

Project: Mustang
Site: H Section 01
Well: Shelton H3-683
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	5444.00	0.00	0.00	5444.00	0.00	0.00	0.00	0.00	0.00	
3	5710.98	7.00	145.79	5710.32	-13.46	9.15	2.62	145.79	-8.89	
4	6341.02	7.00	145.79	6335.67	-76.92	52.29	0.00	0.00	-50.79	
5	7384.27	90.00	269.66	7012.00	-149.55	-582.45	9.00	123.67	585.24	TPZ Shelton H3-683
6	17586.71	90.00	269.66	7012.00	-209.40	-10784.71	0.00	0.00	10786.74	BHL Shelton H3-683

West(-)/East(+) (2500 ft/in)

-9000 -7500 -6000 -4500 -3000 -1500 0

South(-)/North(+) (2500 ft/in)

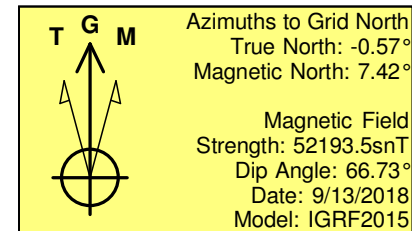
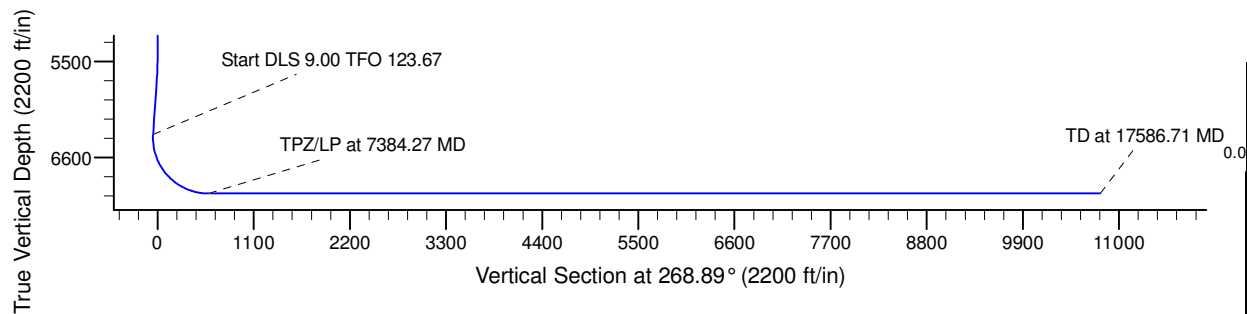
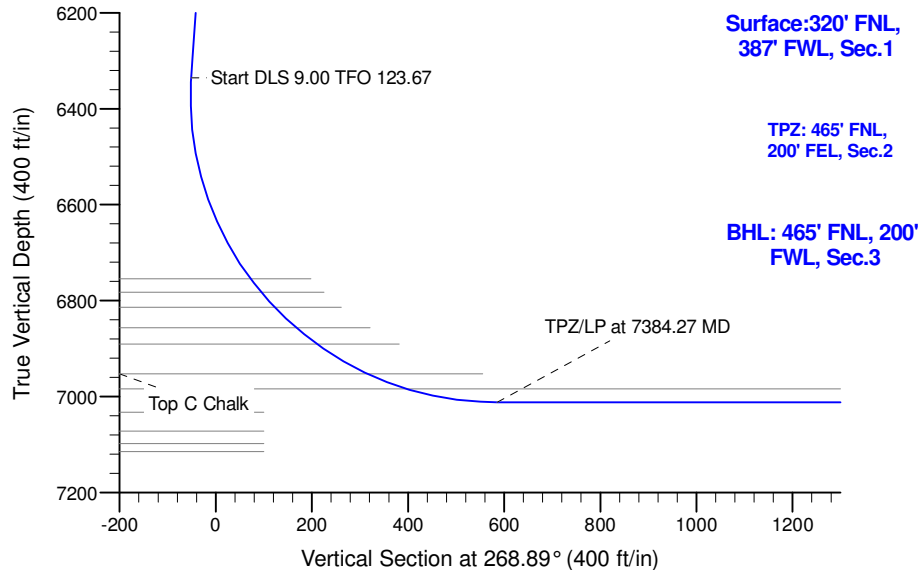
1500

0

-1500

-3000

-4500



WELL DETAILS: Shelton H3-683

	Northings	Easting	4824.00 Latitude	Longitude
0.00	1339007.56	3245726.25	40.2606260	-104.6195080

Plan: Plan #1 (Shelton H3-683/Wellbore #1)

Created By: Colby Baxter	Date: 9:07, October 01 2018
Checked: _____	Date: _____
Reviewed: _____	Date: _____
Approved: _____	Date: _____

Northern Region - DJ Basin

Mustang

H Section 01

Shelton H3-683

Wellbore #1

Plan: Plan #1

Standard Survey Report

28 September, 2018

Noble Energy, Inc.

Survey Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Shelton H3-683
Project:	Mustang	TVD Reference:	KB @ 4854.00ft
Site:	H Section 01	MD Reference:	KB @ 4854.00ft
Well:	Shelton H3-683	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 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 H3-683					
Well Position	+N/-S	0.00 ft	Northing:	1,339,007.56 usft	Latitude:	40.2606260
	+E/-W	0.00 ft	Easting:	3,245,726.25 usft	Longitude:	-104.6195080
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,824.00 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	9/13/2018	7.99	66.73	52,193.52641905

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 (°)	
	4.00	0.00	0.00	268.89	

Survey Tool Program	Date	9/28/2018			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.00	17,586.71	Plan #1 (Wellbore #1)	2_MWD+IFR1+MS	A008Mb: IFR dec & multi-station analysis	

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

Noble Energy, Inc.

Survey Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Shelton H3-683
Project:	Mustang	TVD Reference:	KB @ 4854.00ft
Site:	H Section 01	MD Reference:	KB @ 4854.00ft
Well:	Shelton H3-683	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	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00

Noble Energy, Inc.

Survey Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Shelton H3-683
Project:	Mustang	TVD Reference:	KB @ 4854.00ft
Site:	H Section 01	MD Reference:	KB @ 4854.00ft
Well:	Shelton H3-683	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)
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00
5,444.00	0.00	0.00	5,444.00	0.00	0.00	0.00	0.00	0.00	0.00
5,500.00	1.47	145.79	5,499.99	-0.60	0.40	-0.39	2.62	2.62	0.00
5,600.00	4.09	145.79	5,599.87	-4.60	3.13	-3.04	2.62	2.62	0.00
5,700.00	6.71	145.79	5,699.42	-12.38	8.42	-8.17	2.62	2.62	0.00
5,710.98	7.00	145.79	5,710.32	-13.47	9.15	-8.89	2.62	2.62	0.00
5,800.00	7.00	145.79	5,798.67	-22.43	15.25	-14.81	0.00	0.00	0.00
5,900.00	7.00	145.79	5,897.93	-32.50	22.09	-21.46	0.00	0.00	0.00
6,000.00	7.00	145.79	5,997.19	-42.58	28.94	-28.11	0.00	0.00	0.00
6,100.00	7.00	145.79	6,096.44	-52.65	35.79	-34.76	0.00	0.00	0.00
6,200.00	7.00	145.79	6,195.70	-62.72	42.63	-41.41	0.00	0.00	0.00
6,300.00	7.00	145.79	6,294.95	-72.79	49.48	-48.06	0.00	0.00	0.00
6,341.02	7.00	145.79	6,335.67	-76.92	52.29	-50.79	0.00	0.00	0.00
6,400.00	5.99	193.37	6,394.31	-82.89	53.60	-51.98	9.00	-1.71	80.67
6,500.00	11.91	240.79	6,493.16	-93.02	43.36	-41.55	9.00	5.93	47.42
6,600.00	20.24	253.62	6,589.20	-102.96	17.71	-15.70	9.00	8.32	12.83
6,700.00	28.96	259.05	6,680.05	-112.45	-22.74	24.91	9.00	8.72	5.43
6,800.00	37.80	262.12	6,763.47	-121.27	-76.97	79.31	9.00	8.84	3.06
6,900.00	46.70	264.15	6,837.43	-129.19	-143.66	146.14	9.00	8.90	2.04
7,000.00	55.62	265.67	6,900.09	-136.03	-221.16	223.76	9.00	8.92	1.51
7,100.00	64.56	266.89	6,949.90	-141.61	-307.57	310.26	9.00	8.94	1.22
7,200.00	73.50	267.93	6,985.65	-145.80	-400.76	403.51	9.00	8.95	1.05
7,300.00	82.46	268.89	7,006.46	-148.50	-498.43	501.22	9.00	8.95	0.96
7,384.27	90.00	269.66	7,012.00	-149.55	-582.45	585.24	9.00	8.95	0.92
7,400.00	90.00	269.66	7,012.00	-149.64	-598.18	600.97	0.00	0.00	0.00
7,500.00	90.00	269.66	7,012.00	-150.23	-698.18	700.96	0.00	0.00	0.00
7,600.00	90.00	269.66	7,012.00	-150.82	-798.17	800.95	0.00	0.00	0.00
7,700.00	90.00	269.66	7,012.00	-151.40	-898.17	900.94	0.00	0.00	0.00
7,800.00	90.00	269.66	7,012.00	-151.99	-998.17	1,000.93	0.00	0.00	0.00
7,900.00	90.00	269.66	7,012.00	-152.58	-1,098.17	1,100.92	0.00	0.00	0.00
8,000.00	90.00	269.66	7,012.00	-153.16	-1,198.17	1,200.92	0.00	0.00	0.00
8,100.00	90.00	269.66	7,012.00	-153.75	-1,298.17	1,300.91	0.00	0.00	0.00
8,200.00	90.00	269.66	7,012.00	-154.34	-1,398.16	1,400.90	0.00	0.00	0.00
8,300.00	90.00	269.66	7,012.00	-154.92	-1,498.16	1,500.89	0.00	0.00	0.00
8,400.00	90.00	269.66	7,012.00	-155.51	-1,598.16	1,600.88	0.00	0.00	0.00
8,500.00	90.00	269.66	7,012.00	-156.10	-1,698.16	1,700.87	0.00	0.00	0.00
8,600.00	90.00	269.66	7,012.00	-156.68	-1,798.16	1,800.86	0.00	0.00	0.00
8,700.00	90.00	269.66	7,012.00	-157.27	-1,898.16	1,900.85	0.00	0.00	0.00
8,800.00	90.00	269.66	7,012.00	-157.86	-1,998.15	2,000.84	0.00	0.00	0.00
8,900.00	90.00	269.66	7,012.00	-158.44	-2,098.15	2,100.83	0.00	0.00	0.00
9,000.00	90.00	269.66	7,012.00	-159.03	-2,198.15	2,200.82	0.00	0.00	0.00
9,100.00	90.00	269.66	7,012.00	-159.62	-2,298.15	2,300.81	0.00	0.00	0.00
9,200.00	90.00	269.66	7,012.00	-160.20	-2,398.15	2,400.81	0.00	0.00	0.00

Noble Energy, Inc.

