

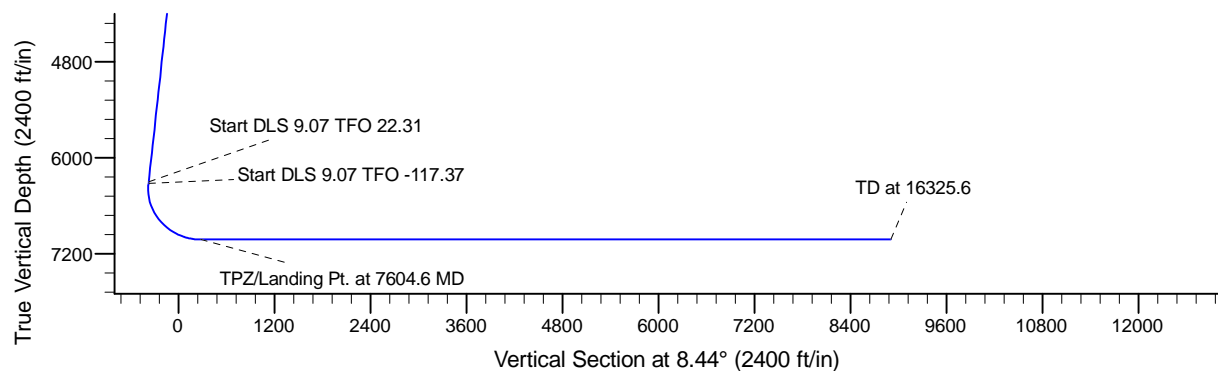
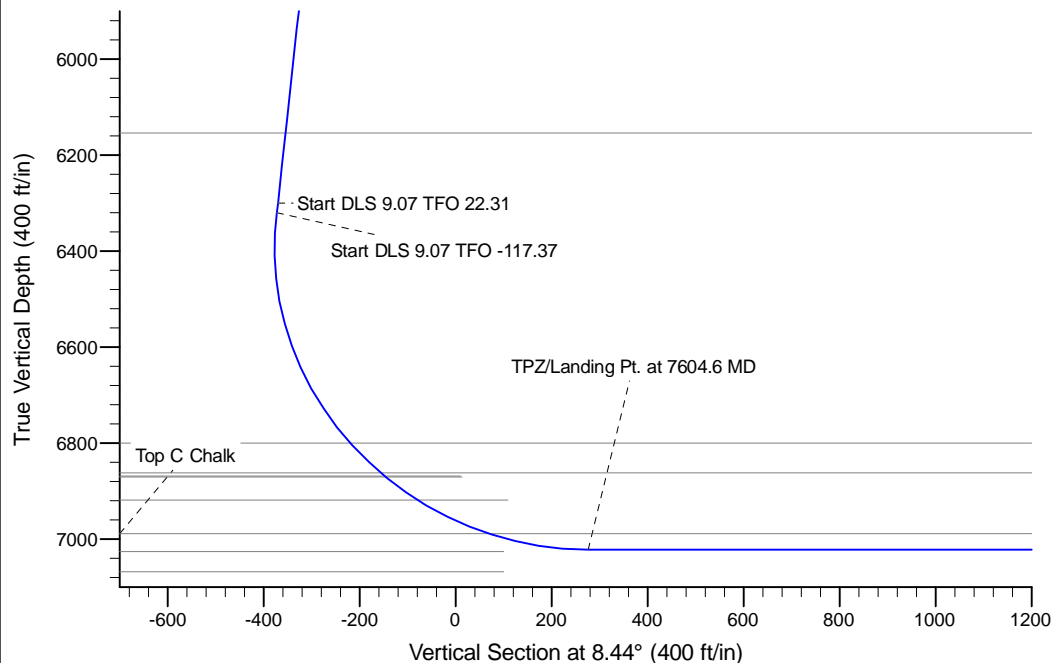
Project: Conceptual Wells
Site: DP 408
Well: Hurley H26-750
Wellbore: Wellbore #1
Design: Prelim - Rev 2

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

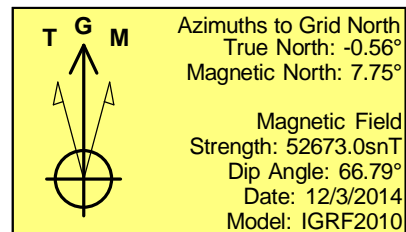
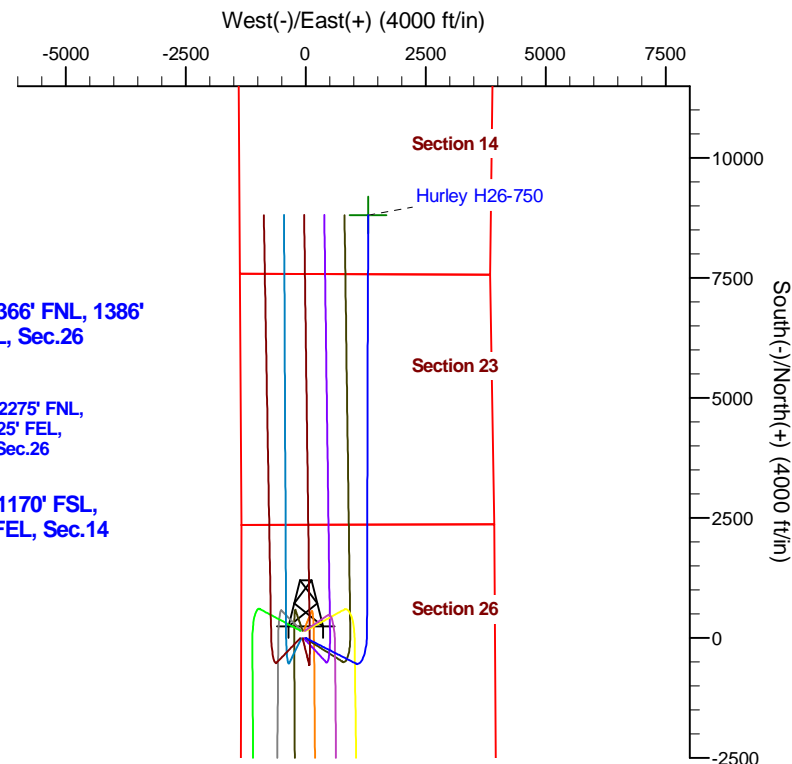
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	2400.0	0.00	0.00	2400.0	0.0	0.0	0.00	0.00	0.0	
3	3337.5	18.75	117.00	3320.9	-69.0	135.5	2.00	117.00	-48.4	
4	6483.6	18.75	117.00	6300.0	-528.1	1036.5	0.00	0.00	-370.3	
5	6505.0	20.56	119.10	6320.2	-531.5	1042.9	9.07	22.31	-372.7	
6	7604.6	90.00	0.16	7022.0	90.0	1275.0	9.07	-117.37	276.2	
7	16325.6	90.00	0.16	7022.0	3811.0	1299.3	0.00	0.00	8906.3	Hurley H26-750



Surface: 2366' FNL, 1386'
FWL, Sec.26

TPZ: 2275' FNL,
2625' FEL,
Sec.26

BHL: 1170' FSL,
2595' FEL, Sec.14



WELL DETAILS: Hurley H26-750

	Ground Level:	4822.0	
0.00.0	Northings	Easting	Latitude
	1315823.87	3241558.81	40.197100
			Longitude
			-104.635250

Plan: Prelim - Rev 2 (Hurley H26-750/Wellbore #1)

Created By: Chad Stich Date: 11:03, October 31 2017

Checked: _____ Date: _____

Reviewed: _____ Date: _____

Approved: _____ Date: _____

Northern Region Drilling - Sandbox

Conceptual Wells

DP 408

Hurley H26-750

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 H26-750
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 H26-750	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 H26-750					
Well Position	+N/-S	-2,360.9 ft	Northing:	1,315,823.87 usft	Latitude:	40.197100
	+E/-W	1,333.7 ft	Easting:	3,241,558.81 usft	Longitude:	-104.635250
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	52,672.95200466

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	8.44

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	
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.00	0.00	0.00	0.00	
3,337.5	18.75	117.00	3,320.9	-69.0	135.5	2.00	2.00	0.00	117.00	
6,483.6	18.75	117.00	6,300.0	-528.1	1,036.5	0.00	0.00	0.00	0.00	
6,505.0	20.56	119.10	6,320.2	-531.5	1,042.9	9.07	8.46	9.81	22.31	
7,604.6	90.00	0.16	7,022.0	90.0	1,275.0	9.07	6.32	-10.82	-117.37	
16,325.6	90.00	0.16	7,022.0	8,811.0	1,299.3	0.00	0.00	0.00	0.00	Hurley H26-750

Noble Energy, Inc.

Planning Report

Database:	EDMP	Local Co-ordinate Reference:	Well Hurley H26-750
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 H26-750	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	2.00	117.00	2,500.0	-0.8	1.6	-0.6	2.00	2.00	0.00
2,600.0	4.00	117.00	2,599.8	-3.2	6.2	-2.2	2.00	2.00	0.00
2,700.0	6.00	117.00	2,699.5	-7.1	14.0	-5.0	2.00	2.00	0.00
2,800.0	8.00	117.00	2,798.7	-12.7	24.8	-8.9	2.00	2.00	0.00
2,900.0	10.00	117.00	2,897.5	-19.8	38.8	-13.9	2.00	2.00	0.00
3,000.0	12.00	117.00	2,995.6	-28.4	55.8	-19.9	2.00	2.00	0.00
3,100.0	14.00	117.00	3,093.1	-38.6	75.8	-27.1	2.00	2.00	0.00
3,200.0	16.00	117.00	3,189.6	-50.4	98.9	-35.3	2.00	2.00	0.00
3,300.0	18.00	117.00	3,285.3	-63.7	124.9	-44.6	2.00	2.00	0.00
3,337.5	18.75	117.00	3,320.9	-69.0	135.5	-48.4	2.00	2.00	0.00
3,400.0	18.75	117.00	3,380.0	-78.1	153.4	-54.8	0.00	0.00	0.00
3,500.0	18.75	117.00	3,474.7	-92.7	182.0	-65.0	0.00	0.00	0.00
3,600.0	18.75	117.00	3,569.4	-107.3	210.6	-75.2	0.00	0.00	0.00
3,700.0	18.75	117.00	3,664.1	-121.9	239.3	-85.5	0.00	0.00	0.00
3,800.0	18.75	117.00	3,758.8	-136.5	267.9	-95.7	0.00	0.00	0.00
3,900.0	18.75	117.00	3,853.5	-151.1	296.6	-105.9	0.00	0.00	0.00
4,000.0	18.75	117.00	3,948.2	-165.7	325.2	-116.2	0.00	0.00	0.00
4,100.0	18.75	117.00	4,042.9	-180.3	353.8	-126.4	0.00	0.00	0.00
4,200.0	18.75	117.00	4,137.6	-194.9	382.5	-136.6	0.00	0.00	0.00
4,300.0	18.75	117.00	4,232.3	-209.5	411.1	-146.9	0.00	0.00	0.00
4,400.0	18.75	117.00	4,327.0	-224.1	439.8	-157.1	0.00	0.00	0.00
4,500.0	18.75	117.00	4,421.7	-238.7	468.4	-167.3	0.00	0.00	0.00
4,600.0	18.75	117.00	4,516.4	-253.3	497.0	-177.6	0.00	0.00	0.00
4,700.0	18.75	117.00	4,611.0	-267.9	525.7	-187.8	0.00	0.00	0.00
4,800.0	18.75	117.00	4,705.7	-282.4	554.3	-198.0	0.00	0.00	0.00
4,900.0	18.75	117.00	4,800.4	-297.0	583.0	-208.2	0.00	0.00	0.00
5,000.0	18.75	117.00	4,895.1	-311.6	611.6	-218.5	0.00	0.00	0.00
5,100.0	18.75	117.00	4,989.8	-326.2	640.3	-228.7	0.00	0.00	0.00
5,200.0	18.75	117.00	5,084.5	-340.8	668.9	-238.9	0.00	0.00	0.00

Noble Energy, Inc.

