

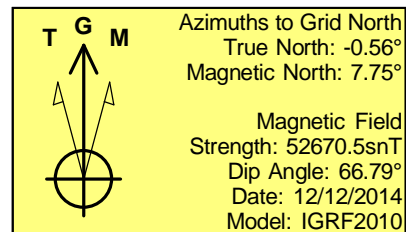
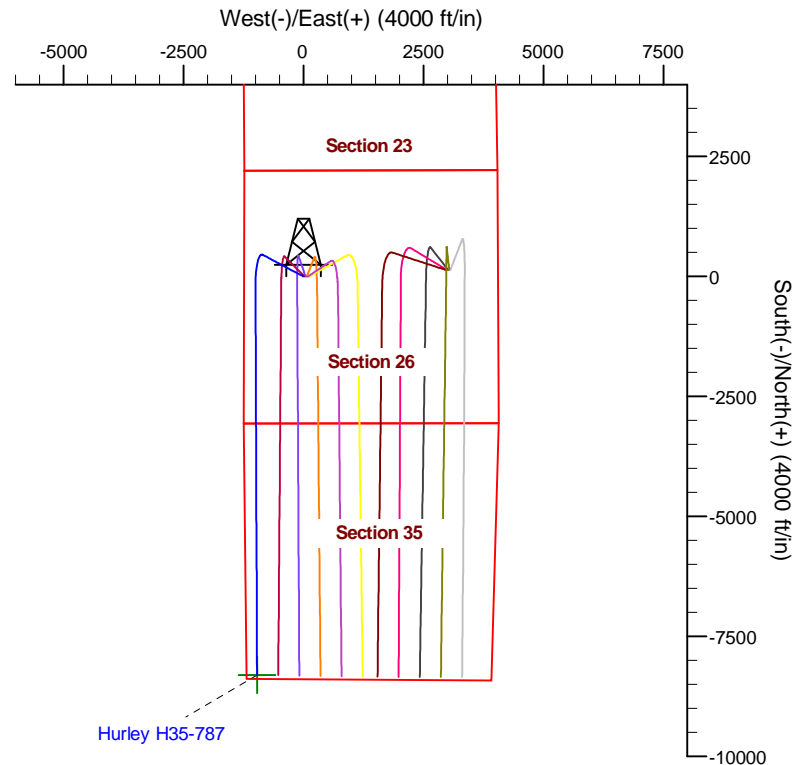
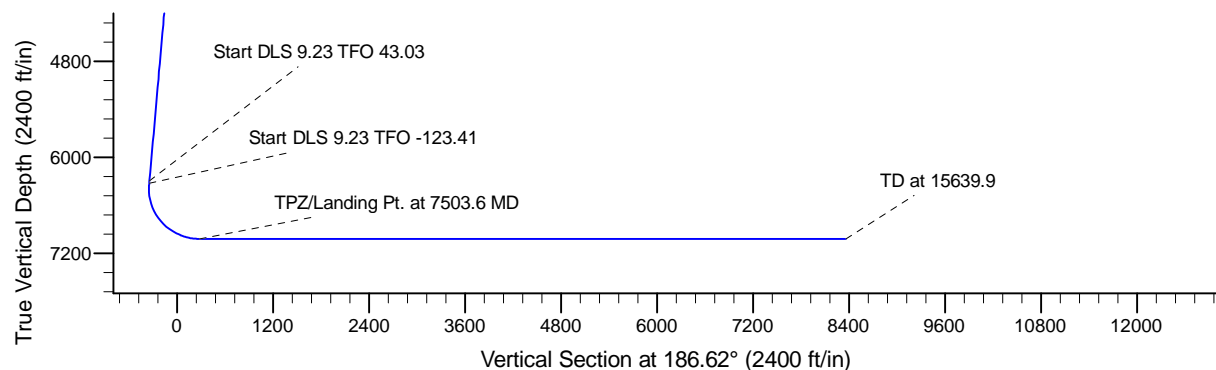
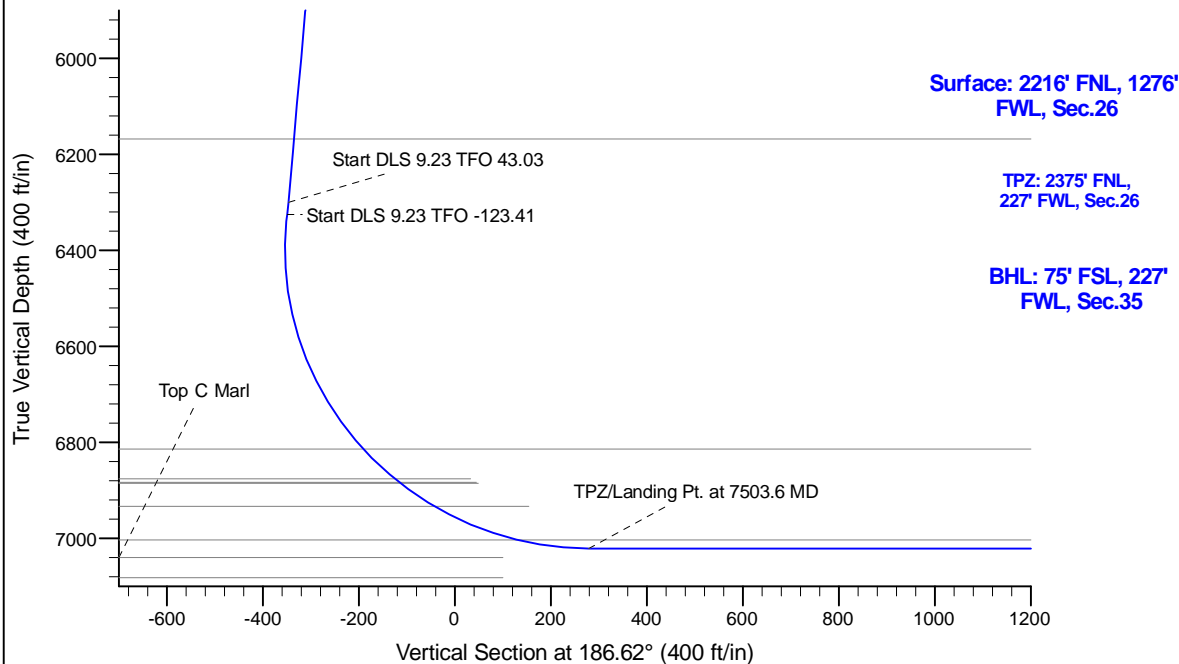
Project: Conceptual Wells
Site: DP 408
Well: Hurley H35-787
Wellbore: Wellbore #1
Design: Prelim - Rev 2

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	2000.0	0.00	0.00	2000.0	0.0	0.0	0.00	0.00	0.0	
3	2675.0	13.50	298.00	2668.8	37.2	-69.9	2.00	298.00	-28.9	
4	6409.4	13.50	298.00	6300.0	446.4	-839.6	0.00	0.00	-346.6	
5	6435.1	15.32	304.14	6324.9	449.8	-845.1	9.23	43.03	-349.3	
6	7503.6	90.00	179.77	7021.0	-165.0	-1000.0	9.23	-123.41	279.2	
7	15639.9	90.00	179.77	7021.0	-8301.2	-967.1	0.00	0.00	8357.4	Hurley H35-787 BHL



WELL DETAILS: Hurley H35-787

	Ground Level:	4821.0	
0.00.0	Northing	Easting	Latitude
	1315975.80	3241448.38	40.197520
			Longitude
			-104.635640

Plan: Prelim - Rev 2 (Hurley H35-787/Wellbore #1)

Created By: Colby Baxter Date: 11:46, October 24 2017

Checked: _____ Date: _____

Reviewed: _____ Date: _____

Approved: _____ Date: _____

Northern Region Drilling - Sandbox

Conceptual Wells

DP 408

Hurley H35-787

Wellbore #1

Plan: Prelim - Rev 2

Standard Planning Report

24 October, 2017

Noble Energy, Inc.

Planning Report

Database:	EDMP	Local Co-ordinate Reference:	Well Hurley H35-787
Company:	Northern Region Drilling - Sandbox	TVD Reference:	WELL @ 4851.0ft (Original Well Elev)
Project:	Conceptual Wells	MD Reference:	WELL @ 4851.0ft (Original Well Elev)
Site:	DP 408	North Reference:	Grid
Well:	Hurley H35-787	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 H35-787					
Well Position	+N/-S	-2,209.0 ft	Northing:	1,315,975.80 usft	Latitude:	40.197520
	+E/-W	1,223.3 ft	Easting:	3,241,448.38 usft	Longitude:	-104.635640
Position Uncertainty		0.0 ft	Wellhead Elevation:	0.0 ft	Ground Level:	4,821.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	12/12/2014	8.31	66.79	52,670.54258949

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	186.62

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	
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,675.0	13.50	298.00	2,668.8	37.2	-69.9	2.00	2.00	0.00	298.00	
6,409.4	13.50	298.00	6,300.0	446.4	-839.6	0.00	0.00	0.00	0.00	
6,435.1	15.32	304.14	6,324.9	449.8	-845.1	9.23	7.07	23.87	43.03	
7,503.6	90.00	179.77	7,021.0	-165.0	-1,000.0	9.23	6.99	-11.64	-123.41	
15,639.9	90.00	179.77	7,021.0	-8,301.2	-967.1	0.00	0.00	0.00	0.00	Hurley H35-787 BHL

Noble Energy, Inc.

Planning Report

Database:	EDMP	Local Co-ordinate Reference:	Well Hurley H35-787
Company:	Northern Region Drilling - Sandbox	TVD Reference:	WELL @ 4851.0ft (Original Well Elev)
Project:	Conceptual Wells	MD Reference:	WELL @ 4851.0ft (Original Well Elev)
Site:	DP 408	North Reference:	Grid
Well:	Hurley H35-787	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	2.00	298.00	2,100.0	0.8	-1.5	-0.6	2.00	2.00	0.00
2,200.0	4.00	298.00	2,199.8	3.3	-6.2	-2.5	2.00	2.00	0.00
2,300.0	6.00	298.00	2,299.5	7.4	-13.9	-5.7	2.00	2.00	0.00
2,400.0	8.00	298.00	2,398.7	13.1	-24.6	-10.2	2.00	2.00	0.00
2,500.0	10.00	298.00	2,497.5	20.4	-38.4	-15.9	2.00	2.00	0.00
2,600.0	12.00	298.00	2,595.6	29.4	-55.3	-22.8	2.00	2.00	0.00
2,675.0	13.50	298.00	2,668.8	37.2	-69.9	-28.9	2.00	2.00	0.00
2,700.0	13.50	298.00	2,693.1	39.9	-75.0	-31.0	0.00	0.00	0.00
2,800.0	13.50	298.00	2,790.3	50.9	-95.7	-39.5	0.00	0.00	0.00
2,900.0	13.50	298.00	2,887.6	61.8	-116.3	-48.0	0.00	0.00	0.00
3,000.0	13.50	298.00	2,984.8	72.8	-136.9	-56.5	0.00	0.00	0.00
3,100.0	13.50	298.00	3,082.0	83.7	-157.5	-65.0	0.00	0.00	0.00
3,200.0	13.50	298.00	3,179.3	94.7	-178.1	-73.5	0.00	0.00	0.00
3,300.0	13.50	298.00	3,276.5	105.7	-198.7	-82.0	0.00	0.00	0.00
3,400.0	13.50	298.00	3,373.7	116.6	-219.3	-90.5	0.00	0.00	0.00
3,500.0	13.50	298.00	3,471.0	127.6	-239.9	-99.1	0.00	0.00	0.00
3,600.0	13.50	298.00	3,568.2	138.5	-260.6	-107.6	0.00	0.00	0.00
3,700.0	13.50	298.00	3,665.5	149.5	-281.2	-116.1	0.00	0.00	0.00
3,800.0	13.50	298.00	3,762.7	160.5	-301.8	-124.6	0.00	0.00	0.00
3,900.0	13.50	298.00	3,859.9	171.4	-322.4	-133.1	0.00	0.00	0.00
4,000.0	13.50	298.00	3,957.2	182.4	-343.0	-141.6	0.00	0.00	0.00
4,100.0	13.50	298.00	4,054.4	193.3	-363.6	-150.1	0.00	0.00	0.00
4,200.0	13.50	298.00	4,151.6	204.3	-384.2	-158.6	0.00	0.00	0.00
4,300.0	13.50	298.00	4,248.9	215.3	-404.8	-167.1	0.00	0.00	0.00
4,400.0	13.50	298.00	4,346.1	226.2	-425.4	-175.6	0.00	0.00	0.00
4,500.0	13.50	298.00	4,443.3	237.2	-446.1	-184.2	0.00	0.00	0.00
4,600.0	13.50	298.00	4,540.6	248.1	-466.7	-192.7	0.00	0.00	0.00
4,700.0	13.50	298.00	4,637.8	259.1	-487.3	-201.2	0.00	0.00	0.00
4,800.0	13.50	298.00	4,735.1	270.1	-507.9	-209.7	0.00	0.00	0.00
4,900.0	13.50	298.00	4,832.3	281.0	-528.5	-218.2	0.00	0.00	0.00
5,000.0	13.50	298.00	4,929.5	292.0	-549.1	-226.7	0.00	0.00	0.00
5,100.0	13.50	298.00	5,026.8	302.9	-569.7	-235.2	0.00	0.00	0.00
5,200.0	13.50	298.00	5,124.0	313.9	-590.3	-243.7	0.00	0.00	0.00

Noble Energy, Inc.

