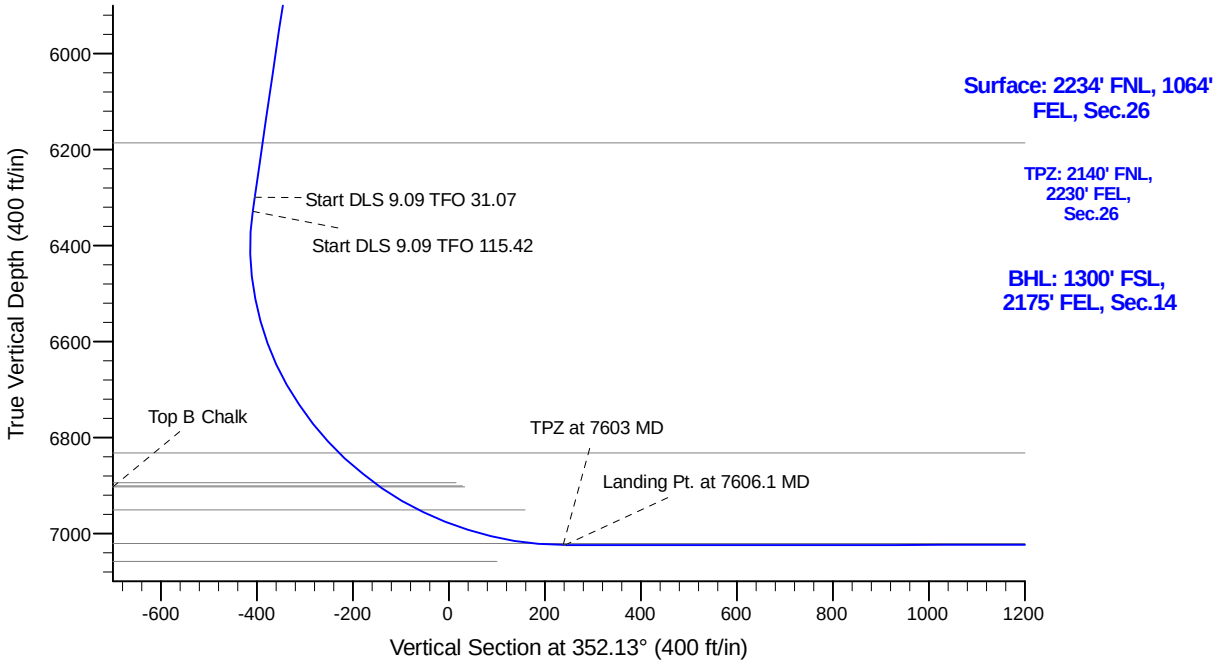
Project: Conceptual Wells
Site: DP 408
Well: Hurley H26-743
Wellbore: Wellbore #1
Design: Prelim - Rev 2

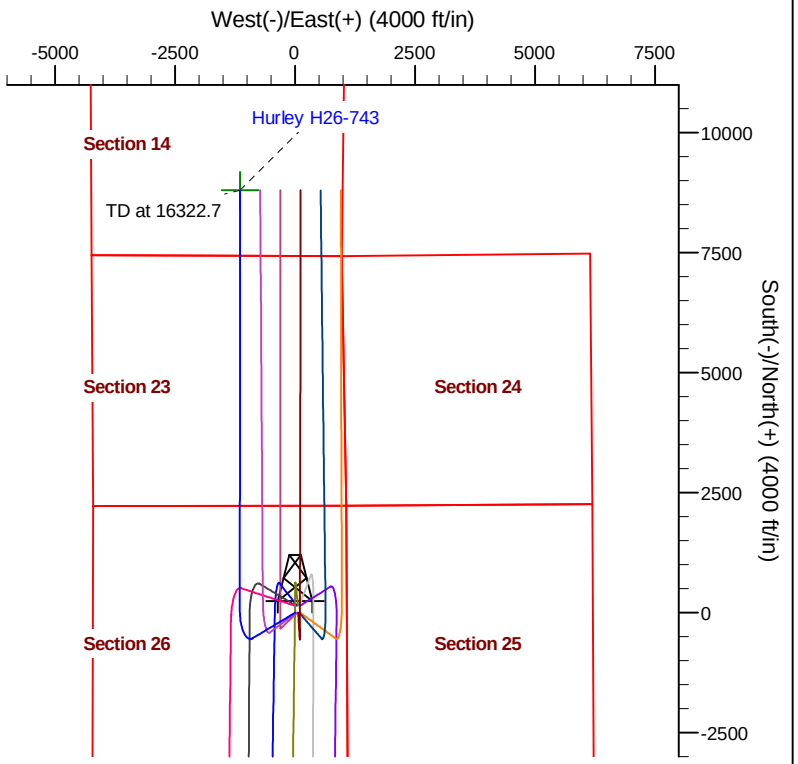
Northern Region Drilling - DJ Basin

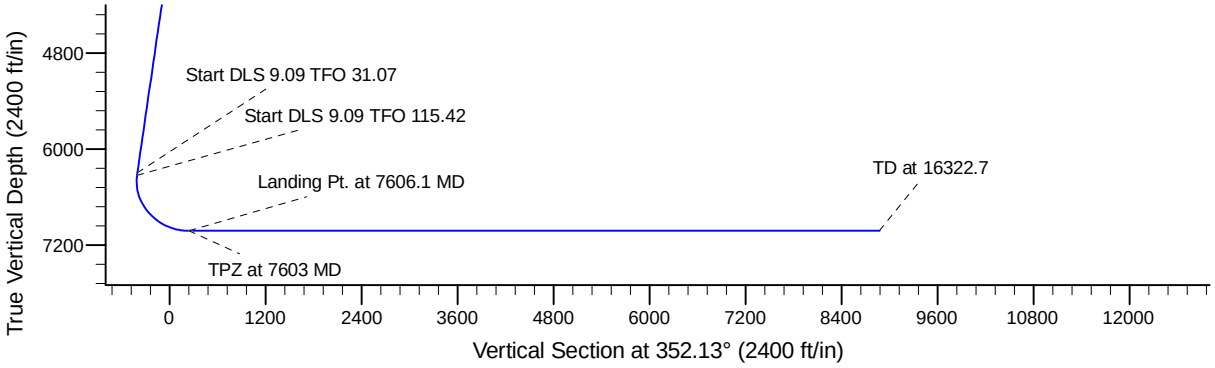
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Northern Zone
System Datum: Mean Sea Level

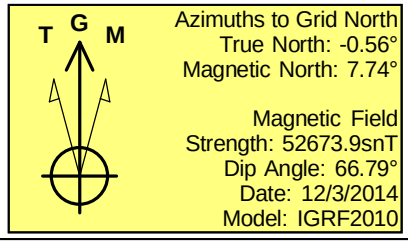
SECTION DETAILS

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	3000.0	0.00	0.00	3000.0	0.0	0.0	0.00	0.00	0.0	
3	4012.5	20.25	239.00	3991.6	-91.2	-151.8	2.00	239.00	-69.6	
4	6473.0	20.25	239.00	6300.0	-529.8	-881.8	0.00	0.00	-404.1	
5	6504.3	22.73	242.79	6329.1	-535.4	-891.8	9.09	31.07	-408.2	
6	7606.1	90.00	0.05	7024.0	85.0	-1150.0	9.09	115.42	241.7	
7	16322.7	90.00	0.05	7024.0	8801.6	-1142.5	0.00	0.00	8875.1	Hurley H26-743 BHL