Planning Report

Database:	EDMP	Local Co-ordinate Reference:	Well Hurley H26-750
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 H26-750	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	18.75	117.00	5,179.2	-355.4	697.5	-249.2	0.00	0.00	0.00
5,400.0	18.75	117.00	5,273.9	-370.0	726.2	-259.4	0.00	0.00	0.00
5,500.0	18.75	117.00	5,368.6	-384.6	754.8	-269.6	0.00	0.00	0.00
5,600.0	18.75	117.00	5,463.3	-399.2	783.5	-279.9	0.00	0.00	0.00
5,700.0	18.75	117.00	5,558.0	-413.8	812.1	-290.1	0.00	0.00	0.00
5,800.0	18.75	117.00	5,652.7	-428.4	840.7	-300.3	0.00	0.00	0.00
5,900.0	18.75	117.00	5,747.4	-443.0	869.4	-310.6	0.00	0.00	0.00
6,000.0	18.75	117.00	5,842.1	-457.6	898.0	-320.8	0.00	0.00	0.00
6,100.0	18.75	117.00	5,936.8	-472.2	926.7	-331.0	0.00	0.00	0.00
6,200.0	18.75	117.00	6,031.4	-486.7	955.3	-341.2	0.00	0.00	0.00
6,300.0	18.75	117.00	6,126.1	-501.3	983.9	-351.5	0.00	0.00	0.00
6,400.0	18.75	117.00	6,220.8	-515.9	1,012.6	-361.7	0.00	0.00	0.00
6,483.6	18.75	117.00	6,300.0	-528.1	1,036.5	-370.3	0.00	0.00	0.00
6,500.0	20.13	118.64	6,315.5	-530.7	1,041.3	-372.1	9.07	8.44	10.01
6,505.0	20.56	119.10	6,320.2	-531.5	1,042.9	-372.7	9.07	8.50	9.16
6,600.0	18.21	93.90	6,409.9	-540.7	1,072.3	-377.4	9.07	-2.48	-26.54
6,700.0	19.77	66.16	6,504.7	-534.9	1,103.4	-367.1	9.07	1.56	-27.74
6,800.0	24.68	45.76	6,597.3	-513.4	1,133.9	-341.4	9.07	4.91	-20.39
6,900.0	31.40	32.69	6,685.6	-476.9	1,163.0	-301.0	9.07	6.73	-13.07
7,000.0	39.01	24.07	6,767.3	-426.1	1,190.0	-246.8	9.07	7.61	-8.63
7,100.0	47.07	17.94	6,840.4	-362.4	1,214.1	-180.3	9.07	8.06	-6.13
7,200.0	55.39	13.26	6,903.0	-287.4	1,234.9	-103.0	9.07	8.31	-4.68
7,300.0	63.84	9.44	6,953.5	-202.9	1,251.7	-16.9	9.07	8.46	-3.82
7,400.0	72.39	6.14	6,990.8	-111.0	1,264.2	75.8	9.07	8.55	-3.30
7,500.0	80.98	3.15	7,013.8	-14.1	1,272.0	172.8	9.07	8.60	-3.00
7,600.0	89.60	0.29	7,022.0	85.4	1,275.0	271.6	9.07	8.62	-2.86
7,604.6	90.00	0.16	7,022.0	90.0	1,275.0	276.2	9.07	8.62	-2.83
7,700.0	90.00	0.16	7,022.0	185.4	1,275.3	370.6	0.00	0.00	0.00
7,800.0	90.00	0.16	7,022.0	285.4	1,275.5	469.5	0.00	0.00	0.00
7,900.0	90.00	0.16	7,022.0	385.4	1,275.8	568.5	0.00	0.00	0.00
8,000.0	90.00	0.16	7,022.0	485.4	1,276.1	667.5	0.00	0.00	0.00
8,100.0	90.00	0.16	7,022.0	585.4	1,276.4	766.4	0.00	0.00	0.00
8,200.0	90.00	0.16	7,022.0	685.4	1,276.7	865.4	0.00	0.00	0.00
8,300.0	90.00	0.16	7,022.0	785.4	1,276.9	964.3	0.00	0.00	0.00
8,400.0	90.00	0.16	7,022.0	885.4	1,277.2	1,063.3	0.00	0.00	0.00
8,500.0	90.00	0.16	7,022.0	985.4	1,277.5	1,162.2	0.00	0.00	0.00
8,600.0	90.00	0.16	7,022.0	1,085.4	1,277.8	1,261.2	0.00	0.00	0.00
8,700.0	90.00	0.16	7,022.0	1,185.4	1,278.1	1,360.2	0.00	0.00	0.00
8,800.0	90.00	0.16	7,022.0	1,285.4	1,278.3	1,459.1	0.00	0.00	0.00
8,900.0	90.00	0.16	7,022.0	1,385.4	1,278.6	1,558.1	0.00	0.00	0.00
9,000.0	90.00	0.16	7,022.0	1,485.4	1,278.9	1,657.0	0.00	0.00	0.00
9,100.0	90.00	0.16	7,022.0	1,585.4	1,279.2	1,756.0	0.00	0.00	0.00
9,200.0	90.00	0.16	7,022.0	1,685.4	1,279.5	1,854.9	0.00	0.00	0.00
9,300.0	90.00	0.16	7,022.0	1,785.4	1,279.7	1,953.9	0.00	0.00	0.00
9,400.0	90.00	0.16	7,022.0	1,885.4	1,280.0	2,052.9	0.00	0.00	0.00
9,500.0	90.00	0.16	7,022.0	1,985.4	1,280.3	2,151.8	0.00	0.00	0.00
9,600.0	90.00	0.16	7,022.0	2,085.4	1,280.6	2,250.8	0.00	0.00	0.00
9,700.0	90.00	0.16	7,022.0	2,185.4	1,280.9	2,349.7	0.00	0.00	0.00
9,800.0	90.00	0.16	7,022.0	2,285.4	1,281.1	2,448.7	0.00	0.00	0.00
9,900.0	90.00	0.16	7,022.0	2,385.4	1,281.4	2,547.6	0.00	0.00	0.00
10,000.0	90.00	0.16	7,022.0	2,485.4	1,281.7	2,646.6	0.00	0.00	0.00
10,100.0	90.00	0.16	7,022.0	2,585.4	1,282.0	2,745.6	0.00	0.00	0.00
10,200.0	90.00	0.16	7,022.0	2,685.4	1,282.2	2,844.5	0.00	0.00	0.00
10,300.0	90.00	0.16	7,022.0	2,785.4	1,282.5	2,943.5	0.00	0.00	0.00

Noble Energy, Inc.

Planning Report

Database:	EDMP	Local Co-ordinate Reference:	Well Hurley H26-750
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 H26-750	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	0.16	7,022.0	2,885.4	1,282.8	3,042.4	0.00	0.00	0.00
10,500.0	90.00	0.16	7,022.0	2,985.4	1,283.1	3,141.4	0.00	0.00	0.00
10,600.0	90.00	0.16	7,022.0	3,085.4	1,283.4	3,240.3	0.00	0.00	0.00
10,700.0	90.00	0.16	7,022.0	3,185.4	1,283.6	3,339.3	0.00	0.00	0.00
10,800.0	90.00	0.16	7,022.0	3,285.4	1,283.9	3,438.3	0.00	0.00	0.00
10,900.0	90.00	0.16	7,022.0	3,385.4	1,284.2	3,537.2	0.00	0.00	0.00
11,000.0	90.00	0.16	7,022.0	3,485.4	1,284.5	3,636.2	0.00	0.00	0.00
11,100.0	90.00	0.16	7,022.0	3,585.4	1,284.8	3,735.1	0.00	0.00	0.00
11,200.0	90.00	0.16	7,022.0	3,685.4	1,285.0	3,834.1	0.00	0.00	0.00
11,300.0	90.00	0.16	7,022.0	3,785.4	1,285.3	3,933.0	0.00	0.00	0.00
11,400.0	90.00	0.16	7,022.0	3,885.4	1,285.6	4,032.0	0.00	0.00	0.00
11,500.0	90.00	0.16	7,022.0	3,985.4	1,285.9	4,131.0	0.00	0.00	0.00
11,600.0	90.00	0.16	7,022.0	4,085.4	1,286.2	4,229.9	0.00	0.00	0.00
11,700.0	90.00	0.16	7,022.0	4,185.4	1,286.4	4,328.9	0.00	0.00	0.00
11,800.0	90.00	0.16	7,022.0	4,285.4	1,286.7	4,427.8	0.00	0.00	0.00
11,900.0	90.00	0.16	7,022.0	4,385.4	1,287.0	4,526.8	0.00	0.00	0.00
12,000.0	90.00	0.16	7,022.0	4,485.4	1,287.3	4,625.8	0.00	0.00	0.00
12,100.0	90.00	0.16	7,022.0	4,585.4	1,287.6	4,724.7	0.00	0.00	0.00
12,200.0	90.00	0.16	7,022.0	4,685.4	1,287.8	4,823.7	0.00	0.00	0.00
12,300.0	90.00	0.16	7,022.0	4,785.4	1,288.1	4,922.6	0.00	0.00	0.00
12,400.0	90.00	0.16	7,022.0	4,885.4	1,288.4	5,021.6	0.00	0.00	0.00
12,500.0	90.00	0.16	7,022.0	4,985.4	1,288.7	5,120.5	0.00	0.00	0.00
12,600.0	90.00	0.16	7,022.0	5,085.4	1,288.9	5,219.5	0.00	0.00	0.00
12,700.0	90.00	0.16	7,022.0	5,185.4	1,289.2	5,318.5	0.00	0.00	0.00
12,800.0	90.00	0.16	7,022.0	5,285.4	1,289.5	5,417.4	0.00	0.00	0.00
12,900.0	90.00	0.16	7,022.0	5,385.4	1,289.8	5,516.4	0.00	0.00	0.00
13,000.0	90.00	0.16	7,022.0	5,485.4	1,290.1	5,615.3	0.00	0.00	0.00
13,100.0	90.00	0.16	7,022.0	5,585.4	1,290.3	5,714.3	0.00	0.00	0.00
13,200.0	90.00	0.16	7,022.0	5,685.4	1,290.6	5,813.2	0.00	0.00	0.00
13,300.0	90.00	0.16	7,022.0	5,785.4	1,290.9	5,912.2	0.00	0.00	0.00
13,400.0	90.00	0.16	7,022.0	5,885.4	1,291.2	6,011.2	0.00	0.00	0.00
13,500.0	90.00	0.16	7,022.0	5,985.4	1,291.5	6,110.1	0.00	0.00	0.00
13,600.0	90.00	0.16	7,022.0	6,085.4	1,291.7	6,209.1	0.00	0.00	0.00
13,700.0	90.00	0.16	7,022.0	6,185.4	1,292.0	6,308.0	0.00	0.00	0.00
13,800.0	90.00	0.16	7,022.0	6,285.4	1,292.3	6,407.0	0.00	0.00	0.00
13,900.0	90.00	0.16	7,022.0	6,385.4	1,292.6	6,505.9	0.00	0.00	0.00
14,000.0	90.00	0.16	7,022.0	6,485.4	1,292.9	6,604.9	0.00	0.00	0.00
14,100.0	90.00	0.16	7,022.0	6,585.4	1,293.1	6,703.9	0.00	0.00	0.00
14,200.0	90.00	0.16	7,022.0	6,685.4	1,293.4	6,802.8	0.00	0.00	0.00
14,300.0	90.00	0.16	7,022.0	6,785.4	1,293.7	6,901.8	0.00	0.00	0.00
14,400.0	90.00	0.16	7,022.0	6,885.4	1,294.0	7,000.7	0.00	0.00	0.00
14,500.0	90.00	0.16	7,022.0	6,985.4	1,294.3	7,099.7	0.00	0.00	0.00
14,600.0	90.00	0.16	7,022.0	7,085.4	1,294.5	7,198.6	0.00	0.00	0.00
14,700.0	90.00	0.16	7,022.0	7,185.4	1,294.8	7,297.6	0.00	0.00	0.00
14,800.0	90.00	0.16	7,022.0	7,285.4	1,295.1	7,396.6	0.00	0.00	0.00
14,900.0	90.00	0.16	7,022.0	7,385.4	1,295.4	7,495.5	0.00	0.00	0.00
15,000.0	90.00	0.16	7,022.0	7,485.4	1,295.7	7,594.5	0.00	0.00	0.00
15,100.0	90.00	0.16	7,022.0	7,585.4	1,295.9	7,693.4	0.00	0.00	0.00
15,200.0	90.00	0.16	7,022.0	7,685.4	1,296.2	7,792.4	0.00	0.00	0.00
15,300.0	90.00	0.16	7,022.0	7,785.4	1,296.5	7,891.3	0.00	0.00	0.00
15,400.0	90.00	0.16	7,022.0	7,885.4	1,296.8	7,990.3	0.00	0.00	0.00
15,500.0	90.00	0.16	7,022.0	7,985.4	1,297.0	8,089.3	0.00	0.00	0.00
15,600.0	90.00	0.16	7,022.0	8,085.4	1,297.3	8,188.2	0.00	0.00	0.00
15,700.0	90.00	0.16	7,022.0	8,185.4	1,297.6	8,287.2	0.00	0.00	0.00

Noble Energy, Inc.

Planning Report

Database:	EDMP	Local Co-ordinate Reference:	Well Hurley H26-750
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 H26-750	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	0.16	7,022.0	8,285.4	1,297.9	8,386.1	0.00	0.00	0.00	
15,900.0	90.00	0.16	7,022.0	8,385.4	1,298.2	8,485.1	0.00	0.00	0.00	
16,000.0	90.00	0.16	7,022.0	8,485.4	1,298.4	8,584.0	0.00	0.00	0.00	
16,100.0	90.00	0.16	7,022.0	8,585.4	1,298.7	8,683.0	0.00	0.00	0.00	
16,200.0	90.00	0.16	7,022.0	8,685.4	1,299.0	8,782.0	0.00	0.00	0.00	
16,300.0	90.00	0.16	7,022.0	8,785.4	1,299.3	8,880.9	0.00	0.00	0.00	
16,325.6	90.00	0.16	7,022.0	8,811.0	1,299.3	8,906.3	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 H26-750	0.00	0.00	7,022.0	8,811.0	1,299.3	1,324,634.46	3,242,858.01	40.221250	-104.630290	
- plan hits target center										
- Point										

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
603.0	603.0	Pierre				
755.0	755.0	Upper Pierre Aquifer Top				
1,643.0	1,643.0	Upper Pierre Aquifer Base				
3,959.7	3,910.0	Parkman				
4,583.8	4,501.0	Sussex				
5,304.0	5,183.0	Shannon				
6,329.4	6,154.0	Teepee Buttes				
7,043.1	6,800.0	Sharon Springs				
7,132.6	6,862.0	Top A Chalk				
7,143.5	6,869.0	Top A Marl				
7,146.7	6,871.0	Top B Chalk				
7,229.1	6,919.0	Top B Marl				
7,394.2	6,989.0	Top C Chalk				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
2,400.0	2,400.0	0.0	0.0	KOP - Start Build 2.00	
6,483.6	6,300.0	-528.1	1,036.5	Start DLS 9.07 TFO 22.31	
6,505.0	6,320.1	-531.5	1,042.9	Start DLS 9.07 TFO -117.37	
7,604.6	7,022.0	90.0	1,275.0	TPZ/Landing Pt. at 7604.6 MD	
16,325.6	7,022.0	8,811.0	1,299.4	TD at 16325.6	