Planning Report

Database:	EDMP	Local Co-ordinate Reference:	Well Hurley H35-787
Company:	Northern Region Drilling - Sandbox	TVD Reference:	WELL @ 4851.0ft (Original Well Elev)
Project:	Conceptual Wells	MD Reference:	WELL @ 4851.0ft (Original Well Elev)
Site:	DP 408	North Reference:	Grid
Well:	Hurley H35-787	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	13.50	298.00	5,221.2	324.9	-611.0	-252.2	0.00	0.00	0.00
5,400.0	13.50	298.00	5,318.5	335.8	-631.6	-260.7	0.00	0.00	0.00
5,500.0	13.50	298.00	5,415.7	346.8	-652.2	-269.2	0.00	0.00	0.00
5,600.0	13.50	298.00	5,513.0	357.7	-672.8	-277.8	0.00	0.00	0.00
5,700.0	13.50	298.00	5,610.2	368.7	-693.4	-286.3	0.00	0.00	0.00
5,800.0	13.50	298.00	5,707.4	379.6	-714.0	-294.8	0.00	0.00	0.00
5,900.0	13.50	298.00	5,804.7	390.6	-734.6	-303.3	0.00	0.00	0.00
6,000.0	13.50	298.00	5,901.9	401.6	-755.2	-311.8	0.00	0.00	0.00
6,100.0	13.50	298.00	5,999.1	412.5	-775.9	-320.3	0.00	0.00	0.00
6,200.0	13.50	298.00	6,096.4	423.5	-796.5	-328.8	0.00	0.00	0.00
6,300.0	13.50	298.00	6,193.6	434.4	-817.1	-337.3	0.00	0.00	0.00
6,400.0	13.50	298.00	6,290.8	445.4	-837.7	-345.8	0.00	0.00	0.00
6,409.4	13.50	298.00	6,300.0	446.4	-839.6	-346.6	0.00	0.00	0.00
6,435.1	15.32	304.14	6,324.9	449.8	-845.1	-349.3	9.23	7.07	23.87
6,500.0	13.00	281.36	6,387.9	456.0	-859.3	-353.9	9.23	-3.58	-35.10
6,600.0	14.34	241.95	6,485.2	452.4	-881.3	-347.7	9.23	1.34	-39.40
6,700.0	20.24	217.59	6,580.8	432.8	-902.9	-325.8	9.23	5.90	-24.37
6,800.0	27.95	204.99	6,672.1	397.8	-923.4	-288.7	9.23	7.71	-12.59
6,900.0	36.33	197.68	6,756.7	348.2	-942.3	-237.2	9.23	8.38	-7.32
7,000.0	45.00	192.84	6,832.5	285.4	-959.2	-172.9	9.23	8.67	-4.84
7,100.0	53.83	189.28	6,897.5	210.9	-973.6	-97.2	9.23	8.83	-3.55
7,200.0	62.74	186.46	6,950.0	126.7	-985.1	-12.3	9.23	8.91	-2.82
7,300.0	71.69	184.06	6,988.7	35.0	-993.5	79.8	9.23	8.96	-2.40
7,400.0	80.68	181.90	7,012.6	-61.8	-998.5	176.6	9.23	8.98	-2.16
7,500.0	89.67	179.84	7,021.0	-161.4	-1,000.0	275.6	9.23	9.00	-2.05
7,503.6	90.00	179.77	7,021.0	-165.0	-1,000.0	279.2	9.23	9.00	-2.03
7,600.0	90.00	179.77	7,021.0	-261.4	-999.6	374.9	0.00	0.00	0.00
7,700.0	90.00	179.77	7,021.0	-361.4	-999.2	474.2	0.00	0.00	0.00
7,800.0	90.00	179.77	7,021.0	-461.4	-998.8	573.5	0.00	0.00	0.00
7,900.0	90.00	179.77	7,021.0	-561.4	-998.4	672.8	0.00	0.00	0.00
8,000.0	90.00	179.77	7,021.0	-661.4	-998.0	772.0	0.00	0.00	0.00
8,100.0	90.00	179.77	7,021.0	-761.4	-997.6	871.3	0.00	0.00	0.00
8,200.0	90.00	179.77	7,021.0	-861.4	-997.2	970.6	0.00	0.00	0.00
8,300.0	90.00	179.77	7,021.0	-961.4	-996.8	1,069.9	0.00	0.00	0.00
8,400.0	90.00	179.77	7,021.0	-1,061.4	-996.4	1,169.2	0.00	0.00	0.00
8,500.0	90.00	179.77	7,021.0	-1,161.4	-996.0	1,268.5	0.00	0.00	0.00
8,600.0	90.00	179.77	7,021.0	-1,261.4	-995.6	1,367.8	0.00	0.00	0.00
8,700.0	90.00	179.77	7,021.0	-1,361.4	-995.2	1,467.0	0.00	0.00	0.00
8,800.0	90.00	179.77	7,021.0	-1,461.4	-994.8	1,566.3	0.00	0.00	0.00
8,900.0	90.00	179.77	7,021.0	-1,561.4	-994.4	1,665.6	0.00	0.00	0.00
9,000.0	90.00	179.77	7,021.0	-1,661.4	-994.0	1,764.9	0.00	0.00	0.00
9,100.0	90.00	179.77	7,021.0	-1,761.3	-993.6	1,864.2	0.00	0.00	0.00
9,200.0	90.00	179.77	7,021.0	-1,861.3	-993.2	1,963.5	0.00	0.00	0.00
9,300.0	90.00	179.77	7,021.0	-1,961.3	-992.8	2,062.8	0.00	0.00	0.00
9,400.0	90.00	179.77	7,021.0	-2,061.3	-992.4	2,162.0	0.00	0.00	0.00
9,500.0	90.00	179.77	7,021.0	-2,161.3	-992.0	2,261.3	0.00	0.00	0.00
9,600.0	90.00	179.77	7,021.0	-2,261.3	-991.6	2,360.6	0.00	0.00	0.00
9,700.0	90.00	179.77	7,021.0	-2,361.3	-991.2	2,459.9	0.00	0.00	0.00
9,800.0	90.00	179.77	7,021.0	-2,461.3	-990.8	2,559.2	0.00	0.00	0.00
9,900.0	90.00	179.77	7,021.0	-2,561.3	-990.4	2,658.5	0.00	0.00	0.00
10,000.0	90.00	179.77	7,021.0	-2,661.3	-990.0	2,757.8	0.00	0.00	0.00
10,100.0	90.00	179.77	7,021.0	-2,761.3	-989.6	2,857.0	0.00	0.00	0.00
10,200.0	90.00	179.77	7,021.0	-2,861.3	-989.2	2,956.3	0.00	0.00	0.00
10,300.0	90.00	179.77	7,021.0	-2,961.3	-988.8	3,055.6	0.00	0.00	0.00

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Planning Report

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Well:	Hurley H35-787	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	179.77	7,021.0	-3,061.3	-988.4	3,154.9	0.00	0.00	0.00
10,500.0	90.00	179.77	7,021.0	-3,161.3	-988.0	3,254.2	0.00	0.00	0.00
10,600.0	90.00	179.77	7,021.0	-3,261.3	-987.6	3,353.5	0.00	0.00	0.00
10,700.0	90.00	179.77	7,021.0	-3,361.3	-987.2	3,452.8	0.00	0.00	0.00
10,800.0	90.00	179.77	7,021.0	-3,461.3	-986.8	3,552.0	0.00	0.00	0.00
10,900.0	90.00	179.77	7,021.0	-3,561.3	-986.4	3,651.3	0.00	0.00	0.00
11,000.0	90.00	179.77	7,021.0	-3,661.3	-986.0	3,750.6	0.00	0.00	0.00
11,100.0	90.00	179.77	7,021.0	-3,761.3	-985.6	3,849.9	0.00	0.00	0.00
11,200.0	90.00	179.77	7,021.0	-3,861.3	-985.2	3,949.2	0.00	0.00	0.00
11,300.0	90.00	179.77	7,021.0	-3,961.3	-984.8	4,048.5	0.00	0.00	0.00
11,400.0	90.00	179.77	7,021.0	-4,061.3	-984.4	4,147.8	0.00	0.00	0.00
11,500.0	90.00	179.77	7,021.0	-4,161.3	-984.0	4,247.0	0.00	0.00	0.00
11,600.0	90.00	179.77	7,021.0	-4,261.3	-983.6	4,346.3	0.00	0.00	0.00
11,700.0	90.00	179.77	7,021.0	-4,361.3	-983.2	4,445.6	0.00	0.00	0.00
11,800.0	90.00	179.77	7,021.0	-4,461.3	-982.8	4,544.9	0.00	0.00	0.00
11,900.0	90.00	179.77	7,021.0	-4,561.3	-982.4	4,644.2	0.00	0.00	0.00
12,000.0	90.00	179.77	7,021.0	-4,661.3	-982.0	4,743.5	0.00	0.00	0.00
12,100.0	90.00	179.77	7,021.0	-4,761.3	-981.5	4,842.8	0.00	0.00	0.00
12,200.0	90.00	179.77	7,021.0	-4,861.3	-981.1	4,942.0	0.00	0.00	0.00
12,300.0	90.00	179.77	7,021.0	-4,961.3	-980.7	5,041.3	0.00	0.00	0.00
12,400.0	90.00	179.77	7,021.0	-5,061.3	-980.3	5,140.6	0.00	0.00	0.00
12,500.0	90.00	179.77	7,021.0	-5,161.3	-979.9	5,239.9	0.00	0.00	0.00
12,600.0	90.00	179.77	7,021.0	-5,261.3	-979.5	5,339.2	0.00	0.00	0.00
12,700.0	90.00	179.77	7,021.0	-5,361.3	-979.1	5,438.5	0.00	0.00	0.00
12,800.0	90.00	179.77	7,021.0	-5,461.3	-978.7	5,537.8	0.00	0.00	0.00
12,900.0	90.00	179.77	7,021.0	-5,561.3	-978.3	5,637.0	0.00	0.00	0.00
13,000.0	90.00	179.77	7,021.0	-5,661.3	-977.9	5,736.3	0.00	0.00	0.00
13,100.0	90.00	179.77	7,021.0	-5,761.3	-977.5	5,835.6	0.00	0.00	0.00
13,200.0	90.00	179.77	7,021.0	-5,861.3	-977.1	5,934.9	0.00	0.00	0.00
13,300.0	90.00	179.77	7,021.0	-5,961.3	-976.7	6,034.2	0.00	0.00	0.00
13,400.0	90.00	179.77	7,021.0	-6,061.3	-976.3	6,133.5	0.00	0.00	0.00
13,500.0	90.00	179.77	7,021.0	-6,161.3	-975.9	6,232.8	0.00	0.00	0.00
13,600.0	90.00	179.77	7,021.0	-6,261.3	-975.5	6,332.0	0.00	0.00	0.00
13,700.0	90.00	179.77	7,021.0	-6,361.3	-975.1	6,431.3	0.00	0.00	0.00
13,800.0	90.00	179.77	7,021.0	-6,461.3	-974.7	6,530.6	0.00	0.00	0.00
13,900.0	90.00	179.77	7,021.0	-6,561.3	-974.3	6,629.9	0.00	0.00	0.00
14,000.0	90.00	179.77	7,021.0	-6,661.3	-973.9	6,729.2	0.00	0.00	0.00
14,100.0	90.00	179.77	7,021.0	-6,761.3	-973.5	6,828.5	0.00	0.00	0.00
14,200.0	90.00	179.77	7,021.0	-6,861.3	-973.1	6,927.8	0.00	0.00	0.00
14,300.0	90.00	179.77	7,021.0	-6,961.3	-972.7	7,027.0	0.00	0.00	0.00
14,400.0	90.00	179.77	7,021.0	-7,061.3	-972.3	7,126.3	0.00	0.00	0.00
14,500.0	90.00	179.77	7,021.0	-7,161.3	-971.9	7,225.6	0.00	0.00	0.00
14,600.0	90.00	179.77	7,021.0	-7,261.3	-971.5	7,324.9	0.00	0.00	0.00
14,700.0	90.00	179.77	7,021.0	-7,361.3	-971.1	7,424.2	0.00	0.00	0.00
14,800.0	90.00	179.77	7,021.0	-7,461.3	-970.7	7,523.5	0.00	0.00	0.00
14,900.0	90.00	179.77	7,021.0	-7,561.3	-970.3	7,622.8	0.00	0.00	0.00
15,000.0	90.00	179.77	7,021.0	-7,661.3	-969.9	7,722.0	0.00	0.00	0.00
15,100.0	90.00	179.77	7,021.0	-7,761.3	-969.5	7,821.3	0.00	0.00	0.00
15,200.0	90.00	179.77	7,021.0	-7,861.3	-969.1	7,920.6	0.00	0.00	0.00
15,300.0	90.00	179.77	7,021.0	-7,961.3	-968.7	8,019.9	0.00	0.00	0.00
15,400.0	90.00	179.77	7,021.0	-8,061.3	-968.3	8,119.2	0.00	0.00	0.00
15,500.0	90.00	179.77	7,021.0	-8,161.3	-967.9	8,218.5	0.00	0.00	0.00
15,600.0	90.00	179.77	7,021.0	-8,261.3	-967.5	8,317.8	0.00	0.00	0.00
15,639.9	90.00	179.77	7,021.0	-8,301.2	-967.1	8,357.4	0.00	0.00	0.00

Noble Energy, Inc.

Planning Report

Database:	EDMP	Local Co-ordinate Reference:	Well Hurley H35-787
Company:	Northern Region Drilling - Sandbox	TVD Reference:	WELL @ 4851.0ft (Original Well Elev)
Project:	Conceptual Wells	MD Reference:	WELL @ 4851.0ft (Original Well Elev)
Site:	DP 408	North Reference:	Grid
Well:	Hurley H35-787	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)

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 H35-787 BHL	0.00	0.00	7,021.0	-8,301.2	-967.1	1,307,674.94	3,240,481.36	40.174760	-104.639390
- plan hits target center									
- Point									

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
617.0	617.0	Pierre (auto fill-equal to FH_base)				
769.0	769.0	Upper Pierre Aquifer Top				
1,657.0	1,657.0	Upper Pierre Aquifer Base				
3,965.9	3,924.0	Parkman				
4,573.7	4,515.0	Sussex				
5,275.1	5,197.0	Shannon				
6,273.7	6,168.0	Teepee Buttes				
6,974.3	6,814.0	Sharon Springs				
7,064.9	6,876.0	Top A Chalk				
7,076.0	6,883.0	Top A Marl				
7,079.3	6,885.0	Top B Chalk				
7,164.7	6,933.0	Top B Marl				
7,351.9	7,003.0	Top C Chalk				

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
2,000.0	2,000.0	0.0	0.0	KOP - Start Build 2.00
6,409.4	6,300.0	446.4	-839.6	Start DLS 9.23 TFO 43.03
6,435.1	6,324.9	449.7	-845.1	Start DLS 9.23 TFO -123.41
7,503.6	7,021.0	-165.0	-1,000.0	TPZ/Landing Pt. at 7503.6 MD
15,639.9	7,021.0	-8,301.2	-967.3	TD at 15639.9