Survey Report

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Project:	Mustang	TVD Reference:	KB @ 4854.00ft
Site:	H Section 01	MD Reference:	KB @ 4854.00ft
Well:	Shelton H3-683	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDMP

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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	269.66	7,012.00	-160.79	-2,498.15	2,500.80	0.00	0.00	0.00
9,400.00	90.00	269.66	7,012.00	-161.38	-2,598.14	2,600.79	0.00	0.00	0.00
9,500.00	90.00	269.66	7,012.00	-161.96	-2,698.14	2,700.78	0.00	0.00	0.00
9,600.00	90.00	269.66	7,012.00	-162.55	-2,798.14	2,800.77	0.00	0.00	0.00
9,700.00	90.00	269.66	7,012.00	-163.14	-2,898.14	2,900.76	0.00	0.00	0.00
9,800.00	90.00	269.66	7,012.00	-163.72	-2,998.14	3,000.75	0.00	0.00	0.00
9,900.00	90.00	269.66	7,012.00	-164.31	-3,098.14	3,100.74	0.00	0.00	0.00
10,000.00	90.00	269.66	7,012.00	-164.90	-3,198.13	3,200.73	0.00	0.00	0.00
10,100.00	90.00	269.66	7,012.00	-165.48	-3,298.13	3,300.72	0.00	0.00	0.00
10,200.00	90.00	269.66	7,012.00	-166.07	-3,398.13	3,400.71	0.00	0.00	0.00
10,300.00	90.00	269.66	7,012.00	-166.66	-3,498.13	3,500.70	0.00	0.00	0.00
10,400.00	90.00	269.66	7,012.00	-167.24	-3,598.13	3,600.70	0.00	0.00	0.00
10,500.00	90.00	269.66	7,012.00	-167.83	-3,698.12	3,700.69	0.00	0.00	0.00
10,600.00	90.00	269.66	7,012.00	-168.42	-3,798.12	3,800.68	0.00	0.00	0.00
10,700.00	90.00	269.66	7,012.00	-169.00	-3,898.12	3,900.67	0.00	0.00	0.00
10,800.00	90.00	269.66	7,012.00	-169.59	-3,998.12	4,000.66	0.00	0.00	0.00
10,900.00	90.00	269.66	7,012.00	-170.18	-4,098.12	4,100.65	0.00	0.00	0.00
11,000.00	90.00	269.66	7,012.00	-170.76	-4,198.12	4,200.64	0.00	0.00	0.00
11,100.00	90.00	269.66	7,012.00	-171.35	-4,298.11	4,300.63	0.00	0.00	0.00
11,200.00	90.00	269.66	7,012.00	-171.94	-4,398.11	4,400.62	0.00	0.00	0.00
11,300.00	90.00	269.66	7,012.00	-172.52	-4,498.11	4,500.61	0.00	0.00	0.00
11,400.00	90.00	269.66	7,012.00	-173.11	-4,598.11	4,600.60	0.00	0.00	0.00
11,500.00	90.00	269.66	7,012.00	-173.70	-4,698.11	4,700.59	0.00	0.00	0.00
11,600.00	90.00	269.66	7,012.00	-174.28	-4,798.11	4,800.58	0.00	0.00	0.00
11,700.00	90.00	269.66	7,012.00	-174.87	-4,898.10	4,900.58	0.00	0.00	0.00
11,800.00	90.00	269.66	7,012.00	-175.46	-4,998.10	5,000.57	0.00	0.00	0.00
11,900.00	90.00	269.66	7,012.00	-176.04	-5,098.10	5,100.56	0.00	0.00	0.00
12,000.00	90.00	269.66	7,012.00	-176.63	-5,198.10	5,200.55	0.00	0.00	0.00
12,100.00	90.00	269.66	7,012.00	-177.22	-5,298.10	5,300.54	0.00	0.00	0.00
12,200.00	90.00	269.66	7,012.00	-177.80	-5,398.10	5,400.53	0.00	0.00	0.00
12,300.00	90.00	269.66	7,012.00	-178.39	-5,498.09	5,500.52	0.00	0.00	0.00
12,400.00	90.00	269.66	7,012.00	-178.98	-5,598.09	5,600.51	0.00	0.00	0.00
12,500.00	90.00	269.66	7,012.00	-179.56	-5,698.09	5,700.50	0.00	0.00	0.00
12,600.00	90.00	269.66	7,012.00	-180.15	-5,798.09	5,800.49	0.00	0.00	0.00
12,700.00	90.00	269.66	7,012.00	-180.74	-5,898.09	5,900.48	0.00	0.00	0.00
12,800.00	90.00	269.66	7,012.00	-181.32	-5,998.09	6,000.47	0.00	0.00	0.00
12,900.00	90.00	269.66	7,012.00	-181.91	-6,098.08	6,100.47	0.00	0.00	0.00
13,000.00	90.00	269.66	7,012.00	-182.50	-6,198.08	6,200.46	0.00	0.00	0.00
13,100.00	90.00	269.66	7,012.00	-183.08	-6,298.08	6,300.45	0.00	0.00	0.00
13,200.00	90.00	269.66	7,012.00	-183.67	-6,398.08	6,400.44	0.00	0.00	0.00
13,300.00	90.00	269.66	7,012.00	-184.26	-6,498.08	6,500.43	0.00	0.00	0.00
13,400.00	90.00	269.66	7,012.00	-184.84	-6,598.07	6,600.42	0.00	0.00	0.00
13,500.00	90.00	269.66	7,012.00	-185.43	-6,698.07	6,700.41	0.00	0.00	0.00

Noble Energy, Inc.

Survey Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Shelton H3-683
Project:	Mustang	TVD Reference:	KB @ 4854.00ft
Site:	H Section 01	MD Reference:	KB @ 4854.00ft
Well:	Shelton H3-683	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)
13,600.00	90.00	269.66	7,012.00	-186.02	-6,798.07	6,800.40	0.00	0.00	0.00
13,700.00	90.00	269.66	7,012.00	-186.60	-6,898.07	6,900.39	0.00	0.00	0.00
13,800.00	90.00	269.66	7,012.00	-187.19	-6,998.07	7,000.38	0.00	0.00	0.00
13,900.00	90.00	269.66	7,012.00	-187.78	-7,098.07	7,100.37	0.00	0.00	0.00
14,000.00	90.00	269.66	7,012.00	-188.36	-7,198.06	7,200.36	0.00	0.00	0.00
14,100.00	90.00	269.66	7,012.00	-188.95	-7,298.06	7,300.36	0.00	0.00	0.00
14,200.00	90.00	269.66	7,012.00	-189.54	-7,398.06	7,400.35	0.00	0.00	0.00
14,300.00	90.00	269.66	7,012.00	-190.12	-7,498.06	7,500.34	0.00	0.00	0.00
14,400.00	90.00	269.66	7,012.00	-190.71	-7,598.06	7,600.33	0.00	0.00	0.00
14,500.00	90.00	269.66	7,012.00	-191.30	-7,698.06	7,700.32	0.00	0.00	0.00
14,600.00	90.00	269.66	7,012.00	-191.88	-7,798.05	7,800.31	0.00	0.00	0.00
14,700.00	90.00	269.66	7,012.00	-192.47	-7,898.05	7,900.30	0.00	0.00	0.00
14,800.00	90.00	269.66	7,012.00	-193.06	-7,998.05	8,000.29	0.00	0.00	0.00
14,900.00	90.00	269.66	7,012.00	-193.64	-8,098.05	8,100.28	0.00	0.00	0.00
15,000.00	90.00	269.66	7,012.00	-194.23	-8,198.05	8,200.27	0.00	0.00	0.00
15,100.00	90.00	269.66	7,012.00	-194.82	-8,298.05	8,300.26	0.00	0.00	0.00
15,200.00	90.00	269.66	7,012.00	-195.40	-8,398.04	8,400.25	0.00	0.00	0.00
15,300.00	90.00	269.66	7,012.00	-195.99	-8,498.04	8,500.25	0.00	0.00	0.00
15,400.00	90.00	269.66	7,012.00	-196.58	-8,598.04	8,600.24	0.00	0.00	0.00
15,500.00	90.00	269.66	7,012.00	-197.16	-8,698.04	8,700.23	0.00	0.00	0.00
15,600.00	90.00	269.66	7,012.00	-197.75	-8,798.04	8,800.22	0.00	0.00	0.00
15,700.00	90.00	269.66	7,012.00	-198.34	-8,898.04	8,900.21	0.00	0.00	0.00
15,800.00	90.00	269.66	7,012.00	-198.92	-8,998.03	9,000.20	0.00	0.00	0.00
15,900.00	90.00	269.66	7,012.00	-199.51	-9,098.03	9,100.19	0.00	0.00	0.00
16,000.00	90.00	269.66	7,012.00	-200.09	-9,198.03	9,200.18	0.00	0.00	0.00
16,100.00	90.00	269.66	7,012.00	-200.68	-9,298.03	9,300.17	0.00	0.00	0.00
16,200.00	90.00	269.66	7,012.00	-201.27	-9,398.03	9,400.16	0.00	0.00	0.00
16,300.00	90.00	269.66	7,012.00	-201.85	-9,498.03	9,500.15	0.00	0.00	0.00
16,400.00	90.00	269.66	7,012.00	-202.44	-9,598.02	9,600.14	0.00	0.00	0.00
16,500.00	90.00	269.66	7,012.00	-203.03	-9,698.02	9,700.14	0.00	0.00	0.00
16,600.00	90.00	269.66	7,012.00	-203.61	-9,798.02	9,800.13	0.00	0.00	0.00
16,700.00	90.00	269.66	7,012.00	-204.20	-9,898.02	9,900.12	0.00	0.00	0.00
16,800.00	90.00	269.66	7,012.00	-204.79	-9,998.02	10,000.11	0.00	0.00	0.00
16,900.00	90.00	269.66	7,012.00	-205.37	-10,098.01	10,100.10	0.00	0.00	0.00
17,000.00	90.00	269.66	7,012.00	-205.96	-10,198.01	10,200.09	0.00	0.00	0.00
17,100.00	90.00	269.66	7,012.00	-206.55	-10,298.01	10,300.08	0.00	0.00	0.00
17,200.00	90.00	269.66	7,012.00	-207.13	-10,398.01	10,400.07	0.00	0.00	0.00
17,300.00	90.00	269.66	7,012.00	-207.72	-10,498.01	10,500.06	0.00	0.00	0.00
17,400.00	90.00	269.66	7,012.00	-208.31	-10,598.01	10,600.05	0.00	0.00	0.00
17,500.00	90.00	269.66	7,012.00	-208.89	-10,698.00	10,700.04	0.00	0.00	0.00
17,586.71	90.00	269.66	7,012.00	-209.40	-10,784.71	10,786.74	0.00	0.00	0.00

Noble Energy, Inc.

