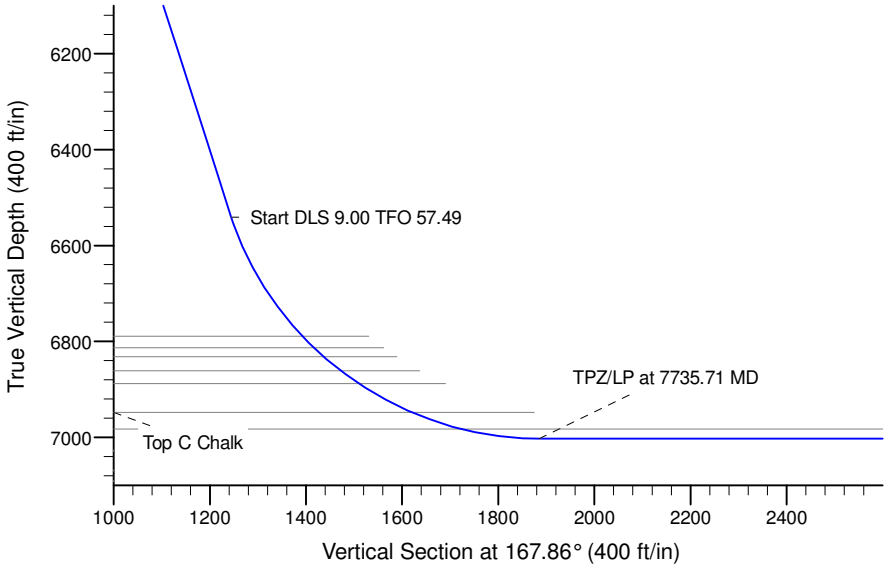
Project: Mustang
Site: H Section 03
Well: Beebe Draw Federal H15-725
Wellbore: Wellbore #1
Design: Plan #1

Northern Region - DJ Basin

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

SECTION DETAILS

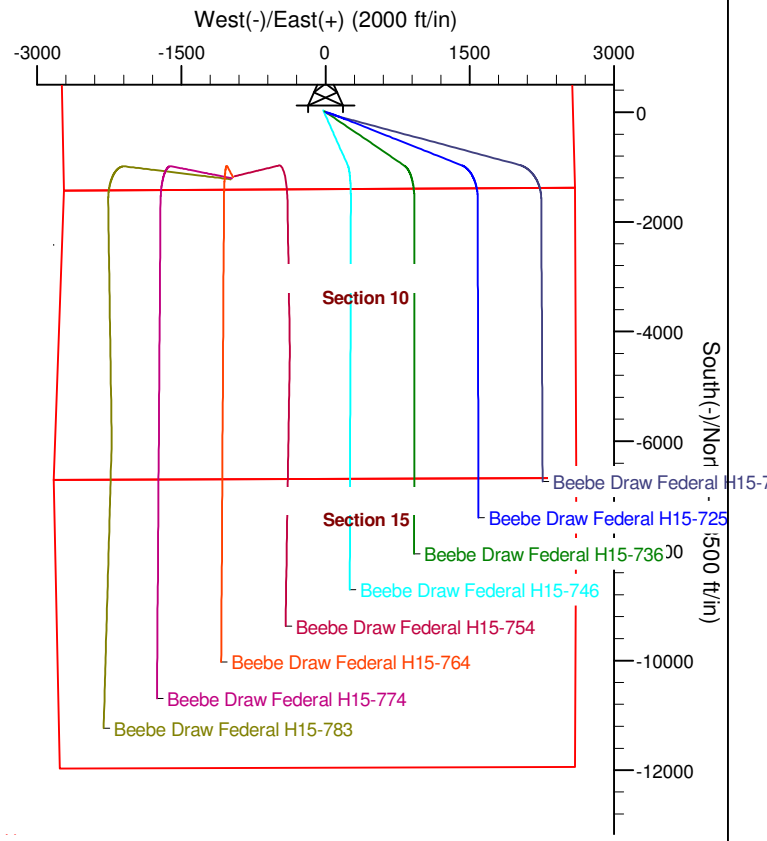
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	2000.00	0.00	0.00	2000.00	0.00	0.00	0.00	0.00	0.00	
3	2150.00	3.00	100.00	2149.93	-0.68	3.87	2.00	100.00	1.48	
4	3195.91	23.61	124.77	3162.63	-126.25	205.09	2.00	28.03	166.56	
5	6882.60	23.61	124.77	6540.81	-968.11	1417.89	0.00	0.00	1244.64	
6	7735.71	90.00	179.94	7003.00	-1587.69	1584.33	9.00	57.49	1885.37	TPZ/LP Beebe Draw Federal H15-725
7	13540.63	90.00	179.94	7003.00	-7392.61	1590.21	0.00	0.00	7561.71	BHL Beebe Draw Federal H15-725

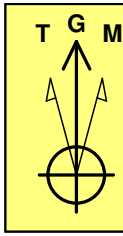


Surface:1403' FSL,2574' FEL, Sec.3

TPZ: 200' FNL, 1010' FEL, Sec.10

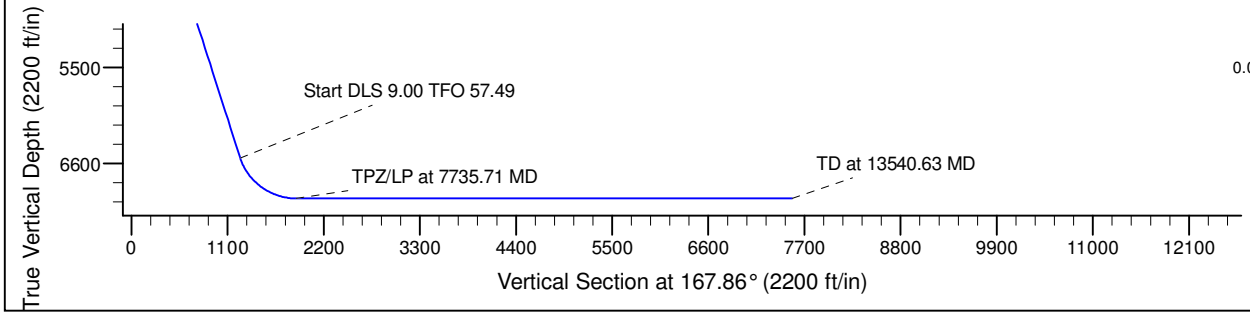
BHL: 717' FNL, 1017' FEL, Sec.15





Azimuths to Grid North
True North: -0.55°
Magnetic North: 7.45°

Magnetic Field
Strength: 52183.7snT
Dip Angle: 66.72°
Date: 9/19/2018
Model: IGRF2015



WELL DETAILS: Beebe Draw Federal H15-725

	Northing	Easting	Latitude	Longitude
0.00	1335402.40	3237515.80	40.2509500	-104.6490500

4783.00

Plan: Plan #1 (Beebe Draw Federal H15-725/Wellbore #1)

Created By: Colby Baxter Date: 7:48, September 27 2018

Checked: _____ Date: _____

Reviewed: _____ Date: _____

Approved: _____ Date: _____

Northern Region - DJ Basin

Mustang
H Section 03
Beebe Draw Federal H15-725

Wellbore #1

Plan: Plan #1

Standard Survey Report

26 September, 2018

Noble Energy, Inc.

