

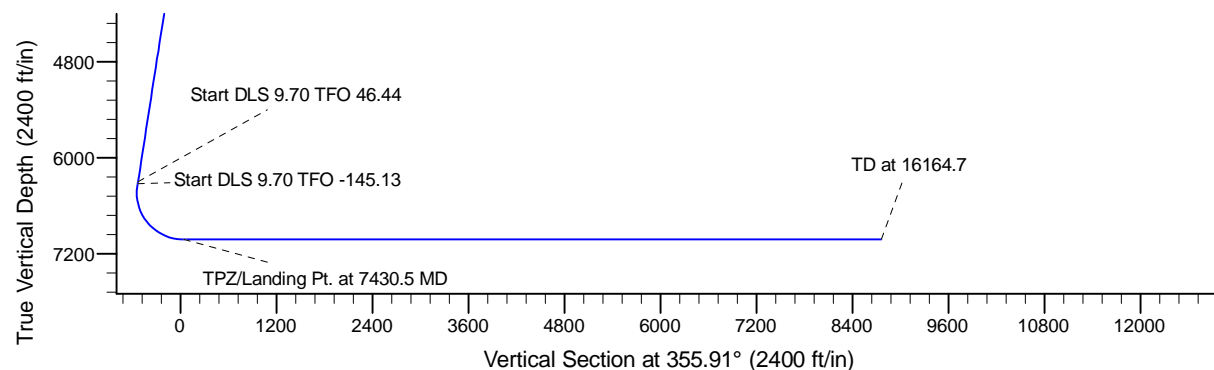
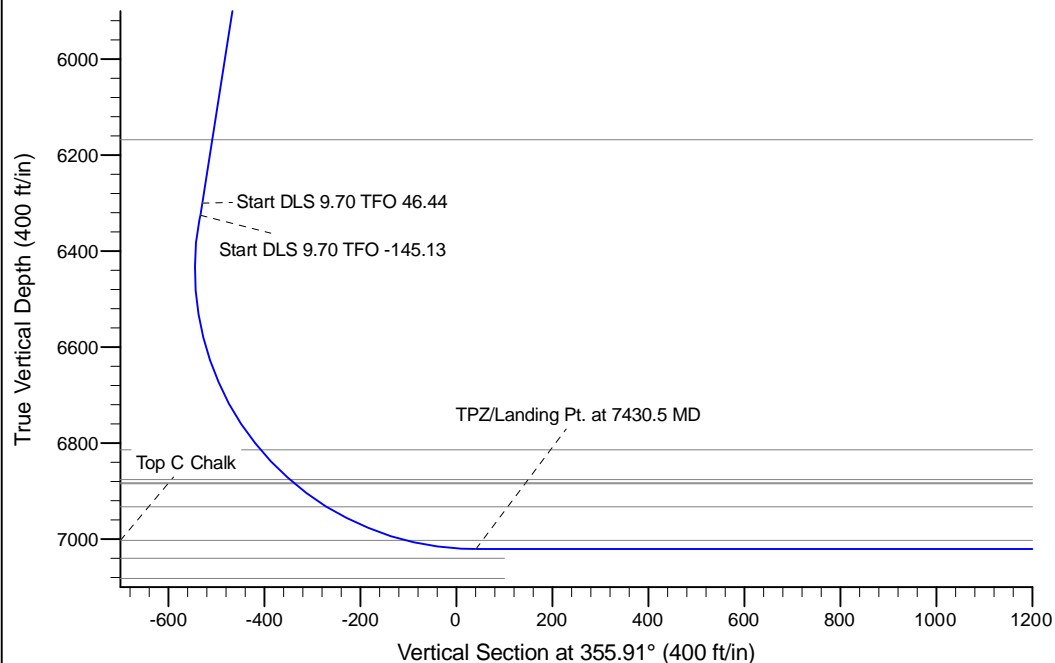
Project: Conceptual Wells
Site: DP 408
Well: Hurley H26-762
Wellbore: Wellbore #1
Design: Prelim - Rev 2

Northern Region Drilling - DJ Basin

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Northern Zone
System Datum: Mean Sea Level

SECTION DETAILS

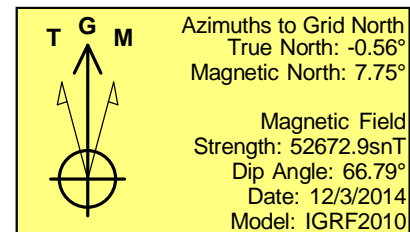
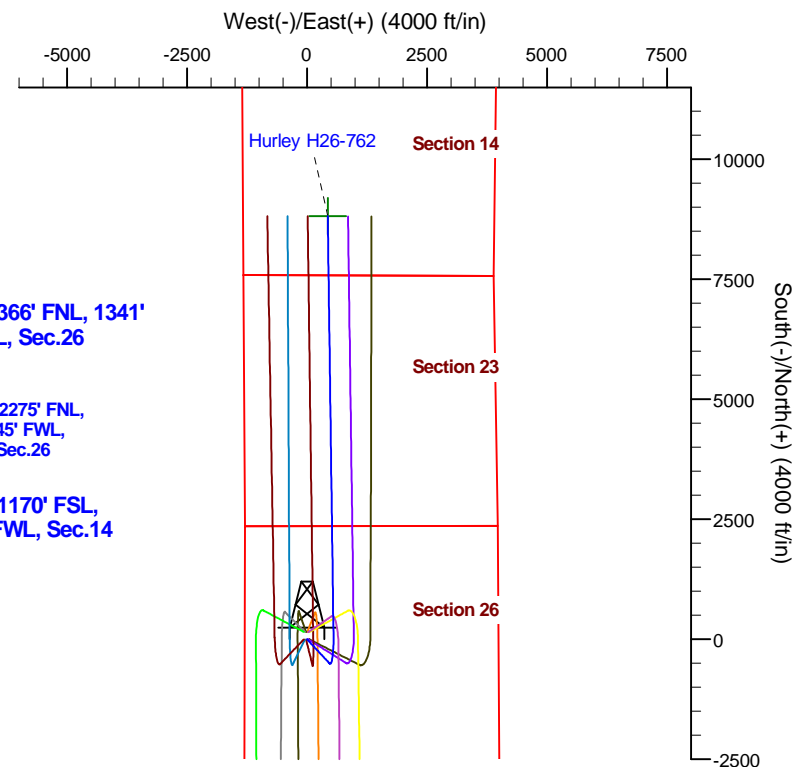
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	2600.0	0.00	0.00	2600.0	0.0	0.0	0.00	0.00	0.0	
3	3162.5	11.25	137.00	3158.9	-40.3	37.5	2.00	137.00	-42.8	
4	6365.1	11.25	137.00	6300.0	-497.2	463.7	0.00	0.00	-529.0	
5	6391.0	13.11	145.05	6325.3	-501.5	467.1	9.70	46.44	-533.5	
6	7430.5	90.00	359.21	7021.0	80.0	550.0	9.70	-145.13	40.6	
7	16164.7	90.00	359.22	7021.0	8813.4	430.7	0.00	90.00	8760.3	Hurley H26-762



Surface: 2366' FNL, 1341' FWL, Sec.26

TPZ: 2275' FNL, 1845' FWL, Sec.26

BHL: 1170' FSL, 1845' FWL, Sec.14



WELL DETAILS: Hurley H26-762

Ground Level: 4821.0			
Northing	Easting	Latitude	Longitude
0.00.0	1315823.43	3241514.12	40.197100

Plan: Prelim - Rev 2 (Hurley H26-762/Wellbore #1)

Created By: Chad Stich Date: 10:08, October 31 2017
Checked: _____ Date: _____
Reviewed: _____ Date: _____
Approved: _____ Date: _____

Northern Region Drilling - Sandbox

Conceptual Wells

DP 408

Hurley H26-762

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 H26-762
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 H26-762	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 H26-762			
Well Position	+N/-S	-2,361.4 ft	Northing:	1,315,823.44 usft
	+E/-W	1,289.0 ft	Easting:	3,241,514.12 usft
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	12/3/2014	8.31	66.79	52,672.94353971

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	355.91

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.00	0.00	0.00	0.00	
3,162.5	11.25	137.00	3,158.9	-40.3	37.5	2.00	2.00	0.00	137.00	
6,365.1	11.25	137.00	6,300.0	-497.2	463.7	0.00	0.00	0.00	0.00	
6,391.0	13.11	145.05	6,325.3	-501.5	467.1	9.70	7.17	31.09	46.44	
7,430.5	90.00	359.21	7,021.0	80.0	550.0	9.70	7.40	-14.03	-145.13	
16,164.7	90.00	359.22	7,021.0	8,813.4	430.7	0.00	0.00	0.00	90.00	Hurley H26-762

Noble Energy, Inc.

Planning Report

Database:	EDMP	Local Co-ordinate Reference:	Well Hurley H26-762
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 H26-762	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Prelim - Rev 2		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	2.00	137.00	2,700.0	-1.3	1.2	-1.4	2.00	2.00	0.00
2,800.0	4.00	137.00	2,799.8	-5.1	4.8	-5.4	2.00	2.00	0.00
2,900.0	6.00	137.00	2,899.5	-11.5	10.7	-12.2	2.00	2.00	0.00
3,000.0	8.00	137.00	2,998.7	-20.4	19.0	-21.7	2.00	2.00	0.00
3,100.0	10.00	137.00	3,097.5	-31.8	29.7	-33.9	2.00	2.00	0.00
3,162.5	11.25	137.00	3,158.9	-40.3	37.5	-42.8	2.00	2.00	0.00
3,200.0	11.25	137.00	3,195.7	-45.6	42.5	-48.5	0.00	0.00	0.00
3,300.0	11.25	137.00	3,293.8	-59.9	55.8	-63.7	0.00	0.00	0.00
3,400.0	11.25	137.00	3,391.8	-74.1	69.1	-78.9	0.00	0.00	0.00
3,500.0	11.25	137.00	3,489.9	-88.4	82.4	-94.1	0.00	0.00	0.00
3,600.0	11.25	137.00	3,588.0	-102.7	95.8	-109.2	0.00	0.00	0.00
3,700.0	11.25	137.00	3,686.1	-116.9	109.1	-124.4	0.00	0.00	0.00
3,800.0	11.25	137.00	3,784.1	-131.2	122.4	-139.6	0.00	0.00	0.00
3,900.0	11.25	137.00	3,882.2	-145.5	135.7	-154.8	0.00	0.00	0.00
4,000.0	11.25	137.00	3,980.3	-159.8	149.0	-170.0	0.00	0.00	0.00
4,100.0	11.25	137.00	4,078.4	-174.0	162.3	-185.1	0.00	0.00	0.00
4,200.0	11.25	137.00	4,176.5	-188.3	175.6	-200.3	0.00	0.00	0.00
4,300.0	11.25	137.00	4,274.5	-202.6	188.9	-215.5	0.00	0.00	0.00
4,400.0	11.25	137.00	4,372.6	-216.8	202.2	-230.7	0.00	0.00	0.00
4,500.0	11.25	137.00	4,470.7	-231.1	215.5	-245.9	0.00	0.00	0.00
4,600.0	11.25	137.00	4,568.8	-245.4	228.8	-261.0	0.00	0.00	0.00
4,700.0	11.25	137.00	4,666.8	-259.6	242.1	-276.2	0.00	0.00	0.00
4,800.0	11.25	137.00	4,764.9	-273.9	255.4	-291.4	0.00	0.00	0.00
4,900.0	11.25	137.00	4,863.0	-288.2	268.7	-306.6	0.00	0.00	0.00
5,000.0	11.25	137.00	4,961.1	-302.4	282.0	-321.8	0.00	0.00	0.00
5,100.0	11.25	137.00	5,059.2	-316.7	295.3	-336.9	0.00	0.00	0.00
5,200.0	11.25	137.00	5,157.2	-331.0	308.6	-352.1	0.00	0.00	0.00

Noble Energy, Inc.