Survey Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Shelton H3-683
Project:	Mustang	TVD Reference:	KB @ 4854.00ft
Site:	H Section 01	MD Reference:	KB @ 4854.00ft
Well:	Shelton H3-683	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDMP

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SHL Shelton H3-683 - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	1,339,007.56	3,245,726.25	40.2606260	-104.6195080
KOP Shelton H3-683 - plan hits target center - Point	0.00	0.00	6,335.67	-76.92	52.29	1,338,930.64	3,245,778.54	40.2604134	-104.6193234
TPZ Shelton H3-683 - plan hits target center - Point	0.00	0.00	7,012.00	-149.55	-582.45	1,338,858.01	3,245,143.81	40.2602313	-104.6216002
BHL Shelton H3-683 - plan hits target center - Point	0.00	0.00	7,012.00	-209.40	-10,784.71	1,338,798.16	3,234,941.56	40.2603387	-104.6581567

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
466.00	466.00	Pierre			
661.00	661.00	Upper Pierre Aquifer Top			
1,566.00	1,566.00	Upper Pierre Aquifer Base			
2,844.00	2,844.00	Top A Marl			
3,721.00	3,721.00	Parkman			
4,158.00	4,158.00	Sussex			
4,953.00	4,953.00	Shannon			
6,789.34	6,755.00	Teepee Buttes			
6,825.10	6,783.00	Sharon Springs			
6,866.74	6,814.00	Top A Chalk			
6,929.25	6,857.00	Top B Chalk			
6,984.19	6,891.00	Top B Marl			
7,107.30	6,953.00	Top C Chalk			
7,194.26	6,984.00	Top C Marl			

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
5444	5444	0	0	Start Build 2.62	
6341	6336	-13	9	Start DLS 9.00 TFO 123.67	
7384	7012	-77	52	TPZ/LP at 7384.27 MD	
17,587	7012	-150	-582	TD at 17586.71 MD	

Checked By: _____ Approved By: _____ Date: _____

Northern Region - DJ Basin

Mustang

H Section 01

Shelton H3-683

Wellbore #1

Plan #1

Anticollision Summary Report

01 October, 2018

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Shelton H3-683
Project:	Mustang	TVD Reference:	KB @ 4854.00ft
Reference Site:	H Section 01	MD Reference:	KB @ 4854.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Shelton H3-683	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	10/1/2018		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	17,586.71	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	6,380.97	6,352.57	4,022.97	3,978.62	90.717	CC, ES
Collins 1-1 - Wellbore #1 - Wellbore #1 - As Drilled	6,750.00	6,718.60	4,128.32	4,081.55	88.271	SF
Houndskeeper 1-13 - Wellbore #1 - Wellbore #1 - As Dril	6,428.65	6,479.57	3,220.80	3,175.85	71.655	CC, ES
Houndskeeper 1-13 - Wellbore #1 - Wellbore #1 - As Dril	6,750.00	6,785.04	3,290.16	3,243.14	69.975	SF
Houndskeeper H01-17 - Wellbore #1 - Wellbore #1 - As D	114.20	126.20	3,679.88	3,679.43	8,305.943	CC
Houndskeeper H01-17 - Wellbore #1 - Wellbore #1 - As D	700.00	690.71	3,681.25	3,676.73	815.063	ES
Houndskeeper H01-17 - Wellbore #1 - Wellbore #1 - As D	6,750.00	6,757.60	3,829.07	3,782.09	81.499	SF
Houndskeeper H01-22 - Wellbore #1 - Wellbore #1 - As D	6,419.03	6,405.88	4,071.42	4,026.75	91.151	CC, ES
Houndskeeper H01-22 - Wellbore #1 - Wellbore #1 - As D	6,800.00	6,731.32	4,168.18	4,121.20	88.725	SF
Houndskeeper H01-27 - Wellbore #1 - Wellbore #1 - As D	1,212.35	1,213.22	2,700.65	2,692.46	329.695	CC, ES
Houndskeeper H01-27 - Wellbore #1 - Wellbore #1 - As D	6,650.00	6,784.53	3,360.48	3,310.70	67.504	SF
Houndskeeper H01-28 - Wellbore #1 - Wellbore #1 - As D	6,385.76	6,493.53	2,231.47	2,183.65	46.662	CC, ES
Houndskeeper H01-28 - Wellbore #1 - Wellbore #1 - As D	6,550.00	6,657.11	2,251.99	2,203.11	46.073	SF
Houndskeeper PC H01-21D - Wellbore #1 - Wellbore #1	6,426.03	6,528.07	3,194.01	3,131.73	51.279	CC, ES
Houndskeeper PC H01-21D - Wellbore #1 - Wellbore #1	6,600.00	6,740.49	3,209.97	3,146.89	50.885	SF
HSR-HARTMAN #4-1(PR) - Wellbore #1 - Gyro Surveys	6,504.11	6,463.93	64.96	19.74	1.436	Level 3, CC, ES, SF
HSR-KOSKELA #5-1(PR) - Wellbore #1 - No Surveys	6,637.59	6,588.07	1,715.82	1,635.12	21.261	CC
HSR-KOSKELA #5-1(PR) - Wellbore #1 - No Surveys	6,650.00	6,599.41	1,715.86	1,635.02	21.225	ES
HSR-KOSKELA #5-1(PR) - Wellbore #1 - No Surveys	6,900.00	6,801.43	1,735.78	1,652.41	20.819	SF
HSR-LAURICE #6-1(PR) - Wellbore #1 - No Surveys	6,450.40	6,408.33	2,304.13	2,225.63	29.352	CC, ES
HSR-LAURICE #6-1(PR) - Wellbore #1 - No Surveys	6,700.00	6,644.05	2,339.01	2,257.65	28.750	SF
LJS R H01-02 - Wellbore #1 - Wellbore #1 - As Drilled	6,392.06	6,383.18	2,662.77	2,618.28	59.847	CC
LJS R H01-02 - Wellbore #1 - Wellbore #1 - As Drilled	6,400.00	6,394.57	2,662.82	2,618.26	59.760	ES
LJS R H01-02 - Wellbore #1 - Wellbore #1 - As Drilled	6,650.00	6,660.69	2,711.05	2,664.77	58.570	SF
LJS R H01-08 - Wellbore #1 - Wellbore #1 - As Drilled	6,398.47	6,328.91	4,390.01	4,345.69	99.042	CC
LJS R H01-08 - Wellbore #1 - Wellbore #1 - As Drilled	6,400.00	6,331.16	4,390.02	4,345.68	99.013	ES
LJS R H01-08 - Wellbore #1 - Wellbore #1 - As Drilled	6,800.00	6,730.95	4,503.66	4,456.70	95.908	SF
Shelton 22-1(PR) - Wellbore #1 - Wellbore #1	904.01	895.08	2,267.64	2,261.55	372.112	CC
Shelton 22-1(PR) - Wellbore #1 - Wellbore #1	2,400.00	2,421.23	2,280.06	2,260.34	115.602	ES
Shelton 22-1(PR) - Wellbore #1 - Wellbore #1	6,800.00	6,906.70	2,373.88	2,321.21	45.070	SF
Shelton 31-01(PR) - Wellbore #1 - Gyro Surveys	1,433.59	1,409.71	235.88	226.22	24.427	CC
Shelton 31-01(PR) - Wellbore #1 - Gyro Surveys	1,500.00	1,473.58	236.25	226.13	23.351	ES
Shelton 31-01(PR) - Wellbore #1 - Gyro Surveys	7,250.00	7,086.57	929.28	877.79	18.048	SF
Shelton D07-30 - Wellbore #1 - Wellbore #1 - As Drilled	2,470.02	2,469.23	6,604.84	6,587.76	386.792	CC
Shelton D07-30 - Wellbore #1 - Wellbore #1 - As Drilled	6,450.00	6,425.48	6,608.56	6,563.70	147.321	ES
Shelton D07-30 - Wellbore #1 - Wellbore #1 - As Drilled	6,950.00	6,950.00	6,742.50	6,694.33	139.960	SF
Shelton H #12-29(PR) - Wellbore #1 - No Surveys	6,679.53	6,648.98	4,732.55	4,651.18	58.160	CC

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

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Shelton H3-683
Project:	Mustang	TVD Reference:	KB @ 4854.00ft
Reference Site:	H Section 01	MD Reference:	KB @ 4854.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Shelton H3-683	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Summary

Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
H Section 01						
Shelton H #12-29(PR) - Wellbore #1 - No Surveys	6,700.00	6,667.05	4,732.63	4,651.03	58.001	ES
Shelton H #12-29(PR) - Wellbore #1 - No Surveys	7,250.00	6,984.97	4,805.26	4,719.23	55.856	SF
Shelton H 1-12X(PR) - Wellbore #1 - No Surveys	6,801.62	6,744.75	2,791.74	2,709.15	33.800	CC, ES
Shelton H 1-12X(PR) - Wellbore #1 - No Surveys	7,200.00	6,965.65	2,830.13	2,744.41	33.015	SF
Shelton H01-23 - Wellbore #1 - Wellbore #1 - As Drilled	6,448.97	6,450.01	4,997.63	4,952.72	111.302	CC
Shelton H01-23 - Wellbore #1 - Wellbore #1 - As Drilled	6,450.00	6,451.02	4,997.63	4,952.72	111.285	ES
Shelton H01-23 - Wellbore #1 - Wellbore #1 - As Drilled	7,250.00	7,250.00	5,326.69	5,276.89	106.971	SF
Shelton H01-24 - Wellbore #1 - Wellbore #1 - As Drilled	6,496.70	6,550.28	4,112.83	4,067.40	90.531	CC
Shelton H01-24 - Wellbore #1 - Wellbore #1 - As Drilled	6,500.00	6,553.46	4,112.84	4,067.39	90.487	ES
Shelton H01-24 - Wellbore #1 - Wellbore #1 - As Drilled	6,950.00	6,900.01	4,201.83	4,153.80	87.481	SF
Shelton H13-715 - Shelton H13-715 - Plan #1	6,425.56	6,300.00	6,221.10	6,176.31	138.884	CC, ES
Shelton H13-715 - Shelton H13-715 - Plan #1	6,750.00	6,350.00	6,284.23	6,238.30	136.846	SF
Shelton H13-724 - Shelton H13-724 - Plan #1	6,454.64	6,500.00	5,868.14	5,822.44	128.409	CC, ES
Shelton H13-724 - Shelton H13-724 - Plan #1	6,750.00	6,550.00	5,919.06	5,872.32	126.637	SF
Shelton H13-730 - Shelton H13-730 - Plan #1	6,476.01	6,650.00	5,686.36	5,639.47	121.276	CC, ES
Shelton H13-730 - Shelton H13-730 - Plan #1	6,750.00	6,700.00	5,728.51	5,680.63	119.654	SF
Shelton H13-734 - Shelton H13-734 - Plan #1	6,460.93	6,578.73	5,516.37	5,469.64	118.030	CC, ES
Shelton H13-734 - Shelton H13-734 - Plan #1	6,900.00	6,650.00	5,617.74	5,569.60	116.711	SF
Shelton H13-744 - Shelton H13-744 - Plan #1	4,105.90	4,147.90	4,998.57	4,969.45	171.646	CC
Shelton H13-744 - Shelton H13-744 - Plan #1	4,200.00	4,220.91	4,998.68	4,968.96	168.219	ES
Shelton H13-744 - Shelton H13-744 - Plan #1	6,850.00	6,428.78	5,117.26	5,070.95	110.510	SF
Shelton H13-753 - Shelton H13-753 - Plan #1	6,495.92	6,450.00	4,831.69	4,786.29	106.430	CC
Shelton H13-753 - Shelton H13-753 - Plan #1	6,500.00	6,450.00	4,831.70	4,786.28	106.400	ES
Shelton H13-753 - Shelton H13-753 - Plan #1	6,850.00	6,500.00	4,882.40	4,835.80	104.778	SF
Shelton H13-763 - Shelton H13-763 - Plan #1	6,539.42	6,550.00	4,619.43	4,572.85	99.178	CC, ES
Shelton H13-763 - Shelton H13-763 - Plan #1	6,950.00	6,600.00	4,676.64	4,628.75	97.672	SF
Shelton H13-768 - Shelton H13-768 - Plan #1	2,112.55	2,123.55	4,441.63	4,426.91	301.758	CC
Shelton H13-768 - Shelton H13-768 - Plan #1	2,400.00	2,380.71	4,442.35	4,425.70	266.823	ES
Shelton H13-768 - Shelton H13-768 - Plan #1	7,150.00	6,600.00	4,553.50	4,505.16	94.201	SF
Shelton H13-773 - Shelton H13-773 - Plan #1	6,575.43	6,354.23	4,434.36	4,388.86	97.465	CC, ES
Shelton H13-773 - Shelton H13-773 - Plan #1	8,800.00	6,400.00	5,130.22	5,075.49	93.743	SF
Shelton H13-782 - Shelton H13-782 - Plan #1	6,738.16	6,370.80	4,325.74	4,279.73	94.012	CC, ES
Shelton H13-782 - Shelton H13-782 - Plan #1	9,200.00	6,400.00	5,022.65	4,964.92	87.001	SF
Shelton H3-615 - Wellbore #1 - Plan #1	7,355.52	7,455.79	4,422.93	4,371.58	86.128	CC
Shelton H3-615 - Wellbore #1 - Plan #1	17,586.71	17,686.85	4,473.74	4,202.43	16.489	ES, SF
Shelton H3-625 - Wellbore #1 - Plan #1	7,359.24	7,484.25	3,774.53	3,722.68	72.795	CC
Shelton H3-625 - Wellbore #1 - Plan #1	17,586.71	17,711.62	3,818.16	3,546.72	14.066	ES, SF
Shelton H3-635 - Wellbore #1 - Plan #1	2,110.32	2,126.32	2,548.01	2,533.29	173.085	CC
Shelton H3-635 - Wellbore #1 - Plan #1	2,200.00	2,210.73	2,548.02	2,532.68	166.066	ES
Shelton H3-635 - Wellbore #1 - Plan #1	17,586.71	17,789.90	3,162.66	2,888.06	11.517	SF
Shelton H3-645 - Wellbore #1 - Plan #1	7,367.10	7,477.05	2,477.80	2,424.99	46.923	CC
Shelton H3-645 - Wellbore #1 - Plan #1	17,586.71	17,696.62	2,507.07	2,232.50	9.131	ES, SF
Shelton H3-655 - Wellbore #1 - Plan #1	7,371.54	7,508.33	1,829.53	1,776.27	34.350	CC
Shelton H3-655 - Wellbore #1 - Plan #1	17,586.71	17,706.82	1,851.56	1,576.98	6.743	ES, SF
Shelton H3-665 - Wellbore #1 - Plan #1	2,000.00	2,000.00	45.18	31.30	3.256	CC, ES
Shelton H3-665 - Wellbore #1 - Plan #1	2,100.00	2,098.41	46.89	32.33	3.220	SF
Shelton H3-675 - Wellbore #1 - Plan #1	2,200.00	2,200.00	22.59	7.28	1.476	Level 3, CC, ES, SF
Shelton State H1-759 - Wellbore #1 - Plan #1	6,550.47	12,135.24	1,756.76	1,685.86	24.779	CC, ES
Shelton State H1-759 - Wellbore #1 - Plan #1	6,600.00	12,130.56	1,759.37	1,688.25	24.738	SF
Shelton State H1-766 - Wellbore #1 - Plan #1	6,594.47	12,185.12	1,270.65	1,198.83	17.692	CC, ES
Shelton State H1-766 - Wellbore #1 - Plan #1	6,600.00	12,184.61	1,270.69	1,198.84	17.686	SF
Shelton State H1-780 - Wellbore #1 - Plan #1	6,691.96	12,103.93	697.34	630.96	10.504	CC
Shelton State H1-780 - Wellbore #1 - Plan #1	6,700.00	12,104.60	697.44	630.86	10.475	ES

