

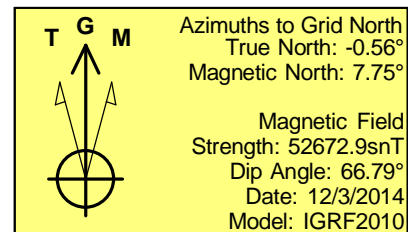
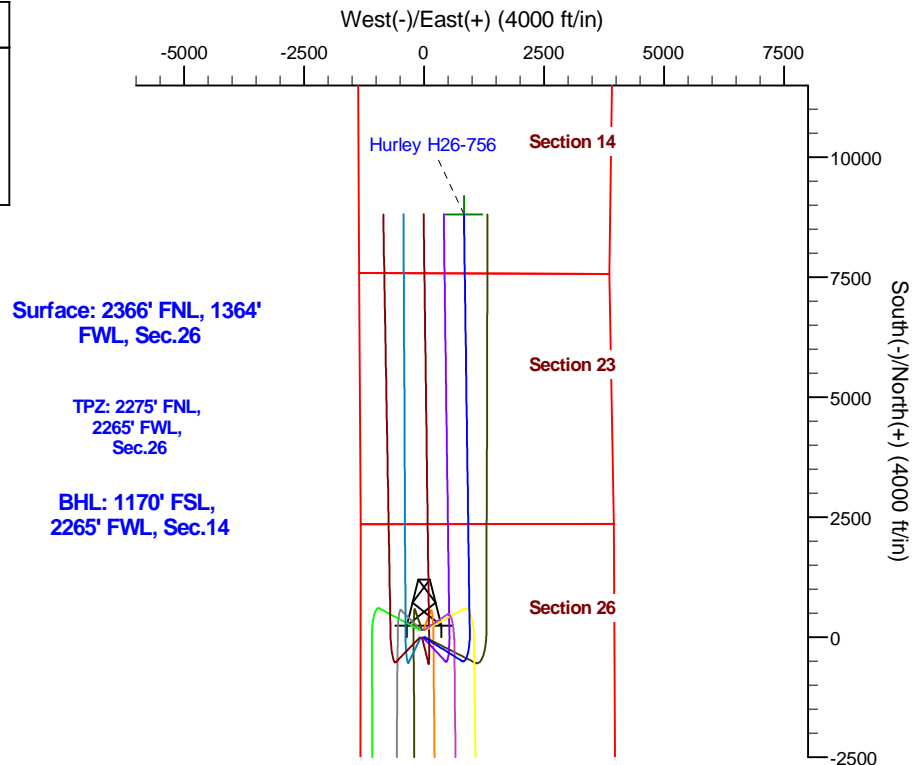
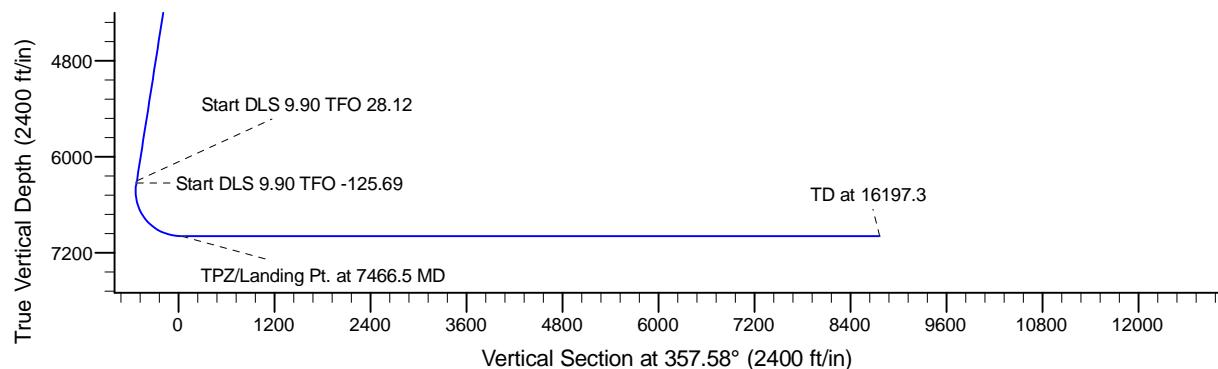
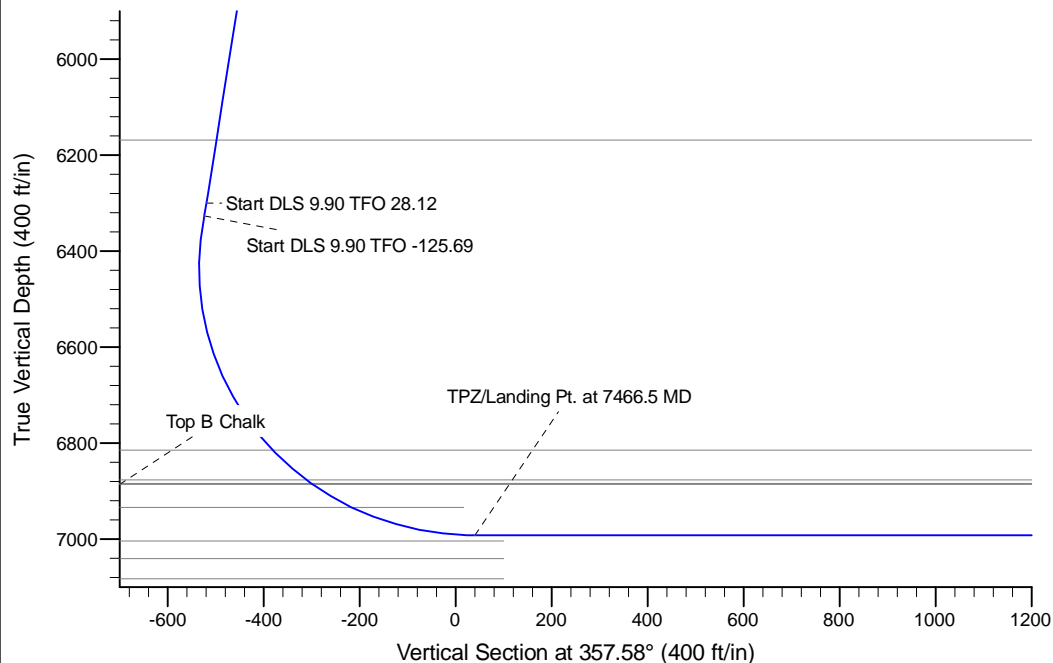
Project: Conceptual Wells
Site: DP 408
Well: Hurley H26-756
Wellbore: Wellbore #1
Design: Prelim - Rev 2

Northern Region Drilling - 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	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	2600.0	0.00	0.00	2600.0	0.0	0.0	0.00	0.00	0.0	
3	3375.0	15.50	122.00	3365.6	-55.2	88.4	2.00	122.00	-58.9	
4	6420.2	15.50	122.00	6300.0	-486.5	778.5	0.00	0.00	-518.9	
5	6448.5	18.02	126.28	6327.2	-491.1	785.2	9.90	28.12	-523.8	
6	7466.5	90.00	359.21	6992.0	80.0	950.0	9.90	-125.69	39.8	
7	16197.3	90.00	359.22	6992.0	810.0	830.1	0.00	90.00	8767.1	Hurley H26-756



WELL DETAILS: Hurley H26-756

	Ground Level:	4822.0	
0.00.0	Northings	Easting	Latitude
	1315823.65	3241536.46	40.197100
			Longitude
			-104.635330

Plan: Prelim - Rev 2 (Hurley H26-756/Wellbore #1)

Created By: Chad Stich Date: 10:29, October 31 2017
Checked: _____ Date: _____
Reviewed: _____ Date: _____
Approved: _____ Date: _____

Northern Region Drilling - Sandbox

Conceptual Wells

DP 408

Hurley H26-756

Wellbore #1

Plan: Prelim - Rev 2

Standard Planning Report

31 October, 2017

Noble Energy, Inc.

Planning Report

Database:	EDMP	Local Co-ordinate Reference:	Well Hurley H26-756
Company:	Northern Region Drilling - Sandbox	TVD Reference:	WELL @ 4852.0ft (Original Well Elev)
Project:	Conceptual Wells	MD Reference:	WELL @ 4852.0ft (Original Well Elev)
Site:	DP 408	North Reference:	Grid
Well:	Hurley H26-756	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Prelim - Rev 2		

Project	Conceptual Wells		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site	DP 408				
Site Position:		Northing:	1,318,184.69 usft	Latitude:	40.203616
From:	Lat/Long	Easting:	3,240,225.17 usft	Longitude:	-104.639942
Position Uncertainty:	0.0 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.56 °

Well	Hurley H26-756					
Well Position	+N/-S	-2,361.1 ft	Northing:	1,315,823.65 usft	Latitude:	40.197100
	+E/-W	1,311.4 ft	Easting:	3,241,536.47 usft	Longitude:	-104.635330
Position Uncertainty		0.0 ft	Wellhead Elevation:	0.0 ft	Ground Level:	4,822.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	12/3/2014	8.31	66.79	52,672.87856836

Design	Prelim - Rev 2			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	357.58

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.00	0.00	0.00	0.00	
3,375.0	15.50	122.00	3,365.6	-55.2	88.4	2.00	2.00	0.00	122.00	
6,420.2	15.50	122.00	6,300.0	-486.5	778.5	0.00	0.00	0.00	0.00	
6,448.5	18.02	126.28	6,327.2	-491.1	785.2	9.90	8.90	15.08	28.12	
7,466.5	90.00	359.21	6,992.0	80.0	950.0	9.90	7.07	-12.48	-125.69	
16,197.3	90.00	359.22	6,992.0	8,810.0	830.1	0.00	0.00	0.00	90.00	Hurley H26-756

Noble Energy, Inc.

Planning Report

Database:	EDMP	Local Co-ordinate Reference:	Well Hurley H26-756
Company:	Northern Region Drilling - Sandbox	TVD Reference:	WELL @ 4852.0ft (Original Well Elev)
Project:	Conceptual Wells	MD Reference:	WELL @ 4852.0ft (Original Well Elev)
Site:	DP 408	North Reference:	Grid
Well:	Hurley H26-756	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Prelim - Rev 2		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	2.00	122.00	2,700.0	-0.9	1.5	-1.0	2.00	2.00	0.00
2,800.0	4.00	122.00	2,799.8	-3.7	5.9	-3.9	2.00	2.00	0.00
2,900.0	6.00	122.00	2,899.5	-8.3	13.3	-8.9	2.00	2.00	0.00
3,000.0	8.00	122.00	2,998.7	-14.8	23.6	-15.8	2.00	2.00	0.00
3,100.0	10.00	122.00	3,097.5	-23.1	36.9	-24.6	2.00	2.00	0.00
3,200.0	12.00	122.00	3,195.6	-33.2	53.1	-35.4	2.00	2.00	0.00
3,300.0	14.00	122.00	3,293.1	-45.1	72.2	-48.1	2.00	2.00	0.00
3,375.0	15.50	122.00	3,365.6	-55.2	88.4	-58.9	2.00	2.00	0.00
3,400.0	15.50	122.00	3,389.7	-58.8	94.0	-62.7	0.00	0.00	0.00
3,500.0	15.50	122.00	3,486.0	-72.9	116.7	-77.8	0.00	0.00	0.00
3,600.0	15.50	122.00	3,582.4	-87.1	139.4	-92.9	0.00	0.00	0.00
3,700.0	15.50	122.00	3,678.8	-101.2	162.0	-108.0	0.00	0.00	0.00
3,800.0	15.50	122.00	3,775.1	-115.4	184.7	-123.1	0.00	0.00	0.00
3,900.0	15.50	122.00	3,871.5	-129.6	207.3	-138.2	0.00	0.00	0.00
4,000.0	15.50	122.00	3,967.9	-143.7	230.0	-153.3	0.00	0.00	0.00
4,100.0	15.50	122.00	4,064.2	-157.9	252.7	-168.4	0.00	0.00	0.00
4,200.0	15.50	122.00	4,160.6	-172.0	275.3	-183.5	0.00	0.00	0.00
4,300.0	15.50	122.00	4,256.9	-186.2	298.0	-198.6	0.00	0.00	0.00
4,400.0	15.50	122.00	4,353.3	-200.4	320.7	-213.7	0.00	0.00	0.00
4,500.0	15.50	122.00	4,449.7	-214.5	343.3	-228.8	0.00	0.00	0.00
4,600.0	15.50	122.00	4,546.0	-228.7	366.0	-243.9	0.00	0.00	0.00
4,700.0	15.50	122.00	4,642.4	-242.9	388.6	-259.0	0.00	0.00	0.00
4,800.0	15.50	122.00	4,738.8	-257.0	411.3	-274.1	0.00	0.00	0.00
4,900.0	15.50	122.00	4,835.1	-271.2	434.0	-289.3	0.00	0.00	0.00
5,000.0	15.50	122.00	4,931.5	-285.3	456.6	-304.4	0.00	0.00	0.00
5,100.0	15.50	122.00	5,027.8	-299.5	479.3	-319.5	0.00	0.00	0.00
5,200.0	15.50	122.00	5,124.2	-313.7	502.0	-334.6	0.00	0.00	0.00

Noble Energy, Inc.