Survey Report

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Beebe Draw Federal H15-725
Project:	Mustang	**TVD Reference:**	KB @ 4813.00ft
Site:	H Section 03	**MD Reference:**	KB @ 4813.00ft
Well:	Beebe Draw Federal H15-725	**North Reference:**	Grid
Wellbore:	Wellbore #1	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #1	**Database:**	EDMP

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

Site	H Section 03				
Site Position:		**Northing:**	1,338,347.30 usft	**Latitude:**	40.2590500
From:	Lat/Long	**Easting:**	3,236,893.05 usft	**Longitude:**	-104.6511800
Position Uncertainty:	0.00 ft	**Slot Radius:**	13.200 in	**Grid Convergence:**	0.55 °

Well	Beebe Draw Federal H15-725					
Well Position	**+N/-S**	0.00 ft	**Northing:**	1,335,402.40 usft	**Latitude:**	40.2509500
	+E/-W	0.00 ft	**Easting:**	3,237,515.80 usft	**Longitude:**	-104.6490500
Position Uncertainty		0.00 ft	**Wellhead Elevation:**	ft	**Ground Level:**	4,783.00 ft

Wellbore	Wellbore #1			
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2015	9/19/2018	8.00	66.72	52,183.71594196

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 (°)**	
	-17.00	0.00	0.00	167.86	

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

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	13,540.63	Plan #1 (Wellbore #1)	2_MWD+IFR1	A005Mb: IFR declination correction only

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 Beebe Draw Federal H15-725
Project:	Mustang	**TVD Reference:**	KB @ 4813.00ft
Site:	H Section 03	**MD Reference:**	KB @ 4813.00ft
Well:	Beebe Draw Federal H15-725	**North Reference:**	Grid
Wellbore:	Wellbore #1	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #1	**Database:**	EDMP

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	2.00	100.00	2,099.98	-0.31	1.72	0.66	2.00	2.00	0.00
2,150.00	3.00	100.00	2,149.93	-0.69	3.87	1.48	2.00	2.00	0.00
2,200.00	3.91	106.91	2,199.84	-1.41	6.79	2.80	2.00	1.82	13.81
2,300.00	5.82	114.03	2,299.48	-4.47	14.68	7.45	2.00	1.91	7.13
2,400.00	7.78	117.62	2,398.77	-9.67	25.31	14.77	2.00	1.96	3.59
2,500.00	9.75	119.76	2,497.60	-17.01	38.66	24.75	2.00	1.97	2.15
2,600.00	11.73	121.19	2,595.84	-26.48	54.71	37.39	2.00	1.98	1.43
2,700.00	13.72	122.21	2,693.38	-38.07	73.44	52.65	2.00	1.99	1.02
2,800.00	15.71	122.98	2,790.09	-51.76	94.83	70.54	2.00	1.99	0.77
2,900.00	17.70	123.57	2,885.87	-67.54	118.86	91.02	2.00	1.99	0.60
3,000.00	19.70	124.05	2,980.58	-85.38	145.49	114.07	2.00	1.99	0.48
3,100.00	21.69	124.45	3,074.13	-105.28	174.70	139.66	2.00	2.00	0.39
3,195.91	23.61	124.77	3,162.63	-126.25	205.09	166.56	2.00	2.00	0.33
3,200.00	23.61	124.77	3,166.38	-127.19	206.44	167.75	0.00	0.00	0.00
3,300.00	23.61	124.77	3,258.02	-150.02	239.34	197.00	0.00	0.00	0.00
3,400.00	23.61	124.77	3,349.65	-172.86	272.23	226.24	0.00	0.00	0.00
3,500.00	23.61	124.77	3,441.28	-195.69	305.13	255.48	0.00	0.00	0.00
3,600.00	23.61	124.77	3,532.91	-218.53	338.03	284.72	0.00	0.00	0.00
3,700.00	23.61	124.77	3,624.54	-241.36	370.92	313.97	0.00	0.00	0.00
3,800.00	23.61	124.77	3,716.17	-264.20	403.82	343.21	0.00	0.00	0.00
3,900.00	23.61	124.77	3,807.81	-287.03	436.72	372.45	0.00	0.00	0.00
4,000.00	23.61	124.77	3,899.44	-309.87	469.61	401.69	0.00	0.00	0.00
4,100.00	23.61	124.77	3,991.07	-332.70	502.51	430.94	0.00	0.00	0.00
4,200.00	23.61	124.77	4,082.70	-355.54	535.41	460.18	0.00	0.00	0.00
4,300.00	23.61	124.77	4,174.33	-378.37	568.30	489.42	0.00	0.00	0.00
4,400.00	23.61	124.77	4,265.96	-401.21	601.20	518.66	0.00	0.00	0.00
4,500.00	23.61	124.77	4,357.60	-424.04	634.10	547.91	0.00	0.00	0.00
4,600.00	23.61	124.77	4,449.23	-446.88	666.99	577.15	0.00	0.00	0.00
4,700.00	23.61	124.77	4,540.86	-469.72	699.89	606.39	0.00	0.00	0.00
4,800.00	23.61	124.77	4,632.49	-492.55	732.79	635.63	0.00	0.00	0.00
4,900.00	23.61	124.77	4,724.12	-515.39	765.68	664.88	0.00	0.00	0.00
5,000.00	23.61	124.77	4,815.75	-538.22	798.58	694.12	0.00	0.00	0.00
5,100.00	23.61	124.77	4,907.39	-561.06	831.48	723.36	0.00	0.00	0.00

Noble Energy, Inc.

Survey Report

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Beebe Draw Federal H15-725
Project:	Mustang	**TVD Reference:**	KB @ 4813.00ft
Site:	H Section 03	**MD Reference:**	KB @ 4813.00ft
Well:	Beebe Draw Federal H15-725	**North Reference:**	Grid
Wellbore:	Wellbore #1	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #1	**Database:**	EDMP

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
5,200.00	23.61	124.77	4,999.02	-583.89	864.37	752.60	0.00	0.00	0.00
5,300.00	23.61	124.77	5,090.65	-606.73	897.27	781.85	0.00	0.00	0.00
5,400.00	23.61	124.77	5,182.28	-629.56	930.17	811.09	0.00	0.00	0.00
5,500.00	23.61	124.77	5,273.91	-652.40	963.06	840.33	0.00	0.00	0.00
5,600.00	23.61	124.77	5,365.54	-675.23	995.96	869.58	0.00	0.00	0.00
5,700.00	23.61	124.77	5,457.18	-698.07	1,028.86	898.82	0.00	0.00	0.00
5,800.00	23.61	124.77	5,548.81	-720.90	1,061.75	928.06	0.00	0.00	0.00
5,900.00	23.61	124.77	5,640.44	-743.74	1,094.65	957.30	0.00	0.00	0.00
6,000.00	23.61	124.77	5,732.07	-766.57	1,127.55	986.55	0.00	0.00	0.00
6,100.00	23.61	124.77	5,823.70	-789.41	1,160.44	1,015.79	0.00	0.00	0.00
6,200.00	23.61	124.77	5,915.33	-812.24	1,193.34	1,045.03	0.00	0.00	0.00
6,300.00	23.61	124.77	6,006.97	-835.08	1,226.24	1,074.27	0.00	0.00	0.00
6,400.00	23.61	124.77	6,098.60	-857.91	1,259.13	1,103.52	0.00	0.00	0.00
6,500.00	23.61	124.77	6,190.23	-880.75	1,292.03	1,132.76	0.00	0.00	0.00
6,600.00	23.61	124.77	6,281.86	-903.58	1,324.93	1,162.00	0.00	0.00	0.00
6,700.00	23.61	124.77	6,373.49	-926.42	1,357.82	1,191.24	0.00	0.00	0.00
6,800.00	23.61	124.77	6,465.12	-949.25	1,390.72	1,220.49	0.00	0.00	0.00
6,882.60	23.61	124.77	6,540.81	-968.11	1,417.89	1,244.64	0.00	0.00	0.00
6,900.00	24.48	127.95	6,556.70	-972.32	1,423.60	1,249.95	9.00	5.03	18.32
7,000.00	30.54	142.48	6,645.46	-1,005.28	1,455.47	1,288.88	9.00	6.05	14.53
7,100.00	37.69	152.28	6,728.26	-1,052.59	1,485.23	1,341.39	9.00	7.16	9.79
7,200.00	45.43	159.24	6,803.07	-1,113.08	1,512.13	1,406.18	9.00	7.73	6.97
7,300.00	53.48	164.54	6,868.05	-1,185.26	1,535.51	1,481.67	9.00	8.06	5.29
7,400.00	61.73	168.82	6,921.60	-1,267.36	1,554.81	1,565.98	9.00	8.25	4.28
7,500.00	70.09	172.47	6,962.39	-1,357.35	1,569.53	1,657.06	9.00	8.36	3.66
7,600.00	78.51	175.76	6,989.44	-1,453.01	1,579.33	1,752.65	9.00	8.43	3.29
7,700.00	86.97	178.86	7,002.06	-1,552.00	1,583.96	1,850.39	9.00	8.46	3.09
7,735.71	90.00	179.94	7,003.00	-1,587.70	1,584.33	1,885.37	9.00	8.47	3.04
7,800.00	90.00	179.94	7,003.00	-1,651.98	1,584.40	1,948.23	0.00	0.00	0.00
7,900.00	90.00	179.94	7,003.00	-1,751.98	1,584.50	2,046.02	0.00	0.00	0.00
8,000.00	90.00	179.94	7,003.00	-1,851.98	1,584.60	2,143.80	0.00	0.00	0.00
8,100.00	90.00	179.94	7,003.00	-1,951.98	1,584.70	2,241.59	0.00	0.00	0.00
8,200.00	90.00	179.94	7,003.00	-2,051.98	1,584.80	2,339.37	0.00	0.00	0.00
8,300.00	90.00	179.94	7,003.00	-2,151.98	1,584.90	2,437.16	0.00	0.00	0.00
8,400.00	90.00	179.94	7,003.00	-2,251.98	1,585.01	2,534.94	0.00	0.00	0.00
8,500.00	90.00	179.94	7,003.00	-2,351.98	1,585.11	2,632.73	0.00	0.00	0.00
8,600.00	90.00	179.94	7,003.00	-2,451.98	1,585.21	2,730.51	0.00	0.00	0.00
8,700.00	90.00	179.94	7,003.00	-2,551.98	1,585.31	2,828.30	0.00	0.00	0.00
8,800.00	90.00	179.94	7,003.00	-2,651.98	1,585.41	2,926.08	0.00	0.00	0.00
8,900.00	90.00	179.94	7,003.00	-2,751.98	1,585.51	3,023.87	0.00	0.00	0.00
9,000.00	90.00	179.94	7,003.00	-2,851.98	1,585.61	3,121.65	0.00	0.00	0.00
9,100.00	90.00	179.94	7,003.00	-2,951.98	1,585.71	3,219.44	0.00	0.00	0.00
9,200.00	90.00	179.94	7,003.00	-3,051.98	1,585.82	3,317.22	0.00	0.00	0.00