Planning Report

Database:	EDMP	Local Co-ordinate Reference:	Well Hurley H26-762
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 H26-762	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	11.25	137.00	5,255.3	-345.2	321.9	-367.3	0.00	0.00	0.00
5,400.0	11.25	137.00	5,353.4	-359.5	335.2	-382.5	0.00	0.00	0.00
5,500.0	11.25	137.00	5,451.5	-373.8	348.5	-397.7	0.00	0.00	0.00
5,600.0	11.25	137.00	5,549.6	-388.0	361.9	-412.8	0.00	0.00	0.00
5,700.0	11.25	137.00	5,647.6	-402.3	375.2	-428.0	0.00	0.00	0.00
5,800.0	11.25	137.00	5,745.7	-416.6	388.5	-443.2	0.00	0.00	0.00
5,900.0	11.25	137.00	5,843.8	-430.8	401.8	-458.4	0.00	0.00	0.00
6,000.0	11.25	137.00	5,941.9	-445.1	415.1	-473.6	0.00	0.00	0.00
6,100.0	11.25	137.00	6,039.9	-459.4	428.4	-488.7	0.00	0.00	0.00
6,200.0	11.25	137.00	6,138.0	-473.6	441.7	-503.9	0.00	0.00	0.00
6,300.0	11.25	137.00	6,236.1	-487.9	455.0	-519.1	0.00	0.00	0.00
6,365.1	11.25	137.00	6,300.0	-497.2	463.7	-529.0	0.00	0.00	0.00
6,391.0	13.11	145.05	6,325.3	-501.5	467.1	-533.5	9.70	7.17	31.09
6,400.0	12.40	142.74	6,334.1	-503.1	468.2	-535.1	9.70	-7.85	-25.82
6,500.0	7.45	91.12	6,432.7	-511.8	481.2	-544.7	9.70	-4.95	-51.62
6,600.0	12.01	37.12	6,531.4	-503.6	494.0	-537.5	9.70	4.56	-54.00
6,700.0	20.50	19.68	6,627.4	-478.7	506.2	-513.6	9.70	8.48	-17.44
6,800.0	29.71	12.45	6,717.9	-437.9	517.5	-473.7	9.70	9.22	-7.23
6,900.0	39.15	8.45	6,800.3	-382.4	527.5	-419.0	9.70	9.44	-4.00
7,000.0	48.68	5.81	6,872.2	-313.6	536.0	-351.0	9.70	9.53	-2.64
7,100.0	58.25	3.85	6,931.7	-233.7	542.6	-271.7	9.70	9.57	-1.96
7,200.0	67.84	2.26	6,977.0	-144.8	547.3	-183.4	9.70	9.60	-1.59
7,300.0	77.45	0.88	7,006.8	-49.5	549.9	-88.5	9.70	9.61	-1.38
7,400.0	87.07	359.59	7,020.2	49.5	550.3	10.2	9.70	9.62	-1.28
7,430.5	90.00	359.21	7,021.0	80.0	550.0	40.6	9.70	9.62	-1.26
7,500.0	90.00	359.21	7,021.0	149.5	549.0	110.0	0.00	0.00	0.00
7,600.0	90.00	359.21	7,021.0	249.5	547.7	209.8	0.00	0.00	0.00
7,700.0	90.00	359.21	7,021.0	349.5	546.3	309.6	0.00	0.00	0.00
7,800.0	90.00	359.21	7,021.0	449.5	544.9	409.5	0.00	0.00	0.00
7,900.0	90.00	359.21	7,021.0	549.4	543.5	509.3	0.00	0.00	0.00
8,000.0	90.00	359.21	7,021.0	649.4	542.2	609.2	0.00	0.00	0.00
8,100.0	90.00	359.21	7,021.0	749.4	540.8	709.0	0.00	0.00	0.00
8,200.0	90.00	359.21	7,021.0	849.4	539.4	808.8	0.00	0.00	0.00
8,300.0	90.00	359.21	7,021.0	949.4	538.0	908.7	0.00	0.00	0.00
8,400.0	90.00	359.21	7,021.0	1,049.4	536.6	1,008.5	0.00	0.00	0.00
8,500.0	90.00	359.21	7,021.0	1,149.4	535.3	1,108.3	0.00	0.00	0.00
8,600.0	90.00	359.21	7,021.0	1,249.4	533.9	1,208.2	0.00	0.00	0.00
8,700.0	90.00	359.21	7,021.0	1,349.4	532.5	1,308.0	0.00	0.00	0.00
8,800.0	90.00	359.21	7,021.0	1,449.4	531.1	1,407.8	0.00	0.00	0.00
8,900.0	90.00	359.21	7,021.0	1,549.3	529.8	1,507.7	0.00	0.00	0.00
9,000.0	90.00	359.21	7,021.0	1,649.3	528.4	1,607.5	0.00	0.00	0.00
9,100.0	90.00	359.21	7,021.0	1,749.3	527.0	1,707.3	0.00	0.00	0.00
9,200.0	90.00	359.21	7,021.0	1,849.3	525.6	1,807.2	0.00	0.00	0.00
9,300.0	90.00	359.21	7,021.0	1,949.3	524.3	1,907.0	0.00	0.00	0.00
9,400.0	90.00	359.21	7,021.0	2,049.3	522.9	2,006.8	0.00	0.00	0.00
9,500.0	90.00	359.21	7,021.0	2,149.3	521.5	2,106.7	0.00	0.00	0.00
9,600.0	90.00	359.21	7,021.0	2,249.3	520.2	2,206.5	0.00	0.00	0.00
9,700.0	90.00	359.21	7,021.0	2,349.3	518.8	2,306.3	0.00	0.00	0.00
9,800.0	90.00	359.21	7,021.0	2,449.3	517.4	2,406.2	0.00	0.00	0.00
9,900.0	90.00	359.21	7,021.0	2,549.3	516.0	2,506.0	0.00	0.00	0.00
10,000.0	90.00	359.21	7,021.0	2,649.2	514.7	2,605.8	0.00	0.00	0.00
10,100.0	90.00	359.21	7,021.0	2,749.2	513.3	2,705.7	0.00	0.00	0.00
10,200.0	90.00	359.21	7,021.0	2,849.2	511.9	2,805.5	0.00	0.00	0.00
10,300.0	90.00	359.21	7,021.0	2,949.2	510.6	2,905.3	0.00	0.00	0.00

Noble Energy, Inc.

Planning Report

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Company:	Northern Region Drilling - Sandbox	TVD Reference:	WELL @ 4851.0ft (Original Well Elev)
Project:	Conceptual Wells	MD Reference:	WELL @ 4851.0ft (Original Well Elev)
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Well:	Hurley H26-762	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Prelim - Rev 2		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,400.0	90.00	359.22	7,021.0	3,049.2	509.2	3,005.2	0.00	0.00	0.00
10,500.0	90.00	359.22	7,021.0	3,149.2	507.8	3,105.0	0.00	0.00	0.00
10,600.0	90.00	359.22	7,021.0	3,249.2	506.5	3,204.8	0.00	0.00	0.00
10,700.0	90.00	359.22	7,021.0	3,349.2	505.1	3,304.7	0.00	0.00	0.00
10,800.0	90.00	359.22	7,021.0	3,449.2	503.7	3,404.5	0.00	0.00	0.00
10,900.0	90.00	359.22	7,021.0	3,549.2	502.3	3,504.3	0.00	0.00	0.00
11,000.0	90.00	359.22	7,021.0	3,649.2	501.0	3,604.2	0.00	0.00	0.00
11,100.0	90.00	359.22	7,021.0	3,749.1	499.6	3,704.0	0.00	0.00	0.00
11,200.0	90.00	359.22	7,021.0	3,849.1	498.2	3,803.8	0.00	0.00	0.00
11,300.0	90.00	359.22	7,021.0	3,949.1	496.9	3,903.7	0.00	0.00	0.00
11,400.0	90.00	359.22	7,021.0	4,049.1	495.5	4,003.5	0.00	0.00	0.00
11,500.0	90.00	359.22	7,021.0	4,149.1	494.1	4,103.3	0.00	0.00	0.00
11,600.0	90.00	359.22	7,021.0	4,249.1	492.8	4,203.2	0.00	0.00	0.00
11,700.0	90.00	359.22	7,021.0	4,349.1	491.4	4,303.0	0.00	0.00	0.00
11,800.0	90.00	359.22	7,021.0	4,449.1	490.0	4,402.9	0.00	0.00	0.00
11,900.0	90.00	359.22	7,021.0	4,549.1	488.7	4,502.7	0.00	0.00	0.00
12,000.0	90.00	359.22	7,021.0	4,649.1	487.3	4,602.5	0.00	0.00	0.00
12,100.0	90.00	359.22	7,021.0	4,749.0	485.9	4,702.4	0.00	0.00	0.00
12,200.0	90.00	359.22	7,021.0	4,849.0	484.6	4,802.2	0.00	0.00	0.00
12,300.0	90.00	359.22	7,021.0	4,949.0	483.2	4,902.0	0.00	0.00	0.00
12,400.0	90.00	359.22	7,021.0	5,049.0	481.9	5,001.9	0.00	0.00	0.00
12,500.0	90.00	359.22	7,021.0	5,149.0	480.5	5,101.7	0.00	0.00	0.00
12,600.0	90.00	359.22	7,021.0	5,249.0	479.1	5,201.5	0.00	0.00	0.00
12,700.0	90.00	359.22	7,021.0	5,349.0	477.8	5,301.4	0.00	0.00	0.00
12,800.0	90.00	359.22	7,021.0	5,449.0	476.4	5,401.2	0.00	0.00	0.00
12,900.0	90.00	359.22	7,021.0	5,549.0	475.0	5,501.0	0.00	0.00	0.00
13,000.0	90.00	359.22	7,021.0	5,649.0	473.7	5,600.9	0.00	0.00	0.00
13,100.0	90.00	359.22	7,021.0	5,749.0	472.3	5,700.7	0.00	0.00	0.00
13,200.0	90.00	359.22	7,021.0	5,848.9	470.9	5,800.5	0.00	0.00	0.00
13,300.0	90.00	359.22	7,021.0	5,948.9	469.6	5,900.4	0.00	0.00	0.00
13,400.0	90.00	359.22	7,021.0	6,048.9	468.2	6,000.2	0.00	0.00	0.00
13,500.0	90.00	359.22	7,021.0	6,148.9	466.9	6,100.0	0.00	0.00	0.00
13,600.0	90.00	359.22	7,021.0	6,248.9	465.5	6,199.9	0.00	0.00	0.00
13,700.0	90.00	359.22	7,021.0	6,348.9	464.1	6,299.7	0.00	0.00	0.00
13,800.0	90.00	359.22	7,021.0	6,448.9	462.8	6,399.5	0.00	0.00	0.00
13,900.0	90.00	359.22	7,021.0	6,548.9	461.4	6,499.4	0.00	0.00	0.00
14,000.0	90.00	359.22	7,021.0	6,648.9	460.1	6,599.2	0.00	0.00	0.00
14,100.0	90.00	359.22	7,021.0	6,748.9	458.7	6,699.0	0.00	0.00	0.00
14,200.0	90.00	359.22	7,021.0	6,848.9	457.3	6,798.9	0.00	0.00	0.00
14,300.0	90.00	359.22	7,021.0	6,948.8	456.0	6,898.7	0.00	0.00	0.00
14,400.0	90.00	359.22	7,021.0	7,048.8	454.6	6,998.5	0.00	0.00	0.00
14,500.0	90.00	359.22	7,021.0	7,148.8	453.3	7,098.4	0.00	0.00	0.00
14,600.0	90.00	359.22	7,021.0	7,248.8	451.9	7,198.2	0.00	0.00	0.00
14,700.0	90.00	359.22	7,021.0	7,348.8	450.6	7,298.0	0.00	0.00	0.00
14,800.0	90.00	359.22	7,021.0	7,448.8	449.2	7,397.9	0.00	0.00	0.00
14,900.0	90.00	359.22	7,021.0	7,548.8	447.8	7,497.7	0.00	0.00	0.00
15,000.0	90.00	359.22	7,021.0	7,648.8	446.5	7,597.5	0.00	0.00	0.00
15,100.0	90.00	359.22	7,021.0	7,748.8	445.1	7,697.4	0.00	0.00	0.00
15,200.0	90.00	359.22	7,021.0	7,848.8	443.8	7,797.2	0.00	0.00	0.00
15,300.0	90.00	359.22	7,021.0	7,948.8	442.4	7,897.0	0.00	0.00	0.00
15,400.0	90.00	359.22	7,021.0	8,048.7	441.1	7,996.9	0.00	0.00	0.00
15,500.0	90.00	359.22	7,021.0	8,148.7	439.7	8,096.7	0.00	0.00	0.00
15,600.0	90.00	359.22	7,021.0	8,248.7	438.4	8,196.5	0.00	0.00	0.00
15,700.0	90.00	359.22	7,021.0	8,348.7	437.0	8,296.4	0.00	0.00	0.00

Noble Energy, Inc.

Planning Report

Database:	EDMP	Local Co-ordinate Reference:	Well Hurley H26-762
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 H26-762	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Prelim - Rev 2		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
15,800.0	90.00	359.22	7,021.0	8,448.7	435.7	8,396.2	0.00	0.00	0.00	
15,900.0	90.00	359.22	7,021.0	8,548.7	434.3	8,496.0	0.00	0.00	0.00	
16,000.0	90.00	359.22	7,021.0	8,648.7	432.9	8,595.9	0.00	0.00	0.00	
16,100.0	90.00	359.22	7,021.0	8,748.7	431.6	8,695.7	0.00	0.00	0.00	
16,164.7	90.00	359.22	7,021.0	8,813.4	430.7	8,760.3	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 H26-762	0.00	0.01	7,021.0	8,813.4	430.7	1,324,636.45	3,241,944.82	40.221280	-104.633560	
- plan hits target center										
- Point										

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
617.0	617.0	Pierre				
769.0	769.0	Upper Pierre Aquifer Top				
1,657.0	1,657.0	Upper Pierre Aquifer Base				
3,942.6	3,924.0	Parkman				
4,545.2	4,515.0	Sussex				
5,240.5	5,197.0	Shannon				
6,230.6	6,168.0	Teepee Buttes				
6,917.9	6,814.0	Sharon Springs				
7,005.8	6,876.0	Top A Chalk				
7,016.6	6,883.0	Top A Marl				
7,019.7	6,885.0	Top B Chalk				
7,102.5	6,933.0	Top B Marl				
7,283.7	7,003.0	Top C Chalk				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
2,600.0	2,600.0	0.0	0.0	KOP - Start Build 2.00	
6,365.1	6,300.0	-497.2	463.7	Start DLS 9.70 TFO 46.44	
6,391.0	6,325.3	-501.5	467.1	Start DLS 9.70 TFO -145.13	
7,430.5	7,021.0	80.0	550.0	TPZ/Landing Pt. at 7430.5 MD	
16,164.7	7,021.0	8,813.4	430.7	TD at 16164.7	

Northern Region Drilling - Sandbox

Conceptual Wells

DP 408

Hurley H26-762

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 H26-762
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 H26-762	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	16,164.7	Prelim - Rev 2 (Wellbore #1)	MWD+IFR1+MS_WY	Fixed:v2:Rockies, crustal dec + 3-axis correction