Azimuths to Grid North
True North: -0.56°
Magnetic North: 7.74°

Magnetic Field
Strength: 52673.9snT
Dip Angle: 66.79°
Date: 12/3/2014
Model: IGRF2010

WELL DETAILS: Hurley H26-743

Ground Level: 4854.0

	Northing	Easting	Latittude	Longitude
0.00.0	1315961.24	3244420.87	40.197400	-104.625000

Plan: Prelim - Rev 2 (Hurley H26-743/Wellbore #1)

Created By: Chad Stich Date: 15:45, October 31 2017

Checked: _____ _____ Date: _____

Reviewed: _____ _____ Date: _____

Approved: _____ _____ Date: _____

Northern Region Drilling - Sandbox

Conceptual Wells
DP 408
Hurley H26-743

Wellbore #1

Plan: Prelim - Rev 2

Standard Planning Report

31 October, 2017

Database:	EDMP	**Local Co-ordinate Reference:**	Well Hurley H26-743
Company:	Northern Region Drilling - Sandbox	**TVD Reference:**	WELL @ 4884.0ft (Original Well Elev)
Project:	Conceptual Wells	**MD Reference:**	WELL @ 4884.0ft (Original Well Elev)
Site:	DP 408	**North Reference:**	Grid
Well:	Hurley H26-743	**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 H26-743					
Well Position	**+N/-S**	-2,223.5 ft	**Northing:**	1,315,961.24 usft	**Latitude:**	40.197400
	+E/-W	4,195.9 ft	**Easting:**	3,244,420.87 usft	**Longitude:**	-104.625000
Position Uncertainty		0.0 ft	**Wellhead Elevation:**	0.0 ft	**Ground Level:**	4,854.0 ft

Wellbore	Wellbore #1				
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2010	12/3/2014	8.30	66.79	52,673.91247425

Design	Prelim - Rev 2				
Audit Notes:					
Version:		**Phase:**	PROTOTYPE	**Tie On Depth:**	0.0
Vertical Section:	**Depth From (TVD) (ft)**	**+N/-S (ft)**	**+E/-W (ft)**	**Direction (°)**	
	0.0	0.0	0.0	352.13	

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	
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
4,012.5	20.25	239.00	3,991.6	-91.2	-151.8	2.00	2.00	0.00	239.00	
6,473.0	20.25	239.00	6,300.0	-529.8	-881.8	0.00	0.00	0.00	0.00	
6,504.3	22.73	242.79	6,329.1	-535.4	-891.8	9.09	7.93	12.15	31.07	
7,606.1	90.00	0.05	7,024.0	85.0	-1,150.0	9.09	6.11	10.64	115.42	
16,322.7	90.00	0.05	7,024.0	8,801.6	-1,142.5	0.00	0.00	0.00	0.00	Hurley H26-743 BHL

Database:	EDMP	**Local Co-ordinate Reference:**	Well Hurley H26-743
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Project:	Conceptual Wells	**MD Reference:**	WELL @ 4884.0ft (Original Well Elev)
Site:	DP 408	**North Reference:**	Grid
Well:	Hurley H26-743	**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	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	2.00	239.00	3,100.0	-0.9	-1.5	-0.7	2.00	2.00	0.00
3,200.0	4.00	239.00	3,199.8	-3.6	-6.0	-2.7	2.00	2.00	0.00
3,300.0	6.00	239.00	3,299.5	-8.1	-13.5	-6.2	2.00	2.00	0.00
3,400.0	8.00	239.00	3,398.7	-14.4	-23.9	-11.0	2.00	2.00	0.00
3,500.0	10.00	239.00	3,497.5	-22.4	-37.3	-17.1	2.00	2.00	0.00
3,600.0	12.00	239.00	3,595.6	-32.2	-53.7	-24.6	2.00	2.00	0.00
3,700.0	14.00	239.00	3,693.1	-43.8	-72.9	-33.4	2.00	2.00	0.00
3,800.0	16.00	239.00	3,789.6	-57.2	-95.1	-43.6	2.00	2.00	0.00
3,900.0	18.00	239.00	3,885.3	-72.2	-120.2	-55.1	2.00	2.00	0.00
4,000.0	20.00	239.00	3,979.8	-89.0	-148.1	-67.9	2.00	2.00	0.00
4,012.5	20.25	239.00	3,991.6	-91.2	-151.8	-69.6	2.00	2.00	0.00
4,100.0	20.25	239.00	4,073.6	-106.8	-177.7	-81.4	0.00	0.00	0.00
4,200.0	20.25	239.00	4,167.5	-124.6	-207.4	-95.0	0.00	0.00	0.00
4,300.0	20.25	239.00	4,261.3	-142.4	-237.1	-108.6	0.00	0.00	0.00
4,400.0	20.25	239.00	4,355.1	-160.3	-266.7	-122.2	0.00	0.00	0.00
4,500.0	20.25	239.00	4,448.9	-178.1	-296.4	-135.8	0.00	0.00	0.00
4,600.0	20.25	239.00	4,542.7	-195.9	-326.1	-149.4	0.00	0.00	0.00
4,700.0	20.25	239.00	4,636.6	-213.8	-355.7	-163.0	0.00	0.00	0.00
4,800.0	20.25	239.00	4,730.4	-231.6	-385.4	-176.6	0.00	0.00	0.00
4,900.0	20.25	239.00	4,824.2	-249.4	-415.1	-190.2	0.00	0.00	0.00
5,000.0	20.25	239.00	4,918.0	-267.2	-444.7	-203.8	0.00	0.00	0.00
5,100.0	20.25	239.00	5,011.8	-285.1	-474.4	-217.4	0.00	0.00	0.00
5,200.0	20.25	239.00	5,105.7	-302.9	-504.1	-231.0	0.00	0.00	0.00