Northern Region Drilling - Sandbox

Conceptual Wells

DP 408

Hurley H26-750

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 H26-750
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 H26-750	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	16,325.6	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
Offset Well - Wellbore - Design						
D Section 19						
Butterball H24-69HN - Original Drilling - Original Drilling -	15,268.5	11,992.0	5,595.7	5,488.6	52.237	CC
Butterball H24-69HN - Original Drilling - Original Drilling -	15,300.0	11,992.0	5,595.8	5,488.3	52.073	ES
Butterball H24-69HN - Original Drilling - Original Drilling -	16,325.6	11,992.0	5,694.8	5,568.9	45.244	SF
DP 408						
Emmy H25-711 - Wellbore #1 - Prelim - Rev 2	5,473.7	2,935.6	7,563.8	7,544.9	400.653	CC
Emmy H25-711 - Wellbore #1 - Prelim - Rev 2	15,200.0	17,530.1	7,654.5	7,474.6	42.547	ES
Emmy H25-711 - Wellbore #1 - Prelim - Rev 2	16,325.6	17,530.1	7,748.7	7,557.6	40.552	SF
Emmy State H25-718 - Wellbore #1 - Prelim - Rev 2	15,113.3	17,376.1	7,215.4	7,036.4	40.307	CC
Emmy State H25-718 - Wellbore #1 - Prelim - Rev 2	15,200.0	17,376.1	7,216.0	7,036.0	40.088	ES
Emmy State H25-718 - Wellbore #1 - Prelim - Rev 2	16,325.6	17,376.1	7,316.7	7,126.1	38.389	SF
Emmy State H25-724 - Wellbore #1 - Prelim - Rev 2	7,604.6	9,957.3	6,773.7	6,726.0	141.943	CC
Emmy State H25-724 - Wellbore #1 - Prelim - Rev 2	15,200.0	17,460.5	6,774.8	6,596.9	38.085	ES
Emmy State H25-724 - Wellbore #1 - Prelim - Rev 2	16,325.6	17,460.5	6,882.9	6,694.8	36.590	SF
Emmy State H25-731 - Wellbore #1 - Prelim - Rev 2	15,127.5	17,379.3	6,335.5	6,157.9	35.677	CC
Emmy State H25-731 - Wellbore #1 - Prelim - Rev 2	15,200.0	17,379.3	6,335.9	6,157.5	35.521	ES
Emmy State H25-731 - Wellbore #1 - Prelim - Rev 2	16,325.6	17,379.3	6,447.9	6,260.1	34.333	SF
Emmy State H25-738 - Wellbore #1 - Prelim - Rev 2	15,121.8	17,299.8	5,894.2	5,715.2	32.921	CC
Emmy State H25-738 - Wellbore #1 - Prelim - Rev 2	15,200.0	17,299.8	5,894.7	5,714.9	32.774	ES
Emmy State H25-738 - Wellbore #1 - Prelim - Rev 2	16,200.0	17,299.8	5,992.0	5,804.4	31.932	SF
Emmy State H25-744 - Wellbore #1 - Prelim - Rev 2	15,063.2	17,300.0	5,456.1	5,277.7	30.588	CC
Emmy State H25-744 - Wellbore #1 - Prelim - Rev 2	15,100.0	17,319.0	5,456.2	5,277.3	30.495	ES
Emmy State H25-744 - Wellbore #1 - Prelim - Rev 2	16,000.0	17,327.4	5,531.4	5,345.6	29.759	SF
Emmy State H25-751 - Wellbore #1 - Design #1	7,585.2	10,029.8	5,093.6	5,043.7	102.202	CC
Emmy State H25-751 - Wellbore #1 - Design #1	15,200.0	17,580.8	5,166.9	4,986.4	28.627	ES
Emmy State H25-751 - Wellbore #1 - Design #1	16,000.0	17,580.8	5,245.8	5,057.8	27.913	SF
Emmy State H25-757 - Wellbore #1 - Design #1	15,081.3	17,501.0	4,727.4	4,547.8	26.327	CC
Emmy State H25-757 - Wellbore #1 - Design #1	15,100.0	17,501.0	4,727.4	4,547.6	26.294	ES
Emmy State H25-757 - Wellbore #1 - Design #1	15,800.0	17,501.0	4,781.7	4,595.4	25.667	SF
Emmy State H25-764 - Wellbore #1 - Design #1	15,079.4	17,466.3	4,288.8	4,211.7	55.658	CC
Emmy State H25-764 - Wellbore #1 - Design #1	15,100.0	17,466.3	4,288.9	4,211.6	55.490	ES
Emmy State H25-764 - Wellbore #1 - Design #1	16,325.6	17,466.3	4,466.3	4,378.4	50.814	SF
Emmy State H25-771 - Wellbore #1 - Design #1	15,073.7	17,391.2	3,847.7	3,668.2	21.440	CC
Emmy State H25-771 - Wellbore #1 - Design #1	15,100.0	17,391.2	3,847.8	3,668.0	21.405	ES
Emmy State H25-771 - Wellbore #1 - Design #1	15,600.0	17,391.2	3,883.5	3,699.7	21.120	SF
Emmy State H25-777 - Wellbore #1 - Design #1	15,068.1	17,434.0	3,409.2	3,229.7	19.001	CC
Emmy State H25-777 - Wellbore #1 - Design #1	15,100.0	17,434.0	3,409.3	3,229.6	18.965	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 H26-750
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 H26-750	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 H25-777 - Wellbore #1 - Design #1	15,400.0	17,434.0	3,425.3	3,243.0	18.795	SF
Emmy State H25-785 - Wellbore #1 - Prelim - Rev 2	15,066.2	17,481.1	2,968.1	2,789.3	16.602	CC
Emmy State H25-785 - Wellbore #1 - Prelim - Rev 2	15,100.0	17,481.1	2,968.3	2,789.1	16.572	ES
Emmy State H25-785 - Wellbore #1 - Prelim - Rev 2	15,300.0	17,481.1	2,977.3	2,796.6	16.482	SF
Emmy State H36-753 - Wellbore #1 - Design #1	6,757.6	5,509.0	5,181.8	5,151.8	172.531	CC, ES
Emmy State H36-753 - Wellbore #1 - Design #1	10,500.0	6,453.3	6,992.7	6,942.0	138.099	SF
Emmy State H36-760 - Wellbore #1 - Design #1	6,926.2	6,143.0	4,899.7	4,868.3	155.730	CC, ES
Emmy State H36-760 - Wellbore #1 - Design #1	9,800.0	6,450.0	6,283.5	6,238.5	139.496	SF
Emmy State H36-766 - Wellbore #1 - Design #1	6,974.4	6,400.0	4,583.7	4,551.9	143.993	CC, ES
Emmy State H36-766 - Wellbore #1 - Design #1	9,400.0	6,450.0	5,738.0	5,695.8	135.958	SF
Emmy State H36-773 - Wellbore #1 - Design #1	6,991.5	6,600.0	4,184.9	4,153.0	131.270	CC, ES
Emmy State H36-773 - Wellbore #1 - Design #1	8,800.0	6,600.0	5,011.1	4,972.3	129.175	SF
Emmy State H36-780 - Wellbore #1 - Design #1	6,961.9	6,650.0	3,841.3	3,809.5	120.794	CC, ES
Emmy State H36-780 - Wellbore #1 - Design #1	7,250.0	6,674.6	3,882.1	3,849.7	119.872	SF
Emmy State H36-787 - Wellbore #1 - Prelim - Rev 2	6,970.0	6,816.7	3,397.4	3,364.5	103.307	CC, ES
Emmy State H36-787 - Wellbore #1 - Prelim - Rev 2	7,200.0	6,850.0	3,425.4	3,392.1	102.762	SF
Hurley H26-712 - Wellbore #1 - Design #1	16,325.6	16,114.8	2,520.7	2,344.0	14.264	CC, ES, SF
Hurley H26-717 - Wellbore #1 - Design #1	16,325.6	16,064.2	2,100.4	1,925.9	12.040	CC, ES, SF
Hurley H26-724 - Wellbore #1 - Design #1	16,312.2	16,029.9	1,679.7	1,505.2	9.629	CC
Hurley H26-724 - Wellbore #1 - Design #1	16,325.6	16,043.3	1,679.8	1,505.1	9.615	ES, SF
Hurley H26-730 - Wellbore #1 - Design #1	16,314.2	15,775.8	1,261.3	1,085.8	7.183	CC
Hurley H26-730 - Wellbore #1 - Design #1	16,325.6	15,787.2	1,261.4	1,085.6	7.175	ES, SF
Hurley H26-736 - Wellbore #1 - Design #1	16,325.6	15,944.0	840.2	666.1	4.828	CC, ES, SF
Hurley H26-743 - Wellbore #1 - Prelim - Rev 2	16,312.7	16,181.4	421.4	245.4	2.394	CC
Hurley H26-743 - Wellbore #1 - Prelim - Rev 2	16,325.6	16,205.7	421.5	245.1	2.389	ES, SF
Hurley H26-756 - 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	2,400.0	2,401.0	44.7	34.2	4.257	CC, ES
Hurley H26-762 - Wellbore #1 - Prelim - Rev 2	2,500.0	2,501.0	46.3	35.3	4.233	SF
Hurley H26-768 - Wellbore #1 - Prelim - Rev 2	2,400.0	2,399.0	67.0	56.6	6.389	CC, ES
Hurley H26-768 - Wellbore #1 - Prelim - Rev 2	2,500.0	2,499.5	68.2	57.3	6.260	SF
Hurley H26-776 - Wellbore #1 - Prelim - Rev 2	2,200.0	2,199.0	89.4	79.8	9.316	CC, ES
Hurley H26-776 - Wellbore #1 - Prelim - Rev 2	2,400.0	2,396.0	92.6	82.2	8.905	SF
Hurley H26-783 - Wellbore #1 - Prelim - Rev 2	2,000.0	1,999.0	111.7	103.0	12.850	CC, ES
Hurley H26-783 - Wellbore #1 - Prelim - Rev 2	2,200.0	2,193.4	116.6	107.0	12.261	SF
Hurley H35-720 - Wellbore #1 - Design #1	8,228.6	7,038.1	1,969.2	1,933.7	55.497	CC, ES
Hurley H35-720 - Wellbore #1 - Design #1	9,200.0	6,700.0	2,136.2	2,093.5	50.087	SF
Hurley H35-727 - Wellbore #1 - Design #1	7,581.6	7,524.8	1,588.6	1,555.4	47.874	CC, ES
Hurley H35-727 - Wellbore #1 - Design #1	8,700.0	6,800.0	1,707.1	1,668.8	44.535	SF
Hurley H35-733 - Wellbore #1 - Design #1	7,578.5	7,550.7	1,167.7	1,134.1	34.734	CC, ES
Hurley H35-733 - Wellbore #1 - Design #1	8,300.0	7,029.7	1,225.9	1,189.8	33.955	SF
Hurley H35-740 - Wellbore #1 - Design #1	7,597.6	7,582.3	644.6	610.1	18.713	CC, ES
Hurley H35-740 - Wellbore #1 - Design #1	7,700.0	7,494.7	645.5	611.0	18.699	SF
Hurley H35-746 - Wellbore #1 - Prelim - Rev 2	7,549.8	7,589.4	257.7	222.2	7.251	CC, ES
Hurley H35-746 - Wellbore #1 - Prelim - Rev 2	7,550.0	7,589.2	257.7	222.2	7.251	SF
Hurley H35-755 - Wellbore #1 - Prelim - Rev 2	2,400.0	2,400.0	149.4	138.9	14.232	CC, ES
Hurley H35-755 - Wellbore #1 - Prelim - Rev 2	7,221.2	7,753.6	232.3	196.5	6.494	SF
Hurley H35-761 - Wellbore #1 - Prelim - Rev 2	2,400.0	2,400.0	150.6	140.1	14.351	CC, ES
Hurley H35-761 - Wellbore #1 - Prelim - Rev 2	2,700.0	2,700.5	160.2	148.4	13.621	SF
Hurley H35-768 - Wellbore #1 - Prelim - Rev 2	2,400.0	2,400.0	155.1	144.6	14.779	CC, ES
Hurley H35-768 - Wellbore #1 - Prelim - Rev 2	2,600.0	2,600.2	160.0	148.6	14.109	SF
Hurley H35-774 - Wellbore #1 - Prelim - Rev 2	2,400.0	2,400.0	162.6	152.1	15.490	CC, ES
Hurley H35-774 - Wellbore #1 - Prelim - Rev 2	2,500.0	2,494.6	165.6	154.7	15.178	SF
Hurley H35-779 - Wellbore #1 - Prelim - Rev 2	2,200.0	2,199.0	175.8	166.2	18.323	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 H26-750
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 H26-750	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 H35-779 - Wellbore #1 - Prelim - Rev 2	2,400.0	2,387.6	182.1	171.7	17.433	SF
Hurley H35-787 - Wellbore #1 - Prelim - Rev 2	2,000.0	1,999.0	187.8	179.1	21.598	CC, ES
Hurley H35-787 - Wellbore #1 - Prelim - Rev 2	2,300.0	2,281.5	201.1	191.2	20.205	SF
Hurley State H35-713 - Wellbore #1 - Design #1	8,163.7	6,700.9	2,427.8	2,392.2	68.221	CC, ES
Hurley State H35-713 - Wellbore #1 - Design #1	9,300.0	6,550.0	2,667.8	2,624.4	61.464	SF
H Section 13						
Karakakes H13-25 - Original Drilling - Original Drilling - A	16,325.6	7,107.9	4,023.6	3,908.8	35.049	CC, ES, SF
Karakakes H13-33 - Original Drilling - Original Drilling - A	16,325.6	7,036.3	2,713.2	2,601.4	24.277	CC, ES, SF
Karakakes H14-63HN - Original Drilling - Original Drilling	16,325.6	9,373.9	291.0	201.3	3.243	CC, ES, SF
Sarchet H13-75HN - Original Drilling - Original Drilling	16,325.6	8,403.0	5,259.2	5,134.4	42.164	CC, ES, SF
UPRC 13-13J - Original Drilling - Original Drilling - As Dri	15,973.7	7,109.6	3,385.8	3,275.8	30.764	CC
UPRC 13-13J - Original Drilling - Original Drilling - As Dri	16,000.0	7,109.2	3,385.9	3,275.6	30.678	ES
UPRC 13-13J - Original Drilling - Original Drilling - As Dri	16,325.6	7,104.2	3,404.2	3,290.4	29.914	SF
UPRC 13-14J - Original Drilling - Original Drilling - As Dri	16,169.6	6,923.6	4,441.2	4,327.9	39.190	CC
UPRC 13-14J - Original Drilling - Original Drilling - As Dri	16,200.0	6,924.0	4,441.3	4,327.6	39.072	ES
UPRC 13-14J - Original Drilling - Original Drilling - As Dri	16,325.6	6,925.5	4,444.0	4,329.0	38.623	SF
UPRC 13-15J - Original Drilling - Original Drilling - As Dri	15,919.4	6,991.5	5,802.0	5,691.9	52.705	CC
UPRC 13-15J - Original Drilling - Original Drilling - As Dri	16,000.0	6,991.8	5,802.5	5,691.6	52.294	ES
UPRC 13-15J - Original Drilling - Original Drilling - As Dri	16,325.6	6,993.3	5,816.3	5,701.9	50.869	SF
UPRC 13-16J - Wellbore #1 - Wellbore #1- As Drilled	15,983.6	6,974.6	6,810.3	6,700.4	61.972	CC
UPRC 13-16J - Wellbore #1 - Wellbore #1- As Drilled	16,100.0	6,973.8	6,811.3	6,700.2	61.291	ES
UPRC 13-16J - Wellbore #1 - Wellbore #1- As Drilled	16,325.6	6,972.3	6,819.0	6,705.5	60.100	SF
UPRR 39 Pan Am B1 (PA) - Original Drilling - Original Dr	15,738.0	7,017.0	3,079.5	2,855.8	13.768	CC
UPRR 39 Pan Am B1 (PA) - Original Drilling - Original Dr	15,800.0	7,017.0	3,080.1	2,855.7	13.726	ES
UPRR 39 Pan Am B1 (PA) - Original Drilling - Original Dr	16,100.0	7,017.0	3,100.7	2,873.2	13.629	SF
H Section 14						
Bohlender H14-09 - Original Drilling - Original Drilling - A	16,325.6	7,071.3	2,238.6	2,137.4	22.118	CC, ES, SF
Bohlender H14-15 - Original Drilling - Original Drilling - A	15,512.2	7,009.6	657.0	551.7	6.240	CC, ES
Bohlender H14-15 - Original Drilling - Original Drilling - A	15,600.0	7,011.1	662.8	556.3	6.224	SF
Bohlender H14-16 - Original Drilling - Original Drilling - A	16,142.2	6,997.0	1,517.8	1,406.4	13.621	CC, ES
Bohlender H14-16 - Original Drilling - Original Drilling - A	16,325.6	6,999.8	1,529.0	1,415.4	13.465	SF
Wilcox H14-03J - Original Drilling - Original Drilling - As D	16,325.6	7,358.9	576.0	445.2	4.404	CC, ES, SF
Wilcox H14-10 - Original Drilling - Original Drilling - As Dr	16,325.6	7,391.4	1,216.8	1,134.8	14.838	CC, ES, SF
Wilcox H14-11 - Original Drilling - Original Drilling - As Dr	16,325.6	7,584.1	1,035.5	956.0	13.027	CC, ES, SF