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
D Section 19						
Butterball H24-69HN - Original Drilling - Original Drilling -	15,001.9	11,992.0	6,490.8	6,387.0	62.500	CC
Butterball H24-69HN - Original Drilling - Original Drilling -	15,100.0	11,992.0	6,491.6	6,386.8	61.984	ES
Butterball H24-69HN - Original Drilling - Original Drilling -	16,164.7	11,992.0	6,594.2	6,473.2	54.511	SF
DP 408						
Emmy H25-711 - Wellbore #1 - Prelim - Rev 2	3,891.3	2,500.0	7,880.2	7,866.7	583.725	CC
Emmy H25-711 - Wellbore #1 - Prelim - Rev 2	3,900.0	2,500.0	7,880.2	7,866.6	582.953	ES
Emmy H25-711 - Wellbore #1 - Prelim - Rev 2	16,164.7	17,530.1	8,651.9	8,463.5	45.925	SF
Emmy State H25-718 - Wellbore #1 - Prelim - Rev 2	4,281.0	2,900.0	7,790.7	7,775.4	510.174	CC
Emmy State H25-718 - Wellbore #1 - Prelim - Rev 2	4,300.0	2,900.0	7,790.7	7,775.4	508.807	ES
Emmy State H25-718 - Wellbore #1 - Prelim - Rev 2	14,800.0	22,663.6	8,107.5	7,881.4	35.863	SF
Emmy State H25-724 - Wellbore #1 - Prelim - Rev 2	7,355.6	9,870.0	7,542.7	7,497.8	167.857	CC
Emmy State H25-724 - Wellbore #1 - Prelim - Rev 2	14,900.0	17,412.6	7,666.8	7,493.2	44.143	ES
Emmy State H25-724 - Wellbore #1 - Prelim - Rev 2	16,164.7	17,460.5	7,783.3	7,597.8	41.962	SF
Emmy State H25-731 - Wellbore #1 - Prelim - Rev 2	7,369.9	9,809.2	7,131.4	7,086.3	157.857	CC
Emmy State H25-731 - Wellbore #1 - Prelim - Rev 2	14,900.0	17,337.5	7,228.3	7,054.1	41.489	ES
Emmy State H25-731 - Wellbore #1 - Prelim - Rev 2	16,164.7	17,379.3	7,347.1	7,161.8	39.654	SF
Emmy State H25-738 - Wellbore #1 - Prelim - Rev 2	7,392.3	9,786.5	6,725.0	6,678.3	144.043	CC
Emmy State H25-738 - Wellbore #1 - Prelim - Rev 2	14,900.0	17,294.0	6,787.2	6,611.0	38.541	ES
Emmy State H25-738 - Wellbore #1 - Prelim - Rev 2	16,164.7	17,299.8	6,913.1	6,727.1	37.179	SF
Emmy State H25-744 - Wellbore #1 - Prelim - Rev 2	7,378.8	9,812.0	6,267.1	6,220.1	133.348	CC
Emmy State H25-744 - Wellbore #1 - Prelim - Rev 2	14,900.0	17,300.0	6,348.8	6,172.7	36.062	ES
Emmy State H25-744 - Wellbore #1 - Prelim - Rev 2	16,000.0	17,327.4	6,456.1	6,271.7	35.023	SF
Emmy State H25-751 - Wellbore #1 - Design #1	7,314.4	9,913.9	5,861.6	5,814.9	125.292	CC
Emmy State H25-751 - Wellbore #1 - Design #1	7,350.0	9,949.0	5,861.8	5,814.7	124.403	ES
Emmy State H25-751 - Wellbore #1 - Design #1	16,100.0	17,580.8	6,190.2	6,003.2	33.100	SF
Emmy State H25-757 - Wellbore #1 - Design #1	7,386.5	10,007.7	5,581.3	5,533.1	115.895	CC
Emmy State H25-757 - Wellbore #1 - Design #1	14,900.0	17,501.0	5,620.1	5,443.0	31.747	ES
Emmy State H25-757 - Wellbore #1 - Design #1	15,900.0	17,501.0	5,720.8	5,535.4	30.864	SF
Emmy State H25-764 - Wellbore #1 - Design #1	7,394.0	9,986.1	5,122.1	5,106.3	323.340	CC
Emmy State H25-764 - Wellbore #1 - Design #1	7,400.0	10,008.0	5,122.1	5,106.3	323.181	ES
Emmy State H25-764 - Wellbore #1 - Design #1	16,164.7	17,466.3	5,349.2	5,264.0	62.763	SF
Emmy State H25-771 - Wellbore #1 - Design #1	7,396.3	9,919.2	4,687.7	4,639.9	97.963	CC
Emmy State H25-771 - Wellbore #1 - Design #1	14,900.0	17,391.2	4,740.4	4,563.4	26.779	ES
Emmy State H25-771 - Wellbore #1 - Design #1	15,500.0	17,391.2	4,786.3	4,604.5	26.327	SF
Emmy State H25-777 - Wellbore #1 - Design #1	7,423.4	10,014.3	4,290.7	4,242.2	88.515	CC
Emmy State H25-777 - Wellbore #1 - Design #1	14,900.0	17,434.0	4,301.8	4,124.8	24.294	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 H26-762
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 H26-762	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	4,338.0	4,157.3	23.998	SF
Emmy State H25-785 - Wellbore #1 - Prelim - Rev 2	7,380.6	9,980.5	3,783.3	3,735.7	79.455	CC
Emmy State H25-785 - Wellbore #1 - Prelim - Rev 2	14,900.0	17,481.1	3,860.7	3,684.3	21.884	ES
Emmy State H25-785 - Wellbore #1 - Prelim - Rev 2	15,300.0	17,481.1	3,887.3	3,708.2	21.706	SF
Emmy State H36-753 - Wellbore #1 - Design #1	4,488.0	3,445.4	5,700.0	5,682.9	334.724	CC
Emmy State H36-753 - Wellbore #1 - Design #1	4,500.0	3,450.5	5,700.0	5,682.9	333.966	ES
Emmy State H36-753 - Wellbore #1 - Design #1	11,200.0	6,432.6	8,183.7	8,133.0	161.257	SF
Emmy State H36-760 - Wellbore #1 - Design #1	6,487.1	5,726.6	5,542.2	5,514.2	197.619	CC
Emmy State H36-760 - Wellbore #1 - Design #1	6,500.0	5,739.4	5,542.3	5,514.2	197.178	ES
Emmy State H36-760 - Wellbore #1 - Design #1	10,800.0	6,450.0	7,679.9	7,633.2	164.690	SF
Emmy State H36-766 - Wellbore #1 - Design #1	6,636.4	6,317.3	5,246.4	5,216.8	176.833	CC, ES
Emmy State H36-766 - Wellbore #1 - Design #1	10,400.0	6,450.0	7,124.6	7,080.8	162.727	SF
Emmy State H36-773 - Wellbore #1 - Design #1	6,687.3	6,550.0	4,849.5	4,819.5	161.840	CC, ES
Emmy State H36-773 - Wellbore #1 - Design #1	9,900.0	6,550.0	6,452.6	6,411.8	158.092	SF
Emmy State H36-780 - Wellbore #1 - Design #1	6,689.6	6,650.0	4,493.4	4,463.4	149.712	CC, ES
Emmy State H36-780 - Wellbore #1 - Design #1	6,850.0	6,671.6	4,504.1	4,473.9	149.178	SF
Emmy State H36-787 - Wellbore #1 - Prelim - Rev 2	6,712.6	6,829.0	4,049.5	4,018.3	129.846	CC, ES
Emmy State H36-787 - Wellbore #1 - Prelim - Rev 2	6,800.0	6,850.0	4,052.8	4,021.5	129.569	SF
Hurley H26-712 - Wellbore #1 - Design #1	1,800.2	1,833.2	3,021.8	3,013.9	383.738	CC
Hurley H26-712 - Wellbore #1 - Design #1	1,900.0	1,918.1	3,021.9	3,013.6	364.727	ES
Hurley H26-712 - Wellbore #1 - Design #1	16,164.7	16,118.7	3,433.9	3,259.3	19.671	SF
Hurley H26-717 - Wellbore #1 - Design #1	6,847.4	6,490.2	2,980.3	2,949.7	97.425	CC
Hurley H26-717 - Wellbore #1 - Design #1	16,164.7	16,076.6	3,013.5	2,841.1	17.485	ES, SF
Hurley H26-724 - Wellbore #1 - Design #1	7,369.1	7,252.8	2,463.3	2,432.2	79.207	CC
Hurley H26-724 - Wellbore #1 - Design #1	16,164.7	16,044.2	2,593.0	2,420.5	15.031	ES, SF
Hurley H26-730 - Wellbore #1 - Design #1	7,537.9	7,186.1	2,059.5	2,028.4	66.394	CC
Hurley H26-730 - Wellbore #1 - Design #1	16,164.7	15,789.4	2,174.5	2,001.0	12.530	ES, SF
Hurley H26-736 - Wellbore #1 - Design #1	7,700.5	7,500.0	1,693.2	1,660.9	52.319	CC
Hurley H26-736 - Wellbore #1 - Design #1	16,164.7	15,952.0	1,753.4	1,581.4	10.197	ES, SF
Hurley H26-743 - Wellbore #1 - Prelim - Rev 2	7,531.9	7,581.3	1,208.9	1,175.8	36.545	CC
Hurley H26-743 - Wellbore #1 - Prelim - Rev 2	16,164.7	16,204.5	1,334.0	1,159.8	7.658	ES, SF
Hurley H26-750 - Wellbore #1 - Prelim - Rev 2	2,400.0	2,401.0	44.7	34.2	4.257	CC, ES
Hurley H26-750 - Wellbore #1 - Prelim - Rev 2	2,500.0	2,499.6	46.3	35.3	4.236	SF
Hurley H26-756 - Wellbore #1 - Prelim - Rev 2	2,600.0	2,601.0	22.3	11.0	1.961	CC
Hurley H26-756 - Wellbore #1 - Prelim - Rev 2	2,700.0	2,700.3	22.7	10.9	1.922	ES, SF
Hurley H26-768 - Wellbore #1 - Prelim - Rev 2	2,572.3	2,572.4	21.7	10.5	1.941	CC
Hurley H26-768 - Wellbore #1 - Prelim - Rev 2	2,600.0	2,600.0	21.8	10.5	1.929	ES, SF
Hurley H26-776 - Wellbore #1 - Prelim - Rev 2	2,200.0	2,200.0	44.7	35.1	4.657	CC, ES
Hurley H26-776 - Wellbore #1 - Prelim - Rev 2	2,300.0	2,299.3	45.5	35.5	4.542	SF
Hurley H26-783 - Wellbore #1 - Prelim - Rev 2	2,000.0	2,000.0	67.0	58.3	7.708	CC, ES
Hurley H26-783 - Wellbore #1 - Prelim - Rev 2	16,164.7	16,118.0	1,259.7	1,084.5	7.192	SF
Hurley H35-720 - Wellbore #1 - Design #1	7,354.4	7,786.2	2,743.4	2,711.8	86.667	CC, ES
Hurley H35-720 - Wellbore #1 - Design #1	9,600.0	6,624.2	3,085.0	3,042.9	73.233	SF
Hurley H35-727 - Wellbore #1 - Design #1	7,300.0	7,652.1	2,356.3	2,325.0	75.242	ES
Hurley H35-727 - Wellbore #1 - Design #1	7,301.2	7,650.9	2,356.3	2,325.0	75.246	CC
Hurley H35-727 - Wellbore #1 - Design #1	9,100.0	6,700.0	2,637.2	2,599.3	69.580	SF
Hurley H35-733 - Wellbore #1 - Design #1	7,300.0	7,676.6	1,935.4	1,903.6	60.859	ES
Hurley H35-733 - Wellbore #1 - Design #1	7,304.7	7,672.0	1,935.4	1,903.6	60.870	CC
Hurley H35-733 - Wellbore #1 - Design #1	8,700.0	6,868.2	2,132.7	2,096.8	59.416	SF
Hurley H35-740 - Wellbore #1 - Design #1	7,000.0	7,983.9	1,430.2	1,396.9	42.980	SF
Hurley H35-740 - Wellbore #1 - Design #1	7,330.6	7,689.6	1,412.8	1,380.3	43.497	CC, ES
Hurley H35-746 - Wellbore #1 - Prelim - Rev 2	7,100.0	7,863.4	1,033.9	999.7	30.220	SF
Hurley H35-746 - Wellbore #1 - Prelim - Rev 2	7,322.1	7,657.6	1,025.1	991.4	30.464	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 H26-762
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 H26-762	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 H35-755 - Wellbore #1 - Prelim - Rev 2	2,600.0	2,601.0	156.7	145.3	13.751	CC, ES
Hurley H35-755 - Wellbore #1 - Prelim - Rev 2	2,700.0	2,697.1	158.8	147.0	13.454	SF
Hurley H35-761 - Wellbore #1 - Prelim - Rev 2	7,355.0	7,288.6	99.1	67.4	3.125	CC, ES, SF
Hurley H35-768 - Wellbore #1 - Prelim - Rev 2	2,600.0	2,601.0	149.4	138.0	13.106	CC, ES
Hurley H35-768 - Wellbore #1 - Prelim - Rev 2	7,139.1	7,537.8	329.2	297.9	10.522	SF
Hurley H35-774 - Wellbore #1 - Prelim - Rev 2	2,400.0	2,401.0	150.6	140.1	14.347	CC, ES
Hurley H35-774 - Wellbore #1 - Prelim - Rev 2	2,600.0	2,590.9	157.2	145.9	13.840	SF
Hurley H35-779 - Wellbore #1 - Prelim - Rev 2	2,200.0	2,200.0	158.6	149.0	16.529	CC, ES
Hurley H35-779 - Wellbore #1 - Prelim - Rev 2	2,400.0	2,390.5	164.5	154.0	15.731	SF
Hurley H35-787 - Wellbore #1 - Prelim - Rev 2	2,000.0	2,000.0	165.9	157.2	19.077	CC, ES
Hurley H35-787 - Wellbore #1 - Prelim - Rev 2	2,300.0	2,286.1	177.9	167.9	17.842	SF
Hurley State H35-713 - Wellbore #1 - Design #1	1,900.2	1,933.2	3,030.9	3,022.6	364.105	CC
Hurley State H35-713 - Wellbore #1 - Design #1	2,000.0	2,000.0	3,031.1	3,022.4	348.469	ES
Hurley State H35-713 - Wellbore #1 - Design #1	9,800.0	6,476.1	3,669.0	3,625.8	84.837	SF
H Section 13						
Karakakes H13-25 - Original Drilling - Original Drilling - A	16,164.7	7,095.1	4,936.0	4,823.3	43.810	CC, ES, SF
Karakakes H13-33 - Original Drilling - Original Drilling - A	16,164.7	7,040.1	3,621.6	3,511.1	32.761	CC, ES, SF
Karakakes H14-63HN - Original Drilling - Original Drilling	16,164.7	10,304.3	314.8	203.7	2.833	CC, ES, SF
Sarchet H13-75HN - Original Drilling - Original Drilling	16,164.7	8,456.4	6,169.1	6,045.4	49.870	CC, ES, SF