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Site:	DP 408	**North Reference:**	Grid
Well:	Hurley H26-743	**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	20.25	239.00	5,199.5	-320.7	-533.8	-244.6	0.00	0.00	0.00
5,400.0	20.25	239.00	5,293.3	-338.5	-563.4	-258.2	0.00	0.00	0.00
5,500.0	20.25	239.00	5,387.1	-356.4	-593.1	-271.8	0.00	0.00	0.00
5,600.0	20.25	239.00	5,480.9	-374.2	-622.8	-285.4	0.00	0.00	0.00
5,700.0	20.25	239.00	5,574.8	-392.0	-652.4	-299.0	0.00	0.00	0.00
5,800.0	20.25	239.00	5,668.6	-409.8	-682.1	-312.6	0.00	0.00	0.00
5,900.0	20.25	239.00	5,762.4	-427.7	-711.8	-326.2	0.00	0.00	0.00
6,000.0	20.25	239.00	5,856.2	-445.5	-741.4	-339.8	0.00	0.00	0.00
6,100.0	20.25	239.00	5,950.0	-463.3	-771.1	-353.4	0.00	0.00	0.00
6,200.0	20.25	239.00	6,043.8	-481.1	-800.8	-366.9	0.00	0.00	0.00
6,300.0	20.25	239.00	6,137.7	-499.0	-830.4	-380.5	0.00	0.00	0.00
6,400.0	20.25	239.00	6,231.5	-516.8	-860.1	-394.1	0.00	0.00	0.00
6,473.0	20.25	239.00	6,300.0	-529.8	-881.8	-404.1	0.00	0.00	0.00
6,500.0	22.39	242.32	6,325.1	-534.6	-890.3	-407.6	9.09	7.92	12.33
6,504.3	22.73	242.79	6,329.1	-535.4	-891.8	-408.2	9.09	8.05	11.04
6,600.0	20.48	265.80	6,418.2	-545.1	-925.0	-413.2	9.09	-2.35	24.03
6,700.0	21.74	291.00	6,511.7	-539.7	-959.8	-403.2	9.09	1.26	25.20
6,800.0	26.16	310.74	6,603.2	-518.6	-993.8	-377.6	9.09	4.42	19.74
6,900.0	32.46	324.22	6,690.5	-482.4	-1,026.3	-337.3	9.09	6.31	13.48
7,000.0	39.76	333.47	6,771.3	-431.9	-1,056.3	-283.2	9.09	7.30	9.24
7,100.0	47.60	340.17	6,843.6	-368.4	-1,083.2	-216.6	9.09	7.84	6.71
7,200.0	55.74	345.36	6,905.6	-293.6	-1,106.2	-139.3	9.09	8.14	5.18
7,300.0	64.05	349.61	6,955.7	-209.2	-1,124.8	-53.2	9.09	8.32	4.26
7,400.0	72.48	353.30	6,992.7	-117.4	-1,138.5	39.6	9.09	8.43	3.69
7,500.0	80.97	356.66	7,015.7	-20.6	-1,147.0	136.7	9.09	8.49	3.36
7,600.0	89.48	359.86	7,024.0	78.9	-1,150.0	235.7	9.09	8.52	3.20
7,606.1	90.00	0.05	7,024.0	85.0	-1,150.0	241.7	9.09	8.52	3.17
7,700.0	90.00	0.05	7,024.0	178.9	-1,149.9	334.7	0.00	0.00	0.00
7,800.0	90.00	0.05	7,024.0	278.9	-1,149.8	433.8	0.00	0.00	0.00
7,900.0	90.00	0.05	7,024.0	378.9	-1,149.7	532.8	0.00	0.00	0.00
8,000.0	90.00	0.05	7,024.0	478.9	-1,149.7	631.9	0.00	0.00	0.00
8,100.0	90.00	0.05	7,024.0	578.9	-1,149.6	730.9	0.00	0.00	0.00
8,200.0	90.00	0.05	7,024.0	678.9	-1,149.5	830.0	0.00	0.00	0.00
8,300.0	90.00	0.05	7,024.0	778.9	-1,149.4	929.0	0.00	0.00	0.00
8,400.0	90.00	0.05	7,024.0	878.9	-1,149.3	1,028.1	0.00	0.00	0.00
8,500.0	90.00	0.05	7,024.0	978.9	-1,149.2	1,127.1	0.00	0.00	0.00
8,600.0	90.00	0.05	7,024.0	1,078.9	-1,149.1	1,226.2	0.00	0.00	0.00
8,700.0	90.00	0.05	7,024.0	1,178.9	-1,149.0	1,325.2	0.00	0.00	0.00
8,800.0	90.00	0.05	7,024.0	1,278.9	-1,149.0	1,424.2	0.00	0.00	0.00
8,900.0	90.00	0.05	7,024.0	1,378.9	-1,148.9	1,523.3	0.00	0.00	0.00
9,000.0	90.00	0.05	7,024.0	1,478.9	-1,148.8	1,622.3	0.00	0.00	0.00
9,100.0	90.00	0.05	7,024.0	1,578.9	-1,148.7	1,721.4	0.00	0.00	0.00
9,200.0	90.00	0.05	7,024.0	1,678.9	-1,148.6	1,820.4	0.00	0.00	0.00
9,300.0	90.00	0.05	7,024.0	1,778.9	-1,148.5	1,919.5	0.00	0.00	0.00
9,400.0	90.00	0.05	7,024.0	1,878.9	-1,148.4	2,018.5	0.00	0.00	0.00
9,500.0	90.00	0.05	7,024.0	1,978.9	-1,148.3	2,117.6	0.00	0.00	0.00
9,600.0	90.00	0.05	7,024.0	2,078.9	-1,148.3	2,216.6	0.00	0.00	0.00
9,700.0	90.00	0.05	7,024.0	2,178.9	-1,148.2	2,315.7	0.00	0.00	0.00
9,800.0	90.00	0.05	7,024.0	2,278.9	-1,148.1	2,414.7	0.00	0.00	0.00
9,900.0	90.00	0.05	7,024.0	2,378.9	-1,148.0	2,513.8	0.00	0.00	0.00
10,000.0	90.00	0.05	7,024.0	2,478.9	-1,147.9	2,612.8	0.00	0.00	0.00
10,100.0	90.00	0.05	7,024.0	2,578.9	-1,147.8	2,711.8	0.00	0.00	0.00
10,200.0	90.00	0.05	7,024.0	2,678.9	-1,147.7	2,810.9	0.00	0.00	0.00
10,300.0	90.00	0.05	7,024.0	2,778.9	-1,147.6	2,909.9	0.00	0.00	0.00