Planning Report

Database:	EDMP	Local Co-ordinate Reference:	Well Hurley H26-756
Company:	Northern Region Drilling - Sandbox	TVD Reference:	WELL @ 4852.0ft (Original Well Elev)
Project:	Conceptual Wells	MD Reference:	WELL @ 4852.0ft (Original Well Elev)
Site:	DP 408	North Reference:	Grid
Well:	Hurley H26-756	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Prelim - Rev 2		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,300.0	15.50	122.00	5,220.6	-327.8	524.6	-349.7	0.00	0.00	0.00
5,400.0	15.50	122.00	5,316.9	-342.0	547.3	-364.8	0.00	0.00	0.00
5,500.0	15.50	122.00	5,413.3	-356.1	569.9	-379.9	0.00	0.00	0.00
5,600.0	15.50	122.00	5,509.7	-370.3	592.6	-395.0	0.00	0.00	0.00
5,700.0	15.50	122.00	5,606.0	-384.5	615.3	-410.1	0.00	0.00	0.00
5,800.0	15.50	122.00	5,702.4	-398.6	637.9	-425.2	0.00	0.00	0.00
5,900.0	15.50	122.00	5,798.7	-412.8	660.6	-440.3	0.00	0.00	0.00
6,000.0	15.50	122.00	5,895.1	-427.0	683.3	-455.4	0.00	0.00	0.00
6,100.0	15.50	122.00	5,991.5	-441.1	705.9	-470.5	0.00	0.00	0.00
6,200.0	15.50	122.00	6,087.8	-455.3	728.6	-485.6	0.00	0.00	0.00
6,300.0	15.50	122.00	6,184.2	-469.4	751.3	-500.7	0.00	0.00	0.00
6,400.0	15.50	122.00	6,280.6	-483.6	773.9	-515.8	0.00	0.00	0.00
6,420.2	15.50	122.00	6,300.0	-486.5	778.5	-518.9	0.00	0.00	0.00
6,448.5	18.02	126.28	6,327.2	-491.1	785.2	-523.8	9.90	8.90	15.08
6,500.0	15.59	110.72	6,376.4	-498.2	798.1	-531.5	9.90	-4.73	-30.23
6,600.0	15.15	72.77	6,473.1	-499.1	823.3	-533.4	9.90	-0.45	-37.95
6,700.0	20.18	44.14	6,568.5	-482.8	847.8	-518.2	9.90	5.04	-28.63
6,800.0	27.87	28.61	6,659.9	-449.8	871.1	-486.2	9.90	7.69	-15.53
6,900.0	36.58	19.69	6,744.5	-401.1	892.4	-438.5	9.90	8.70	-8.92
7,000.0	45.71	13.88	6,819.7	-338.2	911.0	-376.4	9.90	9.14	-5.81
7,100.0	55.07	9.66	6,883.4	-262.8	926.5	-301.7	9.90	9.35	-4.22
7,200.0	64.53	6.31	6,933.7	-177.4	938.4	-216.8	9.90	9.47	-3.35
7,300.0	74.07	3.46	6,969.0	-84.3	946.3	-124.1	9.90	9.53	-2.85
7,400.0	83.63	0.87	6,988.3	13.7	950.0	-26.5	9.90	9.57	-2.59
7,466.5	90.00	359.21	6,992.0	80.0	950.0	39.8	9.90	9.58	-2.50
7,500.0	90.00	359.21	6,992.0	113.5	949.5	73.3	0.00	0.00	0.00
7,600.0	90.00	359.21	6,992.0	213.5	948.2	173.3	0.00	0.00	0.00
7,700.0	90.00	359.21	6,992.0	313.5	946.8	273.2	0.00	0.00	0.00
7,800.0	90.00	359.21	6,992.0	413.5	945.4	373.2	0.00	0.00	0.00
7,900.0	90.00	359.21	6,992.0	513.5	944.0	473.2	0.00	0.00	0.00
8,000.0	90.00	359.21	6,992.0	613.5	942.6	573.1	0.00	0.00	0.00
8,100.0	90.00	359.21	6,992.0	713.5	941.3	673.1	0.00	0.00	0.00
8,200.0	90.00	359.21	6,992.0	813.4	939.9	773.0	0.00	0.00	0.00
8,300.0	90.00	359.21	6,992.0	913.4	938.5	873.0	0.00	0.00	0.00
8,400.0	90.00	359.21	6,992.0	1,013.4	937.1	973.0	0.00	0.00	0.00
8,500.0	90.00	359.21	6,992.0	1,113.4	935.8	1,072.9	0.00	0.00	0.00
8,600.0	90.00	359.21	6,992.0	1,213.4	934.4	1,172.9	0.00	0.00	0.00
8,700.0	90.00	359.21	6,992.0	1,313.4	933.0	1,272.8	0.00	0.00	0.00
8,800.0	90.00	359.21	6,992.0	1,413.4	931.6	1,372.8	0.00	0.00	0.00
8,900.0	90.00	359.21	6,992.0	1,513.4	930.2	1,472.8	0.00	0.00	0.00
9,000.0	90.00	359.21	6,992.0	1,613.4	928.9	1,572.7	0.00	0.00	0.00
9,100.0	90.00	359.21	6,992.0	1,713.4	927.5	1,672.7	0.00	0.00	0.00
9,200.0	90.00	359.21	6,992.0	1,813.3	926.1	1,772.6	0.00	0.00	0.00
9,300.0	90.00	359.21	6,992.0	1,913.3	924.7	1,872.6	0.00	0.00	0.00
9,400.0	90.00	359.21	6,992.0	2,013.3	923.4	1,972.6	0.00	0.00	0.00
9,500.0	90.00	359.21	6,992.0	2,113.3	922.0	2,072.5	0.00	0.00	0.00
9,600.0	90.00	359.21	6,992.0	2,213.3	920.6	2,172.5	0.00	0.00	0.00
9,700.0	90.00	359.21	6,992.0	2,313.3	919.2	2,272.4	0.00	0.00	0.00
9,800.0	90.00	359.21	6,992.0	2,413.3	917.9	2,372.4	0.00	0.00	0.00
9,900.0	90.00	359.21	6,992.0	2,513.3	916.5	2,472.4	0.00	0.00	0.00
10,000.0	90.00	359.21	6,992.0	2,613.3	915.1	2,572.3	0.00	0.00	0.00
10,100.0	90.00	359.21	6,992.0	2,713.3	913.7	2,672.3	0.00	0.00	0.00
10,200.0	90.00	359.21	6,992.0	2,813.3	912.4	2,772.2	0.00	0.00	0.00
10,300.0	90.00	359.21	6,992.0	2,913.2	911.0	2,872.2	0.00	0.00	0.00

Noble Energy, Inc.

Planning Report

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Company:	Northern Region Drilling - Sandbox	TVD Reference:	WELL @ 4852.0ft (Original Well Elev)
Project:	Conceptual Wells	MD Reference:	WELL @ 4852.0ft (Original Well Elev)
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Well:	Hurley H26-756	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Prelim - Rev 2		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,400.0	90.00	359.21	6,992.0	3,013.2	909.6	2,972.1	0.00	0.00	0.00
10,500.0	90.00	359.21	6,992.0	3,113.2	908.2	3,072.1	0.00	0.00	0.00
10,600.0	90.00	359.21	6,992.0	3,213.2	906.9	3,172.1	0.00	0.00	0.00
10,700.0	90.00	359.21	6,992.0	3,313.2	905.5	3,272.0	0.00	0.00	0.00
10,800.0	90.00	359.21	6,992.0	3,413.2	904.1	3,372.0	0.00	0.00	0.00
10,900.0	90.00	359.21	6,992.0	3,513.2	902.7	3,471.9	0.00	0.00	0.00
11,000.0	90.00	359.21	6,992.0	3,613.2	901.4	3,571.9	0.00	0.00	0.00
11,100.0	90.00	359.21	6,992.0	3,713.2	900.0	3,671.9	0.00	0.00	0.00
11,200.0	90.00	359.21	6,992.0	3,813.2	898.6	3,771.8	0.00	0.00	0.00
11,300.0	90.00	359.21	6,992.0	3,913.1	897.2	3,871.8	0.00	0.00	0.00
11,400.0	90.00	359.21	6,992.0	4,013.1	895.9	3,971.7	0.00	0.00	0.00
11,500.0	90.00	359.21	6,992.0	4,113.1	894.5	4,071.7	0.00	0.00	0.00
11,600.0	90.00	359.21	6,992.0	4,213.1	893.1	4,171.7	0.00	0.00	0.00
11,700.0	90.00	359.21	6,992.0	4,313.1	891.7	4,271.6	0.00	0.00	0.00
11,800.0	90.00	359.21	6,992.0	4,413.1	890.4	4,371.6	0.00	0.00	0.00
11,900.0	90.00	359.21	6,992.0	4,513.1	889.0	4,471.5	0.00	0.00	0.00
12,000.0	90.00	359.21	6,992.0	4,613.1	887.6	4,571.5	0.00	0.00	0.00
12,100.0	90.00	359.21	6,992.0	4,713.1	886.2	4,671.5	0.00	0.00	0.00
12,200.0	90.00	359.21	6,992.0	4,813.1	884.9	4,771.4	0.00	0.00	0.00
12,300.0	90.00	359.21	6,992.0	4,913.1	883.5	4,871.4	0.00	0.00	0.00
12,400.0	90.00	359.21	6,992.0	5,013.0	882.1	4,971.3	0.00	0.00	0.00
12,500.0	90.00	359.21	6,992.0	5,113.0	880.8	5,071.3	0.00	0.00	0.00
12,600.0	90.00	359.21	6,992.0	5,213.0	879.4	5,171.3	0.00	0.00	0.00
12,700.0	90.00	359.21	6,992.0	5,313.0	878.0	5,271.2	0.00	0.00	0.00
12,800.0	90.00	359.21	6,992.0	5,413.0	876.6	5,371.2	0.00	0.00	0.00
12,900.0	90.00	359.21	6,992.0	5,513.0	875.3	5,471.1	0.00	0.00	0.00
13,000.0	90.00	359.21	6,992.0	5,613.0	873.9	5,571.1	0.00	0.00	0.00
13,100.0	90.00	359.21	6,992.0	5,713.0	872.5	5,671.1	0.00	0.00	0.00
13,200.0	90.00	359.21	6,992.0	5,813.0	871.2	5,771.0	0.00	0.00	0.00
13,300.0	90.00	359.21	6,992.0	5,913.0	869.8	5,871.0	0.00	0.00	0.00
13,400.0	90.00	359.21	6,992.0	6,013.0	868.4	5,970.9	0.00	0.00	0.00
13,500.0	90.00	359.21	6,992.0	6,112.9	867.0	6,070.9	0.00	0.00	0.00
13,600.0	90.00	359.21	6,992.0	6,212.9	865.7	6,170.8	0.00	0.00	0.00
13,700.0	90.00	359.21	6,992.0	6,312.9	864.3	6,270.8	0.00	0.00	0.00
13,800.0	90.00	359.21	6,992.0	6,412.9	862.9	6,370.8	0.00	0.00	0.00
13,900.0	90.00	359.21	6,992.0	6,512.9	861.6	6,470.7	0.00	0.00	0.00
14,000.0	90.00	359.21	6,992.0	6,612.9	860.2	6,570.7	0.00	0.00	0.00
14,100.0	90.00	359.21	6,992.0	6,712.9	858.8	6,670.6	0.00	0.00	0.00
14,200.0	90.00	359.21	6,992.0	6,812.9	857.4	6,770.6	0.00	0.00	0.00
14,300.0	90.00	359.21	6,992.0	6,912.9	856.1	6,870.6	0.00	0.00	0.00
14,400.0	90.00	359.21	6,992.0	7,012.9	854.7	6,970.5	0.00	0.00	0.00
14,500.0	90.00	359.22	6,992.0	7,112.8	853.3	7,070.5	0.00	0.00	0.00
14,600.0	90.00	359.22	6,992.0	7,212.8	852.0	7,170.4	0.00	0.00	0.00
14,700.0	90.00	359.22	6,992.0	7,312.8	850.6	7,270.4	0.00	0.00	0.00
14,800.0	90.00	359.22	6,992.0	7,412.8	849.2	7,370.4	0.00	0.00	0.00
14,900.0	90.00	359.22	6,992.0	7,512.8	847.9	7,470.3	0.00	0.00	0.00
15,000.0	90.00	359.22	6,992.0	7,612.8	846.5	7,570.3	0.00	0.00	0.00
15,100.0	90.00	359.22	6,992.0	7,712.8	845.1	7,670.2	0.00	0.00	0.00
15,200.0	90.00	359.22	6,992.0	7,812.8	843.7	7,770.2	0.00	0.00	0.00
15,300.0	90.00	359.22	6,992.0	7,912.8	842.4	7,870.2	0.00	0.00	0.00
15,400.0	90.00	359.22	6,992.0	8,012.8	841.0	7,970.1	0.00	0.00	0.00
15,500.0	90.00	359.22	6,992.0	8,112.8	839.6	8,070.1	0.00	0.00	0.00
15,600.0	90.00	359.22	6,992.0	8,212.7	838.3	8,170.0	0.00	0.00	0.00
15,700.0	90.00	359.22	6,992.0	8,312.7	836.9	8,270.0	0.00	0.00	0.00

Noble Energy, Inc.

Planning Report

Database:	EDMP	Local Co-ordinate Reference:	Well Hurley H26-756
Company:	Northern Region Drilling - Sandbox	TVD Reference:	WELL @ 4852.0ft (Original Well Elev)
Project:	Conceptual Wells	MD Reference:	WELL @ 4852.0ft (Original Well Elev)
Site:	DP 408	North Reference:	Grid
Well:	Hurley H26-756	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Prelim - Rev 2		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
15,800.0	90.00	359.22	6,992.0	8,412.7	835.5	8,370.0	0.00	0.00	0.00	
15,900.0	90.00	359.22	6,992.0	8,512.7	834.2	8,469.9	0.00	0.00	0.00	
16,000.0	90.00	359.22	6,992.0	8,612.7	832.8	8,569.9	0.00	0.00	0.00	
16,100.0	90.00	359.22	6,992.0	8,712.7	831.4	8,669.8	0.00	0.00	0.00	
16,197.3	90.00	359.22	6,992.0	8,810.0	830.1	8,767.1	0.00	0.00	0.00	

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
- hit/miss target										
- Shape										
Hurley H26-756	0.00	0.00	6,992.0	8,810.0	830.1	1,324,633.29	3,242,366.53	40.221260	-104.632050	
- plan hits target center										
- Point										

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
618.0	618.0	Pierre				
770.0	770.0	Upper Pierre Aquifer Top				
1,658.0	1,658.0	Upper Pierre Aquifer Base				
3,955.5	3,925.0	Parkman				
4,568.8	4,516.0	Sussex				
5,276.6	5,198.0	Shannon				
6,284.2	6,169.0	Teepee Buttes				
6,993.3	6,815.0	Sharon Springs				
7,088.9	6,877.0	Top A Chalk				
7,101.0	6,884.0	Top A Marl				
7,104.5	6,886.0	Top B Chalk				
7,200.8	6,934.0	Top B Marl				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
2,600.0	2,600.0	0.0	0.0	KOP - Start Build 2.00	
6,420.2	6,300.0	-55.2	88.4	Start DLS 9.90 TFO 28.12	
6,448.5	6,327.2	-486.5	778.5	Start DLS 9.90 TFO -125.69	
7,466.5	6,992.0	-491.1	785.2	TPZ/Landing Pt. at 7466.5 MD	
16,197.3	6,992.0	80.0	950.0	TD at 16197.3	

Northern Region Drilling - Sandbox

Conceptual Wells

DP 408

Hurley H26-756

Wellbore #1

Prelim - Rev 2

Anticollision Summary Report

31 October, 2017

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region Drilling - Sandbox	Local Co-ordinate Reference:	Well Hurley H26-756
Project:	Conceptual Wells	TVD Reference:	WELL @ 4852.0ft (Original Well Elev)
Reference Site:	DP 408	MD Reference:	WELL @ 4852.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	Grid
Reference Well:	Hurley H26-756	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Prelim - Rev 2	Offset TVD Reference:	Offset Datum

Reference	Prelim - Rev 2		
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 10,000.0 ft	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program	Date	10/31/2017		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	16,197.3	Prelim - Rev 2 (Wellbore #1)	MWD+IFR1+MS_WY	Fixed:v2:Rockies, crustal dec + 3-axis correction