UPRC 13-13J - Original Drilling - Original Drilling - As Dri	15,742.8	7,136.0	4,292.5	4,185.2	40.005	CC
UPRC 13-13J - Original Drilling - Original Drilling - As Dri	15,800.0	7,135.2	4,292.9	4,185.0	39.786	ES
UPRC 13-13J - Original Drilling - Original Drilling - As Dri	16,164.7	7,129.7	4,313.2	4,201.8	38.725	SF
UPRC 13-14J - Original Drilling - Original Drilling - As Dri	15,921.6	6,902.6	5,351.1	5,241.1	48.662	CC
UPRC 13-14J - Original Drilling - Original Drilling - As Dri	16,000.0	6,903.6	5,351.6	5,240.9	48.307	ES
UPRC 13-14J - Original Drilling - Original Drilling - As Dri	16,164.7	6,905.6	5,356.6	5,244.1	47.636	SF
UPRC 13-15J - Original Drilling - Original Drilling - As Dri	15,649.4	6,988.4	6,707.8	6,601.1	62.857	CC
UPRC 13-15J - Original Drilling - Original Drilling - As Dri	15,700.0	6,988.7	6,708.0	6,600.7	62.555	ES
UPRC 13-15J - Original Drilling - Original Drilling - As Dri	16,164.7	6,990.7	6,727.5	6,615.8	60.182	SF
UPRC 13-16J - Wellbore #1 - Wellbore #1 - As Drilled	15,697.2	6,973.4	7,717.0	7,610.7	72.543	CC
UPRC 13-16J - Wellbore #1 - Wellbore #1 - As Drilled	15,800.0	6,972.7	7,717.7	7,610.3	71.847	ES
UPRC 13-16J - Wellbore #1 - Wellbore #1 - As Drilled	16,164.7	6,970.3	7,731.2	7,620.2	69.656	SF
UPRR 39 Pan Am B1 (PA) - Original Drilling - Original Dr	15,512.5	7,017.0	3,982.7	3,761.9	18.042	CC, ES
UPRR 39 Pan Am B1 (PA) - Original Drilling - Original Dr	16,100.0	7,017.0	4,025.8	3,799.6	17.799	SF
H Section 14						
Bohlender H14-09 - Original Drilling - Original Drilling - A	16,164.7	7,099.7	3,084.7	2,978.7	29.124	CC, ES, SF
Bohlender H14-15 - Original Drilling - Original Drilling - A	15,326.7	7,031.2	1,556.6	1,453.7	15.127	CC, ES
Bohlender H14-15 - Original Drilling - Original Drilling - A	15,500.0	7,034.4	1,566.2	1,461.6	14.974	SF
Bohlender H14-16 - Original Drilling - Original Drilling - A	15,942.2	6,996.3	2,427.8	2,319.1	22.321	CC, ES
Bohlender H14-16 - Original Drilling - Original Drilling - A	16,164.7	6,999.6	2,438.0	2,327.0	21.966	SF
Wilcox H14-03J - Original Drilling - Original Drilling - As D	16,100.0	7,388.2	347.7	205.4	2.444	SF
Wilcox H14-03J - Original Drilling - Original Drilling - As D	16,164.7	7,388.1	338.1	203.2	2.506	CC, ES
Wilcox H14-10 - Original Drilling - Original Drilling - As Dr	16,164.7	7,386.2	1,913.3	1,802.4	17.249	CC, ES, SF
Wilcox H14-11 - Original Drilling - Original Drilling - As Dr	16,164.7	7,611.9	1,108.4	980.2	8.648	CC, ES, SF
Wilcox H14-13 - Original Drilling - Original Drilling - As Dr	15,752.9	7,650.0	532.1	416.5	4.605	CC
Wilcox H14-13 - Original Drilling - Original Drilling - As Dr	15,900.0	7,645.3	552.0	406.4	3.791	ES
Wilcox H14-13 - Original Drilling - Original Drilling - As Dr	16,000.0	7,642.1	586.6	423.9	3.605	SF
H Section 19						
Butterball 13-19 - Original Drilling - Original Drilling - As D	11,300.0	11,300.0	9,314.5	9,234.4	116.303	ES
Butterball 13-19 - Original Drilling - Original Drilling - As D	11,660.9	6,738.1	9,307.5	9,239.9	137.786	CC
Butterball 13-19 - Original Drilling - Original Drilling - As D	15,200.0	15,200.0	9,956.9	9,830.2	78.622	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 H26-762
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 H26-762	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Prelim - Rev 2	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
H Section 21						
Moser 24-21 - Wellbore #1 - Wellbore #1 - As Drilled	12,385.6	6,832.7	8,490.2	8,415.3	113.463	CC
Moser 24-21 - Wellbore #1 - Wellbore #1 - As Drilled	12,500.0	6,833.4	8,490.9	8,415.1	111.902	ES
Moser 24-21 - Wellbore #1 - Wellbore #1 - As Drilled	16,164.7	6,862.3	9,293.4	9,189.9	89.783	SF
H Section 22						
HSR Demeules 09-22 - Original Drilling - Original Drilling	11,600.3	6,952.2	2,427.7	2,360.0	35.884	CC, ES
HSR Demeules 09-22 - Original Drilling - Original Drilling	12,000.0	6,949.2	2,460.4	2,390.3	35.124	SF
HSR Duryea - Wellbore #1 - Wellbore #1 - As Drilled	10,743.4	6,980.7	2,965.7	2,905.6	49.330	CC, ES
HSR Duryea - Wellbore #1 - Wellbore #1 - As Drilled	11,500.0	7,006.1	3,060.6	2,995.8	47.229	SF
Sarchet 16-22 - Wellbore #1 - Wellbore #1 - As Drilled	10,184.2	7,000.0	2,566.1	2,510.6	46.302	CC
Sarchet 16-22 - Wellbore #1 - Wellbore #1 - As Drilled	10,200.0	7,000.0	2,566.1	2,510.6	46.213	ES
Sarchet 16-22 - Wellbore #1 - Wellbore #1 - As Drilled	10,700.0	7,000.0	2,617.4	2,558.9	44.774	SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region Drilling - Sandbox	Local Co-ordinate Reference:	Well Hurley H26-762
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 H26-762	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						
Eachus 32-23 - Original Drilling - Original Drilling - As Dri	12,974.8	7,001.9	1,593.9	1,513.4	19.782	CC
Eachus 32-23 - Original Drilling - Original Drilling - As Dri	13,000.0	7,001.5	1,594.1	1,513.3	19.711	ES
Eachus 32-23 - Original Drilling - Original Drilling - As Dri	13,200.0	6,998.9	1,609.8	1,527.0	19.443	SF
Eachus 41-23 (PA) - Original Drilling - Original Drilling - A	14,182.2	7,009.0	2,792.3	2,584.4	13.432	CC
Eachus 41-23 (PA) - Original Drilling - Original Drilling - A	14,200.0	7,009.0	2,792.3	2,584.3	13.420	ES
Eachus 41-23 (PA) - Original Drilling - Original Drilling - A	14,500.0	7,009.0	2,810.3	2,599.3	13.320	SF
Eachus UPRR 31-23 - Original Drilling - Original Drilling -	14,306.8	6,966.9	1,544.4	1,393.4	10.227	CC, ES
Eachus UPRR 31-23 - Original Drilling - Original Drilling -	14,400.0	6,967.1	1,547.2	1,395.2	10.175	SF
Eachus UPRR 42-23 (PA) - Original Drilling - Original Dri	12,863.3	7,019.0	2,812.5	2,616.9	14.377	CC
Eachus UPRR 42-23 (PA) - Original Drilling - Original Dri	12,900.0	7,019.0	2,812.8	2,616.7	14.349	ES
Eachus UPRR 42-23 (PA) - Original Drilling - Original Dri	13,200.0	7,019.0	2,832.6	2,633.7	14.239	SF
HSR Alberstein 16-23 - Original Drilling - Original Drilling	10,569.3	7,168.4	2,652.2	2,593.2	44.910	CC
HSR Alberstein 16-23 - Original Drilling - Original Drilling	10,600.0	7,170.1	2,652.4	2,593.0	44.677	ES
HSR Alberstein 16-23 - Original Drilling - Original Drilling	11,400.0	7,214.0	2,778.9	2,712.8	42.043	SF
HSR Ashley 15-23A - Original Drilling - Original Drilling -	10,643.9	7,049.2	1,326.2	1,266.8	22.334	CC, ES
HSR Ashley 15-23A - Original Drilling - Original Drilling -	10,900.0	7,055.3	1,350.7	1,288.8	21.835	SF
HSR Benirschke 10-23 - Original Drilling - Original Drillin	11,635.0	7,046.1	1,644.3	1,576.0	24.073	CC, ES
HSR Benirschke 10-23 - Original Drilling - Original Drillin	11,900.0	7,064.1	1,665.4	1,594.5	23.481	SF
HSR Eachus 03-23 - Original Drilling - Original Drilling - A	14,334.1	7,174.2	230.9	128.4	2.254	CC, ES, SF
HSR Eachus 04-23 - Original Drilling - Original Drilling - A	14,365.8	7,466.4	1,187.3	1,061.6	9.447	CC
HSR Eachus 04-23 - Original Drilling - Original Drilling - A	14,400.0	7,466.9	1,187.8	1,059.7	9.269	ES
HSR Eachus 04-23 - Original Drilling - Original Drilling - A	14,800.0	7,471.9	1,264.2	1,113.6	8.395	SF
HSR Eachus 05-23 - Original Drilling - Original Drilling - A	12,600.0	7,421.7	1,292.4	1,156.9	9.535	SF
HSR Eachus 05-23 - Original Drilling - Original Drilling - A	13,000.0	7,429.5	1,218.2	1,096.7	10.025	ES
HSR Eachus 05-23 - Original Drilling - Original Drilling - A	13,033.0	7,430.1	1,217.8	1,097.3	10.113	CC
HSR Fruman 06-23 - Original Drilling - Original Drilling - A	13,399.1	7,064.9	155.2	70.3	1.828	CC, ES, SF
HSR Grasshopper 09-23 - Original Drilling - Original Drill	11,377.5	6,909.0	2,551.4	2,485.8	38.861	CC
HSR Grasshopper 09-23 - Original Drilling - Original Drill	11,400.0	6,907.8	2,551.5	2,485.6	38.723	ES
HSR Grasshopper 09-23 - Original Drilling - Original Drill	12,000.0	6,884.5	2,626.1	2,555.0	36.914	SF
Ritchey 21-23 - Original Drilling - Original Drilling - As Dri	13,718.8	6,962.1	995.5	907.9	11.368	CC, ES
Ritchey 21-23 - Original Drilling - Original Drilling - As Dri	13,800.0	6,961.2	998.8	910.3	11.284	SF
Ritchey 24-23 - Original Drilling - Original Drilling - As Dri	12,272.4	7,084.9	2,019.4	1,942.6	26.272	CC
Ritchey 24-23 - Original Drilling - Original Drilling - As Dri	12,300.0	7,085.0	2,019.6	1,942.4	26.157	ES
Ritchey 24-23 - Original Drilling - Original Drilling - As Dri	12,700.0	7,086.0	2,064.2	1,983.0	25.430	SF
Ritchey 31-24 - Original Drilling - Original Drilling - As Dri	13,614.0	7,171.0	3,417.0	3,328.3	38.522	CC
Ritchey 31-24 - Original Drilling - Original Drilling - As Dri	13,700.0	7,172.1	3,418.1	3,328.3	38.044	ES
Ritchey 31-24 - Original Drilling - Original Drilling - As Dri	14,700.0	7,184.3	3,585.4	3,484.4	35.482	SF
UPRC 23-11J - Original Drilling - Original Drilling - As Dri	11,639.9	6,977.4	84.8	16.7	1.245	Level 2, CC, ES, SF
UPRC 23-12J - Original Drilling - Original Drilling - As Dri	11,646.4	6,969.6	1,384.8	1,316.6	20.315	CC, ES
UPRC 23-12J - Original Drilling - Original Drilling - As Dri	11,800.0	6,970.9	1,393.3	1,324.4	20.233	SF
UPRC H23-13 - Wellbore #1 - Wellbore #1 - As Drilled	10,496.2	6,985.7	1,387.6	1,329.5	23.902	CC
UPRC H23-13 - Wellbore #1 - Wellbore #1 - As Drilled	10,500.0	6,985.8	1,387.6	1,329.5	23.893	ES
UPRC H23-13 - Wellbore #1 - Wellbore #1 - As Drilled	10,600.0	6,989.4	1,391.5	1,332.9	23.751	SF
UPRC H23-14J - Original Drilling - Original Drilling - As D	10,347.6	6,977.0	320.7	263.9	5.646	CC, ES
UPRC H23-14J - Original Drilling - Original Drilling - As D	10,400.0	6,980.7	324.9	267.3	5.646	SF
UPRC H23-24 - Original Drilling - Original Drilling - As Dr	11,257.8	7,000.0	562.9	498.2	8.699	CC, ES
UPRC H23-24 - Original Drilling - Original Drilling - As Dr	11,300.0	7,001.6	564.5	499.2	8.644	SF
UPRR 53 Pan Am B#1 (PA) - Original Drilling - Original D	10,706.0	6,976.0	827.1	652.0	4.724	CC, ES, SF
UPRR 53 Pan Am UT V#1 - Original Drilling - Original Dr	13,390.4	7,073.3	2,298.4	2,212.4	26.739	CC
UPRR 53 Pan Am UT V#1 - Original Drilling - Original Dr	13,400.0	7,073.4	2,298.4	2,212.3	26.705	ES
UPRR 53 Pan Am UT V#1 - Original Drilling - Original Dr	13,800.0	7,076.4	2,334.6	2,244.8	26.009	SF