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Wellbore:	Wellbore #1		
Design:	Prelim - Rev 2		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,400.0	90.00	0.05	7,024.0	2,878.9	-1,147.6	3,009.0	0.00	0.00	0.00
10,500.0	90.00	0.05	7,024.0	2,978.9	-1,147.5	3,108.0	0.00	0.00	0.00
10,600.0	90.00	0.05	7,024.0	3,078.9	-1,147.4	3,207.1	0.00	0.00	0.00
10,700.0	90.00	0.05	7,024.0	3,178.9	-1,147.3	3,306.1	0.00	0.00	0.00
10,800.0	90.00	0.05	7,024.0	3,278.9	-1,147.2	3,405.2	0.00	0.00	0.00
10,900.0	90.00	0.05	7,024.0	3,378.9	-1,147.1	3,504.2	0.00	0.00	0.00
11,000.0	90.00	0.05	7,024.0	3,478.9	-1,147.0	3,603.3	0.00	0.00	0.00
11,100.0	90.00	0.05	7,024.0	3,578.9	-1,147.0	3,702.3	0.00	0.00	0.00
11,200.0	90.00	0.05	7,024.0	3,678.9	-1,146.9	3,801.3	0.00	0.00	0.00
11,300.0	90.00	0.05	7,024.0	3,778.9	-1,146.8	3,900.4	0.00	0.00	0.00
11,400.0	90.00	0.05	7,024.0	3,878.9	-1,146.7	3,999.4	0.00	0.00	0.00
11,500.0	90.00	0.05	7,024.0	3,978.9	-1,146.6	4,098.5	0.00	0.00	0.00
11,600.0	90.00	0.05	7,024.0	4,078.9	-1,146.5	4,197.5	0.00	0.00	0.00
11,700.0	90.00	0.05	7,024.0	4,178.9	-1,146.4	4,296.6	0.00	0.00	0.00
11,800.0	90.00	0.05	7,024.0	4,278.9	-1,146.3	4,395.6	0.00	0.00	0.00
11,900.0	90.00	0.05	7,024.0	4,378.9	-1,146.3	4,494.7	0.00	0.00	0.00
12,000.0	90.00	0.05	7,024.0	4,478.9	-1,146.2	4,593.7	0.00	0.00	0.00
12,100.0	90.00	0.05	7,024.0	4,578.9	-1,146.1	4,692.8	0.00	0.00	0.00
12,200.0	90.00	0.05	7,024.0	4,678.9	-1,146.0	4,791.8	0.00	0.00	0.00
12,300.0	90.00	0.05	7,024.0	4,778.9	-1,145.9	4,890.9	0.00	0.00	0.00
12,400.0	90.00	0.05	7,024.0	4,878.9	-1,145.8	4,989.9	0.00	0.00	0.00
12,500.0	90.00	0.05	7,024.0	4,978.9	-1,145.7	5,088.9	0.00	0.00	0.00
12,600.0	90.00	0.05	7,024.0	5,078.9	-1,145.6	5,188.0	0.00	0.00	0.00
12,700.0	90.00	0.05	7,024.0	5,178.9	-1,145.6	5,287.0	0.00	0.00	0.00
12,800.0	90.00	0.05	7,024.0	5,278.9	-1,145.5	5,386.1	0.00	0.00	0.00
12,900.0	90.00	0.05	7,024.0	5,378.9	-1,145.4	5,485.1	0.00	0.00	0.00
13,000.0	90.00	0.05	7,024.0	5,478.9	-1,145.3	5,584.2	0.00	0.00	0.00
13,100.0	90.00	0.05	7,024.0	5,578.9	-1,145.2	5,683.2	0.00	0.00	0.00
13,200.0	90.00	0.05	7,024.0	5,678.9	-1,145.1	5,782.3	0.00	0.00	0.00
13,300.0	90.00	0.05	7,024.0	5,778.9	-1,145.0	5,881.3	0.00	0.00	0.00
13,400.0	90.00	0.05	7,024.0	5,878.9	-1,144.9	5,980.4	0.00	0.00	0.00
13,500.0	90.00	0.05	7,024.0	5,978.9	-1,144.9	6,079.4	0.00	0.00	0.00
13,600.0	90.00	0.05	7,024.0	6,078.9	-1,144.8	6,178.4	0.00	0.00	0.00
13,700.0	90.00	0.05	7,024.0	6,178.9	-1,144.7	6,277.5	0.00	0.00	0.00
13,800.0	90.00	0.05	7,024.0	6,278.9	-1,144.6	6,376.5	0.00	0.00	0.00
13,900.0	90.00	0.05	7,024.0	6,378.9	-1,144.5	6,475.6	0.00	0.00	0.00
14,000.0	90.00	0.05	7,024.0	6,478.9	-1,144.4	6,574.6	0.00	0.00	0.00
14,100.0	90.00	0.05	7,024.0	6,578.9	-1,144.3	6,673.7	0.00	0.00	0.00
14,200.0	90.00	0.05	7,024.0	6,678.9	-1,144.2	6,772.7	0.00	0.00	0.00
14,300.0	90.00	0.05	7,024.0	6,778.9	-1,144.2	6,871.8	0.00	0.00	0.00
14,400.0	90.00	0.05	7,024.0	6,878.9	-1,144.1	6,970.8	0.00	0.00	0.00
14,500.0	90.00	0.05	7,024.0	6,978.9	-1,144.0	7,069.9	0.00	0.00	0.00
14,600.0	90.00	0.05	7,024.0	7,078.9	-1,143.9	7,168.9	0.00	0.00	0.00
14,700.0	90.00	0.05	7,024.0	7,178.9	-1,143.8	7,267.9	0.00	0.00	0.00
14,800.0	90.00	0.05	7,024.0	7,278.9	-1,143.7	7,367.0	0.00	0.00	0.00
14,900.0	90.00	0.05	7,024.0	7,378.9	-1,143.6	7,466.0	0.00	0.00	0.00
15,000.0	90.00	0.05	7,024.0	7,478.9	-1,143.5	7,565.1	0.00	0.00	0.00
15,100.0	90.00	0.05	7,024.0	7,578.9	-1,143.5	7,664.1	0.00	0.00	0.00
15,200.0	90.00	0.05	7,024.0	7,678.9	-1,143.4	7,763.2	0.00	0.00	0.00
15,300.0	90.00	0.05	7,024.0	7,778.9	-1,143.3	7,862.2	0.00	0.00	0.00
15,400.0	90.00	0.05	7,024.0	7,878.9	-1,143.2	7,961.3	0.00	0.00	0.00
15,500.0	90.00	0.05	7,024.0	7,978.9	-1,143.1	8,060.3	0.00	0.00	0.00
15,600.0	90.00	0.05	7,024.0	8,078.9	-1,143.0	8,159.4	0.00	0.00	0.00
15,700.0	90.00	0.05	7,024.0	8,178.9	-1,142.9	8,258.4	0.00	0.00	0.00

Database:	EDMP	**Local Co-ordinate Reference:**	Well Hurley H26-743
Company:	Northern Region Drilling - Sandbox	**TVD Reference:**	WELL @ 4884.0ft (Original Well Elev)
Project:	Conceptual Wells	**MD Reference:**	WELL @ 4884.0ft (Original Well Elev)
Site:	DP 408	**North Reference:**	Grid
Well:	Hurley H26-743	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Prelim - Rev 2		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
15,800.0	90.00	0.05	7,024.0	8,278.9	-1,142.8	8,357.5	0.00	0.00	0.00
15,900.0	90.00	0.05	7,024.0	8,378.9	-1,142.8	8,456.5	0.00	0.00	0.00
16,000.0	90.00	0.05	7,024.0	8,478.9	-1,142.7	8,555.5	0.00	0.00	0.00
16,100.0	90.00	0.05	7,024.0	8,578.9	-1,142.6	8,654.6	0.00	0.00	0.00
16,200.0	90.00	0.05	7,024.0	8,678.9	-1,142.5	8,753.6	0.00	0.00	0.00
16,300.0	90.00	0.05	7,024.0	8,778.9	-1,142.4	8,852.7	0.00	0.00	0.00
16,322.7	90.00	0.05	7,024.0	8,801.6	-1,142.5	8,875.1	0.00	0.00	0.00