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
D Section 19						
Butterball H24-69HN - Original Drilling - Original Drilling -	15,042.5	11,992.0	6,068.8	5,965.0	58.484	CC
Butterball H24-69HN - Original Drilling - Original Drilling -	15,100.0	11,992.0	6,069.1	5,964.8	58.191	ES
Butterball H24-69HN - Original Drilling - Original Drilling -	16,197.3	11,992.0	6,177.7	6,055.5	50.587	SF
DP 408						
Emmy H25-711 - Wellbore #1 - Prelim - Rev 2	4,851.9	2,761.3	7,753.1	7,736.7	472.246	CC, ES
Emmy H25-711 - Wellbore #1 - Prelim - Rev 2	16,197.3	17,530.1	8,234.5	8,045.9	43.665	SF
Emmy State H25-718 - Wellbore #1 - Prelim - Rev 2	5,227.7	3,156.1	7,629.2	7,610.9	417.688	CC
Emmy State H25-718 - Wellbore #1 - Prelim - Rev 2	15,000.0	17,376.1	7,687.3	7,510.5	43.496	ES
Emmy State H25-718 - Wellbore #1 - Prelim - Rev 2	16,197.3	17,376.1	7,801.4	7,613.2	41.470	SF
Emmy State H25-724 - Wellbore #1 - Prelim - Rev 2	7,428.9	9,908.6	7,120.7	7,074.6	154.381	CC
Emmy State H25-724 - Wellbore #1 - Prelim - Rev 2	15,000.0	17,460.5	7,246.1	7,071.5	41.492	ES
Emmy State H25-724 - Wellbore #1 - Prelim - Rev 2	16,197.3	17,460.5	7,366.8	7,181.1	39.671	SF
Emmy State H25-731 - Wellbore #1 - Prelim - Rev 2	7,436.7	9,839.7	6,709.2	6,662.9	144.861	CC
Emmy State H25-731 - Wellbore #1 - Prelim - Rev 2	15,000.0	17,379.3	6,807.3	6,632.1	38.864	ES
Emmy State H25-731 - Wellbore #1 - Prelim - Rev 2	16,197.3	17,379.3	6,930.9	6,745.4	37.369	SF
Emmy State H25-738 - Wellbore #1 - Prelim - Rev 2	7,447.5	9,803.7	6,302.8	6,255.1	132.124	CC
Emmy State H25-738 - Wellbore #1 - Prelim - Rev 2	15,000.0	17,299.8	6,366.1	6,189.4	36.029	ES
Emmy State H25-738 - Wellbore #1 - Prelim - Rev 2	16,100.0	17,299.8	6,479.0	6,293.5	34.919	SF
Emmy State H25-744 - Wellbore #1 - Prelim - Rev 2	7,441.2	9,837.4	5,844.8	5,796.7	121.486	CC
Emmy State H25-744 - Wellbore #1 - Prelim - Rev 2	14,900.0	17,295.8	5,926.4	5,750.8	33.755	ES
Emmy State H25-744 - Wellbore #1 - Prelim - Rev 2	15,900.0	17,327.4	6,015.9	5,832.2	32.737	SF
Emmy State H25-751 - Wellbore #1 - Design #1	7,407.7	9,976.1	5,440.2	5,392.0	112.923	CC
Emmy State H25-751 - Wellbore #1 - Design #1	7,450.0	10,018.2	5,440.6	5,392.0	111.991	ES
Emmy State H25-751 - Wellbore #1 - Design #1	16,000.0	17,580.8	5,748.8	5,562.4	30.845	SF
Emmy State H25-757 - Wellbore #1 - Design #1	7,445.1	10,028.8	5,159.0	5,109.8	104.883	CC
Emmy State H25-757 - Wellbore #1 - Design #1	14,900.0	17,501.0	5,197.8	5,021.3	29.455	ES
Emmy State H25-757 - Wellbore #1 - Design #1	15,800.0	17,501.0	5,280.3	5,095.6	28.587	SF
Emmy State H25-764 - Wellbore #1 - Design #1	7,448.4	10,002.3	4,700.0	4,683.3	281.367	CC
Emmy State H25-764 - Wellbore #1 - Design #1	7,450.0	10,003.8	4,700.0	4,683.3	281.334	ES
Emmy State H25-764 - Wellbore #1 - Design #1	16,197.3	17,466.3	4,939.6	4,854.0	57.717	SF
Emmy State H25-771 - Wellbore #1 - Design #1	7,450.0	9,934.3	4,265.3	4,216.5	87.314	CC
Emmy State H25-771 - Wellbore #1 - Design #1	14,900.0	17,392.8	4,318.1	4,141.6	24.462	ES
Emmy State H25-771 - Wellbore #1 - Design #1	15,500.0	17,391.2	4,362.8	4,181.1	24.012	SF
Emmy State H25-777 - Wellbore #1 - Design #1	7,463.0	10,013.0	3,868.5	3,819.2	78.448	CC
Emmy State H25-777 - Wellbore #1 - Design #1	14,900.0	17,434.0	3,879.7	3,703.2	21.972	ES
Emmy State H25-777 - Wellbore #1 - Design #1	15,400.0	17,434.0	3,914.6	3,734.0	21.672	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 Drilling - Sandbox	Local Co-ordinate Reference:	Well Hurley H26-756
Project:	Conceptual Wells	TVD Reference:	WELL @ 4852.0ft (Original Well Elev)
Reference Site:	DP 408	MD Reference:	WELL @ 4852.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	Grid
Reference Well:	Hurley H26-756	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Prelim - Rev 2	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						
DP 408						
Emmy State H25-785 - Wellbore #1 - Prelim - Rev 2	7,442.7	10,005.3	3,360.9	3,312.2	68.963	CC
Emmy State H25-785 - Wellbore #1 - Prelim - Rev 2	14,900.0	17,461.7	3,438.3	3,262.5	19.557	ES
Emmy State H25-785 - Wellbore #1 - Prelim - Rev 2	15,200.0	17,481.1	3,452.9	3,274.4	19.351	SF
Emmy State H36-753 - Wellbore #1 - Design #1	6,572.0	5,305.7	5,465.8	5,437.7	194.280	CC, ES
Emmy State H36-753 - Wellbore #1 - Design #1	10,700.0	6,432.6	7,501.3	7,451.3	149.841	SF
Emmy State H36-760 - Wellbore #1 - Design #1	6,750.0	6,007.0	5,199.9	5,169.9	173.624	ES
Emmy State H36-760 - Wellbore #1 - Design #1	6,751.3	6,005.8	5,199.9	5,169.9	173.632	CC
Emmy State H36-760 - Wellbore #1 - Design #1	10,300.0	6,450.0	6,996.8	6,950.8	152.132	SF
Emmy State H36-766 - Wellbore #1 - Design #1	6,833.0	6,365.7	4,889.3	4,858.5	159.186	CC, ES
Emmy State H36-766 - Wellbore #1 - Design #1	9,900.0	6,450.0	6,442.7	6,399.6	149.309	SF
Emmy State H36-773 - Wellbore #1 - Design #1	6,855.4	6,576.4	4,490.8	4,459.9	145.589	CC, ES
Emmy State H36-773 - Wellbore #1 - Design #1	9,300.0	6,550.0	5,702.8	5,663.1	143.537	SF
Emmy State H36-780 - Wellbore #1 - Design #1	6,838.3	6,650.0	4,142.1	4,111.2	134.396	CC, ES
Emmy State H36-780 - Wellbore #1 - Design #1	7,050.0	6,671.4	4,164.2	4,133.0	133.800	SF
Emmy State H36-787 - Wellbore #1 - Prelim - Rev 2	6,850.9	6,820.4	3,697.8	3,665.9	115.781	CC, ES
Emmy State H36-787 - Wellbore #1 - Prelim - Rev 2	7,000.0	6,850.0	3,709.6	3,677.4	115.423	SF
Hurley H26-712 - Wellbore #1 - Design #1	7,087.2	6,506.0	2,870.5	2,838.2	88.939	CC
Hurley H26-712 - Wellbore #1 - Design #1	16,197.3	16,114.6	3,012.3	2,838.1	17.286	ES, SF
Hurley H26-717 - Wellbore #1 - Design #1	7,280.8	6,947.6	2,569.3	2,537.0	79.611	CC
Hurley H26-717 - Wellbore #1 - Design #1	16,197.3	16,068.6	2,591.7	2,419.6	15.066	ES, SF
Hurley H26-724 - Wellbore #1 - Design #1	7,428.5	7,267.5	2,041.0	2,009.1	63.821	CC
Hurley H26-724 - Wellbore #1 - Design #1	16,197.3	16,041.5	2,171.5	1,999.2	12.606	ES, SF
Hurley H26-730 - Wellbore #1 - Design #1	7,557.1	7,161.9	1,636.4	1,604.5	51.321	CC
Hurley H26-730 - Wellbore #1 - Design #1	16,197.3	15,786.1	1,752.6	1,579.2	10.110	ES, SF
Hurley H26-736 - Wellbore #1 - Design #1	7,727.0	7,484.9	1,271.3	1,238.1	38.355	CC
Hurley H26-736 - Wellbore #1 - Design #1	16,197.3	15,946.0	1,332.0	1,160.4	7.760	ES, SF
Hurley H26-743 - Wellbore #1 - Prelim - Rev 2	7,571.8	7,579.6	786.2	752.2	23.117	CC
Hurley H26-743 - Wellbore #1 - Prelim - Rev 2	16,197.3	16,207.3	911.9	737.8	5.236	ES, SF
Hurley H26-750 - Wellbore #1 - Prelim - Rev 2	2,400.0	2,400.0	22.3	11.9	2.129	CC, ES, SF
Hurley H26-762 - Wellbore #1 - Prelim - Rev 2	2,600.0	2,599.0	22.3	11.0	1.962	CC
Hurley H26-762 - Wellbore #1 - Prelim - Rev 2	2,700.0	2,699.5	22.7	10.9	1.921	ES, SF
Hurley H26-768 - Wellbore #1 - Prelim - Rev 2	2,615.8	2,615.2	43.6	32.2	3.833	CC, ES, SF
Hurley H26-776 - Wellbore #1 - Prelim - Rev 2	2,200.0	2,199.0	67.0	57.5	6.987	CC, ES
Hurley H26-776 - Wellbore #1 - Prelim - Rev 2	2,400.0	2,396.6	70.4	60.0	6.763	SF
Hurley H26-783 - Wellbore #1 - Prelim - Rev 2	2,000.0	1,999.0	89.4	80.7	10.280	CC, ES
Hurley H26-783 - Wellbore #1 - Prelim - Rev 2	16,197.3	16,107.6	1,680.9	1,506.1	9.612	SF
Hurley H35-720 - Wellbore #1 - Design #1	7,429.3	7,745.8	2,321.6	2,289.2	71.555	CC, ES
Hurley H35-720 - Wellbore #1 - Design #1	9,300.0	6,650.0	2,559.2	2,517.5	61.453	SF
Hurley H35-727 - Wellbore #1 - Design #1	7,404.2	7,578.9	1,934.8	1,902.7	60.355	CC, ES
Hurley H35-727 - Wellbore #1 - Design #1	8,900.0	6,720.6	2,155.1	2,117.1	56.626	SF
Hurley H35-733 - Wellbore #1 - Design #1	7,400.0	7,606.6	1,514.4	1,481.8	46.555	ES
Hurley H35-733 - Wellbore #1 - Design #1	7,404.1	7,602.6	1,514.4	1,481.8	46.561	CC
Hurley H35-733 - Wellbore #1 - Design #1	8,500.0	6,900.0	1,654.2	1,618.3	46.030	SF
Hurley H35-740 - Wellbore #1 - Design #1	7,300.0	7,751.8	994.2	960.7	29.711	SF
Hurley H35-740 - Wellbore #1 - Design #1	7,421.8	7,632.1	990.7	957.4	29.728	CC, ES
Hurley H35-746 - Wellbore #1 - Prelim - Rev 2	7,400.0	7,614.7	604.5	570.0	17.519	SF
Hurley H35-746 - Wellbore #1 - Prelim - Rev 2	7,403.3	7,612.0	604.5	570.0	17.520	CC, ES
Hurley H35-755 - Wellbore #1 - Prelim - Rev 2	7,543.1	7,320.6	83.9	49.8	2.461	CC, ES, SF
Hurley H35-761 - Wellbore #1 - Prelim - Rev 2	2,600.0	2,600.0	149.4	138.0	13.109	CC, ES
Hurley H35-761 - Wellbore #1 - Prelim - Rev 2	7,227.5	7,451.8	319.1	286.2	9.700	SF
Hurley H35-768 - Wellbore #1 - Prelim - Rev 2	2,600.0	2,600.0	150.6	139.2	13.218	CC, ES
Hurley H35-768 - Wellbore #1 - Prelim - Rev 2	2,800.0	2,799.8	155.2	143.0	12.687	SF
Hurley H35-774 - Wellbore #1 - Prelim - Rev 2	2,400.0	2,400.0	155.1	144.6	14.778	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 Drilling - Sandbox	Local Co-ordinate Reference:	Well Hurley H26-756
Project:	Conceptual Wells	TVD Reference:	WELL @ 4852.0ft (Original Well Elev)
Reference Site:	DP 408	MD Reference:	WELL @ 4852.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	Grid
Reference Well:	Hurley H26-756	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Prelim - Rev 2	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						
DP 408						
Hurley H35-774 - Wellbore #1 - Prelim - Rev 2	2,600.0	2,589.5	161.7	150.4	14.242	SF
Hurley H35-779 - Wellbore #1 - Prelim - Rev 2	2,200.0	2,199.0	165.9	156.3	17.294	CC, ES
Hurley H35-779 - Wellbore #1 - Prelim - Rev 2	2,400.0	2,388.6	172.1	161.6	16.464	SF
Hurley H35-787 - Wellbore #1 - Prelim - Rev 2	2,000.0	1,999.0	175.8	167.1	20.216	CC, ES
Hurley H35-787 - Wellbore #1 - Prelim - Rev 2	2,300.0	2,283.3	188.5	178.6	18.926	SF
Hurley State H35-713 - Wellbore #1 - Design #1	8,019.3	6,610.9	2,773.6	2,740.1	82.887	CC, ES
Hurley State H35-713 - Wellbore #1 - Design #1	9,500.0	6,500.0	3,137.4	3,094.4	73.023	SF
H Section 10						
HSR-Beebe Draw 3-15 - Original Drilling - Original Drilling	16,197.3	7,095.2	7,696.3	7,582.1	67.417	CC, ES, SF
H Section 13						
Karakakes H13-25 - Original Drilling - Original Drilling - A	16,197.3	7,076.5	4,514.2	4,401.8	40.169	CC, ES, SF
Karakakes H13-33 - Original Drilling - Original Drilling - A	16,197.3	7,008.5	3,202.3	3,092.5	29.167	CC, ES, SF
Karakakes H14-63HN - Original Drilling - Original Drilling	16,197.3	9,874.0	307.4	205.7	3.023	CC, ES, SF
Sarchet H13-75HN - Original Drilling - Original Drilling	16,000.0	16,000.0	5,763.7	5,541.8	25.969	ES, SF
Sarchet H13-75HN - Original Drilling - Original Drilling	16,197.3	8,434.2	5,748.9	5,626.0	46.762	CC
UPRC 13-13J - Original Drilling - Original Drilling - As Dri	15,784.4	7,094.1	3,871.8	3,764.8	36.188	CC
UPRC 13-13J - Original Drilling - Original Drilling - As Dri	15,800.0	7,093.9	3,871.8	3,764.7	36.127	ES
UPRC 13-13J - Original Drilling - Original Drilling - As Dri	16,197.3	7,088.0	3,893.8	3,782.4	34.981	SF
UPRC 13-14J - Original Drilling - Original Drilling - As Dri	15,962.1	6,881.9	4,928.8	4,819.1	44.910	CC
UPRC 13-14J - Original Drilling - Original Drilling - As Dri	16,000.0	6,882.4	4,929.0	4,818.8	44.738	ES
UPRC 13-14J - Original Drilling - Original Drilling - As Dri	16,197.3	6,884.8	4,934.4	4,822.1	43.936	SF
UPRC 13-15J - Original Drilling - Original Drilling - As Dri	15,689.8	6,959.6	6,286.0	6,179.5	59.056	CC
UPRC 13-15J - Original Drilling - Original Drilling - As Dri	15,800.0	6,960.1	6,286.9	6,179.3	58.416	ES
UPRC 13-15J - Original Drilling - Original Drilling - As Dri	16,197.3	6,961.9	6,306.4	6,194.7	56.464	SF
UPRC 13-16J - Wellbore #1 - Wellbore #1- As Drilled	15,737.8	6,953.0	7,295.2	7,189.0	68.691	CC
UPRC 13-16J - Wellbore #1 - Wellbore #1- As Drilled	15,800.0	6,952.6	7,295.5	7,188.7	68.270	ES
UPRC 13-16J - Wellbore #1 - Wellbore #1- As Drilled	16,197.3	6,950.0	7,309.7	7,198.8	65.889	SF
UPRR 39 Pan Am B1 (PA) - Original Drilling - Original Dr	15,553.4	6,987.0	3,560.9	3,340.9	16.183	CC
UPRR 39 Pan Am B1 (PA) - Original Drilling - Original Dr	15,600.0	6,987.0	3,561.2	3,340.7	16.145	ES
UPRR 39 Pan Am B1 (PA) - Original Drilling - Original Dr	16,000.0	6,987.0	3,588.8	3,364.1	15.973	SF
H Section 14						
Bohlender H14-09 - Original Drilling - Original Drilling - A	16,197.3	7,056.6	2,690.4	2,587.6	26.177	CC, ES, SF
Bohlender H14-15 - Original Drilling - Original Drilling - A	15,367.3	7,009.1	1,135.7	1,033.0	11.061	CC
Bohlender H14-15 - Original Drilling - Original Drilling - A	15,400.0	7,008.5	1,136.1	1,033.0	11.012	ES
Bohlender H14-15 - Original Drilling - Original Drilling - A	15,500.0	7,006.6	1,143.4	1,039.1	10.960	SF
Bohlender H14-16 - Original Drilling - Original Drilling - A	15,982.9	6,966.9	2,006.2	1,897.6	18.480	CC
Bohlender H14-16 - Original Drilling - Original Drilling - A	16,000.0	6,967.2	2,006.2	1,897.4	18.442	ES
Bohlender H14-16 - Original Drilling - Original Drilling - A	16,197.3	6,970.3	2,017.6	1,906.6	18.177	SF
Wilcox H14-03J - Original Drilling - Original Drilling - As D	16,197.3	7,344.9	87.3	-25.3	0.775	Level 1, CC, ES, SF
Wilcox H14-10 - Original Drilling - Original Drilling - As Dr	16,197.3	7,360.2	1,565.7	1,465.4	15.623	CC, ES, SF
Wilcox H14-11 - Original Drilling - Original Drilling - As Dr	16,197.3	7,568.6	977.1	889.9	11.200	CC, ES, SF
Wilcox H14-13 - Original Drilling - Original Drilling - As Dr	15,795.6	7,618.3	953.6	838.3	8.265	CC
Wilcox H14-13 - Original Drilling - Original Drilling - As Dr	15,900.0	7,615.0	959.3	832.3	7.551	ES
Wilcox H14-13 - Original Drilling - Original Drilling - As Dr	16,197.3	7,605.5	1,034.7	875.4	6.492	SF
H Section 19						
Butterball 13-19 - Original Drilling - Original Drilling - As D	11,701.1	6,697.5	8,884.7	8,817.2	131.555	CC
Butterball 13-19 - Original Drilling - Original Drilling - As D	12,300.0	12,300.0	8,904.9	8,811.8	95.698	ES
Butterball 13-19 - Original Drilling - Original Drilling - As D	16,197.3	16,197.3	9,956.7	9,819.9	72.768	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 Drilling - Sandbox	Local Co-ordinate Reference:	Well Hurley H26-756
Project:	Conceptual Wells	TVD Reference:	WELL @ 4852.0ft (Original Well Elev)
Reference Site:	DP 408	MD Reference:	WELL @ 4852.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	Grid
Reference Well:	Hurley H26-756	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Prelim - Rev 2	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 21						
Moser 24-21 - Wellbore #1 - Wellbore #1 - As Drilled	100.0	55.4	8,561.4	8,561.2	10,000.000	CC
Moser 24-21 - Wellbore #1 - Wellbore #1 - As Drilled	500.0	424.8	8,562.4	8,560.6	4,919.721	ES
Moser 24-21 - Wellbore #1 - Wellbore #1 - As Drilled	16,197.3	6,838.3	9,675.8	9,573.3	94.371	SF
H Section 22						
HSR Demeules 09-22 - Original Drilling - Original Drilling	11,642.3	6,928.0	2,849.5	2,781.9	42.124	CC, ES
HSR Demeules 09-22 - Original Drilling - Original Drilling	12,100.0	6,924.6	2,886.1	2,816.0	41.187	SF
HSR Duryea - Wellbore #1 - Wellbore #1 - As Drilled	10,784.3	6,950.4	3,388.0	3,327.8	56.306	CC
HSR Duryea - Wellbore #1 - Wellbore #1 - As Drilled	10,800.0	6,950.9	3,388.0	3,327.7	56.209	ES
HSR Duryea - Wellbore #1 - Wellbore #1 - As Drilled	11,600.0	6,975.4	3,484.7	3,419.9	53.803	SF
