

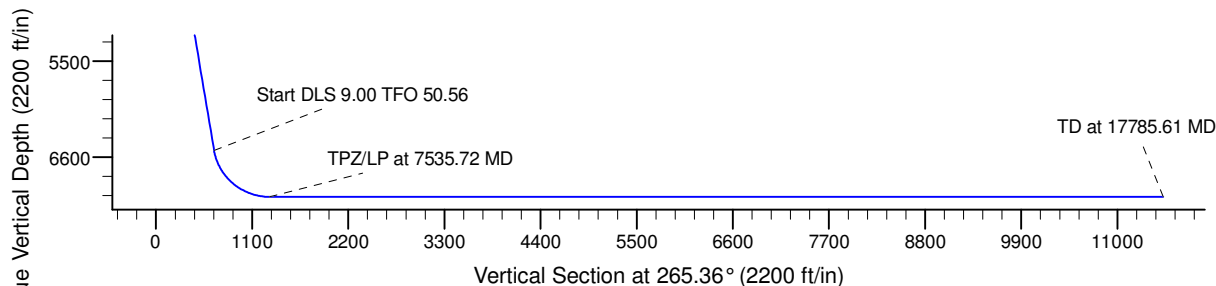
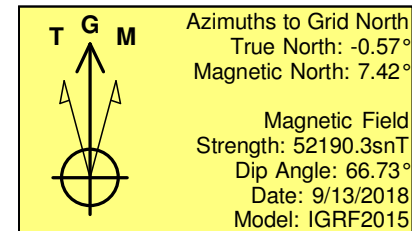
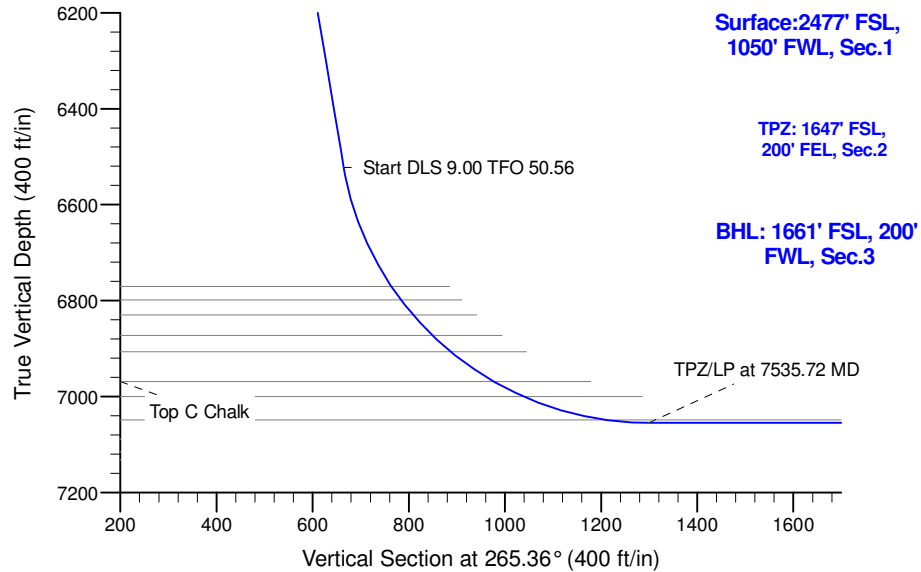
Project: Mustang  
Site: H Section 01  
Well: Shelton H3-635  
Wellbore: Wellbore #1  
Design: Plan #1

# 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	2200.00	0.00	0.00	2200.00	0.00	0.00	0.00	0.00	0.00	
3	2871.43	13.43	219.68	2865.30	-60.28	-50.01	2.00	219.68	54.72	
4	6631.55	13.43	219.68	6522.62	-732.33	-607.56	0.00	0.00	664.80	
5	7535.72	90.00	269.46	7055.00	-835.33	-1236.03	9.00	50.56	1299.55	TPZ Shelton H3-635
6	17785.61	90.00	269.46	7055.00	-932.04	-11485.46	0.00	0.00	11523.22	BHL Shelton H3-635



## WELL DETAILS: Shelton H3-635

	Northing	Easting	Latitude	Longitude
0.00	0.00	1336567.84	4840.00 40.2539090	-104.6169620

Plan: Plan #1 (Shelton H3-635/Wellbore #1)

Created By: Colby Baxter Date: 11:01, October 01 2018

Checked: \_\_\_\_\_ Date: \_\_\_\_\_

Reviewed: \_\_\_\_\_ Date: \_\_\_\_\_

Approved: \_\_\_\_\_ Date: \_\_\_\_\_

# **Northern Region - DJ Basin**

**Mustang**

**H Section 01**

**Shelton H3-635**

**Wellbore #1**

**Plan: Plan #1**

## **Standard Survey Report**

**01 October, 2018**

# Noble Energy, Inc.

## Survey Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Shelton H3-635
<b>Project:</b>	Mustang	<b>TVD Reference:</b>	KB @ 4870.00ft
<b>Site:</b>	H Section 01	<b>MD Reference:</b>	KB @ 4870.00ft
<b>Well:</b>	Shelton H3-635	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Plan #1	<b>Database:</b>	EDMP

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

Site	H Section 01				
Site Position:		Northing:	1,334,244.42 usft	Latitude:	40.2479754
From:	Map	Easting:	3,229,641.33 usft	Longitude:	-104.6772988
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.53 °

Well	Shelton H3-635					
Well Position	+N/-S	0.00 ft	Northing:	1,336,567.84 usft	Latitude:	40.2539090
	+E/-W	0.00 ft	Easting:	3,246,461.13 usft	Longitude:	-104.6169620
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,840.00 ft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2015	9/13/2018	7.99	66.73	52,190.30366480

<b>Design</b>	Plan #1				
<b>Audit Notes:</b>					
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00	
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	0.00	0.00	0.00	265.36	

<b>Survey Tool Program</b>	<b>Date</b>	10/1/2018			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
0.00	17,785.61	Plan #1 (Wellbore #1)	2_MWD+IFR1+MS	A008Mb: IFR dec & multi-station analysis	

<b>Planned Survey</b>										
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Vertical Section (ft)</b>	<b>Dogleg Rate (°/100ft)</b>	<b>Build Rate (°/100ft)</b>	<b>Turn Rate (°/100ft)</b>	
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

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Shelton H3-635
<b>Project:</b>	Mustang	<b>TVD Reference:</b>	KB @ 4870.00ft
<b>Site:</b>	H Section 01	<b>MD Reference:</b>	KB @ 4870.00ft
<b>Well:</b>	Shelton H3-635	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Plan #1	<b>Database:</b>	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	219.68	2,299.98	-1.34	-1.11	1.22	2.00	2.00	0.00
2,400.00	4.00	219.68	2,399.84	-5.37	-4.46	4.88	2.00	2.00	0.00
2,500.00	6.00	219.68	2,499.45	-12.08	-10.02	10.96	2.00	2.00	0.00
2,600.00	8.00	219.68	2,598.70	-21.46	-17.80	19.48	2.00	2.00	0.00
2,700.00	10.00	219.68	2,697.47	-33.50	-27.79	30.41	2.00	2.00	0.00
2,800.00	12.00	219.68	2,795.62	-48.18	-39.97	43.74	2.00	2.00	0.00
2,871.43	13.43	219.68	2,865.30	-60.28	-50.01	54.72	2.00	2.00	0.00
2,900.00	13.43	219.68	2,893.09	-65.39	-54.25	59.36	0.00	0.00	0.00
3,000.00	13.43	219.68	2,990.35	-83.26	-69.07	75.58	0.00	0.00	0.00
3,100.00	13.43	219.68	3,087.62	-101.13	-83.90	91.81	0.00	0.00	0.00
3,200.00	13.43	219.68	3,184.89	-119.01	-98.73	108.03	0.00	0.00	0.00
3,300.00	13.43	219.68	3,282.15	-136.88	-113.56	124.26	0.00	0.00	0.00
3,400.00	13.43	219.68	3,379.42	-154.75	-128.38	140.48	0.00	0.00	0.00
3,500.00	13.43	219.68	3,476.69	-172.63	-143.21	156.71	0.00	0.00	0.00
3,600.00	13.43	219.68	3,573.95	-190.50	-158.04	172.93	0.00	0.00	0.00
3,700.00	13.43	219.68	3,671.22	-208.37	-172.87	189.16	0.00	0.00	0.00
3,800.00	13.43	219.68	3,768.48	-226.24	-187.70	205.38	0.00	0.00	0.00
3,900.00	13.43	219.68	3,865.75	-244.12	-202.52	221.61	0.00	0.00	0.00
4,000.00	13.43	219.68	3,963.02	-261.99	-217.35	237.83	0.00	0.00	0.00
4,100.00	13.43	219.68	4,060.28	-279.86	-232.18	254.05	0.00	0.00	0.00
4,200.00	13.43	219.68	4,157.55	-297.74	-247.01	270.28	0.00	0.00	0.00
4,300.00	13.43	219.68	4,254.81	-315.61	-261.84	286.50	0.00	0.00	0.00
4,400.00	13.43	219.68	4,352.08	-333.48	-276.66	302.73	0.00	0.00	0.00
4,500.00	13.43	219.68	4,449.35	-351.36	-291.49	318.95	0.00	0.00	0.00
4,600.00	13.43	219.68	4,546.61	-369.23	-306.32	335.18	0.00	0.00	0.00
4,700.00	13.43	219.68	4,643.88	-387.10	-321.15	351.40	0.00	0.00	0.00
4,800.00	13.43	219.68	4,741.14	-404.98	-335.98	367.63	0.00	0.00	0.00
4,900.00	13.43	219.68	4,838.41	-422.85	-350.80	383.85	0.00	0.00	0.00
5,000.00	13.43	219.68	4,935.68	-440.72	-365.63	400.08	0.00	0.00	0.00
5,100.00	13.43	219.68	5,032.94	-458.60	-380.46	416.30	0.00	0.00	0.00
5,200.00	13.43	219.68	5,130.21	-476.47	-395.29	432.53	0.00	0.00	0.00

