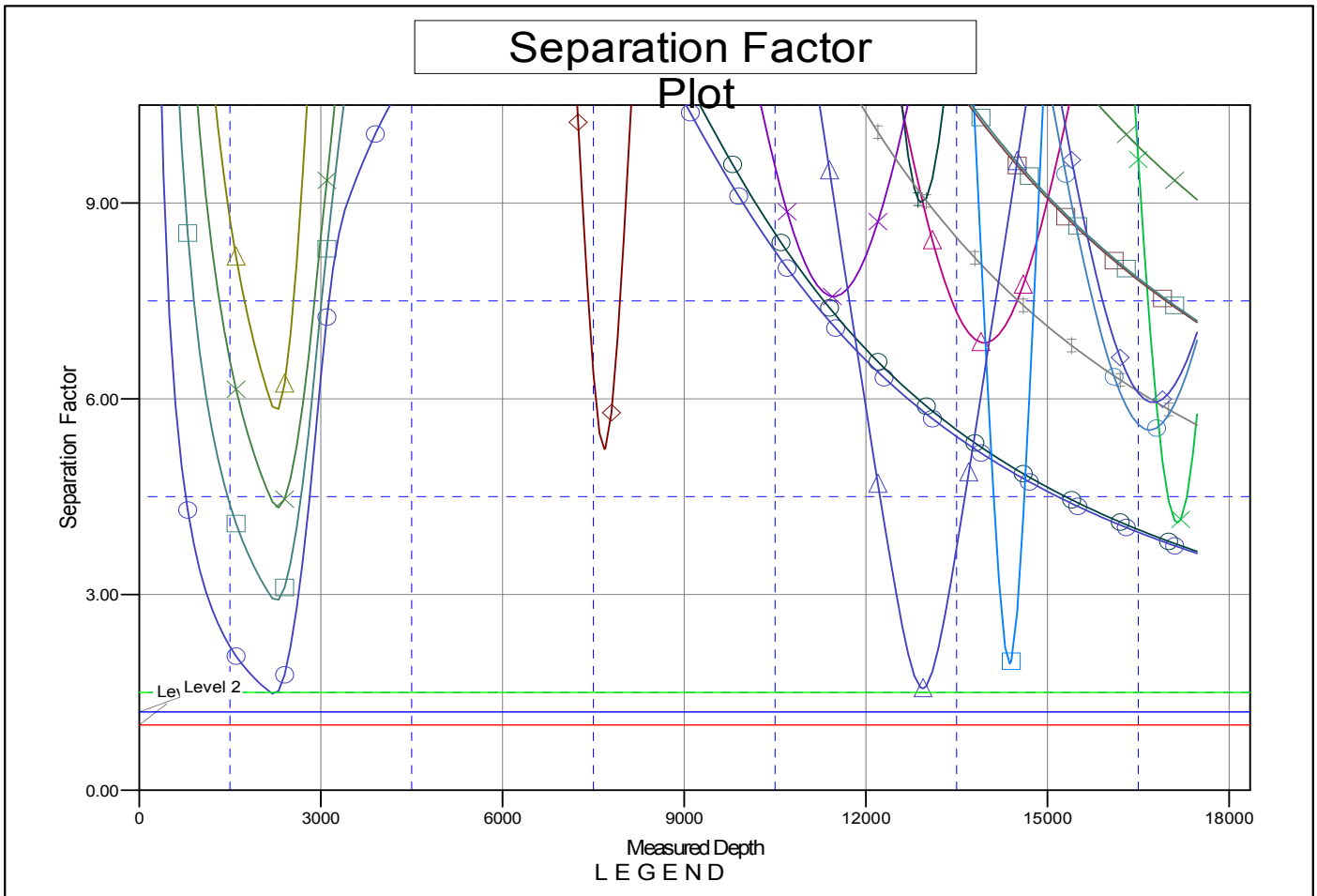
Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Pioneer Y17-755
Project:	Mustang	**TVD Reference:**	Well @ 4886.00ft
Reference Site:	Y Section 05	**MD Reference:**	Well @ 4886.00ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Pioneer Y17-755	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Pioneer Y17-755	**Database:**	EDMP
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to Well @ 4886.00ft
Offset Depths are relative to Offset Datum
Central Meridian is -105.5000000

Coordinates are relative to: Pioneer Y17-755
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.59°



urveys V0	Norris C Unit 01 (SI), Wellbore #1, Gyro Surveys V0	Pioneer Y 08-02 (PR), Wellbore #
3-05 - As Drilled V0	Pioneer Y17-740, Pioneer Y17-740, Plan #1 V0	Perkins 42-05, Perkins 42-05, Per
-16, Perkins USX Y05-16 - As Drilled V0	Pioneer Y17-745, Pioneer Y17-745, Plan #1 V0	UPRC 17-12Q (SI), Wellbore #1, (
1 #1 V0	Perkins 32-05, Perkins 32-05, Perkins 32-05 - As Drilled V0	Pioneer Y17-775, Pioneer Y17-77
Surveys V0	Norris C Unit 02 (PA), Wellbore #1, Gyro Surveys V0	Pioneer Y 08-05 (SI), Wellbore #1
rveys V0	HP Farms Y 17-06 (PR), Wellbore #1, Gyro Surveys V0	HP Farms Y 17-03 (PR), Wellbore
Gyro Surveys V0	Olsen Y5-05JI, Olsen Y5-05JI, Olsen Y5-05JI - As Drilled V0	HP Farms Y 17-04 (PR), Wellbore
1 #1 V0	Pioneer Y 08-08 (PR), Wellbore #1, No Surveys V0	Sloan 41-17, Wellbore #1, Wellbo
1 #1 V0	Lazy 15-8 (PR), Wellbore #1, Gyro Surveys V0	UPRC 17-13Q (SI), Wellbore #1,
1 #1 V0	Semmen USX Y 17-07 (PR), Wellbore #1, Gyro Surveys V0	Pioneer Y17-715, Pioneer Y17-71

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