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

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Shelton H3-683
Project:	Mustang	TVD Reference:	KB @ 4854.00ft
Reference Site:	H Section 01	MD Reference:	KB @ 4854.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Shelton H3-683	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
H Section 01						
Shelton State H1-780 - Wellbore #1 - Plan #1	6,750.00	12,108.62	702.36	634.60	10.366	SF
Shelton State H1-783 - Wellbore #1 - Plan #1	6,859.20	12,036.05	279.62	215.32	4.349	CC, ES
Shelton State H1-783 - Wellbore #1 - Plan #1	6,900.00	12,033.55	283.86	217.11	4.252	SF
UPRC #1-12J(PA) - Wellbore #1 - No Surveys	6,786.40	6,732.64	2,709.36	2,673.87	76.338	CC
UPRC #1-12J(PA) - Wellbore #1 - No Surveys	6,800.00	6,743.47	2,709.40	2,673.84	76.208	ES
UPRC #1-12J(PA) - Wellbore #1 - No Surveys	7,250.00	6,977.97	2,763.11	2,725.80	74.059	SF
UPRC #1-13J(SI) - Wellbore #1 - No Surveys	6,949.37	6,847.88	3,999.95	3,916.00	47.647	CC
UPRC #1-13J(SI) - Wellbore #1 - No Surveys	6,950.00	6,848.27	3,999.95	3,916.00	47.644	ES
UPRC #1-13J(SI) - Wellbore #1 - No Surveys	7,350.00	6,989.08	4,032.62	3,946.20	46.665	SF
UPRC 1-09J - Wellbore #1 - Wellbore #1 - As Drilled	6,432.90	6,496.39	4,969.58	4,924.55	110.363	CC, ES
UPRC 1-09J - Wellbore #1 - Wellbore #1 - As Drilled	6,900.00	6,871.54	5,109.82	5,062.09	107.069	SF
UPRC 1-10J - Wellbore #1 - Wellbore #1 - As Drilled	6,446.49	6,450.47	3,918.63	3,873.72	87.259	CC
UPRC 1-10J - Wellbore #1 - Wellbore #1 - As Drilled	6,450.00	6,454.01	3,918.64	3,873.71	87.212	ES
UPRC 1-10J - Wellbore #1 - Wellbore #1 - As Drilled	6,850.00	6,837.16	4,005.05	3,957.54	84.313	SF
UPRC 1-15J - Wellbore #1 - Wellbore #1 - As Drilled	6,469.81	6,384.81	5,168.51	5,123.73	115.422	CC, ES
UPRC 1-15J - Wellbore #1 - Wellbore #1 - As Drilled	7,000.00	6,909.66	5,277.68	5,229.46	109.445	SF
UPRC 1-16J - Wellbore #1 - Wellbore #1 - As Drilled	6,449.30	6,448.85	5,883.80	5,838.89	131.005	CC
UPRC 1-16J - Wellbore #1 - Wellbore #1 - As Drilled	6,450.00	6,449.50	5,883.80	5,838.88	130.991	ES
UPRC 1-16J - Wellbore #1 - Wellbore #1 - As Drilled	7,000.00	6,910.96	6,045.25	5,997.11	125.585	SF
UPRR 39 PAN AM G #1(PR) - Wellbore #1 - No Surveys	6,667.52	6,637.25	3,600.45	3,519.22	44.324	CC
UPRR 39 PAN AM G #1(PR) - Wellbore #1 - No Surveys	6,700.00	6,666.05	3,600.67	3,519.08	44.133	ES
UPRR 39 PAN AM G #1(PR) - Wellbore #1 - No Surveys	7,150.00	6,955.60	3,656.88	3,571.41	42.787	SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Shelton H3-683
Project:	Mustang	TVD Reference:	KB @ 4854.00ft
Reference Site:	H Section 01	MD Reference:	KB @ 4854.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Shelton H3-683	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Summary

Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
H Section 02						
ARISTOCRAT ANGUS #34-2(PR) - Wellbore #1 - Wellbo	9,273.92	6,942.00	4,153.67	4,054.20	41.758	CC
ARISTOCRAT ANGUS #34-2(PR) - Wellbore #1 - Wellbo	9,300.00	6,942.00	4,153.75	4,054.03	41.654	ES
ARISTOCRAT ANGUS #34-2(PR) - Wellbore #1 - Wellbo	10,600.00	6,942.00	4,360.22	4,248.74	39.112	SF
ARISTOCRAT ANGUS #43-2(PR) - Wellbore #1 - No Sur	7,653.60	6,970.00	2,616.45	2,529.01	29.923	CC, ES
ARISTOCRAT ANGUS #43-2(PR) - Wellbore #1 - No Sur	8,100.00	6,970.00	2,654.26	2,564.37	29.526	SF
ARISTOCRAT ANGUS #44-2(PR) - Wellbore #1 - No Sur	8,129.16	6,962.00	3,742.20	3,652.11	41.538	CC, ES
ARISTOCRAT ANGUS #44-2(PR) - Wellbore #1 - No Sur	9,300.00	6,962.00	3,921.08	3,822.11	39.618	SF
ARISTOCRAT ANGUS #44-2A(PR) - Wellbore #1 - Wellb	7,650.22	6,970.00	4,285.61	4,198.19	49.022	CC, ES
ARISTOCRAT ANGUS #44-2A(PR) - Wellbore #1 - Wellb	9,200.00	6,970.00	4,557.23	4,459.37	46.569	SF
ARISTOCRAT ANGUS #4-8-2(PR) - Wellbore #1 - No Su	9,319.12	6,939.00	4,157.86	4,057.98	41.630	CC
ARISTOCRAT ANGUS #4-8-2(PR) - Wellbore #1 - No Su	9,400.00	6,939.00	4,158.64	4,057.98	41.311	ES
ARISTOCRAT ANGUS #4-8-2(PR) - Wellbore #1 - No Su	10,600.00	6,939.00	4,350.68	4,239.11	38.995	SF
Aristocrat Angus 5-6-2(PR) - Wellbore #1 - As Drilled	8,907.04	7,039.70	3,373.63	3,312.54	55.221	CC, ES
Aristocrat Angus 5-6-2(PR) - Wellbore #1 - As Drilled	10,300.00	7,078.92	3,649.68	3,575.81	49.407	SF
Aristocrat Angus 6-4-2(PR) - Wellbore #1 - As Drilled	8,464.08	7,423.73	2,198.26	2,135.20	34.859	CC
Aristocrat Angus 6-4-2(PR) - Wellbore #1 - As Drilled	8,500.00	7,424.25	2,198.55	2,134.99	34.586	ES
Aristocrat Angus 6-4-2(PR) - Wellbore #1 - As Drilled	9,300.00	7,434.14	2,351.81	2,277.30	31.566	SF
Aristocrat H14-715 - Aristocrat H14-715 - Plan #1	4,211.69	4,206.69	4,286.95	4,257.24	144.286	CC
Aristocrat H14-715 - Aristocrat H14-715 - Plan #1	4,300.00	4,287.21	4,286.97	4,256.65	141.411	ES
Aristocrat H14-715 - Aristocrat H14-715 - Plan #1	9,900.00	6,464.19	5,026.60	4,963.01	79.052	SF
Aristocrat H14-725 - Aristocrat H14-725 - Plan #1	2,200.00	2,195.00	4,264.67	4,249.38	278.940	CC
Aristocrat H14-725 - Aristocrat H14-725 - Plan #1	2,300.00	2,253.37	4,265.13	4,249.28	269.104	ES
Aristocrat H14-725 - Aristocrat H14-725 - Plan #1	10,300.00	6,550.00	4,938.81	4,870.06	71.839	SF
Aristocrat H14-735 - Aristocrat H14-735 - Plan #1	2,200.00	2,195.00	4,242.36	4,227.07	277.481	CC
Aristocrat H14-735 - Aristocrat H14-735 - Plan #1	2,300.00	2,261.08	4,242.74	4,226.86	267.222	ES
Aristocrat H14-735 - Aristocrat H14-735 - Plan #1	10,800.00	6,723.01	4,903.37	4,827.58	64.698	SF
Aristocrat H14-744 - Aristocrat H14-744 - Plan #1	2,200.00	2,196.00	4,220.07	4,204.78	275.959	CC
Aristocrat H14-744 - Aristocrat H14-744 - Plan #1	2,300.00	2,265.47	4,220.42	4,204.52	265.553	ES
Aristocrat H14-744 - Aristocrat H14-744 - Plan #1	11,100.00	7,000.00	4,779.18	4,696.04	57.479	SF
Aristocrat H14-756 - Aristocrat H14-756 - Plan #1	9,990.37	6,344.47	4,392.73	4,324.27	64.159	CC
Aristocrat H14-756 - Aristocrat H14-756 - Plan #1	10,000.00	6,345.93	4,392.74	4,324.17	64.058	ES
Aristocrat H14-756 - Aristocrat H14-756 - Plan #1	11,800.00	6,533.22	4,743.81	4,658.22	55.428	SF
Aristocrat H14-765 - Aristocrat H14-765 - Plan #1	10,521.28	6,405.30	4,391.16	4,315.82	58.286	CC
Aristocrat H14-765 - Aristocrat H14-765 - Plan #1	10,600.00	6,428.93	4,391.80	4,315.46	57.530	ES
Aristocrat H14-765 - Aristocrat H14-765 - Plan #1	12,200.00	6,700.00	4,678.99	4,586.36	50.512	SF
Aristocrat H14-775 - Aristocrat H14-775 - Plan #1	11,014.76	6,526.81	4,383.98	4,301.17	52.939	CC
Aristocrat H14-775 - Aristocrat H14-775 - Plan #1	11,100.00	6,564.50	4,384.64	4,300.61	52.179	ES
Aristocrat H14-775 - Aristocrat H14-775 - Plan #1	12,800.00	7,000.00	4,681.13	4,578.31	45.531	SF
Aristocrat H14-785 - Aristocrat H14-785 - Plan #1	11,457.70	6,686.89	4,372.74	4,282.31	48.351	CC
Aristocrat H14-785 - Aristocrat H14-785 - Plan #1	11,600.00	6,767.71	4,374.31	4,281.59	47.177	ES
Aristocrat H14-785 - Aristocrat H14-785 - Plan #1	13,300.00	7,350.00	4,648.25	4,534.71	40.939	SF
Aristocrat PC H11-27D(PR) - Wellbore #1 - As Drilled	809.20	797.10	4,548.96	4,544.89	1,117.495	CC, ES
Aristocrat PC H11-27D(PR) - Wellbore #1 - As Drilled	10,900.00	7,175.00	5,422.43	5,341.95	67.378	SF
Bonkiewicz 1(PA) - Wellbore #1 - Wellbore #1	8,820.91	6,900.00	966.24	907.62	16.482	CC, ES
Bonkiewicz 1(PA) - Wellbore #1 - Wellbore #1	8,900.00	6,900.00	969.47	910.18	16.350	SF
Jenson 21-2C(SI) - Wellbore #1 - Wellbore #1	10,868.67	6,908.00	1,059.83	943.94	9.145	CC, ES
Jenson 21-2C(SI) - Wellbore #1 - Wellbore #1	11,000.00	6,908.00	1,067.94	950.86	9.122	SF
Jepsen #1(SI) - Wellbore #1 - Wellbore #1	10,784.96	6,928.00	3,701.70	3,586.56	32.151	CC
Jepsen #1(SI) - Wellbore #1 - Wellbore #1	10,800.00	6,928.00	3,701.73	3,586.43	32.104	ES
Jepsen #1(SI) - Wellbore #1 - Wellbore #1	11,700.00	6,928.00	3,813.12	3,689.11	30.749	SF
JEPSEN #2(PR) - Wellbore #1 - As Drilled	11,375.03	6,909.11	878.65	793.36	10.302	CC, ES
JEPSEN #2(PR) - Wellbore #1 - As Drilled	11,400.00	6,908.78	879.01	793.44	10.272	SF
JEPSEN #23A-2(DA) - Wellbore #1 - Wellbore #1	1,559.32	1,500.00	5,476.36	5,465.62	509.845	CC, ES