# Noble Energy, Inc.

## Survey Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Shelton H3-635
<b>Project:</b>	Mustang	<b>TVD Reference:</b>	KB @ 4870.00ft
<b>Site:</b>	H Section 01	<b>MD Reference:</b>	KB @ 4870.00ft
<b>Well:</b>	Shelton H3-635	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Plan #1	<b>Database:</b>	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	13.43	219.68	5,227.47	-494.34	-410.12	448.75	0.00	0.00	0.00
5,400.00	13.43	219.68	5,324.74	-512.22	-424.94	464.98	0.00	0.00	0.00
5,500.00	13.43	219.68	5,422.01	-530.09	-439.77	481.20	0.00	0.00	0.00
5,600.00	13.43	219.68	5,519.27	-547.96	-454.60	497.43	0.00	0.00	0.00
5,700.00	13.43	219.68	5,616.54	-565.84	-469.43	513.65	0.00	0.00	0.00
5,800.00	13.43	219.68	5,713.80	-583.71	-484.25	529.88	0.00	0.00	0.00
5,900.00	13.43	219.68	5,811.07	-601.58	-499.08	546.10	0.00	0.00	0.00
6,000.00	13.43	219.68	5,908.34	-619.45	-513.91	562.33	0.00	0.00	0.00
6,100.00	13.43	219.68	6,005.60	-637.33	-528.74	578.55	0.00	0.00	0.00
6,200.00	13.43	219.68	6,102.87	-655.20	-543.57	594.78	0.00	0.00	0.00
6,300.00	13.43	219.68	6,200.13	-673.07	-558.39	611.00	0.00	0.00	0.00
6,400.00	13.43	219.68	6,297.40	-690.95	-573.22	627.23	0.00	0.00	0.00
6,500.00	13.43	219.68	6,394.67	-708.82	-588.05	643.45	0.00	0.00	0.00
6,600.00	13.43	219.68	6,491.93	-726.69	-602.88	659.68	0.00	0.00	0.00
6,631.55	13.43	219.68	6,522.62	-732.33	-607.56	664.80	0.00	0.00	0.00
6,700.00	17.97	235.26	6,588.53	-744.48	-621.32	679.50	9.00	6.64	22.76
6,800.00	25.81	247.32	6,681.29	-761.70	-654.15	713.62	9.00	7.84	12.05
6,900.00	34.20	253.90	6,767.83	-777.92	-701.34	761.96	9.00	8.39	6.58
7,000.00	42.81	258.11	6,846.03	-792.75	-761.72	823.34	9.00	8.61	4.21
7,100.00	51.54	261.13	6,913.94	-805.81	-833.80	896.24	9.00	8.72	3.02
7,200.00	60.32	263.50	6,969.91	-816.79	-915.82	978.88	9.00	8.79	2.36
7,300.00	69.15	265.48	7,012.55	-825.41	-1,005.74	1,069.21	9.00	8.82	1.98
7,400.00	77.99	267.24	7,040.82	-831.47	-1,101.37	1,165.01	9.00	8.84	1.76
7,500.00	86.84	268.88	7,054.01	-834.81	-1,200.33	1,263.92	9.00	8.85	1.65
7,535.72	90.00	269.46	7,055.00	-835.33	-1,236.03	1,299.55	9.00	8.85	1.62
7,600.00	90.00	269.46	7,055.00	-835.93	-1,300.31	1,363.66	0.00	0.00	0.00
7,700.00	90.00	269.46	7,055.00	-836.88	-1,400.30	1,463.40	0.00	0.00	0.00
7,800.00	90.00	269.46	7,055.00	-837.82	-1,500.30	1,563.15	0.00	0.00	0.00
7,900.00	90.00	269.46	7,055.00	-838.76	-1,600.29	1,662.89	0.00	0.00	0.00
8,000.00	90.00	269.46	7,055.00	-839.71	-1,700.29	1,762.63	0.00	0.00	0.00
8,100.00	90.00	269.46	7,055.00	-840.65	-1,800.28	1,862.38	0.00	0.00	0.00
8,200.00	90.00	269.46	7,055.00	-841.59	-1,900.28	1,962.12	0.00	0.00	0.00
8,300.00	90.00	269.46	7,055.00	-842.54	-2,000.28	2,061.87	0.00	0.00	0.00
8,400.00	90.00	269.46	7,055.00	-843.48	-2,100.27	2,161.61	0.00	0.00	0.00
8,500.00	90.00	269.46	7,055.00	-844.42	-2,200.27	2,261.36	0.00	0.00	0.00
8,600.00	90.00	269.46	7,055.00	-845.37	-2,300.26	2,361.10	0.00	0.00	0.00
8,700.00	90.00	269.46	7,055.00	-846.31	-2,400.26	2,460.84	0.00	0.00	0.00
8,800.00	90.00	269.46	7,055.00	-847.25	-2,500.25	2,560.59	0.00	0.00	0.00
8,900.00	90.00	269.46	7,055.00	-848.20	-2,600.25	2,660.33	0.00	0.00	0.00
9,000.00	90.00	269.46	7,055.00	-849.14	-2,700.24	2,760.08	0.00	0.00	0.00
9,100.00	90.00	269.46	7,055.00	-850.08	-2,800.24	2,859.82	0.00	0.00	0.00
9,200.00	90.00	269.46	7,055.00	-851.03	-2,900.24	2,959.57	0.00	0.00	0.00
9,300.00	90.00	269.46	7,055.00	-851.97	-3,000.23	3,059.31	0.00	0.00	0.00

# Noble Energy, Inc.

## Survey Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Shelton H3-635
<b>Project:</b>	Mustang	<b>TVD Reference:</b>	KB @ 4870.00ft
<b>Site:</b>	H Section 01	<b>MD Reference:</b>	KB @ 4870.00ft
<b>Well:</b>	Shelton H3-635	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Plan #1	<b>Database:</b>	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	269.46	7,055.00	-852.92	-3,100.23	3,159.05	0.00	0.00	0.00
9,500.00	90.00	269.46	7,055.00	-853.86	-3,200.22	3,258.80	0.00	0.00	0.00
9,600.00	90.00	269.46	7,055.00	-854.80	-3,300.22	3,358.54	0.00	0.00	0.00
9,700.00	90.00	269.46	7,055.00	-855.75	-3,400.21	3,458.29	0.00	0.00	0.00
9,800.00	90.00	269.46	7,055.00	-856.69	-3,500.21	3,558.03	0.00	0.00	0.00
9,900.00	90.00	269.46	7,055.00	-857.63	-3,600.20	3,657.77	0.00	0.00	0.00
10,000.00	90.00	269.46	7,055.00	-858.58	-3,700.20	3,757.52	0.00	0.00	0.00
10,100.00	90.00	269.46	7,055.00	-859.52	-3,800.20	3,857.26	0.00	0.00	0.00
10,200.00	90.00	269.46	7,055.00	-860.46	-3,900.19	3,957.01	0.00	0.00	0.00
10,300.00	90.00	269.46	7,055.00	-861.41	-4,000.19	4,056.75	0.00	0.00	0.00
10,400.00	90.00	269.46	7,055.00	-862.35	-4,100.18	4,156.50	0.00	0.00	0.00
10,500.00	90.00	269.46	7,055.00	-863.29	-4,200.18	4,256.24	0.00	0.00	0.00
10,600.00	90.00	269.46	7,055.00	-864.24	-4,300.17	4,355.98	0.00	0.00	0.00
10,700.00	90.00	269.46	7,055.00	-865.18	-4,400.17	4,455.73	0.00	0.00	0.00
10,800.00	90.00	269.46	7,055.00	-866.12	-4,500.16	4,555.47	0.00	0.00	0.00
10,900.00	90.00	269.46	7,055.00	-867.07	-4,600.16	4,655.22	0.00	0.00	0.00
11,000.00	90.00	269.46	7,055.00	-868.01	-4,700.16	4,754.96	0.00	0.00	0.00
11,100.00	90.00	269.46	7,055.00	-868.96	-4,800.15	4,854.71	0.00	0.00	0.00
11,200.00	90.00	269.46	7,055.00	-869.90	-4,900.15	4,954.45	0.00	0.00	0.00
11,300.00	90.00	269.46	7,055.00	-870.84	-5,000.14	5,054.19	0.00	0.00	0.00
11,400.00	90.00	269.46	7,055.00	-871.79	-5,100.14	5,153.94	0.00	0.00	0.00
11,500.00	90.00	269.46	7,055.00	-872.73	-5,200.13	5,253.68	0.00	0.00	0.00
11,600.00	90.00	269.46	7,055.00	-873.67	-5,300.13	5,353.43	0.00	0.00	0.00
11,700.00	90.00	269.46	7,055.00	-874.62	-5,400.12	5,453.17	0.00	0.00	0.00
11,800.00	90.00	269.46	7,055.00	-875.56	-5,500.12	5,552.92	0.00	0.00	0.00
11,900.00	90.00	269.46	7,055.00	-876.50	-5,600.12	5,652.66	0.00	0.00	0.00
12,000.00	90.00	269.46	7,055.00	-877.45	-5,700.11	5,752.40	0.00	0.00	0.00
12,100.00	90.00	269.46	7,055.00	-878.39	-5,800.11	5,852.15	0.00	0.00	0.00
12,200.00	90.00	269.46	7,055.00	-879.33	-5,900.10	5,951.89	0.00	0.00	0.00
12,300.00	90.00	269.46	7,055.00	-880.28	-6,000.10	6,051.64	0.00	0.00	0.00
12,400.00	90.00	269.46	7,055.00	-881.22	-6,100.09	6,151.38	0.00	0.00	0.00
12,500.00	90.00	269.46	7,055.00	-882.16	-6,200.09	6,251.13	0.00	0.00	0.00
12,600.00	90.00	269.46	7,055.00	-883.11	-6,300.08	6,350.87	0.00	0.00	0.00
12,700.00	90.00	269.46	7,055.00	-884.05	-6,400.08	6,450.61	0.00	0.00	0.00
12,800.00	90.00	269.46	7,055.00	-884.99	-6,500.08	6,550.36	0.00	0.00	0.00
12,900.00	90.00	269.46	7,055.00	-885.94	-6,600.07	6,650.10	0.00	0.00	0.00
13,000.00	90.00	269.46	7,055.00	-886.88	-6,700.07	6,749.85	0.00	0.00	0.00
13,100.00	90.00	269.46	7,055.00	-887.83	-6,800.06	6,849.59	0.00	0.00	0.00
13,200.00	90.00	269.46	7,055.00	-888.77	-6,900.06	6,949.34	0.00	0.00	0.00
13,300.00	90.00	269.46	7,055.00	-889.71	-7,000.05	7,049.08	0.00	0.00	0.00
13,400.00	90.00	269.46	7,055.00	-890.66	-7,100.05	7,148.82	0.00	0.00	0.00
13,500.00	90.00	269.46	7,055.00	-891.60	-7,200.04	7,248.57	0.00	0.00	0.00
13,600.00	90.00	269.46	7,055.00	-892.54	-7,300.04	7,348.31	0.00	0.00	0.00

# Noble Energy, Inc.

## Survey Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Shelton H3-635
<b>Project:</b>	Mustang	<b>TVD Reference:</b>	KB @ 4870.00ft
<b>Site:</b>	H Section 01	<b>MD Reference:</b>	KB @ 4870.00ft
<b>Well:</b>	Shelton H3-635	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Plan #1	<b>Database:</b>	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	269.46	7,055.00	-893.49	-7,400.04	7,448.06	0.00	0.00	0.00
13,800.00	90.00	269.46	7,055.00	-894.43	-7,500.03	7,547.80	0.00	0.00	0.00
13,900.00	90.00	269.46	7,055.00	-895.37	-7,600.03	7,647.55	0.00	0.00	0.00
14,000.00	90.00	269.46	7,055.00	-896.32	-7,700.02	7,747.29	0.00	0.00	0.00
14,100.00	90.00	269.46	7,055.00	-897.26	-7,800.02	7,847.03	0.00	0.00	0.00
14,200.00	90.00	269.46	7,055.00	-898.20	-7,900.01	7,946.78	0.00	0.00	0.00
14,300.00	90.00	269.46	7,055.00	-899.15	-8,000.01	8,046.52	0.00	0.00	0.00
14,400.00	90.00	269.46	7,055.00	-900.09	-8,100.00	8,146.27	0.00	0.00	0.00
14,500.00	90.00	269.46	7,055.00	-901.03	-8,200.00	8,246.01	0.00	0.00	0.00
14,600.00	90.00	269.46	7,055.00	-901.98	-8,300.00	8,345.76	0.00	0.00	0.00
14,700.00	90.00	269.46	7,055.00	-902.92	-8,399.99	8,445.50	0.00	0.00	0.00
14,800.00	90.00	269.46	7,055.00	-903.87	-8,499.99	8,545.24	0.00	0.00	0.00
14,900.00	90.00	269.46	7,055.00	-904.81	-8,599.98	8,644.99	0.00	0.00	0.00
15,000.00	90.00	269.46	7,055.00	-905.75	-8,699.98	8,744.73	0.00	0.00	0.00
15,100.00	90.00	269.46	7,055.00	-906.70	-8,799.97	8,844.48	0.00	0.00	0.00
15,200.00	90.00	269.46	7,055.00	-907.64	-8,899.97	8,944.22	0.00	0.00	0.00
15,300.00	90.00	269.46	7,055.00	-908.58	-8,999.96	9,043.97	0.00	0.00	0.00
15,400.00	90.00	269.46	7,055.00	-909.53	-9,099.96	9,143.71	0.00	0.00	0.00
15,500.00	90.00	269.46	7,055.00	-910.47	-9,199.96	9,243.45	0.00	0.00	0.00
15,600.00	90.00	269.46	7,055.00	-911.41	-9,299.95	9,343.20	0.00	0.00	0.00
15,700.00	90.00	269.46	7,055.00	-912.36	-9,399.95	9,442.94	0.00	0.00	0.00
15,800.00	90.00	269.46	7,055.00	-913.30	-9,499.94	9,542.69	0.00	0.00	0.00
15,900.00	90.00	269.46	7,055.00	-914.24	-9,599.94	9,642.43	0.00	0.00	0.00
16,000.00	90.00	269.46	7,055.00	-915.19	-9,699.93	9,742.17	0.00	0.00	0.00
16,100.00	90.00	269.46	7,055.00	-916.13	-9,799.93	9,841.92	0.00	0.00	0.00
16,200.00	90.00	269.46	7,055.00	-917.07	-9,899.92	9,941.66	0.00	0.00	0.00
16,300.00	90.00	269.46	7,055.00	-918.02	-9,999.92	10,041.41	0.00	0.00	0.00
16,400.00	90.00	269.46	7,055.00	-918.96	-10,099.92	10,141.15	0.00	0.00	0.00
16,500.00	90.00	269.46	7,055.00	-919.91	-10,199.91	10,240.90	0.00	0.00	0.00
16,600.00	90.00	269.46	7,055.00	-920.85	-10,299.91	10,340.64	0.00	0.00	0.00
16,700.00	90.00	269.46	7,055.00	-921.79	-10,399.90	10,440.38	0.00	0.00	0.00
16,800.00	90.00	269.46	7,055.00	-922.74	-10,499.90	10,540.13	0.00	0.00	0.00
16,900.00	90.00	269.46	7,055.00	-923.68	-10,599.89	10,639.87	0.00	0.00	0.00
17,000.00	90.00	269.46	7,055.00	-924.62	-10,699.89	10,739.62	0.00	0.00	0.00
17,100.00	90.00	269.46	7,055.00	-925.57	-10,799.88	10,839.36	0.00	0.00	0.00
17,200.00	90.00	269.46	7,055.00	-926.51	-10,899.88	10,939.11	0.00	0.00	0.00
17,300.00	90.00	269.46	7,055.00	-927.45	-10,999.88	11,038.85	0.00	0.00	0.00
17,400.00	90.00	269.46	7,055.00	-928.40	-11,099.87	11,138.59	0.00	0.00	0.00
17,500.00	90.00	269.46	7,055.00	-929.34	-11,199.87	11,238.34	0.00	0.00	0.00
17,600.00	90.00	269.46	7,055.00	-930.28	-11,299.86	11,338.08	0.00	0.00	0.00
17,700.00	90.00	269.46	7,055.00	-931.23	-11,399.86	11,437.83	0.00	0.00	0.00
17,785.61	90.00	269.46	7,055.00	-932.04	-11,485.46	11,523.22	0.00	0.00	0.00