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Hurley H26-743 BHL - plan hits target center - Point	0.00	0.00	7,024.0	8,801.6	-1,142.5	1,324,762.45	3,243,278.43	40.221590	-104.628780

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
635.0	635.0	Pierre			
787.0	787.0	Upper Pierre Aquifer Top			
1,675.0	1,675.0	Upper Pierre Aquifer Base			
3,959.9	3,942.0	Parkman			
4,589.6	4,533.0	Sussex			
5,316.5	5,215.0	Shannon			
6,351.5	6,186.0	Teepee Buttes			
7,083.1	6,832.0	Sharon Springs			
7,179.9	6,894.0	Top A Chalk			
7,192.0	6,901.0	Top A Marl			
7,195.5	6,903.0	Top B Chalk			
7,289.4	6,951.0	Top B Marl			
7,542.5	7,021.0	Top C Chalk			

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
3,000.0	3,000.0	0.0	0.0	KOP - Start Build 2.00
6,473.0	6,300.0	-91.2	-151.8	Start DLS 9.09 TFO 31.07
6,504.3	6,329.1	-529.8	-881.8	Start DLS 9.09 TFO 115.42
7,603.0	7,024.0	-535.4	-891.8	TPZ at 7603 MD
7,606.1	7,024.0	81.9	-1,150.0	Landing Pt. at 7606.1 MD
16,322.7	7,024.0	85.0	-1,150.0	TD at 16322.7

Northern Region Drilling - Sandbox

Conceptual Wells
DP 408
Hurley H26-743

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 H26-743
Project:	Conceptual Wells	**TVD Reference:**	WELL @ 4884.0ft (Original Well Elev)
Reference Site:	DP 408	**MD Reference:**	WELL @ 4884.0ft (Original Well Elev)
Site Error:	0.0 ft	**North Reference:**	Grid
Reference Well:	Hurley H26-743	**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	16,322.5	Prelim - Rev 2 (Wellbore #1)	MWD+IFR1+MS_WY	Fixed:v2:Rockies, crustal dec + 3-axis correction

Summary

Site Name / Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
D Section 19						
Butterball H24-69HN - Original Drilling - Original Drilling -	15,126.4	11,992.0	5,173.0	5,067.6	49.072	CC
Butterball H24-69HN - Original Drilling - Original Drilling -	15,200.0	11,992.0	5,173.6	5,067.6	48.806	ES
Butterball H24-69HN - Original Drilling - Original Drilling -	16,322.7	11,992.0	5,309.6	5,184.8	42.532	SF
DP 408						
Emmy H25-711 - Wellbore #1 - Prelim - Rev 2	2,002.0	1,953.0	5,313.8	5,305.2	618.086	CC
Emmy H25-711 - Wellbore #1 - Prelim - Rev 2	2,100.0	2,000.0	5,314.0	5,305.1	595.542	ES
Emmy H25-711 - Wellbore #1 - Prelim - Rev 2	16,322.7	17,530.1	7,356.7	7,169.1	39.211	SF
Emmy State H25-718 - Wellbore #1 - Prelim - Rev 2	2,402.0	2,353.0	5,294.9	5,284.5	509.350	CC
Emmy State H25-718 - Wellbore #1 - Prelim - Rev 2	2,500.0	2,400.0	5,295.1	5,284.4	493.896	ES
Emmy State H25-718 - Wellbore #1 - Prelim - Rev 2	16,200.0	17,376.1	6,903.5	6,717.4	37.104	SF
Emmy State H25-724 - Wellbore #1 - Prelim - Rev 2	2,402.0	2,353.0	5,275.9	5,265.5	507.531	CC
Emmy State H25-724 - Wellbore #1 - Prelim - Rev 2	2,500.0	2,400.0	5,276.2	5,265.5	492.132	ES
Emmy State H25-724 - Wellbore #1 - Prelim - Rev 2	16,000.0	17,460.5	6,435.6	6,253.1	35.264	SF
Emmy State H25-731 - Wellbore #1 - Prelim - Rev 2	2,403.3	2,353.3	5,257.1	5,246.7	505.526	CC
Emmy State H25-731 - Wellbore #1 - Prelim - Rev 2	2,500.0	2,400.0	5,257.3	5,246.6	490.369	ES
Emmy State H25-731 - Wellbore #1 - Prelim - Rev 2	15,800.0	17,379.3	5,968.8	5,787.5	32.922	SF
Emmy State H25-738 - Wellbore #1 - Prelim - Rev 2	5,589.5	9,500.9	5,234.7	5,193.9	128.314	CC
Emmy State H25-738 - Wellbore #1 - Prelim - Rev 2	5,600.0	9,501.0	5,234.7	5,193.9	128.183	ES
Emmy State H25-738 - Wellbore #1 - Prelim - Rev 2	15,700.0	17,299.8	5,518.9	5,337.2	30.377	SF
Emmy State H25-744 - Wellbore #1 - Prelim - Rev 2	5,703.5	9,524.1	4,788.4	4,746.2	113.535	CC, ES
Emmy State H25-744 - Wellbore #1 - Prelim - Rev 2	15,500.0	17,327.4	5,063.5	4,883.2	28.089	SF
Emmy State H25-751 - Wellbore #1 - Design #1	2,202.3	2,164.3	3,653.2	3,643.7	383.643	CC
Emmy State H25-751 - Wellbore #1 - Design #1	2,300.0	2,228.6	3,653.5	3,643.6	369.762	ES
Emmy State H25-751 - Wellbore #1 - Design #1	15,600.0	17,580.8	4,788.0	4,605.8	26.285	SF
Emmy State H25-757 - Wellbore #1 - Design #1	2,402.3	2,364.3	3,639.0	3,628.6	349.184	CC
Emmy State H25-757 - Wellbore #1 - Design #1	2,500.0	2,428.1	3,639.3	3,628.5	337.654	ES
Emmy State H25-757 - Wellbore #1 - Design #1	15,400.0	17,501.0	4,329.0	4,148.0	23.923	SF
Emmy State H25-764 - Wellbore #1 - Design #1	2,601.9	2,567.9	3,624.9	3,619.2	635.679	CC, ES
Emmy State H25-764 - Wellbore #1 - Design #1	15,700.0	17,466.3	3,940.2	3,860.4	49.390	SF
Emmy State H25-771 - Wellbore #1 - Design #1	6,185.5	9,522.3	3,284.1	3,241.4	76.925	CC
Emmy State H25-771 - Wellbore #1 - Design #1	6,200.0	9,519.7	3,284.1	3,241.4	76.840	ES
Emmy State H25-771 - Wellbore #1 - Design #1	15,200.0	17,391.2	3,435.1	3,255.9	19.167	SF
Emmy State H25-777 - Wellbore #1 - Design #1	6,333.0	9,555.9	2,917.2	2,873.4	66.592	CC
Emmy State H25-777 - Wellbore #1 - Design #1	14,930.3	17,434.0	2,986.6	2,808.6	16.783	ES
Emmy State H25-777 - Wellbore #1 - Design #1	15,100.0	17,434.0	2,991.4	2,812.7	16.743	SF
Emmy State H25-785 - Wellbore #1 - Prelim - Rev 2	6,465.3	9,554.7	2,420.7	2,375.9	54.031	CC