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Beebe Draw Federal H15-725
Project:	Mustang	**TVD Reference:**	KB @ 4813.00ft
Site:	H Section 03	**MD Reference:**	KB @ 4813.00ft
Well:	Beebe Draw Federal H15-725	**North Reference:**	Grid
Wellbore:	Wellbore #1	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #1	**Database:**	EDMP

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
9,300.00	90.00	179.94	7,003.00	-3,151.98	1,585.92	3,415.01	0.00	0.00	0.00
9,400.00	90.00	179.94	7,003.00	-3,251.98	1,586.02	3,512.79	0.00	0.00	0.00
9,500.00	90.00	179.94	7,003.00	-3,351.98	1,586.12	3,610.58	0.00	0.00	0.00
9,600.00	90.00	179.94	7,003.00	-3,451.98	1,586.22	3,708.36	0.00	0.00	0.00
9,700.00	90.00	179.94	7,003.00	-3,551.98	1,586.32	3,806.15	0.00	0.00	0.00
9,800.00	90.00	179.94	7,003.00	-3,651.98	1,586.42	3,903.93	0.00	0.00	0.00
9,900.00	90.00	179.94	7,003.00	-3,751.98	1,586.52	4,001.72	0.00	0.00	0.00
10,000.00	90.00	179.94	7,003.00	-3,851.98	1,586.62	4,099.50	0.00	0.00	0.00
10,100.00	90.00	179.94	7,003.00	-3,951.98	1,586.73	4,197.29	0.00	0.00	0.00
10,200.00	90.00	179.94	7,003.00	-4,051.98	1,586.83	4,295.07	0.00	0.00	0.00
10,300.00	90.00	179.94	7,003.00	-4,151.98	1,586.93	4,392.86	0.00	0.00	0.00
10,400.00	90.00	179.94	7,003.00	-4,251.98	1,587.03	4,490.64	0.00	0.00	0.00
10,500.00	90.00	179.94	7,003.00	-4,351.98	1,587.13	4,588.43	0.00	0.00	0.00
10,600.00	90.00	179.94	7,003.00	-4,451.98	1,587.23	4,686.21	0.00	0.00	0.00
10,700.00	90.00	179.94	7,003.00	-4,551.98	1,587.33	4,784.00	0.00	0.00	0.00
10,800.00	90.00	179.94	7,003.00	-4,651.98	1,587.43	4,881.78	0.00	0.00	0.00
10,900.00	90.00	179.94	7,003.00	-4,751.98	1,587.53	4,979.57	0.00	0.00	0.00
11,000.00	90.00	179.94	7,003.00	-4,851.98	1,587.64	5,077.35	0.00	0.00	0.00
11,100.00	90.00	179.94	7,003.00	-4,951.98	1,587.74	5,175.14	0.00	0.00	0.00
11,200.00	90.00	179.94	7,003.00	-5,051.98	1,587.84	5,272.92	0.00	0.00	0.00
11,300.00	90.00	179.94	7,003.00	-5,151.98	1,587.94	5,370.71	0.00	0.00	0.00
11,400.00	90.00	179.94	7,003.00	-5,251.98	1,588.04	5,468.49	0.00	0.00	0.00
11,500.00	90.00	179.94	7,003.00	-5,351.98	1,588.14	5,566.28	0.00	0.00	0.00
11,600.00	90.00	179.94	7,003.00	-5,451.98	1,588.24	5,664.06	0.00	0.00	0.00
11,700.00	90.00	179.94	7,003.00	-5,551.98	1,588.34	5,761.85	0.00	0.00	0.00
11,800.00	90.00	179.94	7,003.00	-5,651.98	1,588.45	5,859.63	0.00	0.00	0.00
11,900.00	90.00	179.94	7,003.00	-5,751.98	1,588.55	5,957.42	0.00	0.00	0.00
12,000.00	90.00	179.94	7,003.00	-5,851.98	1,588.65	6,055.20	0.00	0.00	0.00
12,100.00	90.00	179.94	7,003.00	-5,951.98	1,588.75	6,152.99	0.00	0.00	0.00
12,200.00	90.00	179.94	7,003.00	-6,051.98	1,588.85	6,250.77	0.00	0.00	0.00
12,300.00	90.00	179.94	7,003.00	-6,151.98	1,588.95	6,348.56	0.00	0.00	0.00
12,400.00	90.00	179.94	7,003.00	-6,251.98	1,589.05	6,446.34	0.00	0.00	0.00
12,500.00	90.00	179.94	7,003.00	-6,351.98	1,589.15	6,544.13	0.00	0.00	0.00
12,600.00	90.00	179.94	7,003.00	-6,451.98	1,589.25	6,641.91	0.00	0.00	0.00
12,700.00	90.00	179.94	7,003.00	-6,551.98	1,589.36	6,739.70	0.00	0.00	0.00
12,800.00	90.00	179.94	7,003.00	-6,651.98	1,589.46	6,837.48	0.00	0.00	0.00
12,900.00	90.00	179.94	7,003.00	-6,751.98	1,589.56	6,935.27	0.00	0.00	0.00
13,000.00	90.00	179.94	7,003.00	-6,851.98	1,589.66	7,033.05	0.00	0.00	0.00
13,100.00	90.00	179.94	7,003.00	-6,951.98	1,589.76	7,130.84	0.00	0.00	0.00
13,200.00	90.00	179.94	7,003.00	-7,051.98	1,589.86	7,228.62	0.00	0.00	0.00
13,300.00	90.00	179.94	7,003.00	-7,151.98	1,589.96	7,326.41	0.00	0.00	0.00
13,400.00	90.00	179.94	7,003.00	-7,251.98	1,590.06	7,424.19	0.00	0.00	0.00
13,500.00	90.00	179.94	7,003.00	-7,351.98	1,590.16	7,521.98	0.00	0.00	0.00

Noble Energy, Inc.