Northern Region Drilling - Sandbox

Conceptual Wells

DP 408

Hurley H35-787

Wellbore #1

Prelim - Rev 2

Anticollision Summary Report

24 October, 2017

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region Drilling - Sandbox	Local Co-ordinate Reference:	Well Hurley H35-787
Project:	Conceptual Wells	TVD Reference:	WELL @ 4851.0ft (Original Well Elev)
Reference Site:	DP 408	MD Reference:	WELL @ 4851.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	Grid
Reference Well:	Hurley H35-787	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	10/24/2017		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	15,639.9	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 -						Out of range
DP 408						
Emmy H25-711 - Wellbore #1 - Prelim - Rev 2	2,000.0	1,984.0	8,006.9	7,998.2	924.316	CC, ES
Emmy H25-711 - Wellbore #1 - Prelim - Rev 2	13,300.0	4,082.4	9,989.1	9,925.7	157.628	SF
Emmy State H25-718 - Wellbore #1 - Prelim - Rev 2	2,000.0	1,984.0	7,986.0	7,977.3	921.906	CC, ES
Emmy State H25-718 - Wellbore #1 - Prelim - Rev 2	13,900.0	4,713.1	9,983.6	9,914.5	144.437	SF
Emmy State H25-724 - Wellbore #1 - Prelim - Rev 2	2,000.0	1,984.0	7,965.1	7,956.5	919.498	CC, ES
Emmy State H25-724 - Wellbore #1 - Prelim - Rev 2	14,800.0	6,175.6	9,972.5	9,893.0	125.440	SF
Emmy State H25-731 - Wellbore #1 - Prelim - Rev 2	2,000.0	1,983.0	7,944.3	7,935.6	917.328	CC, ES
Emmy State H25-731 - Wellbore #1 - Prelim - Rev 2	15,400.0	6,400.0	9,966.7	9,884.9	121.900	SF
Emmy State H25-738 - Wellbore #1 - Prelim - Rev 2	2,000.0	1,984.0	7,923.4	7,914.8	914.683	CC, ES
Emmy State H25-738 - Wellbore #1 - Prelim - Rev 2	15,500.0	6,450.0	9,758.1	9,677.6	121.206	SF
Emmy State H25-744 - Wellbore #1 - Prelim - Rev 2	5,480.9	10,284.2	7,697.0	7,648.5	158.854	CC
Emmy State H25-744 - Wellbore #1 - Prelim - Rev 2	5,500.0	10,286.3	7,697.0	7,648.5	158.617	ES
Emmy State H25-744 - Wellbore #1 - Prelim - Rev 2	15,100.0	6,600.0	9,191.7	9,113.0	116.876	SF
Emmy State H25-751 - Wellbore #1 - Design #1	2,000.0	2,005.0	6,022.0	6,013.3	691.415	CC, ES
Emmy State H25-751 - Wellbore #1 - Design #1	14,900.0	5,905.5	8,420.3	8,343.9	110.098	SF
Emmy State H25-757 - Wellbore #1 - Design #1	2,000.0	2,005.0	6,002.3	5,993.6	689.158	CC, ES
Emmy State H25-757 - Wellbore #1 - Design #1	14,600.0	6,219.9	8,086.9	8,011.5	107.203	SF
Emmy State H25-764 - Wellbore #1 - Design #1	2,000.0	2,001.0	5,982.7	5,978.4	1,375.518	CC, ES
Emmy State H25-764 - Wellbore #1 - Design #1	14,500.0	6,450.0	7,747.0	7,687.7	130.631	SF
Emmy State H25-771 - Wellbore #1 - Design #1	2,000.0	2,005.0	5,963.1	5,954.4	684.650	CC, ES
Emmy State H25-771 - Wellbore #1 - Design #1	13,700.0	6,500.0	7,049.5	6,980.2	101.755	SF
Emmy State H25-777 - Wellbore #1 - Design #1	5,929.2	10,504.1	5,765.0	5,714.0	112.905	CC, ES
Emmy State H25-777 - Wellbore #1 - Design #1	13,400.0	6,650.0	6,611.5	6,544.0	97.872	SF
Emmy State H25-785 - Wellbore #1 - Prelim - Rev 2	5,998.8	10,508.8	5,266.6	5,215.3	102.582	CC
Emmy State H25-785 - Wellbore #1 - Prelim - Rev 2	6,000.0	10,509.0	5,266.6	5,215.3	102.574	ES
Emmy State H25-785 - Wellbore #1 - Prelim - Rev 2	12,900.0	6,800.0	5,953.4	5,888.1	91.262	SF
Emmy State H36-753 - Wellbore #1 - Design #1	2,000.0	2,005.0	5,950.9	5,942.1	683.246	CC, ES
Emmy State H36-753 - Wellbore #1 - Design #1	15,639.9	12,699.7	7,373.0	7,236.2	53.871	SF
Emmy State H36-760 - Wellbore #1 - Design #1	2,000.0	1,966.0	5,931.0	5,922.3	685.206	CC, ES
Emmy State H36-760 - Wellbore #1 - Design #1	15,639.9	12,527.7	6,932.0	6,795.3	50.704	SF
Emmy State H36-766 - Wellbore #1 - Design #1	2,000.0	2,004.0	5,911.1	5,902.4	678.855	CC, ES
Emmy State H36-766 - Wellbore #1 - Design #1	15,639.9	12,453.6	6,501.6	6,366.9	48.248	SF
Emmy State H36-773 - Wellbore #1 - Design #1	2,000.0	2,004.0	5,891.2	5,882.5	676.574	CC, ES
Emmy State H36-773 - Wellbore #1 - Design #1	15,639.9	12,608.4	6,053.0	5,916.7	44.383	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 H35-787
Project:	Conceptual Wells	TVD Reference:	WELL @ 4851.0ft (Original Well Elev)
Reference Site:	DP 408	MD Reference:	WELL @ 4851.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	Grid
Reference Well:	Hurley H35-787	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 H36-780 - Wellbore #1 - Design #1	15,239.5	12,543.0	5,601.0	5,467.7	42.009	CC
Emmy State H36-780 - Wellbore #1 - Design #1	15,300.0	12,543.0	5,601.3	5,467.6	41.875	ES
Emmy State H36-780 - Wellbore #1 - Design #1	15,639.9	12,543.0	5,615.0	5,479.1	41.305	SF
Emmy State H36-787 - Wellbore #1 - Prelim - Rev 2	15,245.7	12,821.8	5,159.4	5,026.6	38.826	CC
Emmy State H36-787 - Wellbore #1 - Prelim - Rev 2	15,300.0	12,821.8	5,159.7	5,026.5	38.731	ES
Emmy State H36-787 - Wellbore #1 - Prelim - Rev 2	15,639.9	12,821.8	5,174.2	5,039.2	38.330	SF
Hurley H26-712 - Wellbore #1 - Design #1	1,800.2	1,833.2	3,084.4	3,076.5	391.685	CC
Hurley H26-712 - Wellbore #1 - Design #1	1,900.0	1,900.0	3,084.6	3,076.3	373.945	ES
Hurley H26-712 - Wellbore #1 - Design #1	10,900.0	6,500.0	5,717.6	5,670.7	121.737	SF
Hurley H26-717 - Wellbore #1 - Design #1	1,900.2	1,933.2	3,062.0	3,053.7	367.848	CC
Hurley H26-717 - Wellbore #1 - Design #1	2,000.0	2,019.4	3,062.1	3,053.4	350.481	ES
Hurley H26-717 - Wellbore #1 - Design #1	10,600.0	6,479.7	5,314.7	5,270.5	120.378	SF
Hurley H26-724 - Wellbore #1 - Design #1	2,000.0	2,034.0	3,039.7	3,030.9	346.409	CC, ES
Hurley H26-724 - Wellbore #1 - Design #1	10,000.0	6,600.0	4,607.7	4,567.6	114.781	SF
Hurley H26-730 - Wellbore #1 - Design #1	2,000.0	2,033.0	3,017.3	3,008.6	343.951	CC, ES
Hurley H26-730 - Wellbore #1 - Design #1	6,650.0	7,573.1	3,593.6	3,561.6	112.168	SF
Hurley H26-736 - Wellbore #1 - Design #1	2,000.0	2,034.0	2,995.0	2,986.2	341.316	CC, ES
Hurley H26-736 - Wellbore #1 - Design #1	6,650.0	7,744.4	3,232.7	3,199.8	98.036	SF
Hurley H26-743 - Wellbore #1 - Prelim - Rev 2	6,496.1	7,989.1	2,749.3	2,714.7	79.591	CC
Hurley H26-743 - Wellbore #1 - Prelim - Rev 2	6,500.0	7,989.3	2,749.3	2,714.7	79.574	ES
Hurley H26-743 - Wellbore #1 - Prelim - Rev 2	6,600.0	7,985.6	2,751.2	2,716.5	79.357	SF
Hurley H26-750 - Wellbore #1 - Prelim - Rev 2	2,000.0	2,001.0	187.8	179.1	21.588	CC, ES
Hurley H26-750 - Wellbore #1 - Prelim - Rev 2	2,300.0	2,300.5	202.1	192.0	20.163	SF
Hurley H26-756 - Wellbore #1 - Prelim - Rev 2	2,000.0	2,001.0	175.8	167.1	20.206	CC, ES
Hurley H26-756 - Wellbore #1 - Prelim - Rev 2	2,300.0	2,300.5	189.3	179.3	18.890	SF
Hurley H26-762 - Wellbore #1 - Prelim - Rev 2	2,000.0	2,000.0	165.9	157.2	19.078	CC, ES
Hurley H26-762 - Wellbore #1 - Prelim - Rev 2	2,300.0	2,300.5	178.5	168.4	17.807	SF
Hurley H26-768 - Wellbore #1 - Prelim - Rev 2	2,000.0	2,000.0	158.6	149.9	18.238	CC, ES
Hurley H26-768 - Wellbore #1 - Prelim - Rev 2	2,300.0	2,300.5	169.9	159.9	16.950	SF
Hurley H26-776 - Wellbore #1 - Prelim - Rev 2	2,000.0	2,000.0	154.3	145.6	17.733	CC, ES
Hurley H26-776 - Wellbore #1 - Prelim - Rev 2	2,200.0	2,199.8	158.4	148.9	16.539	SF
Hurley H26-783 - Wellbore #1 - Prelim - Rev 2	2,000.0	2,000.0	153.0	144.3	17.592	CC, ES
Hurley H26-783 - Wellbore #1 - Prelim - Rev 2	7,100.0	7,705.4	369.3	335.8	11.020	SF
Hurley H35-720 - Wellbore #1 - Design #1	2,000.0	2,034.0	3,063.5	3,054.8	349.127	CC, ES
Hurley H35-720 - Wellbore #1 - Design #1	15,639.9	15,975.0	4,270.9	4,103.1	25.455	SF
Hurley H35-727 - Wellbore #1 - Design #1	2,000.0	2,034.0	3,041.2	3,032.4	346.582	CC, ES
Hurley H35-727 - Wellbore #1 - Design #1	15,639.9	15,763.0	3,829.4	3,661.3	22.786	SF
Hurley H35-733 - Wellbore #1 - Design #1	2,000.0	2,033.0	3,018.9	3,010.1	344.125	CC, ES
Hurley H35-733 - Wellbore #1 - Design #1	15,639.9	15,790.0	3,390.6	3,222.4	20.162	SF
Hurley H35-740 - Wellbore #1 - Design #1	15,639.9	15,826.1	2,949.0	2,781.2	17.571	CC, ES, SF
Hurley H35-746 - Wellbore #1 - Prelim - Rev 2	15,639.9	15,794.7	2,510.2	2,342.0	14.923	CC, ES, SF
Hurley H35-755 - Wellbore #1 - Prelim - Rev 2	2,000.0	2,001.0	111.8	103.1	12.850	CC, ES
Hurley H35-755 - Wellbore #1 - Prelim - Rev 2	2,200.0	2,200.8	118.1	108.5	12.328	SF
Hurley H35-761 - Wellbore #1 - Prelim - Rev 2	2,000.0	2,001.0	89.5	80.8	10.283	CC, ES
Hurley H35-761 - Wellbore #1 - Prelim - Rev 2	2,100.0	2,101.0	91.0	81.9	9.957	SF
Hurley H35-768 - Wellbore #1 - Prelim - Rev 2	2,000.0	2,001.0	67.1	58.4	7.717	CC, ES
Hurley H35-768 - Wellbore #1 - Prelim - Rev 2	2,100.0	2,101.0	68.7	59.6	7.517	SF
Hurley H35-774 - Wellbore #1 - Prelim - Rev 2	2,000.0	2,001.0	44.8	36.1	5.154	CC, ES
Hurley H35-774 - Wellbore #1 - Prelim - Rev 2	2,100.0	2,101.0	46.4	37.3	5.080	SF
Hurley H35-779 - Wellbore #1 - Prelim - Rev 2	2,000.0	2,000.0	22.3	13.6	2.569	CC, ES, SF
Hurley State H35-713 - Wellbore #1 - Design #1	1,900.2	1,933.2	3,085.9	3,077.6	370.712	CC
Hurley State H35-713 - Wellbore #1 - Design #1	2,000.0	2,000.0	3,086.1	3,077.4	354.791	ES
Hurley State H35-713 - Wellbore #1 - Design #1	15,639.9	15,707.5	4,709.7	4,541.6	28.015	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 H35-787
Project:	Conceptual Wells	TVD Reference:	WELL @ 4851.0ft (Original Well Elev)
Reference Site:	DP 408	MD Reference:	WELL @ 4851.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	Grid
Reference Well:	Hurley H35-787	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 13						
Karakakes H13-25 - Original Drilling - Original Drilling - A	0.0	0.0	9,925.2			
Karakakes H13-25 - Original Drilling - Original Drilling - A	1,300.0	1,252.6	9,929.6	9,922.6	1,420.080	ES
Karakakes H13-25 - Original Drilling - Original Drilling - A	2,900.0	2,148.7	9,999.5	9,984.5	667.734	SF
Karakakes H13-33 - Original Drilling - Original Drilling - A	4,923.8	4,868.5	9,862.2	9,833.1	338.858	CC
Karakakes H13-33 - Original Drilling - Original Drilling - A	5,000.0	4,900.0	9,862.2	9,832.8	334.959	ES
Karakakes H13-33 - Original Drilling - Original Drilling - A	6,900.0	7,191.3	9,996.4	9,953.8	234.706	SF
Karakakes H14-63HN - Original Drilling - Original Drilling	6,564.9	11,538.3	8,551.2	8,411.2	61.098	CC, ES
Karakakes H14-63HN - Original Drilling - Original Drilling	6,750.0	11,562.5	8,580.4	8,439.3	60.798	SF
Sarchet H13-75HN - Original Drilling - Original Drilling	2,069.9	2,139.2	9,951.2	9,941.9	1,075.802	CC
Sarchet H13-75HN - Original Drilling - Original Drilling	2,100.0	2,156.4	9,951.2	9,941.9	1,061.288	ES
Sarchet H13-75HN - Original Drilling - Original Drilling	3,100.0	3,085.0	9,996.0	9,981.0	666.538	SF
UPRC 13-13J - Original Drilling - Original Drilling - As Dri	3,477.9	3,595.5	9,629.1	9,608.7	472.389	CC
UPRC 13-13J - Original Drilling - Original Drilling - As Dri	3,600.0	3,670.2	9,629.4	9,608.5	458.813	ES
UPRC 13-13J - Original Drilling - Original Drilling - As Dri	7,000.0	7,110.4	9,867.5	9,825.2	233.310	SF
UPRC 13-14J - Original Drilling - Original Drilling - As Dri						Out of range
UPRC 13-15J - Original Drilling - Original Drilling - As Dri						Out of range
UPRC 13-16J - Wellbore #1 - Wellbore #1 - As Drilled						Out of range
UPRR 39 Pan Am B1 (PA) - Original Drilling - Original Dr	2,000.0	1,996.0	9,227.5	9,183.2	208.440	CC
UPRR 39 Pan Am B1 (PA) - Original Drilling - Original Dr	5,400.0	5,314.5	9,268.9	9,149.0	77.311	ES
UPRR 39 Pan Am B1 (PA) - Original Drilling - Original Dr	7,100.0	6,893.5	9,564.3	9,408.8	61.516	SF
H Section 14						
Bohlender H14-09 - Original Drilling - Original Drilling - A						Out of range
Bohlender H14-15 - Original Drilling - Original Drilling - A	6,452.3	6,053.6	7,940.7	7,902.8	209.521	CC, ES
Bohlender H14-15 - Original Drilling - Original Drilling - A	6,850.0	6,800.0	8,049.1	8,007.8	195.074	SF
Bohlender H14-16 - Original Drilling - Original Drilling - A	6,467.6	6,394.8	8,860.4	8,821.3	226.695	CC, ES
Bohlender H14-16 - Original Drilling - Original Drilling - A	6,750.0	6,750.0	8,919.3	8,878.4	218.007	SF
Wilcox H14-03J - Original Drilling - Original Drilling - As D	186.1	158.1	8,309.3	8,308.6	10,000.000	CC
Wilcox H14-03J - Original Drilling - Original Drilling - As D	1,300.0	1,241.5	8,313.3	8,306.4	1,197.543	ES
Wilcox H14-03J - Original Drilling - Original Drilling - As D	6,700.0	7,175.8	8,439.2	8,338.3	83.613	SF
Wilcox H14-10 - Original Drilling - Original Drilling - As Dr	1,286.0	1,258.0	8,374.0	8,367.0	1,202.361	CC
Wilcox H14-10 - Original Drilling - Original Drilling - As Dr	1,300.0	1,263.6	8,374.0	8,367.0	1,193.643	ES
Wilcox H14-10 - Original Drilling - Original Drilling - As Dr	7,000.0	7,322.1	9,845.4	9,800.8	221.163	SF
Wilcox H14-11 - Original Drilling - Original Drilling - As Dr	329.3	301.3	8,340.2	8,338.7	5,664.842	CC
Wilcox H14-11 - Original Drilling - Original Drilling - As Dr	928.8	918.1	8,341.1	8,336.1	1,677.146	ES
Wilcox H14-11 - Original Drilling - Original Drilling - As Dr	6,750.0	7,401.6	9,420.9	9,332.7	106.831	SF
Wilcox H14-13 - Original Drilling - Original Drilling - As Dr	6,507.4	6,958.0	7,843.1	7,667.9	44.772	CC, ES
Wilcox H14-13 - Original Drilling - Original Drilling - As Dr	6,600.0	7,295.0	7,849.2	7,673.7	44.713	SF
H Section 19						
Butterball 13-19 - Original Drilling - Original Drilling - As D						Out of range
H Section 21						
Moser 24-21 - Wellbore #1 - Wellbore #1 - As Drilled	6,728.4	6,591.3	8,257.0	8,218.6	215.481	CC, ES
Moser 24-21 - Wellbore #1 - Wellbore #1 - As Drilled	9,700.0	6,814.4	9,956.2	9,905.0	194.499	SF
H Section 22						