Wilcox H14-13 - Original Drilling - Original Drilling - As Dr	15,904.7	7,647.1	1,438.6	1,322.3	12.370	CC
Wilcox H14-13 - Original Drilling - Original Drilling - As Dr	16,000.0	7,644.1	1,441.7	1,318.8	11.725	ES
Wilcox H14-13 - Original Drilling - Original Drilling - As Dr	16,325.6	7,633.6	1,498.7	1,350.1	10.084	SF
H Section 19						
Butterball 13-19 - Original Drilling - Original Drilling - As D	11,975.7	6,780.4	8,466.9	8,395.1	117.992	CC
Butterball 13-19 - Original Drilling - Original Drilling - As D	12,100.0	6,784.6	8,467.8	8,394.8	115.991	ES
Butterball 13-19 - Original Drilling - Original Drilling - As D	14,700.0	14,700.0	8,893.9	8,770.5	72.072	SF
H Section 21						
Moser 24-21 - Wellbore #1 - Wellbore #1 - As Drilled	100.0	55.4	8,580.3	8,580.2	10,000.000	CC
Moser 24-21 - Wellbore #1 - Wellbore #1 - As Drilled	500.0	424.7	8,581.3	8,579.5	4,931.168	ES
Moser 24-21 - Wellbore #1 - Wellbore #1 - As Drilled	15,900.0	6,842.5	9,971.9	9,869.6	97.433	SF
Moser 41-21 - Wellbore #1 - Wellbore #1 - As Drilled	13,884.8	7,222.9	8,152.9	8,060.7	88.415	CC
Moser 41-21 - Wellbore #1 - Wellbore #1 - As Drilled	14,000.0	7,220.8	8,153.7	8,060.5	87.453	ES
Moser 41-21 - Wellbore #1 - Wellbore #1 - As Drilled	16,325.6	16,325.6	8,510.0	8,371.8	61.579	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 H26-750
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 H26-750	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 22						
HSR Demeules 09-22 - Original Drilling - Original Drilling	11,721.3	6,946.1	3,265.8	3,196.0	46.767	CC, ES
HSR Demeules 09-22 - Original Drilling - Original Drilling	12,400.0	6,941.4	3,335.6	3,262.1	45.375	SF
HSR Duryea - Wellbore #1 - Wellbore #1 - As Drilled	10,855.6	6,979.4	3,789.7	3,727.4	60.757	CC
HSR Duryea - Wellbore #1 - Wellbore #1 - As Drilled	10,900.0	6,980.8	3,790.0	3,727.3	60.463	ES
HSR Duryea - Wellbore #1 - Wellbore #1 - As Drilled	11,900.0	7,015.4	3,930.9	3,862.4	57.426	SF
Sarchet 16-22 - Wellbore #1 - Wellbore #1 - As Drilled	10,302.9	7,000.0	3,380.9	3,323.1	58.467	CC, ES
Sarchet 16-22 - Wellbore #1 - Wellbore #1 - As Drilled	11,100.0	7,000.0	3,473.6	3,411.4	55.876	SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region Drilling - Sandbox	Local Co-ordinate Reference:	Well Hurley H26-750
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 H26-750	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)	Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
H Section 23						
Eachus 32-23 - Original Drilling - Original Drilling - As Dri	13,161.7	7,004.1	732.6	649.3	8.793	CC, ES
Eachus 32-23 - Original Drilling - Original Drilling - As Dri	13,200.0	7,003.6	733.6	649.6	8.732	SF
Eachus 41-23 (PA) - Original Drilling - Original Drilling - A	14,388.6	7,009.0	1,911.0	1,700.3	9.070	CC
Eachus 41-23 (PA) - Original Drilling - Original Drilling - A	14,400.0	7,009.0	1,911.0	1,700.2	9.064	ES
Eachus 41-23 (PA) - Original Drilling - Original Drilling - A	14,600.0	7,009.0	1,922.7	1,709.5	9.019	SF
Eachus UPRR 31-23 - Original Drilling - Original Drilling -	14,492.7	6,979.4	661.4	507.2	4.291	CC
Eachus UPRR 31-23 - Original Drilling - Original Drilling -	14,500.0	6,979.4	661.4	507.1	4.287	ES, SF
Eachus UPRR 42-23 (PA) - Original Drilling - Original Dri	13,070.2	7,019.0	1,952.8	1,754.3	9.836	CC
Eachus UPRR 42-23 (PA) - Original Drilling - Original Dri	13,100.0	7,019.0	1,953.1	1,754.1	9.818	ES
Eachus UPRR 42-23 (PA) - Original Drilling - Original Dri	13,300.0	7,019.0	1,966.3	1,765.1	9.772	SF
HSR Alberstein 16-23 - Original Drilling - Original Drilling	10,771.8	7,126.5	1,831.5	1,769.8	29.669	CC
HSR Alberstein 16-23 - Original Drilling - Original Drilling	10,800.0	7,128.0	1,831.7	1,769.7	29.510	ES
HSR Alberstein 16-23 - Original Drilling - Original Drilling	11,200.0	7,149.6	1,880.8	1,814.6	28.426	SF
HSR Ashley 15-23A - Original Drilling - Original Drilling -	10,826.2	7,023.1	503.7	441.6	8.120	CC, ES
HSR Ashley 15-23A - Original Drilling - Original Drilling -	10,900.0	7,024.8	509.0	445.7	8.037	SF
HSR Benirschke 10-23 - Original Drilling - Original Drillin	11,821.8	7,029.7	805.2	734.2	11.343	CC, ES
HSR Benirschke 10-23 - Original Drilling - Original Drillin	11,900.0	7,035.0	808.9	736.7	11.207	SF
HSR Eachus 03-23 - Original Drilling - Original Drilling - A	14,498.5	7,193.0	652.4	547.6	6.224	CC
HSR Eachus 03-23 - Original Drilling - Original Drilling - A	14,500.0	7,193.0	652.4	547.6	6.223	ES, SF
HSR Eachus 04-23 - Original Drilling - Original Drilling - A	14,506.7	7,444.0	2,070.8	1,944.5	16.401	CC
HSR Eachus 04-23 - Original Drilling - Original Drilling - A	14,600.0	7,445.1	2,072.9	1,942.6	15.907	ES
HSR Eachus 04-23 - Original Drilling - Original Drilling - A	15,300.0	7,453.7	2,217.5	2,063.6	14.407	SF
HSR Eachus 05-23 - Original Drilling - Original Drilling - A	12,600.0	7,392.9	2,156.8	2,023.0	16.120	SF
HSR Eachus 05-23 - Original Drilling - Original Drilling - A	13,100.0	7,402.3	2,080.6	1,956.5	16.764	ES
HSR Eachus 05-23 - Original Drilling - Original Drilling - A	13,173.3	7,403.6	2,079.3	1,956.5	16.937	CC
HSR Fruman 06-23 - Original Drilling - Original Drilling - A	13,557.2	7,052.1	1,023.2	936.0	11.730	CC, ES
HSR Fruman 06-23 - Original Drilling - Original Drilling - A	13,600.0	7,052.4	1,024.1	936.8	11.729	SF
HSR Grasshopper 09-23 - Original Drilling - Original Drill	11,578.5	6,951.0	1,717.1	1,648.1	24.902	CC
HSR Grasshopper 09-23 - Original Drilling - Original Drill	11,600.0	6,949.9	1,717.2	1,648.0	24.803	ES
HSR Grasshopper 09-23 - Original Drilling - Original Drill	11,900.0	6,934.3	1,746.8	1,674.3	24.085	SF
Ritchey 21-23 - Original Drilling - Original Drilling - As Dri	13,895.4	6,989.1	122.5	32.1	1.355	Level 3, CC
Ritchey 21-23 - Original Drilling - Original Drilling - As Dri	13,900.0	6,989.1	122.5	31.9	1.352	Level 3, ES, SF
Ritchey 24-23 - Original Drilling - Original Drilling - As Dri	12,466.4	7,086.2	1,169.6	1,089.8	14.664	CC
Ritchey 24-23 - Original Drilling - Original Drilling - As Dri	12,500.0	7,086.2	1,170.0	1,089.7	14.565	ES
Ritchey 24-23 - Original Drilling - Original Drilling - As Dri	12,700.0	7,086.7	1,192.7	1,109.8	14.387	SF
Ritchey 31-24 - Original Drilling - Original Drilling - As Dri	13,830.6	7,168.5	2,545.0	2,453.2	27.727	CC
Ritchey 31-24 - Original Drilling - Original Drilling - As Dri	13,900.0	7,169.3	2,545.9	2,453.0	27.406	ES
Ritchey 31-24 - Original Drilling - Original Drilling - As Dri	14,600.0	7,177.5	2,658.7	2,556.5	26.017	SF
UPRC 23-11J - Original Drilling - Original Drilling - As Dri	11,799.5	6,966.3	923.9	853.3	13.089	CC
UPRC 23-11J - Original Drilling - Original Drilling - As Dri	11,800.0	6,966.3	923.9	853.3	13.089	ES, SF
UPRC H23-13 - Wellbore #1 - Wellbore #1 - As Drilled	10,634.3	6,983.1	2,207.8	2,147.2	36.463	CC, ES
UPRC H23-13 - Wellbore #1 - Wellbore #1 - As Drilled	10,900.0	6,992.8	2,223.7	2,161.8	35.952	SF
UPRC H23-14J - Original Drilling - Original Drilling - As D	10,500.0	6,990.3	497.4	437.7	8.327	SF
UPRC H23-14J - Original Drilling - Original Drilling - As D	10,515.0	6,991.3	497.2	437.5	8.329	CC, ES
UPRC H23-24 - Original Drilling - Original Drilling - As Dr	11,427.4	6,981.8	269.9	202.6	4.011	CC, ES, SF
UPRR 53 Pan Am B#1 (PA) - Original Drilling - Original D	10,853.4	6,976.0	1,650.8	1,473.1	9.292	CC, ES
UPRR 53 Pan Am B#1 (PA) - Original Drilling - Original D	10,900.0	6,976.0	1,651.4	1,473.6	9.286	SF
UPRR 53 Pan Am UT V#1 - Original Drilling - Original Dr	13,588.7	7,053.4	1,430.4	1,342.2	16.216	CC
UPRR 53 Pan Am UT V#1 - Original Drilling - Original Dr	13,600.0	7,053.5	1,430.4	1,342.0	16.186	ES
UPRR 53 Pan Am UT V#1 - Original Drilling - Original Dr	13,800.0	7,054.9	1,445.9	1,355.2	15.936	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 H26-750
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 H26-750	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	11,914.4	6,800.0	7,139.6	7,068.3	100.109	CC
Gurtler 24-09J - Original Drilling - Original Drilling - As Dr	12,000.0	6,800.0	7,140.1	7,067.9	98.920	ES
Gurtler 24-09J - Original Drilling - Original Drilling - As Dr	15,500.0	6,800.0	7,989.4	7,889.0	79.546	SF
Gurtler 24-10J - Original Drilling - Original Drilling - As Dr	11,922.7	7,002.3	5,947.0	5,875.1	82.733	CC
Gurtler 24-10J - Original Drilling - Original Drilling - As Dr	12,000.0	7,003.5	5,947.5	5,874.8	81.832	ES
Gurtler 24-10J - Original Drilling - Original Drilling - As Dr	14,600.0	7,023.8	6,521.8	6,427.6	69.189	SF
Gurtler 24-11J - Original Drilling - Original Drilling - As Dr	11,840.9	6,800.0	4,484.3	4,413.5	63.350	CC
Gurtler 24-11J - Original Drilling - Original Drilling - As Dr	11,900.0	6,800.0	4,484.7	4,413.3	62.797	ES
Gurtler 24-11J - Original Drilling - Original Drilling - As Dr	13,500.0	6,800.0	4,781.4	4,696.0	56.029	SF
Gurtler 24-12J - Original Drilling - Original Drilling - As Dr	11,840.5	6,500.0	3,317.5	3,247.4	47.288	CC
Gurtler 24-12J - Original Drilling - Original Drilling - As Dr	11,900.0	6,500.0	3,318.1	3,247.3	46.852	ES
Gurtler 24-12J - Original Drilling - Original Drilling - As Dr	12,900.0	6,500.0	3,482.6	3,402.8	43.626	SF
Gurtler 24-12J - Original Drilling - ST01 - ST01 Original D	11,822.5	6,682.0	3,312.1	3,242.6	47.661	CC, ES
Gurtler 24-12J - Original Drilling - ST01 - ST01 Original D	12,900.0	6,620.0	3,481.2	3,402.1	43.982	SF
Gurtler 24-13J - Original Drilling - Original Drilling - As Dr	10,541.3	6,363.9	3,348.4	3,289.9	57.251	CC
Gurtler 24-13J - Original Drilling - Original Drilling - As Dr	10,600.0	6,360.2	3,348.9	3,289.8	56.683	ES
Gurtler 24-13J - Original Drilling - Original Drilling - As Dr	11,800.0	6,300.0	3,575.7	3,506.4	51.558	SF
Gurtler 24-15J - Original Drilling - Original Drilling - As Dr	10,570.0	7,037.7	5,876.6	5,816.6	97.881	CC
Gurtler 24-15J - Original Drilling - Original Drilling - As Dr	10,600.0	7,037.5	5,876.7	5,816.4	97.416	ES
Gurtler 24-15J - Original Drilling - Original Drilling - As Dr	13,600.0	7,022.5	6,611.8	6,527.1	78.071	SF
Gurtler 24-16J - Original Drilling - Original Drilling - As Dr	10,605.4	6,961.1	6,863.1	6,802.9	114.106	CC
Gurtler 24-16J - Original Drilling - Original Drilling - As Dr	10,700.0	6,961.1	6,863.7	6,802.7	112.440	ES
Gurtler 24-16J - Original Drilling - Original Drilling - As Dr	14,400.0	6,960.2	7,842.2	7,751.7	86.598	SF
Gurtler H24-14 - Original Drilling - Original Drilling - As D	10,439.6	6,922.1	4,717.0	4,658.2	80.290	CC
Gurtler H24-14 - Original Drilling - Original Drilling - As D	10,500.0	6,922.8	4,717.3	4,658.0	79.496	ES
Gurtler H24-14 - Original Drilling - Original Drilling - As D	12,600.0	6,944.0	5,188.1	5,111.2	67.455	SF
Gurtler H24-21 (PA) - Original Drilling - Original Drilling -	12,397.0	7,069.9	5,233.7	5,157.3	68.524	CC
Gurtler H24-21 (PA) - Original Drilling - Original Drilling -	12,500.0	7,077.0	5,234.7	5,157.2	67.565	ES
Gurtler H24-21 (PA) - Original Drilling - Original Drilling -	14,500.0	7,214.6	5,638.5	5,544.0	59.631	SF
Gurtler H24-23 - Original Drilling - Original Drilling - As D	11,254.4	6,909.7	6,506.8	6,441.1	99.096	CC
Gurtler H24-23 - Original Drilling - Original Drilling - As D	11,300.0	6,909.8	6,507.0	6,440.8	98.421	ES
Gurtler H24-23 - Original Drilling - Original Drilling - As D	14,500.0	6,914.1	7,271.3	7,179.1	78.806	SF
Gurtler H24-24 - Original Drilling - Original Drilling - As D	11,243.4	6,537.5	5,394.9	5,330.1	83.261	CC
Gurtler H24-24 - Original Drilling - Original Drilling - As D	11,300.0	6,536.7	5,395.2	5,329.9	82.536	ES
Gurtler H24-24 - Original Drilling - Original Drilling - As D	13,700.0	6,500.0	5,927.8	5,842.5	69.507	SF
Gurtler H24-99HZ - Wellbore #1 - Original Drilling	11,174.9	11,118.0	3,026.9	2,958.0	43.899	CC
Gurtler H24-99HZ - Wellbore #1 - Original Drilling	11,300.0	11,118.0	3,029.5	2,956.3	41.364	ES
Gurtler H24-99HZ - Wellbore #1 - Original Drilling	13,300.0	11,118.0	3,698.4	3,559.9	26.702	SF
Gurtler H25-27 - Original Drilling - Original Drilling - As D	10,028.3	6,984.4	6,467.8	6,410.4	112.832	CC
Gurtler H25-27 - Original Drilling - Original Drilling - As D	10,100.0	6,984.0	6,468.1	6,410.1	111.521	ES