Sarchet 16-22 - Wellbore #1 - Wellbore #1 - As Drilled	10,225.6	6,992.3	2,988.6	2,932.9	53.677	CC, ES
Sarchet 16-22 - Wellbore #1 - Wellbore #1 - As Drilled	10,900.0	7,011.5	3,063.7	3,004.5	51.766	SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region Drilling - Sandbox	Local Co-ordinate Reference:	Well Hurley H26-756
Project:	Conceptual Wells	TVD Reference:	WELL @ 4852.0ft (Original Well Elev)
Reference Site:	DP 408	MD Reference:	WELL @ 4852.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	Grid
Reference Well:	Hurley H26-756	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Prelim - Rev 2	Offset TVD Reference:	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
H Section 23						
Eachus 32-23 - Original Drilling - Original Drilling - As Dri	13,016.6	6,972.5	1,171.8	1,091.3	14.561	CC, ES
Eachus 32-23 - Original Drilling - Original Drilling - As Dri	13,200.0	6,970.3	1,186.1	1,103.3	14.331	SF
Eachus 41-23 (PA) - Original Drilling - Original Drilling - A	14,223.5	6,979.0	2,370.4	2,163.2	11.439	CC, ES
Eachus 41-23 (PA) - Original Drilling - Original Drilling - A	14,500.0	6,979.0	2,386.5	2,176.1	11.347	SF
Eachus UPRR 31-23 - Original Drilling - Original Drilling -	14,348.1	6,942.9	1,122.2	972.0	7.473	CC, ES
Eachus UPRR 31-23 - Original Drilling - Original Drilling -	14,400.0	6,943.0	1,123.4	972.4	7.442	SF
Eachus UPRR 42-23 (PA) - Original Drilling - Original Dri	12,904.6	6,989.0	2,390.5	2,195.4	12.258	CC, ES
Eachus UPRR 42-23 (PA) - Original Drilling - Original Dri	13,200.0	6,989.0	2,408.6	2,210.3	12.145	SF
HSR Alberstein 16-23 - Original Drilling - Original Drilling	10,607.9	7,116.0	2,232.2	2,173.3	37.898	CC, ES
HSR Alberstein 16-23 - Original Drilling - Original Drilling	11,200.0	7,148.5	2,309.2	2,244.4	35.632	SF
HSR Ashley 15-23A - Original Drilling - Original Drilling -	10,684.4	7,005.7	905.2	845.8	15.259	CC
HSR Ashley 15-23A - Original Drilling - Original Drilling -	10,700.0	7,006.1	905.3	845.7	15.198	ES
HSR Ashley 15-23A - Original Drilling - Original Drilling -	10,800.0	7,008.5	912.5	851.5	14.966	SF
HSR Benirschke 10-23 - Original Drilling - Original Drillin	11,673.8	7,007.4	1,222.8	1,154.7	17.939	CC
HSR Benirschke 10-23 - Original Drilling - Original Drillin	11,700.0	7,009.1	1,223.1	1,154.6	17.842	ES
HSR Benirschke 10-23 - Original Drilling - Original Drillin	11,900.0	7,022.7	1,243.5	1,172.6	17.539	SF
HSR Eachus 03-23 - Original Drilling - Original Drilling - A	14,375.6	7,153.2	191.6	89.2	1.872	CC, ES, SF
HSR Eachus 04-23 - Original Drilling - Original Drilling - A	14,407.0	7,425.9	1,608.3	1,483.1	12.846	CC
HSR Eachus 04-23 - Original Drilling - Original Drilling - A	14,500.0	7,427.1	1,611.0	1,480.9	12.378	ES
HSR Eachus 04-23 - Original Drilling - Original Drilling - A	15,000.0	7,433.4	1,714.2	1,563.5	11.380	SF
HSR Eachus 05-23 - Original Drilling - Original Drilling - A	12,500.0	7,376.4	1,736.2	1,602.0	12.930	SF
HSR Eachus 05-23 - Original Drilling - Original Drilling - A	13,000.0	7,386.0	1,640.4	1,519.2	13.534	ES
HSR Eachus 05-23 - Original Drilling - Original Drilling - A	13,073.9	7,387.5	1,638.7	1,519.4	13.730	CC
HSR Fruman 06-23 - Original Drilling - Original Drilling - A	13,440.4	7,030.1	576.7	492.0	6.804	CC, ES, SF
HSR Grasshopper 09-23 - Original Drilling - Original Drill	11,419.3	6,900.0	2,128.3	2,062.5	32.330	CC, ES
HSR Grasshopper 09-23 - Original Drilling - Original Drill	11,900.0	6,880.8	2,181.8	2,111.0	30.807	SF
Ritchey 21-23 - Original Drilling - Original Drilling - As Dri	13,760.4	6,945.5	572.8	485.2	6.543	CC, ES
Ritchey 21-23 - Original Drilling - Original Drilling - As Dri	13,800.0	6,945.1	574.2	485.8	6.501	SF
Ritchey 24-23 - Original Drilling - Original Drilling - As Dri	12,313.7	7,052.1	1,597.2	1,520.4	20.795	CC, ES
Ritchey 24-23 - Original Drilling - Original Drilling - As Dri	12,600.0	7,052.8	1,622.7	1,542.2	20.166	SF
Ritchey 31-24 - Original Drilling - Original Drilling - As Dri	13,654.7	7,132.9	2,995.1	2,906.6	33.822	CC
Ritchey 31-24 - Original Drilling - Original Drilling - As Dri	13,700.0	7,133.6	2,995.5	2,906.2	33.570	ES
Ritchey 31-24 - Original Drilling - Original Drilling - As Dri	14,600.0	7,146.0	3,140.7	3,040.1	31.219	SF
UPRC 23-11J - Original Drilling - Original Drilling - As Dri	11,681.6	6,941.8	506.5	438.5	7.446	CC, ES, SF
UPRC 23-12J - Original Drilling - Original Drilling - As Dri	11,687.8	6,936.6	1,806.7	1,738.6	26.527	CC
UPRC 23-12J - Original Drilling - Original Drilling - As Dri	11,700.0	6,936.7	1,806.8	1,738.6	26.504	ES
UPRC 23-12J - Original Drilling - Original Drilling - As Dri	11,800.0	6,937.4	1,810.2	1,741.6	26.390	SF
UPRC H23-13 - Wellbore #1 - Wellbore #1 - As Drilled	10,536.8	6,953.9	1,809.8	1,751.6	31.138	CC, ES
UPRC H23-13 - Wellbore #1 - Wellbore #1 - As Drilled	10,700.0	6,959.1	1,817.1	1,758.3	30.904	SF
UPRC H23-14J - Original Drilling - Original Drilling - As D	10,387.6	6,954.9	102.1	45.1	1.792	CC, ES, SF
UPRC H23-24 - Original Drilling - Original Drilling - As Dr	11,297.9	6,960.1	141.4	76.8	2.188	CC
UPRC H23-24 - Original Drilling - Original Drilling - As Dr	11,300.0	6,960.2	141.4	76.7	2.184	ES, SF
UPRR 53 Pan Am B#1 (PA) - Original Drilling - Original D	10,747.6	6,946.0	1,249.3	1,074.6	7.153	CC, ES, SF
UPRR 53 Pan Am UT V#1 - Original Drilling - Original Dr	13,431.5	7,033.6	1,877.2	1,792.2	22.090	CC, ES
UPRR 53 Pan Am UT V#1 - Original Drilling - Original Dr	13,800.0	7,036.4	1,913.0	1,824.1	21.517	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 Drilling - Sandbox	Local Co-ordinate Reference:	Well Hurley H26-756
Project:	Conceptual Wells	TVD Reference:	WELL @ 4852.0ft (Original Well Elev)
Reference Site:	DP 408	MD Reference:	WELL @ 4852.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	Grid
Reference Well:	Hurley H26-756	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Prelim - Rev 2	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 24						
Gurtler 24-09J - Original Drilling - Original Drilling - As Dr	11,663.2	6,800.0	7,556.7	7,489.2	111.878	CC
Gurtler 24-09J - Original Drilling - Original Drilling - As Dr	11,700.0	6,800.0	7,556.8	7,488.9	111.272	ES
Gurtler 24-09J - Original Drilling - Original Drilling - As Dr	15,700.0	6,800.0	8,567.3	8,467.2	85.589	SF
Gurtler 24-10J - Original Drilling - Original Drilling - As Dr	11,690.9	6,976.6	6,365.2	6,296.9	93.248	CC
Gurtler 24-10J - Original Drilling - Original Drilling - As Dr	11,800.0	6,977.2	6,366.1	6,296.7	91.767	ES
Gurtler 24-10J - Original Drilling - Original Drilling - As Dr	14,800.0	6,993.7	7,083.8	6,989.9	75.426	SF
Gurtler 24-11J - Original Drilling - Original Drilling - As Dr	11,633.6	6,800.0	4,899.7	4,832.3	72.746	CC
Gurtler 24-11J - Original Drilling - Original Drilling - As Dr	11,700.0	6,800.0	4,900.1	4,832.1	72.006	ES
Gurtler 24-11J - Original Drilling - Original Drilling - As Dr	13,700.0	6,800.0	5,317.6	5,232.5	62.540	SF
Gurtler 24-12J - Original Drilling - Original Drilling - As Dr	11,653.1	6,500.0	3,726.1	3,659.3	55.814	CC
Gurtler 24-12J - Original Drilling - Original Drilling - As Dr	11,700.0	6,500.0	3,726.4	3,659.1	55.391	ES
Gurtler 24-12J - Original Drilling - Original Drilling - As Dr	13,000.0	6,500.0	3,962.0	3,883.3	50.300	SF
Gurtler 24-12J - Original Drilling - ST01 - ST01 Original D	11,639.9	6,647.7	3,724.1	3,658.0	56.349	CC
Gurtler 24-12J - Original Drilling - ST01 - ST01 Original D	11,700.0	6,643.1	3,724.6	3,657.8	55.813	ES
Gurtler 24-12J - Original Drilling - ST01 - ST01 Original D	13,000.0	6,574.7	3,962.8	3,884.9	50.811	SF
Gurtler 24-13J - Original Drilling - Original Drilling - As Dr	10,361.8	6,300.0	3,731.3	3,676.4	67.899	CC
Gurtler 24-13J - Original Drilling - Original Drilling - As Dr	10,400.0	6,300.0	3,731.5	3,676.2	67.426	ES
Gurtler 24-13J - Original Drilling - Original Drilling - As Dr	11,900.0	6,245.2	4,035.2	3,967.1	59.245	SF
Gurtler 24-15J - Original Drilling - Original Drilling - As Dr	10,339.8	7,012.2	6,272.7	6,216.2	110.968	CC
Gurtler 24-15J - Original Drilling - Original Drilling - As Dr	10,400.0	7,011.9	6,273.0	6,215.9	109.871	ES
Gurtler 24-15J - Original Drilling - Original Drilling - As Dr	13,800.0	6,995.5	7,163.7	7,079.3	84.903	SF
Gurtler 24-16J - Original Drilling - Original Drilling - As Dr	10,358.7	6,931.4	7,259.3	7,202.8	128.570	CC
Gurtler 24-16J - Original Drilling - Original Drilling - As Dr	10,400.0	6,931.5	7,259.4	7,202.6	127.704	ES
Gurtler 24-16J - Original Drilling - Original Drilling - As Dr	14,600.0	6,936.3	8,407.4	8,317.2	93.189	SF
Gurtler H24-14 - Original Drilling - Original Drilling - As D	10,228.1	6,886.9	5,110.2	5,054.8	92.361	CC
Gurtler H24-14 - Original Drilling - Original Drilling - As D	10,300.0	6,887.5	5,110.7	5,054.7	91.232	ES
Gurtler H24-14 - Original Drilling - Original Drilling - As D	12,800.0	6,911.1	5,720.8	5,644.2	74.698	SF
Gurtler H24-21 (PA) - Original Drilling - Original Drilling -	12,175.1	7,039.6	5,660.1	5,587.2	77.691	CC
Gurtler H24-21 (PA) - Original Drilling - Original Drilling -	12,200.0	7,041.3	5,660.1	5,587.0	77.410	ES
Gurtler H24-21 (PA) - Original Drilling - Original Drilling -	14,600.0	7,206.9	6,155.3	6,061.6	65.655	SF
Gurtler H24-23 - Original Drilling - Original Drilling - As D	11,013.6	6,900.0	6,913.5	6,851.5	111.506	CC
Gurtler H24-23 - Original Drilling - Original Drilling - As D	11,100.0	6,900.0	6,914.1	6,851.2	110.011	ES
Gurtler H24-23 - Original Drilling - Original Drilling - As D	14,800.0	6,891.2	7,882.4	7,789.9	85.237	SF
Gurtler H24-24 - Original Drilling - Original Drilling - As D	11,022.0	6,500.0	5,798.0	5,736.9	94.909	CC
Gurtler H24-24 - Original Drilling - Original Drilling - As D	11,100.0	6,500.0	5,798.5	5,736.6	93.719	ES
Gurtler H24-24 - Original Drilling - Original Drilling - As D	13,900.0	6,458.0	6,472.7	6,387.9	76.360	SF
Gurtler H24-99HZ - Wellbore #1 - Original Drilling	10,991.8	11,118.0	3,432.1	3,367.4	53.010	CC
Gurtler H24-99HZ - Wellbore #1 - Original Drilling	11,100.0	11,118.0	3,433.8	3,365.9	50.552	ES
Gurtler H24-99HZ - Wellbore #1 - Original Drilling	13,500.0	11,118.0	4,250.9	4,112.6	30.729	SF
Gurtler H25-27 - Original Drilling - Original Drilling - As D	9,788.4	6,953.0	6,854.5	6,800.8	127.514	CC
Gurtler H25-27 - Original Drilling - Original Drilling - As D	9,900.0	6,952.3	6,855.4	6,800.7	125.144	ES
Gurtler H25-27 - Original Drilling - Original Drilling - As D	13,900.0	6,929.7	7,993.0	7,905.7	91.547	SF
Gurtler Russell L1 (PA) - Original Drilling - Original Drilling	10,756.1	7,024.5	4,489.5	4,419.8	64.392	CC
Gurtler Russell L1 (PA) - Original Drilling - Original Drilling	10,800.0	7,024.8	4,489.8	4,419.6	63.979	ES
Gurtler Russell L1 (PA) - Original Drilling - Original Drilling	12,600.0	7,036.9	4,853.4	4,767.4	56.413	SF
HSR Brutschy 04-24 - Original Drilling - Original Drilling -	14,162.3	7,152.8	3,792.4	3,700.8	41.394	CC
HSR Brutschy 04-24 - Original Drilling - Original Drilling -	14,200.0	7,154.3	3,792.6	3,700.5	41.201	ES
HSR Brutschy 04-24 - Original Drilling - Original Drilling -	15,200.0	7,195.5	3,931.5	3,830.5	38.904	SF
HSR Epstein 05-24 - Original Drilling - Original Drilling - A	13,338.2	6,997.3	4,315.7	4,232.1	51.658	CC
HSR Epstein 05-24 - Original Drilling - Original Drilling - A	13,400.0	6,999.4	4,316.1	4,231.9	51.240	ES
HSR Epstein 05-24 - Original Drilling - Original Drilling - A	14,000.0	14,000.0	4,366.1	4,251.4	38.069	SF
HSR Hoffman 03-24 - Original Drilling - Original Drilling -	14,206.5	7,006.4	5,105.2	5,007.1	52.081	CC
HSR Hoffman 03-24 - Original Drilling - Original Drilling -	14,300.0	7,004.8	5,106.0	5,007.0	51.561	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 Drilling - Sandbox	Local Co-ordinate Reference:	Well Hurley H26-756
Project:	Conceptual Wells	TVD Reference:	WELL @ 4852.0ft (Original Well Elev)
Reference Site:	DP 408	MD Reference:	WELL @ 4852.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	Grid
Reference Well:	Hurley H26-756	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Prelim - Rev 2	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 24						
HSR Hoffman 03-24 - Original Drilling - Original Drilling -	15,800.0	6,979.4	5,348.0	5,236.2	47.834	SF
HSR Sarchet 02-24 - Original Drilling - Original Drilling - A	14,198.3	6,935.4	6,457.3	6,365.8	70.591	CC
HSR Sarchet 02-24 - Original Drilling - Original Drilling - A	14,300.0	6,935.8	6,458.1	6,365.5	69.775	ES
HSR Sarchet 02-24 - Original Drilling - Original Drilling - A	16,197.3	6,942.8	6,759.6	6,650.3	61.862	SF
HSR Sarchet 06-24 - Original Drilling - Original Drilling - A	12,846.2	6,909.6	5,234.6	5,155.8	66.478	CC
HSR Sarchet 06-24 - Original Drilling - Original Drilling - A	12,900.0	6,910.3	5,234.9	5,155.5	65.996	ES
HSR Sarchet 06-24 - Original Drilling - Original Drilling - A	14,800.0	6,937.2	5,587.2	5,491.5	58.385	SF
HSR Traurig 01-24 - Original Drilling - Original Drilling - A	14,437.9	7,009.2	7,338.2	7,244.3	78.110	CC
HSR Traurig 01-24 - Original Drilling - Original Drilling - A	14,500.0	7,009.8	7,338.5	7,243.9	77.572	ES
HSR Traurig 01-24 - Original Drilling - Original Drilling - A	15,700.0	15,700.0	7,446.0	7,309.4	54.534	SF
Nopens D19-31 - Original Drilling - Original Drilling - As D	13,586.3	6,934.3	8,047.8	7,962.0	93.878	CC
Nopens D19-31 - Original Drilling - Original Drilling - As D	13,700.0	6,936.4	8,048.6	7,961.7	92.612	ES
Nopens D19-31 - Original Drilling - Original Drilling - As D	16,197.3	6,982.5	8,460.5	8,351.3	77.484	SF
Nopens H24-08 - Original Drilling - Original Drilling - As D	12,994.5	6,808.5	7,549.2	7,469.4	94.570	CC
Nopens H24-08 - Original Drilling - Original Drilling - As D	13,100.0	6,811.9	7,549.9	7,469.0	93.296	ES
Nopens H24-08 - Original Drilling - Original Drilling - As D	16,197.3	6,922.0	8,199.9	8,092.7	76.509	SF
Sarchet H24-22 - Original Drilling - Original Drilling - As D	12,673.5	6,957.1	6,710.8	6,633.5	86.855	CC
Sarchet H24-22 - Original Drilling - Original Drilling - As D	12,700.0	6,958.5	6,710.9	6,633.3	86.543	ES
Sarchet H24-22 - Original Drilling - Original Drilling - As D	15,800.0	7,198.5	7,399.3	7,295.7	71.393	SF
Weld County Lumber 01 - Original Drilling - Original Drilling	13,419.0	6,947.0	6,532.4	6,448.2	77.615	CC
Weld County Lumber 01 - Original Drilling - Original Drilling	13,500.0	6,947.6	6,532.9	6,447.9	76.841	ES
Weld County Lumber 01 - Original Drilling - Original Drilling	16,100.0	6,969.7	7,061.1	6,954.4	66.190	SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region Drilling - Sandbox	Local Co-ordinate Reference:	Well Hurley H26-756
Project:	Conceptual Wells	TVD Reference:	WELL @ 4852.0ft (Original Well Elev)
Reference Site:	DP 408	MD Reference:	WELL @ 4852.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	Grid
Reference Well:	Hurley H26-756	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Prelim - Rev 2	Offset TVD Reference:	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
H Section 25						
Dechant 21-25 - Original Drilling - Original Drilling - As D	8,269.7	7,140.3	5,680.2	5,633.2	120.760	CC