HSR Demeules 09-22 - Original Drilling - Original Drilling	6,557.4	6,355.2	3,737.5	3,698.7	96.414	CC, ES
HSR Demeules 09-22 - Original Drilling - Original Drilling	6,950.0	6,729.8	3,857.2	3,816.3	94.423	SF
HSR Duryea - Wellbore #1 - Wellbore #1 - As Drilled	6,587.8	6,361.8	3,122.8	3,084.3	81.071	CC, ES
HSR Duryea - Wellbore #1 - Wellbore #1 - As Drilled	6,850.0	6,587.0	3,172.9	3,133.0	79.593	SF
Sarchet 16-22 - Wellbore #1 - Wellbore #1 - As Drilled	6,585.3	6,389.8	2,447.3	2,408.4	62.978	CC, ES
Sarchet 16-22 - Wellbore #1 - Wellbore #1 - As Drilled	6,800.0	6,591.5	2,480.7	2,440.7	61.973	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 H35-787
Project:	Conceptual Wells	TVD Reference:	WELL @ 4851.0ft (Original Well Elev)
Reference Site:	DP 408	MD Reference:	WELL @ 4851.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	Grid
Reference Well:	Hurley H35-787	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	2,675.4	2,500.0	5,798.3	5,783.9	402.211	CC
Eachus 32-23 - Original Drilling - Original Drilling - As Dri	3,700.0	3,525.6	5,800.6	5,779.8	279.486	ES
Eachus 32-23 - Original Drilling - Original Drilling - As Dri	6,850.0	6,734.9	5,968.4	5,927.4	145.789	SF
Eachus 41-23 (PA) - Original Drilling - Original Drilling - A	3,304.0	3,268.4	7,486.9	7,414.1	102.748	CC
Eachus 41-23 (PA) - Original Drilling - Original Drilling - A	6,450.0	6,327.3	7,522.3	7,379.0	52.479	ES
Eachus 41-23 (PA) - Original Drilling - Original Drilling - A	7,050.0	6,854.5	7,756.3	7,601.6	50.129	SF
Eachus UPRR 31-23 - Original Drilling - Original Drilling -	6,459.7	6,259.0	7,001.4	6,926.9	93.900	CC
Eachus UPRR 31-23 - Original Drilling - Original Drilling -	6,500.0	6,298.1	7,002.6	6,926.6	92.123	ES
Eachus UPRR 31-23 - Original Drilling - Original Drilling -	7,250.0	6,878.5	7,402.1	7,305.2	76.437	SF
Eachus UPRR 42-23 (PA) - Original Drilling - Original Dri	2,000.0	1,998.0	6,355.1	6,310.8	143.425	CC
Eachus UPRR 42-23 (PA) - Original Drilling - Original Dri	3,100.0	3,080.0	6,369.5	6,301.0	92.937	ES
Eachus UPRR 42-23 (PA) - Original Drilling - Original Dri	7,000.0	6,830.5	6,688.8	6,534.7	43.406	SF
HSR Alberstein 16-23 - Original Drilling - Original Drilling	1,135.7	1,139.9	4,417.7	4,411.4	708.626	CC
HSR Alberstein 16-23 - Original Drilling - Original Drilling	2,012.0	2,022.1	4,420.4	4,409.1	391.912	ES
HSR Alberstein 16-23 - Original Drilling - Original Drilling	6,950.0	6,923.1	5,020.4	4,979.3	122.180	SF
HSR Ashley 15-23A - Original Drilling - Original Drilling -	0.0	0.0	3,564.4			
HSR Ashley 15-23A - Original Drilling - Original Drilling -	600.0	564.8	3,565.4	3,562.4	1,187.551	ES
HSR Ashley 15-23A - Original Drilling - Original Drilling -	6,800.0	6,693.2	3,948.6	3,908.1	97.532	SF
HSR Benirschke 10-23 - Original Drilling - Original Drillin	2,921.1	2,944.3	4,623.8	4,607.1	277.751	CC
HSR Benirschke 10-23 - Original Drilling - Original Drillin	3,100.0	3,107.8	4,624.4	4,606.7	261.479	ES
HSR Benirschke 10-23 - Original Drilling - Original Drillin	6,750.0	6,441.8	4,846.4	4,806.8	122.382	SF
HSR Eachus 03-23 - Original Drilling - Original Drilling - A	2,876.2	2,400.0	6,088.2	6,073.6	418.153	CC
HSR Eachus 03-23 - Original Drilling - Original Drilling - A	2,900.0	2,400.0	6,088.2	6,073.6	416.476	ES
HSR Eachus 03-23 - Original Drilling - Original Drilling - A	5,500.0	5,500.0	6,531.3	6,471.8	109.823	SF
HSR Eachus 04-23 - Original Drilling - Original Drilling - A	100.0	56.4	6,074.5	6,074.4	10,000.000	CC
HSR Eachus 04-23 - Original Drilling - Original Drilling - A	1,000.0	937.8	6,077.0	6,071.7	1,163.048	ES
HSR Eachus 04-23 - Original Drilling - Original Drilling - A	6,650.0	6,881.4	6,396.7	6,279.5	54.561	SF
HSR Eachus 05-23 - Original Drilling - Original Drilling - A	6,511.3	6,755.0	5,048.8	4,921.0	39.513	CC, ES
HSR Eachus 05-23 - Original Drilling - Original Drilling - A	6,750.0	6,983.9	5,094.3	4,963.8	39.032	SF
HSR Fruman 06-23 - Original Drilling - Original Drilling - A	6,505.1	6,520.7	5,576.6	5,529.7	118.898	CC, ES
HSR Fruman 06-23 - Original Drilling - Original Drilling - A	6,750.0	6,673.7	5,624.8	5,577.0	117.629	SF
HSR Grasshopper 09-23 - Original Drilling - Original Drill	0.0	0.0	4,887.0			
HSR Grasshopper 09-23 - Original Drilling - Original Drill	1,800.0	1,774.7	4,894.2	4,884.3	492.773	ES
HSR Grasshopper 09-23 - Original Drilling - Original Drill	6,900.0	6,792.6	5,394.6	5,353.8	132.044	SF
Ritchey 21-23 - Original Drilling - Original Drilling - As Dri	6,470.9	6,324.7	6,244.9	6,205.9	160.498	CC, ES
Ritchey 21-23 - Original Drilling - Original Drilling - As Dri	6,900.0	6,737.0	6,376.7	6,335.6	155.100	SF
Ritchey 24-23 - Original Drilling - Original Drilling - As Dri	1,039.8	1,026.8	4,671.8	4,666.2	832.759	CC
Ritchey 24-23 - Original Drilling - Original Drilling - As Dri	1,500.0	1,467.0	4,674.1	4,665.9	571.545	ES
Ritchey 24-23 - Original Drilling - Original Drilling - As Dri	6,850.0	6,730.6	5,638.1	5,597.0	137.056	SF
Ritchey 31-24 - Original Drilling - Original Drilling - As Dri	1,403.3	1,400.0	6,570.0	6,562.3	850.815	CC
Ritchey 31-24 - Original Drilling - Original Drilling - As Dri	1,500.0	1,448.3	6,570.3	6,562.2	810.337	ES
Ritchey 31-24 - Original Drilling - Original Drilling - As Dri	6,850.0	6,818.8	7,563.6	7,516.0	158.844	SF
UPRC 23-11J - Original Drilling - Original Drilling - As Dri	6,477.6	6,321.4	3,918.2	3,879.3	100.722	CC, ES
UPRC 23-11J - Original Drilling - Original Drilling - As Dri	6,800.0	6,682.4	3,993.5	3,952.8	97.917	SF
UPRC 23-12J - Original Drilling - Original Drilling - As Dri	6,529.3	6,394.5	3,668.8	3,629.6	93.674	CC, ES
UPRC 23-12J - Original Drilling - Original Drilling - As Dri	6,800.0	6,657.7	3,726.8	3,686.1	91.719	SF
UPRC H23-13 - Wellbore #1 - Wellbore #1 - As Drilled	6,513.1	6,318.6	2,502.6	2,463.6	64.240	CC, ES
UPRC H23-13 - Wellbore #1 - Wellbore #1 - As Drilled	6,700.0	6,486.9	2,531.0	2,491.0	63.328	SF
UPRC H23-14J - Original Drilling - Original Drilling - As D	1,808.2	1,765.3	2,790.7	2,780.7	281.417	CC
UPRC H23-14J - Original Drilling - Original Drilling - As D	1,900.0	1,837.2	2,791.1	2,780.7	269.053	ES
UPRC H23-14J - Original Drilling - Original Drilling - As D	6,700.0	6,457.5	2,989.2	2,949.5	75.291	SF
UPRC H23-24 - Original Drilling - Original Drilling - As Dr	3,984.1	3,828.7	3,764.8	3,742.1	166.122	CC
UPRC H23-24 - Original Drilling - Original Drilling - As Dr	4,700.0	4,538.3	3,767.9	3,740.6	138.257	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 H35-787
Project:	Conceptual Wells	TVD Reference:	WELL @ 4851.0ft (Original Well Elev)
Reference Site:	DP 408	MD Reference:	WELL @ 4851.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	Grid
Reference Well:	Hurley H35-787	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 23						
UPRC H23-24 - Original Drilling - Original Drilling - As Dr	6,800.0	6,534.9	3,929.5	3,889.3	97.731	SF
UPRR 53 Pan Am B#1 (PA) - Original Drilling - Original D	6,497.3	6,340.3	2,801.2	2,657.3	19.477	CC
UPRR 53 Pan Am B#1 (PA) - Original Drilling - Original D	6,500.0	6,342.9	2,801.2	2,657.3	19.469	ES
UPRR 53 Pan Am B#1 (PA) - Original Drilling - Original D	6,750.0	6,582.1	2,851.0	2,701.8	19.111	SF
UPRR 53 Pan Am UT V#1 - Original Drilling - Original Dr	0.0	0.0	6,565.4			
UPRR 53 Pan Am UT V#1 - Original Drilling - Original Dr	4,800.0	4,767.7	6,580.1	6,551.8	232.558	ES
UPRR 53 Pan Am UT V#1 - Original Drilling - Original Dr	6,850.0	6,762.0	6,702.5	6,661.5	163.628	SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region Drilling - Sandbox	Local Co-ordinate Reference:	Well Hurley H35-787
Project:	Conceptual Wells	TVD Reference:	WELL @ 4851.0ft (Original Well Elev)
Reference Site:	DP 408	MD Reference:	WELL @ 4851.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	Grid
Reference Well:	Hurley H35-787	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 24						
Gurtler 24-09J - Original Drilling - Original Drilling - As Dr	100.0	0.0	9,461.8			
Gurtler 24-09J - Original Drilling - Original Drilling - As Dr	1,900.0	1,797.2	9,471.1	9,460.8	924.915	ES
Gurtler 24-09J - Original Drilling - Original Drilling - As Dr	5,700.0	5,300.0	9,983.4	9,951.2	309.700	SF
Gurtler 24-10J - Original Drilling - Original Drilling - As Dr	2,027.0	2,030.7	8,356.2	8,344.9	736.939	CC, ES
Gurtler 24-10J - Original Drilling - Original Drilling - As Dr	6,950.0	6,950.0	9,176.0	9,135.0	224.256	SF
Gurtler 24-11J - Original Drilling - Original Drilling - As Dr	0.0	0.0	7,172.6			
Gurtler 24-11J - Original Drilling - Original Drilling - As Dr	2,000.0	1,939.7	7,180.4	7,169.4	655.383	ES
Gurtler 24-11J - Original Drilling - Original Drilling - As Dr	6,800.0	6,700.0	7,770.2	7,730.1	193.931	SF
Gurtler 24-12J - Original Drilling - Original Drilling - As Dr	2,002.9	2,002.1	6,231.7	6,220.5	557.504	CC, ES
Gurtler 24-12J - Original Drilling - Original Drilling - As Dr	6,700.0	6,500.0	6,710.8	6,671.5	170.466	SF
Gurtler 24-12J - Original Drilling - ST01 - ST01 Original D	1,720.8	1,717.9	6,234.5	6,225.9	729.256	CC
Gurtler 24-12J - Original Drilling - ST01 - ST01 Original D	2,100.0	2,125.0	6,234.9	6,224.1	576.505	ES
Gurtler 24-12J - Original Drilling - ST01 - ST01 Original D	6,800.0	6,800.0	6,751.8	6,712.2	170.486	SF
Gurtler 24-13J - Original Drilling - Original Drilling - As Dr	0.0	1.8	5,402.7			
Gurtler 24-13J - Original Drilling - Original Drilling - As Dr	2,000.0	1,978.3	5,409.1	5,398.0	487.668	ES
Gurtler 24-13J - Original Drilling - Original Drilling - As Dr	6,900.0	7,415.2	6,134.9	6,088.4	132.099	SF
Gurtler 24-15J - Original Drilling - Original Drilling - As Dr	100.0	34.1	7,797.5	7,797.4	10,000.000	CC
Gurtler 24-15J - Original Drilling - Original Drilling - As Dr	2,029.9	2,038.7	7,806.5	7,795.1	686.486	ES
Gurtler 24-15J - Original Drilling - Original Drilling - As Dr	10,000.0	7,089.6	9,950.5	9,901.5	203.150	SF
Gurtler 24-16J - Original Drilling - Original Drilling - As Dr	2,034.3	2,042.9	8,787.0	8,775.7	771.978	CC, ES
Gurtler 24-16J - Original Drilling - Original Drilling - As Dr	6,850.0	6,850.0	9,535.4	9,495.1	236.840	SF
Gurtler H24-14 - Original Drilling - Original Drilling - As D	2,009.5	2,000.0	6,615.3	6,604.0	590.370	CC, ES
Gurtler H24-14 - Original Drilling - Original Drilling - As D	11,600.0	6,837.6	9,980.3	9,926.6	186.064	SF
Gurtler H24-21 (PA) - Original Drilling - Original Drilling -	2,116.7	2,232.8	8,018.0	8,005.7	654.749	CC, ES
Gurtler H24-21 (PA) - Original Drilling - Original Drilling -	6,900.0	6,900.0	8,739.3	8,698.4	213.845	SF
Gurtler H24-23 - Original Drilling - Original Drilling - As D	2,006.5	1,967.6	8,645.1	8,634.0	781.241	CC, ES
Gurtler H24-23 - Original Drilling - Original Drilling - As D	6,850.0	6,850.0	9,395.1	9,354.8	232.726	SF
Gurtler H24-24 - Original Drilling - Original Drilling - As D	1,994.1	1,963.2	7,471.9	7,460.8	677.925	CC
Gurtler H24-24 - Original Drilling - Original Drilling - As D	2,000.0	1,967.6	7,471.9	7,460.8	676.179	ES
Gurtler H24-24 - Original Drilling - Original Drilling - As D	6,650.0	6,650.0	8,256.8	8,217.3	209.162	SF
Gurtler H24-99HZ - Wellbore #1 - Original Drilling	6,260.5	11,118.0	6,111.7	6,044.1	90.382	CC, ES
Gurtler H24-99HZ - Wellbore #1 - Original Drilling	10,100.0	11,118.0	8,275.5	8,172.3	80.202	SF
Gurtler H25-27 - Original Drilling - Original Drilling - As D	3,453.1	4,836.6	8,622.3	8,596.8	336.971	CC
Gurtler H25-27 - Original Drilling - Original Drilling - As D	3,500.0	4,847.1	8,622.4	8,596.7	334.730	ES
Gurtler H25-27 - Original Drilling - Original Drilling - As D	9,600.0	7,017.4	9,977.7	9,929.3	206.210	SF
Gurtler Russell L1 (PA) - Original Drilling - Original Drilling	0.0	0.0	6,308.0			
Gurtler Russell L1 (PA) - Original Drilling - Original Drilling	500.0	480.7	6,309.4	6,306.9	2,539.182	ES
Gurtler Russell L1 (PA) - Original Drilling - Original Drilling	7,400.0	7,041.5	7,290.7	7,239.6	142.625	SF
HSR Brutschy 04-24 - Original Drilling - Original Drilling -	2,371.1	2,520.6	8,203.0	8,189.3	594.634	CC
HSR Brutschy 04-24 - Original Drilling - Original Drilling -	2,400.0	2,533.3	8,203.1	8,189.2	590.031	ES
HSR Brutschy 04-24 - Original Drilling - Original Drilling -	7,000.0	6,842.6	8,558.2	8,517.1	207.791	SF
HSR Epstein 05-24 - Original Drilling - Original Drilling - A	0.0	0.0	7,861.9			
HSR Epstein 05-24 - Original Drilling - Original Drilling - A	500.0	460.2	7,863.3	7,860.9	3,258.041	ES
HSR Epstein 05-24 - Original Drilling - Original Drilling - A	6,900.0	6,673.1	8,302.5	8,262.2	205.606	SF
HSR Hoffman 03-24 - Original Drilling - Original Drilling -	0.0	0.0	9,019.6			
HSR Hoffman 03-24 - Original Drilling - Original Drilling -	700.0	645.1	9,021.2	9,017.7	2,571.262	ES
HSR Hoffman 03-24 - Original Drilling - Original Drilling -	7,250.0	7,111.0	9,687.4	9,638.5	198.299	SF
HSR Sarchet 02-24 - Original Drilling - Original Drilling - A	2,047.6	2,083.2	9,966.2	9,954.6	861.582	CC
HSR Sarchet 02-24 - Original Drilling - Original Drilling - A	2,100.0	2,121.7	9,966.4	9,954.6	843.429	ES
HSR Sarchet 02-24 - Original Drilling - Original Drilling - A	2,700.0	2,679.4	9,993.0	9,977.9	661.812	SF
HSR Sarchet 06-24 - Original Drilling - Original Drilling - A	2,018.5	2,020.7	8,104.6	8,093.3	717.924	CC, ES
HSR Sarchet 06-24 - Original Drilling - Original Drilling - A	7,150.0	6,752.4	8,867.3	8,826.8	218.990	SF
HSR Traurig 01-24 - Original Drilling - Original Drilling - A						Out of range