# Noble Energy, Inc.

## Survey Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Shelton H3-635
<b>Project:</b>	Mustang	<b>TVD Reference:</b>	KB @ 4870.00ft
<b>Site:</b>	H Section 01	<b>MD Reference:</b>	KB @ 4870.00ft
<b>Well:</b>	Shelton H3-635	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Plan #1	<b>Database:</b>	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
SHL Shelton H3-635 - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	1,336,567.84	3,246,461.13	40.2539090	-104.6169620
KOP Shelton H3-635 - plan hits target center - Point	0.00	0.00	6,522.62	-732.33	-607.56	1,335,835.50	3,245,853.57	40.2519154	-104.6191647
TPZ Shelton H3-635 - plan hits target center - Point	0.00	0.00	7,055.00	-835.33	-1,236.03	1,335,732.51	3,245,225.10	40.2516498	-104.6214199
BHL Shelton H3-635 - plan hits target center - Point	0.00	0.00	7,055.00	-932.04	-11,485.46	1,335,635.80	3,234,975.69	40.2516572	-104.6581420

### Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
482.00	482.00	Pierre			
677.00	677.00	Upper Pierre Aquifer Top			
1,582.00	1,582.00	Upper Pierre Aquifer Base			
2,865.98	2,860.00	Top A Marl			
3,767.63	3,737.00	Parkman			
4,216.92	4,174.00	Sussex			
5,034.26	4,969.00	Shannon			
6,903.84	6,771.00	Teepee Buttes			
6,938.45	6,799.00	Sharon Springs			
6,978.47	6,830.00	Top A Chalk			
7,037.80	6,873.00	Top B Chalk			
7,088.95	6,907.00	Top B Marl			
7,198.16	6,969.00	Top C Chalk			
7,266.93	7,000.00	Top C Marl			
7,447.53	7,049.00	Top D Chalk			

### Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
2200	2200	0	0	Start Build 2.00
6632	6523	-60	-50	Start DLS 9.00 TFO 50.56
7536	7055	-732	-608	TPZ/LP at 7535.72 MD
17,786	7055	-835	-1236	TD at 17785.61 MD

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_



# **Northern Region - DJ Basin**

**Mustang**

**H Section 01**

**Shelton H3-635**

**Wellbore #1**

**Plan #1**

## **Anticollision Summary Report**

**01 October, 2018**

**Noble Energy, Inc.**  
Anticollision Summary Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Shelton H3-635
<b>Project:</b>	Mustang	<b>TVD Reference:</b>	KB @ 4870.00ft
<b>Reference Site:</b>	H Section 01	<b>MD Reference:</b>	KB @ 4870.00ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Shelton H3-635	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

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

<b>Survey Tool Program</b>	<b>Date</b>	10/1/2018		
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.00	17,785.61	Plan #1 (Wellbore #1)	2_MWD+IFR1+MS	A008Mb: IFR dec & multi-station analysis

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
H Section 01						
Collins 1-1 - Wellbore #1 - Wellbore #1 - As Drilled	252.91	250.91	3,981.62	3,980.24	2,889.076	CC
Collins 1-1 - Wellbore #1 - Wellbore #1 - As Drilled	2,218.13	2,240.33	3,984.83	3,969.47	259.388	ES
Collins 1-1 - Wellbore #1 - Wellbore #1 - As Drilled	7,300.00	7,300.00	5,307.47	5,256.51	104.151	SF
Houndskeeper 1-13 - Wellbore #1 - Wellbore #1 - As Dril	2,289.72	2,357.76	2,262.01	2,245.99	141.236	CC
Houndskeeper 1-13 - Wellbore #1 - Wellbore #1 - As Dril	2,300.00	2,368.55	2,262.02	2,245.93	140.599	ES
Houndskeeper 1-13 - Wellbore #1 - Wellbore #1 - As Dril	6,800.00	6,689.96	3,172.10	3,124.62	66.821	SF
Houndskeeper H01-17 - Wellbore #1 - Wellbore #1 - As D	0.00	0.00	3,077.82			
Houndskeeper H01-17 - Wellbore #1 - Wellbore #1 - As D	600.00	574.27	3,079.92	3,076.16	820.422	ES
Houndskeeper H01-17 - Wellbore #1 - Wellbore #1 - As D	7,000.00	6,879.54	4,284.76	4,235.85	87.592	SF
Houndskeeper H01-22 - Wellbore #1 - Wellbore #1 - As D	2,321.60	2,407.61	2,787.46	2,771.17	171.080	CC, ES
Houndskeeper H01-22 - Wellbore #1 - Wellbore #1 - As D	6,850.00	6,693.43	3,624.52	3,576.76	75.883	SF
Houndskeeper H01-27 - Wellbore #1 - Wellbore #1 - As D	100.00	82.85	2,830.19	2,829.92	10,000.000	CC
Houndskeeper H01-27 - Wellbore #1 - Wellbore #1 - As D	1,100.00	1,062.16	2,830.83	2,823.58	390.674	ES
Houndskeeper H01-27 - Wellbore #1 - Wellbore #1 - As D	7,000.00	6,953.89	4,859.76	4,810.31	98.269	SF
Houndskeeper H01-28 - Wellbore #1 - Wellbore #1 - As D	1,693.99	1,679.06	2,826.27	2,814.74	244.985	CC
Houndskeeper H01-28 - Wellbore #1 - Wellbore #1 - As D	1,800.00	1,752.04	2,826.81	2,814.64	232.238	ES
Houndskeeper H01-28 - Wellbore #1 - Wellbore #1 - As D	7,050.00	7,005.33	4,190.35	4,138.23	80.396	SF
Houndskeeper PC H01-21D - Wellbore #1 - Wellbore #1	4,772.48	5,278.91	2,066.20	2,029.57	56.410	CC
Houndskeeper PC H01-21D - Wellbore #1 - Wellbore #1	4,800.00	5,300.01	2,066.28	2,029.45	56.115	ES
Houndskeeper PC H01-21D - Wellbore #1 - Wellbore #1	6,750.00	6,786.20	2,382.11	2,332.97	48.474	SF
HSR-HARTMAN #4-1(PR) - Wellbore #1 - Gyro Surveys	100.00	43.57	2,320.26	2,320.05	10,000.000	CC
HSR-HARTMAN #4-1(PR) - Wellbore #1 - Gyro Surveys	600.00	527.71	2,322.43	2,318.84	646.438	ES
HSR-HARTMAN #4-1(PR) - Wellbore #1 - Gyro Surveys	7,600.00	7,027.12	3,186.01	3,134.18	61.475	SF
HSR-KOSKELA #5-1(PR) - Wellbore #1 - No Surveys	2,200.00	2,148.00	739.70	713.30	28.021	CC
HSR-KOSKELA #5-1(PR) - Wellbore #1 - No Surveys	2,300.00	2,247.98	740.43	712.82	26.814	ES
HSR-KOSKELA #5-1(PR) - Wellbore #1 - No Surveys	6,650.00	6,488.52	1,433.18	1,352.82	17.835	SF
HSR-LAURICE #6-1(PR) - Wellbore #1 - No Surveys	2,200.00	2,148.00	1,170.57	1,144.17	44.343	CC, ES
HSR-LAURICE #6-1(PR) - Wellbore #1 - No Surveys	6,700.00	6,536.53	2,126.90	2,046.04	26.302	SF
LJS R H01-02 - Wellbore #1 - Wellbore #1 - As Drilled	2,203.38	2,189.71	2,799.96	2,784.83	184.987	CC, ES
LJS R H01-02 - Wellbore #1 - Wellbore #1 - As Drilled	6,900.00	6,799.33	3,862.48	3,814.32	80.191	SF
LJS R H01-08 - Wellbore #1 - Wellbore #1 - As Drilled	1,967.24	1,952.27	3,489.07	3,475.61	259.167	CC
LJS R H01-08 - Wellbore #1 - Wellbore #1 - As Drilled	2,200.00	2,157.01	3,489.88	3,474.87	232.493	ES
LJS R H01-08 - Wellbore #1 - Wellbore #1 - As Drilled	6,950.00	6,787.27	4,472.30	4,423.88	92.361	SF
Shelton 22-1(PR) - Wellbore #1 - Wellbore #1	2,812.31	2,894.00	283.73	259.92	11.915	CC, ES
Shelton 22-1(PR) - Wellbore #1 - Wellbore #1	2,900.00	2,969.90	287.60	262.76	11.578	SF
Shelton 31-01(PR) - Wellbore #1 - Gyro Surveys	5,030.27	5,278.23	1,991.00	1,951.74	50.706	CC, ES
Shelton 31-01(PR) - Wellbore #1 - Gyro Surveys	7,500.00	7,112.98	2,220.50	2,167.79	42.126	SF