Dechant 21-25 - Original Drilling - Original Drilling - As D	8,300.0	7,139.9	5,680.3	5,633.1	120.280	ES
Dechant 21-25 - Original Drilling - Original Drilling - As D	12,100.0	7,100.3	6,850.8	6,771.0	85.902	SF
Dechant D30-33D - Original Drilling - Original Drilling - As	7,076.9	6,724.3	8,184.6	8,143.7	199.842	CC, ES
Dechant D30-33D - Original Drilling - Original Drilling - As	11,600.0	6,789.4	9,978.1	9,910.8	148.228	SF
Dechant D31-30D - Original Drilling - Original Drilling - As	6,951.9	6,779.9	8,303.2	8,260.7	195.408	CC, ES
Dechant D31-30D - Original Drilling - Original Drilling - As	10,700.0	6,935.1	9,949.1	9,889.6	167.124	SF
Dechant H25-64-1HN - Original Drilling - Original Drilling	6,790.8	6,384.3	3,236.3	3,198.7	86.158	CC, ES
Dechant H25-64-1HN - Original Drilling - Original Drilling	6,900.0	6,423.0	3,240.0	3,202.1	85.682	SF
Dechant H25-65HN - Original Drilling - Original Drilling	7,094.7	6,417.0	3,096.5	3,059.4	83.371	CC, ES
Dechant H25-65HN - Original Drilling - Original Drilling	7,200.0	6,455.2	3,098.0	3,060.7	83.148	SF
HSR Cohn 03-25 - Original Drilling - Original Drilling - As	9,005.5	6,892.5	4,774.7	4,728.5	103.369	CC, ES
HSR Cohn 03-25 - Original Drilling - Original Drilling - As	13,800.0	13,800.0	6,766.0	6,665.3	67.200	SF
HSR Crowe 06-25 - Original Drilling - Original Drilling - A	7,655.0	7,018.6	4,821.9	4,780.7	116.926	CC, ES
HSR Crowe 06-25 - Original Drilling - Original Drilling - A	10,900.0	6,948.7	5,811.9	5,751.8	96.689	SF
HSR Dechant 04-25 - Original Drilling - Original Drilling -	9,090.6	7,401.7	3,706.4	3,636.5	53.049	CC
HSR Dechant 04-25 - Original Drilling - Original Drilling -	9,100.0	7,401.7	3,706.4	3,636.5	53.004	ES
HSR Dechant 04-25 - Original Drilling - Original Drilling -	10,000.0	7,403.3	3,816.3	3,741.1	50.767	SF
HSR Dechant 05-25 - Original Drilling - Original Drilling -	7,570.0	7,054.9	3,814.3	3,773.0	92.477	CC, ES
HSR Dechant 05-25 - Original Drilling - Original Drilling -	10,000.0	10,000.0	4,522.2	4,457.9	70.231	SF
KY Blue D30-32 - Original Drilling - Original Drilling - As D	7,343.8	6,892.0	7,994.3	7,953.8	197.421	CC
KY Blue D30-32 - Original Drilling - Original Drilling - As D	7,350.0	6,893.7	7,994.3	7,953.8	197.363	ES
KY Blue D30-32 - Original Drilling - Original Drilling - As D	12,900.0	6,928.0	9,971.8	9,897.8	134.776	SF
KY Blue H25-04J - Original Drilling - Original Drilling - As	7,036.7	6,792.5	7,369.8	7,341.8	263.664	CC, ES
KY Blue H25-04J - Original Drilling - Original Drilling - As	12,400.0	6,940.0	9,987.6	9,932.2	180.281	SF
KY Blue H25-09 - Original Drilling - Original Drilling - As D	7,220.7	6,828.8	7,513.6	7,473.5	187.460	CC, ES
KY Blue H25-09 - Original Drilling - Original Drilling - As D	13,000.0	6,904.9	9,952.4	9,879.7	137.052	SF
KY Blue H25-10 - Original Drilling - Original Drilling - As D	7,237.1	6,956.6	6,066.7	6,026.2	149.705	CC, ES
KY Blue H25-10 - Original Drilling - Original Drilling - As D	11,600.0	7,008.9	7,833.3	7,769.5	122.763	SF
KY Blue H25-11 - Original Drilling - Original Drilling - As D	7,161.8	6,963.2	4,922.8	4,852.4	69.945	CC, ES
KY Blue H25-11 - Original Drilling - Original Drilling - As D	7,450.0	7,042.8	4,951.8	4,879.8	68.783	SF
KY Blue H25-12 - Original Drilling - Original Drilling - As D	7,064.4	6,767.1	3,485.3	3,445.5	87.695	CC, ES
KY Blue H25-12 - Original Drilling - Original Drilling - As D	7,350.0	6,917.6	3,513.9	3,473.3	86.562	SF
KY Blue H25-14 - Original Drilling - Original Drilling - As D	6,871.3	6,657.7	5,371.9	5,333.1	138.271	CC, ES
KY Blue H25-14 - Original Drilling - Original Drilling - As D	9,400.0	6,861.3	6,632.1	6,583.2	135.595	SF
KY Blue H25-15 - Original Drilling - Original Drilling - As D	6,937.9	6,686.8	6,315.8	6,276.7	161.509	CC, ES
KY Blue H25-15 - Original Drilling - Original Drilling - As D	12,900.0	12,900.0	9,818.8	9,731.8	112.869	SF
KY H25-24 - Original Drilling - Original Drilling - As Drilled	7,034.9	6,820.8	5,762.1	5,722.4	144.975	CC, ES
KY H25-24 - Original Drilling - Original Drilling - As Drilled	10,700.0	6,915.9	7,449.4	7,392.3	130.617	SF
Moore UPRC H25-01 - Original Drilling - Original Drilling	9,098.2	6,905.7	7,634.0	7,587.2	163.172	CC
Moore UPRC H25-01 - Original Drilling - Original Drilling	9,200.0	6,906.0	7,634.7	7,587.2	160.591	ES
Moore UPRC H25-01 - Original Drilling - Original Drilling	14,300.0	6,918.9	9,237.6	9,151.8	107.590	SF
Moore UPRC H25-02 - Original Drilling - Original Drilling	8,992.7	6,909.6	6,248.9	6,202.8	135.499	CC
Moore UPRC H25-02 - Original Drilling - Original Drilling	9,000.0	6,909.6	6,248.9	6,202.7	135.348	ES
Moore UPRC H25-02 - Original Drilling - Original Drilling	13,000.0	6,940.9	7,423.3	7,346.9	97.172	SF
Moser 25-32 - Original Drilling - Original Drilling - As Drill	7,558.4	6,968.6	5,936.1	5,895.1	144.822	CC, ES
Moser 25-32 - Original Drilling - Original Drilling - As Drill	13,000.0	13,000.0	8,052.5	7,959.1	86.236	SF
Moser 25-42 - Original Drilling - Original Drilling - As Drill	7,777.8	6,918.9	7,611.0	7,569.9	185.339	CC, ES
Moser 25-42 - Original Drilling - Original Drilling - As Drill	13,700.0	6,915.2	9,643.5	9,564.0	121.370	SF
UPRR 53 Pan Am T#2 - Original Drilling - Original Drilling	8,311.4	6,800.0	4,531.7	4,489.4	107.224	CC, ES
UPRR 53 Pan Am T#2 - Original Drilling - Original Drilling	11,100.0	6,866.4	5,320.2	5,258.4	86.024	SF
UPRR 53 Pan Am UT T#1 - Original Drilling - Original Dr	8,137.8	6,933.0	6,921.3	6,764.7	44.210	CC, ES
UPRR 53 Pan Am UT T#1 - Original Drilling - Original Dr	10,600.0	6,933.0	7,346.1	7,172.2	42.235	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 Drilling - Sandbox	Local Co-ordinate Reference:	Well Hurley H26-756
Project:	Conceptual Wells	TVD Reference:	WELL @ 4852.0ft (Original Well Elev)
Reference Site:	DP 408	MD Reference:	WELL @ 4852.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	Grid
Reference Well:	Hurley H26-756	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Prelim - Rev 2	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 25						
Von Feldt 1-25B - Original Drilling - Original Drilling - As D	6,856.2	6,563.5	4,317.3	4,278.8	112.039	CC, ES
Von Feldt 1-25B - Original Drilling - Original Drilling - As D	8,300.0	8,300.0	4,911.7	4,863.1	101.241	SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region Drilling - Sandbox	Local Co-ordinate Reference:	Well Hurley H26-756
Project:	Conceptual Wells	TVD Reference:	WELL @ 4852.0ft (Original Well Elev)
Reference Site:	DP 408	MD Reference:	WELL @ 4852.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	Grid
Reference Well:	Hurley H26-756	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Prelim - Rev 2	Offset TVD Reference:	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 26						
Bullard 31-26 - Original Drilling - Original Drilling - As Dril	9,324.6	7,004.0	917.8	869.2	18.900	CC, ES
Bullard 31-26 - Original Drilling - Original Drilling - As Dril	9,500.0	7,012.1	934.3	883.7	18.445	SF
Bullard 32-26 - Original Drilling - Original Drilling - As Dril	7,635.4	6,995.7	1,059.2	1,018.1	25.732	CC, ES
Bullard 32-26 - Original Drilling - Original Drilling - As Dril	7,700.0	6,996.1	1,061.2	1,020.0	25.725	SF
Bullard 41-26 - Original Drilling - Original Drilling - As Dril	8,796.3	7,037.1	1,871.0	1,825.7	41.306	CC
Bullard 41-26 - Original Drilling - Original Drilling - As Dril	8,800.0	7,037.1	1,871.0	1,825.7	41.279	ES
Bullard 41-26 - Original Drilling - Original Drilling - As Dril	9,400.0	7,038.7	1,966.0	1,915.6	39.041	SF
Dechant H25-29D - Original Drilling - Original Drilling - As	110.6	128.6	3,795.0	3,794.6	9,504.052	CC
Dechant H25-29D - Original Drilling - Original Drilling - As	200.0	195.9	3,795.3	3,794.4	4,527.616	ES
Dechant H25-29D - Original Drilling - Original Drilling - As	12,300.0	7,430.2	5,175.1	5,086.6	58.442	SF
Dechant H25-33D - Original Drilling - Original Drilling - As	6,862.2	7,120.1	3,179.7	3,111.8	46.835	CC, ES
Dechant H25-33D - Original Drilling - Original Drilling - As	6,950.0	7,234.6	3,181.8	3,113.6	46.617	SF
Harsh H26-09D - Original Drilling - Original Drilling - As D	7,024.0	6,804.8	2,514.9	2,475.2	63.273	CC, ES
Harsh H26-09D - Original Drilling - Original Drilling - As D	7,200.0	6,909.9	2,527.6	2,487.3	62.767	SF
Harsh H26-10 - Original Drilling - Original Drilling - As Dr	6,958.4	6,801.4	1,235.0	1,195.5	31.227	CC, ES
Harsh H26-10 - Original Drilling - Original Drilling - As Dr	7,050.0	6,865.0	1,239.5	1,199.7	31.111	SF
Harsh H26-15 - Original Drilling - Original Drilling - As Dr	6,661.0	6,554.6	2,045.2	2,006.9	53.406	CC, ES
Harsh H26-15 - Original Drilling - Original Drilling - As Dr	6,850.0	6,716.7	2,072.2	2,032.9	52.724	SF
Harsh H26-16 - Original Drilling - Original Drilling - As Dr	6,722.6	6,555.8	2,837.6	2,799.3	74.197	CC, ES
Harsh H26-16 - Original Drilling - Original Drilling - As Dr	6,950.0	6,754.5	2,868.1	2,828.8	72.888	SF
Harsh H26-23D - Original Drilling - Original Drilling - As D	6,811.4	6,873.2	2,145.4	2,106.0	54.333	CC, ES
Harsh H26-23D - Original Drilling - Original Drilling - As D	6,950.0	6,956.4	2,157.0	2,117.1	54.051	SF
HSR Moser 04-26 - Original Drilling - Original Drilling - As	9,439.0	6,856.8	1,730.5	1,681.9	35.581	CC, ES
HSR Moser 04-26 - Original Drilling - Original Drilling - As	10,500.0	10,500.0	2,027.5	1,964.2	32.007	SF
HSR Moser 06-26 - Original Drilling - Original Drilling - As	7,708.4	6,978.1	83.5	42.3	2.028	CC, ES, SF
HSR Regalia 05-26 - Original Drilling - Original Drilling - A	2,442.5	2,409.1	864.1	850.5	63.505	CC
HSR Regalia 05-26 - Original Drilling - Original Drilling - A	2,600.0	2,560.4	864.7	850.2	59.701	ES
HSR Regalia 05-26 - Original Drilling - Original Drilling - A	8,300.0	6,977.9	1,167.9	1,125.2	27.375	SF
HSR-Moser 03-26A - Original Drilling - Original Drilling - A	9,300.0	6,958.0	49.1	0.7	1.013	Level 2, ES, SF
HSR-Moser 03-26A - Original Drilling - Original Drilling - A	9,305.6	6,958.2	48.8	0.8	1.017	Level 2, CC
John 03-26 - Original Drilling - Original Drilling - As Drille	9,053.0	6,954.4	194.2	148.0	4.197	CC, ES, SF
Lamp H25-31 - Original Drilling - Original Drilling - As Dri	8,386.1	7,061.2	2,863.1	2,819.9	66.251	CC
Lamp H25-31 - Original Drilling - Original Drilling - As Dri	8,400.0	7,061.1	2,863.2	2,819.9	66.137	ES
Lamp H25-31 - Original Drilling - Original Drilling - As Dri	9,700.0	7,053.7	3,150.2	3,097.7	60.005	SF
Lamp H26-01 - Original Drilling - Original Drilling - As Dri	9,182.0	7,087.4	2,500.6	2,449.5	48.952	CC
Lamp H26-01 - Original Drilling - Original Drilling - As Dri	9,200.0	7,087.6	2,500.7	2,449.4	48.818	ES
Lamp H26-01 - Original Drilling - Original Drilling - As Dri	10,000.0	7,092.7	2,631.0	2,573.8	45.997	SF
Lamp H26-08 - Original Drilling - Original Drilling - As Dri	7,853.6	6,900.5	2,393.5	2,352.3	58.052	CC, ES
Lamp H26-08 - Original Drilling - Original Drilling - As Dri	8,800.0	6,854.9	2,573.6	2,527.4	55.757	SF
Lamp H26-22 - Original Drilling - Original Drilling - As Dri	7,249.7	7,119.3	1,673.3	1,626.0	35.385	CC
Lamp H26-22 - Original Drilling - Original Drilling - As Dri	7,250.0	7,119.4	1,673.3	1,626.0	35.384	ES
Lamp H26-22 - Original Drilling - Original Drilling - As Dri	7,400.0	7,162.1	1,685.3	1,637.2	34.989	SF
Moser 05-26 - Original Drilling - Original Drilling - As Drill	2,661.7	2,647.9	887.4	872.5	59.596	CC, ES
Moser 05-26 - Original Drilling - Original Drilling - As Drill	7,638.1	6,983.4	1,714.1	1,672.9	41.603	SF
Moser 41-27 - Original Drilling - Original Drilling - As Drill	931.7	899.8	893.9	889.0	181.457	CC, ES
Moser 41-27 - Original Drilling - Original Drilling - As Drill	9,000.0	7,080.0	2,433.4	2,383.0	48.199	SF
Moser H26-11 - Original Drilling - Original Drilling - As Dr	5,837.6	5,719.6	372.2	337.8	10.825	CC, ES
Moser H26-11 - Original Drilling - Original Drilling - As Dr	6,200.0	6,066.9	385.0	348.3	10.488	SF
Moser H26-12 - Wellbore #1 - Wellbore #1 - As Drilled	2,111.7	2,082.8	1,183.7	1,172.0	101.159	CC
Moser H26-12 - Wellbore #1 - Wellbore #1 - As Drilled	2,200.0	2,164.5	1,183.9	1,171.7	97.167	ES
Moser H26-12 - Wellbore #1 - Wellbore #1 - As Drilled	6,600.0	6,524.4	1,587.2	1,548.3	40.792	SF
Moser H26-13 - Wellbore #1 - Wellbore #1 - As Drilled	5,793.6	5,717.0	2,307.0	2,272.8	67.418	CC
Moser H26-13 - Wellbore #1 - Wellbore #1 - As Drilled	5,900.0	5,805.6	2,307.5	2,272.7	66.162	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 Drilling - Sandbox	Local Co-ordinate Reference:	Well Hurley H26-756
Project:	Conceptual Wells	TVD Reference:	WELL @ 4852.0ft (Original Well Elev)
Reference Site:	DP 408	MD Reference:	WELL @ 4852.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	Grid
Reference Well:	Hurley H26-756	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Prelim - Rev 2	Offset TVD Reference:	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 26						
Moser H26-13 - Wellbore #1 - Wellbore #1 - As Drilled	6,650.0	6,505.3	2,349.3	2,309.7	59.273	SF
Moser H26-14 - Original Drilling - Original Drilling - As Dr	6,565.9	6,465.4	1,954.6	1,915.9	50.451	CC, ES
Moser H26-14 - Original Drilling - Original Drilling - As Dr	6,700.0	6,586.3	1,970.6	1,931.1	49.855	SF
Moser H26-18D - Original Drilling - Original Drilling - As D	8,418.3	7,425.2	452.0	403.7	9.360	CC, ES
Moser H26-18D - Original Drilling - Original Drilling - As D	8,600.0	7,427.5	487.2	430.8	8.649	SF
Moser H26-24 - Original Drilling - Original Drilling - As Dr	6,602.4	6,480.9	971.6	933.2	25.299	CC, ES
Moser H26-24 - Original Drilling - Original Drilling - As Dr	6,700.0	6,560.9	980.6	941.6	25.156	SF
Moser H26-25 - Original Drilling - Original Drilling - As Dr	6,509.2	6,409.2	1,251.7	1,212.8	32.177	CC, ES
Moser H26-25 - Original Drilling - Original Drilling - As Dr	6,600.0	6,494.0	1,258.5	1,219.0	31.903	SF
Moser H26-27D - Original Drilling - Original Drilling - As D	9,649.6	7,149.5	1,753.9	1,699.4	32.186	CC, ES
Moser H26-27D - Original Drilling - Original Drilling - As D	10,000.0	7,148.4	1,788.6	1,731.4	31.267	SF
Moser H26-28D - Original Drilling - Original Drilling - As D	9,800.0	7,591.7	264.1	197.7	3.978	SF
Moser H26-28D - Original Drilling - Original Drilling - As D	9,886.5	7,594.4	249.6	187.5	4.016	CC, ES
Moser H26-29D - Original Drilling - Original Drilling - As D	9,916.2	7,946.8	976.0	909.0	14.562	CC, ES
Moser H26-29D - Original Drilling - Original Drilling - As D	10,400.0	7,993.1	1,088.6	1,003.8	12.836	SF
Moser, Wesley E. G. U. B1 (PA) - Original Drilling - Origin	5,788.1	5,670.9	1,816.8	1,689.0	14.213	CC
Moser, Wesley E. G. U. B1 (PA) - Original Drilling - Origin	6,450.0	6,308.6	1,825.1	1,682.4	12.784	ES
Moser, Wesley E. G. U. B1 (PA) - Original Drilling - Origin	6,650.0	6,501.2	1,854.7	1,707.6	12.606	SF
H Section 27						
HSR Moser 1-27 - Original Drilling - Original Drilling - As	100.0	55.4	2,566.5	2,566.3	10,000.000	CC
HSR Moser 1-27 - Original Drilling - Original Drilling - As	1,000.0	944.2	2,569.2	2,563.9	491.038	ES
HSR Moser 1-27 - Original Drilling - Original Drilling - As	10,000.0	6,936.4	2,886.0	2,834.5	56.008	SF