CC - Min centre to center distance or covergent 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 H26-743
Project:	Conceptual Wells	**TVD Reference:**	WELL @ 4884.0ft (Original Well Elev)
Reference Site:	DP 408	**MD Reference:**	WELL @ 4884.0ft (Original Well Elev)
Site Error:	0.0 ft	**North Reference:**	Grid
Reference Well:	Hurley H26-743	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDMP
Reference Design:	Prelim - Rev 2	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
DP 408						
Emmy State H25-785 - Wellbore #1 - Prelim - Rev 2	14,929.2	17,481.1	2,545.2	2,367.9	14.361	ES
Emmy State H25-785 - Wellbore #1 - Prelim - Rev 2	15,000.0	17,481.1	2,546.1	2,368.7	14.349	SF
Emmy State H36-753 - Wellbore #1 - Design #1	2,602.3	2,564.3	3,536.6	3,525.3	312.400	CC
Emmy State H36-753 - Wellbore #1 - Design #1	2,700.0	2,649.6	3,536.7	3,525.0	301.552	ES
Emmy State H36-753 - Wellbore #1 - Design #1	6,800.0	5,742.9	4,548.5	4,517.4	146.141	SF
Emmy State H36-760 - Wellbore #1 - Design #1	2,600.3	2,533.3	3,521.9	3,510.6	312.228	CC
Emmy State H36-760 - Wellbore #1 - Design #1	2,900.0	2,816.6	3,522.5	3,509.9	280.167	ES
Emmy State H36-760 - Wellbore #1 - Design #1	6,800.0	6,145.3	4,267.0	4,235.1	133.988	SF
Emmy State H36-766 - Wellbore #1 - Design #1	3,540.5	3,671.0	3,470.3	3,454.5	219.808	CC
Emmy State H36-766 - Wellbore #1 - Design #1	3,600.0	3,726.7	3,470.5	3,454.5	216.308	ES
Emmy State H36-766 - Wellbore #1 - Design #1	6,600.0	6,317.3	3,873.3	3,841.6	122.152	SF
Emmy State H36-773 - Wellbore #1 - Design #1	4,640.4	4,987.8	3,367.6	3,345.9	155.373	CC
Emmy State H36-773 - Wellbore #1 - Design #1	4,700.0	5,041.3	3,367.7	3,345.7	153.132	ES
Emmy State H36-773 - Wellbore #1 - Design #1	6,650.0	6,500.0	3,514.0	3,481.9	109.511	SF
Emmy State H36-780 - Wellbore #1 - Design #1	5,972.4	6,350.0	3,126.1	3,096.5	105.562	CC, ES
Emmy State H36-780 - Wellbore #1 - Design #1	6,650.0	6,550.0	3,194.3	3,162.1	98.913	SF
Emmy State H36-787 - Wellbore #1 - Prelim - Rev 2	6,182.6	6,550.0	2,722.2	2,690.4	85.789	CC
Emmy State H36-787 - Wellbore #1 - Prelim - Rev 2	6,200.0	6,550.0	2,722.2	2,690.4	85.615	ES
Emmy State H36-787 - Wellbore #1 - Prelim - Rev 2	6,650.0	6,700.0	2,765.4	2,731.9	82.482	SF
Hurley H26-712 - Wellbore #1 - Design #1	1,900.0	1,900.0	111.7	103.5	13.546	CC, ES
Hurley H26-712 - Wellbore #1 - Design #1	16,322.7	16,233.9	2,100.3	1,922.7	11.821	SF
Hurley H26-717 - Wellbore #1 - Design #1	2,000.0	2,000.0	89.4	80.7	10.277	CC, ES
Hurley H26-717 - Wellbore #1 - Design #1	16,321.2	16,166.7	1,678.3	1,503.1	9.579	SF
Hurley H26-724 - Wellbore #1 - Design #1	2,200.0	2,201.0	67.0	57.4	6.984	CC
Hurley H26-724 - Wellbore #1 - Design #1	2,300.0	2,300.8	67.2	57.1	6.704	ES
Hurley H26-724 - Wellbore #1 - Design #1	2,500.0	2,499.5	69.7	58.9	6.455	SF
Hurley H26-730 - Wellbore #1 - Design #1	2,831.4	2,833.1	30.6	18.3	2.490	CC, ES, SF
Hurley H26-736 - Wellbore #1 - Design #1	2,919.5	2,921.1	13.3	0.6	1.043	Level 2, CC, ES, SF
Hurley H26-750 - Wellbore #1 - Prelim - Rev 2	16,177.8	16,309.9	421.4	245.4	2.394	CC
Hurley H26-750 - Wellbore #1 - Prelim - Rev 2	16,200.0	16,325.6	421.5	245.2	2.390	ES, SF
Hurley H26-756 - Wellbore #1 - Prelim - Rev 2	7,579.6	7,571.9	786.2	752.2	23.117	CC
Hurley H26-756 - Wellbore #1 - Prelim - Rev 2	16,200.0	16,191.4	911.9	737.9	5.240	ES, SF
Hurley H26-762 - Wellbore #1 - Prelim - Rev 2	7,581.3	7,531.9	1,208.9	1,175.8	36.545	CC
Hurley H26-762 - Wellbore #1 - Prelim - Rev 2	16,200.0	16,150.0	1,333.9	1,159.9	7.663	ES
Hurley H26-762 - Wellbore #1 - Prelim - Rev 2	16,300.0	16,164.7	1,338.1	1,163.1	7.648	SF
Hurley H26-768 - Wellbore #1 - Prelim - Rev 2	7,580.6	7,518.8	1,631.5	1,598.8	49.856	CC
Hurley H26-768 - Wellbore #1 - Prelim - Rev 2	16,200.0	16,137.6	1,752.5	1,577.9	10.036	ES
Hurley H26-768 - Wellbore #1 - Prelim - Rev 2	16,322.7	16,156.8	1,757.1	1,581.1	9.982	SF
Hurley H26-776 - Wellbore #1 - Prelim - Rev 2	7,596.1	7,548.9	2,122.6	2,089.6	64.337	CC
Hurley H26-776 - Wellbore #1 - Prelim - Rev 2	16,200.0	16,163.1	2,171.8	1,995.1	12.287	ES
Hurley H26-776 - Wellbore #1 - Prelim - Rev 2	16,322.7	16,158.9	2,175.5	1,997.3	12.209	SF
Hurley H26-783 - Wellbore #1 - Prelim - Rev 2	7,573.0	7,472.4	2,435.8	2,402.5	73.137	CC, ES
Hurley H26-783 - Wellbore #1 - Prelim - Rev 2	16,322.7	16,138.4	2,596.3	2,418.5	14.602	SF
Hurley H35-720 - Wellbore #1 - Design #1	2,200.0	2,201.0	174.1	164.5	18.132	CC, ES
Hurley H35-720 - Wellbore #1 - Design #1	2,400.0	2,389.3	180.6	170.2	17.274	SF
Hurley H35-727 - Wellbore #1 - Design #1	2,400.0	2,401.0	163.7	153.2	15.594	CC, ES
Hurley H35-727 - Wellbore #1 - Design #1	2,600.0	2,591.3	169.6	158.2	14.920	SF
Hurley H35-733 - Wellbore #1 - Design #1	2,600.0	2,600.0	155.9	144.5	13.681	CC, ES
Hurley H35-733 - Wellbore #1 - Design #1	2,900.0	2,889.7	165.3	152.6	13.017	SF
Hurley H35-740 - Wellbore #1 - Design #1	3,000.0	3,001.0	151.0	137.8	11.444	CC, ES
Hurley H35-740 - Wellbore #1 - Design #1	7,298.6	7,735.7	193.1	158.3	5.553	SF
Hurley H35-746 - Wellbore #1 - Prelim - Rev 2	2,000.0	2,000.0	149.4	140.7	17.170	CC
Hurley H35-746 - Wellbore #1 - Prelim - Rev 2	7,684.3	7,302.6	163.0	127.1	4.543	ES