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Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region Drilling - Sandbox	Local Co-ordinate Reference:	Well Hurley H26-762
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 H26-762	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	11,622.2	6,800.0	7,979.4	7,911.9	118.321	CC
Gurtler 24-09J - Original Drilling - Original Drilling - As Dr	11,700.0	6,800.0	7,979.8	7,911.6	117.025	ES
Gurtler 24-09J - Original Drilling - Original Drilling - As Dr	15,900.0	6,800.0	9,053.5	8,952.9	90.025	SF
Gurtler 24-10J - Original Drilling - Original Drilling - As Dr	11,650.1	7,007.2	6,787.2	6,718.9	99.365	CC
Gurtler 24-10J - Original Drilling - Original Drilling - As Dr	11,700.0	7,008.1	6,787.4	6,718.6	98.662	ES
Gurtler 24-10J - Original Drilling - Original Drilling - As Dr	14,900.0	7,031.5	7,525.0	7,431.0	79.999	SF
Gurtler 24-11J - Original Drilling - Original Drilling - As Dr	11,592.4	6,800.0	5,322.7	5,255.5	79.209	CC
Gurtler 24-11J - Original Drilling - Original Drilling - As Dr	11,600.0	6,800.0	5,322.7	5,255.4	79.121	ES
Gurtler 24-11J - Original Drilling - Original Drilling - As Dr	13,800.0	6,800.0	5,762.2	5,677.2	67.751	SF
Gurtler 24-12J - Original Drilling - Original Drilling - As Dr	11,611.8	6,500.0	4,148.6	4,082.2	62.505	CC, ES
Gurtler 24-12J - Original Drilling - Original Drilling - As Dr	13,100.0	6,500.0	4,407.4	4,328.7	56.020	SF
Gurtler 24-12J - Original Drilling - ST01 - ST01 Original D	11,600.0	6,642.9	4,147.2	4,081.4	63.040	CC, ES
Gurtler 24-12J - Original Drilling - ST01 - ST01 Original D	13,100.0	6,569.3	4,408.6	4,330.6	56.580	SF
Gurtler 24-13J - Original Drilling - Original Drilling - As Dr	10,320.4	6,300.0	4,152.0	4,097.7	76.458	CC, ES
Gurtler 24-13J - Original Drilling - Original Drilling - As Dr	12,100.0	6,200.0	4,515.7	4,447.5	66.225	SF
Gurtler 24-15J - Original Drilling - Original Drilling - As Dr	10,298.4	7,046.5	6,694.6	6,638.1	118.591	CC
Gurtler 24-15J - Original Drilling - Original Drilling - As Dr	10,400.0	7,046.1	6,695.4	6,638.0	116.697	ES
Gurtler 24-15J - Original Drilling - Original Drilling - As Dr	14,000.0	7,028.7	7,649.6	7,564.7	90.094	SF
Gurtler 24-16J - Original Drilling - Original Drilling - As Dr	10,317.6	6,961.3	7,681.5	7,625.2	136.312	CC
Gurtler 24-16J - Original Drilling - Original Drilling - As Dr	10,400.0	6,961.3	7,682.0	7,624.9	134.543	ES
Gurtler 24-16J - Original Drilling - Original Drilling - As Dr	14,900.0	6,960.3	8,944.2	8,853.0	98.072	SF
Gurtler H24-14 - Original Drilling - Original Drilling - As D	10,187.0	6,906.4	5,532.9	5,477.7	100.368	CC
Gurtler H24-14 - Original Drilling - Original Drilling - As D	10,200.0	6,906.5	5,532.9	5,477.6	100.153	ES
Gurtler H24-14 - Original Drilling - Original Drilling - As D	13,000.0	6,935.6	6,206.7	6,129.6	80.492	SF
Gurtler H24-21 (PA) - Original Drilling - Original Drilling -	12,136.6	7,075.3	6,081.8	6,008.8	83.311	CC
Gurtler H24-21 (PA) - Original Drilling - Original Drilling -	12,200.0	7,079.7	6,082.1	6,008.4	82.589	ES
Gurtler H24-21 (PA) - Original Drilling - Original Drilling -	14,800.0	7,259.2	6,636.8	6,542.1	70.085	SF
Gurtler H24-23 - Original Drilling - Original Drilling - As D	10,972.5	6,902.3	7,336.0	7,274.1	118.564	CC
Gurtler H24-23 - Original Drilling - Original Drilling - As D	11,000.0	6,902.3	7,336.0	7,273.9	118.070	ES
Gurtler H24-23 - Original Drilling - Original Drilling - As D	15,000.0	6,909.3	8,368.6	8,275.6	90.009	SF
Gurtler H24-24 - Original Drilling - Original Drilling - As D	10,981.1	6,489.7	6,221.2	6,160.5	102.440	CC
Gurtler H24-24 - Original Drilling - Original Drilling - As D	11,000.0	6,489.5	6,221.2	6,160.3	102.137	ES
Gurtler H24-24 - Original Drilling - Original Drilling - As D	14,100.0	6,453.1	6,959.0	6,873.9	81.771	SF
Gurtler H24-99HZ - Wellbore #1 - Original Drilling	10,950.4	11,118.0	3,854.9	3,790.4	59.701	CC
Gurtler H24-99HZ - Wellbore #1 - Original Drilling	11,100.0	11,118.0	3,857.8	3,789.3	56.262	ES
Gurtler H24-99HZ - Wellbore #1 - Original Drilling	13,700.0	11,118.0	4,734.9	4,597.3	34.411	SF
Gurtler H25-27 - Original Drilling - Original Drilling - As D	9,746.9	6,987.1	7,276.7	7,223.2	135.866	CC
Gurtler H25-27 - Original Drilling - Original Drilling - As D	9,800.0	6,986.8	7,276.9	7,222.9	134.685	ES
Gurtler H25-27 - Original Drilling - Original Drilling - As D	14,200.0	6,961.8	8,530.9	8,442.6	96.654	SF
Gurtler Russell L1 (PA) - Original Drilling - Original Drilling	10,715.0	7,058.1	4,911.5	4,841.0	69.704	CC
Gurtler Russell L1 (PA) - Original Drilling - Original Drilling	10,800.0	7,058.6	4,912.2	4,840.9	68.907	ES
Gurtler Russell L1 (PA) - Original Drilling - Original Drilling	12,700.0	7,071.4	5,297.4	5,210.4	60.886	SF
HSR Brutschy 04-24 - Original Drilling - Original Drilling -	14,123.2	7,200.9	4,212.6	4,120.7	45.809	CC
HSR Brutschy 04-24 - Original Drilling - Original Drilling -	14,200.0	7,204.1	4,213.3	4,120.5	45.418	ES
HSR Brutschy 04-24 - Original Drilling - Original Drilling -	15,300.0	7,249.4	4,373.6	4,271.8	42.974	SF
HSR Epstein 05-24 - Original Drilling - Original Drilling - A	13,297.7	7,030.3	4,737.5	4,653.7	56.504	CC
HSR Epstein 05-24 - Original Drilling - Original Drilling - A	13,300.0	7,030.3	4,737.5	4,653.7	56.488	ES
A HSR Epstein 05-24 - Original Drilling - Original Drilling - A	14,800.0	7,060.0	4,969.9	4,873.4	51.510	SF
HSR Hoffman 03-24 - Original Drilling - Original Drilling -	14,165.0	7,039.1	5,526.9	5,428.5	56.152	CC
HSR Hoffman 03-24 - Original Drilling - Original Drilling -	14,200.0	7,038.5	5,527.0	5,428.2	55.952	ES
HSR Hoffman 03-24 - Original Drilling - Original Drilling -	15,900.0	7,009.6	5,792.7	5,680.2	51.505	SF
HSR Sarchet 02-24 - Original Drilling - Original Drilling - A	14,157.6	6,952.9	6,879.3	6,787.7	75.108	CC
HSR Sarchet 02-24 - Original Drilling - Original Drilling - A	14,200.0	6,953.0	6,879.5	6,787.4	74.758	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 H26-762
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 H26-762	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	16,164.7	6,958.2	7,166.1	7,057.3	65.853	SF
HSR Sarchet 06-24 - Original Drilling - Original Drilling - A	12,805.5	6,933.3	5,657.0	5,578.2	71.786	CC
HSR Sarchet 06-24 - Original Drilling - Original Drilling - A	12,900.0	6,934.7	5,657.8	5,578.0	70.934	ES
HSR Sarchet 06-24 - Original Drilling - Original Drilling - A	15,000.0	6,977.7	6,067.5	5,970.9	62.806	SF
HSR Traurig 01-24 - Original Drilling - Original Drilling - A	14,397.4	7,038.2	7,759.9	7,665.8	82.431	CC
HSR Traurig 01-24 - Original Drilling - Original Drilling - A	14,500.0	7,038.7	7,760.6	7,665.4	81.544	ES
HSR Traurig 01-24 - Original Drilling - Original Drilling - A	16,164.7	7,047.0	7,958.6	7,848.5	72.317	SF
Nopens D19-31 - Original Drilling - Original Drilling - As D	13,546.2	6,954.1	8,469.8	8,384.0	98.669	CC
Nopens D19-31 - Original Drilling - Original Drilling - As D	13,600.0	6,955.1	8,470.0	8,383.6	98.056	ES
Nopens D19-31 - Original Drilling - Original Drilling - As D	16,164.7	7,001.7	8,865.1	8,756.4	81.561	SF
Nopens H24-08 - Original Drilling - Original Drilling - As D	12,954.5	6,840.3	7,971.7	7,891.8	99.756	CC
Nopens H24-08 - Original Drilling - Original Drilling - As D	13,000.0	6,841.9	7,971.8	7,891.5	99.191	ES
Nopens H24-08 - Original Drilling - Original Drilling - As D	16,164.7	6,947.5	8,593.1	8,486.5	80.602	SF
Sarchet H24-22 - Original Drilling - Original Drilling - As D	12,634.1	6,975.9	7,132.9	7,055.5	92.217	CC
Sarchet H24-22 - Original Drilling - Original Drilling - As D	12,700.0	6,979.2	7,133.2	7,055.2	91.436	ES
Sarchet H24-22 - Original Drilling - Original Drilling - As D	16,000.0	7,247.9	7,882.3	7,777.7	75.412	SF
Weld County Lumber 01 - Original Drilling - Original Drilling	13,378.4	6,964.3	6,954.4	6,870.2	82.533	CC
Weld County Lumber 01 - Original Drilling - Original Drilling	13,400.0	6,964.5	6,954.5	6,870.0	82.321	ES
Weld County Lumber 01 - Original Drilling - Original Drilling	16,164.7	7,000.0	7,491.7	7,384.9	70.168	SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region Drilling - Sandbox	Local Co-ordinate Reference:	Well Hurley H26-762
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 H26-762	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	575.1	554.1	5,799.9	5,797.0	1,993.858	CC
Dechant 21-25 - Original Drilling - Original Drilling - As D	1,400.0	1,358.6	5,800.8	5,793.3	766.299	ES
Dechant 21-25 - Original Drilling - Original Drilling - As D	12,400.0	7,129.0	7,391.9	7,311.3	91.741	SF
Dechant D30-33D - Original Drilling - Original Drilling - As	0.0	0.0	8,344.2			
Dechant D30-33D - Original Drilling - Original Drilling - As	100.0	34.1	8,344.2	8,344.0	10,000.000	ES
Dechant D30-33D - Original Drilling - Original Drilling - As	10,900.0	6,821.8	9,958.4	9,897.0	162.113	SF
Dechant D31-30D - Original Drilling - Original Drilling - As	100.0	37.7	8,347.2	8,347.1	10,000.000	CC, ES
Dechant D31-30D - Original Drilling - Original Drilling - As	10,100.0	6,956.6	9,971.6	9,916.9	182.273	SF
Dechant H25-64-1HN - Original Drilling - Original Drilling	6,648.6	6,366.6	3,596.4	3,559.8	98.180	CC, ES
Dechant H25-64-1HN - Original Drilling - Original Drilling	6,800.0	6,423.0	3,607.3	3,570.3	97.628	SF
Dechant H25-65HN - Original Drilling - Original Drilling	6,800.0	6,417.0	3,497.3	3,460.9	96.147	SF
Dechant H25-65HN - Original Drilling - Original Drilling	6,854.4	6,417.0	3,496.8	3,460.5	96.188	CC, ES
HSR Cohn 03-25 - Original Drilling - Original Drilling - As	8,964.3	6,916.7	5,197.4	5,151.7	113.610	CC
HSR Cohn 03-25 - Original Drilling - Original Drilling - As	9,000.0	6,917.1	5,197.5	5,151.5	112.973	ES
HSR Cohn 03-25 - Original Drilling - Original Drilling - As	12,800.0	12,800.0	6,459.1	6,366.4	69.700	SF
HSR Crowe 06-25 - Original Drilling - Original Drilling - A	7,612.8	7,012.3	5,244.1	5,203.8	130.031	CC, ES
HSR Crowe 06-25 - Original Drilling - Original Drilling - A	11,200.0	6,962.6	6,353.2	6,292.5	104.664	SF
HSR Dechant 04-25 - Original Drilling - Original Drilling -	9,049.2	7,430.2	4,129.0	4,059.6	59.478	CC, ES
HSR Dechant 04-25 - Original Drilling - Original Drilling -	10,100.0	7,440.7	4,260.6	4,185.3	56.593	SF
HSR Dechant 05-25 - Original Drilling - Original Drilling -	7,529.4	7,108.7	4,235.9	4,195.3	104.409	CC, ES
HSR Dechant 05-25 - Original Drilling - Original Drilling -	10,200.0	7,154.7	5,007.2	4,952.6	91.670	SF
KY Blue D30-32 - Original Drilling - Original Drilling - As D	7,236.3	6,904.3	8,414.0	8,374.4	212.423	CC
KY Blue D30-32 - Original Drilling - Original Drilling - As D	7,250.0	6,910.1	8,414.0	8,374.4	212.252	ES
KY Blue D30-32 - Original Drilling - Original Drilling - As D	12,300.0	6,951.7	9,999.3	9,929.9	143.973	SF
KY Blue H25-04J - Original Drilling - Original Drilling - As	6,836.4	6,697.9	7,758.1	7,731.2	288.438	CC, ES
KY Blue H25-04J - Original Drilling - Original Drilling - As	11,900.0	6,970.0	9,988.5	9,936.9	193.477	SF
KY Blue H25-09 - Original Drilling - Original Drilling - As D	7,051.1	6,781.6	7,924.9	7,885.9	203.301	CC, ES
KY Blue H25-09 - Original Drilling - Original Drilling - As D	12,500.0	6,923.6	9,984.5	9,915.6	144.890	SF
KY Blue H25-10 - Original Drilling - Original Drilling - As D	7,095.1	6,937.5	6,479.3	6,439.7	163.781	CC
KY Blue H25-10 - Original Drilling - Original Drilling - As D	7,100.0	6,940.8	6,479.3	6,439.7	163.722	ES
KY Blue H25-10 - Original Drilling - Original Drilling - As D	12,000.0	7,043.3	8,440.3	8,375.6	130.400	SF
KY Blue H25-11 - Original Drilling - Original Drilling - As D	7,009.2	6,930.7	5,328.1	5,259.0	77.206	CC
KY Blue H25-11 - Original Drilling - Original Drilling - As D	7,050.0	6,956.6	5,328.4	5,259.0	76.735	ES
KY Blue H25-11 - Original Drilling - Original Drilling - As D	7,400.0	7,078.1	5,363.5	5,291.8	74.818	SF
KY Blue H25-12 - Original Drilling - Original Drilling - As D	6,868.6	6,657.6	3,881.0	3,842.5	100.926	CC, ES
KY Blue H25-12 - Original Drilling - Original Drilling - As D	7,350.0	6,947.3	3,931.7	3,891.8	98.562	SF
KY Blue H25-14 - Original Drilling - Original Drilling - As D	6,704.2	6,599.2	5,727.4	5,689.6	151.489	CC, ES
KY Blue H25-14 - Original Drilling - Original Drilling - As D	10,000.0	6,894.2	7,379.1	7,328.7	146.646	SF