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 H35-787
Project:	Conceptual Wells	TVD Reference:	WELL @ 4851.0ft (Original Well Elev)
Reference Site:	DP 408	MD Reference:	WELL @ 4851.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	Grid
Reference Well:	Hurley H35-787	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						
Nopens D19-31 - Original Drilling - Original Drilling - As D						Out of range
Nopens H24-08 - Original Drilling - Original Drilling - As D						Out of range
Sarchet H24-22 - Original Drilling - Original Drilling - As D	1,982.5	1,936.6	9,187.0	9,176.1	842.779	CC
Sarchet H24-22 - Original Drilling - Original Drilling - As D	2,000.0	1,947.6	9,187.0	9,176.0	836.807	ES
Sarchet H24-22 - Original Drilling - Original Drilling - As D	6,900.0	6,600.0	9,895.4	9,855.6	248.545	SF
Weld County Lumber 01 - Original Drilling - Original Drilling - As D	100.0	41.5	9,509.7	9,509.5	10,000.000	CC
Weld County Lumber 01 - Original Drilling - Original Drilling - As D	2,000.0	1,911.9	9,518.3	9,507.5	875.887	ES
Weld County Lumber 01 - Original Drilling - Original Drilling - As D	6,450.0	6,250.5	9,997.2	9,959.2	262.975	SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region Drilling - Sandbox	Local Co-ordinate Reference:	Well Hurley H35-787
Project:	Conceptual Wells	TVD Reference:	WELL @ 4851.0ft (Original Well Elev)
Reference Site:	DP 408	MD Reference:	WELL @ 4851.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	Grid
Reference Well:	Hurley H35-787	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	575.0	554.0	5,856.1	5,853.2	2,013.545	CC
Dechant 21-25 - Original Drilling - Original Drilling - As D	1,400.0	1,358.7	5,857.0	5,849.4	773.661	ES
Dechant 21-25 - Original Drilling - Original Drilling - As D	12,900.0	7,250.7	9,981.5	9,913.9	147.655	SF
Dechant D30-33D - Original Drilling - Original Drilling - As	0.0	0.0	8,442.3			
Dechant D30-33D - Original Drilling - Original Drilling - As	100.0	34.0	8,442.3	8,442.2	10,000.000	ES
Dechant D30-33D - Original Drilling - Original Drilling - As	5,800.0	3,159.1	9,994.2	9,969.2	400.470	SF
Dechant D31-30D - Original Drilling - Original Drilling - As	100.0	37.4	8,445.8	8,445.6	10,000.000	CC, ES
Dechant D31-30D - Original Drilling - Original Drilling - As	10,700.0	7,006.0	9,995.0	9,929.0	151.507	SF
Dechant H25-64-1HN - Original Drilling - Original Drilling	2,327.4	2,864.3	4,433.6	4,419.3	309.051	CC, ES
Dechant H25-64-1HN - Original Drilling - Original Drilling	11,300.0	6,423.0	5,656.4	5,600.9	101.798	SF
Dechant H25-65HN - Original Drilling - Original Drilling	2,656.8	3,658.9	4,404.0	4,387.3	263.770	CC, ES
Dechant H25-65HN - Original Drilling - Original Drilling	10,900.0	6,417.0	5,910.6	5,857.7	111.738	SF
HSR Cohn 03-25 - Original Drilling - Original Drilling - As	2,042.9	2,042.9	5,990.3	5,978.9	524.733	CC
HSR Cohn 03-25 - Original Drilling - Original Drilling - As	2,100.0	2,143.6	5,990.7	5,978.8	503.780	ES
HSR Cohn 03-25 - Original Drilling - Original Drilling - As	11,600.0	6,861.3	8,914.4	8,858.7	159.954	SF
HSR Crowe 06-25 - Original Drilling - Original Drilling - A	2,019.1	2,031.8	5,852.8	5,841.4	517.398	CC, ES
HSR Crowe 06-25 - Original Drilling - Original Drilling - A	12,200.0	7,131.9	8,495.9	8,432.9	134.849	SF
HSR Dechant 04-25 - Original Drilling - Original Drilling -	2,124.4	2,370.3	4,978.6	4,961.3	287.499	CC
HSR Dechant 04-25 - Original Drilling - Original Drilling -	2,300.0	2,766.7	4,983.9	4,959.5	204.181	ES
HSR Dechant 04-25 - Original Drilling - Original Drilling -	6,650.0	6,984.4	5,727.9	5,664.8	90.858	SF
HSR Dechant 05-25 - Original Drilling - Original Drilling -	1,998.9	1,989.9	4,838.8	4,827.7	435.007	CC
HSR Dechant 05-25 - Original Drilling - Original Drilling -	2,000.0	1,990.7	4,838.8	4,827.7	434.797	ES
HSR Dechant 05-25 - Original Drilling - Original Drilling -	11,000.0	7,074.3	6,934.4	6,878.5	124.100	SF
KY Blue D30-32 - Original Drilling - Original Drilling - As D	2,029.4	2,056.5	8,984.9	8,973.5	786.878	CC, ES
KY Blue D30-32 - Original Drilling - Original Drilling - As D	6,850.0	6,622.3	9,995.6	9,956.5	255.670	SF
KY Blue H25-04J - Original Drilling - Original Drilling - As	2,000.0	1,949.0	8,453.7	8,446.0	1,090.537	CC, ES
KY Blue H25-04J - Original Drilling - Original Drilling - As	13,300.0	6,970.0	9,995.0	9,929.0	151.537	SF
KY Blue H25-09 - Original Drilling - Original Drilling - As D	2,007.0	1,972.7	8,583.8	8,572.7	774.955	CC, ES
KY Blue H25-09 - Original Drilling - Original Drilling - As D	11,500.0	6,915.9	9,996.0	9,931.6	155.409	SF
KY Blue H25-10 - Original Drilling - Original Drilling - As D	100.0	38.7	7,075.3	7,075.1	10,000.000	CC
KY Blue H25-10 - Original Drilling - Original Drilling - As D	1,400.0	1,317.4	7,080.4	7,072.9	952.465	ES
KY Blue H25-10 - Original Drilling - Original Drilling - As D	13,800.0	7,058.8	9,796.9	9,721.2	129.563	SF
KY Blue H25-11 - Original Drilling - Original Drilling - As D	291.1	257.1	6,033.5	6,032.2	4,889.365	CC
KY Blue H25-11 - Original Drilling - Original Drilling - As D	900.0	830.9	6,034.4	6,029.8	1,309.679	ES
KY Blue H25-11 - Original Drilling - Original Drilling - As D	11,600.0	7,036.3	7,591.4	7,497.3	80.617	SF
KY Blue H25-12 - Original Drilling - Original Drilling - As D	2,104.9	2,259.3	4,532.7	4,520.0	357.951	CC, ES
KY Blue H25-12 - Original Drilling - Original Drilling - As D	11,300.0	6,841.5	6,167.8	6,109.0	104.943	SF
KY Blue H25-14 - Original Drilling - Original Drilling - As D	100.0	41.9	6,513.4	6,513.2	10,000.000	CC
KY Blue H25-14 - Original Drilling - Original Drilling - As D	2,000.0	1,929.8	6,515.4	6,504.5	597.037	ES
KY Blue H25-14 - Original Drilling - Original Drilling - As D	14,500.0	14,500.0	8,347.6	8,239.9	77.484	SF
KY Blue H25-15 - Original Drilling - Original Drilling - As D	306.2	260.2	7,432.1	7,430.8	5,816.687	CC
KY Blue H25-15 - Original Drilling - Original Drilling - As D	2,000.0	1,934.6	7,439.0	7,428.1	680.284	ES
KY Blue H25-15 - Original Drilling - Original Drilling - As D	14,400.0	6,886.1	9,290.1	9,207.5	112.449	SF
KY H25-24 - Original Drilling - Original Drilling - As Drilled	177.7	133.7	6,859.2	6,858.7	10,000.000	CC
KY H25-24 - Original Drilling - Original Drilling - As Drilled	600.0	521.4	6,860.1	6,857.2	2,406.720	ES
KY H25-24 - Original Drilling - Original Drilling - As Drilled	13,900.0	7,105.5	9,020.6	8,940.9	113.228	SF
Moore UPRC H25-01 - Original Drilling - Original Drilling	2,013.5	1,977.8	8,750.2	8,739.1	785.708	CC, ES
Moore UPRC H25-01 - Original Drilling - Original Drilling	8,300.0	6,925.7	9,996.8	9,954.6	236.821	SF
Moore UPRC H25-02 - Original Drilling - Original Drilling	1,324.8	1,283.8	7,354.0	7,346.8	1,028.934	CC
Moore UPRC H25-02 - Original Drilling - Original Drilling	2,004.5	1,972.3	7,355.3	7,344.2	664.365	ES
Moore UPRC H25-02 - Original Drilling - Original Drilling	11,400.0	6,917.2	9,971.7	9,914.2	173.438	SF
Moser 25-32 - Original Drilling - Original Drilling - As Drill	100.0	41.8	6,939.3	6,939.1	10,000.000	CC
Moser 25-32 - Original Drilling - Original Drilling - As Drill	2,022.2	2,027.6	6,940.9	6,929.6	613.899	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 H35-787
Project:	Conceptual Wells	TVD Reference:	WELL @ 4851.0ft (Original Well Elev)
Reference Site:	DP 408	MD Reference:	WELL @ 4851.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	Grid
Reference Well:	Hurley H35-787	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						
Moser 25-32 - Original Drilling - Original Drilling - As Drill	13,300.0	7,068.6	9,996.9	9,926.7	142.487	SF
Moser 25-42 - Original Drilling - Original Drilling - As Drill	774.7	715.8	8,587.6	8,583.7	2,189.980	CC
Moser 25-42 - Original Drilling - Original Drilling - As Drill	2,000.0	1,900.0	8,589.9	8,579.1	794.644	ES
Moser 25-42 - Original Drilling - Original Drilling - As Drill	9,600.0	6,941.9	9,981.8	9,931.8	199.782	SF
UPRR 53 Pan Am T#2 - Original Drilling - Original Drilling	2,059.7	2,144.0	5,614.9	5,603.1	476.309	CC, ES
UPRR 53 Pan Am T#2 - Original Drilling - Original Drilling	11,600.0	6,656.6	8,289.6	8,233.4	147.644	SF
UPRR 53 Pan Am UT T#1 - Original Drilling - Original Dr	2,000.0	1,942.0	7,979.7	7,936.5	184.761	CC
UPRR 53 Pan Am UT T#1 - Original Drilling - Original Dr	2,100.0	2,042.0	7,981.2	7,935.8	175.773	ES
UPRR 53 Pan Am UT T#1 - Original Drilling - Original Dr	10,000.0	6,963.0	9,548.5	9,381.6	57.191	SF
Von Feldt 1-25B - Original Drilling - Original Drilling - As D	2,003.6	1,984.6	5,458.9	5,447.8	491.184	CC, ES
Von Feldt 1-25B - Original Drilling - Original Drilling - As D	12,500.0	7,168.7	6,724.2	6,653.5	95.023	SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region Drilling - Sandbox	Local Co-ordinate Reference:	Well Hurley H35-787
Project:	Conceptual Wells	TVD Reference:	WELL @ 4851.0ft (Original Well Elev)
Reference Site:	DP 408	MD Reference:	WELL @ 4851.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	Grid
Reference Well:	Hurley H35-787	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 26						
Bullard 31-26 - Original Drilling - Original Drilling - As Dril	1,655.8	1,646.0	2,520.0	2,510.8	275.018	CC
Bullard 31-26 - Original Drilling - Original Drilling - As Dril	1,800.0	1,775.9	2,520.4	2,510.4	253.542	ES
Bullard 31-26 - Original Drilling - Original Drilling - As Dril	6,700.0	6,552.8	3,141.5	3,102.2	79.849	SF
Bullard 32-26 - Original Drilling - Original Drilling - As Dril	2,026.8	2,044.7	2,041.0	2,029.6	179.285	CC, ES
Bullard 32-26 - Original Drilling - Original Drilling - As Dril	7,400.0	7,019.1	3,098.2	3,057.4	75.783	SF
Bullard 41-26 - Original Drilling - Original Drilling - As Dril	1,869.0	1,871.1	3,223.9	3,213.5	309.257	CC
Bullard 41-26 - Original Drilling - Original Drilling - As Dril	2,000.0	1,988.8	3,224.3	3,213.1	289.722	ES
Bullard 41-26 - Original Drilling - Original Drilling - As Dril	7,100.0	7,005.5	4,011.8	3,970.8	97.913	SF
Dechant H25-29D - Original Drilling - Original Drilling - As	111.9	132.0	3,813.5	3,813.1	9,198.941	CC
Dechant H25-29D - Original Drilling - Original Drilling - As	200.0	197.8	3,813.8	3,812.9	4,513.813	ES
Dechant H25-29D - Original Drilling - Original Drilling - As	8,400.0	8,400.0	7,278.1	7,224.8	136.374	SF
Dechant H25-33D - Original Drilling - Original Drilling - As	2,128.0	2,393.0	3,732.9	3,715.1	209.234	CC
Dechant H25-33D - Original Drilling - Original Drilling - As	2,200.0	2,489.5	3,733.4	3,714.5	197.823	ES
Dechant H25-33D - Original Drilling - Original Drilling - As	10,700.0	8,459.0	5,363.8	5,267.3	55.586	SF
Harsh H26-09D - Original Drilling - Original Drilling - As D	2,114.6	2,258.9	3,553.2	3,540.9	288.401	CC, ES
Harsh H26-09D - Original Drilling - Original Drilling - As D	10,400.0	7,050.0	4,906.7	4,852.6	90.719	SF
Harsh H26-10 - Original Drilling - Original Drilling - As Dr	2,018.1	2,039.1	2,370.8	2,359.5	209.045	CC, ES
Harsh H26-10 - Original Drilling - Original Drilling - As Dr	9,100.0	7,032.7	3,294.1	3,247.4	70.458	SF
Harsh H26-15 - Original Drilling - Original Drilling - As Dr	9,659.0	6,970.9	3,108.0	3,055.5	59.119	CC, ES
Harsh H26-15 - Original Drilling - Original Drilling - As Dr	10,400.0	6,977.8	3,195.1	3,138.7	56.564	SF
Harsh H26-16 - Original Drilling - Original Drilling - As Dr	2,030.6	2,071.6	3,995.5	3,984.0	347.681	CC, ES
Harsh H26-16 - Original Drilling - Original Drilling - As Dr	11,200.0	7,001.9	4,421.0	4,359.3	71.663	SF
Harsh H26-23D - Original Drilling - Original Drilling - As D	1,055.0	1,074.0	2,389.6	2,384.9	505.153	CC
Harsh H26-23D - Original Drilling - Original Drilling - As D	1,100.0	1,109.2	2,389.7	2,384.7	482.842	ES
Harsh H26-23D - Original Drilling - Original Drilling - As D	10,400.0	7,110.2	4,033.2	3,973.9	68.026	SF
HSR Moser 04-26 - Original Drilling - Original Drilling - As	6,502.8	6,341.8	1,415.8	1,376.8	36.252	CC, ES
HSR Moser 04-26 - Original Drilling - Original Drilling - As	6,600.0	6,441.4	1,423.0	1,383.4	35.909	SF
HSR Moser 06-26 - Original Drilling - Original Drilling - As	1,785.2	1,768.3	870.8	860.9	88.145	CC
HSR Moser 06-26 - Original Drilling - Original Drilling - As	2,000.0	1,979.6	871.4	860.3	78.534	ES
HSR Moser 06-26 - Original Drilling - Original Drilling - As	7,150.0	6,914.3	1,930.9	1,890.6	47.834	SF
HSR Regalia 05-26 - Original Drilling - Original Drilling - A	4,219.1	4,119.6	483.5	459.2	19.864	CC
HSR Regalia 05-26 - Original Drilling - Original Drilling - A	4,300.0	4,198.2	483.9	459.1	19.475	ES
HSR Regalia 05-26 - Original Drilling - Original Drilling - A	4,900.0	4,764.3	523.5	495.0	18.402	SF
HSR-Moser 03-26A - Original Drilling - Original Drilling - A	199.7	166.7	1,891.6	1,890.8	2,663.323	CC
HSR-Moser 03-26A - Original Drilling - Original Drilling - A	2,100.0	2,053.9	1,892.2	1,880.7	163.634	ES
HSR-Moser 03-26A - Original Drilling - Original Drilling - A	6,650.0	6,434.3	2,275.0	2,235.9	58.159	SF
John 03-26 - Original Drilling - Original Drilling - As Drille	2,409.7	2,388.0	1,623.5	1,610.1	120.974	CC
John 03-26 - Original Drilling - Original Drilling - As Drille	2,600.0	2,569.8	1,624.1	1,609.6	112.075	ES
John 03-26 - Original Drilling - Original Drilling - As Drille	6,600.0	6,458.7	2,013.2	1,974.2	51.643	SF
Lamp H25-31 - Original Drilling - Original Drilling - As Dri	488.5	496.5	3,954.9	3,952.4	1,573.105	CC
Lamp H25-31 - Original Drilling - Original Drilling - As Dri	2,100.0	2,169.3	3,963.1	3,951.1	330.930	ES
Lamp H25-31 - Original Drilling - Original Drilling - As Dri	7,200.0	7,067.0	4,932.7	4,891.7	120.279	SF
Lamp H26-01 - Original Drilling - Original Drilling - As Dri	1,837.0	1,845.8	3,956.4	3,946.1	383.847	CC
Lamp H26-01 - Original Drilling - Original Drilling - As Dri	1,900.0	1,881.4	3,956.6	3,946.1	373.908	ES
Lamp H26-01 - Original Drilling - Original Drilling - As Dri	6,900.0	6,900.0	4,649.6	4,605.4	104.987	SF
Lamp H26-08 - Original Drilling - Original Drilling - As Dri	2,052.5	2,106.2	3,362.1	3,350.4	288.388	CC, ES
Lamp H26-08 - Original Drilling - Original Drilling - As Dri	11,100.0	11,100.0	6,028.3	5,965.6	96.290	SF
Lamp H26-22 - Original Drilling - Original Drilling - As Dri	2,637.5	3,312.3	3,242.9	3,223.8	169.726	CC, ES
Lamp H26-22 - Original Drilling - Original Drilling - As Dri	8,000.0	7,199.4	3,700.4	3,652.6	77.379	SF
Moser 05-26 - Original Drilling - Original Drilling - As Drill	5,239.4	5,134.2	265.0	234.1	8.563	CC, ES
Moser 05-26 - Original Drilling - Original Drilling - As Drill	7,219.5	6,925.2	310.1	269.7	7.669	SF
Moser 41-27 - Original Drilling - Original Drilling - As Drill	6,667.9	6,627.8	616.4	576.6	15.504	CC, ES
Moser 41-27 - Original Drilling - Original Drilling - As Drill	6,750.0	6,706.2	620.8	580.7	15.459	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 H35-787
Project:	Conceptual Wells	TVD Reference:	WELL @ 4851.0ft (Original Well Elev)
Reference Site:	DP 408	MD Reference:	WELL @ 4851.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	Grid
Reference Well:	Hurley H35-787	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 H26-11 - Original Drilling - Original Drilling - As Dr	2,061.1	2,059.0	1,040.6	1,029.1	90.434	CC
Moser H26-11 - Original Drilling - Original Drilling - As Dr	2,100.0	2,098.7	1,040.8	1,029.0	88.730	ES
Moser H26-11 - Original Drilling - Original Drilling - As Dr	8,300.0	6,984.7	1,540.3	1,497.1	35.613	SF
Moser H26-12 - Wellbore #1 - Wellbore #1 - As Drilled	8,442.0	6,992.3	397.6	353.3	8.983	CC, ES, SF
Moser H26-13 - Wellbore #1 - Wellbore #1 - As Drilled	9,752.0	7,000.3	353.8	300.3	6.608	CC, ES, SF
Moser H26-14 - Original Drilling - Original Drilling - As Dr	9,947.4	7,096.1	1,885.9	1,830.2	33.873	CC, ES
Moser H26-14 - Original Drilling - Original Drilling - As Dr	10,200.0	7,094.1	1,902.7	1,846.0	33.582	SF
Moser H26-18D - Original Drilling - Original Drilling - As D	5,063.3	5,794.7	2,205.0	2,169.1	61.340	CC, ES
Moser H26-18D - Original Drilling - Original Drilling - As D	6,650.0	6,982.3	2,411.6	2,368.7	56.224	SF
Moser H26-24 - Original Drilling - Original Drilling - As Dr	2,029.2	2,049.4	2,050.8	2,039.4	179.723	CC, ES