CC - Min centre to center distance or covergent 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 H26-743
Project:	Conceptual Wells	**TVD Reference:**	WELL @ 4884.0ft (Original Well Elev)
Reference Site:	DP 408	**MD Reference:**	WELL @ 4884.0ft (Original Well Elev)
Site Error:	0.0 ft	**North Reference:**	Grid
Reference Well:	Hurley H26-743	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDMP
Reference Design:	Prelim - Rev 2	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
DP 408						
Hurley H35-746 - Wellbore #1 - Prelim - Rev 2	7,700.0	7,289.0	163.2	127.2	4.541	SF
Hurley H35-755 - Wellbore #1 - Prelim - Rev 2	7,503.2	7,400.0	703.2	669.6	20.962	CC, ES, SF
Hurley H35-761 - Wellbore #1 - Prelim - Rev 2	7,491.1	7,257.9	1,116.4	1,083.8	34.202	CC, ES
Hurley H35-761 - Wellbore #1 - Prelim - Rev 2	7,550.0	7,218.6	1,118.0	1,085.3	34.174	SF
Hurley H35-768 - Wellbore #1 - Prelim - Rev 2	7,551.1	7,210.0	1,544.6	1,512.3	47.854	CC, ES
Hurley H35-768 - Wellbore #1 - Prelim - Rev 2	8,300.0	6,812.2	1,646.9	1,611.5	46.534	SF
Hurley H35-774 - Wellbore #1 - Prelim - Rev 2	7,679.0	7,065.1	1,951.9	1,919.5	60.082	CC
Hurley H35-774 - Wellbore #1 - Prelim - Rev 2	7,700.0	7,046.8	1,952.0	1,919.4	59.997	ES
Hurley H35-774 - Wellbore #1 - Prelim - Rev 2	8,700.0	6,650.0	2,118.1	2,080.0	55.679	SF
Hurley H35-779 - Wellbore #1 - Prelim - Rev 2	7,841.6	6,821.1	2,270.3	2,237.1	68.345	CC, ES
Hurley H35-779 - Wellbore #1 - Prelim - Rev 2	9,000.0	6,577.0	2,515.4	2,475.1	62.408	SF
Hurley H35-787 - Wellbore #1 - Prelim - Rev 2	7,989.1	6,496.1	2,749.3	2,714.7	79.591	CC
Hurley H35-787 - Wellbore #1 - Prelim - Rev 2	8,000.0	6,496.7	2,749.3	2,714.7	79.479	ES
Hurley H35-787 - Wellbore #1 - Prelim - Rev 2	9,400.0	6,518.0	3,089.9	3,045.7	69.848	SF
Hurley State H35-713 - Wellbore #1 - Design #1	2,000.0	2,000.0	186.5	177.8	21.444	CC, ES
Hurley State H35-713 - Wellbore #1 - Design #1	2,300.0	2,282.0	200.3	190.4	20.118	SF
H Section 13						
Karakakes H13-25 - Original Drilling - Original Drilling - A	16,322.7	7,091.1	3,599.5	3,485.0	31.429	CC, ES, SF
Karakakes H13-33 - Original Drilling - Original Drilling - A	16,322.7	6,998.2	2,282.4	2,168.9	20.120	CC, ES, SF
Karakakes H14-63HN - Original Drilling - Original Drilling	16,322.7	8,968.5	143.4	60.2	1.724	CC, ES, SF
Sarchet H13-75HN - Original Drilling - Original Drilling	16,322.7	8,469.5	4,829.6	4,702.8	38.102	CC, ES, SF
UPRC 13-13J - Original Drilling - Original Drilling - As Dri	15,836.5	7,067.9	2,965.8	2,857.1	27.271	CC, ES
UPRC 13-13J - Original Drilling - Original Drilling - As Dri	16,100.0	7,063.9	2,977.5	2,867.3	27.017	SF
UPRC 13-14J - Original Drilling - Original Drilling - As Dri	16,029.5	6,902.7	4,020.0	3,908.7	36.110	CC, ES
UPRC 13-14J - Original Drilling - Original Drilling - As Dri	16,322.7	6,906.3	4,030.8	3,917.4	35.557	SF
UPRC 13-15J - Original Drilling - Original Drilling - As Dri	15,776.8	6,962.6	5,380.8	5,272.5	49.688	CC
UPRC 13-15J - Original Drilling - Original Drilling - As Dri	15,800.0	6,962.7	5,380.8	5,272.3	49.603	ES
UPRC 13-15J - Original Drilling - Original Drilling - As Dri	16,322.7	6,965.0	5,408.5	5,296.2	48.166	SF
UPRC 13-16J - Wellbore #1 - Wellbore #1- As Drilled	15,839.4	6,953.6	6,389.2	6,281.0	59.056	CC
UPRC 13-16J - Wellbore #1 - Wellbore #1- As Drilled	15,900.0	6,953.2	6,389.5	6,280.8	58.788	ES
UPRC 13-16J - Wellbore #1 - Wellbore #1- As Drilled	16,322.7	6,950.3	6,407.6	6,295.6	57.234	SF
UPRR 39 Pan Am B1 (PA) - Original Drilling - Original Dr	15,600.7	6,987.0	2,658.0	2,436.5	11.998	CC, ES
UPRR 39 Pan Am B1 (PA) - Original Drilling - Original Dr	15,800.0	6,987.0	2,665.5	2,442.8	11.974	SF
H Section 14						
Bohlender H14-09 - Original Drilling - Original Drilling - A	16,322.7	7,026.4	1,807.1	1,699.9	16.855	CC, ES, SF
Bohlender H14-15 - Original Drilling - Original Drilling - A	15,378.9	6,970.0	236.0	132.0	2.270	CC, ES, SF
Bohlender H14-16 - Original Drilling - Original Drilling - A	16,007.5	6,967.3	1,097.1	987.3	9.990	CC, ES, SF
Wilcox H14-03J - Original Drilling - Original Drilling - As D	16,219.3	7,312.5	994.7	862.4	7.520	CC
Wilcox H14-03J - Original Drilling - Original Drilling - As D	16,300.0	7,311.9	997.9	859.5	7.212	ES
Wilcox H14-03J - Original Drilling - Original Drilling - As D	16,322.7	7,311.8	999.9	859.9	7.143	SF
Wilcox H14-10 - Original Drilling - Original Drilling - As Dr	16,322.7	7,363.6	897.4	826.1	12.578	CC, ES, SF
Wilcox H14-11 - Original Drilling - Original Drilling - As Dr	16,322.7	7,537.1	1,151.8	1,066.8	13.542	CC, ES, SF
Wilcox H14-13 - Original Drilling - Original Drilling - As Dr	15,777.2	7,615.5	1,859.6	1,744.6	16.172	CC
Wilcox H14-13 - Original Drilling - Original Drilling - As Dr	15,900.0	7,611.6	1,863.7	1,740.6	15.145	ES
Wilcox H14-13 - Original Drilling - Original Drilling - As Dr	16,322.7	7,598.0	1,937.8	1,784.4	12.634	SF
H Section 19						
Butterball 13-19 - Original Drilling - Original Drilling - As D	1,888.9	1,789.0	8,012.4	8,002.2	787.582	CC
Butterball 13-19 - Original Drilling - Original Drilling - As D	11,900.0	6,744.0	8,038.0	7,967.7	114.423	ES
Butterball 13-19 - Original Drilling - Original Drilling - As D	15,800.0	15,800.0	8,965.1	8,838.8	71.022	SF