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

**Noble Energy, Inc.**  
Anticollision Summary Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Shelton H3-635
<b>Project:</b>	Mustang	<b>TVD Reference:</b>	KB @ 4870.00ft
<b>Reference Site:</b>	H Section 01	<b>MD Reference:</b>	KB @ 4870.00ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Shelton H3-635	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
H Section 01						
Shelton D07-30 - Wellbore #1 - Wellbore #1 - As Drilled	2,344.65	2,361.83	4,491.98	4,475.76	276.904	CC
Shelton D07-30 - Wellbore #1 - Wellbore #1 - As Drilled	2,400.00	2,400.00	4,492.20	4,475.66	271.637	ES
Shelton D07-30 - Wellbore #1 - Wellbore #1 - As Drilled	7,050.00	6,872.09	5,003.30	4,953.77	101.020	SF
Shelton H #12-29(PR) - Wellbore #1 - No Surveys	6,741.03	6,598.19	1,770.31	1,688.26	21.575	CC
Shelton H #12-29(PR) - Wellbore #1 - No Surveys	6,750.00	6,606.55	1,770.35	1,688.18	21.546	ES
Shelton H #12-29(PR) - Wellbore #1 - No Surveys	7,000.00	6,817.03	1,801.11	1,716.03	21.169	SF
Shelton H 1-12X(PR) - Wellbore #1 - No Surveys	5,203.75	5,097.86	46.75	-16.28	0.742	Level 1, CC, ES, SF
Shelton H01-23 - Wellbore #1 - Wellbore #1 - As Drilled	2,573.19	2,684.98	3,012.35	2,994.24	166.363	CC
Shelton H01-23 - Wellbore #1 - Wellbore #1 - As Drilled	2,700.00	2,818.80	3,013.03	2,994.03	158.594	ES
Shelton H01-23 - Wellbore #1 - Wellbore #1 - As Drilled	6,800.00	6,616.64	3,482.42	3,434.88	73.256	SF
Shelton H01-24 - Wellbore #1 - Wellbore #1 - As Drilled	2,868.45	2,913.95	1,928.63	1,908.74	96.955	CC
Shelton H01-24 - Wellbore #1 - Wellbore #1 - As Drilled	3,200.00	3,237.05	1,929.19	1,907.02	87.011	ES
Shelton H01-24 - Wellbore #1 - Wellbore #1 - As Drilled	6,800.00	6,701.50	2,205.67	2,157.76	46.039	SF
Shelton H13-715 - Shelton H13-715 - Plan #1	2,200.00	2,224.00	4,278.52	4,263.12	277.956	CC
Shelton H13-715 - Shelton H13-715 - Plan #1	2,300.00	2,323.98	4,278.81	4,262.72	265.877	ES
Shelton H13-715 - Shelton H13-715 - Plan #1	6,800.00	6,415.71	4,568.23	4,521.00	96.723	SF
Shelton H13-724 - Shelton H13-724 - Plan #1	6,225.74	6,500.00	4,010.41	3,964.87	88.047	CC, ES
Shelton H13-724 - Shelton H13-724 - Plan #1	6,850.00	6,700.00	4,078.98	4,030.45	84.044	SF
Shelton H13-730 - Shelton H13-730 - Plan #1	6,460.28	6,732.78	3,755.67	3,708.07	78.901	CC
Shelton H13-730 - Shelton H13-730 - Plan #1	6,500.00	6,750.00	3,755.82	3,708.01	78.549	ES
Shelton H13-730 - Shelton H13-730 - Plan #1	6,800.00	6,850.00	3,786.94	3,737.67	76.861	SF
Shelton H13-734 - Shelton H13-734 - Plan #1	6,414.21	6,700.00	3,484.48	3,436.87	73.190	CC, ES
Shelton H13-734 - Shelton H13-734 - Plan #1	6,750.00	6,800.00	3,506.08	3,457.00	71.431	SF
Shelton H13-744 - Shelton H13-744 - Plan #1	4,295.35	4,247.27	2,487.19	2,457.13	82.756	CC
Shelton H13-744 - Shelton H13-744 - Plan #1	4,300.00	4,250.19	2,487.19	2,457.11	82.682	ES
Shelton H13-744 - Shelton H13-744 - Plan #1	6,800.00	6,389.71	2,796.25	2,749.40	59.679	SF
Shelton H13-753 - Shelton H13-753 - Plan #1	6,520.52	6,500.00	2,337.59	2,291.10	50.290	CC, ES
Shelton H13-753 - Shelton H13-753 - Plan #1	6,800.00	6,600.00	2,367.47	2,319.64	49.492	SF
Shelton H13-763 - Shelton H13-763 - Plan #1	6,637.23	6,600.00	1,884.69	1,836.79	39.345	CC, ES
Shelton H13-763 - Shelton H13-763 - Plan #1	6,750.00	6,650.00	1,893.60	1,845.14	39.078	SF
Shelton H13-768 - Shelton H13-768 - Plan #1	6,316.87	6,127.33	1,536.27	1,491.61	34.396	CC
Shelton H13-768 - Shelton H13-768 - Plan #1	6,400.00	6,204.83	1,536.57	1,491.30	33.941	ES
Shelton H13-768 - Shelton H13-768 - Plan #1	6,800.00	6,555.20	1,558.35	1,510.25	32.397	SF
Shelton H13-773 - Shelton H13-773 - Plan #1	6,636.52	6,400.00	1,430.75	1,384.12	30.686	CC, ES
Shelton H13-773 - Shelton H13-773 - Plan #1	6,750.00	6,426.16	1,438.39	1,391.40	30.609	SF
Shelton H13-782 - Shelton H13-782 - Plan #1	6,746.70	6,426.93	1,254.76	1,207.90	26.780	CC
Shelton H13-782 - Shelton H13-782 - Plan #1	6,750.00	6,428.05	1,254.76	1,207.90	26.774	ES
Shelton H13-782 - Shelton H13-782 - Plan #1	6,800.00	6,450.00	1,255.69	1,208.64	26.686	SF
Shelton H3-615 - Wellbore #1 - Plan #1	7,530.96	7,432.36	1,296.68	1,243.38	24.326	CC
Shelton H3-615 - Wellbore #1 - Plan #1	17,786.16	17,687.55	1,311.07	1,035.98	4.766	ES, SF
Shelton H3-625 - Wellbore #1 - Plan #1	7,533.23	7,457.17	648.31	594.52	12.051	CC
Shelton H3-625 - Wellbore #1 - Plan #1	17,786.16	17,710.10	655.51	380.32	2.382	ES, SF
Shelton H3-645 - Wellbore #1 - Plan #1	2,000.00	1,999.00	22.61	8.74	1.630	CC, ES, SF
Shelton H3-655 - Wellbore #1 - Plan #1	2,000.00	1,999.00	44.94	31.07	3.240	CC, ES
Shelton H3-655 - Wellbore #1 - Plan #1	2,100.00	2,097.73	46.31	31.74	3.178	SF
Shelton H3-665 - Wellbore #1 - Plan #1	6,669.86	7,061.75	1,936.34	1,886.74	39.041	CC
Shelton H3-665 - Wellbore #1 - Plan #1	17,786.16	17,771.61	1,966.62	1,692.03	7.162	ES, SF
Shelton H3-675 - Wellbore #1 - Plan #1	3,393.01	3,718.44	2,480.99	2,456.59	101.654	CC
Shelton H3-675 - Wellbore #1 - Plan #1	17,786.16	17,630.98	2,622.09	2,347.70	9.556	ES, SF
Shelton H3-683 - Wellbore #1 - Plan #1	2,200.00	2,184.00	2,548.01	2,532.76	167.089	CC, ES
Shelton H3-683 - Wellbore #1 - Plan #1	17,786.16	17,571.68	3,162.63	2,888.27	11.527	SF
Shelton State H1-759 - Wellbore #1 - Plan #1	6,694.97	9,049.15	1,710.95	1,657.05	31.744	CC
Shelton State H1-759 - Wellbore #1 - Plan #1	6,700.00	9,048.28	1,710.97	1,657.05	31.728	ES

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

**Noble Energy, Inc.**  
Anticollision Summary Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Shelton H3-635
<b>Project:</b>	Mustang	<b>TVD Reference:</b>	KB @ 4870.00ft
<b>Reference Site:</b>	H Section 01	<b>MD Reference:</b>	KB @ 4870.00ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Shelton H3-635	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
H Section 01						
Shelton State H1-759 - Wellbore #1 - Plan #1	6,750.00	9,039.77	1,714.17	1,659.99	31.637	SF
Shelton State H1-766 - Wellbore #1 - Plan #1	6,737.61	9,104.20	1,231.45	1,176.46	22.395	CC, ES
Shelton State H1-766 - Wellbore #1 - Plan #1	6,800.00	9,085.51	1,236.02	1,180.74	22.359	SF
Shelton State H1-780 - Wellbore #1 - Plan #1	6,833.57	9,000.30	663.33	613.53	13.321	CC
Shelton State H1-780 - Wellbore #1 - Plan #1	6,850.00	8,997.16	663.74	613.50	13.212	ES
Shelton State H1-780 - Wellbore #1 - Plan #1	6,950.00	8,982.61	683.56	631.04	13.015	SF
Shelton State H1-783 - Wellbore #1 - Plan #1	7,000.96	8,928.34	249.53	202.50	5.305	CC, ES
Shelton State H1-783 - Wellbore #1 - Plan #1	7,050.00	8,922.44	256.07	205.35	5.049	SF
UPRC #1-12J(PA) - Wellbore #1 - No Surveys	4,877.78	4,780.79	89.26	63.61	3.480	CC, ES
UPRC #1-12J(PA) - Wellbore #1 - No Surveys	4,900.00	4,802.41	89.41	63.63	3.469	SF
UPRC #1-13J(SI) - Wellbore #1 - No Surveys	6,990.41	6,800.95	906.57	821.86	10.703	CC
UPRC #1-13J(SI) - Wellbore #1 - No Surveys	7,000.00	6,808.03	906.61	821.80	10.690	ES
UPRC #1-13J(SI) - Wellbore #1 - No Surveys	7,100.00	6,875.94	912.58	826.69	10.626	SF
UPRC 1-09J - Wellbore #1 - Wellbore #1 - As Drilled	2,336.38	2,447.71	3,505.81	3,489.32	212.645	CC
UPRC 1-09J - Wellbore #1 - Wellbore #1 - As Drilled	2,400.00	2,513.10	3,506.19	3,489.27	207.179	ES
UPRC 1-09J - Wellbore #1 - Wellbore #1 - As Drilled	6,900.00	6,788.34	4,170.28	4,121.84	86.087	SF
UPRC 1-10J - Wellbore #1 - Wellbore #1 - As Drilled	2,282.87	2,327.14	2,047.89	2,031.99	128.835	CC
UPRC 1-10J - Wellbore #1 - Wellbore #1 - As Drilled	2,300.00	2,344.87	2,047.91	2,031.89	127.868	ES
UPRC 1-10J - Wellbore #1 - Wellbore #1 - As Drilled	6,800.00	6,697.86	2,692.25	2,644.53	56.416	SF
UPRC 1-15J - Wellbore #1 - Wellbore #1 - As Drilled	3,609.89	3,566.75	2,784.22	2,759.42	112.234	CC
UPRC 1-15J - Wellbore #1 - Wellbore #1 - As Drilled	3,700.00	3,638.30	2,784.55	2,759.17	109.688	ES
UPRC 1-15J - Wellbore #1 - Wellbore #1 - As Drilled	6,900.00	6,751.61	2,976.76	2,928.17	61.260	SF
UPRC 1-16J - Wellbore #1 - Wellbore #1 - As Drilled	2,344.63	2,378.88	3,833.16	3,816.88	235.556	CC
UPRC 1-16J - Wellbore #1 - Wellbore #1 - As Drilled	2,400.00	2,430.29	3,833.29	3,816.66	230.451	ES
UPRC 1-16J - Wellbore #1 - Wellbore #1 - As Drilled	6,950.00	6,801.64	4,304.91	4,256.06	88.113	SF
UPRR 39 PAN AM G #1(PR) - Wellbore #1 - No Surveys	6,395.53	6,263.06	778.16	700.31	9.996	CC
UPRR 39 PAN AM G #1(PR) - Wellbore #1 - No Surveys	6,600.00	6,461.93	779.61	699.22	9.698	ES
UPRR 39 PAN AM G #1(PR) - Wellbore #1 - No Surveys	6,700.00	6,558.53	784.40	702.78	9.610	SF

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

**Noble Energy, Inc.**  
Anticollision Summary Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Shelton H3-635
<b>Project:</b>	Mustang	<b>TVD Reference:</b>	KB @ 4870.00ft
<b>Reference Site:</b>	H Section 01	<b>MD Reference:</b>	KB @ 4870.00ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Shelton H3-635	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