Moser H26-24 - Original Drilling - Original Drilling - As Dr	9,300.0	6,992.1	2,231.0	2,182.3	45.757	SF
Moser H26-25 - Original Drilling - Original Drilling - As Dr	9,137.4	6,992.7	1,400.4	1,351.7	28.741	CC, ES
Moser H26-25 - Original Drilling - Original Drilling - As Dr	9,200.0	6,992.5	1,401.8	1,352.9	28.665	SF
Moser H26-27D - Original Drilling - Original Drilling - As D	2,451.8	2,841.6	3,655.3	3,638.1	212.380	CC
Moser H26-27D - Original Drilling - Original Drilling - As D	2,500.0	2,888.7	3,655.6	3,638.0	207.874	ES
Moser H26-27D - Original Drilling - Original Drilling - As D	6,750.0	6,797.7	4,059.5	4,014.3	89.652	SF
Moser H26-28D - Original Drilling - Original Drilling - As D	5,320.5	6,024.1	2,776.7	2,716.6	46.204	CC, ES
Moser H26-28D - Original Drilling - Original Drilling - As D	6,500.0	6,979.7	2,836.4	2,771.5	43.662	SF
Moser H26-29D - Original Drilling - Original Drilling - As D	6,502.8	7,558.7	2,116.3	2,024.4	23.014	CC, ES
Moser H26-29D - Original Drilling - Original Drilling - As D	6,600.0	7,624.8	2,123.7	2,031.2	22.962	SF
Moser, Wesley E. G. U. B1 (PA) - Original Drilling - Origin	9,431.5	7,002.0	752.8	586.0	4.514	CC, ES, SF
H Section 27						
HSR Moser 1-27 - Original Drilling - Original Drilling - As	6,601.5	6,405.5	1,588.6	1,550.0	41.162	CC, ES
HSR Moser 1-27 - Original Drilling - Original Drilling - As	6,750.0	6,533.1	1,604.6	1,565.2	40.736	SF
HSR Moser 16-27 - Original Drilling - Original Drilling - As	9,913.3	6,997.9	742.7	687.9	13.553	CC, ES
HSR Moser 16-27 - Original Drilling - Original Drilling - As	10,000.0	6,998.3	747.8	691.6	13.322	SF
Moser 09-27X (PA) - Original Drilling - Original Drilling - A	8,498.9	7,012.4	791.3	744.0	16.757	CC
Moser 09-27X (PA) - Original Drilling - Original Drilling - A	8,500.0	7,012.4	791.3	744.0	16.753	ES
Moser 09-27X (PA) - Original Drilling - Original Drilling - A	8,600.0	7,010.6	797.7	749.4	16.515	SF
Moser 24-27 - Original Drilling - Original Drilling - As Drill	7,835.3	7,050.3	1,520.9	1,477.0	34.631	CC, ES
Moser 24-27 - Original Drilling - Original Drilling - As Drill	8,000.0	7,053.4	1,529.8	1,485.5	34.541	SF
H Section 34						
Moser H34-09 - Wellbore #1 - Wellbore #1 - As Drilled	13,733.6	7,012.9	809.2	719.8	9.051	CC, ES
Moser H34-09 - Wellbore #1 - Wellbore #1 - As Drilled	13,800.0	7,013.0	811.9	721.5	8.977	SF
Moser H34-16 - Wellbore #1 - Wellbore #1 - As Drilled	14,982.5	7,001.2	813.5	712.2	8.028	CC
Moser H34-16 - Wellbore #1 - Wellbore #1 - As Drilled	15,000.0	7,000.7	813.7	712.1	8.005	ES
Moser H34-16 - Wellbore #1 - Wellbore #1 - As Drilled	15,100.0	7,002.1	822.0	719.2	7.997	SF
Moser H34-31 - Wellbore #1 - Wellbore #1 - As Drilled	11,729.7	7,088.3	5,465.3	5,394.3	76.990	CC
Moser H34-31 - Wellbore #1 - Wellbore #1 - As Drilled	11,800.0	7,090.5	5,465.7	5,394.0	76.205	ES
Moser H34-31 - Wellbore #1 - Wellbore #1 - As Drilled	14,100.0	7,149.3	5,956.7	5,865.6	65.408	SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region Drilling - Sandbox	Local Co-ordinate Reference:	Well Hurley H35-787
Project:	Conceptual Wells	TVD Reference:	WELL @ 4851.0ft (Original Well Elev)
Reference Site:	DP 408	MD Reference:	WELL @ 4851.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	Grid
Reference Well:	Hurley H35-787	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	14,632.8	7,021.3	3,844.8	3,746.7	39.178	CC
Cannon Farms 01-35C - Original Drilling - Original Drilling	15,000.0	15,000.0	3,862.3	3,734.0	30.108	ES, SF
Cannon H35-03D - Original Drilling - Original Drilling - As	14,125.3	7,052.6	1,415.8	1,322.4	15.155	CC, ES
Cannon H35-03D - Original Drilling - Original Drilling - As	14,200.0	7,050.1	1,417.8	1,324.1	15.143	SF
Cannon H35-09 - Original Drilling - Original Drilling - As D	13,701.3	7,063.1	4,221.5	4,126.6	44.446	CC, ES
Cannon H35-09 - Original Drilling - Original Drilling - As D	14,500.0	7,046.0	4,296.4	4,196.8	43.129	SF
Cannon H35-10 - Original Drilling - Original Drilling - As D	13,815.0	6,973.5	2,981.2	2,891.2	33.118	CC, ES
Cannon H35-10 - Original Drilling - Original Drilling - As D	14,200.0	6,975.3	3,006.0	2,913.8	32.611	SF
Cannon H35-11 - Original Drilling - Original Drilling - As D	13,702.3	7,067.8	1,911.1	1,821.6	21.356	CC, ES
Cannon H35-11 - Original Drilling - Original Drilling - As D	13,800.0	7,068.9	1,913.6	1,823.6	21.274	SF
Cannon H35-12 - Original Drilling - Original Drilling - As D	13,800.0	7,002.6	446.8	356.6	4.957	SF
Cannon H35-12 - Original Drilling - Original Drilling - As D	13,808.4	7,002.7	446.7	356.6	4.959	CC, ES
Cannon H35-13 - Wellbore #1 - Wellbore #1 - As Drilled	15,000.0	7,008.6	388.2	286.8	3.827	ES, SF
Cannon H35-13 - Wellbore #1 - Wellbore #1 - As Drilled	15,000.4	7,008.6	388.2	286.8	3.827	CC
Cannon H35-14 - Original Drilling - Original Drilling - As D	15,029.9	7,020.9	1,781.7	1,673.0	16.385	CC, ES
Cannon H35-14 - Original Drilling - Original Drilling - As D	15,100.0	7,020.4	1,783.1	1,674.1	16.353	SF
Cannon H35-15 (PA) - Original Drilling - Original Drilling -	15,062.8	7,014.0	2,998.2	2,780.2	13.750	CC
Cannon H35-15 (PA) - Original Drilling - Original Drilling -	15,100.0	7,014.0	2,998.5	2,780.2	13.735	ES
Cannon H35-15 (PA) - Original Drilling - Original Drilling -	15,300.0	7,014.0	3,007.6	2,788.1	13.703	SF
Cannon H35-20 - Original Drilling - Original Drilling - As D	13,207.5	7,064.5	1,042.7	957.8	12.278	CC, ES, SF
Cannon H35-21 - Original Drilling - Original Drilling - As D	13,284.1	7,005.1	2,465.6	2,380.5	28.955	CC
Cannon H35-21 - Original Drilling - Original Drilling - As D	13,300.0	7,005.2	2,465.7	2,380.4	28.921	ES
Cannon H35-21 - Original Drilling - Original Drilling - As D	13,600.0	7,007.3	2,485.8	2,399.1	28.667	SF
Cannon H35-22 - Original Drilling - Original Drilling - As D	13,199.8	6,842.1	3,393.4	3,309.7	40.521	CC
Cannon H35-22 - Original Drilling - Original Drilling - As D	13,200.0	6,842.1	3,393.4	3,309.7	40.520	ES
Cannon H35-22 - Original Drilling - Original Drilling - As D	13,800.0	6,841.4	3,446.1	3,358.9	39.506	SF
Cannon H35-24 - Original Drilling - Original Drilling - As D	14,472.8	7,083.1	2,263.5	2,166.7	23.371	CC, ES
Cannon H35-24 - Original Drilling - Original Drilling - As D	14,700.0	7,084.5	2,274.9	2,177.0	23.235	SF
Cannon X02-27 - Original Drilling - Original Drilling - As D	15,545.0	7,004.4	3,420.5	3,313.9	32.074	CC, ES
Cannon X02-27 - Original Drilling - Original Drilling - As D	15,639.9	7,004.5	3,421.6	3,314.3	31.885	SF
Cannon X02-28 - Original Drilling - Original Drilling - As D	15,316.8	7,056.3	2,235.3	2,130.6	21.338	CC, ES
Cannon X02-28 - Original Drilling - Original Drilling - As D	15,500.0	7,056.5	2,242.8	2,137.2	21.235	SF
Cannon X02-29 - Original Drilling - Original Drilling - As D	15,401.7	7,004.6	909.8	804.4	8.633	CC, ES, SF
Foster 18-35 - Original Drilling - Original Drilling - As Drill	11,543.0	7,033.6	913.1	843.7	13.163	CC, ES, SF
Foster UPRR 31-35 #1 (PA) - Original Drilling - Original D	10,959.3	7,026.0	3,041.5	2,861.6	16.913	CC, ES
Foster UPRR 31-35 #1 (PA) - Original Drilling - Original D	11,200.0	7,026.0	3,051.0	2,869.7	16.827	SF
Foster UPRR 32-35 - Original Drilling - Original Drilling -	12,293.3	7,015.9	2,912.9	2,836.9	38.336	CC
Foster UPRR 32-35 - Original Drilling - Original Drilling -	12,300.0	7,016.0	2,912.9	2,836.9	38.313	ES
Foster UPRR 32-35 - Original Drilling - Original Drilling -	12,800.0	7,017.9	2,956.7	2,878.0	37.576	SF
Foster UPRR 41-35 - Original Drilling - Original Drilling -	11,177.1	7,005.1	4,369.9	4,294.6	58.020	CC
Foster UPRR 41-35 - Original Drilling - Original Drilling -	11,200.0	7,005.2	4,370.0	4,294.5	57.890	ES
Foster UPRR 41-35 - Original Drilling - Original Drilling -	12,400.0	7,011.8	4,537.8	4,454.8	54.704	SF
Foster UPRR 42-35 #2 - Original Drilling - Original Drilling	12,267.1	6,829.3	4,323.7	4,248.8	57.771	CC
Foster UPRR 42-35 #2 - Original Drilling - Original Drilling	12,300.0	6,829.6	4,323.8	4,248.7	57.581	ES
Foster UPRR 42-35 #2 - Original Drilling - Original Drilling	13,400.0	6,840.5	4,469.6	4,387.8	54.655	SF
HSR Foster 03-35 - Original Drilling - Original Drilling - A	11,178.2	6,992.4	1,800.9	1,735.3	27.425	CC, ES
HSR Foster 03-35 - Original Drilling - Original Drilling - A	11,300.0	6,988.9	1,805.0	1,738.9	27.277	SF
HSR Foster 04-35 - Wellbore #1 - Wellbore #1 - As Drilled	10,875.2	7,004.6	125.3	61.9	1.977	CC, ES, SF
HSR Foster 05-35 - Wellbore #1 - Wellbore #1 - As Drilled	12,471.0	7,025.4	338.0	260.0	4.336	CC, ES, SF
HSR Foster 06-35 - Original Drilling - Original Drilling - A	12,359.0	7,032.9	1,713.3	1,636.6	22.340	CC, ES
HSR Foster 06-35 - Original Drilling - Original Drilling - A	12,500.0	7,034.3	1,719.1	1,641.8	22.257	SF
UPRR 53 Pan Am Unit P1 - Original Drilling - Original Dri	11,764.2	7,031.2	3,815.5	3,744.3	53.588	CC
UPRR 53 Pan Am Unit P1 - Original Drilling - Original Dri	11,800.0	7,031.1	3,815.7	3,744.2	53.398	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 H35-787
Project:	Conceptual Wells	TVD Reference:	WELL @ 4851.0ft (Original Well Elev)
Reference Site:	DP 408	MD Reference:	WELL @ 4851.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	Grid
Reference Well:	Hurley H35-787	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						
UPRR 53 Pan Am Unit P1 - Original Drilling - Original Dri	12,700.0	7,028.0	3,928.6	3,852.0	51.258	SF
UPRR 53 Pan Am UT P2 - Original Drilling - Original Drill	11,397.5	7,067.4	1,332.5	1,264.3	19.544	CC
UPRR 53 Pan Am UT P2 - Original Drilling - Original Drill	11,400.0	7,067.4	1,332.5	1,264.3	19.542	ES
UPRR 53 Pan Am UT P2 - Original Drilling - Original Drill	11,500.0	7,065.9	1,336.4	1,268.0	19.531	SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region Drilling - Sandbox	Local Co-ordinate Reference:	Well Hurley H35-787
Project:	Conceptual Wells	TVD Reference:	WELL @ 4851.0ft (Original Well Elev)
Reference Site:	DP 408	MD Reference:	WELL @ 4851.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	Grid
Reference Well:	Hurley H35-787	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	12,657.0	6,836.0	8,004.6	7,926.0	101.809	CC
Dechant 07-36 - Original Drilling - Original Drilling - As D	12,700.0	6,836.1	8,004.7	7,925.8	101.345	ES
Dechant 07-36 - Original Drilling - Original Drilling - As D	15,639.9	6,847.9	8,542.1	8,442.7	85.951	SF
Dechant 13N-1HZ - Original Drilling - Original Drilling - A	15,639.9	7,100.0	5,438.2	5,328.6	49.639	CC, ES, SF
Dechant 14C-1HZ - Original Drilling - Original Drilling - A	15,518.9	6,339.6	6,894.7	6,790.6	66.225	CC
Dechant 14C-1HZ - Original Drilling - Original Drilling - A	15,639.9	6,339.7	6,895.5	6,790.3	65.591	ES, SF
Dechant 15-36 - Original Drilling - Original Drilling - As D	15,110.8	6,951.4	8,001.2	7,881.8	67.001	CC
Dechant 15-36 - Original Drilling - Original Drilling - As D	15,200.0	6,951.8	8,001.7	7,881.5	66.575	ES
Dechant 15-36 - Original Drilling - Original Drilling - As D	15,639.9	6,953.7	8,018.4	7,894.5	64.736	SF
Dechant 15C-1HZ - Original Drilling - Original Drilling - A	902.5	859.5	7,684.1	7,679.4	1,606.167	CC
Dechant 15C-1HZ - Original Drilling - Original Drilling - A	1,000.0	900.0	7,684.3	7,679.2	1,492.518	ES
Dechant 15C-1HZ - Original Drilling - Original Drilling - A	15,639.9	11,899.9	8,148.5	7,971.6	46.083	SF
Dechant 24-36 - Original Drilling - Original Drilling - As D	12,990.8	7,131.7	8,695.4	8,610.3	102.140	CC
Dechant 24-36 - Original Drilling - Original Drilling - As D	13,100.0	7,131.7	8,696.1	8,609.9	100.922	ES
Dechant 24-36 - Original Drilling - Original Drilling - As D	15,639.9	7,132.7	9,089.7	8,982.3	84.598	SF
Dechant 35N-E1HZ - Original Drilling - Original Drilling -	15,639.9	6,692.6	6,599.2	6,492.5	61.838	CC, ES, SF
Dechant 35N-W1HZ - Original Drilling - Original Drilling -	15,639.9	6,932.4	5,998.5	5,890.6	55.542	CC, ES, SF
Dechant 36N-W1HZ - Original Drilling - Original Drilling -	15,514.3	6,059.7	7,130.0	7,027.0	69.257	CC
Dechant 36N-W1HZ - Original Drilling - Original Drilling -	15,639.9	6,059.7	7,130.8	7,026.8	68.557	ES, SF
Dechant 37N-E1HZ - Original Drilling - Original Drilling -	15,498.1	4,776.9	8,882.5	8,785.1	91.280	CC
Dechant 37N-E1HZ - Original Drilling - Original Drilling -	15,639.9	4,777.6	8,883.3	8,784.8	90.146	ES, SF
Dechant 37N-W1HZ - Original Drilling - Original Drilling -	15,504.1	5,749.7	8,436.3	8,334.8	83.099	CC
Dechant 37N-W1HZ - Original Drilling - Original Drilling -	15,639.9	5,749.8	8,437.1	8,334.4	82.158	ES, SF
Dechant State 16C-1HZ - Original Drilling - Original Drilling	2,303.2	3,235.0	9,081.5	9,064.8	545.019	CC, ES
Dechant State 16C-1HZ - Original Drilling - Original Drilling	15,639.9	12,719.7	9,340.6	9,152.3	49.621	SF
Dechant State 36N-E1HZ - Original Drilling - Original Drilling	2,010.2	2,005.5	7,663.4	7,652.1	679.273	CC, ES
Dechant State 36N-E1HZ - Original Drilling - Original Drilling	15,639.9	11,726.2	7,870.1	7,693.8	44.638	SF
Dechant State 37N-E36HZ - Original Drilling - Original Drilling	15,271.6	11,401.3	9,089.0	8,923.9	55.031	CC
Dechant State 37N-E36HZ - Original Drilling - Original Drilling	15,300.0	11,401.3	9,089.1	8,923.7	54.958	ES
Dechant State 37N-E36HZ - Original Drilling - Original Drilling	15,639.9	11,401.3	9,096.2	8,928.3	54.169	SF
Dechant State 37N-W36HZ - Original Drilling - Original Drilling	904.2	860.2	7,701.0	7,696.2	1,607.437	CC
Dechant State 37N-W36HZ - Original Drilling - Original Drilling	1,000.0	900.0	7,701.2	7,696.0	1,495.786	ES
Dechant State 37N-W36HZ - Original Drilling - Original Drilling	15,639.9	11,489.0	8,500.2	8,330.0	49.936	SF
Dechant State 38N-1HZ - Original Drilling - Original Drilling	909.1	862.1	9,378.7	9,373.9	1,950.539	CC
Dechant State 38N-1HZ - Original Drilling - Original Drilling	1,000.0	900.0	9,378.9	9,373.7	1,821.648	ES
Dechant State 38N-1HZ - Original Drilling - Original Drilling	15,639.9	11,643.7	9,795.7	9,621.1	56.082	SF
Dechant State H36-11D - Original Drilling - Original Drilling	13,850.9	6,900.0	6,841.4	6,751.3	75.920	CC
Dechant State H36-11D - Original Drilling - Original Drilling	13,900.0	6,900.0	6,841.6	6,751.1	75.579	ES
Dechant State H36-11D - Original Drilling - Original Drilling	15,639.9	6,900.0	7,071.2	6,968.6	68.864	SF
Dechant State H36-18D - Original Drilling - Original Drilling	100.0	74.7	6,596.7	6,596.5	10,000.000	CC
Dechant State H36-18D - Original Drilling - Original Drilling	600.0	553.8	6,597.7	6,595.5	3,028.412	ES
Dechant State H36-18D - Original Drilling - Original Drilling	15,400.0	7,255.6	8,234.1	8,134.9	83.012	SF
Dechant State H36-19 - Original Drilling - Original Drilling	11,458.5	7,300.0	5,995.7	5,926.1	86.162	CC
Dechant State H36-19 - Original Drilling - Original Drilling	11,500.0	7,300.0	5,995.9	5,926.0	85.765	ES
Dechant State H36-19 - Original Drilling - Original Drilling	13,700.0	7,327.5	6,400.9	6,316.9	76.137	SF
Dechant State H36-20D - Original Drilling - Original Drilling	13,245.1	7,424.0	6,207.0	6,120.6	71.874	CC
Dechant State H36-20D - Original Drilling - Original Drilling	13,300.0	7,424.0	6,207.2	6,120.4	71.532	ES
Dechant State H36-20D - Original Drilling - Original Drilling	15,200.0	7,424.0	6,507.6	6,409.1	66.114	SF
Dechant State H36-21D - Original Drilling - Original Drilling	13,212.4	7,062.4	7,415.8	7,330.1	86.528	CC
Dechant State H36-21D - Original Drilling - Original Drilling	13,300.0	7,062.3	7,416.4	7,330.0	85.839	ES
Dechant State H36-21D - Original Drilling - Original Drilling	15,639.9	7,060.1	7,802.8	7,701.2	76.817	SF
Dechant State H36-24 - Original Drilling - Original Drilling	14,420.5	7,221.0	7,486.4	7,388.6	76.538	CC
Dechant State H36-24 - Original Drilling - Original Drilling	14,500.0	7,219.8	7,486.8	7,388.3	76.014	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 H35-787
Project:	Conceptual Wells	TVD Reference:	WELL @ 4851.0ft (Original Well Elev)
Reference Site:	DP 408	MD Reference:	WELL @ 4851.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	Grid
Reference Well:	Hurley H35-787	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