Survey Report

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Beebe Draw Federal H15-725
Project:	Mustang	**TVD Reference:**	KB @ 4813.00ft
Site:	H Section 03	**MD Reference:**	KB @ 4813.00ft
Well:	Beebe Draw Federal H15-725	**North Reference:**	Grid
Wellbore:	Wellbore #1	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #1	**Database:**	EDMP

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
13,540.63	90.00	179.94	7,003.00	-7,392.61	1,590.21	7,561.71	0.00	0.00	0.00

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
TPZ/LP Beebe Draw Fe - plan hits target center - Point	0.00	0.00	7,003.00	-1,587.70	1,584.33	1,333,814.71	3,239,100.13	40.2465500	-104.6434291
BHL Beebe Draw Feder - plan hits target center - Point	0.00	0.00	7,003.00	-7,392.61	1,590.21	1,328,009.80	3,239,106.00	40.2306155	-104.6436089

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
334.00	334.00	Pierre			
626.00	626.00	Upper Pierre Aquifer Top			
1,548.00	1,548.00	Upper Pierre Aquifer Base			
3,889.30	3,798.00	Parkman			
4,540.82	4,395.00	Sussex			
5,405.15	5,187.00	Shannon			
6,390.62	6,090.00	Teepee Buttes			
7,180.23	6,789.00	Sharon Springs			
7,214.30	6,813.00	Top A Chalk			
7,242.52	6,832.00	Top A Marl			
7,288.29	6,861.00	Top B Chalk			
7,334.70	6,888.00	Top B Marl			
7,460.82	6,948.00	Top C Chalk			
7,570.77	6,983.00	Top C Marl			

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
2000	2000	0	0	Start Build 2.00
6883	6541	-1	4	Start DLS 9.00 TFO 57.49
7736	7003	-126	205	TPZ/LP at 7735.71 MD
13,541	7003	-968	1418	TD at 13540.63 MD

Checked By: _____ Approved By: _____ Date: _____

Northern Region - DJ Basin

Mustang
H Section 03
Beebe Draw Federal H15-725

Wellbore #1
Plan #1

Anticollision Summary Report

26 September, 2018

Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Beebe Draw Federal H15-725
Project:	Mustang	**TVD Reference:**	KB @ 4813.00ft
Reference Site:	H Section 03	**MD Reference:**	KB @ 4813.00ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Beebe Draw Federal H15-725	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDMP
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

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

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

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	13,540.63	Plan #1 (Wellbore #1)	2_MWD+IFR1	A005Mb: IFR declination correction only