**Summary**

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Separation Factor	Warning
H Section 02						
ARISTOCRAT ANGUS #34-2(PR) - Wellbore #1 - Wellbo	9,491.98	6,969.00	1,020.76	917.31	9.867	CC
ARISTOCRAT ANGUS #34-2(PR) - Wellbore #1 - Wellbo	9,500.00	6,969.00	1,020.80	917.23	9.857	ES
ARISTOCRAT ANGUS #34-2(PR) - Wellbore #1 - Wellbo	9,600.00	6,969.00	1,026.46	921.72	9.800	SF
ARISTOCRAT ANGUS #43-2(PR) - Wellbore #1 - No Sur	7,866.19	6,997.00	510.66	420.37	5.656	CC, ES, SF
ARISTOCRAT ANGUS #44-2(PR) - Wellbore #1 - No Sur	8,345.77	6,989.00	613.38	519.92	6.563	CC, ES
ARISTOCRAT ANGUS #44-2(PR) - Wellbore #1 - No Sur	8,400.00	6,989.00	615.77	521.71	6.546	SF
ARISTOCRAT ANGUS #44-2A(PR) - Wellbore #1 - Wellb	7,868.77	6,997.00	1,158.50	1,068.20	12.829	CC, ES
ARISTOCRAT ANGUS #44-2A(PR) - Wellbore #1 - Wellb	8,000.00	6,997.00	1,165.91	1,074.60	12.769	SF
ARISTOCRAT ANGUS #4-8-2(PR) - Wellbore #1 - No Su	9,537.20	6,966.00	1,024.79	920.91	9.865	CC, ES
ARISTOCRAT ANGUS #4-8-2(PR) - Wellbore #1 - No Su	9,600.00	6,966.00	1,026.71	922.04	9.809	SF
Aristocrat Angus 5-6-2(PR) - Wellbore #1 - As Drilled	9,123.54	7,082.26	242.21	177.35	3.734	CC, ES, SF
Aristocrat Angus 6-4-2(PR) - Wellbore #1 - As Drilled	8,600.00	7,404.91	934.82	867.80	13.947	SF
Aristocrat Angus 6-4-2(PR) - Wellbore #1 - As Drilled	8,674.91	7,406.08	931.81	865.47	14.045	CC, ES
Aristocrat H14-715 - Aristocrat H14-715 - Plan #1	7,650.56	6,600.00	1,325.67	1,275.87	26.620	CC, ES
Aristocrat H14-715 - Aristocrat H14-715 - Plan #1	7,900.00	6,600.00	1,348.94	1,297.67	26.313	SF
Aristocrat H14-725 - Aristocrat H14-725 - Plan #1	8,256.55	6,650.00	1,325.15	1,270.61	24.295	CC, ES
Aristocrat H14-725 - Aristocrat H14-725 - Plan #1	8,500.00	6,666.40	1,347.02	1,290.45	23.810	SF
Aristocrat H14-735 - Aristocrat H14-735 - Plan #1	8,859.29	6,776.57	1,333.85	1,272.81	21.851	CC, ES
Aristocrat H14-735 - Aristocrat H14-735 - Plan #1	9,100.00	6,800.00	1,354.82	1,291.46	21.382	SF
Aristocrat H14-744 - Aristocrat H14-744 - Plan #1	9,456.89	7,018.19	1,324.70	1,254.96	18.995	CC, ES
Aristocrat H14-744 - Aristocrat H14-744 - Plan #1	9,700.00	7,050.00	1,345.53	1,273.21	18.604	SF
Aristocrat H14-756 - Aristocrat H14-756 - Plan #1	10,255.45	6,650.00	1,338.14	1,264.91	18.273	CC, ES
Aristocrat H14-756 - Aristocrat H14-756 - Plan #1	10,500.00	6,650.00	1,360.30	1,284.76	18.007	SF
Aristocrat H14-765 - Aristocrat H14-765 - Plan #1	10,853.30	6,783.74	1,335.30	1,254.10	16.444	CC, ES
Aristocrat H14-765 - Aristocrat H14-765 - Plan #1	11,000.00	6,800.00	1,343.13	1,260.13	16.182	SF
Aristocrat H14-775 - Aristocrat H14-775 - Plan #1	11,451.14	7,019.86	1,328.20	1,237.43	14.633	CC, ES
Aristocrat H14-775 - Aristocrat H14-775 - Plan #1	11,600.00	7,050.00	1,336.13	1,243.25	14.386	SF
Aristocrat H14-785 - Aristocrat H14-785 - Plan #1	12,052.69	7,350.00	1,319.17	1,217.16	12.933	CC, ES
Aristocrat H14-785 - Aristocrat H14-785 - Plan #1	12,200.00	7,366.50	1,327.05	1,223.11	12.767	SF
Aristocrat PC H11-27D(PR) - Wellbore #1 - As Drilled	8,675.67	7,133.40	1,710.06	1,647.46	27.320	CC
Aristocrat PC H11-27D(PR) - Wellbore #1 - As Drilled	8,700.00	7,133.97	1,710.23	1,647.33	27.191	ES
Aristocrat PC H11-27D(PR) - Wellbore #1 - As Drilled	9,100.00	7,142.99	1,761.88	1,694.45	26.129	SF
Bonkiewicz 1(PA) - Wellbore #1 - Wellbore #1	9,027.60	6,900.00	2,167.41	2,105.43	34.973	CC, ES
Bonkiewicz 1(PA) - Wellbore #1 - Wellbore #1	9,500.00	6,900.00	2,218.29	2,153.18	34.068	SF
Jenson 21-2C(SI) - Wellbore #1 - Wellbore #1	11,075.68	6,935.00	2,078.75	1,958.75	17.323	CC
Jenson 21-2C(SI) - Wellbore #1 - Wellbore #1	11,100.00	6,935.00	2,078.89	1,958.67	17.292	ES
Jenson 21-2C(SI) - Wellbore #1 - Wellbore #1	11,300.00	6,935.00	2,090.81	1,969.01	17.165	SF
Jepsen #1(SI) - Wellbore #1 - Wellbore #1	11,001.40	6,955.00	563.40	444.06	4.721	CC, ES, SF
JEPSEN #2(PR) - Wellbore #1 - As Drilled	11,581.51	6,900.00	2,262.02	2,172.93	25.390	CC
JEPSEN #2(PR) - Wellbore #1 - As Drilled	11,600.00	6,900.00	2,262.09	2,172.83	25.341	ES
JEPSEN #2(PR) - Wellbore #1 - As Drilled	11,900.00	6,900.00	2,284.33	2,192.73	24.938	SF
JEPSEN #23A-2(DA) - Wellbore #1 - Wellbore #1	1,575.32	1,500.00	4,529.34	4,518.28	409.362	CC
JEPSEN #23A-2(DA) - Wellbore #1 - Wellbore #1	1,600.00	1,500.00	4,529.41	4,518.26	406.185	ES
JEPSEN #23A-2(DA) - Wellbore #1 - Wellbore #1	13,500.00	1,500.00	6,353.88	6,300.95	120.036	SF
Jepsen #3(PA) - Wellbore #1 - Wellbore #1	11,784.44	6,900.00	1,010.36	918.83	11.038	CC
Jepsen #3(PA) - Wellbore #1 - Wellbore #1	11,800.00	6,900.00	1,010.48	918.72	11.012	ES
Jepsen #3(PA) - Wellbore #1 - Wellbore #1	11,900.00	6,900.00	1,016.95	924.03	10.944	SF
Jepsen #4(SI) - Wellbore #1 - Wellbore #1	12,166.46	6,940.00	362.62	230.15	2.737	CC, ES, SF
Jepsen 11-2(PA) - Wellbore #1 - Wellbore #1	12,119.36	7,000.00	2,831.76	2,735.98	29.565	CC, ES
Jepsen 11-2(PA) - Wellbore #1 - Wellbore #1	12,600.00	7,000.00	2,872.26	2,772.50	28.790	SF
Jepsen 21-02(TA) - Wellbore #1 - Wellbore #1	11,052.35	6,949.93	2,920.59	2,837.22	35.033	CC
Jepsen 21-02(TA) - Wellbore #1 - Wellbore #1	11,100.00	6,949.65	2,920.98	2,837.15	34.845	ES
Jepsen 21-02(TA) - Wellbore #1 - Wellbore #1	11,700.00	6,945.98	2,991.53	2,903.04	33.805	SF

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

**Noble Energy, Inc.**  
Anticollision Summary Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Shelton H3-635
<b>Project:</b>	Mustang	<b>TVD Reference:</b>	KB @ 4870.00ft
<b>Reference Site:</b>	H Section 01	<b>MD Reference:</b>	KB @ 4870.00ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Shelton H3-635	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)		Separation Factor	Warning
Offset Well - Wellbore - Design				Between Ellipses (ft)		
H Section 02						
JEPSEN 22-2(SI) - Wellbore #1 - Wellbore #1	10,100.00	7,165.10	62.64	-32.00	0.662	Level 1, ES, SF
JEPSEN 22-2(SI) - Wellbore #1 - Wellbore #1	10,128.42	7,148.55	58.21	-20.92	0.736	Level 1, CC
Jepsen 23-2(SI) - Wellbore #1 - Wellbore #1	10,638.30	6,950.00	362.74	247.44	3.146	CC, ES, SF
Jepsen 5-2(PA) - Wellbore #1 - Wellbore #1	12,097.08	6,900.00	1,666.39	1,571.42	17.546	CC
Jepsen 5-2(PA) - Wellbore #1 - Wellbore #1	12,100.00	6,900.00	1,666.40	1,571.40	17.541	ES
Jepsen 5-2(PA) - Wellbore #1 - Wellbore #1	12,800.00	12,800.00	1,808.56	1,691.84	15.495	SF
Shelton 17-2(PA) - Wellbore #1 - Wellbore #1	8,809.20	6,896.24	2,471.57	2,411.54	41.176	CC, ES
Shelton 17-2(PA) - Wellbore #1 - Wellbore #1	9,400.00	6,901.89	2,541.19	2,477.16	39.688	SF
Shelton 27-2(SI) - Wellbore #1 - Wellbore #1	100.00	51.43	1,339.00	1,338.81	6,877.029	CC
Shelton 27-2(SI) - Wellbore #1 - Wellbore #1	300.00	247.74	1,339.87	1,338.26	832.047	ES
Shelton 27-2(SI) - Wellbore #1 - Wellbore #1	10,300.00	7,633.11	3,860.72	3,769.71	42.423	SF
Shelton 31-2(PA) - Wellbore #1 - Wellbore #1	9,450.07	6,938.89	3,189.06	3,122.73	48.075	CC
Shelton 31-2(PA) - Wellbore #1 - Wellbore #1	9,500.00	6,937.06	3,189.45	3,122.69	47.776	ES
Shelton 31-2(PA) - Wellbore #1 - Wellbore #1	10,300.00	6,903.74	3,300.23	3,227.54	45.401	SF
Shelton 41-2(PA) - Wellbore #1 - Wellbore #1	512.91	447.91	2,552.77	2,549.78	852.256	CC
Shelton 41-2(PA) - Wellbore #1 - Wellbore #1	900.00	815.70	2,554.16	2,548.50	450.736	ES
Shelton 41-2(PA) - Wellbore #1 - Wellbore #1	8,800.00	7,000.00	3,120.95	3,062.08	53.007	SF
Shelton 42-2(PR) - Wellbore #1 - Wellbore #1	7,879.49	6,995.91	1,573.73	1,520.17	29.382	CC, ES
Shelton 42-2(PR) - Wellbore #1 - Wellbore #1	8,100.00	6,996.38	1,589.11	1,534.56	29.130	SF
Shelton 7-2(PR) - Wellbore #1 - Gyro Surveys	9,516.76	6,953.59	1,647.10	1,580.10	24.582	CC, ES
Shelton 7-2(PR) - Wellbore #1 - Gyro Surveys	9,700.00	6,948.19	1,657.25	1,589.01	24.286	SF