KY Blue H25-15 - Original Drilling - Original Drilling - As D	6,741.6	6,569.4	6,686.9	6,649.1	176.806	CC
KY Blue H25-15 - Original Drilling - Original Drilling - As D	6,750.0	6,576.0	6,687.0	6,649.1	176.653	ES
KY Blue H25-15 - Original Drilling - Original Drilling - As D	11,500.0	6,932.1	9,071.2	9,012.1	153.399	SF
KY H25-24 - Original Drilling - Original Drilling - As Drilled	6,849.7	6,753.9	6,150.7	6,112.0	159.155	CC
KY H25-24 - Original Drilling - Original Drilling - As Drilled	6,850.0	6,754.1	6,150.7	6,112.0	159.151	ES
KY H25-24 - Original Drilling - Original Drilling - As Drilled	11,200.0	6,934.9	8,125.8	8,067.6	139.702	SF
Moore UPRC H25-01 - Original Drilling - Original Drilling	9,057.0	6,936.0	8,056.4	8,010.0	173.549	CC
Moore UPRC H25-01 - Original Drilling - Original Drilling	9,100.0	6,936.1	8,056.5	8,009.8	172.394	ES
Moore UPRC H25-01 - Original Drilling - Original Drilling	14,600.0	6,947.5	9,778.7	9,692.0	112.847	SF
Moore UPRC H25-02 - Original Drilling - Original Drilling	8,951.5	6,936.7	6,671.4	6,625.7	145.960	CC
Moore UPRC H25-02 - Original Drilling - Original Drilling	9,000.0	6,937.1	6,671.6	6,625.5	144.874	ES
Moore UPRC H25-02 - Original Drilling - Original Drilling	13,300.0	6,970.7	7,963.1	7,885.9	103.114	SF
Moser 25-32 - Original Drilling - Original Drilling - As Drill	7,516.5	7,000.6	6,358.3	6,318.1	158.064	CC, ES
Moser 25-32 - Original Drilling - Original Drilling - As Drill	15,200.0	15,200.0	9,972.3	9,864.5	92.502	SF
Moser 25-42 - Original Drilling - Original Drilling - As Drill	7,736.2	6,943.3	8,033.4	7,993.1	199.371	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 H26-762
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 H26-762	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 25-42 - Original Drilling - Original Drilling - As Drill	13,600.0	6,936.7	9,945.4	9,867.4	127.489	SF
UPRR 53 Pan Am T#2 - Original Drilling - Original Drilling	8,269.9	6,800.0	4,954.9	4,913.4	119.423	CC
UPRR 53 Pan Am T#2 - Original Drilling - Original Drilling	8,300.0	6,800.0	4,955.0	4,913.3	119.015	ES
UPRR 53 Pan Am T#2 - Original Drilling - Original Drilling	11,300.0	6,876.9	5,806.9	5,745.0	93.698	SF
UPRR 53 Pan Am UT T#1 - Original Drilling - Original Dr	8,096.3	6,963.0	7,343.6	7,187.2	46.956	CC
UPRR 53 Pan Am UT T#1 - Original Drilling - Original Dr	8,100.0	6,963.0	7,343.6	7,187.2	46.952	ES
UPRR 53 Pan Am UT T#1 - Original Drilling - Original Dr	10,700.0	6,963.0	7,791.4	7,616.9	44.645	SF
Von Feldt 1-25B - Original Drilling - Original Drilling - As D	6,674.4	6,458.0	4,673.4	4,636.1	125.287	CC, ES
Von Feldt 1-25B - Original Drilling - Original Drilling - As D	9,400.0	9,400.0	5,967.8	5,911.9	106.817	SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region Drilling - Sandbox	Local Co-ordinate Reference:	Well Hurley H26-762
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 H26-762	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	9,284.8	7,039.3	1,339.4	1,291.0	27.705	CC
Bullard 31-26 - Original Drilling - Original Drilling - As Dril	9,300.0	7,040.0	1,339.4	1,291.0	27.622	ES
Bullard 31-26 - Original Drilling - Original Drilling - As Dril	9,600.0	7,054.1	1,375.9	1,324.8	26.923	SF
Bullard 32-26 - Original Drilling - Original Drilling - As Dril	7,594.0	7,026.3	1,481.5	1,441.1	36.691	CC, ES
Bullard 32-26 - Original Drilling - Original Drilling - As Dril	7,700.0	7,027.0	1,485.3	1,444.8	36.641	SF
Bullard 41-26 - Original Drilling - Original Drilling - As Dril	8,755.0	7,068.9	2,292.6	2,247.7	51.038	CC, ES
Bullard 41-26 - Original Drilling - Original Drilling - As Dril	9,500.0	7,072.9	2,410.6	2,360.2	47.835	SF
Dechant H25-29D - Original Drilling - Original Drilling - As	109.8	128.8	3,815.3	3,814.9	9,569.673	CC
Dechant H25-29D - Original Drilling - Original Drilling - As	200.0	196.7	3,815.6	3,814.7	4,537.381	ES
Dechant H25-29D - Original Drilling - Original Drilling - As	12,600.0	7,459.9	5,711.0	5,621.3	63.653	SF
Dechant H25-33D - Original Drilling - Original Drilling - As	5,476.1	5,498.0	3,538.8	3,485.2	65.998	CC
Dechant H25-33D - Original Drilling - Original Drilling - As	6,600.0	6,896.2	3,547.6	3,481.1	53.310	ES
Dechant H25-33D - Original Drilling - Original Drilling - As	6,850.0	7,228.6	3,558.2	3,490.2	52.281	SF
Harsh H26-09D - Original Drilling - Original Drilling - As D	6,851.9	6,711.8	2,905.8	2,867.2	75.314	CC, ES
Harsh H26-09D - Original Drilling - Original Drilling - As D	7,150.0	6,929.1	2,927.6	2,888.1	74.079	SF
Harsh H26-10 - Original Drilling - Original Drilling - As Dr	6,847.1	6,771.7	1,617.0	1,578.2	41.761	CC
Harsh H26-10 - Original Drilling - Original Drilling - As Dr	6,850.0	6,774.2	1,617.0	1,578.2	41.749	ES
Harsh H26-10 - Original Drilling - Original Drilling - As Dr	7,000.0	6,887.3	1,624.7	1,585.5	41.450	SF
Harsh H26-15 - Original Drilling - Original Drilling - As Dr	6,577.7	6,535.9	2,268.4	2,231.2	61.007	CC, ES
Harsh H26-15 - Original Drilling - Original Drilling - As Dr	6,800.0	6,732.7	2,300.4	2,262.2	60.197	SF
Harsh H26-16 - Original Drilling - Original Drilling - As Dr	6,599.3	6,485.7	3,131.1	3,094.0	84.302	CC
Harsh H26-16 - Original Drilling - Original Drilling - As Dr	6,600.0	6,486.3	3,131.1	3,094.0	84.294	ES
Harsh H26-16 - Original Drilling - Original Drilling - As Dr	6,900.0	6,767.4	3,174.9	3,136.4	82.470	SF
Harsh H26-23D - Original Drilling - Original Drilling - As D	1,055.0	1,074.0	2,270.7	2,266.0	480.016	CC
Harsh H26-23D - Original Drilling - Original Drilling - As D	1,100.0	1,109.7	2,270.8	2,265.9	458.661	ES
Harsh H26-23D - Original Drilling - Original Drilling - As D	6,850.0	6,940.7	2,485.6	2,446.2	63.073	SF
HSR Moser 04-26 - Original Drilling - Original Drilling - As	9,401.9	6,920.9	1,310.9	1,262.2	26.927	CC, ES
HSR Moser 04-26 - Original Drilling - Original Drilling - As	10,000.0	10,000.0	1,439.2	1,378.1	23.558	SF
HSR Moser 06-26 - Original Drilling - Original Drilling - As	7,667.4	7,006.7	338.9	298.5	8.387	CC, ES, SF
HSR Regalia 05-26 - Original Drilling - Original Drilling - A	8,224.3	7,000.2	744.7	702.8	17.750	CC, ES, SF
HSR-Moser 03-26A - Original Drilling - Original Drilling - A	9,266.4	7,017.3	370.6	322.7	7.739	CC, ES
HSR-Moser 03-26A - Original Drilling - Original Drilling - A	9,300.0	7,018.7	372.1	323.8	7.697	SF
John 03-26 - Original Drilling - Original Drilling - As Drille	9,013.6	7,009.3	225.6	179.4	4.888	CC, ES, SF
Lamp H25-31 - Original Drilling - Original Drilling - As Dri	8,344.4	7,100.2	3,284.7	3,242.0	76.849	CC, ES
Lamp H25-31 - Original Drilling - Original Drilling - As Dri	9,900.0	7,091.3	3,634.4	3,581.5	68.674	SF
Lamp H26-01 - Original Drilling - Original Drilling - As Dri	9,140.7	7,115.3	2,923.0	2,872.0	57.359	CC, ES
Lamp H26-01 - Original Drilling - Original Drilling - As Dri	10,100.0	7,121.9	3,076.4	3,018.7	53.388	SF
Lamp H26-08 - Original Drilling - Original Drilling - As Dri	7,811.4	6,924.6	2,816.7	2,776.3	69.754	CC, ES
Lamp H26-08 - Original Drilling - Original Drilling - As Dri	9,000.0	6,860.4	3,056.8	3,010.6	66.090	SF
Lamp H26-22 - Original Drilling - Original Drilling - As Dri	7,169.6	7,178.5	2,087.8	2,041.5	45.044	CC, ES
Lamp H26-22 - Original Drilling - Original Drilling - As Dri	7,430.5	7,176.6	2,112.3	2,064.8	44.514	SF
Moser 05-26 - Original Drilling - Original Drilling - As Drill	2,669.2	2,655.9	865.7	850.8	57.981	CC
Moser 05-26 - Original Drilling - Original Drilling - As Drill	2,700.0	2,686.7	865.9	850.8	57.342	ES
Moser 05-26 - Original Drilling - Original Drilling - As Drill	7,600.0	7,008.1	1,291.4	1,251.0	31.985	SF
Moser 41-27 - Original Drilling - Original Drilling - As Drill	927.9	896.9	872.4	867.5	177.768	CC, ES
Moser 41-27 - Original Drilling - Original Drilling - As Drill	8,800.0	7,108.2	1,986.7	1,937.1	40.076	SF
Moser H26-11 - Original Drilling - Original Drilling - As Dr	6,479.7	6,385.3	213.7	176.8	5.787	CC, ES
Moser H26-11 - Original Drilling - Original Drilling - As Dr	6,500.0	6,405.6	214.1	177.0	5.777	SF
Moser H26-12 - Wellbore #1 - Wellbore #1 - As Drilled	2,111.9	2,083.9	1,170.2	1,158.5	99.972	CC
Moser H26-12 - Wellbore #1 - Wellbore #1 - As Drilled	4,000.0	3,946.7	1,180.3	1,158.0	53.006	ES
Moser H26-12 - Wellbore #1 - Wellbore #1 - As Drilled	6,600.0	6,556.5	1,248.7	1,210.6	32.765	SF
Moser H26-13 - Wellbore #1 - Wellbore #1 - As Drilled	6,456.5	6,389.5	2,102.3	2,065.0	56.323	CC, ES
Moser H26-13 - Wellbore #1 - Wellbore #1 - As Drilled	6,650.0	6,565.1	2,129.0	2,090.7	55.555	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 H26-762
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 H26-762	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 H26-14 - Original Drilling - Original Drilling - As Dr	6,526.6	6,486.0	1,975.9	1,938.7	53.185	CC, ES
Moser H26-14 - Original Drilling - Original Drilling - As Dr	6,700.0	6,647.3	2,001.4	1,963.3	52.597	SF
Moser H26-18D - Original Drilling - Original Drilling - As D	8,377.2	7,457.5	874.2	826.5	18.316	CC
Moser H26-18D - Original Drilling - Original Drilling - As D	8,400.0	7,457.9	874.5	826.3	18.143	ES
Moser H26-18D - Original Drilling - Original Drilling - As D	8,700.0	7,462.1	931.9	876.5	16.815	SF
Moser H26-24 - Original Drilling - Original Drilling - As Dr	6,556.8	6,495.3	1,122.9	1,085.9	30.330	CC, ES
Moser H26-24 - Original Drilling - Original Drilling - As Dr	6,650.0	6,573.6	1,129.6	1,092.2	30.143	SF
Moser H26-25 - Original Drilling - Original Drilling - As Dr	6,504.9	6,454.5	1,145.9	1,108.6	30.718	CC, ES
Moser H26-25 - Original Drilling - Original Drilling - As Dr	6,600.0	6,544.8	1,153.8	1,115.9	30.504	SF
Moser H26-27D - Original Drilling - Original Drilling - As D	9,608.0	7,183.2	2,175.9	2,121.7	40.091	CC, ES
Moser H26-27D - Original Drilling - Original Drilling - As D	10,100.0	7,183.6	2,230.9	2,173.3	38.776	SF
Moser H26-28D - Original Drilling - Original Drilling - As D	9,700.0	7,629.7	686.8	622.2	10.624	SF
Moser H26-28D - Original Drilling - Original Drilling - As D	9,846.2	7,634.7	671.1	609.1	10.819	CC, ES
Moser H26-29D - Original Drilling - Original Drilling - As D	9,879.6	8,016.3	557.2	490.0	8.302	CC
Moser H26-29D - Original Drilling - Original Drilling - As D	9,900.0	8,017.9	557.5	489.2	8.154	ES
Moser H26-29D - Original Drilling - Original Drilling - As D	10,100.0	8,033.9	598.9	517.4	7.350	SF
Moser, Wesley E. G. U. B1 (PA) - Original Drilling - Origin	6,459.3	6,373.4	1,627.0	1,484.4	11.408	CC, ES
Moser, Wesley E. G. U. B1 (PA) - Original Drilling - Origin	6,600.0	6,512.4	1,641.6	1,495.9	11.268	SF
H Section 27						
HSR Moser 1-27 - Original Drilling - Original Drilling - As	9,300.8	6,963.9	2,388.1	2,339.8	49.494	CC, ES
HSR Moser 1-27 - Original Drilling - Original Drilling - As	9,800.0	6,965.3	2,439.7	2,388.8	47.908	SF
HSR Moser 16-27 - Original Drilling - Original Drilling - As	6,417.7	6,348.8	2,977.6	2,940.5	80.129	CC, ES
HSR Moser 16-27 - Original Drilling - Original Drilling - As	6,750.0	6,668.0	3,036.1	2,997.2	78.118	SF
Moser 09-27X (PA) - Original Drilling - Original Drilling - A	340.7	310.7	2,012.7	2,011.1	1,303.860	CC
Moser 09-27X (PA) - Original Drilling - Original Drilling - A	1,700.0	1,661.9	2,015.7	2,006.4	216.466	ES
Moser 09-27X (PA) - Original Drilling - Original Drilling - A	7,300.0	7,011.9	2,588.2	2,545.5	60.618	SF
Moser 24-27 - Original Drilling - Original Drilling - As Drill	847.0	816.0	1,999.8	1,995.4	451.205	CC
Moser 24-27 - Original Drilling - Original Drilling - As Drill	900.0	857.4	1,999.9	1,995.2	425.853	ES
Moser 24-27 - Original Drilling - Original Drilling - As Drill	7,500.0	7,022.4	3,173.7	3,130.6	73.634	SF
H Section 34						
Moser H34-09 - Wellbore #1 - Wellbore #1 - As Drilled	6,474.3	6,430.4	6,193.5	6,156.1	165.573	CC, ES
Moser H34-09 - Wellbore #1 - Wellbore #1 - As Drilled	6,850.0	6,819.7	6,299.6	6,260.2	160.012	SF
Moser H34-16 - Wellbore #1 - Wellbore #1 - As Drilled	6,478.4	6,425.4	7,356.0	7,318.6	196.901	CC, ES
Moser H34-16 - Wellbore #1 - Wellbore #1 - As Drilled	6,850.0	6,700.0	7,464.1	7,425.2	191.776	SF
Moser H34-31 - Wellbore #1 - Wellbore #1 - As Drilled	0.0	0.0	7,696.9			
Moser H34-31 - Wellbore #1 - Wellbore #1 - As Drilled	2,300.0	2,224.0	7,698.8	7,686.2	610.358	ES
Moser H34-31 - Wellbore #1 - Wellbore #1 - As Drilled	7,000.0	6,911.7	8,079.7	8,039.8	202.768	SF