HSR Moser 16-27 - Original Drilling - Original Drilling - As	3,038.2	3,049.2	3,058.3	3,041.3	179.655	CC
HSR Moser 16-27 - Original Drilling - Original Drilling - As	3,100.0	3,091.2	3,058.6	3,041.3	176.848	ES
HSR Moser 16-27 - Original Drilling - Original Drilling - As	6,750.0	6,615.1	3,322.5	3,282.5	82.981	SF
Moser 09-27X (PA) - Original Drilling - Original Drilling - A	338.2	307.4	2,033.2	2,031.7	1,331.956	CC
Moser 09-27X (PA) - Original Drilling - Original Drilling - A	1,700.0	1,660.8	2,036.3	2,027.0	218.763	ES
Moser 09-27X (PA) - Original Drilling - Original Drilling - A	7,350.0	6,984.3	2,987.9	2,944.8	69.265	SF
Moser 24-27 - Original Drilling - Original Drilling - As Drill	847.8	815.8	2,020.4	2,016.0	455.748	CC
Moser 24-27 - Original Drilling - Original Drilling - As Drill	900.0	856.4	2,020.6	2,015.9	430.566	ES
Moser 24-27 - Original Drilling - Original Drilling - As Drill	7,600.0	6,992.5	3,599.5	3,555.6	82.005	SF
H Section 34						
Moser H34-09 - Wellbore #1 - Wellbore #1 - As Drilled	6,491.2	6,388.9	6,342.6	6,303.8	163.364	CC, ES
Moser H34-09 - Wellbore #1 - Wellbore #1 - As Drilled	6,900.0	6,814.8	6,467.9	6,426.7	157.123	SF
Moser H34-16 - Wellbore #1 - Wellbore #1 - As Drilled	6,501.7	6,388.3	7,483.7	7,444.9	192.796	CC, ES
Moser H34-16 - Wellbore #1 - Wellbore #1 - As Drilled	6,900.0	6,685.6	7,607.8	7,567.2	186.973	SF
Moser H34-31 - Wellbore #1 - Wellbore #1 - As Drilled	0.0	0.0	7,715.6			
Moser H34-31 - Wellbore #1 - Wellbore #1 - As Drilled	2,300.0	2,223.4	7,717.5	7,704.9	611.943	ES
Moser H34-31 - Wellbore #1 - Wellbore #1 - As Drilled	6,900.0	6,900.0	8,372.3	8,331.3	204.153	SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region Drilling - Sandbox	Local Co-ordinate Reference:	Well Hurley H26-756
Project:	Conceptual Wells	TVD Reference:	WELL @ 4852.0ft (Original Well Elev)
Reference Site:	DP 408	MD Reference:	WELL @ 4852.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	Grid
Reference Well:	Hurley H26-756	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Prelim - Rev 2	Offset TVD Reference:	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
H Section 35						
Cannon Farms 01-35C - Original Drilling - Original Drilling	6,604.3	6,541.9	6,918.4	6,879.7	178.989	CC, ES
Cannon Farms 01-35C - Original Drilling - Original Drilling	7,150.0	7,073.6	7,150.3	7,108.5	171.211	SF
Cannon H35-03D - Original Drilling - Original Drilling - As	6,540.8	6,371.2	6,128.8	6,090.3	159.184	CC, ES
Cannon H35-03D - Original Drilling - Original Drilling - As	6,850.0	6,600.0	6,210.7	6,170.7	155.216	SF
Cannon H35-09 - Original Drilling - Original Drilling - As D	6,628.5	6,626.1	6,167.4	6,128.6	158.902	CC, ES
Cannon H35-09 - Original Drilling - Original Drilling - As D	7,300.0	7,110.7	6,498.1	6,450.1	135.390	SF
Cannon H35-10 - Original Drilling - Original Drilling - As D	6,572.0	6,327.0	5,905.9	5,867.9	155.420	CC, ES
Cannon H35-10 - Original Drilling - Original Drilling - As D	7,400.0	7,400.0	6,399.3	6,356.3	148.648	SF
Cannon H35-11 - Original Drilling - Original Drilling - As D	6,562.2	6,497.7	5,701.6	5,662.7	146.530	CC, ES
Cannon H35-11 - Original Drilling - Original Drilling - As D	6,900.0	6,738.1	5,799.7	5,759.2	143.189	SF
Cannon H35-12 - Original Drilling - Original Drilling - As D	6,517.7	6,359.4	5,985.0	5,946.3	154.885	CC, ES
Cannon H35-12 - Original Drilling - Original Drilling - As D	6,900.0	6,725.4	6,102.8	6,062.0	149.803	SF
Cannon H35-13 - Wellbore #1 - Wellbore #1 - As Drilled	6,527.4	6,431.8	7,166.9	7,128.0	184.446	CC, ES
Cannon H35-13 - Wellbore #1 - Wellbore #1 - As Drilled	7,050.0	7,072.0	7,381.0	7,339.0	175.583	SF
Cannon H35-14 - Original Drilling - Original Drilling - As D	6,557.5	6,484.5	7,035.4	6,996.6	181.115	CC, ES
Cannon H35-14 - Original Drilling - Original Drilling - As D	7,300.0	7,016.0	7,451.2	7,402.5	153.193	SF
Cannon H35-15 (PA) - Original Drilling - Original Drilling -	6,578.2	6,444.1	7,148.2	7,003.2	49.296	CC
Cannon H35-15 (PA) - Original Drilling - Original Drilling -	6,600.0	6,465.1	7,148.6	7,003.1	49.137	ES
Cannon H35-15 (PA) - Original Drilling - Original Drilling -	7,050.0	6,845.1	7,329.4	7,175.5	47.602	SF
Cannon H35-20 - Original Drilling - Original Drilling - As D	6,522.9	6,318.2	5,266.3	5,228.0	137.287	CC, ES
Cannon H35-20 - Original Drilling - Original Drilling - As D	6,900.0	6,684.9	5,382.8	5,342.3	133.022	SF
Cannon H35-21 - Original Drilling - Original Drilling - As D	6,563.5	6,364.5	5,317.0	5,278.7	138.910	CC, ES
Cannon H35-21 - Original Drilling - Original Drilling - As D	6,900.0	6,792.1	5,407.1	5,366.5	133.492	SF
Cannon H35-22 - Original Drilling - Original Drilling - As D	6,595.2	6,352.0	5,409.4	5,371.3	141.773	CC
Cannon H35-22 - Original Drilling - Original Drilling - As D	6,600.0	6,357.1	5,409.4	5,371.2	141.661	ES
Cannon H35-22 - Original Drilling - Original Drilling - As D	6,950.0	6,701.6	5,511.2	5,471.1	137.302	SF
Cannon H35-24 - Original Drilling - Original Drilling - As D	6,556.7	6,339.7	6,473.2	6,435.0	169.436	CC, ES
Cannon H35-24 - Original Drilling - Original Drilling - As D	6,950.0	6,655.6	6,603.5	6,563.3	164.442	SF
Cannon X02-27 - Original Drilling - Original Drilling - As D	6,585.5	6,457.0	7,696.6	7,658.1	199.983	CC, ES
Cannon X02-27 - Original Drilling - Original Drilling - As D	7,100.0	7,100.0	7,909.6	7,867.9	189.561	SF
Cannon X02-28 - Original Drilling - Original Drilling - As D	6,562.2	6,432.3	7,326.0	7,287.3	189.753	CC, ES
Cannon X02-28 - Original Drilling - Original Drilling - As D	6,950.0	6,815.2	7,450.6	7,409.8	182.767	SF
Cannon X02-29 - Original Drilling - Original Drilling - As D	6,497.3	5,885.0	7,390.3	7,353.3	199.942	CC
Cannon X02-29 - Original Drilling - Original Drilling - As D	6,500.0	5,886.7	7,390.3	7,353.3	199.871	ES
Cannon X02-29 - Original Drilling - Original Drilling - As D	6,950.0	6,152.4	7,561.5	7,522.7	194.839	SF
Foster 18-35 - Original Drilling - Original Drilling - As Drill	6,507.5	6,316.3	3,669.8	3,631.4	95.419	CC, ES
Foster 18-35 - Original Drilling - Original Drilling - As Drill	6,800.0	6,653.5	3,739.4	3,699.1	92.723	SF
Foster UPRR 31-35 #1 (PA) - Original Drilling - Original D	6,610.8	6,487.6	3,170.7	3,025.3	21.811	CC, ES
Foster UPRR 31-35 #1 (PA) - Original Drilling - Original D	6,850.0	6,707.2	3,217.5	3,067.2	21.404	SF
Foster UPRR 32-35 - Original Drilling - Original Drilling -	6,590.4	6,471.1	4,413.0	4,374.5	114.716	CC, ES
Foster UPRR 32-35 - Original Drilling - Original Drilling -	6,900.0	6,813.0	4,492.7	4,452.4	111.360	SF
Foster UPRR 41-35 - Original Drilling - Original Drilling -	6,661.6	6,501.1	4,014.7	3,976.7	105.677	CC, ES
Foster UPRR 41-35 - Original Drilling - Original Drilling -	7,300.0	6,936.0	4,285.9	4,236.8	87.316	SF
Foster UPRR 42-35 #2 - Original Drilling - Original Drilling	6,647.4	6,600.0	4,901.8	4,863.2	127.099	CC
Foster UPRR 42-35 #2 - Original Drilling - Original Drilling	6,650.0	6,600.0	4,901.8	4,863.2	127.075	ES
Foster UPRR 42-35 #2 - Original Drilling - Original Drilling	6,950.0	6,738.6	4,975.0	4,935.3	125.206	SF
HSR Foster 03-35 - Original Drilling - Original Drilling - A	6,554.9	6,444.0	3,194.9	3,156.1	82.493	CC, ES
HSR Foster 03-35 - Original Drilling - Original Drilling - A	6,800.0	6,800.0	3,243.9	3,203.4	80.036	SF
HSR Foster 04-35 - Wellbore #1 - Wellbore #1 - As Drille	6,474.6	6,355.6	3,369.7	3,331.0	87.128	CC, ES
HSR Foster 04-35 - Wellbore #1 - Wellbore #1 - As Drille	6,750.0	6,600.0	3,425.7	3,385.5	85.235	SF
HSR Foster 05-35 - Wellbore #1 - Wellbore #1 - As Drille	6,473.7	6,071.1	4,705.6	4,668.0	125.328	CC, ES
HSR Foster 05-35 - Wellbore #1 - Wellbore #1 - As Drille	6,850.0	6,597.4	4,818.6	4,778.3	119.627	SF
HSR Foster 06-35 - Original Drilling - Original Drilling - A	6,553.7	6,457.1	4,365.7	4,326.9	112.540	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 Drilling - Sandbox	Local Co-ordinate Reference:	Well Hurley H26-756
Project:	Conceptual Wells	TVD Reference:	WELL @ 4852.0ft (Original Well Elev)
Reference Site:	DP 408	MD Reference:	WELL @ 4852.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	Grid
Reference Well:	Hurley H26-756	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Prelim - Rev 2	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 35						
HSR Foster 06-35 - Original Drilling - Original Drilling - A	6,800.0	6,709.5	4,416.9	4,376.6	109.711	SF
UPRR 53 Pan Am Unit P1 - Original Drilling - Original Dri	6,632.9	6,530.2	4,221.3	4,182.9	110.076	CC, ES
UPRR 53 Pan Am Unit P1 - Original Drilling - Original Dri	6,950.0	6,766.7	4,301.5	4,261.6	107.866	SF
UPRR 53 Pan Am UT P2 - Original Drilling - Original Drill	6,532.6	6,400.0	3,438.2	3,399.5	88.875	CC, ES
UPRR 53 Pan Am UT P2 - Original Drilling - Original Drill	6,750.0	6,547.8	3,480.1	3,440.4	87.566	SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region Drilling - Sandbox	Local Co-ordinate Reference:	Well Hurley H26-756
Project:	Conceptual Wells	TVD Reference:	WELL @ 4852.0ft (Original Well Elev)
Reference Site:	DP 408	MD Reference:	WELL @ 4852.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	Grid
Reference Well:	Hurley H26-756	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Prelim - Rev 2	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 36						
Dechant 07-36 - Original Drilling - Original Drilling - As D	6,726.4	6,469.2	7,655.9	7,617.9	201.994	CC, ES
Dechant 07-36 - Original Drilling - Original Drilling - As D	10,000.0	6,809.3	9,812.3	9,762.1	195.094	SF
Dechant 13N-1HZ - Original Drilling - Original Drilling - A	6,612.5	6,350.0	8,343.5	8,302.3	202.725	CC, ES
Dechant 13N-1HZ - Original Drilling - Original Drilling - A	7,000.0	6,400.0	8,464.8	8,422.6	200.570	SF
Dechant 14C-1HZ - Original Drilling - Original Drilling - A	6,613.3	5,991.6	8,998.4	8,960.6	238.347	CC, ES
Dechant 14C-1HZ - Original Drilling - Original Drilling - A	7,100.0	6,397.0	9,163.1	9,122.8	227.310	SF
Dechant 15-36 - Original Drilling - Original Drilling - As D	6,672.2	6,451.9	9,357.9	9,314.4	214.733	CC
Dechant 15-36 - Original Drilling - Original Drilling - As D	6,700.0	6,478.2	9,358.5	9,314.1	211.101	ES
Dechant 15-36 - Original Drilling - Original Drilling - As D	7,400.0	6,896.4	9,679.9	9,623.3	170.805	SF
Dechant 15C-1HZ - Original Drilling - Original Drilling - A	6,818.3	6,402.7	6,753.0	6,714.6	175.883	CC, ES
Dechant 15C-1HZ - Original Drilling - Original Drilling - A	10,900.0	6,500.0	9,059.0	9,002.8	161.381	SF
Dechant 24-36 - Original Drilling - Original Drilling - As D	6,750.4	6,771.1	8,417.3	8,378.0	214.285	CC, ES
Dechant 24-36 - Original Drilling - Original Drilling - As D	9,300.0	7,090.0	9,969.7	9,919.8	199.939	SF
Dechant 35N-E1HZ - Original Drilling - Original Drilling -	6,622.2	6,171.4	8,844.0	8,806.3	234.869	CC, ES
Dechant 35N-E1HZ - Original Drilling - Original Drilling -	6,900.0	6,200.0	8,903.8	8,865.4	232.038	SF
Dechant 35N-W1HZ - Original Drilling - Original Drilling -	6,621.3	6,300.0	8,567.6	8,529.3	223.592	CC, ES
Dechant 35N-W1HZ - Original Drilling - Original Drilling -	6,900.0	6,300.0	8,630.3	8,591.3	221.707	SF
Dechant 36N-W1HZ - Original Drilling - Original Drilling -	6,601.0	5,781.8	9,119.1	9,081.2	240.696	CC, ES
Dechant 36N-W1HZ - Original Drilling - Original Drilling -	7,250.0	6,273.1	9,394.8	9,353.6	227.811	SF
Dechant 37N-E1HZ - Original Drilling - Original Drilling -						Out of range
Dechant 37N-W1HZ - Original Drilling - Original Drilling -	6,604.6	5,503.1	9,906.8	9,870.3	271.493	CC, ES
Dechant 37N-W1HZ - Original Drilling - Original Drilling -	6,950.0	5,817.3	9,984.1	9,945.6	259.180	SF
Dechant State 16C-1HZ - Original Drilling - Original Drilling	6,881.7	6,526.0	7,855.3	7,816.5	202.407	CC, ES
Dechant State 16C-1HZ - Original Drilling - Original Drilling	11,100.0	6,526.0	9,994.8	9,936.2	170.649	SF
Dechant State 36N-E1HZ - Original Drilling - Original Drilling	6,808.2	6,400.0	6,529.7	6,491.4	170.533	CC, ES
Dechant State 36N-E1HZ - Original Drilling - Original Drilling	10,600.0	6,400.0	8,682.3	8,628.3	160.876	SF
Dechant State 37N-E36HZ - Original Drilling - Original Drilling	6,868.9	6,500.0	7,654.1	7,615.1	196.264	CC, ES
Dechant State 37N-E36HZ - Original Drilling - Original Drilling	11,300.0	6,400.0	9,980.0	9,920.4	167.349	SF
Dechant State 37N-W36HZ - Original Drilling - Original Drilling	6,784.0	6,059.7	7,001.8	6,964.1	185.880	CC, ES
Dechant State 37N-W36HZ - Original Drilling - Original Drilling	11,400.0	6,362.9	9,567.9	9,508.2	160.410	SF
Dechant State 38N-1HZ - Original Drilling - Original Drilling	6,865.1	6,400.0	8,346.2	8,307.8	217.099	CC, ES
Dechant State 38N-1HZ - Original Drilling - Original Drilling	10,300.0	6,400.0	9,959.3	9,905.3	184.656	SF
Dechant State H36-11D - Original Drilling - Original Drilling	6,681.6	6,593.4	7,655.2	7,616.9	199.565	CC, ES
Dechant State H36-11D - Original Drilling - Original Drilling	7,100.0	6,934.4	7,770.4	7,730.1	192.629	SF
Dechant State H36-18D - Original Drilling - Original Drilling	100.0	73.9	6,432.4	6,432.2	10,000.000	CC
Dechant State H36-18D - Original Drilling - Original Drilling	600.0	553.4	6,433.5	6,431.3	2,954.006	ES
Dechant State H36-18D - Original Drilling - Original Drilling	9,500.0	6,938.5	8,369.0	8,316.1	158.138	SF
Dechant State H36-19 - Original Drilling - Original Drilling	6,745.1	6,751.1	5,363.5	5,324.6	137.910	CC
Dechant State H36-19 - Original Drilling - Original Drilling	6,750.0	6,758.7	5,363.5	5,324.6	137.785	ES
Dechant State H36-19 - Original Drilling - Original Drilling	7,150.0	7,081.5	5,462.3	5,421.5	134.040	SF
Dechant State H36-20D - Original Drilling - Original Drilling	6,682.0	6,738.3	6,782.1	6,739.4	158.932	CC, ES
Dechant State H36-20D - Original Drilling - Original Drilling	7,050.0	7,007.4	6,875.4	6,831.3	155.759	SF
Dechant State H36-21D - Original Drilling - Original Drilling	6,703.4	6,626.7	7,577.1	7,535.8	183.325	CC, ES
Dechant State H36-21D - Original Drilling - Original Drilling	7,200.0	6,992.3	7,726.6	7,683.3	178.589	SF
Dechant State H36-24 - Original Drilling - Original Drilling	6,677.5	6,669.3	8,504.0	8,460.7	196.373	CC, ES
Dechant State H36-24 - Original Drilling - Original Drilling	7,250.0	7,207.5	8,711.3	8,665.1	188.729	SF
Dechant State H36-31D - Original Drilling - Original Drilling	6,664.6	6,620.5	4,892.3	4,848.2	111.057	CC, ES
Dechant State H36-31D - Original Drilling - Original Drilling	7,000.0	6,871.6	4,971.2	4,925.8	109.359	SF
Dechant State H36-32D - Original Drilling - Original Drilling	6,647.5	6,611.3	5,914.6	5,876.9	156.717	CC
Dechant State H36-32D - Original Drilling - Original Drilling	6,650.0	6,612.3	5,914.6	5,876.9	156.678	ES
Dechant State H36-32D - Original Drilling - Original Drilling	7,200.0	7,200.0	6,139.5	6,098.7	150.539	SF
Dechant State H36-33 - Original Drilling - Original Drilling	6,629.5	6,693.7	7,017.2	6,970.5	150.270	CC, ES
Dechant State H36-33 - Original Drilling - Original Drilling	7,000.0	7,165.7	7,118.3	7,069.3	145.327	SF