**Noble Energy, Inc.**  
Anticollision Summary Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Shelton H3-635
<b>Project:</b>	Mustang	<b>TVD Reference:</b>	KB @ 4870.00ft
<b>Reference Site:</b>	H Section 01	<b>MD Reference:</b>	KB @ 4870.00ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Shelton H3-635	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
H Section 03						
Beebe 17-3(PR) - Wellbore #1 - Wellbore #1	13,893.71	6,900.00	2,233.56	2,117.52	19.248	CC
Beebe 17-3(PR) - Wellbore #1 - Wellbore #1	13,900.00	6,900.00	2,233.57	2,117.47	19.238	ES
Beebe 17-3(PR) - Wellbore #1 - Wellbore #1	14,100.00	6,900.00	2,243.07	2,125.33	19.051	SF
ARISTOCRAT #24-3C(PR) - Wellbore #1 - Wellbore #1	16,149.59	6,978.00	794.81	-1,766.81	0.310	Level 1, CC, ES, SF
ARISTOCRAT #33-3C(PR) - Wellbore #1 - Wellbore #1	14,667.61	6,959.00	301.56	139.37	1.859	CC, ES, SF
ARISTOCRAT #43-3C(PR) - Wellbore #1 - Wellbore #1	13,340.97	6,945.00	313.86	167.60	2.146	CC, ES, SF
ARISTOCRAT ANGUS #11-3(PR) - Wellbore #1 - Wellbo	17,268.07	6,960.00	2,895.67	326.78	1.127	Level 2, CC
ARISTOCRAT ANGUS #11-3(PR) - Wellbore #1 - Wellbo	17,300.00	6,960.00	2,895.85	326.63	1.127	Level 2, ES, SF
ARISTOCRAT ANGUS #12-3C(PR) - Wellbore #1 - No S	17,411.14	6,959.00	1,504.45	1,309.09	7.701	CC, ES
ARISTOCRAT ANGUS #12-3C(PR) - Wellbore #1 - No S	17,500.00	6,959.00	1,507.07	1,311.11	7.691	SF
ARISTOCRAT ANGUS #11-3(PR) - Wellbore #1 - Wellbo	13,910.26	6,960.00	215.21	-2,313.20	0.085	Level 1, CC, ES, SF
ARISTOCRAT ANGUS #13-3(PR) - Wellbore #1 - No Sur	17,490.88	6,990.00	356.57	159.97	1.814	CC, ES, SF
ARISTOCRAT ANGUS #14-3 (PR) - Wellbore #1 - Wellb	15,300.00	4,603.00	3,270.26	2,106.02	2.809	SF
ARISTOCRAT ANGUS #14-3 (PR) - Wellbore #1 - Wellb	17,290.93	4,603.00	2,594.38	1,875.20	3.607	CC
ARISTOCRAT ANGUS #14-3 (PR) - Wellbore #1 - Wellb	17,786.16	4,603.00	2,641.22	1,860.64	3.384	ES
ARISTOCRAT ANGUS #14-3A(PR) - Wellbore #1 - Wellb	17,249.33	6,988.00	1,150.47	-1,427.99	0.446	Level 1, CC, ES, SF
ARISTOCRAT ANGUS #2-0-3(PR) - Wellbore #1 - Wellb	16,901.61	6,961.00	2,655.64	90.85	1.035	Level 2, CC, ES, SF
ARISTOCRAT ANGUS #21-3(PR) - Wellbore #1 - Wellbo	15,842.74	6,965.00	2,693.28	139.92	1.055	Level 2, CC, ES
ARISTOCRAT ANGUS #21-3(PR) - Wellbore #1 - Wellbo	15,900.00	6,965.00	2,693.89	139.95	1.055	Level 2, SF
ARISTOCRAT ANGUS #23-3(PR) - Wellbore #1 - No Sur	16,006.26	4,640.00	2,337.47	2,248.66	26.322	CC, ES
ARISTOCRAT ANGUS #23-3(PR) - Wellbore #1 - No Sur	16,400.00	4,640.00	2,370.40	2,279.27	26.012	SF
ARISTOCRAT ANGUS #23-3C(PR) - Wellbore #1 - No S	16,005.16	6,954.00	416.83	238.57	2.338	CC, ES, SF
ARISTOCRAT ANGUS #2-4-3X(PR) - Wellbore #1 - Well	15,108.43	6,961.00	835.53	-1,707.58	0.329	Level 1, CC, ES, SF
ARISTOCRAT ANGUS #34-3C(PR) - Wellbore #1 - Wellb	14,502.17	6,971.00	795.64	-1,743.69	0.313	Level 1, CC, ES, SF
ARISTOCRAT ANGUS #4-0-3(PR) - Wellbore #1 - Wellb	15,874.29	6,950.00	2,752.29	203.80	1.080	Level 2, CC
ARISTOCRAT ANGUS #4-0-3(PR) - Wellbore #1 - Wellb	15,900.00	6,950.00	2,752.41	203.66	1.080	Level 2, ES, SF
ARISTOCRAT ANGUS #44-3C(PR) - Wellbore #1 - No S	13,272.85	6,958.00	931.62	786.05	6.400	CC
ARISTOCRAT ANGUS #44-3C(PR) - Wellbore #1 - No S	13,300.00	6,958.00	932.02	786.03	6.384	ES, SF
ARISTOCRAT ANGUS #4-6-3X(PR) - Wellbore #1 - No S	15,736.78	6,990.00	1,354.18	1,178.85	7.724	CC, ES
ARISTOCRAT ANGUS #4-6-3X(PR) - Wellbore #1 - No S	15,800.00	6,990.00	1,355.65	1,179.87	7.712	SF
ARISTOCRAT ANGUS #6-4-3(PR) - Wellbore #1 - Wellb	14,624.91	6,956.00	331.07	-2,204.47	0.131	Level 1, CC, ES, SF
ARISTOCRAT ANGUS #7-6-3(PR) - Wellbore #1 - Wellb	13,891.27	6,960.00	226.87	-2,301.32	0.090	Level 1, CC, SF
ARISTOCRAT ANGUS #7-6-3(PR) - Wellbore #1 - Wellb	13,900.00	6,960.00	227.03	-2,301.35	0.090	Level 1, ES
Aristocrat Angus 0-8-3(PR) - Wellbore #1 - Wellbore #1	17,786.16	7,101.23	1,636.07	1,470.02	9.852	CC, ES, SF
Aristocrat Angus 2-0-3 - Wellbore #1 - Actual	16,676.18	7,116.39	3,573.87	3,423.77	23.810	CC
Aristocrat Angus 2-0-3 - Wellbore #1 - Actual	16,700.00	7,116.14	3,573.95	3,423.60	23.772	ES
Aristocrat Angus 2-0-3 - Wellbore #1 - Actual	17,200.00	7,110.93	3,612.05	3,457.75	23.410	SF
ARISTOCRAT ANGUS 2-3(PR) - Wellbore #1 - Wellbore	16,619.40	7,081.74	2,208.97	2,055.92	14.433	CC, ES
ARISTOCRAT ANGUS 2-3(PR) - Wellbore #1 - Wellbore	16,800.00	7,074.18	2,216.33	2,062.19	14.379	SF
Aristocrat Angus 3-3(PR) - Wellbore #1 - Wellbore #1	16,606.52	7,106.25	304.46	152.40	2.002	CC, ES, SF
Aristocrat Angus 4-0-3 - Aristocrat Angus 4-0-3 - Actual	15,401.54	7,075.75	3,524.38	3,387.94	25.830	CC, ES
Aristocrat Angus 4-0-3 - Aristocrat Angus 4-0-3 - Actual	15,900.00	7,065.83	3,559.45	3,419.13	25.367	SF
Aristocrat Angus 4-0-3 (DO NOT USE) - Original Drilling	15,392.40	7,024.55	2,293.70	2,157.45	16.834	CC
Aristocrat Angus 4-0-3 (DO NOT USE) - Original Drilling	15,400.00	7,024.45	2,293.71	2,157.37	16.824	ES
Aristocrat Angus 4-0-3 (DO NOT USE) - Original Drilling	15,600.00	7,021.72	2,303.07	2,164.93	16.671	SF
ARISTOCRAT ANGUS 4-2-3(PR) - Wellbore #1 - Wellbo	15,392.40	7,024.55	2,293.71	2,157.46	16.834	CC
ARISTOCRAT ANGUS 4-2-3(PR) - Wellbore #1 - Wellbo	15,400.00	7,024.45	2,293.73	2,157.38	16.823	ES
ARISTOCRAT ANGUS 4-2-3(PR) - Wellbore #1 - Wellbo	15,600.00	7,021.72	2,303.09	2,164.94	16.671	SF
Aristocrat Angus 6-4-3(PR) - Wellbore #1 - Wellbore #1	14,624.91	6,956.00	331.07	169.42	2.048	CC, ES, SF
ARISTOCRAT ANGUS 6-8-3(PR) - Wellbore #1 - Wellbo	14,045.96	7,143.94	1,569.39	1,449.32	13.071	CC, ES
ARISTOCRAT ANGUS 6-8-3(PR) - Wellbore #1 - Wellbo	14,200.00	7,146.23	1,576.93	1,454.82	12.914	SF
BB DRAW H #3-12J(SI) - Wellbore #1 - No Surveys	17,509.02	6,995.00	268.05	71.19	1.362	Level 3, CC, ES, SF
BB DRAW H #3-14J(PR) - Wellbore #1 - Wellbore #1	16,199.55	6,980.00	800.28	-1,762.64	0.312	Level 1, CC

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

**Noble Energy, Inc.**  
Anticollision Summary Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Shelton H3-635
<b>Project:</b>	Mustang	<b>TVD Reference:</b>	KB @ 4870.00ft
<b>Reference Site:</b>	H Section 01	<b>MD Reference:</b>	KB @ 4870.00ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Shelton H3-635	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
H Section 03						
BB DRAW H #3-14J(PR) - Wellbore #1 - Wellbore #1	16,200.00	6,980.00	800.28	-1,762.65	0.312	Level 1, ES, SF
BB DRAW H #3-5J(SI) - Wellbore #1 - No Surveys	17,305.08	6,965.00	1,487.33	1,293.21	7.662	CC, ES
BB DRAW H #3-5J(SI) - Wellbore #1 - No Surveys	17,400.00	6,965.00	1,490.36	1,295.62	7.653	SF
BB DRAW H #3-6J(SI) - Wellbore #1 - Wellbore #1	15,842.62	6,985.00	1,771.63	-788.73	0.692	Level 1, CC, ES, SF
BB Draw H 03-02J(PA) - Wellbore #1 - Wellbore #1	16,882.73	6,975.48	2,537.16	2,384.71	16.643	CC
BB Draw H 03-02J(PA) - Wellbore #1 - Wellbore #1	16,900.00	6,974.94	2,537.22	2,384.59	16.624	ES
BB Draw H 03-02J(PA) - Wellbore #1 - Wellbore #1	17,100.00	6,968.53	2,546.44	2,392.19	16.509	SF
BB Draw H3-3J(PR) - Wellbore #1 - Wellbore #1	16,884.32	7,011.69	715.69	563.16	4.692	CC
BB Draw H3-3J(PR) - Wellbore #1 - Wellbore #1	16,900.00	7,011.48	715.86	563.08	4.685	ES, SF
Beebe Draw H15-715 - Wellbore #1 - Plan #1	13,236.50	7,134.86	1,317.29	1,198.07	11.049	CC, ES
Beebe Draw H15-715 - Wellbore #1 - Plan #1	13,300.00	7,125.78	1,319.44	1,200.02	11.049	SF
Beebe Draw H15-725 - Wellbore #1 - Plan #1	13,824.61	6,927.43	1,318.23	1,199.09	11.064	CC, ES
Beebe Draw H15-725 - Wellbore #1 - Plan #1	13,900.00	6,919.51	1,320.32	1,200.68	11.036	SF
Beebe Draw H15-736 - Wellbore #1 - Plan #1	14,425.17	6,781.80	1,323.82	1,201.86	10.855	CC, ES
Beebe Draw H15-736 - Wellbore #1 - Plan #1	14,500.00	6,776.97	1,325.90	1,203.26	10.811	SF
Beebe Draw H15-746 - Wellbore #1 - Plan #1	15,018.90	6,700.00	1,327.45	1,200.19	10.431	CC, ES
Beebe Draw H15-746 - Wellbore #1 - Plan #1	15,100.00	6,700.00	1,329.92	1,201.74	10.375	SF
Beebe Draw H15-754 - Wellbore #1 - Plan #1	15,710.90	6,650.00	1,322.40	1,188.07	9.844	CC, ES
Beebe Draw H15-754 - Wellbore #1 - Plan #1	15,800.00	6,650.00	1,325.39	1,190.02	9.791	SF
Beebe Draw H15-764 - Wellbore #1 - Plan #1	16,292.49	6,621.22	1,323.68	1,183.17	9.421	CC
Beebe Draw H15-764 - Wellbore #1 - Plan #1	16,300.00	6,621.33	1,323.70	1,183.09	9.414	ES
Beebe Draw H15-764 - Wellbore #1 - Plan #1	16,400.00	6,622.75	1,328.03	1,186.36	9.374	SF
Beebe Draw H15-774 - Wellbore #1 - Plan #1	16,900.63	6,667.50	1,322.90	1,174.25	8.900	CC, ES
Beebe Draw H15-774 - Wellbore #1 - Plan #1	17,000.00	6,672.51	1,326.60	1,176.83	8.858	SF
Beebe Draw H15-783 - Wellbore #1 - Plan #1	17,404.86	6,771.23	1,319.01	1,163.46	8.480	CC, ES
Beebe Draw H15-783 - Wellbore #1 - Plan #1	17,500.00	6,779.06	1,322.37	1,165.67	8.439	SF
Gun Club 43-3 #1(PA) - Wellbore #1 - Wellbore #1	13,398.15	6,600.00	3,069.33	2,960.93	28.315	CC
Gun Club 43-3 #1(PA) - Wellbore #1 - Wellbore #1	13,400.00	6,600.00	3,069.33	2,960.91	28.310	ES
Gun Club 43-3 #1(PA) - Wellbore #1 - Wellbore #1	13,900.00	6,600.00	3,110.09	2,997.57	27.640	SF
Gun Club UPRR 31-3 2(PA) - Wellbore #1 - Wellbore #1	14,467.38	6,931.05	2,888.30	2,765.20	23.464	CC
Gun Club UPRR 31-3 2(PA) - Wellbore #1 - Wellbore #1	14,500.00	6,930.86	2,888.48	2,765.05	23.402	ES
Gun Club UPRR 31-3 2(PA) - Wellbore #1 - Wellbore #1	14,900.00	6,928.59	2,920.51	2,793.93	23.072	SF
Moser UPRR 32-3 #1(PA) - Wellbore #1 - Wellbore #1	14,755.27	6,950.00	1,559.48	1,432.86	12.317	CC, ES
Moser UPRR 32-3 #1(PA) - Wellbore #1 - Wellbore #1	14,900.00	6,950.00	1,566.18	1,438.63	12.279	SF
Moser UPRR 42-3 #2(PA) - Wellbore #1 - Wellbore #1	13,282.91	6,926.39	1,617.82	1,508.87	14.849	CC
Moser UPRR 42-3 #2(PA) - Wellbore #1 - Wellbore #1	13,300.00	6,926.35	1,617.91	1,508.81	14.828	ES
Moser UPRR 42-3 #2(PA) - Wellbore #1 - Wellbore #1	13,400.00	6,926.09	1,622.06	1,512.22	14.768	SF