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

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region Drilling - Sandbox	Local Co-ordinate Reference:	Well Hurley H26-762
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 H26-762	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Prelim - Rev 2	Offset TVD Reference:	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Separation Factor	Warning
H Section 35						
Cannon Farms 01-35C - Original Drilling - Original Drilling	6,535.1	6,534.9	7,017.6	6,980.4	188.336	CC, ES
Cannon Farms 01-35C - Original Drilling - Original Drilling	7,100.0	7,096.9	7,255.5	7,215.3	180.196	SF
Cannon H35-03D - Original Drilling - Original Drilling - As	6,496.6	6,388.1	6,102.3	6,065.3	165.073	CC
Cannon H35-03D - Original Drilling - Original Drilling - As	6,500.0	6,391.6	6,102.3	6,065.3	164.984	ES
Cannon H35-03D - Original Drilling - Original Drilling - As	6,750.0	6,587.6	6,156.8	6,118.7	161.460	SF
Cannon H35-09 - Original Drilling - Original Drilling - As D	6,553.1	6,616.3	6,302.5	6,265.0	167.949	CC, ES
Cannon H35-09 - Original Drilling - Original Drilling - As D	7,250.0	7,142.7	6,639.4	6,592.4	141.378	SF
Cannon H35-10 - Original Drilling - Original Drilling - As D	6,510.0	6,329.6	5,971.6	5,935.0	163.337	CC, ES
Cannon H35-10 - Original Drilling - Original Drilling - As D	7,250.0	7,250.0	6,368.0	6,327.3	156.587	SF
Cannon H35-11 - Original Drilling - Original Drilling - As D	6,513.1	6,508.5	5,704.2	5,666.8	152.611	CC, ES
Cannon H35-11 - Original Drilling - Original Drilling - As D	6,850.0	6,761.3	5,799.6	5,760.7	149.376	SF
Cannon H35-12 - Original Drilling - Original Drilling - As D	6,485.3	6,384.8	5,900.6	5,863.5	158.992	CC, ES
Cannon H35-12 - Original Drilling - Original Drilling - As D	6,850.0	6,738.4	6,007.0	5,968.0	154.236	SF
Cannon H35-13 - Wellbore #1 - Wellbore #1 - As Drilled	6,491.4	6,443.3	7,091.5	7,054.2	190.217	CC, ES
Cannon H35-13 - Wellbore #1 - Wellbore #1 - As Drilled	6,950.0	7,019.4	7,257.0	7,217.0	181.666	SF
Cannon H35-14 - Original Drilling - Original Drilling - As D	6,508.6	6,493.3	7,028.6	6,991.3	188.401	CC, ES
Cannon H35-14 - Original Drilling - Original Drilling - As D	7,300.0	7,054.7	7,484.7	7,437.0	156.693	SF
Cannon H35-15 (PA) - Original Drilling - Original Drilling -	6,517.5	6,443.1	7,201.7	7,058.2	50.180	CC, ES
Cannon H35-15 (PA) - Original Drilling - Original Drilling -	7,000.0	6,865.2	7,385.2	7,232.5	48.376	SF
Cannon H35-20 - Original Drilling - Original Drilling - As D	6,485.2	6,331.6	5,212.2	5,175.4	141.665	CC, ES
Cannon H35-20 - Original Drilling - Original Drilling - As D	6,850.0	6,705.0	5,320.2	5,281.4	137.452	SF
Cannon H35-21 - Original Drilling - Original Drilling - As D	6,508.3	6,380.7	5,356.6	5,319.8	145.460	CC, ES
Cannon H35-21 - Original Drilling - Original Drilling - As D	6,850.0	6,805.1	5,446.8	5,407.9	140.170	SF
Cannon H35-22 - Original Drilling - Original Drilling - As D	6,526.7	6,341.3	5,508.8	5,472.1	150.044	CC, ES
Cannon H35-22 - Original Drilling - Original Drilling - As D	6,900.0	6,711.6	5,616.1	5,577.5	145.549	SF
Cannon H35-24 - Original Drilling - Original Drilling - As D	6,502.9	6,349.1	6,494.1	6,457.4	176.920	CC, ES
Cannon H35-24 - Original Drilling - Original Drilling - As D	6,950.0	6,726.5	6,656.2	6,617.5	171.941	SF
Cannon X02-27 - Original Drilling - Original Drilling - As D	6,521.7	6,455.2	7,765.0	7,728.0	209.614	CC, ES
Cannon X02-27 - Original Drilling - Original Drilling - As D	7,000.0	6,894.9	7,945.5	7,906.2	202.346	SF
Cannon X02-28 - Original Drilling - Original Drilling - As D	6,508.8	6,439.5	7,341.4	7,304.3	197.888	CC, ES
Cannon X02-28 - Original Drilling - Original Drilling - As D	6,900.0	6,826.4	7,464.9	7,425.8	191.084	SF
Cannon X02-29 - Original Drilling - Original Drilling - As D	6,453.8	5,888.3	7,341.3	7,305.9	207.581	CC, ES
Cannon X02-29 - Original Drilling - Original Drilling - As D	6,800.0	6,100.0	7,442.3	7,405.6	202.842	SF
Foster 18-35 - Original Drilling - Original Drilling - As Drill	6,478.3	6,337.6	3,583.4	3,546.5	97.128	CC, ES
Foster 18-35 - Original Drilling - Original Drilling - As Drill	6,750.0	6,661.7	3,642.5	3,604.0	94.559	SF
Foster UPRR 31-35 #1 (PA) - Original Drilling - Original D	6,540.3	6,477.6	3,307.0	3,163.1	22.988	CC
Foster UPRR 31-35 #1 (PA) - Original Drilling - Original D	6,550.0	6,487.2	3,307.0	3,163.0	22.955	ES
Foster UPRR 31-35 #1 (PA) - Original Drilling - Original D	6,800.0	6,722.9	3,358.0	3,208.8	22.508	SF
Foster UPRR 32-35 - Original Drilling - Original Drilling -	6,527.2	6,470.6	4,498.4	4,461.4	121.455	CC, ES
Foster UPRR 32-35 - Original Drilling - Original Drilling -	6,850.0	6,815.8	4,581.0	4,542.2	118.183	SF
Foster UPRR 41-35 - Original Drilling - Original Drilling -	6,564.8	6,465.9	4,238.8	4,201.9	114.986	CC, ES
Foster UPRR 41-35 - Original Drilling - Original Drilling -	7,250.0	6,961.2	4,519.0	4,470.8	93.688	SF
Foster UPRR 42-35 #2 - Original Drilling - Original Drilling	6,563.6	6,582.7	5,080.4	5,043.1	136.045	CC, ES
Foster UPRR 42-35 #2 - Original Drilling - Original Drilling	6,750.0	6,700.0	5,106.8	5,068.7	134.101	SF
HSR Foster 03-35 - Original Drilling - Original Drilling - A	6,512.2	6,463.3	3,193.4	3,156.2	85.907	CC, ES
HSR Foster 03-35 - Original Drilling - Original Drilling - A	6,750.0	6,813.3	3,238.0	3,199.2	83.484	SF
HSR Foster 04-35 - Wellbore #1 - Wellbore #1 - As Drille	6,471.8	6,415.5	3,196.4	3,159.1	85.551	CC, ES
HSR Foster 04-35 - Wellbore #1 - Wellbore #1 - As Drille	6,700.0	6,617.0	3,235.8	3,197.3	84.045	SF
HSR Foster 05-35 - Wellbore #1 - Wellbore #1 - As Drille	6,446.8	6,100.0	4,597.8	4,561.7	127.511	CC, ES
HSR Foster 05-35 - Wellbore #1 - Wellbore #1 - As Drille	6,800.0	6,631.2	4,695.0	4,656.4	121.728	SF
HSR Foster 06-35 - Original Drilling - Original Drilling - A	6,509.1	6,472.5	4,355.6	4,318.3	116.950	CC, ES
HSR Foster 06-35 - Original Drilling - Original Drilling - A	6,750.0	6,720.0	4,403.2	4,364.6	114.241	SF
UPRR 53 Pan Am Unit P1 - Original Drilling - Original Dri	6,553.7	6,520.1	4,387.4	4,350.3	118.234	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 H26-762
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 H26-762	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	6,850.0	6,748.4	4,453.0	4,414.6	116.020	SF
UPRR 53 Pan Am UT P2 - Original Drilling - Original Drill	6,495.6	6,409.2	3,390.2	3,353.1	91.471	CC
UPRR 53 Pan Am UT P2 - Original Drilling - Original Drill	6,500.0	6,412.5	3,390.2	3,353.1	91.417	ES
UPRR 53 Pan Am UT P2 - Original Drilling - Original Drill	6,700.0	6,559.3	3,426.6	3,388.6	90.216	SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region Drilling - Sandbox	Local Co-ordinate Reference:	Well Hurley H26-762
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 H26-762	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Prelim - Rev 2	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
H Section 36						
Dechant 07-36 - Original Drilling - Original Drilling - As D	6,597.2	6,426.1	7,945.8	7,909.0	215.529	CC
Dechant 07-36 - Original Drilling - Original Drilling - As D	6,600.0	6,427.9	7,945.8	7,908.9	215.463	ES
Dechant 07-36 - Original Drilling - Original Drilling - As D	9,800.0	6,831.4	9,950.3	9,902.5	208.540	SF
Dechant 13N-1HZ - Original Drilling - Original Drilling - A	6,530.8	6,350.0	8,495.4	8,455.6	213.149	CC, ES
Dechant 13N-1HZ - Original Drilling - Original Drilling - A	6,850.0	6,400.0	8,575.6	8,535.0	211.270	SF
Dechant 14C-1HZ - Original Drilling - Original Drilling - A	6,514.0	5,917.1	9,190.8	9,154.5	253.118	CC, ES
Dechant 14C-1HZ - Original Drilling - Original Drilling - A	7,100.0	6,405.7	9,412.5	9,373.5	241.179	SF
Dechant 15-36 - Original Drilling - Original Drilling - As D	6,565.0	6,405.7	9,591.1	9,549.7	231.881	CC
Dechant 15-36 - Original Drilling - Original Drilling - As D	6,600.0	6,440.1	9,591.9	9,549.5	226.592	ES
Dechant 15-36 - Original Drilling - Original Drilling - As D	7,350.0	6,922.4	9,936.1	9,880.1	177.515	SF
Dechant 15C-1HZ - Original Drilling - Original Drilling - A	6,633.5	6,277.0	7,097.5	7,060.5	191.575	CC
Dechant 15C-1HZ - Original Drilling - Original Drilling - A	6,650.0	6,307.1	7,097.6	7,060.4	190.888	ES
Dechant 15C-1HZ - Original Drilling - Original Drilling - A	11,500.0	6,500.0	9,818.8	9,761.6	171.647	SF
Dechant 24-36 - Original Drilling - Original Drilling - As D	937.9	900.0	8,643.5	8,638.6	1,748.977	CC, ES
Dechant 24-36 - Original Drilling - Original Drilling - As D	8,900.0	7,121.9	9,996.0	9,950.0	216.987	SF
Dechant 35N-E1HZ - Original Drilling - Original Drilling -	6,531.2	6,171.4	9,030.2	8,993.7	247.278	CC, ES
Dechant 35N-E1HZ - Original Drilling - Original Drilling -	6,750.0	6,200.0	9,066.1	9,029.0	244.978	SF
Dechant 35N-W1HZ - Original Drilling - Original Drilling -	6,535.3	6,300.0	8,737.0	8,699.9	235.263	CC, ES
Dechant 35N-W1HZ - Original Drilling - Original Drilling -	6,750.0	6,300.0	8,772.9	8,735.4	233.908	SF
Dechant 36N-W1HZ - Original Drilling - Original Drilling -	6,497.9	5,689.1	9,315.7	9,279.4	256.419	CC
Dechant 36N-W1HZ - Original Drilling - Original Drilling -	6,500.0	5,708.8	9,315.7	9,279.3	255.826	ES
Dechant 36N-W1HZ - Original Drilling - Original Drilling -	7,100.0	6,205.9	9,545.2	9,505.9	242.687	SF
Dechant 37N-E1HZ - Original Drilling - Original Drilling -						Out of range
Dechant 37N-W1HZ - Original Drilling - Original Drilling -						Out of range
Dechant State 16C-1HZ - Original Drilling - Original Drilling	6,691.6	6,454.1	8,215.8	8,178.1	217.945	CC
Dechant State 16C-1HZ - Original Drilling - Original Drilling	6,700.0	6,461.8	8,215.8	8,178.1	217.731	ES
Dechant State 16C-1HZ - Original Drilling - Original Drilling	10,500.0	6,526.0	9,950.1	9,896.4	185.323	SF
Dechant State 36N-E1HZ - Original Drilling - Original Drilling	6,645.1	6,377.0	6,871.5	6,834.1	183.981	CC
Dechant State 36N-E1HZ - Original Drilling - Original Drilling	6,650.0	6,377.8	6,871.5	6,834.1	183.928	ES
Dechant State 36N-E1HZ - Original Drilling - Original Drilling	11,200.0	6,400.0	9,442.0	9,387.0	171.693	SF
Dechant State 37N-E36HZ - Original Drilling - Original Drilling	6,692.5	6,500.0	8,012.3	7,974.2	210.088	CC, ES
Dechant State 37N-E36HZ - Original Drilling - Original Drilling	10,800.0	6,400.0	9,981.0	9,925.7	180.351	SF
Dechant State 37N-W36HZ - Original Drilling - Original Drilling	6,569.6	5,878.9	7,345.2	7,309.2	204.050	CC, ES
Dechant State 37N-W36HZ - Original Drilling - Original Drilling	11,500.0	6,362.9	9,959.7	9,901.2	170.313	SF
Dechant State 38N-1HZ - Original Drilling - Original Drilling	6,676.4	6,350.0	8,703.9	8,666.5	232.887	CC, ES
Dechant State 38N-1HZ - Original Drilling - Original Drilling	9,700.0	6,400.0	9,964.8	9,916.0	204.069	SF
Dechant State H36-11D - Original Drilling - Original Drilling	6,578.4	6,564.5	7,887.7	7,850.4	211.687	CC, ES
Dechant State H36-11D - Original Drilling - Original Drilling	6,900.0	6,900.0	7,951.3	7,912.4	204.532	SF
Dechant State H36-18D - Original Drilling - Original Drilling	100.0	74.8	6,449.7	6,449.5	10,000.000	CC
Dechant State H36-18D - Original Drilling - Original Drilling	600.0	554.3	6,450.8	6,448.6	2,959.819	ES
Dechant State H36-18D - Original Drilling - Original Drilling	10,200.0	6,942.2	9,211.5	9,157.3	170.022	SF
Dechant State H36-19 - Original Drilling - Original Drilling	6,627.0	6,700.0	5,645.5	5,607.7	149.199	CC, ES
Dechant State H36-19 - Original Drilling - Original Drilling	7,050.0	7,105.5	5,738.9	5,699.1	144.421	SF
Dechant State H36-20D - Original Drilling - Original Drilling	6,581.2	6,714.2	7,012.2	6,970.7	168.953	CC, ES
Dechant State H36-20D - Original Drilling - Original Drilling	6,950.0	7,008.8	7,098.9	7,056.0	165.761	SF
Dechant State H36-21D - Original Drilling - Original Drilling	6,585.9	6,569.2	7,840.6	7,800.4	194.893	CC, ES
Dechant State H36-21D - Original Drilling - Original Drilling	7,050.0	6,970.0	7,960.4	7,918.5	189.836	SF
Dechant State H36-24 - Original Drilling - Original Drilling	165.2	151.2	8,662.1	8,661.5	10,000.000	CC
Dechant State H36-24 - Original Drilling - Original Drilling	400.0	332.5	8,662.6	8,660.8	4,883.881	ES
Dechant State H36-24 - Original Drilling - Original Drilling	7,150.0	7,218.5	8,937.2	8,892.6	200.385	SF
Dechant State H36-31D - Original Drilling - Original Drilling	6,563.6	6,584.2	5,120.8	5,078.2	120.024	CC, ES
Dechant State H36-31D - Original Drilling - Original Drilling	6,900.0	6,849.3	5,193.2	5,149.3	118.331	SF
Dechant State H36-32D - Original Drilling - Original Drilling	6,558.5	6,584.0	6,102.0	6,065.5	167.113	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 H26-762
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 H26-762	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