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
H Section 03						
Beebe 17-3(PR) - Wellbore #1 - Wellbore #1	2,885.69	2,945.52	2,812.64	2,792.49	139.573	CC
Beebe 17-3(PR) - Wellbore #1 - Wellbore #1	3,000.00	3,000.00	2,812.96	2,792.18	135.361	ES
Beebe 17-3(PR) - Wellbore #1 - Wellbore #1	7,050.00	6,630.88	3,533.25	3,479.86	66.183	SF
ARISTOCRAT #24-3C(PR) - Wellbore #1 - Wellbore #1	2,000.00	1,980.00	1,049.79	349.85	1.500	Level 3, CC
ARISTOCRAT #24-3C(PR) - Wellbore #1 - Wellbore #1	4,900.00	4,704.12	1,662.63	-2.17	0.999	Level 1, ES, SF
ARISTOCRAT #33-3C(PR) - Wellbore #1 - Wellbore #1	2,979.51	2,922.27	778.78	742.87	21.686	CC
ARISTOCRAT #33-3C(PR) - Wellbore #1 - Wellbore #1	3,000.00	2,941.58	778.82	742.66	21.537	ES
ARISTOCRAT #33-3C(PR) - Wellbore #1 - Wellbore #1	4,300.00	4,135.33	942.76	890.38	17.996	SF
ARISTOCRAT #43-3C(PR) - Wellbore #1 - Wellbore #1	5,656.84	5,364.63	1,554.98	1,483.56	21.773	CC
ARISTOCRAT #43-3C(PR) - Wellbore #1 - Wellbore #1	5,800.00	5,495.81	1,556.04	1,482.65	21.201	ES
ARISTOCRAT #43-3C(PR) - Wellbore #1 - Wellbore #1	6,950.00	6,548.69	1,642.34	1,553.58	18.504	SF
ARISTOCRAT ANGUS #11-3(PR) - Wellbore #1 - Wellbo	2,000.00	1,962.00	3,744.74	3,051.10	5.399	CC
ARISTOCRAT ANGUS #11-3(PR) - Wellbore #1 - Wellbo	3,100.00	3,036.13	3,929.47	2,856.11	3.661	ES
ARISTOCRAT ANGUS #11-3(PR) - Wellbore #1 - Wellbo	7,150.00	6,728.78	5,510.21	3,128.39	2.313	SF
ARISTOCRAT ANGUS #1-3(PR) - Wellbore #1 - Wellbor	5,260.31	5,016.28	794.20	-983.79	0.447	Level 1, CC
ARISTOCRAT ANGUS #1-3(PR) - Wellbore #1 - Wellbor	6,000.00	5,694.07	847.64	-1,171.30	0.420	Level 1, SF
ARISTOCRAT ANGUS #1-3(PR) - Wellbore #1 - Wellbor	6,900.00	6,518.70	1,030.72	-1,280.17	0.446	Level 1, ES
ARISTOCRAT ANGUS #14-3 (PR) - Wellbore #1 - Wellb	2,000.00	1,996.00	2,176.29	1,470.75	3.085	CC
ARISTOCRAT ANGUS #14-3 (PR) - Wellbore #1 - Wellb	5,200.00	4,995.02	2,906.22	1,138.05	1.644	ES, SF
ARISTOCRAT ANGUS #14-3A(PR) - Wellbore #1 - Wellb	2,000.00	1,990.00	2,191.74	1,488.30	3.116	CC
ARISTOCRAT ANGUS #14-3A(PR) - Wellbore #1 - Wellb	6,400.00	6,088.60	3,252.59	1,096.10	1.508	ES
ARISTOCRAT ANGUS #14-3A(PR) - Wellbore #1 - Wellb	7,400.00	6,911.60	3,565.57	1,116.51	1.456	Level 3, SF
ARISTOCRAT ANGUS #2-0-3(PR) - Wellbore #1 - Wellb	2,000.00	1,963.00	3,349.72	2,655.73	4.827	CC
ARISTOCRAT ANGUS #2-0-3(PR) - Wellbore #1 - Wellb	3,100.00	3,037.13	3,529.82	2,456.10	3.287	ES
ARISTOCRAT ANGUS #2-0-3(PR) - Wellbore #1 - Wellb	7,100.00	6,691.26	5,062.38	2,693.77	2.137	SF
ARISTOCRAT ANGUS #21-3(PR) - Wellbore #1 - Wellbo	2,000.00	1,967.00	3,010.02	2,314.64	4.329	CC
ARISTOCRAT ANGUS #21-3(PR) - Wellbore #1 - Wellbo	4,200.00	4,049.70	3,497.74	2,065.12	2.441	ES
ARISTOCRAT ANGUS #21-3(PR) - Wellbore #1 - Wellbo	7,050.00	6,654.73	4,489.98	2,133.40	1.905	SF
ARISTOCRAT ANGUS #2-4-3X(PR) - Wellbore #1 - Well	2,000.00	1,963.00	1,101.74	407.75	1.588	CC
ARISTOCRAT ANGUS #2-4-3X(PR) - Wellbore #1 - Well	4,600.00	4,412.23	1,632.22	70.95	1.045	Level 2, ES
ARISTOCRAT ANGUS #2-4-3X(PR) - Wellbore #1 - Well	5,100.00	4,870.39	1,798.08	74.40	1.043	Level 2, SF
ARISTOCRAT ANGUS #34-3C(PR) - Wellbore #1 - Wellb	4,891.79	4,689.60	21.56	-1,639.98	0.013	Level 1, CC, SF
ARISTOCRAT ANGUS #34-3C(PR) - Wellbore #1 - Wellb	5,000.00	4,788.75	48.40	-1,646.02	0.029	Level 1, ES
ARISTOCRAT ANGUS #4-0-3(PR) - Wellbore #1 - Wellb	2,000.00	1,952.00	3,074.16	2,384.03	4.454	CC
ARISTOCRAT ANGUS #4-0-3(PR) - Wellbore #1 - Wellb	4,200.00	4,034.70	3,563.78	2,136.42	2.497	ES
ARISTOCRAT ANGUS #4-0-3(PR) - Wellbore #1 - Wellb	7,050.00	6,639.73	4,556.89	2,205.56	1.938	SF
ARISTOCRAT ANGUS #44-3C(PR) - Wellbore #1 - No S	7,024.38	6,626.27	631.01	541.06	7.016	CC, 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 Beebe Draw Federal H15-725
Project:	Mustang	**TVD Reference:**	KB @ 4813.00ft
Reference Site:	H Section 03	**MD Reference:**	KB @ 4813.00ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Beebe Draw Federal H15-725	**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
H Section 03						
ARISTOCRAT ANGUS #44-3C(PR) - Wellbore #1 - No S	7,100.00	6,688.26	635.31	544.07	6.963	SF
ARISTOCRAT ANGUS #6-4-3(PR) - Wellbore #1 - Wellb	3,025.67	2,962.72	827.33	-220.22	0.790	Level 1, CC
ARISTOCRAT ANGUS #6-4-3(PR) - Wellbore #1 - Wellb	4,300.00	4,132.33	973.89	-488.80	0.666	Level 1, SF
ARISTOCRAT ANGUS #6-4-3(PR) - Wellbore #1 - Wellb	5,900.00	5,598.44	1,420.61	-561.76	0.717	Level 1, ES
ARISTOCRAT ANGUS #7-6-3(PR) - Wellbore #1 - Wellb	5,315.81	5,067.14	795.66	-1,000.45	0.443	Level 1, CC
ARISTOCRAT ANGUS #7-6-3(PR) - Wellbore #1 - Wellb	6,000.00	5,694.07	841.52	-1,177.51	0.417	Level 1, SF
ARISTOCRAT ANGUS #7-6-3(PR) - Wellbore #1 - Wellb	6,950.00	6,563.69	1,033.62	-1,293.30	0.444	Level 1, ES
Aristocrat Angus 0-8-3(PR) - Wellbore #1 - Wellbore #1	892.56	904.87	2,118.95	2,112.70	339.123	CC
Aristocrat Angus 0-8-3(PR) - Wellbore #1 - Wellbore #1	900.00	909.80	2,118.95	2,112.65	336.544	ES
Aristocrat Angus 0-8-3(PR) - Wellbore #1 - Wellbore #1	8,800.00	7,162.80	4,448.72	4,385.13	69.964	SF
Aristocrat Angus 2-0-3 - Wellbore #1 - Actual	100.00	73.07	3,349.73	3,349.47	10,000.000	CC
Aristocrat Angus 2-0-3 - Wellbore #1 - Actual	700.00	657.65	3,351.45	3,348.01	974.584	ES
Aristocrat Angus 2-0-3 - Wellbore #1 - Actual	7,150.00	6,927.76	5,728.23	5,675.11	107.822	SF
ARISTOCRAT ANGUS 2-3(PR) - Wellbore #1 - Wellbore	2,226.71	2,376.56	2,933.30	2,914.20	153.632	CC, ES
ARISTOCRAT ANGUS 2-3(PR) - Wellbore #1 - Wellbore	7,300.00	7,300.00	4,673.95	4,616.56	81.435	SF
Aristocrat Angus 3-3(PR) - Wellbore #1 - Wellbore #1	2,846.47	3,302.61	1,769.52	1,745.05	72.325	CC, ES
Aristocrat Angus 3-3(PR) - Wellbore #1 - Wellbore #1	4,800.00	4,870.76	2,161.48	2,121.14	53.582	SF
Aristocrat Angus 4-0-3 - Aristocrat Angus 4-0-3 - Actual	0.00	0.00	3,070.47			
Aristocrat Angus 4-0-3 - Aristocrat Angus 4-0-3 - Actual	100.00	44.40	3,070.49	3,070.30	10,000.000	ES
Aristocrat Angus 4-0-3 - Aristocrat Angus 4-0-3 - Actual	7,050.00	6,764.86	5,086.04	5,031.27	92.857	SF
Aristocrat Angus 4-0-3 (DO NOT USE) - Original Drilling	2,766.51	3,229.70	2,716.96	2,694.26	119.734	CC, ES
Aristocrat Angus 4-0-3 (DO NOT USE) - Original Drilling	7,000.00	6,693.90	3,911.62	3,860.01	75.785	SF
ARISTOCRAT ANGUS 4-2-3(PR) - Wellbore #1 - Wellbo	2,766.51	3,229.70	2,716.97	2,694.27	119.721	CC, ES
ARISTOCRAT ANGUS 4-2-3(PR) - Wellbore #1 - Wellbo	7,000.00	6,693.90	3,911.63	3,860.02	75.783	SF
Aristocrat Angus 6-4-3(PR) - Wellbore #1 - Wellbore #1	3,025.67	2,962.72	827.33	790.88	22.698	CC
Aristocrat Angus 6-4-3(PR) - Wellbore #1 - Wellbore #1	3,100.00	3,032.13	827.82	790.46	22.157	ES
Aristocrat Angus 6-4-3(PR) - Wellbore #1 - Wellbore #1	4,500.00	4,315.60	1,018.47	963.56	18.549	SF
ARISTOCRAT ANGUS 6-8-3(PR) - Wellbore #1 - Wellbo	7,343.31	7,044.02	338.92	273.71	5.198	CC, ES, SF
BB DRAW H #3-14JI(PR) - Wellbore #1 - Wellbore #1	2,000.00	1,982.00	1,095.71	395.07	1.564	CC
BB DRAW H #3-14JI(PR) - Wellbore #1 - Wellbore #1	4,900.00	4,706.12	1,712.65	47.14	1.028	Level 2, ES
BB DRAW H #3-14JI(PR) - Wellbore #1 - Wellbore #1	5,200.00	4,981.02	1,811.24	48.24	1.027	Level 2, SF
BB DRAW H #3-6JI(SI) - Wellbore #1 - Wellbore #1	2,000.00	1,987.00	2,114.38	1,411.99	3.010	CC
BB DRAW H #3-6JI(SI) - Wellbore #1 - Wellbore #1	3,195.91	3,149.63	2,300.28	1,186.79	2.066	ES
BB DRAW H #3-6JI(SI) - Wellbore #1 - Wellbore #1	7,000.00	6,632.46	3,668.06	1,320.08	1.562	SF
BB Draw H 03-02J(PA) - Wellbore #1 - Wellbore #1	1,469.95	1,436.99	3,304.19	3,294.31	334.311	CC
BB Draw H 03-02J(PA) - Wellbore #1 - Wellbore #1	2,007.08	1,979.50	3,304.89	3,291.19	241.179	ES
BB Draw H 03-02J(PA) - Wellbore #1 - Wellbore #1	7,200.00	6,919.73	5,025.30	4,974.15	98.250	SF
BB Draw H3-3J(PR) - Wellbore #1 - Wellbore #1	1,160.65	1,172.69	1,699.44	1,691.59	216.380	CC
BB Draw H3-3J(PR) - Wellbore #1 - Wellbore #1	2,000.00	2,008.01	1,700.61	1,686.83	123.460	ES
BB Draw H3-3J(PR) - Wellbore #1 - Wellbore #1	7,300.00	6,919.74	3,247.94	3,195.34	61.747	SF
Beebe Draw Federal H15-715 - Wellbore #1 - Plan #1	2,000.00	2,000.00	22.59	8.71	1.628	CC
Beebe Draw Federal H15-715 - Wellbore #1 - Plan #1	2,100.00	2,099.17	23.24	8.68	1.596	ES, SF
Beebe Draw Federal H15-736 - Wellbore #1 - Plan #1	2,000.00	2,000.00	22.59	8.71	1.628	CC, ES, SF
Beebe Draw Federal H15-746 - Wellbore #1 - Plan #1	2,231.34	2,233.44	43.78	28.37	2.841	CC, ES
Beebe Draw Federal H15-746 - Wellbore #1 - Plan #1	2,300.00	2,302.75	44.24	28.39	2.791	SF
Beebe Draw Federal H15-754 - Wellbore #1 - Plan #1	3,580.91	3,731.84	1,461.13	1,435.10	56.144	CC
Beebe Draw Federal H15-754 - Wellbore #1 - Plan #1	3,700.00	3,843.37	1,461.72	1,434.73	54.150	ES
Beebe Draw Federal H15-754 - Wellbore #1 - Plan #1	13,540.63	13,208.34	1,988.06	1,831.07	12.664	SF
Beebe Draw Federal H15-764 - Wellbore #1 - Plan #1	2,000.00	2,021.00	1,526.08	1,512.13	109.411	CC, ES
Beebe Draw Federal H15-764 - Wellbore #1 - Plan #1	13,540.63	13,187.83	2,665.42	2,508.58	16.995	SF
Beebe Draw Federal H15-774 - Wellbore #1 - Plan #1	2,000.00	2,021.00	1,548.55	1,534.60	111.022	CC, ES
Beebe Draw Federal H15-774 - Wellbore #1 - Plan #1	13,540.63	13,225.71	3,329.43	3,172.90	21.271	SF
Beebe Draw Federal H15-783 - Wellbore #1 - Plan #1	1,907.81	1,928.81	1,571.03	1,557.74	118.237	CC