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Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region Drilling - Sandbox	Local Co-ordinate Reference:	Well Hurley H26-756
Project:	Conceptual Wells	TVD Reference:	WELL @ 4852.0ft (Original Well Elev)
Reference Site:	DP 408	MD Reference:	WELL @ 4852.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	Grid
Reference Well:	Hurley H26-756	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Prelim - Rev 2	Offset TVD Reference:	Offset Datum

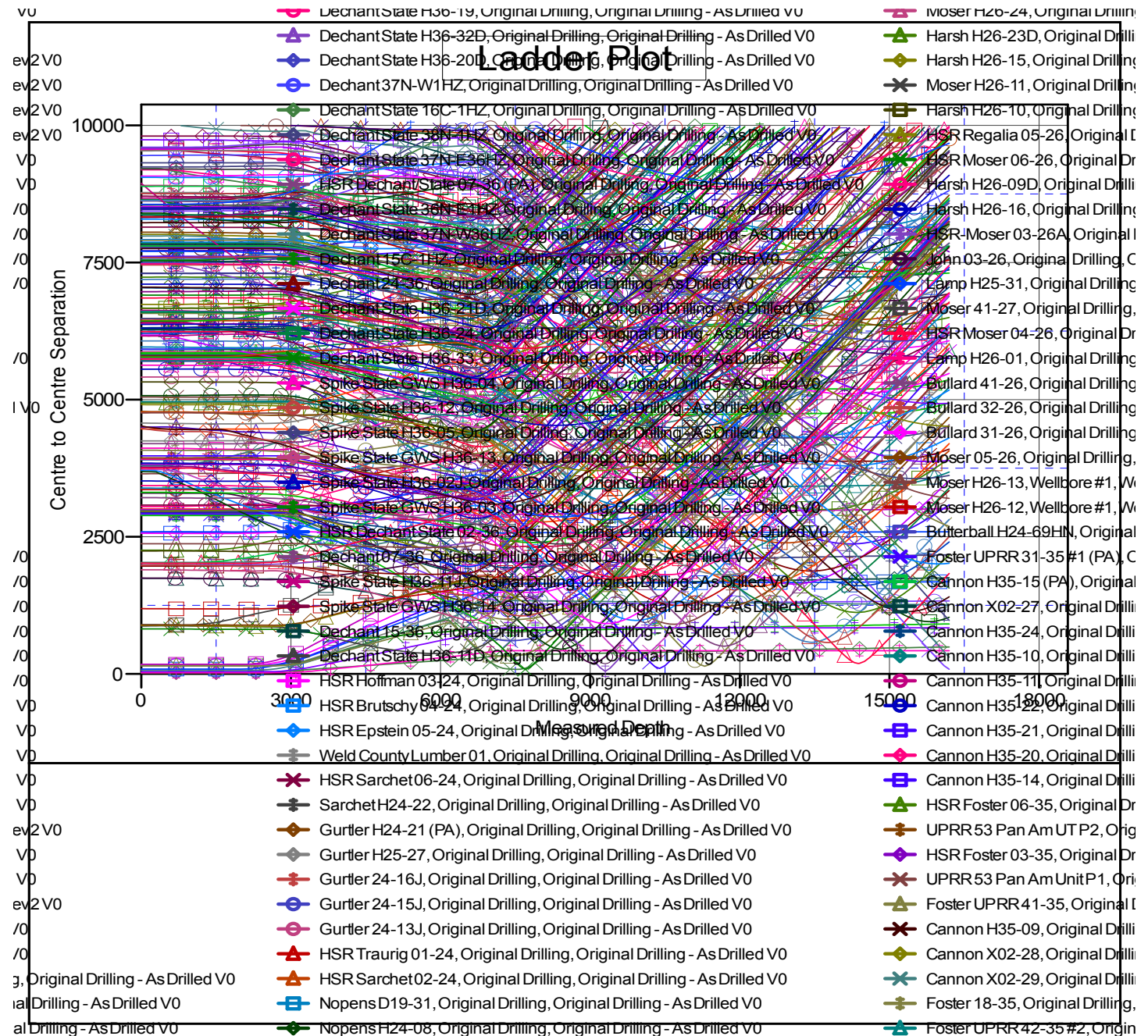
Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
H Section 36						
HSR Dechant State 02-36 - Original Drilling - Original Dri	6,796.8	6,431.5	6,675.2	6,637.3	176.035	CC
HSR Dechant State 02-36 - Original Drilling - Original Dri	6,800.0	6,433.7	6,675.2	6,637.3	175.974	ES
HSR Dechant State 02-36 - Original Drilling - Original Dri	10,500.0	6,715.0	8,819.1	8,765.3	164.178	SF
HSR Dechant/State 07-36 (PA) - Original Drilling - Origin	6,773.4	6,593.1	7,782.0	7,634.5	52.791	CC
HSR Dechant/State 07-36 (PA) - Original Drilling - Origin	6,800.0	6,616.9	7,782.3	7,634.4	52.607	ES
HSR Dechant/State 07-36 (PA) - Original Drilling - Origin	7,250.0	6,910.3	7,895.9	7,741.4	51.096	SF
Spike State GWS H36-03 - Original Drilling - Original Dri	6,763.0	6,463.9	5,941.1	5,903.2	156.538	CC, ES
Spike State GWS H36-03 - Original Drilling - Original Dri	7,200.0	6,741.5	6,035.9	5,996.2	152.222	SF
Spike State GWS H36-04 - Original Drilling - Original Dri	6,743.2	6,672.0	4,638.0	4,593.5	104.262	CC
Spike State GWS H36-04 - Original Drilling - Original Dri	6,750.0	6,678.2	4,638.0	4,593.4	104.070	ES
Spike State GWS H36-04 - Original Drilling - Original Dri	7,250.0	7,017.2	4,788.8	4,739.6	97.290	SF
Spike State GWS H36-13 - Original Drilling - Original Dri	6,696.0	7,444.0	7,987.0	7,942.8	180.507	CC, ES
Spike State GWS H36-13 - Original Drilling - Original Dri	6,900.0	7,444.0	8,022.0	7,977.3	179.313	SF
Spike State GWS H36-14 - Original Drilling - Original Dri	6,682.2	6,856.7	8,891.7	8,852.3	226.102	CC, ES
Spike State GWS H36-14 - Original Drilling - Original Dri	7,250.0	7,241.0	9,112.4	9,070.7	218.302	SF
Spike State H36-02J - Original Drilling - Original Drilling -	6,695.5	6,408.7	6,139.2	6,084.1	111.526	CC
Spike State H36-02J - Original Drilling - Original Drilling -	6,700.0	6,412.9	6,139.2	6,084.0	111.234	ES
Spike State H36-02J - Original Drilling - Original Drilling -	7,350.0	6,818.4	6,384.3	6,315.0	92.161	SF
Spike State H36-05 - Original Drilling - Original Drilling - A	6,665.5	6,449.0	5,583.5	5,545.6	147.294	CC, ES
Spike State H36-05 - Original Drilling - Original Drilling - A	7,100.0	6,996.3	5,708.9	5,668.3	140.626	SF
Spike State H36-11J - Original Drilling - Original Drilling -	6,656.5	6,561.9	7,785.1	7,746.8	203.169	CC, ES
Spike State H36-11J - Original Drilling - Original Drilling -	7,150.0	6,961.3	7,955.5	7,914.9	195.658	SF
Spike State H36-12 - Original Drilling - Original Drilling - A	6,642.5	6,470.7	6,561.2	6,523.2	172.540	CC
Spike State H36-12 - Original Drilling - Original Drilling - A	6,650.0	6,482.5	6,561.3	6,523.2	172.275	ES
Spike State H36-12 - Original Drilling - Original Drilling - A	7,050.0	6,925.4	6,677.2	6,636.8	165.226	SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region Drilling - Sandbox	Local Co-ordinate Reference:	Well Hurley H26-756
Project:	Conceptual Wells	TVD Reference:	WELL @ 4852.0ft (Original Well Elev)
Reference Site:	DP 408	MD Reference:	WELL @ 4852.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	Grid
Reference Well:	Hurley H26-756	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Prelim - Rev 2	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4852.0ft (Original Well Elev)
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000