Gurtler H25-27 - Original Drilling - Original Drilling - As D	13,700.0	6,963.7	7,437.3	7,349.6	84.862	SF
Gurtler Russell L1 (PA) - Original Drilling - Original Drillin	10,957.0	7,051.5	4,086.9	4,013.2	55.497	CC
Gurtler Russell L1 (PA) - Original Drilling - Original Drillin	11,000.0	7,051.8	4,087.1	4,013.0	55.162	ES
Gurtler Russell L1 (PA) - Original Drilling - Original Drillin	12,500.0	7,061.7	4,368.5	4,281.0	49.946	SF
HSR Brutschy 04-24 - Original Drilling - Original Drilling -	14,351.3	7,165.3	3,332.9	3,238.2	35.202	CC
HSR Brutschy 04-24 - Original Drilling - Original Drilling -	14,400.0	7,167.3	3,333.3	3,238.0	34.995	ES
HSR Brutschy 04-24 - Original Drilling - Original Drilling -	15,100.0	7,195.6	3,415.9	3,314.1	33.556	SF
HSR Epstein 05-24 - Original Drilling - Original Drilling - A	13,536.1	7,027.8	3,870.5	3,783.5	44.499	CC
HSR Epstein 05-24 - Original Drilling - Original Drilling - A	13,600.0	7,029.0	3,871.0	3,783.3	44.136	ES
HSR Epstein 05-24 - Original Drilling - Original Drilling - A	14,600.0	7,048.7	4,014.0	3,917.1	41.442	SF
HSR Hoffman 03-24 - Original Drilling - Original Drilling -	14,416.3	7,032.2	4,645.5	4,543.9	45.734	CC
HSR Hoffman 03-24 - Original Drilling - Original Drilling -	14,500.0	7,030.7	4,646.3	4,543.8	45.335	ES
HSR Hoffman 03-24 - Original Drilling - Original Drilling -	15,700.0	7,010.2	4,819.6	4,706.6	42.673	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 H26-750
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 H26-750	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 Sarchet 02-24 - Original Drilling - Original Drilling - A	14,430.9	6,956.6	5,997.9	5,902.8	63.080	CC
HSR Sarchet 02-24 - Original Drilling - Original Drilling - A	14,500.0	6,956.8	5,998.3	5,902.5	62.596	ES
HSR Sarchet 02-24 - Original Drilling - Original Drilling - A	16,325.6	6,961.6	6,290.1	6,178.5	56.314	SF
HSR Sarchet 06-24 - Original Drilling - Original Drilling - A	13,059.3	6,945.2	4,797.9	4,715.7	58.337	CC
HSR Sarchet 06-24 - Original Drilling - Original Drilling - A	13,100.0	6,945.9	4,798.1	4,715.4	58.026	ES
HSR Sarchet 06-24 - Original Drilling - Original Drilling - A	14,700.0	6,979.4	5,070.6	4,973.9	52.448	SF
HSR Traurig 01-24 - Original Drilling - Original Drilling - A	14,685.0	7,033.2	6,874.5	6,776.8	70.385	CC
HSR Traurig 01-24 - Original Drilling - Original Drilling - A	14,800.0	7,033.7	6,875.4	6,776.5	69.531	ES
HSR Traurig 01-24 - Original Drilling - Original Drilling - A	16,325.6	7,041.1	7,067.6	6,954.7	62.593	SF
Nopens D19-31 - Original Drilling - Original Drilling - As D	13,845.9	6,958.2	7,598.2	7,508.6	84.801	CC
Nopens D19-31 - Original Drilling - Original Drilling - As D	13,900.0	6,959.2	7,598.4	7,508.2	84.271	ES
Nopens D19-31 - Original Drilling - Original Drilling - As D	16,325.6	7,005.5	7,992.5	7,880.8	71.571	SF
Nopens H24-08 - Original Drilling - Original Drilling - As D	13,246.7	6,864.4	7,110.0	7,026.2	84.888	CC
Nopens H24-08 - Original Drilling - Original Drilling - As D	13,300.0	6,866.3	7,110.2	7,025.8	84.328	ES
Nopens H24-08 - Original Drilling - Original Drilling - As D	16,325.6	6,961.7	7,747.5	7,638.0	70.741	SF
Sarchet H24-22 - Original Drilling - Original Drilling - As D	12,912.6	6,981.7	6,276.4	6,195.4	77.526	CC
Sarchet H24-22 - Original Drilling - Original Drilling - As D	13,000.0	7,020.9	6,277.0	6,194.9	76.533	ES
Sarchet H24-22 - Original Drilling - Original Drilling - As D	15,600.0	7,201.1	6,824.0	6,720.1	65.686	SF
Weld County Lumber 01 - Original Drilling - Original Drilling	13,653.2	6,966.6	6,085.8	5,998.0	69.320	CC
Weld County Lumber 01 - Original Drilling - Original Drilling	13,700.0	6,967.0	6,085.9	5,997.6	68.931	ES
Weld County Lumber 01 - Original Drilling - Original Drilling	16,000.0	6,988.3	6,522.5	6,414.9	60.614	SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region Drilling - Sandbox	Local Co-ordinate Reference:	Well Hurley H26-750
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 H26-750	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						
Dechant 21-25 - Original Drilling - Original Drilling - As D	8,490.4	7,166.9	5,318.6	5,268.9	106.914	CC
Dechant 21-25 - Original Drilling - Original Drilling - As D	8,500.0	7,166.8	5,318.6	5,268.8	106.759	ES
Dechant 21-25 - Original Drilling - Original Drilling - As D	11,900.0	7,130.4	6,317.6	6,237.5	78.902	SF
Dechant D30-33D - Original Drilling - Original Drilling - As	7,259.4	6,770.1	7,854.2	7,811.9	185.837	CC, ES
Dechant D30-33D - Original Drilling - Original Drilling - As	12,300.0	6,895.2	9,998.1	9,924.8	136.444	SF
Dechant D31-30D - Original Drilling - Original Drilling - As	7,117.0	6,845.6	7,984.8	7,941.1	182.885	CC, ES
Dechant D31-30D - Original Drilling - Original Drilling - As	11,400.0	6,955.0	9,991.3	9,926.3	153.864	SF
Dechant H25-64-1HN - Original Drilling - Original Drilling	6,947.1	6,423.0	2,931.9	2,893.1	75.646	CC
Dechant H25-64-1HN - Original Drilling - Original Drilling	6,950.0	6,423.0	2,931.9	2,893.1	75.637	ES
Dechant H25-64-1HN - Original Drilling - Original Drilling	7,100.0	6,423.0	2,942.2	2,903.2	75.484	SF
Dechant H25-65HN - Original Drilling - Original Drilling	7,281.2	6,469.8	2,771.2	2,732.7	72.107	CC, ES
Dechant H25-65HN - Original Drilling - Original Drilling	7,400.0	6,512.0	2,776.0	2,737.4	71.893	SF
HSR Cohn 03-25 - Original Drilling - Original Drilling - As	9,211.6	6,932.3	4,401.8	4,352.5	89.409	CC, ES
HSR Cohn 03-25 - Original Drilling - Original Drilling - As	12,500.0	12,500.0	5,494.1	5,401.9	59.561	SF
HSR Crowe 06-25 - Original Drilling - Original Drilling - A	7,861.2	7,008.9	4,470.7	4,428.1	104.864	CC, ES
HSR Crowe 06-25 - Original Drilling - Original Drilling - A	10,600.0	6,968.7	5,242.7	5,182.9	87.667	SF
HSR Dechant 04-25 - Original Drilling - Original Drilling -	9,278.9	7,441.6	3,332.0	3,259.4	45.869	CC
HSR Dechant 04-25 - Original Drilling - Original Drilling -	9,300.0	7,441.8	3,332.1	3,259.3	45.784	ES
HSR Dechant 04-25 - Original Drilling - Original Drilling -	10,000.0	7,450.3	3,409.2	3,332.4	44.384	SF
HSR Dechant 05-25 - Original Drilling - Original Drilling -	7,760.7	7,087.0	3,464.2	3,421.6	81.335	CC, ES
HSR Dechant 05-25 - Original Drilling - Original Drilling -	9,600.0	7,123.0	3,922.0	3,868.7	73.593	SF
KY Blue D30-32 - Original Drilling - Original Drilling - As D	7,515.0	6,927.9	7,649.9	7,608.2	183.177	CC, ES
KY Blue D30-32 - Original Drilling - Original Drilling - As D	13,400.0	6,960.2	9,852.7	9,774.7	126.197	SF
KY Blue H25-04J - Original Drilling - Original Drilling - As	7,205.8	6,854.3	7,043.2	7,014.1	242.025	CC, ES
KY Blue H25-04J - Original Drilling - Original Drilling - As	12,900.0	6,970.0	9,948.8	9,889.9	168.880	SF
KY Blue H25-09 - Original Drilling - Original Drilling - As D	7,397.6	6,897.0	7,174.4	7,133.0	173.183	CC
KY Blue H25-09 - Original Drilling - Original Drilling - As D	7,400.0	6,898.0	7,174.4	7,132.9	173.158	ES
KY Blue H25-09 - Original Drilling - Original Drilling - As D	12,700.0	6,928.0	9,342.1	9,269.6	128.895	SF
KY Blue H25-10 - Original Drilling - Original Drilling - As D	7,406.3	7,006.5	5,726.6	5,684.8	137.070	CC, ES
KY Blue H25-10 - Original Drilling - Original Drilling - As D	11,300.0	7,034.6	7,242.2	7,178.6	113.851	SF
KY Blue H25-11 - Original Drilling - Original Drilling - As D	7,324.7	7,006.6	4,587.2	4,515.0	63.619	CC, ES
KY Blue H25-11 - Original Drilling - Original Drilling - As D	7,604.6	7,068.5	4,616.9	4,543.4	62.787	SF
KY Blue H25-12 - Original Drilling - Original Drilling - As D	7,227.3	6,845.2	3,156.5	3,115.4	76.863	CC, ES
KY Blue H25-12 - Original Drilling - Original Drilling - As D	7,500.0	6,961.4	3,186.0	3,144.1	76.042	SF
KY Blue H25-14 - Original Drilling - Original Drilling - As D	7,011.1	6,700.0	5,066.8	5,026.8	126.699	CC, ES
KY Blue H25-14 - Original Drilling - Original Drilling - As D	11,100.0	11,100.0	7,524.9	7,452.5	103.910	SF
KY Blue H25-15 - Original Drilling - Original Drilling - As D	7,093.4	6,737.2	5,999.8	5,959.5	148.890	CC
KY Blue H25-15 - Original Drilling - Original Drilling - As D	7,100.0	6,740.3	5,999.8	5,959.5	148.815	ES
KY Blue H25-15 - Original Drilling - Original Drilling - As D	10,600.0	6,934.4	7,733.3	7,675.7	134.292	SF
KY H25-24 - Original Drilling - Original Drilling - As Drilled	7,196.3	6,865.2	5,436.1	5,395.1	132.812	CC
KY H25-24 - Original Drilling - Original Drilling - As Drilled	7,200.0	6,866.9	5,436.1	5,395.1	132.779	ES
KY H25-24 - Original Drilling - Original Drilling - As Drilled	10,400.0	6,941.5	6,867.8	6,811.0	120.752	SF
Moore UPRC H25-01 - Original Drilling - Original Drilling	9,351.5	6,938.3	7,258.7	7,208.5	144.700	CC
Moore UPRC H25-01 - Original Drilling - Original Drilling	9,400.0	6,938.4	7,258.8	7,208.3	143.607	ES
Moore UPRC H25-01 - Original Drilling - Original Drilling	14,000.0	6,948.0	8,619.6	8,533.9	100.600	SF
Moore UPRC H25-02 - Original Drilling - Original Drilling	9,223.2	6,942.8	5,875.7	5,826.4	119.216	CC
Moore UPRC H25-02 - Original Drilling - Original Drilling	9,300.0	6,943.4	5,876.2	5,826.3	117.784	ES
Moore UPRC H25-02 - Original Drilling - Original Drilling	12,700.0	6,970.4	6,827.2	6,751.0	89.645	SF
Moser 25-32 - Original Drilling - Original Drilling - As Drill	7,783.5	6,997.2	5,586.4	5,544.0	131.716	CC
Moser 25-32 - Original Drilling - Original Drilling - As Drill	7,800.0	6,997.0	5,586.4	5,544.0	131.618	ES
Moser 25-32 - Original Drilling - Original Drilling - As Drill	15,400.0	15,400.0	9,445.2	9,335.0	85.688	SF
Moser 25-42 - Original Drilling - Original Drilling - As Drill	8,030.8	6,945.2	7,257.6	7,214.6	169.005	CC, ES
Moser 25-42 - Original Drilling - Original Drilling - As Drill	13,400.0	6,939.4	9,027.7	8,948.5	113.862	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 H26-750
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 H26-750	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						
UPRR 53 Pan Am T#2 - Original Drilling - Original Drilling	8,514.5	6,829.4	4,171.3	4,126.6	93.157	CC, ES
UPRR 53 Pan Am T#2 - Original Drilling - Original Drilling	10,900.0	6,900.0	4,804.7	4,742.5	77.259	SF
UPRR 53 Pan Am UT T#1 - Original Drilling - Original Dr	8,379.3	6,963.0	6,561.9	6,402.4	41.151	CC
UPRR 53 Pan Am UT T#1 - Original Drilling - Original Dr	8,400.0	6,963.0	6,561.9	6,402.3	41.125	ES
UPRR 53 Pan Am UT T#1 - Original Drilling - Original Dr	10,500.0	6,963.0	6,896.0	6,720.8	39.360	SF
Von Feldt 1-25B - Original Drilling - Original Drilling - As D	6,999.1	6,634.4	4,012.2	3,972.5	100.860	CC
Von Feldt 1-25B - Original Drilling - Original Drilling - As D	7,000.0	6,635.1	4,012.2	3,972.5	100.850	ES
Von Feldt 1-25B - Original Drilling - Original Drilling - As D	9,200.0	9,200.0	5,136.8	5,079.6	89.756	SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region Drilling - Sandbox	Local Co-ordinate Reference:	Well Hurley H26-750
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 H26-750	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 26						
Bullard 31-26 - Original Drilling - Original Drilling - As Dril	9,467.5	7,025.4	539.0	487.8	10.535	CC, ES
Bullard 31-26 - Original Drilling - Original Drilling - As Dril	9,500.0	7,027.0	540.0	488.3	10.447	SF
Bullard 32-26 - Original Drilling - Original Drilling - As Dril	7,780.1	7,025.4	708.9	666.4	16.670	CC, ES
Bullard 32-26 - Original Drilling - Original Drilling - As Dril	7,800.0	7,025.5	709.2	666.6	16.657	SF
Bullard 41-26 - Original Drilling - Original Drilling - As Dril	8,954.1	7,056.2	1,500.8	1,453.0	31.404	CC, ES
Bullard 41-26 - Original Drilling - Original Drilling - As Dril	9,300.0	7,057.6	1,540.2	1,489.2	30.226	SF
Dechant H25-29D - Original Drilling - Original Drilling - As	110.3	128.3	3,774.7	3,774.3	9,492.941	CC
Dechant H25-29D - Original Drilling - Original Drilling - As	200.0	195.9	3,775.0	3,774.1	4,502.895	ES
Dechant H25-29D - Original Drilling - Original Drilling - As	12,200.0	7,464.6	4,691.8	4,602.4	52.462	SF
Dechant H25-33D - Original Drilling - Original Drilling - As	7,000.0	7,235.7	2,868.2	2,799.2	41.559	SF