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 Beebe Draw Federal H15-725
Project:	Mustang	**TVD Reference:**	KB @ 4813.00ft
Reference Site:	H Section 03	**MD Reference:**	KB @ 4813.00ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Beebe Draw Federal H15-725	**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
H Section 03						
Beebe Draw Federal H15-783 - Wellbore #1 - Plan #1	2,000.00	2,016.82	1,571.05	1,557.12	112.766	ES
Beebe Draw Federal H15-783 - Wellbore #1 - Plan #1	13,540.63	13,283.09	3,835.50	3,679.31	24.558	SF
Gun Club 43-3 #1(PA) - Wellbore #1 - Wellbore #1	2,312.63	2,219.65	3,789.98	3,774.40	243.144	CC
Gun Club 43-3 #1(PA) - Wellbore #1 - Wellbore #1	2,400.00	2,311.74	3,790.16	3,773.95	233.861	ES
Gun Club 43-3 #1(PA) - Wellbore #1 - Wellbore #1	7,000.00	6,592.74	4,346.44	4,292.68	80.844	SF
Gun Club UPRR 31-3 2(PA) - Wellbore #1 - Wellbore #1	100.00	36.96	3,301.80	3,301.61	10,000.000	CC
Gun Club UPRR 31-3 2(PA) - Wellbore #1 - Wellbore #1	2,300.00	2,283.87	3,306.54	3,290.77	209.720	ES
Gun Club UPRR 31-3 2(PA) - Wellbore #1 - Wellbore #1	7,100.00	6,695.65	4,270.20	4,217.23	80.613	SF
Moser UPRR 32-3 #1(PA) - Wellbore #1 - Wellbore #1	1,724.82	1,672.83	1,894.04	1,882.41	162.906	CC
Moser UPRR 32-3 #1(PA) - Wellbore #1 - Wellbore #1	2,150.00	2,081.20	1,895.77	1,881.22	130.288	ES
Moser UPRR 32-3 #1(PA) - Wellbore #1 - Wellbore #1	6,950.00	6,555.11	2,970.74	2,920.06	58.614	SF
Moser UPRR 42-3 #2(PA) - Wellbore #1 - Wellbore #1	3,726.02	3,575.53	2,631.73	2,605.57	100.589	CC
Moser UPRR 42-3 #2(PA) - Wellbore #1 - Wellbore #1	3,900.00	3,736.03	2,632.88	2,605.26	95.327	ES
Moser UPRR 42-3 #2(PA) - Wellbore #1 - Wellbore #1	7,000.00	6,607.95	2,936.81	2,882.52	54.093	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 Beebe Draw Federal H15-725
Project:	Mustang	**TVD Reference:**	KB @ 4813.00ft
Reference Site:	H Section 03	**MD Reference:**	KB @ 4813.00ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Beebe Draw Federal H15-725	**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
H Section 10						
ARISTOCRAT #21-10C(PR) - Wellbore #1 - Wellbore #1	4,039.94	3,931.03	2,196.79	2,147.01	44.130	CC
ARISTOCRAT #21-10C(PR) - Wellbore #1 - Wellbore #1	4,200.00	4,077.70	2,197.72	2,145.81	42.332	ES
ARISTOCRAT #21-10C(PR) - Wellbore #1 - Wellbore #1	8,400.00	6,998.00	2,358.42	2,261.30	24.282	SF
ARISTOCRAT #31-10C(PR) - Wellbore #1 - Wellbore #1	8,200.00	6,979.00	963.97	866.87	9.927	SF
ARISTOCRAT #31-10C(PR) - Wellbore #1 - Wellbore #1	8,276.96	6,979.00	960.90	864.12	9.929	CC, ES
ARISTOCRAT #41-10C(PR) - Wellbore #1 - Wellbore #1	8,154.72	6,962.00	580.67	484.80	6.057	CC, ES
ARISTOCRAT #41-10C(PR) - Wellbore #1 - Wellbore #1	8,200.00	6,962.00	582.43	485.50	6.008	SF
ARISTOCRAT ANGUS #1-10(PR) - Wellbore #1 - Wellbo	8,200.00	6,989.00	1,095.94	999.04	11.309	SF
ARISTOCRAT ANGUS #1-10(PR) - Wellbore #1 - Wellbo	8,255.89	6,989.00	1,094.52	997.78	11.315	CC, ES
ARISTOCRAT ANGUS #13-10(PR) - Wellbore #1 - Wellb	11,002.26	7,005.00	3,855.51	3,735.85	32.220	CC, ES
ARISTOCRAT ANGUS #13-10(PR) - Wellbore #1 - Wellb	11,500.00	7,005.00	3,887.50	3,765.21	31.788	SF
ARISTOCRAT ANGUS #1-6-10(PR) - Wellbore #1 - Well	11,037.97	7,007.00	3,856.32	3,736.30	32.131	CC, ES
ARISTOCRAT ANGUS #1-6-10(PR) - Wellbore #1 - Well	11,600.00	7,007.00	3,897.06	3,774.12	31.698	SF
ARISTOCRAT ANGUS #21-10(PR) - Wellbore #1 - Wellb	4,064.48	3,946.52	2,112.15	2,062.10	42.204	CC
ARISTOCRAT ANGUS #21-10(PR) - Wellbore #1 - Wellb	4,200.00	4,070.70	2,112.84	2,060.99	40.745	ES
ARISTOCRAT ANGUS #21-10(PR) - Wellbore #1 - Wellb	5,200.00	4,987.02	2,160.54	2,095.20	33.067	SF
ARISTOCRAT ANGUS #42-10(PR) - Wellbore #1 - No Su	9,425.47	6,967.00	739.65	634.42	7.029	CC, ES
ARISTOCRAT ANGUS #42-10(PR) - Wellbore #1 - No Su	9,500.00	6,967.00	743.39	636.42	6.949	SF
ARISTOCRAT ANGUS #5-2-10(PR) - Wellbore #1 - Well	8,200.00	6,989.00	1,085.63	988.61	11.190	SF
ARISTOCRAT ANGUS #5-2-10(PR) - Wellbore #1 - Well	8,267.45	6,989.00	1,083.53	986.72	11.193	CC, ES
ARISTOCRAT ANGUS #7-2-10(PR) - Wellbore #1 - Well	9,395.65	6,969.00	733.53	628.53	6.986	CC
ARISTOCRAT ANGUS #7-2-10(PR) - Wellbore #1 - Well	9,400.00	6,969.00	733.54	628.44	6.979	ES
ARISTOCRAT ANGUS #7-2-10(PR) - Wellbore #1 - Well	9,500.00	6,969.00	740.91	633.54	6.900	SF
Aristocrat Angus 14-10 - Wellbore #1 - Wellbore #1 - As	12,081.40	7,019.43	3,872.78	3,779.23	41.400	CC
Aristocrat Angus 14-10 - Wellbore #1 - Wellbore #1 - As	12,100.00	7,019.33	3,872.82	3,779.16	41.349	ES
Aristocrat Angus 14-10 - Wellbore #1 - Wellbore #1 - As	12,700.00	7,018.29	3,921.87	3,825.11	40.535	SF
Aristocrat Angus 6-4-10(PR) - Wellbore #1 - MWD Surve	10,029.88	7,137.53	212.32	135.55	2.766	CC, ES, SF
ARISTOCRAT ANGUS FEDERAL #0-4-10(PR) - Wellbor	10,161.14	7,117.05	4,333.43	4,254.10	54.627	CC
ARISTOCRAT ANGUS FEDERAL #0-4-10(PR) - Wellbor	10,200.00	7,117.29	4,333.60	4,254.08	54.494	ES
ARISTOCRAT ANGUS FEDERAL #0-4-10(PR) - Wellbor	11,000.00	7,122.19	4,413.87	4,330.84	53.160	SF
ARISTOCRAT ANGUS FEDERAL #1-2-10(PR) - Wellbor	2,000.00	1,988.00	2,362.27	2,337.99	97.272	CC
ARISTOCRAT ANGUS FEDERAL #1-2-10(PR) - Wellbor	2,100.00	2,087.98	2,363.19	2,337.68	92.653	ES
ARISTOCRAT ANGUS FEDERAL #1-2-10(PR) - Wellbor	8,200.00	6,991.00	3,171.23	3,075.84	33.245	SF
ARISTOCRAT ANGUS FEDERAL #2-10(PR) - Wellbore	2,000.00	1,988.00	2,377.86	2,353.57	97.914	CC
ARISTOCRAT ANGUS FEDERAL #2-10(PR) - Wellbore	2,100.00	2,087.98	2,378.77	2,353.26	93.263	ES
ARISTOCRAT ANGUS FEDERAL #2-10(PR) - Wellbore	8,200.00	6,991.00	3,169.48	3,074.02	33.201	SF
ARISTOCRAT ANGUS FEDERAL #2-4-10(PR) - Wellbor	10,967.01	7,002.00	3,822.31	3,703.00	32.038	CC
ARISTOCRAT ANGUS FEDERAL #2-4-10(PR) - Wellbor	11,000.00	7,002.00	3,822.45	3,702.95	31.987	ES
ARISTOCRAT ANGUS FEDERAL #2-4-10(PR) - Wellbor	11,500.00	7,002.00	3,859.29	3,737.22	31.616	SF
FEDERAL #11-10(PR) - Wellbore #1 - No Surveys	2,000.00	1,983.00	2,440.80	2,416.56	100.687	CC
FEDERAL #11-10(PR) - Wellbore #1 - No Surveys	2,100.00	2,082.98	2,441.75	2,416.29	95.897	ES
FEDERAL #11-10(PR) - Wellbore #1 - No Surveys	8,200.00	6,986.00	3,258.43	3,162.97	34.135	SF
FEDERAL #12-10(PR) - Wellbore #1 - Wellbore #1	9,234.61	7,007.00	2,734.31	2,630.29	26.287	CC, ES
FEDERAL #12-10(PR) - Wellbore #1 - Wellbore #1	9,400.00	7,007.00	2,739.30	2,634.73	26.196	SF
FEDERAL #22-10(PR) - Wellbore #1 - Wellbore #1	9,238.06	7,006.00	2,711.94	2,607.90	26.067	CC, ES
FEDERAL #22-10(PR) - Wellbore #1 - Wellbore #1	9,400.00	7,006.00	2,716.77	2,612.20	25.980	SF
FEDERAL #32-10(PR) - Wellbore #1 - Wellbore #1	9,300.00	6,977.00	777.15	671.98	7.390	SF
FEDERAL #32-10(PR) - Wellbore #1 - Wellbore #1	9,359.52	6,977.00	774.86	670.09	7.396	CC, ES
FRICO #23-10(PR) - Wellbore #1 - Wellbore #1	10,327.37	7,000.00	2,292.25	2,178.89	20.221	CC, ES
FRICO #23-10(PR) - Wellbore #1 - Wellbore #1	10,400.00	7,000.00	2,293.40	2,179.81	20.192	SF
Frico 28-15 - Original Drilling - Original Drilling - As Drille	12,300.00	7,532.42	1,949.59	1,818.01	14.816	SF
Frico 28-15 - Original Drilling - Original Drilling - As Drille	12,900.00	7,541.42	1,847.84	1,732.13	15.970	ES
Frico 28-15 - Original Drilling - Original Drilling - As Drille	12,922.07	7,541.75	1,847.70	1,732.63	16.056	CC