Coordinates are relative to: Hurley H26-756
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.56°



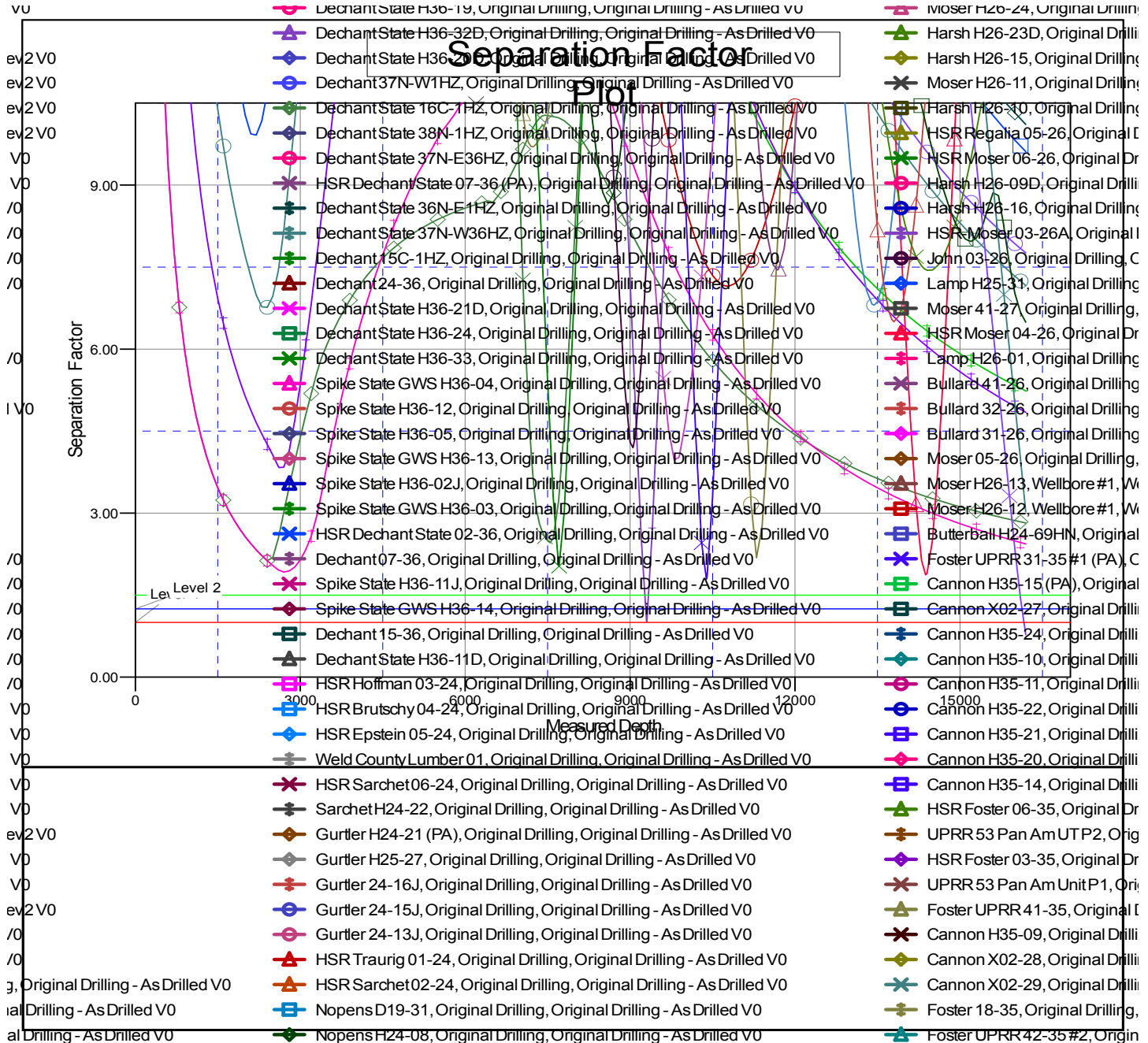
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Noble Energy, Inc.
Anticollision Summary Report

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