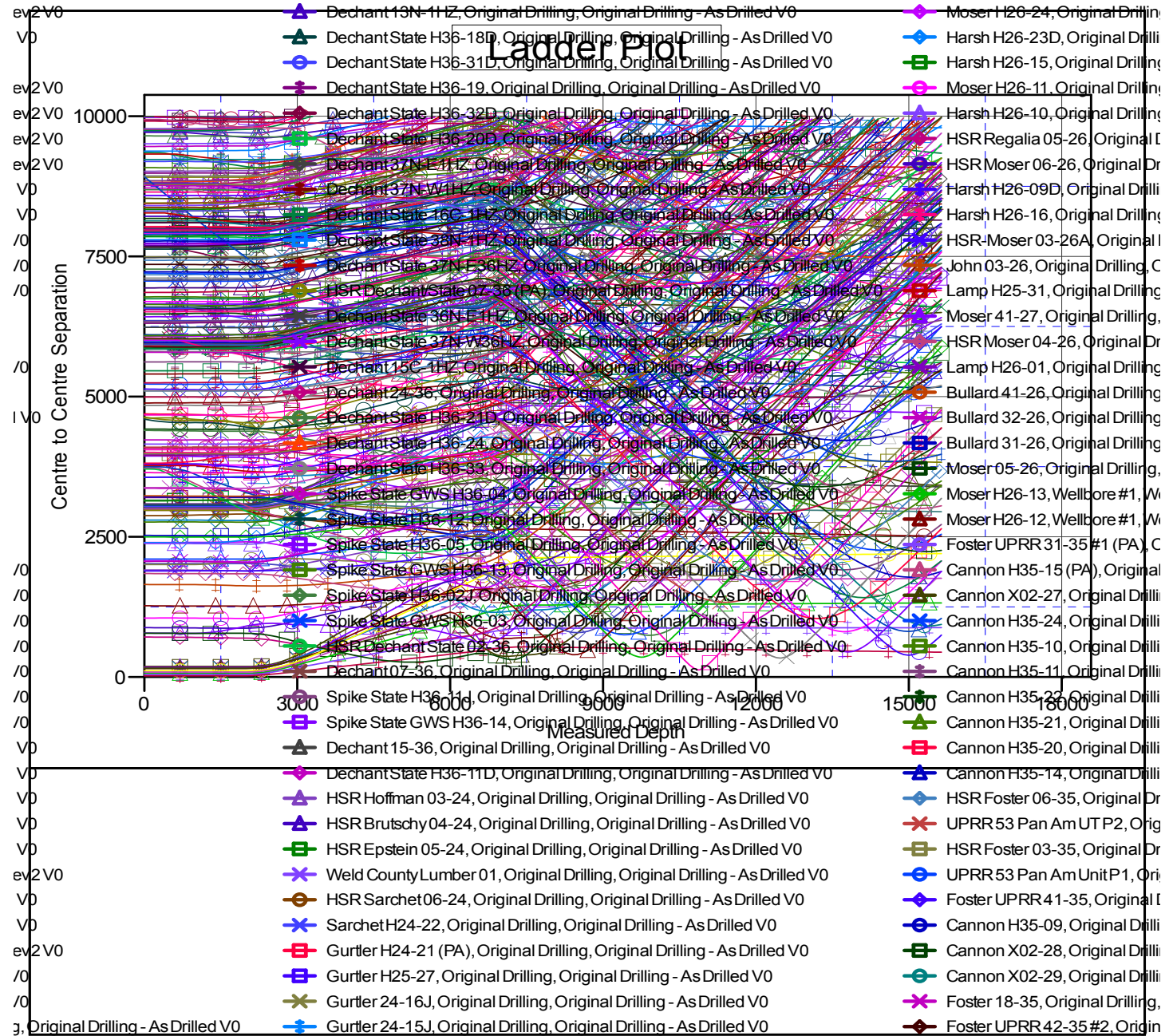
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
H Section 36						
Dechant State H36-24 - Original Drilling - Original Drilling	15,639.9	7,202.6	7,584.8	7,477.2	70.552	SF
Dechant State H36-31D - Original Drilling - Original Drilling	11,806.4	7,094.7	4,995.4	4,923.6	69.613	CC, ES
Dechant State H36-31D - Original Drilling - Original Drilling	13,400.0	7,107.6	5,243.4	5,162.2	64.556	SF
Dechant State H36-32D - Original Drilling - Original Drilling	13,059.2	7,078.4	4,980.6	4,896.5	59.186	CC
Dechant State H36-32D - Original Drilling - Original Drilling	13,100.0	7,078.9	4,980.8	4,896.3	58.951	ES
Dechant State H36-32D - Original Drilling - Original Drilling	14,400.0	7,093.7	5,157.9	5,064.8	55.393	SF
Dechant State H36-33 - Original Drilling - Original Drilling	14,275.5	7,457.0	5,019.7	4,922.0	51.372	CC
Dechant State H36-33 - Original Drilling - Original Drilling	14,300.0	7,457.0	5,019.8	4,921.9	51.268	ES
Dechant State H36-33 - Original Drilling - Original Drilling	15,600.0	7,457.0	5,191.5	5,085.0	48.730	SF
HSR Dechant State 02-36 - Original Drilling - Original Drilling	2,130.3	2,444.9	7,832.7	7,819.7	602.291	CC
HSR Dechant State 02-36 - Original Drilling - Original Drilling	2,200.0	2,628.0	7,833.3	7,819.5	568.180	ES
HSR Dechant State 02-36 - Original Drilling - Original Drilling	15,000.0	6,931.7	8,945.0	8,855.2	99.600	SF
HSR Dechant/State 07-36 (PA) - Original Drilling - Original Drilling	12,095.1	6,979.0	8,543.0	8,353.6	45.101	CC
HSR Dechant/State 07-36 (PA) - Original Drilling - Original Drilling	12,200.0	6,979.0	8,543.6	8,353.4	44.898	ES
HSR Dechant/State 07-36 (PA) - Original Drilling - Original Drilling	14,500.0	6,979.0	8,875.1	8,667.6	42.784	SF
Spike State GWS H36-03 - Original Drilling - Original Drilling	11,058.6	7,059.6	7,033.0	6,968.0	108.213	CC
Spike State GWS H36-03 - Original Drilling - Original Drilling	11,100.0	7,061.6	7,033.1	6,967.8	107.660	ES
Spike State GWS H36-03 - Original Drilling - Original Drilling	14,400.0	7,220.8	7,784.7	7,697.6	89.385	SF
Spike State GWS H36-04 - Original Drilling - Original Drilling	10,896.8	7,103.5	5,530.0	5,457.1	75.861	CC
Spike State GWS H36-04 - Original Drilling - Original Drilling	10,900.0	7,103.5	5,530.0	5,457.1	75.836	ES
Spike State GWS H36-04 - Original Drilling - Original Drilling	12,800.0	7,089.7	5,848.3	5,763.4	68.831	SF
Spike State GWS H36-13 - Original Drilling - Original Drilling	15,226.0	6,600.0	5,422.2	5,320.5	53.318	CC
Spike State GWS H36-13 - Original Drilling - Original Drilling	15,300.0	6,600.0	5,422.7	5,320.4	53.012	ES
Spike State GWS H36-13 - Original Drilling - Original Drilling	15,639.9	6,600.0	5,437.7	5,332.8	51.860	SF
Spike State GWS H36-14 - Original Drilling - Original Drilling	13,800.0	13,800.0	7,240.8	7,126.6	63.425	SF
Spike State GWS H36-14 - Original Drilling - Original Drilling	15,210.3	6,875.9	7,102.4	6,999.4	68.985	CC
Spike State GWS H36-14 - Original Drilling - Original Drilling	15,300.0	6,873.5	7,103.0	6,999.3	68.495	ES
Spike State H36-02J - Original Drilling - Original Drilling	12,118.2	6,916.9	6,482.2	6,376.5	61.326	CC
Spike State H36-02J - Original Drilling - Original Drilling	12,200.0	6,918.4	6,482.7	6,376.3	60.925	ES
Spike State H36-02J - Original Drilling - Original Drilling	14,300.0	6,954.5	6,839.4	6,717.8	56.244	SF
Spike State H36-05 - Original Drilling - Original Drilling - A	12,298.3	7,194.1	5,472.3	5,395.5	71.222	CC
Spike State H36-05 - Original Drilling - Original Drilling - A	12,300.0	7,194.1	5,472.3	5,395.4	71.209	ES
Spike State H36-05 - Original Drilling - Original Drilling - A	14,000.0	7,188.8	5,730.8	5,643.1	65.355	SF
Spike State H36-11J - Original Drilling - Original Drilling	14,456.0	6,951.9	6,252.8	6,156.8	65.095	CC
Spike State H36-11J - Original Drilling - Original Drilling	14,500.0	6,951.0	6,253.0	6,156.5	64.854	ES
Spike State H36-11J - Original Drilling - Original Drilling	15,639.9	6,926.9	6,363.6	6,259.1	60.918	SF
Spike State H36-12 - Original Drilling - Original Drilling - A	13,567.7	7,000.6	5,368.9	5,281.0	61.113	CC
Spike State H36-12 - Original Drilling - Original Drilling - A	13,600.0	7,000.4	5,369.0	5,280.9	60.935	ES
Spike State H36-12 - Original Drilling - Original Drilling - A	15,000.0	6,988.1	5,556.7	5,459.7	57.284	SF