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 Beebe Draw Federal H15-725
Project:	Mustang	**TVD Reference:**	KB @ 4813.00ft
Reference Site:	H Section 03	**MD Reference:**	KB @ 4813.00ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Beebe Draw Federal H15-725	**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
H Section 10						
HSR-BEEBE DRAW #14-10(PA) - Wellbore #1 - Wellbor	12,457.29	7,000.00	3,857.11	3,723.29	28.823	CC
HSR-BEEBE DRAW #14-10(PA) - Wellbore #1 - Wellbor	12,500.00	7,000.00	3,857.35	3,723.26	28.766	ES
HSR-BEEBE DRAW #14-10(PA) - Wellbore #1 - Wellbor	12,900.00	7,000.00	3,882.44	3,746.17	28.490	SF
HSR-BEEBE DRAW #4-15(PR) - Wellbore #1 - Wellbore	13,540.63	7,050.00	3,693.29	3,573.75	30.894	CC, ES, SF
HSR-Beebe Draw 3-15 - Original Drilling - Original Drillin	13,534.48	7,301.44	3,656.82	3,535.16	30.058	CC
HSR-Beebe Draw 3-15 - Original Drilling - Original Drillin	13,540.63	7,301.15	3,656.82	3,535.14	30.051	ES, SF
HSR-FRICO #10-10(PR) - Wellbore #1 - Wellbore #1	10,437.79	7,003.00	1,998.16	1,883.77	17.468	CC, ES
HSR-FRICO #10-10(PR) - Wellbore #1 - Wellbore #1	10,500.00	7,003.00	1,999.13	1,884.60	17.455	SF
HSR-FRICO #15-10(PR) - Wellbore #1 - Wellbore #1	10,463.43	7,004.00	2,014.69	1,900.06	17.575	CC, ES
HSR-FRICO #15-10(PR) - Wellbore #1 - Wellbore #1	10,500.00	7,004.00	2,015.02	1,900.30	17.565	SF
HSR-FRICO #16-10(PR) - Wellbore #1 - Wellbore #1	10,492.76	7,005.00	2,036.78	1,921.87	17.725	CC
HSR-FRICO #16-10(PR) - Wellbore #1 - Wellbore #1	10,500.00	7,005.00	2,036.79	1,921.86	17.722	ES
HSR-FRICO #16-10(PR) - Wellbore #1 - Wellbore #1	10,600.00	7,005.00	2,039.60	1,924.45	17.713	SF
HSR-OVIATT #11-10(PR) - Wellbore #1 - Wellbore #1	12,453.39	6,999.00	3,826.43	3,692.66	28.604	CC
HSR-OVIATT #11-10(PR) - Wellbore #1 - Wellbore #1	12,500.00	6,999.00	3,826.72	3,692.65	28.543	ES
HSR-OVIATT #11-10(PR) - Wellbore #1 - Wellbore #1	12,900.00	6,999.00	3,852.41	3,716.19	28.280	SF
REI #11-10(PR) - Wellbore #1 - Wellbore #1	10,313.16	7,000.00	2,334.24	2,221.02	20.615	CC, ES
REI #11-10(PR) - Wellbore #1 - Wellbore #1	10,400.00	7,000.00	2,335.86	2,222.36	20.580	SF
REI #35-10(PR) - Wellbore #1 - Wellbore #1	12,775.36	7,221.86	3,008.66	2,905.72	29.226	CC
REI #35-10(PR) - Wellbore #1 - Wellbore #1	12,800.00	7,221.98	3,008.77	2,905.72	29.198	ES
REI #35-10(PR) - Wellbore #1 - Wellbore #1	13,000.00	7,222.93	3,017.04	2,913.30	29.083	SF
REI #38-9(PR) - Wellbore #1 - Wellbore #1	12,799.04	7,140.01	4,593.08	4,490.69	44.862	CC
REI #38-9(PR) - Wellbore #1 - Wellbore #1	12,800.00	7,139.99	4,593.08	4,490.69	44.859	ES
REI #38-9(PR) - Wellbore #1 - Wellbore #1	13,540.63	7,128.82	4,652.54	4,545.33	43.395	SF
REI FEDERAL #25-10(PA) - Wellbore #1 - Wellbore #1	10,878.69	7,780.52	1,578.20	1,480.50	16.154	CC
REI FEDERAL #25-10(PA) - Wellbore #1 - Wellbore #1	10,900.00	7,780.86	1,578.34	1,480.22	16.086	ES
REI FEDERAL #25-10(PA) - Wellbore #1 - Wellbore #1	11,200.00	7,785.68	1,610.57	1,507.37	15.606	SF
H Section 15						
BEEBE DRAW 41-15 #2(PA) - Wellbore #1 - No Surveys	13,171.30	5,475.00	2,986.78	2,874.87	26.689	CC, ES
BEEBE DRAW 41-15 #2(PA) - Wellbore #1 - No Surveys	13,400.00	5,475.00	2,995.52	2,882.85	26.586	SF
BEEBE DRAW CATL. CO 32-15 #1(PA) - Wellbore #1 - N	13,280.08	5,153.00	3,116.13	3,010.52	29.506	CC
BEEBE DRAW CATL. CO 32-15 #1(PA) - Wellbore #1 - N	13,300.00	5,153.00	3,116.20	3,010.51	29.485	ES
BEEBE DRAW CATL. CO 32-15 #1(PA) - Wellbore #1 - N	13,540.63	5,153.00	3,127.01	3,020.53	29.367	SF
Frico 10-15 - Wellbore #1 - Wellbore #1 - As Drilled	13,540.63	7,783.05	2,772.54	2,663.93	25.528	CC, ES, SF
Frico 11-15 - Original Drilling - Original Drilling - As Drille	13,540.63	7,113.91	3,567.27	3,459.70	33.162	CC, ES, SF
Frico 1-15XHZ - Wellbore #1 - Wellbore #1 - As Drilled	13,540.63	6,940.00	5,455.07	5,362.85	59.152	CC, ES, SF
Frico 14-15 - Wellbore #1 - Wellbore #1 - As Drilled	13,540.63	7,046.23	4,535.17	4,439.29	47.302	CC, ES, SF
Frico 15-15 - Wellbore #1 - Wellbore #1 - As Drilled	13,540.63	7,624.78	4,017.39	3,847.69	23.673	CC, ES, SF
Frico 16-15 - Wellbore #1 - Wellbore #1 - As Drilled	13,540.63	7,869.37	3,955.61	3,848.61	36.969	CC, ES, SF
Frico 20-15 - Wellbore #1 - Wellbore #1 - As Drilled	13,540.63	7,793.93	3,315.74	3,205.43	30.057	CC, ES, SF
Frico 22-15 - Original Drilling - Original Drilling - As Drille	13,540.63	7,061.18	3,651.27	3,546.77	34.940	CC, ES, SF
Frico 23-15 - Wellbore #1 - Wellbore #1 - As Drilled	13,540.63	7,419.17	3,675.93	3,549.27	29.024	CC, ES, SF
Frico 25-15 - Original Drilling - Original Drilling - As Drille	13,540.63	7,495.90	2,738.40	2,576.88	16.953	CC, ES, SF
Frico 36-15 - Wellbore #1 - Wellbore #1 - As Drilled	13,540.63	7,367.03	4,729.49	4,610.44	39.729	CC, ES, SF
Frico 37-15 - Wellbore #1 - Wellbore #1 - As Drilled	13,540.63	7,746.33	4,538.84	4,336.46	22.428	CC, ES, SF
Frico 9-15 - Original Drilling - Original Drilling - As Drilled	13,540.63	7,918.92	2,602.97	2,333.66	9.665	CC, ES, SF
Frico State 31-15 - Original Drilling - Original Drilling - As	13,540.63	7,120.92	4,398.65	4,285.28	38.796	CC, ES, SF
HSR-Frico 12-15 - Wellbore #1 - Wellbore #1 - As Drilled	13,540.63	7,033.67	4,556.17	4,453.06	44.191	CC, ES, SF
HSR-Frico 13-15 - Wellbore #1 - Wellbore #1 - As Drilled	13,540.63	7,026.02	5,421.28	5,323.21	55.279	CC, ES, SF
Wardell Gerald J GU 1 - Wellbore #1 - Wellbore #1 - As D	13,540.63	6,874.08	8,697.84	8,623.64	117.231	CC, ES, SF