**Noble Energy, Inc.**  
Anticollision Summary Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Shelton H3-635
<b>Project:</b>	Mustang	<b>TVD Reference:</b>	KB @ 4870.00ft
<b>Reference Site:</b>	H Section 01	<b>MD Reference:</b>	KB @ 4870.00ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Shelton H3-635	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

**Summary**

Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Separation Factor	Warning
<b>Offset Well - Wellbore - Design</b>						
H Section 12						
Helms H 12-14D(SI) - Wellbore #1 - Gyro Surveys	6,978.41	6,972.28	6,784.70	6,735.25	137.200	CC
Helms H 12-14D(SI) - Wellbore #1 - Gyro Surveys	7,000.00	6,988.34	6,784.83	6,735.23	136.791	ES
Helms H 12-14D(SI) - Wellbore #1 - Gyro Surveys	11,200.00	7,213.64	8,715.54	8,639.02	113.891	SF
JOHNSON H #13-27D(PR) - Wellbore #1 - MWD Survey	323.52	334.02	7,380.22	7,378.31	3,881.542	CC
JOHNSON H #13-27D(PR) - Wellbore #1 - MWD Survey	800.00	778.00	7,381.68	7,376.54	1,436.071	ES
JOHNSON H #13-27D(PR) - Wellbore #1 - MWD Survey	10,900.00	7,169.56	9,989.54	9,917.45	138.580	SF
Ray H 12-24D(SI) - Wellbore #1 - Gyro Surveys	6,817.54	6,752.81	5,792.68	5,739.87	109.688	CC, ES
Ray H 12-24D(SI) - Wellbore #1 - Gyro Surveys	12,800.00	12,800.00	9,518.37	9,418.74	95.531	SF
SHELTON H #01-25D(SI) - Wellbore #1 - MWD Surveys	5,882.25	6,214.50	1,020.06	959.89	16.953	CC
SHELTON H #01-25D(SI) - Wellbore #1 - MWD Surveys	5,900.00	6,230.38	1,020.08	959.77	16.914	ES
SHELTON H #01-25D(SI) - Wellbore #1 - MWD Surveys	6,650.00	6,957.07	1,046.13	980.78	16.009	SF
Shelton H01-33D(SI) - Wellbore #1 - MWD Surveys	7,400.00	7,406.22	451.19	393.61	7.835	SF
Shelton H01-33D(SI) - Wellbore #1 - MWD Surveys	7,450.00	7,415.85	447.65	390.91	7.889	ES
Shelton H01-33D(SI) - Wellbore #1 - MWD Surveys	7,453.71	7,416.42	447.64	390.95	7.897	CC
STROH #H 12-03(SI) - Wellbore #1 - No Surveys	6,695.16	6,564.92	2,763.91	2,682.29	33.863	CC
STROH #H 12-03(SI) - Wellbore #1 - No Surveys	6,700.00	6,569.53	2,763.92	2,682.24	33.838	ES
STROH #H 12-03(SI) - Wellbore #1 - No Surveys	7,050.00	6,862.38	2,826.48	2,740.77	32.975	SF
Stroh #H12-16(SI) - Wellbore #1 - No Surveys	6,710.85	6,555.82	7,790.91	7,709.32	95.488	CC, ES
Stroh #H12-16(SI) - Wellbore #1 - No Surveys	7,400.00	6,997.82	7,991.75	7,903.41	90.461	SF
Stroh #H12-18(PR) - Wellbore #1 - No Surveys	6,700.10	6,572.62	3,586.84	3,505.14	43.901	CC, ES
Stroh #H12-18(PR) - Wellbore #1 - No Surveys	7,100.00	6,897.94	3,663.46	3,577.22	42.483	SF
Stroh #H12-22(PR) - Wellbore #1 - Gyro Surveys	6,676.70	6,554.12	5,326.01	5,279.13	113.624	CC, ES
Stroh #H12-22(PR) - Wellbore #1 - Gyro Surveys	7,100.00	6,800.00	5,417.89	5,368.40	109.473	SF
Stroh #H12-32(PR) - Wellbore #1 - No Surveys	7,333.52	6,990.67	4,096.17	4,008.46	46.700	CC
Stroh #H12-32(PR) - Wellbore #1 - No Surveys	7,350.00	6,995.54	4,096.24	4,008.41	46.637	ES
Stroh #H12-32(PR) - Wellbore #1 - No Surveys	8,500.00	7,022.00	4,318.05	4,222.93	45.397	SF
Stroh 12-01 - Wellbore #1 - Wellbore #1 - As Drilled	2,507.89	2,492.81	4,638.23	4,621.01	269.448	CC
Stroh 12-01 - Wellbore #1 - Wellbore #1 - As Drilled	5,100.00	5,146.35	4,639.37	4,603.41	129.026	ES
Stroh 12-01 - Wellbore #1 - Wellbore #1 - As Drilled	7,050.00	6,861.88	4,848.04	4,798.48	97.821	SF
STROH D #07-31(PR) - Wellbore #1 - Gyro Surveys	5,406.26	5,374.28	5,302.98	5,265.00	139.647	CC
STROH D #07-31(PR) - Wellbore #1 - Gyro Surveys	5,700.00	5,642.45	5,304.30	5,264.24	132.427	ES
STROH D #07-31(PR) - Wellbore #1 - Gyro Surveys	7,100.00	6,864.71	5,475.49	5,425.68	109.928	SF
STROH H #12-05(PA) - Wellbore #1 - Gyro Surveys	6,974.39	6,770.36	3,354.95	3,306.33	69.006	CC, ES
STROH H #12-05(PA) - Wellbore #1 - Gyro Surveys	7,500.00	7,028.04	3,439.10	3,387.19	66.248	SF
STROH H #12-06(SI) - Wellbore #1 - No Surveys	6,763.77	6,633.29	4,148.36	4,065.93	50.324	CC, ES
STROH H #12-06(SI) - Wellbore #1 - No Surveys	7,250.00	6,977.97	4,241.71	4,154.17	48.454	SF
STROH H #12-08(PR) - Wellbore #1 - No Surveys	6,641.17	6,515.96	5,692.49	5,611.47	70.260	CC
STROH H #12-08(PR) - Wellbore #1 - No Surveys	6,650.00	6,524.52	5,692.54	5,611.41	70.166	ES
STROH H #12-08(PR) - Wellbore #1 - No Surveys	7,150.00	6,927.52	5,840.21	5,753.53	67.374	SF
STROH H #12-10(PR) - Wellbore #1 - No Surveys	6,740.87	6,820.05	5,619.35	5,535.36	66.905	CC
STROH H #12-10(PR) - Wellbore #1 - No Surveys	6,750.00	6,828.55	5,619.38	5,535.28	66.816	ES
STROH H #12-10(PR) - Wellbore #1 - No Surveys	7,300.00	7,205.55	5,745.60	5,655.86	64.020	SF
STROH H #12-11(SI) - Wellbore #1 - No Surveys	6,907.45	6,767.97	5,185.57	5,101.46	61.654	CC, ES
STROH H #12-11(SI) - Wellbore #1 - No Surveys	7,450.00	7,043.33	5,272.53	5,183.59	59.280	SF
STROH H #12-12(SI) - Wellbore #1 - No Surveys	7,288.17	6,979.24	4,920.30	4,832.87	56.278	CC
STROH H #12-12(SI) - Wellbore #1 - No Surveys	7,300.00	6,983.55	4,920.34	4,832.82	56.219	ES
STROH H #12-12(SI) - Wellbore #1 - No Surveys	9,100.00	7,026.00	5,356.15	5,256.45	53.726	SF
STROH H #12-13(SI) - Wellbore #1 - No Surveys	7,281.87	6,968.87	6,586.94	6,499.63	75.440	CC
STROH H #12-13(SI) - Wellbore #1 - No Surveys	7,300.00	6,975.55	6,587.01	6,499.56	75.320	ES
STROH H #12-13(SI) - Wellbore #1 - No Surveys	10,600.00	7,018.00	7,584.39	7,472.51	67.790	SF
STROH H #12-14(PA) - Wellbore #1 - No Surveys	6,948.97	6,798.30	5,914.73	5,830.20	69.976	CC
STROH H #12-14(PA) - Wellbore #1 - No Surveys	6,950.00	6,799.10	5,914.73	5,830.19	69.966	ES
STROH H #12-14(PA) - Wellbore #1 - No Surveys	8,500.00	7,046.00	6,374.55	6,279.56	67.110	SF