Dechant H25-33D - Original Drilling - Original Drilling - As	7,021.4	7,246.3	2,868.1	2,799.1	41.559	CC, ES
Harsh H26-09D - Original Drilling - Original Drilling - As D	7,167.5	6,860.4	2,190.3	2,149.4	53.502	CC, ES
Harsh H26-09D - Original Drilling - Original Drilling - As D	7,350.0	6,949.6	2,205.9	2,164.4	53.156	SF
Harsh H26-10 - Original Drilling - Original Drilling - As Dr	7,058.3	6,821.4	920.4	879.9	22.720	CC, ES
Harsh H26-10 - Original Drilling - Original Drilling - As Dr	7,100.0	6,850.7	921.5	880.9	22.661	SF
Harsh H26-15 - Original Drilling - Original Drilling - As Dr	6,724.2	6,547.2	1,854.2	1,814.5	46.705	CC, ES
Harsh H26-15 - Original Drilling - Original Drilling - As Dr	6,900.0	6,698.7	1,877.3	1,836.5	46.022	SF
Harsh H26-16 - Original Drilling - Original Drilling - As Dr	6,818.3	6,588.1	2,581.2	2,541.8	65.459	CC, ES
Harsh H26-16 - Original Drilling - Original Drilling - As Dr	7,100.0	6,810.0	2,629.0	2,588.1	64.251	SF
Harsh H26-23D - Original Drilling - Original Drilling - As D	6,909.9	6,894.4	1,865.9	1,825.6	46.339	CC, ES
Harsh H26-23D - Original Drilling - Original Drilling - As D	7,050.0	6,971.5	1,878.7	1,837.9	46.026	SF
HSR Moser 04-26 - Original Drilling - Original Drilling - As	1,941.5	1,905.2	2,025.1	2,014.4	189.311	CC
HSR Moser 04-26 - Original Drilling - Original Drilling - As	2,000.0	1,950.8	2,025.2	2,014.3	184.327	ES
HSR Moser 04-26 - Original Drilling - Original Drilling - As	10,400.0	10,400.0	2,279.3	2,212.8	34.302	SF
HSR Moser 06-26 - Original Drilling - Original Drilling - As	7,834.5	7,009.5	434.7	392.1	10.200	CC, ES, SF
HSR Regalia 05-26 - Original Drilling - Original Drilling - A	2,403.6	2,370.6	872.8	859.4	65.211	CC, ES
HSR Regalia 05-26 - Original Drilling - Original Drilling - A	8,500.0	7,008.0	1,532.6	1,487.7	34.143	SF
HSR-Moser 03-26A - Original Drilling - Original Drilling - A	9,431.7	6,963.9	427.7	377.4	8.502	CC, ES, SF
John 03-26 - Original Drilling - Original Drilling - As Drille	9,176.8	6,961.8	568.9	520.4	11.723	CC, ES, SF
Lamp H25-31 - Original Drilling - Original Drilling - As Dri	8,560.2	7,083.3	2,499.6	2,454.1	54.921	CC, ES
Lamp H25-31 - Original Drilling - Original Drilling - As Dri	9,500.0	7,077.6	2,670.4	2,617.9	50.796	SF
Lamp H26-01 - Original Drilling - Original Drilling - As Dri	9,350.3	7,118.1	2,124.6	2,070.5	39.262	CC, ES
Lamp H26-01 - Original Drilling - Original Drilling - As Dri	9,900.0	7,121.9	2,194.6	2,136.1	37.552	SF
Lamp H26-08 - Original Drilling - Original Drilling - As Dri	8,018.5	6,965.0	2,040.7	1,997.7	47.431	CC, ES
Lamp H26-08 - Original Drilling - Original Drilling - As Dri	8,700.0	6,939.2	2,151.4	2,104.4	45.734	SF
Lamp H26-22 - Original Drilling - Original Drilling - As Dri	7,383.1	7,168.5	1,333.2	1,284.6	27.398	CC, ES
Lamp H26-22 - Original Drilling - Original Drilling - As Dri	7,550.0	7,164.9	1,350.6	1,300.9	27.186	SF
Moser 05-26 - Original Drilling - Original Drilling - As Drill	2,415.0	2,387.7	911.5	898.0	67.821	CC, ES
Moser 05-26 - Original Drilling - Original Drilling - As Drill	7,900.0	7,019.5	2,070.0	2,027.1	48.258	SF
Moser H26-11 - Original Drilling - Original Drilling - As Dr	5,139.1	5,016.6	462.9	432.4	15.147	CC
Moser H26-11 - Original Drilling - Original Drilling - As Dr	5,200.0	5,075.2	463.3	432.3	14.953	ES
Moser H26-11 - Original Drilling - Original Drilling - As Dr	5,600.0	5,451.5	486.8	453.2	14.495	SF
Moser H26-12 - Wellbore #1 - Wellbore #1 - As Drilled	2,110.5	2,081.6	1,197.4	1,185.7	102.388	CC
Moser H26-12 - Wellbore #1 - Wellbore #1 - As Drilled	2,200.0	2,164.4	1,197.6	1,185.4	98.295	ES
Moser H26-12 - Wellbore #1 - Wellbore #1 - As Drilled	6,600.0	6,483.4	1,843.6	1,803.9	46.453	SF
Moser H26-13 - Wellbore #1 - Wellbore #1 - As Drilled	4,099.7	4,022.0	2,369.2	2,345.8	101.000	CC
Moser H26-13 - Wellbore #1 - Wellbore #1 - As Drilled	4,200.0	4,110.6	2,369.6	2,345.5	98.318	ES
Moser H26-13 - Wellbore #1 - Wellbore #1 - As Drilled	6,700.0	6,486.6	2,522.2	2,481.0	61.263	SF
Moser H26-14 - Original Drilling - Original Drilling - As Dr	6,596.4	6,431.1	1,935.3	1,894.8	47.745	CC
Moser H26-14 - Original Drilling - Original Drilling - As Dr	6,600.0	6,434.4	1,935.3	1,894.8	47.717	ES
Moser H26-14 - Original Drilling - Original Drilling - As Dr	6,750.0	6,568.2	1,954.5	1,913.0	47.095	SF
Moser H26-18D - Original Drilling - Original Drilling - As D	8,553.0	7,453.6	88.7	38.1	1.753	CC, ES
Moser H26-18D - Original Drilling - Original Drilling - As D	8,600.0	7,454.3	100.4	40.4	1.674	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 H26-750
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 H26-750	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 26						
Moser H26-24 - Original Drilling - Original Drilling - As Dr	6,621.5	6,440.2	885.7	845.3	21.944	CC, ES
Moser H26-24 - Original Drilling - Original Drilling - As Dr	6,700.0	6,503.9	891.3	850.4	21.801	SF
Moser H26-25 - Original Drilling - Original Drilling - As Dr	6,325.5	6,176.9	1,351.9	1,312.9	34.632	CC
Moser H26-25 - Original Drilling - Original Drilling - As Dr	6,400.0	6,248.7	1,352.1	1,312.5	34.171	ES
Moser H26-25 - Original Drilling - Original Drilling - As Dr	6,650.0	6,483.4	1,368.3	1,327.1	33.187	SF
Moser H26-27D - Original Drilling - Original Drilling - As D	9,805.2	7,176.7	1,370.0	1,312.8	23.948	CC, ES
Moser H26-27D - Original Drilling - Original Drilling - As D	10,000.0	7,176.6	1,383.8	1,325.0	23.551	SF
Moser H26-28D - Original Drilling - Original Drilling - As D	10,017.9	7,616.0	138.4	74.0	2.150	CC, ES, SF
Moser H26-29D - Original Drilling - Original Drilling - As D	10,026.4	7,941.6	1,364.9	1,296.2	19.857	CC
Moser H26-29D - Original Drilling - Original Drilling - As D	10,100.0	7,949.4	1,366.9	1,296.1	19.310	ES
Moser H26-29D - Original Drilling - Original Drilling - As D	10,700.0	8,005.2	1,521.1	1,433.2	17.319	SF
Moser, Wesley E. G. U. B1 (PA) - Original Drilling - Origin	4,631.7	4,526.4	1,885.6	1,783.6	18.500	CC
Moser, Wesley E. G. U. B1 (PA) - Original Drilling - Origin	5,000.0	4,875.1	1,889.3	1,779.1	17.142	ES
Moser, Wesley E. G. U. B1 (PA) - Original Drilling - Origin	6,700.0	6,484.7	2,020.1	1,871.7	13.612	SF
H Section 27						
HSR Moser 1-27 - Original Drilling - Original Drilling - As	100.0	55.3	2,582.5	2,582.3	10,000.000	CC
HSR Moser 1-27 - Original Drilling - Original Drilling - As	1,000.0	943.9	2,585.2	2,579.9	494.203	ES
HSR Moser 1-27 - Original Drilling - Original Drilling - As	10,300.0	6,959.8	3,306.9	3,251.8	60.066	SF
HSR Moser 16-27 - Original Drilling - Original Drilling - As	2,788.1	2,831.9	3,078.5	3,062.8	195.819	CC
HSR Moser 16-27 - Original Drilling - Original Drilling - As	2,800.0	2,841.4	3,078.6	3,062.8	195.112	ES
HSR Moser 16-27 - Original Drilling - Original Drilling - As	6,800.0	6,601.7	3,542.2	3,500.7	85.447	SF
Moser 09-27X (PA) - Original Drilling - Original Drilling - A	338.3	307.4	2,053.8	2,052.2	1,345.425	CC
Moser 09-27X (PA) - Original Drilling - Original Drilling - A	1,700.0	1,660.7	2,056.9	2,047.6	220.992	ES
Moser 09-27X (PA) - Original Drilling - Original Drilling - A	7,500.0	7,017.1	3,322.9	3,277.8	73.634	SF
Moser 24-27 - Original Drilling - Original Drilling - As Drill	847.7	815.7	2,041.1	2,036.7	460.511	CC
Moser 24-27 - Original Drilling - Original Drilling - As Drill	900.0	856.2	2,041.3	2,036.6	435.039	ES
Moser 24-27 - Original Drilling - Original Drilling - As Drill	8,500.0	7,002.8	4,129.2	4,081.6	86.775	SF
H Section 34						
Moser H34-09 - Wellbore #1 - Wellbore #1 - As Drilled	6,517.4	6,357.7	6,430.7	6,390.3	159.130	CC, ES
Moser H34-09 - Wellbore #1 - Wellbore #1 - As Drilled	6,950.0	6,950.0	6,559.5	6,515.9	150.564	SF
Moser H34-16 - Wellbore #1 - Wellbore #1 - As Drilled	6,533.2	6,360.1	7,552.1	7,511.6	186.685	CC, ES
Moser H34-16 - Wellbore #1 - Wellbore #1 - As Drilled	7,000.0	6,700.0	7,707.2	7,664.5	180.255	SF
Moser H34-31 - Wellbore #1 - Wellbore #1 - As Drilled	0.0	0.0	7,734.3			
Moser H34-31 - Wellbore #1 - Wellbore #1 - As Drilled	2,300.0	2,223.4	7,736.3	7,723.7	613.438	ES
Moser H34-31 - Wellbore #1 - Wellbore #1 - As Drilled	7,150.0	6,914.8	8,722.0	8,679.3	204.647	SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region Drilling - Sandbox	Local Co-ordinate Reference:	Well Hurley H26-750
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 H26-750	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						
Cannon Farms 01-35C - Original Drilling - Original Drilling	6,670.1	6,541.1	6,803.3	6,763.0	169.068	CC, ES
Cannon Farms 01-35C - Original Drilling - Original Drilling	7,250.0	7,091.4	7,046.7	7,002.9	160.885	SF
Cannon H35-03D - Original Drilling - Original Drilling - As	6,585.7	6,349.4	6,116.4	6,076.2	152.131	CC, ES
Cannon H35-03D - Original Drilling - Original Drilling - As	6,900.0	6,591.1	6,194.3	6,152.4	147.780	SF
Cannon H35-09 - Original Drilling - Original Drilling - As D	6,699.3	6,627.1	6,025.5	5,985.1	149.409	CC
Cannon H35-09 - Original Drilling - Original Drilling - As D	6,700.0	6,627.8	6,025.5	5,985.1	149.394	ES
Cannon H35-11 - Original Drilling - Original Drilling - As D	7,450.0	7,140.9	6,408.7	6,358.1	126.778	SF
Cannon H35-10 - Original Drilling - Original Drilling - As D	6,629.1	6,313.2	5,819.6	5,779.9	146.871	CC, ES
Cannon H35-10 - Original Drilling - Original Drilling - As D	7,000.0	6,651.1	5,924.2	5,882.4	141.720	SF
Cannon H35-11 - Original Drilling - Original Drilling - As D	6,611.1	6,477.6	5,666.9	5,626.2	139.531	CC, ES
Cannon H35-11 - Original Drilling - Original Drilling - As D	7,000.0	6,750.7	5,785.9	5,743.3	135.872	SF
Cannon H35-12 - Original Drilling - Original Drilling - As D	6,553.7	6,332.1	6,020.2	5,979.9	149.294	CC, ES
Cannon H35-12 - Original Drilling - Original Drilling - As D	6,950.0	6,711.7	6,136.3	6,093.7	143.823	SF
Cannon H35-13 - Wellbore #1 - Wellbore #1 - As Drilled	6,567.9	6,418.5	7,192.5	7,151.9	177.179	CC, ES
Cannon H35-13 - Wellbore #1 - Wellbore #1 - As Drilled	7,100.0	7,083.0	7,397.8	7,353.7	167.744	SF
Cannon H35-14 - Original Drilling - Original Drilling - As D	6,607.5	6,471.0	7,005.2	6,964.7	172.706	CC, ES
Cannon H35-14 - Original Drilling - Original Drilling - As D	7,450.0	7,051.5	7,490.6	7,438.9	145.045	SF
Cannon H35-15 (PA) - Original Drilling - Original Drilling -	6,636.8	6,436.9	7,069.1	6,922.6	48.239	CC
Cannon H35-15 (PA) - Original Drilling - Original Drilling -	6,650.0	6,449.4	7,069.3	6,922.4	48.145	ES
Cannon H35-15 (PA) - Original Drilling - Original Drilling -	7,100.0	6,832.4	7,232.0	7,076.4	46.475	SF
Cannon H35-20 - Original Drilling - Original Drilling - As D	6,563.0	6,295.0	5,278.8	5,238.7	131.735	CC, ES
Cannon H35-20 - Original Drilling - Original Drilling - As D	6,950.0	6,666.5	5,392.1	5,349.7	127.225	SF
Cannon H35-21 - Original Drilling - Original Drilling - As D	6,614.9	6,337.9	5,253.2	5,213.3	131.629	CC, ES
Cannon H35-21 - Original Drilling - Original Drilling - As D	7,000.0	6,814.3	5,361.6	5,319.0	125.928	SF
Cannon H35-22 - Original Drilling - Original Drilling - As D	6,657.8	6,349.2	5,297.5	5,257.7	133.159	CC, ES
Cannon H35-22 - Original Drilling - Original Drilling - As D	7,050.0	6,718.4	5,413.1	5,371.0	128.562	SF
Cannon H35-24 - Original Drilling - Original Drilling - As D	6,608.6	6,322.9	6,421.6	6,381.7	161.021	CC, ES
Cannon H35-24 - Original Drilling - Original Drilling - As D	7,050.0	6,670.5	6,572.1	6,529.9	155.662	SF
Cannon X02-27 - Original Drilling - Original Drilling - As D	6,647.2	6,453.8	7,604.7	7,564.6	189.534	CC
Cannon X02-27 - Original Drilling - Original Drilling - As D	6,650.0	6,455.4	7,604.7	7,564.6	189.464	ES
Cannon X02-27 - Original Drilling - Original Drilling - As D	7,150.0	6,901.8	7,795.3	7,752.3	181.673	SF
Cannon X02-28 - Original Drilling - Original Drilling - As D	6,615.3	6,419.1	7,277.2	7,236.9	180.594	CC, ES
Cannon X02-28 - Original Drilling - Original Drilling - As D	7,050.0	6,819.3	7,421.2	7,378.4	173.454	SF
Cannon X02-29 - Original Drilling - Original Drilling - As D	6,539.5	5,878.2	7,393.4	7,354.7	190.983	CC, ES