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

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Shelton H3-683
Project:	Mustang	TVD Reference:	KB @ 4854.00ft
Reference Site:	H Section 01	MD Reference:	KB @ 4854.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Shelton H3-683	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
H Section 02						
JEPSEN #23A-2(DA) - Wellbore #1 - Wellbore #1	14,400.00	1,500.00	8,014.54	7,943.61	112.996	SF
Jepsen #3(PA) - Wellbore #1 - Wellbore #1	11,566.40	6,900.00	4,150.57	4,063.17	47.489	CC
Jepsen #3(PA) - Wellbore #1 - Wellbore #1	11,600.00	6,900.00	4,150.71	4,062.92	47.281	ES
Jepsen #3(PA) - Wellbore #1 - Wellbore #1	12,900.00	6,900.00	4,359.56	4,259.83	43.714	SF
Jepsen #4(SI) - Wellbore #1 - Wellbore #1	11,953.32	6,913.00	2,779.84	2,651.60	21.676	CC
Jepsen #4(SI) - Wellbore #1 - Wellbore #1	12,000.00	6,913.00	2,780.23	2,651.45	21.587	ES
Jepsen #4(SI) - Wellbore #1 - Wellbore #1	12,400.00	6,913.00	2,815.50	2,682.78	21.213	SF
Jepsen 11-2(PA) - Wellbore #1 - Wellbore #1	11,919.15	6,904.94	308.26	216.74	3.368	CC, ES, SF
Jepsen 21-02(TA) - Wellbore #1 - Wellbore #1	10,848.61	6,905.38	217.73	138.38	2.744	CC, ES, SF
JEPSEN 22-2(SI) - Wellbore #1 - Wellbore #1	10,344.10	6,248.99	2,859.62	2,789.23	40.628	CC, ES
JEPSEN 22-2(SI) - Wellbore #1 - Wellbore #1	11,100.00	6,200.00	2,955.27	2,878.50	38.495	SF
Jepsen 23-2(SI) - Wellbore #1 - Wellbore #1	10,425.17	6,923.00	2,774.27	2,663.12	24.959	CC, ES
Jepsen 23-2(SI) - Wellbore #1 - Wellbore #1	11,000.00	6,923.00	2,833.20	2,716.54	24.287	SF
Jepsen 5-2(PA) - Wellbore #1 - Wellbore #1	11,888.59	6,900.00	1,476.41	1,385.26	16.198	CC
Jepsen 5-2(PA) - Wellbore #1 - Wellbore #1	11,900.00	6,900.00	1,476.45	1,385.17	16.175	ES
Jepsen 5-2(PA) - Wellbore #1 - Wellbore #1	12,100.00	6,900.00	1,491.47	1,398.38	16.022	SF
Shelton 17-2(PA) - Wellbore #1 - Wellbore #1	8,604.47	6,986.41	657.60	600.51	11.518	CC, ES
Shelton 17-2(PA) - Wellbore #1 - Wellbore #1	8,700.00	6,987.12	664.50	606.71	11.498	SF
Shelton 27-2(SI) - Wellbore #1 - Wellbore #1	8,513.99	7,582.37	390.96	323.34	5.781	CC, ES
Shelton 27-2(SI) - Wellbore #1 - Wellbore #1	8,600.00	7,582.67	400.31	327.62	5.507	SF
Shelton 31-2(PA) - Wellbore #1 - Wellbore #1	9,246.56	6,953.09	56.19	-6.64	0.894	Level 1, CC, ES, SF
Shelton 41-2(PA) - Wellbore #1 - Wellbore #1	7,665.96	6,967.49	147.84	96.94	2.904	CC, ES, SF
Shelton 42-2(PR) - Wellbore #1 - Wellbore #1	7,670.65	6,975.12	1,553.48	1,502.60	30.532	CC, ES
Shelton 42-2(PR) - Wellbore #1 - Wellbore #1	7,900.00	6,975.69	1,570.32	1,518.26	30.164	SF
Shelton 7-2(PR) - Wellbore #1 - Gyro Surveys	9,309.84	6,915.72	1,485.82	1,422.59	23.500	CC, ES
Shelton 7-2(PR) - Wellbore #1 - Gyro Surveys	9,600.00	6,896.49	1,513.79	1,448.19	23.075	SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Shelton H3-683
Project:	Mustang	TVD Reference:	KB @ 4854.00ft
Reference Site:	H Section 01	MD Reference:	KB @ 4854.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Shelton H3-683	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
H Section 03						
Beebe 17-3(PR) - Wellbore #1 - Wellbore #1	13,687.23	6,900.00	915.79	803.60	8.163	CC
Beebe 17-3(PR) - Wellbore #1 - Wellbore #1	13,700.00	6,900.00	915.88	803.53	8.152	ES, SF
ARISTOCRAT #24-3C(PR) - Wellbore #1 - Wellbore #1	15,932.29	6,951.00	3,951.48	1,403.34	1.551	CC
ARISTOCRAT #24-3C(PR) - Wellbore #1 - Wellbore #1	16,000.00	6,951.00	3,952.06	1,403.11	1.550	ES, SF
ARISTOCRAT #33-3C(PR) - Wellbore #1 - Wellbore #1	14,454.23	6,932.00	2,849.83	2,691.87	18.042	CC
ARISTOCRAT #33-3C(PR) - Wellbore #1 - Wellbore #1	14,500.00	6,932.00	2,850.20	2,691.69	17.982	ES
ARISTOCRAT #33-3C(PR) - Wellbore #1 - Wellbore #1	14,800.00	6,932.00	2,870.73	2,709.22	17.775	SF
ARISTOCRAT #43-3C(PR) - Wellbore #1 - Wellbore #1	13,127.65	6,918.00	2,832.79	2,690.76	19.945	CC, ES
ARISTOCRAT #43-3C(PR) - Wellbore #1 - Wellbore #1	13,600.00	6,918.00	2,871.90	2,725.24	19.582	SF
ARISTOCRAT ANGUS #11-3(PR) - Wellbore #1 - Wellbo	17,063.93	6,933.00	265.01	-2,290.56	0.104	Level 1, CC, ES, SF
ARISTOCRAT ANGUS #12-3C(PR) - Wellbore #1 - No S	17,202.04	6,932.00	1,656.74	1,465.54	8.665	CC, ES
ARISTOCRAT ANGUS #12-3C(PR) - Wellbore #1 - No S	17,300.00	6,932.00	1,659.63	1,467.42	8.634	SF
ARISTOCRAT ANGUS #1-3(PR) - Wellbore #1 - Wellbor	13,695.04	6,933.00	3,363.89	848.96	1.338	Level 3, CC
ARISTOCRAT ANGUS #1-3(PR) - Wellbore #1 - Wellbor	13,700.00	6,933.00	3,363.90	848.90	1.338	Level 3, ES, SF
ARISTOCRAT ANGUS #13-3(PR) - Wellbore #1 - No Sur	17,277.68	6,963.00	2,804.89	2,612.50	14.579	CC
ARISTOCRAT ANGUS #13-3(PR) - Wellbore #1 - No Sur	17,300.00	6,963.00	2,804.98	2,612.32	14.559	ES
ARISTOCRAT ANGUS #13-3(PR) - Wellbore #1 - No Sur	17,586.71	6,963.00	2,821.86	2,626.41	14.437	SF
ARISTOCRAT ANGUS #14-3 (PR) - Wellbore #1 - Wellb	17,072.86	4,603.00	4,791.46	3,271.20	3.152	CC
ARISTOCRAT ANGUS #14-3 (PR) - Wellbore #1 - Wellb	17,100.00	4,603.00	4,791.53	3,270.97	3.151	ES
ARISTOCRAT ANGUS #14-3 (PR) - Wellbore #1 - Wellb	17,300.00	4,603.00	4,796.84	3,273.63	3.149	SF
ARISTOCRAT ANGUS #14-3A(PR) - Wellbore #1 - Wellb	17,030.75	6,961.00	4,311.06	1,746.09	1.681	CC
ARISTOCRAT ANGUS #14-3A(PR) - Wellbore #1 - Wellb	17,100.00	6,961.00	4,311.61	1,745.80	1.680	ES, SF
ARISTOCRAT ANGUS #2-0-3(PR) - Wellbore #1 - Wellb	16,696.62	6,934.00	503.74	-2,047.72	0.197	Level 1, CC, SF
ARISTOCRAT ANGUS #2-0-3(PR) - Wellbore #1 - Wellb	16,700.00	6,934.00	503.75	-2,047.75	0.197	Level 1, ES
ARISTOCRAT ANGUS #21-3(PR) - Wellbore #1 - Wellbo	15,637.89	6,938.00	462.32	-2,077.71	0.182	Level 1, CC, ES, SF
ARISTOCRAT ANGUS #23-3(PR) - Wellbore #1 - No Sur	15,792.90	4,640.00	3,654.11	3,522.45	27.754	CC
ARISTOCRAT ANGUS #23-3(PR) - Wellbore #1 - No Sur	15,800.00	4,640.00	3,654.12	3,522.38	27.738	ES
ARISTOCRAT ANGUS #23-3(PR) - Wellbore #1 - No Sur	16,500.00	4,640.00	3,721.90	3,584.17	27.023	SF
ARISTOCRAT ANGUS #23-3C(PR) - Wellbore #1 - No S	15,792.18	6,927.00	2,739.33	2,565.30	15.740	CC
ARISTOCRAT ANGUS #23-3C(PR) - Wellbore #1 - No S	15,800.00	6,927.00	2,739.35	2,565.21	15.731	ES
ARISTOCRAT ANGUS #23-3C(PR) - Wellbore #1 - No S	16,100.00	6,927.00	2,756.57	2,579.42	15.561	SF
ARISTOCRAT ANGUS #2-4-3X(PR) - Wellbore #1 - Well	14,896.95	6,934.00	2,317.44	-212.25	0.916	Level 1, CC
ARISTOCRAT ANGUS #2-4-3X(PR) - Wellbore #1 - Well	14,900.00	6,934.00	2,317.44	-212.28	0.916	Level 1, ES, SF
ARISTOCRAT ANGUS #34-3C(PR) - Wellbore #1 - Wellb	14,284.87	6,944.00	3,946.43	1,420.60	1.562	CC
ARISTOCRAT ANGUS #34-3C(PR) - Wellbore #1 - Wellb	14,300.00	6,944.00	3,946.46	1,420.44	1.562	ES
ARISTOCRAT ANGUS #34-3C(PR) - Wellbore #1 - Wellb	14,400.00	6,944.00	3,948.11	1,420.92	1.562	SF
ARISTOCRAT ANGUS #4-0-3(PR) - Wellbore #1 - Wellb	15,669.65	6,923.00	403.42	-2,131.74	0.159	Level 1, CC, ES, SF
ARISTOCRAT ANGUS #44-3C(PR) - Wellbore #1 - No S	13,055.08	6,931.00	4,078.02	3,936.74	28.864	CC
ARISTOCRAT ANGUS #44-3C(PR) - Wellbore #1 - No S	13,100.00	6,931.00	4,078.27	3,936.45	28.757	ES
ARISTOCRAT ANGUS #44-3C(PR) - Wellbore #1 - No S	13,900.00	6,931.00	4,164.63	4,014.91	27.815	SF
ARISTOCRAT ANGUS #4-6-3X(PR) - Wellbore #1 - No S	15,527.15	6,963.00	1,801.03	1,629.89	10.523	CC, ES
ARISTOCRAT ANGUS #4-6-3X(PR) - Wellbore #1 - No S	15,700.00	6,963.00	1,809.31	1,636.49	10.469	SF
ARISTOCRAT ANGUS #6-4-3(PR) - Wellbore #1 - Wellb	14,411.64	6,929.00	2,820.16	298.06	1.118	Level 2, CC, ES, SF
ARISTOCRAT ANGUS #7-6-3(PR) - Wellbore #1 - Wellb	13,676.01	6,933.00	3,375.48	860.77	1.342	Level 3, CC
ARISTOCRAT ANGUS #7-6-3(PR) - Wellbore #1 - Wellb	13,700.00	6,933.00	3,375.56	860.56	1.342	Level 3, ES, SF
Aristocrat Angus 0-8-3(PR) - Wellbore #1 - Wellbore #1	17,586.71	7,054.27	4,793.28	4,629.99	29.354	CC, ES, SF
Aristocrat Angus 2-0-3 - Wellbore #1 - Actual	16,475.04	7,065.28	415.62	269.55	2.845	CC, ES, SF
ARISTOCRAT ANGUS 2-3(PR) - Wellbore #1 - Wellbore	16,414.71	7,023.64	949.01	800.04	6.371	CC, ES
ARISTOCRAT ANGUS 2-3(PR) - Wellbore #1 - Wellbore	16,500.00	7,021.24	952.83	802.90	6.355	SF
Aristocrat Angus 3-3(PR) - Wellbore #1 - Wellbore #1	16,391.54	7,049.17	3,462.36	3,314.52	23.420	CC
Aristocrat Angus 3-3(PR) - Wellbore #1 - Wellbore #1	16,400.00	7,049.09	3,462.37	3,314.42	23.402	ES
Aristocrat Angus 3-3(PR) - Wellbore #1 - Wellbore #1	17,000.00	7,043.05	3,515.41	3,361.17	22.792	SF
Aristocrat Angus 4-0-3 - Aristocrat Angus 4-0-3 - Actual	15,200.29	7,037.89	370.43	237.97	2.797	CC, ES, SF