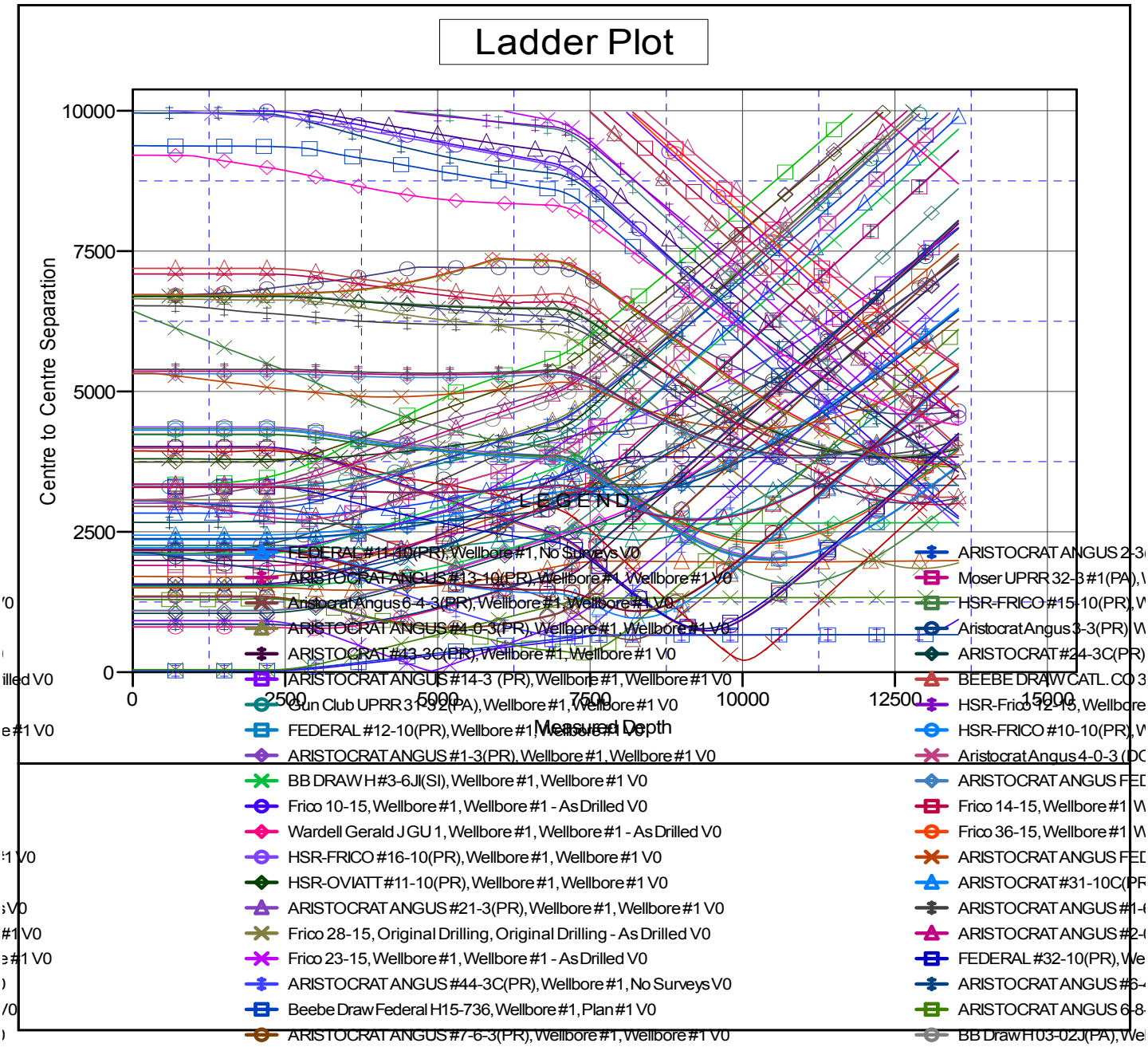
CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Beebe Draw Federal H15-725
Project:	Mustang	**TVD Reference:**	KB @ 4813.00ft
Reference Site:	H Section 03	**MD Reference:**	KB @ 4813.00ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Beebe Draw Federal H15-725	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDMP
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to KB @ 4813.00ft	Coordinates are relative to: Beebe Draw Federal H15-725
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: 0.55°



Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Beebe Draw Federal H15-725
Project:	Mustang	**TVD Reference:**	KB @ 4813.00ft
Reference Site:	H Section 03	**MD Reference:**	KB @ 4813.00ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Beebe Draw Federal H15-725	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDMP
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to KB @ 4813.00ft	Coordinates are relative to: Beebe Draw Federal H15-725
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: 0.55°