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

**Noble Energy, Inc.**  
Anticollision Summary Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Shelton H3-635
<b>Project:</b>	Mustang	<b>TVD Reference:</b>	KB @ 4870.00ft
<b>Reference Site:</b>	H Section 01	<b>MD Reference:</b>	KB @ 4870.00ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Shelton H3-635	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
H Section 12						
STROH H #12-20(PR) - Wellbore #1 - No Surveys	6,914.24	6,771.53	4,264.95	4,180.78	50.675	CC
STROH H #12-20(PR) - Wellbore #1 - No Surveys	6,950.00	6,800.10	4,265.31	4,180.75	50.438	ES
STROH H #12-20(PR) - Wellbore #1 - No Surveys	7,400.00	7,032.82	4,337.30	4,248.68	48.940	SF
STROH H #12-21(PR) - Wellbore #1 - No Surveys	6,722.16	6,598.50	4,831.28	4,749.29	58.919	CC
STROH H #12-21(PR) - Wellbore #1 - No Surveys	6,750.00	6,624.55	4,831.62	4,749.28	58.679	ES
STROH H #12-21(PR) - Wellbore #1 - No Surveys	7,250.00	6,981.97	4,952.08	4,864.49	56.538	SF
STROH H #12-28D(PR) - Wellbore #1 - MWD Surveys	4,788.79	4,801.28	2,410.26	2,363.53	51.581	CC
STROH H #12-28D(PR) - Wellbore #1 - MWD Surveys	4,800.00	4,810.47	2,410.27	2,363.43	51.452	ES
STROH H #12-28D(PR) - Wellbore #1 - MWD Surveys	6,750.00	6,878.33	2,533.92	2,471.36	40.507	SF
STROH H #12-4J(PR) - Wellbore #1 - No Surveys	6,721.73	6,580.10	6,975.54	6,893.71	85.238	CC
STROH H #12-4J(PR) - Wellbore #1 - No Surveys	6,750.00	6,606.55	6,975.89	6,893.70	84.882	ES
STROH H #12-4J(PR) - Wellbore #1 - No Surveys	7,350.00	6,999.54	7,139.84	7,051.68	80.987	SF
STROH H #12-9(PR) - Wellbore #1 - No Surveys	6,671.96	6,534.71	6,456.24	6,374.95	79.426	CC, ES
STROH H #12-9(PR) - Wellbore #1 - No Surveys	7,250.00	6,965.97	6,623.33	6,535.89	75.750	SF
Stroh H 12-04(PR) - Wellbore #1 - Wellbore #1	7,140.06	6,919.96	2,119.93	2,069.97	42.428	CC
Stroh H 12-04(PR) - Wellbore #1 - Wellbore #1	7,150.00	6,925.72	2,119.97	2,069.94	42.373	ES
Stroh H 12-04(PR) - Wellbore #1 - Wellbore #1	7,400.00	7,000.00	2,145.20	2,093.69	41.645	SF
Stroh H12-02 - Wellbore #1 - Wellbore #1 - As Drilled	6,633.94	6,515.16	3,361.91	3,315.20	71.970	CC, ES
Stroh H12-02 - Wellbore #1 - Wellbore #1 - As Drilled	7,000.00	6,838.57	3,442.76	3,393.42	69.773	SF
Stroh H12-27 - Wellbore #1 - Wellbore #1 - As Drilled	4,613.10	4,619.23	3,754.86	3,722.60	116.394	CC
Stroh H12-27 - Wellbore #1 - Wellbore #1 - As Drilled	4,700.00	4,681.29	3,755.18	3,722.37	114.453	ES
Stroh H12-27 - Wellbore #1 - Wellbore #1 - As Drilled	7,000.00	6,818.42	3,940.07	3,890.85	80.050	SF
STROH H12-99HZ(PR) - Wellbore #1 - MWD Surveys	7,092.73	6,485.38	2,917.06	2,869.07	60.791	CC
STROH H12-99HZ(PR) - Wellbore #1 - MWD Surveys	7,100.00	6,487.05	2,917.07	2,869.05	60.747	ES
STROH H12-99HZ(PR) - Wellbore #1 - MWD Surveys	8,000.00	6,453.00	3,070.20	3,017.95	58.752	SF
STROH PC H #12-30D(SI) - Wellbore #1 - MWD Surveys	7,336.25	7,100.19	1,501.66	1,448.59	28.291	CC, ES
STROH PC H #12-30D(SI) - Wellbore #1 - MWD Surveys	7,450.00	7,124.77	1,507.75	1,454.29	28.204	SF
STROH PC H #12-31D(SI) - Wellbore #1 - MWD Surveys	7,381.46	7,157.23	2,730.07	2,677.15	51.595	CC
STROH PC H #12-31D(SI) - Wellbore #1 - MWD Surveys	7,400.00	7,161.25	2,730.18	2,677.15	51.479	ES
STROH PC H #12-31D(SI) - Wellbore #1 - MWD Surveys	8,300.00	7,169.60	2,919.80	2,860.55	49.279	SF
Stroh/12-7(PR) - Wellbore #1 - Gyro Surveys	6,662.74	6,564.09	4,518.37	4,471.39	96.180	CC, ES
Stroh/12-7(PR) - Wellbore #1 - Gyro Surveys	7,150.00	6,921.41	4,647.48	4,597.25	92.517	SF

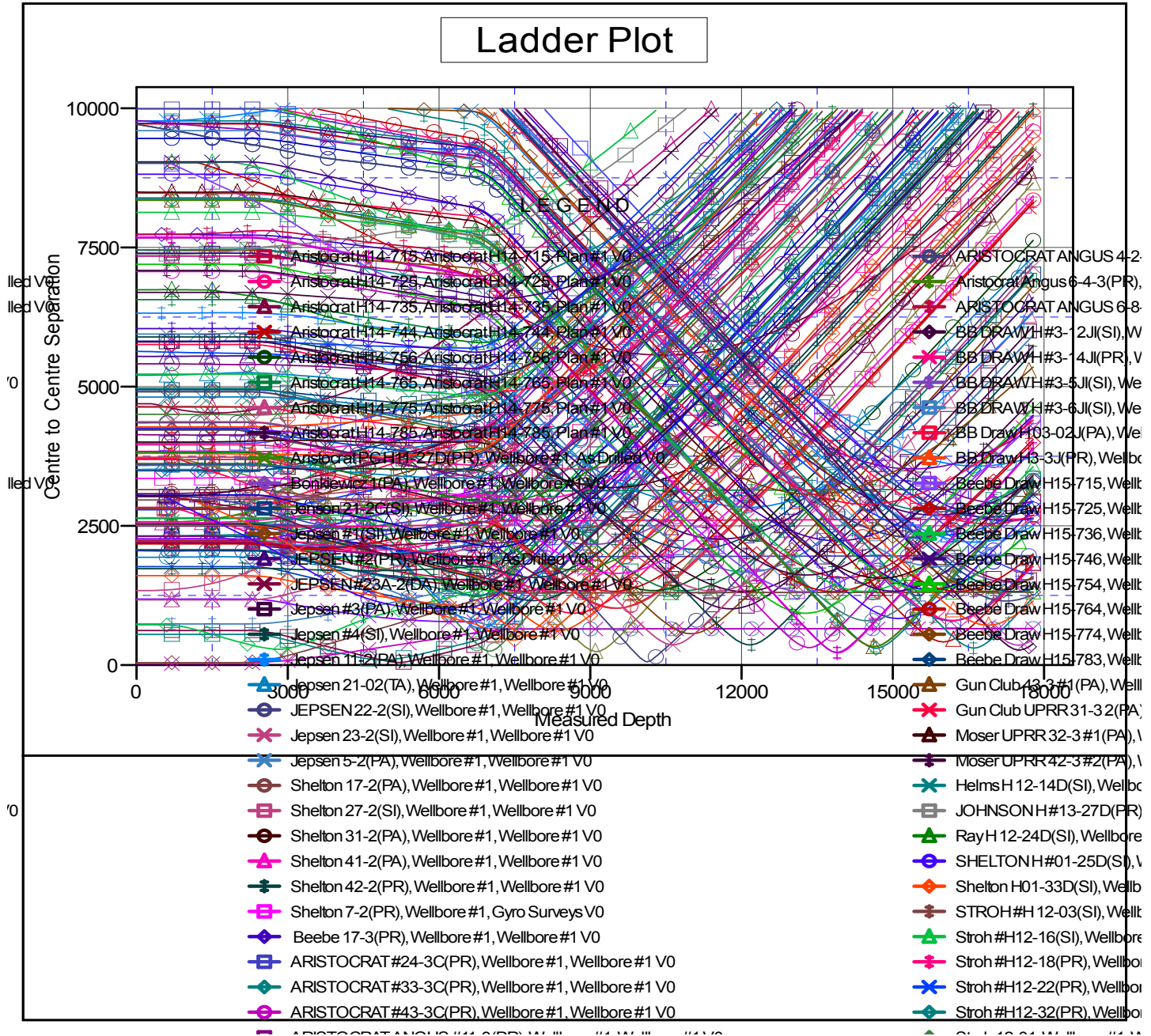
# Noble Energy, Inc.

## Anticollision Summary Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Shelton H3-635
<b>Project:</b>	Mustang	<b>TVD Reference:</b>	KB @ 4870.00ft
<b>Reference Site:</b>	H Section 01	<b>MD Reference:</b>	KB @ 4870.00ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Shelton H3-635	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to KB @ 4870.00ft  
Offset Depths are relative to Offset Datum  
Central Meridian is -105.5000000

Coordinates are relative to: Shelton H3-635  
Coordinate System is US State Plane 1983, Colorado Northern Zone  
Grid Convergence at Surface is: 0.57°



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

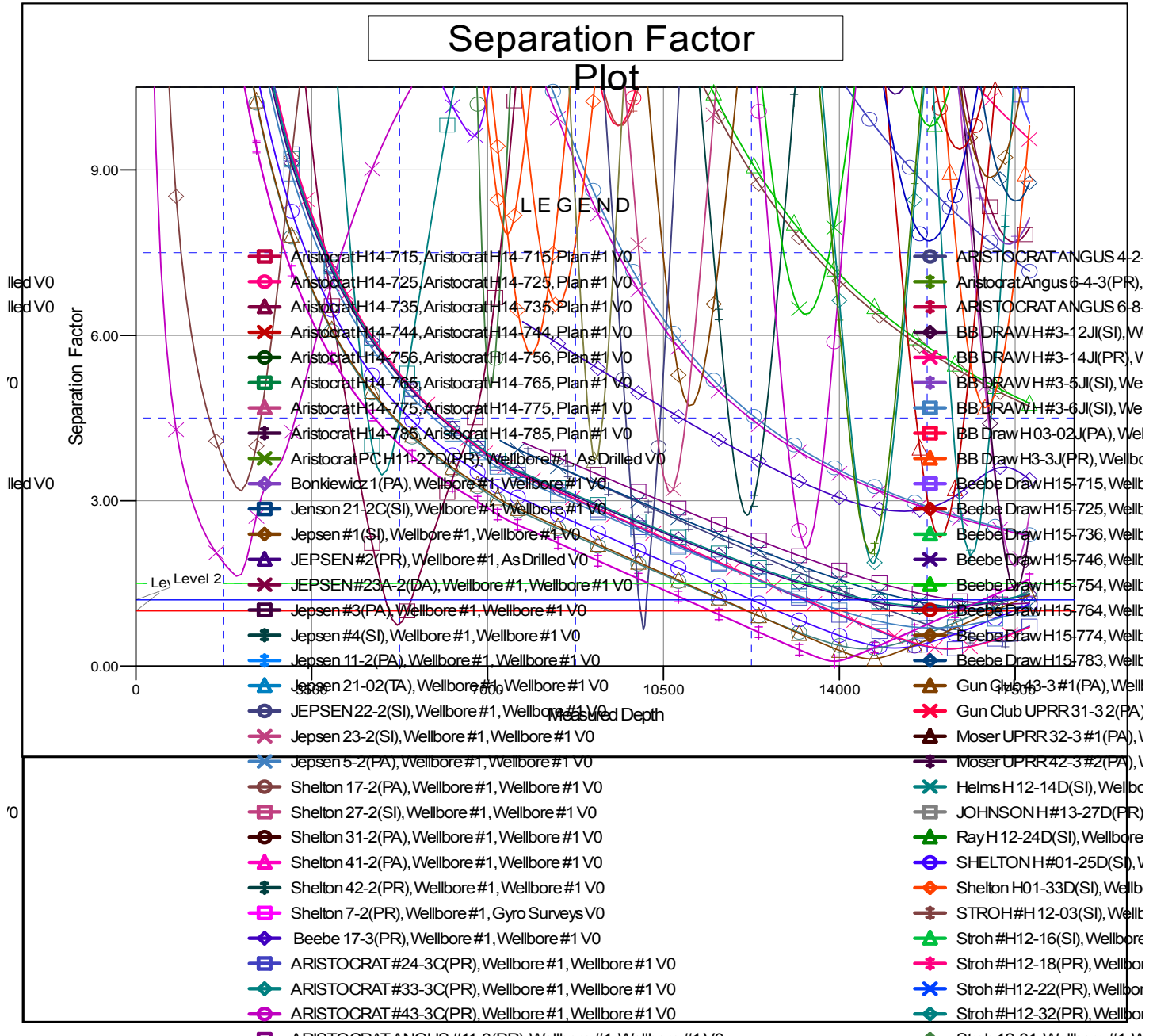


**Noble Energy, Inc.**  
**Anticollision Summary Report**

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Shelton H3-635
<b>Project:</b>	Mustang	<b>TVD Reference:</b>	KB @ 4870.00ft
<b>Reference Site:</b>	H Section 01	<b>MD Reference:</b>	KB @ 4870.00ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Shelton H3-635	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to KB @ 4870.00ft  
Offset Depths are relative to Offset Datum  
Central Meridian is -105.5000000

Coordinates are relative to: Shelton H3-635  
Coordinate System is US State Plane 1983, Colorado Northern Zone  
Grid Convergence at Surface is: 0.57°



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