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

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Shelton H3-683
Project:	Mustang	TVD Reference:	KB @ 4854.00ft
Reference Site:	H Section 01	MD Reference:	KB @ 4854.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Shelton H3-683	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
H Section 03						
Aristocrat Angus 4-0-3 (DO NOT USE) - Original Drilling	15,186.69	6,982.75	860.13	727.92	6.506	CC
Aristocrat Angus 4-0-3 (DO NOT USE) - Original Drilling	15,200.00	6,982.56	860.23	727.90	6.501	ES, SF
ARISTOCRAT ANGUS 4-2-3(PR) - Wellbore #1 - Wellbo	15,186.69	6,982.75	860.11	727.91	6.506	CC
ARISTOCRAT ANGUS 4-2-3(PR) - Wellbore #1 - Wellbo	15,200.00	6,982.56	860.22	727.89	6.501	ES, SF
Aristocrat Angus 6-4-3(PR) - Wellbore #1 - Wellbore #1	14,411.64	6,929.00	2,820.16	2,662.74	17.915	CC, ES
Aristocrat Angus 6-4-3(PR) - Wellbore #1 - Wellbore #1	14,800.00	6,929.00	2,846.78	2,685.48	17.650	SF
ARISTOCRAT ANGUS 6-8-3(PR) - Wellbore #1 - Wellbo	13,825.45	7,109.52	4,718.41	4,602.56	40.730	CC
ARISTOCRAT ANGUS 6-8-3(PR) - Wellbore #1 - Wellbo	13,900.00	7,110.24	4,719.00	4,602.24	40.417	ES
ARISTOCRAT ANGUS 6-8-3(PR) - Wellbore #1 - Wellbo	15,200.00	7,124.08	4,914.52	4,784.89	37.913	SF
BB DRAW H #3-12JI(SI) - Wellbore #1 - No Surveys	17,295.50	6,968.00	2,893.48	2,700.83	15.019	CC
BB DRAW H #3-12JI(SI) - Wellbore #1 - No Surveys	17,300.00	6,968.00	2,893.48	2,700.78	15.015	ES
BB DRAW H #3-12JI(SI) - Wellbore #1 - No Surveys	17,586.71	6,968.00	2,908.10	2,712.48	14.866	SF
BB DRAW H #3-14JI(PR) - Wellbore #1 - Wellbore #1	15,982.23	6,953.00	3,957.13	1,407.69	1.552	CC
BB DRAW H #3-14JI(PR) - Wellbore #1 - Wellbore #1	16,000.00	6,953.00	3,957.17	1,407.51	1.552	ES
BB DRAW H #3-14JI(PR) - Wellbore #1 - Wellbore #1	16,100.00	6,953.00	3,958.88	1,408.04	1.552	SF
BB DRAW H #3-5JI(SI) - Wellbore #1 - No Surveys	17,095.92	6,938.00	1,673.48	1,483.52	8.810	CC
BB DRAW H #3-5JI(SI) - Wellbore #1 - No Surveys	17,100.00	6,938.00	1,673.48	1,483.47	8.807	ES
BB DRAW H #3-5JI(SI) - Wellbore #1 - No Surveys	17,200.00	6,938.00	1,676.71	1,485.68	8.777	SF
BB DRAW H #3-6JI(SI) - Wellbore #1 - Wellbore #1	15,634.48	6,958.00	1,383.96	-1,163.02	0.543	Level 1, CC, ES, SF
BB Draw H 03-02J(PA) - Wellbore #1 - Wellbore #1	16,678.61	6,937.01	622.03	473.60	4.191	CC, ES
BB Draw H 03-02J(PA) - Wellbore #1 - Wellbore #1	16,700.00	6,936.23	622.40	473.75	4.187	SF
BB Draw H3-3J(PR) - Wellbore #1 - Wellbore #1	16,667.58	6,990.68	3,875.03	3,726.59	26.104	CC
BB Draw H3-3J(PR) - Wellbore #1 - Wellbore #1	16,700.00	6,990.17	3,875.17	3,726.33	26.036	ES
BB Draw H3-3J(PR) - Wellbore #1 - Wellbore #1	17,300.00	6,980.88	3,926.29	3,771.71	25.400	SF
Beebe Draw H15-715 - Wellbore #1 - Plan #1	13,322.67	6,411.40	4,361.83	4,247.29	38.083	CC, ES
Beebe Draw H15-715 - Wellbore #1 - Plan #1	14,100.00	6,067.46	4,417.18	4,298.97	37.367	SF
Beebe Draw H15-725 - Wellbore #1 - Plan #1	13,846.35	6,192.43	4,359.78	4,245.32	38.091	CC
Beebe Draw H15-725 - Wellbore #1 - Plan #1	13,900.00	6,174.85	4,360.07	4,245.18	37.951	ES
Beebe Draw H15-725 - Wellbore #1 - Plan #1	14,700.00	5,912.76	4,433.75	4,313.81	36.966	SF
Beebe Draw H15-736 - Wellbore #1 - Plan #1	14,355.83	6,045.68	4,361.92	4,245.01	37.311	CC
Beebe Draw H15-736 - Wellbore #1 - Plan #1	14,400.00	6,036.70	4,362.13	4,244.80	37.176	ES
Beebe Draw H15-736 - Wellbore #1 - Plan #1	15,300.00	5,853.67	4,458.80	4,334.67	35.921	SF
Beebe Draw H15-746 - Wellbore #1 - Plan #1	14,839.07	6,035.21	4,375.32	4,253.49	35.915	CC
Beebe Draw H15-746 - Wellbore #1 - Plan #1	14,900.00	6,031.62	4,375.74	4,253.23	35.717	ES
Beebe Draw H15-746 - Wellbore #1 - Plan #1	15,800.00	5,978.60	4,479.24	4,348.81	34.344	SF
Beebe Draw H15-754 - Wellbore #1 - Plan #1	15,509.90	6,500.00	4,413.20	4,280.38	33.227	CC
Beebe Draw H15-754 - Wellbore #1 - Plan #1	15,600.00	6,500.00	4,414.12	4,280.22	32.966	ES
Beebe Draw H15-754 - Wellbore #1 - Plan #1	16,500.00	6,500.00	4,522.90	4,380.74	31.816	SF
Beebe Draw H15-764 - Wellbore #1 - Plan #1	16,068.33	6,500.00	4,416.04	4,276.81	31.717	CC
Beebe Draw H15-764 - Wellbore #1 - Plan #1	16,100.00	6,500.00	4,416.16	4,276.54	31.631	ES
Beebe Draw H15-764 - Wellbore #1 - Plan #1	17,000.00	6,500.00	4,513.25	4,365.24	30.492	SF
Beebe Draw H15-774 - Wellbore #1 - Plan #1	16,663.23	6,550.00	4,418.50	4,271.05	29.968	CC
Beebe Draw H15-774 - Wellbore #1 - Plan #1	16,700.00	6,550.00	4,418.65	4,270.77	29.879	ES
Beebe Draw H15-774 - Wellbore #1 - Plan #1	17,500.00	6,550.00	4,497.03	4,341.66	28.943	SF
Beebe Draw H15-783 - Wellbore #1 - Plan #1	17,154.59	6,650.00	4,417.70	4,263.38	28.627	CC
Beebe Draw H15-783 - Wellbore #1 - Plan #1	17,200.00	6,650.00	4,417.93	4,263.06	28.527	ES
Beebe Draw H15-783 - Wellbore #1 - Plan #1	17,586.71	6,650.00	4,438.78	4,279.81	27.922	SF
Gun Club 43-3 #1(PA) - Wellbore #1 - Wellbore #1	13,194.59	6,600.00	319.99	253.71	4.828	CC, ES
Gun Club 43-3 #1(PA) - Wellbore #1 - Wellbore #1	13,200.00	6,600.00	320.04	253.71	4.825	SF
Gun Club UPRR 31-3 2(PA) - Wellbore #1 - Wellbore #1	14,263.36	6,910.62	262.44	143.29	2.203	CC, ES, SF
Moser UPRR 32-3 #1(PA) - Wellbore #1 - Wellbore #1	14,546.42	6,911.72	1,592.00	1,469.47	12.993	CC, ES
Moser UPRR 32-3 #1(PA) - Wellbore #1 - Wellbore #1	14,700.00	6,911.80	1,599.39	1,475.38	12.898	SF
Moser UPRR 42-3 #2(PA) - Wellbore #1 - Wellbore #1	13,074.23	6,928.15	1,528.75	1,423.70	14.553	CC