Cannon X02-29 - Original Drilling - Original Drilling - As D	7,000.0	6,149.2	7,557.3	7,516.5	185.291	SF
Foster 18-35 - Original Drilling - Original Drilling - As Drill	6,537.1	6,291.1	3,715.6	3,675.4	92.544	CC, ES
Foster 18-35 - Original Drilling - Original Drilling - As Drill	6,850.0	6,641.3	3,788.9	3,746.6	89.684	SF
Foster UPRR 31-35 #1 (PA) - Original Drilling - Original D	6,670.7	6,481.0	3,039.7	2,892.9	20.698	CC, ES
Foster UPRR 31-35 #1 (PA) - Original Drilling - Original D	6,950.0	6,731.5	3,100.0	2,947.3	20.304	SF
Foster UPRR 32-35 - Original Drilling - Original Drilling -	6,648.3	6,464.5	4,315.9	4,275.7	107.555	CC
Foster UPRR 32-35 - Original Drilling - Original Drilling -	6,650.0	6,465.5	4,315.9	4,275.7	107.531	ES
Foster UPRR 32-35 - Original Drilling - Original Drilling -	7,000.0	6,821.3	4,411.3	4,369.0	104.237	SF
Foster UPRR 41-35 - Original Drilling - Original Drilling -	6,743.0	6,514.6	3,808.2	3,768.6	96.164	CC
Foster UPRR 41-35 - Original Drilling - Original Drilling -	6,750.0	6,521.1	3,808.3	3,768.5	95.763	ES
Foster UPRR 41-35 - Original Drilling - Original Drilling -	7,400.0	6,958.5	4,086.2	4,034.9	79.626	SF
Foster UPRR 42-35 #2 - Original Drilling - Original Drilling	6,722.3	6,600.0	4,728.6	4,688.7	118.270	CC, ES
Foster UPRR 42-35 #2 - Original Drilling - Original Drilling	7,000.0	6,735.0	4,787.0	4,745.8	116.036	SF
HSR Foster 03-35 - Original Drilling - Original Drilling - A	6,593.7	6,414.3	3,175.8	3,135.4	78.497	CC
HSR Foster 03-35 - Original Drilling - Original Drilling - A	6,600.0	6,420.7	3,175.9	3,135.4	78.414	ES
HSR Foster 03-35 - Original Drilling - Original Drilling - A	6,850.0	6,789.6	3,225.6	3,183.2	75.960	SF
HSR Foster 04-35 - Wellbore #1 - Wellbore #1 - As Drille	4,680.7	4,519.7	3,447.0	3,419.8	126.887	CC
HSR Foster 04-35 - Wellbore #1 - Wellbore #1 - As Drille	4,800.0	4,600.0	3,447.5	3,419.6	123.724	ES
HSR Foster 04-35 - Wellbore #1 - Wellbore #1 - As Drille	6,800.0	6,578.3	3,553.1	3,511.2	84.755	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 H26-750
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 H26-750	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 05-35 - Wellbore #1 - Wellbore #1 - As Drille	6,358.4	6,000.0	4,762.3	4,723.9	123.737	CC, ES
HSR Foster 05-35 - Wellbore #1 - Wellbore #1 - As Drille	6,900.0	6,566.2	4,881.1	4,839.0	115.898	SF
HSR Foster 06-35 - Original Drilling - Original Drilling - A	6,597.4	6,435.6	4,346.0	4,305.5	107.256	CC
HSR Foster 06-35 - Original Drilling - Original Drilling - A	6,600.0	6,438.1	4,346.1	4,305.5	107.210	ES
HSR Foster 06-35 - Original Drilling - Original Drilling - A	6,900.0	6,721.9	4,417.1	4,374.7	104.281	SF
UPRR 53 Pan Am Unit P1 - Original Drilling - Original Dri	6,703.3	6,530.7	4,060.4	4,020.5	101.949	CC, ES
UPRR 53 Pan Am Unit P1 - Original Drilling - Original Dri	7,050.0	6,785.2	4,150.9	4,109.2	99.576	SF
UPRR 53 Pan Am UT P2 - Original Drilling - Original Drill	6,567.7	6,379.2	3,454.8	3,414.3	85.435	CC, ES
UPRR 53 Pan Am UT P2 - Original Drilling - Original Drill	6,800.0	6,535.1	3,498.4	3,456.8	83.980	SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region Drilling - Sandbox	Local Co-ordinate Reference:	Well Hurley H26-750
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 H26-750	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)	Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
H Section 36						
Dechant 13N-1HZ - Original Drilling - Original Drilling - A	6,687.1	6,350.0	8,184.8	8,142.1	191.914	CC, ES
Dechant 13N-1HZ - Original Drilling - Original Drilling - A	7,150.0	6,400.0	8,344.5	8,300.5	189.313	SF
Dechant 14C-1HZ - Original Drilling - Original Drilling - A	6,698.2	6,038.3	8,807.3	8,768.0	224.257	CC
Dechant 14C-1HZ - Original Drilling - Original Drilling - A	6,700.0	6,040.1	8,807.3	8,768.0	224.188	ES
Dechant 14C-1HZ - Original Drilling - Original Drilling - A	7,150.0	6,405.5	8,941.4	8,899.6	213.642	SF
Dechant 15-36 - Original Drilling - Original Drilling - As D	6,766.9	6,478.5	9,136.6	9,091.1	200.943	CC
Dechant 15-36 - Original Drilling - Original Drilling - As D	6,800.0	6,508.8	9,137.3	9,090.9	197.123	ES
Dechant 15-36 - Original Drilling - Original Drilling - As D	7,550.0	6,929.7	9,487.2	9,428.0	160.097	SF
Dechant 15C-1HZ - Original Drilling - Original Drilling - A	6,962.7	6,476.8	6,453.7	6,414.0	162.639	CC, ES
Dechant 15C-1HZ - Original Drilling - Original Drilling - A	10,500.0	6,500.0	8,401.4	8,345.7	150.929	SF
Dechant 24-36 - Original Drilling - Original Drilling - As D	6,865.2	6,807.3	8,151.1	8,110.6	201.134	CC, ES
Dechant 24-36 - Original Drilling - Original Drilling - As D	9,700.0	7,118.2	9,927.4	9,873.9	185.552	SF
Dechant 35N-E1HZ - Original Drilling - Original Drilling -	6,703.0	6,171.4	8,658.3	8,619.3	222.052	CC, ES
Dechant 35N-E1HZ - Original Drilling - Original Drilling -	7,100.0	6,200.0	8,770.4	8,730.3	218.466	SF
Dechant 35N-W1HZ - Original Drilling - Original Drilling -	6,699.1	6,300.0	8,395.2	8,355.5	211.429	CC
Dechant 35N-W1HZ - Original Drilling - Original Drilling -	6,700.0	6,300.0	8,395.2	8,355.5	211.415	ES
Dechant 35N-W1HZ - Original Drilling - Original Drilling -	7,050.0	6,300.0	8,487.0	8,446.4	208.847	SF
Dechant 36N-W1HZ - Original Drilling - Original Drilling -	6,687.0	5,841.3	8,924.4	8,884.9	226.060	CC, ES
Dechant 36N-W1HZ - Original Drilling - Original Drilling -	7,250.0	6,294.7	9,124.5	9,081.7	213.217	SF
Dechant 37N-E1HZ - Original Drilling - Original Drilling -	6,639.9	4,767.6	9,969.7	9,932.4	267.185	CC
Dechant 37N-E1HZ - Original Drilling - Original Drilling -	6,650.0	4,777.6	9,969.8	9,932.4	266.618	ES
Dechant 37N-E1HZ - Original Drilling - Original Drilling -	6,850.0	4,971.7	9,995.6	9,956.6	256.787	SF
Dechant 37N-W1HZ - Original Drilling - Original Drilling -	6,698.4	5,574.7	9,689.2	9,651.2	254.708	CC
Dechant 37N-W1HZ - Original Drilling - Original Drilling -	6,700.0	5,576.2	9,689.2	9,651.2	254.637	ES
Dechant 37N-W1HZ - Original Drilling - Original Drilling -	7,400.0	6,081.4	9,966.7	9,924.7	237.517	SF
Dechant State 16C-1HZ - Original Drilling - Original Drilling	7,029.6	6,526.0	7,546.0	7,506.1	189.480	CC, ES
Dechant State 16C-1HZ - Original Drilling - Original Drilling	11,600.0	6,526.0	9,957.9	9,895.3	159.198	SF
Dechant State 36N-E1HZ - Original Drilling - Original Drilling	6,939.1	6,400.0	6,233.1	6,193.8	158.599	CC, ES
Dechant State 36N-E1HZ - Original Drilling - Original Drilling	10,100.0	6,400.0	7,957.4	7,904.4	150.013	SF
Dechant State 37N-E36HZ - Original Drilling - Original Drilling	7,014.5	6,500.0	7,346.5	7,306.4	183.586	CC, ES
Dechant State 37N-E36HZ - Original Drilling - Original Drilling	11,800.0	6,400.0	9,957.0	9,893.5	156.745	SF
Dechant State 37N-W36HZ - Original Drilling - Original Drilling	6,939.5	6,163.1	6,702.3	6,663.2	171.277	CC
Dechant State 37N-W36HZ - Original Drilling - Original Drilling	6,950.0	6,172.1	6,702.4	6,663.2	171.048	ES
Dechant State 37N-W36HZ - Original Drilling - Original Drilling	11,000.0	6,362.9	8,905.5	8,846.3	150.476	SF
Dechant State 38N-1HZ - Original Drilling - Original Drilling	7,013.2	6,400.0	8,038.6	7,999.1	203.612	CC, ES
Dechant State 38N-1HZ - Original Drilling - Original Drilling	10,900.0	6,400.0	9,959.2	9,900.4	169.290	SF
Dechant State H36-11D - Original Drilling - Original Drilling	6,774.5	6,616.1	7,435.8	7,396.2	187.592	CC, ES
Dechant State H36-11D - Original Drilling - Original Drilling	7,350.0	7,000.0	7,638.4	7,596.1	180.243	SF
Dechant State H36-18D - Original Drilling - Original Drilling	6,856.5	6,733.6	6,387.9	6,345.9	151.824	CC, ES
Dechant State H36-18D - Original Drilling - Original Drilling	8,800.0	6,973.4	7,498.0	7,446.8	146.536	SF
Dechant State H36-19 - Original Drilling - Original Drilling	6,847.8	6,770.6	5,110.0	5,070.0	127.651	CC
Dechant State H36-19 - Original Drilling - Original Drilling	6,850.0	6,773.7	5,110.0	5,069.9	127.601	ES
Dechant State H36-19 - Original Drilling - Original Drilling	7,300.0	7,104.6	5,229.7	5,187.4	123.727	SF
Dechant State H36-20D - Original Drilling - Original Drilling	6,772.3	6,749.8	6,565.4	6,521.5	149.267	CC, ES
Dechant State H36-20D - Original Drilling - Original Drilling	7,200.0	7,034.0	6,684.2	6,638.4	145.780	SF
Dechant State H36-21D - Original Drilling - Original Drilling	6,805.9	6,664.1	7,334.6	7,292.0	172.361	CC, ES
Dechant State H36-21D - Original Drilling - Original Drilling	7,350.0	7,029.5	7,505.3	7,460.5	167.234	SF
Dechant State H36-24 - Original Drilling - Original Drilling	6,771.2	6,683.2	8,281.5	8,236.8	185.238	CC, ES
Dechant State H36-24 - Original Drilling - Original Drilling	7,400.0	7,239.6	8,515.2	8,467.1	177.109	SF
Dechant State H36-31D - Original Drilling - Original Drilling	6,750.4	6,638.3	4,679.7	4,634.2	102.766	CC, ES
Dechant State H36-31D - Original Drilling - Original Drilling	7,100.0	6,896.1	4,761.6	4,714.4	100.875	SF
Dechant State H36-32D - Original Drilling - Original Drilling	6,726.3	6,615.0	5,732.1	5,693.0	146.503	CC, ES
Dechant State H36-32D - Original Drilling - Original Drilling	7,250.0	7,250.0	5,926.0	5,883.4	139.161	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 H26-750
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 H26-750	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 State H36-33 - Original Drilling - Original Drilling	6,705.4	6,701.8	6,854.7	6,806.3	141.690	CC, ES
Dechant State H36-33 - Original Drilling - Original Drilling	7,100.0	7,169.1	6,962.2	6,911.2	136.749	SF
HSR Dechant State 02-36 - Original Drilling - Original Dri	6,930.3	6,478.7	6,382.4	6,343.3	163.260	CC, ES
HSR Dechant State 02-36 - Original Drilling - Original Dri	10,000.0	6,749.1	8,091.4	8,038.5	153.020	SF
HSR Dechant/State 07-36 (PA) - Original Drilling - Origin	6,896.6	6,639.7	7,502.9	7,353.5	50.235	CC
HSR Dechant/State 07-36 (PA) - Original Drilling - Origin	6,900.0	6,642.6	7,502.9	7,353.5	50.213	ES
HSR Dechant/State 07-36 (PA) - Original Drilling - Origin	7,400.0	6,947.8	7,626.3	7,469.7	48.699	SF
Spike State GWS H36-03 - Original Drilling - Original Dri	6,882.9	6,498.9	5,660.7	5,621.6	144.811	CC, ES
Spike State GWS H36-03 - Original Drilling - Original Dri	7,400.0	6,771.4	5,790.1	5,748.9	140.457	SF
Spike State GWS H36-04 - Original Drilling - Original Dri	6,845.8	6,695.2	4,381.1	4,335.3	95.649	CC
Spike State GWS H36-04 - Original Drilling - Original Dri	6,850.0	6,698.9	4,381.1	4,335.2	95.542	ES
Spike State GWS H36-04 - Original Drilling - Original Dri	7,400.0	7,047.8	4,556.9	4,505.8	89.227	SF
Spike State GWS H36-13 - Original Drilling - Original Dri	6,777.5	7,444.0	7,818.8	7,773.2	171.594	CC, ES
Spike State GWS H36-13 - Original Drilling - Original Dri	7,050.0	7,444.0	7,876.8	7,830.4	169.934	SF
Spike State GWS H36-14 - Original Drilling - Original Dri	6,771.3	6,867.8	8,688.5	8,647.9	213.891	CC, ES
Spike State GWS H36-14 - Original Drilling - Original Dri	7,400.0	7,285.1	8,940.6	8,897.0	205.101	SF
Spike State H36-02J - Original Drilling - Original Drilling - A	6,796.8	6,442.7	5,893.2	5,836.0	102.972	CC
Spike State H36-02J - Original Drilling - Original Drilling - A	6,800.0	6,445.6	5,893.2	5,835.9	102.792	ES
Spike State H36-02J - Original Drilling - Original Drilling - A	7,500.0	6,854.8	6,164.5	6,092.5	85.569	SF
Spike State H36-05 - Original Drilling - Original Drilling - A	6,753.5	6,465.8	5,367.3	5,328.1	136.950	CC, ES
Spike State H36-05 - Original Drilling - Original Drilling - A	7,200.0	7,010.1	5,493.2	5,451.0	130.370	SF
Spike State H36-11J - Original Drilling - Original Drilling - A	6,742.2	6,584.2	7,590.5	7,550.8	191.221	CC
Spike State H36-11J - Original Drilling - Original Drilling - A	6,750.0	6,592.0	7,590.5	7,550.8	190.986	ES
Spike State H36-11J - Original Drilling - Original Drilling - A	7,400.0	7,042.3	7,866.8	7,823.8	182.844	SF
Spike State H36-12 - Original Drilling - Original Drilling - A	6,724.2	6,493.4	6,375.9	6,336.5	161.615	CC, ES
Spike State H36-12 - Original Drilling - Original Drilling - A	7,150.0	6,937.3	6,495.5	6,453.4	154.422	SF