Noble Energy, Inc.
Anticollision Summary Report

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Project:	Conceptual Wells	TVD Reference:	WELL @ 4851.0ft (Original Well Elev)
Reference Site:	DP 408	MD Reference:	WELL @ 4851.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	Grid
Reference Well:	Hurley H35-787	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 @ 4851.0ft (Original Well Elev)
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000

Coordinates are relative to: Hurley H35-787
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.56°



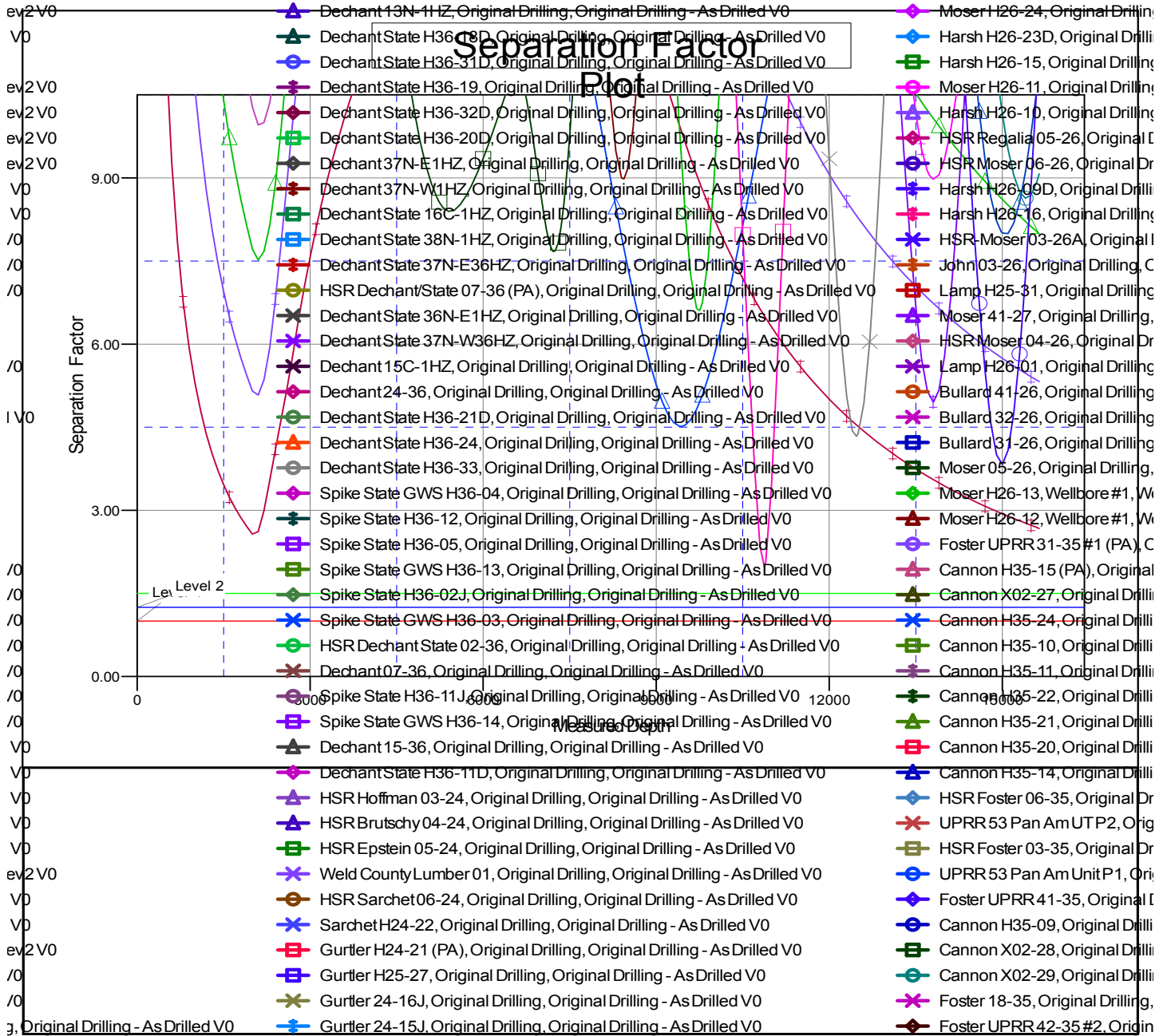
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Anticollision Summary Report

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