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

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Shelton H3-683
Project:	Mustang	TVD Reference:	KB @ 4854.00ft
Reference Site:	H Section 01	MD Reference:	KB @ 4854.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Shelton H3-683	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
H Section 03						
Moser UPRR 42-3 #2(PA) - Wellbore #1 - Wellbore #1	13,100.00	6,928.06	1,528.96	1,423.61	14.513	ES
Moser UPRR 42-3 #2(PA) - Wellbore #1 - Wellbore #1	13,200.00	6,927.67	1,533.91	1,427.57	14.425	SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Shelton H3-683
Project:	Mustang	TVD Reference:	KB @ 4854.00ft
Reference Site:	H Section 01	MD Reference:	KB @ 4854.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Shelton H3-683	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Summary

Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
H Section 12						
Helms H 12-14D(SI) - Wellbore #1 - Gyro Surveys	6,784.61	6,980.17	9,838.97	9,791.10	205.539	CC
Helms H 12-14D(SI) - Wellbore #1 - Gyro Surveys	6,800.00	6,992.45	9,839.01	9,791.05	205.150	ES
Helms H 12-14D(SI) - Wellbore #1 - Gyro Surveys	7,700.00	7,243.82	9,981.00	9,929.15	192.514	SF
JOHNSON H #13-27D(PR) - Wellbore #1 - MWD Survey	307.49	333.99	9,928.22	9,926.37	5,384.654	CC
JOHNSON H #13-27D(PR) - Wellbore #1 - MWD Survey	800.00	778.00	9,929.73	9,924.59	1,931.783	ES
JOHNSON H #13-27D(PR) - Wellbore #1 - MWD Survey	2,100.00	1,153.32	9,993.55	9,982.46	901.300	SF
Ray H 12-24D(SI) - Wellbore #1 - Gyro Surveys	6,635.27	6,715.95	8,772.63	8,721.89	172.879	CC
Ray H 12-24D(SI) - Wellbore #1 - Gyro Surveys	6,650.00	6,724.15	8,772.68	8,721.86	172.627	ES
Ray H 12-24D(SI) - Wellbore #1 - Gyro Surveys	10,000.00	6,944.65	9,999.93	9,929.20	141.379	SF
SHELTON H #01-25D(SI) - Wellbore #1 - MWD Surveys	6,616.32	7,066.43	3,636.43	3,579.84	64.252	CC, ES
SHELTON H #01-25D(SI) - Wellbore #1 - MWD Surveys	7,200.00	7,273.00	3,741.36	3,681.18	62.171	SF
Shelton H01-33D(SI) - Wellbore #1 - MWD Surveys	7,293.10	7,473.40	3,573.04	3,517.93	64.836	CC, ES
Shelton H01-33D(SI) - Wellbore #1 - MWD Surveys	8,800.00	7,506.60	3,902.39	3,841.33	63.913	SF
STROH #H 12-03(SI) - Wellbore #1 - No Surveys	6,583.94	6,571.06	5,594.51	5,514.13	69.604	CC
STROH #H 12-03(SI) - Wellbore #1 - No Surveys	6,600.00	6,586.20	5,594.58	5,514.02	69.445	ES
STROH #H 12-03(SI) - Wellbore #1 - No Surveys	7,200.00	6,982.65	5,696.19	5,610.37	66.370	SF
Stroh #H12-16(SI) - Wellbore #1 - No Surveys						Out of range
Stroh #H12-18(PR) - Wellbore #1 - No Surveys	6,565.57	6,556.60	6,397.19	6,317.01	79.777	CC
Stroh #H12-18(PR) - Wellbore #1 - No Surveys	6,600.00	6,589.20	6,397.52	6,316.94	79.387	ES
Stroh #H12-18(PR) - Wellbore #1 - No Surveys	7,250.00	6,997.97	6,527.65	6,441.56	75.824	SF
Stroh #H12-22(PR) - Wellbore #1 - Gyro Surveys	6,517.73	6,502.47	7,994.31	7,949.08	176.738	CC, ES
Stroh #H12-22(PR) - Wellbore #1 - Gyro Surveys	10,300.00	6,800.00	9,989.73	9,926.42	157.775	SF
Stroh #H12-32(PR) - Wellbore #1 - No Surveys	7,147.07	6,951.55	7,217.77	7,132.32	84.458	CC
Stroh #H12-32(PR) - Wellbore #1 - No Surveys	7,150.00	6,952.60	7,217.78	7,132.30	84.440	ES
Stroh #H12-32(PR) - Wellbore #1 - No Surveys	11,200.00	6,995.00	8,409.95	8,296.12	73.886	SF
Stroh 12-01 - Wellbore #1 - Wellbore #1 - As Drilled	6,463.99	6,454.63	6,765.98	6,720.99	150.387	CC, ES
Stroh 12-01 - Wellbore #1 - Wellbore #1 - As Drilled	7,100.00	6,935.69	6,956.85	6,908.36	143.445	SF
STROH D #07-31(PR) - Wellbore #1 - Gyro Surveys	6,469.02	6,444.74	7,535.06	7,490.06	167.412	CC, ES
STROH D #07-31(PR) - Wellbore #1 - Gyro Surveys	7,100.00	6,895.21	7,714.32	7,665.92	159.378	SF
STROH H #12-05(PA) - Wellbore #1 - Gyro Surveys	6,813.16	6,712.11	6,432.23	6,385.34	137.179	CC, ES
STROH H #12-05(PA) - Wellbore #1 - Gyro Surveys	9,100.00	9,100.00	7,023.41	6,956.45	104.890	SF
STROH H #12-06(SI) - Wellbore #1 - No Surveys	6,610.14	6,599.68	7,077.39	6,996.67	87.685	CC
STROH H #12-06(SI) - Wellbore #1 - No Surveys	6,650.00	6,636.41	7,077.76	6,996.59	87.203	ES
STROH H #12-06(SI) - Wellbore #1 - No Surveys	7,300.00	7,007.46	7,190.48	7,104.12	83.265	SF
STROH H #12-08(PR) - Wellbore #1 - No Surveys	6,489.04	6,482.42	8,140.32	8,061.04	102.678	CC
STROH H #12-08(PR) - Wellbore #1 - No Surveys	6,500.00	6,493.16	8,140.37	8,060.96	102.510	ES
STROH H #12-08(PR) - Wellbore #1 - No Surveys	7,200.00	6,985.65	8,339.03	8,253.30	97.272	SF
STROH H #12-10(PR) - Wellbore #1 - No Surveys	6,568.57	6,768.46	8,484.95	8,402.90	103.415	CC
STROH H #12-10(PR) - Wellbore #1 - No Surveys	6,600.00	6,798.20	8,485.22	8,402.81	102.963	ES
STROH H #12-10(PR) - Wellbore #1 - No Surveys	10,000.00	7,221.00	9,964.74	9,861.53	96.541	SF
STROH H #12-11(SI) - Wellbore #1 - No Surveys	6,718.30	6,705.93	8,227.92	8,145.93	100.348	CC
STROH H #12-11(SI) - Wellbore #1 - No Surveys	6,750.00	6,732.82	8,228.10	8,145.77	99.942	ES
STROH H #12-11(SI) - Wellbore #1 - No Surveys	11,300.00	7,022.00	9,990.37	9,877.68	88.654	SF
STROH H #12-12(SI) - Wellbore #1 - No Surveys	7,092.80	6,933.77	8,038.95	7,953.82	94.424	CC
STROH H #12-12(SI) - Wellbore #1 - No Surveys	7,100.00	6,936.90	8,038.96	7,953.77	94.370	ES
STROH H #12-12(SI) - Wellbore #1 - No Surveys	11,900.00	6,999.00	9,559.17	9,439.59	79.939	SF
STROH H #12-13(SI) - Wellbore #1 - No Surveys	7,070.10	6,915.43	9,704.58	9,619.68	114.297	CC
STROH H #12-13(SI) - Wellbore #1 - No Surveys	7,100.00	6,928.90	9,704.70	9,619.58	114.017	ES
STROH H #12-13(SI) - Wellbore #1 - No Surveys	9,000.00	6,991.00	9,986.57	9,889.72	103.110	SF
STROH H #12-14(PA) - Wellbore #1 - No Surveys	6,744.56	6,725.27	8,972.19	8,889.94	109.089	CC
STROH H #12-14(PA) - Wellbore #1 - No Surveys	6,800.00	6,770.47	8,972.69	8,889.88	108.348	ES
STROH H #12-14(PA) - Wellbore #1 - No Surveys	10,100.00	7,019.00	9,987.51	9,882.64	95.238	SF
STROH H #12-20(PR) - Wellbore #1 - No Surveys	6,742.67	6,724.68	7,314.94	7,232.70	88.951	CC