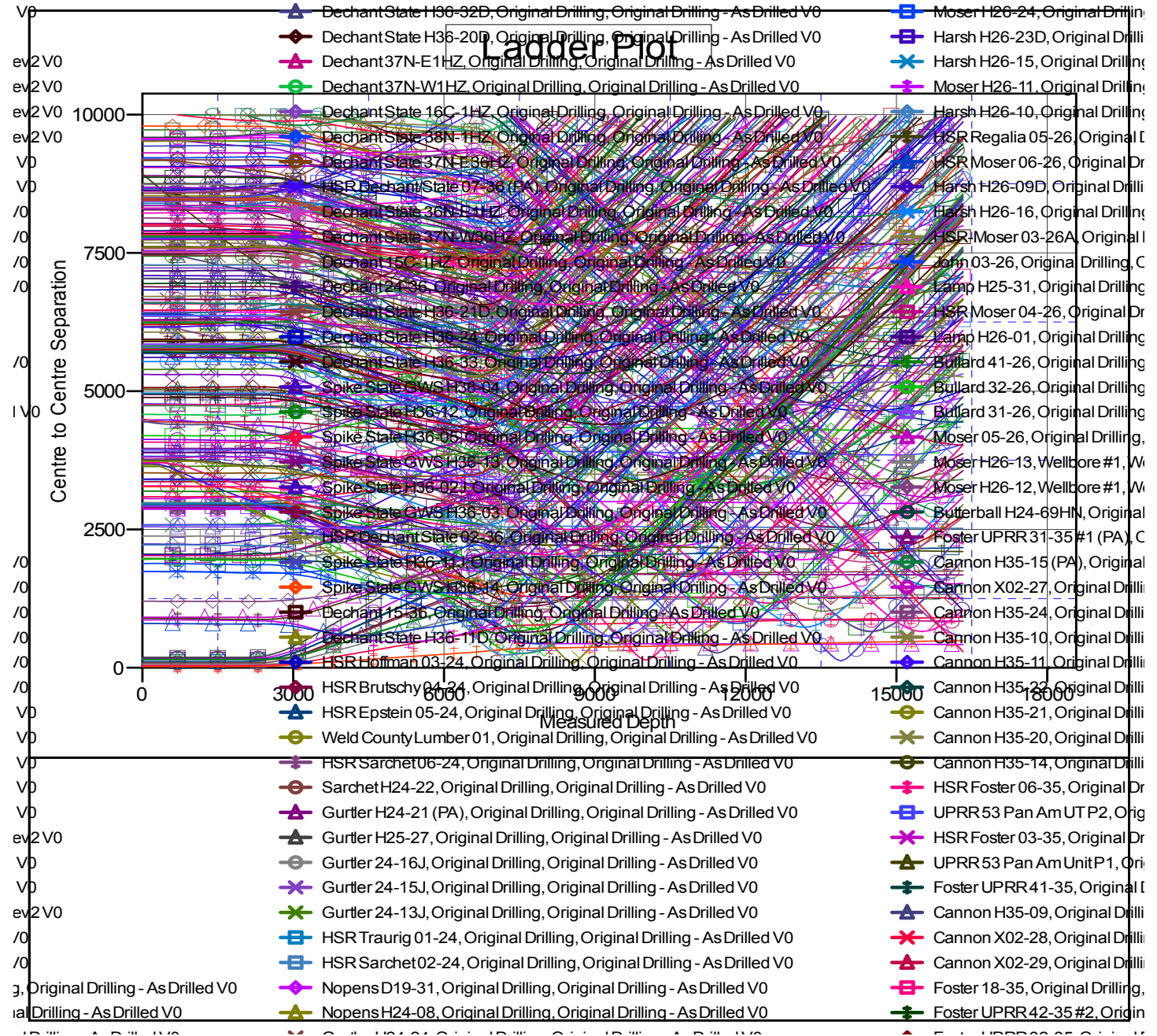
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region Drilling - Sandbox	Local Co-ordinate Reference:	Well Hurley H26-750
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 H26-750	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 H26-750
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

Company:	Northern Region Drilling - Sandbox	Local Co-ordinate Reference:	Well Hurley H26-750
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 H26-750	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 H26-750
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.56°