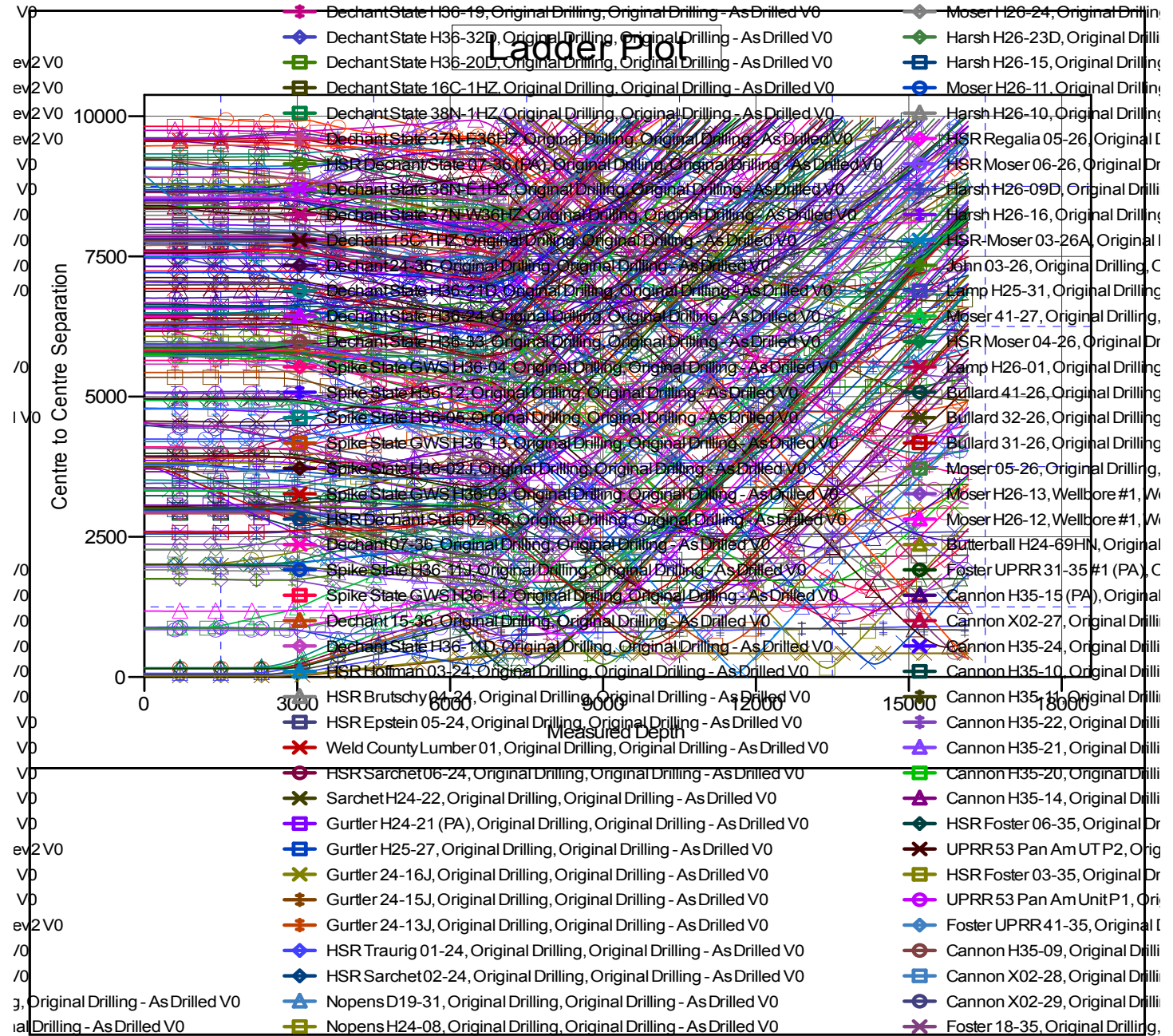
Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
H Section 36						
Dechant State H36-32D - Original Drilling - Original Drilling	7,100.0	7,100.0	6,305.1	6,266.1	161.917	SF
Dechant State H36-33 - Original Drilling - Original Drilling	6,546.3	6,670.5	7,176.5	7,131.3	159.054	CC
Dechant State H36-33 - Original Drilling - Original Drilling	6,550.0	6,674.3	7,176.5	7,131.3	158.992	ES
Dechant State H36-33 - Original Drilling - Original Drilling	6,900.0	7,166.0	7,263.2	7,216.0	153.835	SF
HSR Dechant State 02-36 - Original Drilling - Original Dri	6,626.9	6,324.5	7,010.4	6,973.7	191.157	CC, ES
HSR Dechant State 02-36 - Original Drilling - Original Dri	11,100.0	6,720.6	9,579.9	9,525.2	174.956	SF
HSR Dechant/State 07-36 (PA) - Original Drilling - Origin	6,628.2	6,516.8	8,096.3	7,951.3	55.825	CC
HSR Dechant/State 07-36 (PA) - Original Drilling - Origin	6,650.0	6,537.9	8,096.5	7,951.0	55.651	ES
HSR Dechant/State 07-36 (PA) - Original Drilling - Origin	7,200.0	6,935.0	8,237.7	8,083.6	53.480	SF
Spike State GWS H36-03 - Original Drilling - Original Dri	6,616.8	6,401.8	6,259.2	6,222.3	169.723	CC, ES
Spike State GWS H36-03 - Original Drilling - Original Dri	7,050.0	6,732.0	6,339.3	6,300.8	164.515	SF
Spike State GWS H36-04 - Original Drilling - Original Dri	6,624.0	6,626.7	4,926.0	4,882.9	114.244	CC, ES
Spike State GWS H36-04 - Original Drilling - Original Dri	7,200.0	7,050.3	5,094.3	5,045.8	105.081	SF
Spike State GWS H36-13 - Original Drilling - Original Dri	6,616.4	7,444.0	8,153.0	8,109.8	188.872	CC, ES
Spike State GWS H36-13 - Original Drilling - Original Dri	6,800.0	7,444.0	8,180.0	8,136.5	188.008	SF
Spike State GWS H36-14 - Original Drilling - Original Dri	6,587.0	6,838.1	9,101.4	9,063.2	238.195	CC, ES
Spike State GWS H36-14 - Original Drilling - Original Dri	7,150.0	7,235.0	9,306.8	9,266.5	230.802	SF
Spike State H36-02J - Original Drilling - Original Drilling -	6,574.8	6,348.5	6,409.0	6,356.8	122.734	CC
Spike State H36-02J - Original Drilling - Original Drilling -	6,600.0	6,373.1	6,409.4	6,356.3	120.826	ES
Spike State H36-02J - Original Drilling - Original Drilling -	7,300.0	6,841.2	6,676.4	6,607.7	97.120	SF
Spike State H36-05 - Original Drilling - Original Drilling - A	6,563.1	6,413.8	5,815.0	5,778.2	158.121	CC, ES
Spike State H36-05 - Original Drilling - Original Drilling - A	7,000.0	7,004.7	5,931.3	5,891.9	150.641	SF
Spike State H36-11J - Original Drilling - Original Drilling -	6,561.3	6,517.9	7,984.6	7,947.5	215.356	CC, ES
Spike State H36-11J - Original Drilling - Original Drilling -	7,200.0	7,024.9	8,243.3	8,203.6	207.417	SF
Spike State H36-12 - Original Drilling - Original Drilling - A	6,549.2	6,415.9	6,750.5	6,713.8	183.876	CC
Spike State H36-12 - Original Drilling - Original Drilling - A	6,550.0	6,417.2	6,750.5	6,713.8	183.847	ES
Spike State H36-12 - Original Drilling - Original Drilling - A	6,950.0	6,916.3	6,854.3	6,815.3	175.671	SF

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Reference Site:	DP 408	MD Reference:	WELL @ 4851.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	Grid
Reference Well:	Hurley H26-762	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 H26-762
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.56°



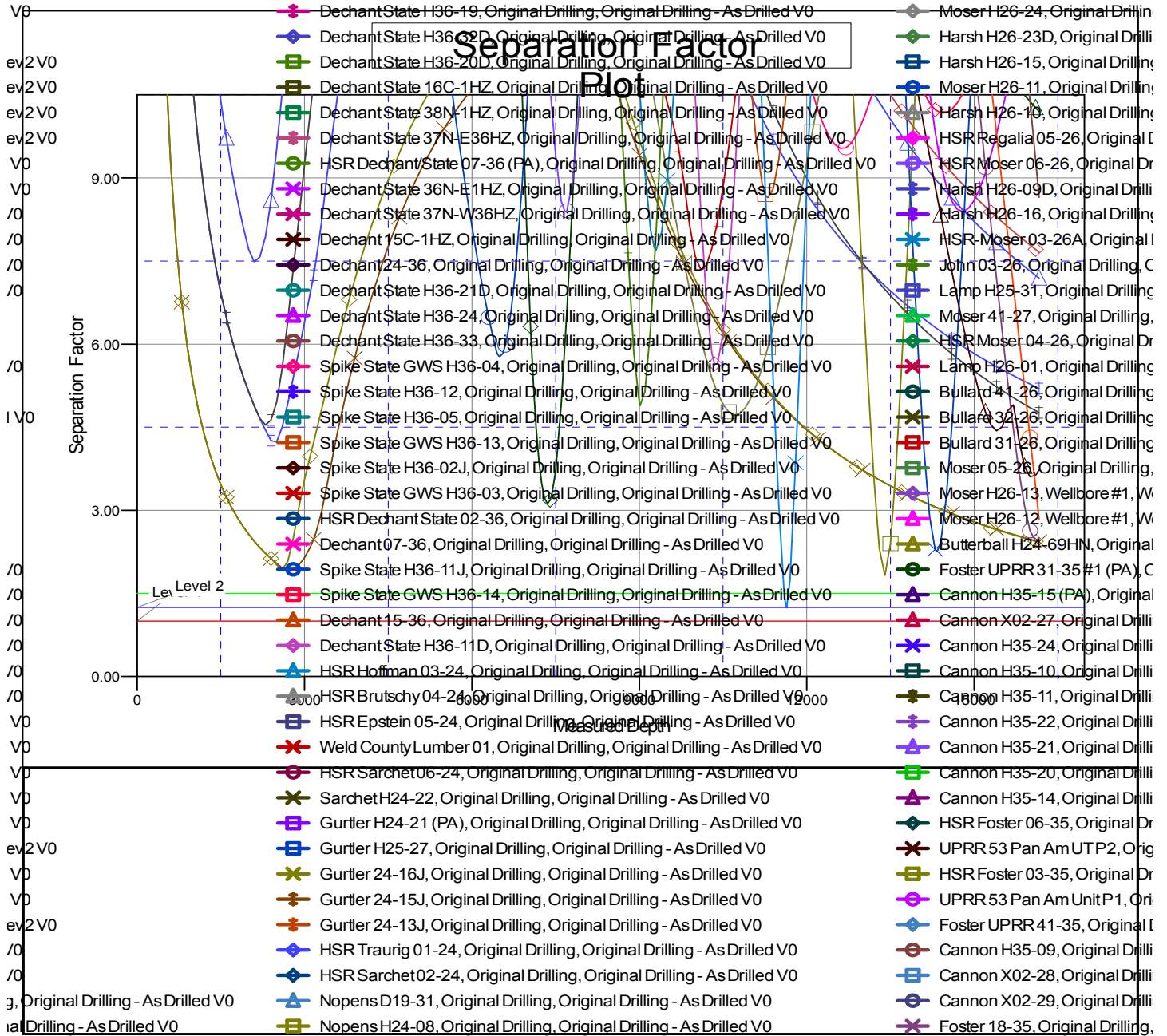
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Noble Energy, Inc.
Anticollision Summary Report

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Coordinate System is US State Plane 1983, Colorado Northern Zone
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