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

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Shelton H3-683
Project:	Mustang	TVD Reference:	KB @ 4854.00ft
Reference Site:	H Section 01	MD Reference:	KB @ 4854.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Shelton H3-683	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
H Section 12						
STROH H #12-20(PR) - Wellbore #1 - No Surveys	6,750.00	6,730.82	7,314.95	7,232.63	88.869	ES
STROH H #12-20(PR) - Wellbore #1 - No Surveys	10,400.00	7,020.00	8,599.48	8,493.54	81.180	SF
STROH H #12-21(PR) - Wellbore #1 - No Surveys	6,562.80	6,558.95	7,667.32	7,587.12	95.603	CC
STROH H #12-21(PR) - Wellbore #1 - No Surveys	6,600.00	6,594.20	7,667.71	7,587.08	95.097	ES
STROH H #12-21(PR) - Wellbore #1 - No Surveys	7,300.00	7,011.46	7,815.87	7,729.52	90.512	SF
STROH H #12-28D(PR) - Wellbore #1 - MWD Surveys	6,499.40	6,749.97	5,089.21	5,025.38	79.729	CC
STROH H #12-28D(PR) - Wellbore #1 - MWD Surveys	6,500.00	6,750.55	5,089.21	5,025.37	79.724	ES
STROH H #12-28D(PR) - Wellbore #1 - MWD Surveys	13,500.00	13,500.00	9,876.36	9,735.87	70.300	SF
STROH H #12-4J(PR) - Wellbore #1 - No Surveys	6,541.38	6,520.38	9,776.17	9,696.38	122.522	CC
STROH H #12-4J(PR) - Wellbore #1 - No Surveys	6,550.00	6,528.68	9,776.19	9,696.30	122.368	ES
STROH H #12-4J(PR) - Wellbore #1 - No Surveys	7,300.00	6,993.46	9,943.74	9,857.57	115.390	SF
STROH H #12-9(PR) - Wellbore #1 - No Surveys	6,506.80	6,488.81	9,074.49	8,995.10	114.292	CC, ES
STROH H #12-9(PR) - Wellbore #1 - No Surveys	7,250.00	6,986.97	9,267.69	9,181.77	107.870	SF
Stroh H 12-04(PR) - Wellbore #1 - Wellbore #1	7,017.88	6,943.85	5,227.26	5,178.73	107.722	CC, ES
Stroh H 12-04(PR) - Wellbore #1 - Wellbore #1	10,200.00	6,987.37	6,292.79	6,225.90	94.071	SF
Stroh H12-02 - Wellbore #1 - Wellbore #1 - As Drilled	6,514.45	6,522.23	5,891.57	5,846.17	129.770	CC, ES
Stroh H12-02 - Wellbore #1 - Wellbore #1 - As Drilled	7,200.00	6,997.16	6,057.33	6,008.26	123.441	SF
Stroh H12-27 - Wellbore #1 - Wellbore #1 - As Drilled	6,472.62	6,460.23	6,012.32	5,967.28	133.486	CC, ES
Stroh H12-27 - Wellbore #1 - Wellbore #1 - As Drilled	7,050.00	6,894.20	6,160.12	6,111.86	127.641	SF
STROH H12-99HZ(PR) - Wellbore #1 - MWD Surveys	6,940.28	6,431.00	6,012.00	5,965.74	129.951	CC
STROH H12-99HZ(PR) - Wellbore #1 - MWD Surveys	6,950.00	6,431.00	6,012.01	5,965.72	129.876	ES
STROH H12-99HZ(PR) - Wellbore #1 - MWD Surveys	11,200.00	6,203.15	7,414.23	7,342.50	103.356	SF
STROH PC H #12-30D(SI) - Wellbore #1 - MWD Surveys	7,187.85	7,102.30	4,624.23	4,572.81	89.916	CC
STROH PC H #12-30D(SI) - Wellbore #1 - MWD Surveys	7,200.00	7,105.93	4,624.26	4,572.79	89.848	ES
STROH PC H #12-30D(SI) - Wellbore #1 - MWD Surveys	9,700.00	7,123.04	5,335.22	5,270.53	82.482	SF
STROH PC H #12-31D(SI) - Wellbore #1 - MWD Surveys	100.00	92.70	5,449.30	5,449.02	10,000.000	CC
STROH PC H #12-31D(SI) - Wellbore #1 - MWD Surveys	800.00	782.89	5,449.77	5,444.82	1,101.125	ES
STROH PC H #12-31D(SI) - Wellbore #1 - MWD Surveys	11,100.00	7,193.83	7,129.35	7,051.65	91.750	SF
Stroh/12-7(PR) - Wellbore #1 - Gyro Surveys	6,524.22	6,575.58	7,134.05	7,088.43	156.371	CC, ES
Stroh/12-7(PR) - Wellbore #1 - Gyro Surveys	10,300.00	6,982.28	9,207.54	9,144.37	145.760	SF

Noble Energy, Inc.

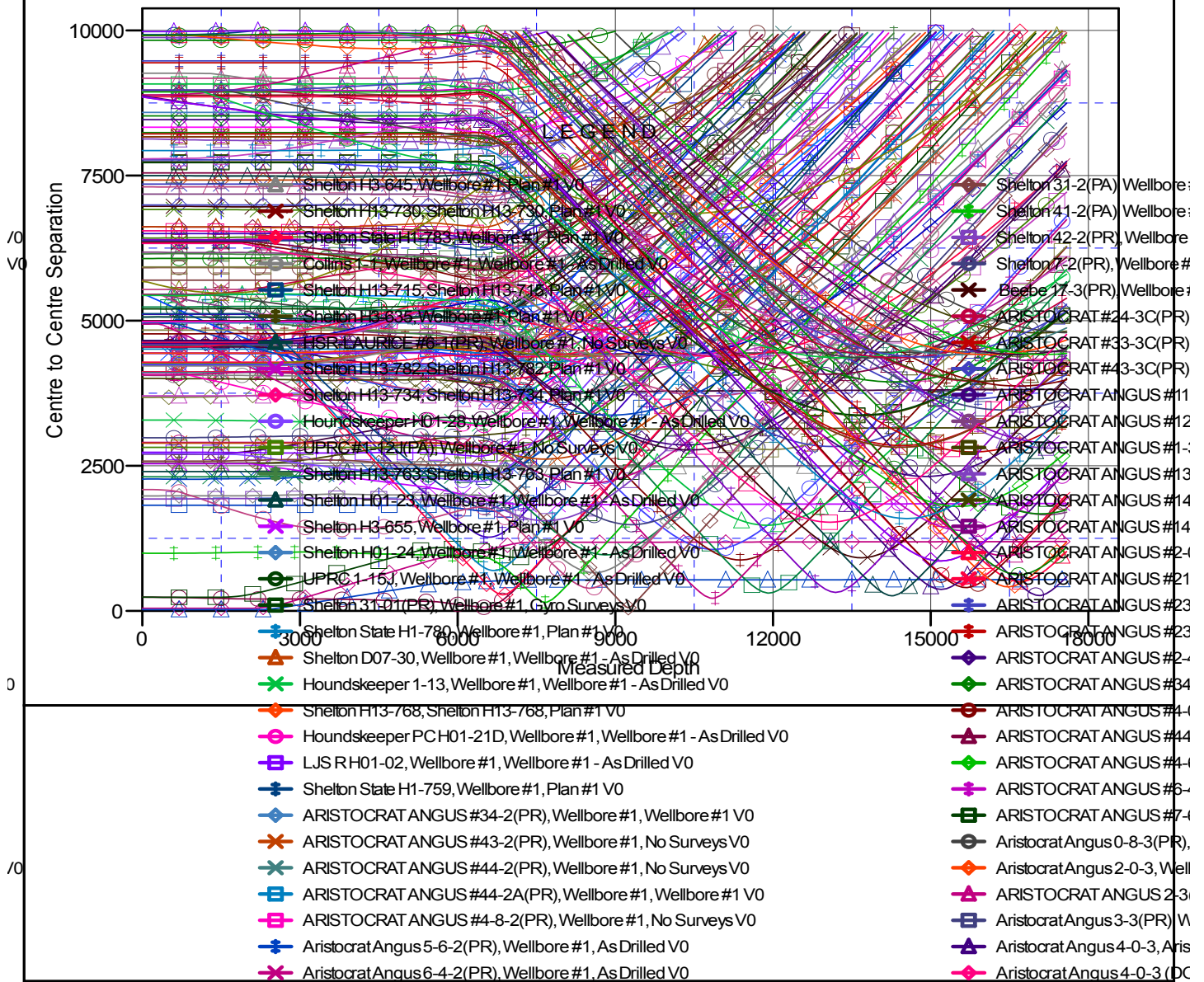
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Shelton H3-683
Project:	Mustang	TVD Reference:	KB @ 4854.00ft
Reference Site:	H Section 01	MD Reference:	KB @ 4854.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Shelton H3-683	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 @ 4854.00ft
Offset Depths are relative to Offset Datum
Central Meridian is -105.5000000

Coordinates are relative to: Shelton H3-683
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.57°

Ladder Plot

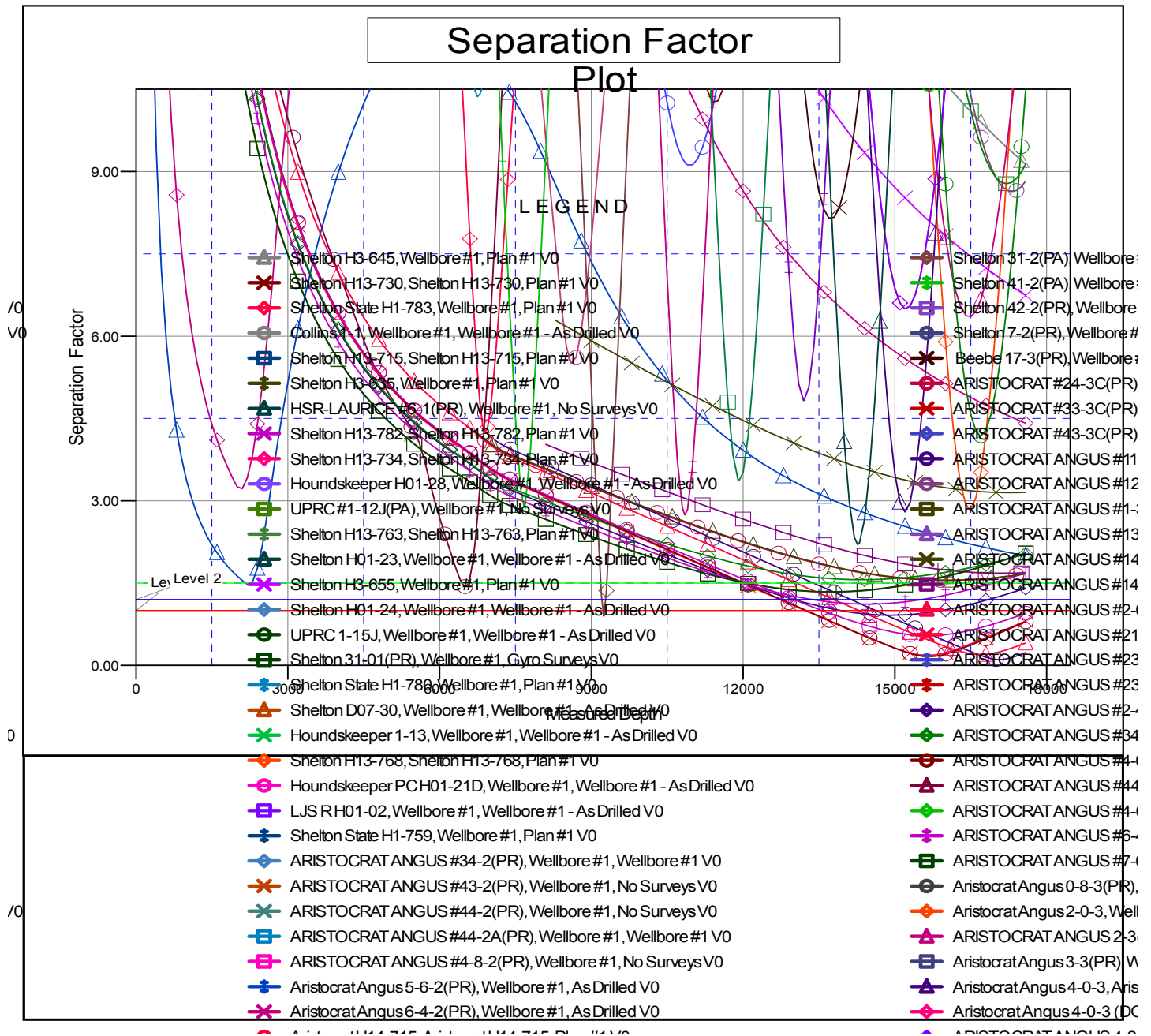


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Anticollision Summary Report

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Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Grid Convergence at Surface is: 0.57°



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