CC - Min centre to center distance or covergent 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 H26-743
Project:	Conceptual Wells	**TVD Reference:**	WELL @ 4884.0ft (Original Well Elev)
Reference Site:	DP 408	**MD Reference:**	WELL @ 4884.0ft (Original Well Elev)
Site Error:	0.0 ft	**North Reference:**	Grid
Reference Well:	Hurley H26-743	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDMP
Reference Design:	Prelim - Rev 2	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
H Section 21						
Moser 24-21 - Wellbore #1 - Wellbore #1 - As Drilled	12,293.0	6,772.0	9,767.1	9,692.3	130.682	CC
Moser 24-21 - Wellbore #1 - Wellbore #1 - As Drilled	12,400.0	6,772.0	9,767.6	9,691.8	128.789	ES
Moser 24-21 - Wellbore #1 - Wellbore #1 - As Drilled	14,400.0	6,813.6	9,991.6	9,896.0	104.556	SF
H Section 22						
HSR Demeules 09-22 - Original Drilling - Original Drilling	11,596.5	6,924.2	3,694.7	3,626.3	54.009	CC
HSR Demeules 09-22 - Original Drilling - Original Drilling	11,600.0	6,924.1	3,694.7	3,626.3	53.979	ES
HSR Demeules 09-22 - Original Drilling - Original Drilling	12,900.0	6,915.0	3,917.9	3,837.8	48.931	SF
HSR Duryea - Wellbore #1 - Wellbore #1 - As Drilled	10,730.7	6,949.2	4,220.6	4,159.8	69.424	CC
HSR Duryea - Wellbore #1 - Wellbore #1 - As Drilled	10,800.0	6,951.1	4,221.1	4,159.6	68.627	ES
HSR Duryea - Wellbore #1 - Wellbore #1 - As Drilled	12,500.0	7,009.2	4,576.1	4,499.9	60.063	SF
Sarchet 16-22 - Wellbore #1 - Wellbore #1 - As Drilled	10,178.2	7,003.2	3,813.0	3,756.8	67.791	CC
Sarchet 16-22 - Wellbore #1 - Wellbore #1 - As Drilled	10,200.0	7,003.9	3,813.1	3,756.6	67.532	ES
Sarchet 16-22 - Wellbore #1 - Wellbore #1 - As Drilled	11,800.0	7,000.0	4,143.6	4,073.5	59.040	SF

Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region Drilling - Sandbox	**Local Co-ordinate Reference:**	Well Hurley H26-743
Project:	Conceptual Wells	**TVD Reference:**	WELL @ 4884.0ft (Original Well Elev)
Reference Site:	DP 408	**MD Reference:**	WELL @ 4884.0ft (Original Well Elev)
Site Error:	0.0 ft	**North Reference:**	Grid
Reference Well:	Hurley H26-743	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDMP
Reference Design:	Prelim - Rev 2	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
H Section 23						
Eachus 32-23 - Original Drilling - Original Drilling - As Dri	13,029.4	6,975.3	306.1	224.4	3.749	CC, ES, SF
Eachus 41-23 (PA) - Original Drilling - Original Drilling - A	14,253.6	6,979.0	1,486.9	1,278.4	7.129	CC, ES
Eachus 41-23 (PA) - Original Drilling - Original Drilling - A	14,300.0	6,979.0	1,487.7	1,278.9	7.127	SF
Eachus UPRR 31-23 - Original Drilling - Original Drilling -	14,360.0	6,955.4	237.1	85.5	1.564	CC, ES, SF
Eachus UPRR 42-23 (PA) - Original Drilling - Original Dri	12,935.2	6,989.0	1,526.3	1,329.9	7.772	CC, ES
Eachus UPRR 42-23 (PA) - Original Drilling - Original Dri	13,000.0	6,989.0	1,527.6	1,331.0	7.770	SF
HSR Alberstein 16-23 - Original Drilling - Original Drilling	10,634.1	7,073.1	1,402.7	1,342.1	23.110	CC, ES
HSR Alberstein 16-23 - Original Drilling - Original Drilling	10,700.0	7,076.6	1,404.3	1,343.4	23.049	SF
HSR Ashley 15-23A - Original Drilling - Original Drilling -	10,692.9	6,979.4	74.0	13.2	1.217	Level 2, CC, ES, SF
HSR Benirschke 10-23 - Original Drilling - Original Drillin	11,686.3	7,009.7	376.9	307.3	5.412	CC, ES, SF
HSR Eachus 03-23 - Original Drilling - Original Drilling - A	14,368.4	7,172.0	1,076.8	973.7	10.452	CC
HSR Eachus 03-23 - Original Drilling - Original Drilling - A	14,400.0	7,172.1	1,077.2	973.5	10.382	ES
HSR Eachus 03-23 - Original Drilling - Original Drilling - A	14,500.0	7,172.4	1,084.8	979.1	10.268	SF
HSR Eachus 04-23 - Original Drilling - Original Drilling - A	14,378.8	7,403.4	2,493.7	2,368.8	19.965	CC
HSR Eachus 04-23 - Original Drilling - Original Drilling - A	14,500.0	7,404.9	2,496.7	2,366.4	19.166	ES
HSR Eachus 04-23 - Original Drilling - Original Drilling - A	15,400.0	7,416.0	2,694.7	2,533.2	16.685	SF
HSR Eachus 05-23 - Original Drilling - Original Drilling - A	12,600.0	7,352.5	2,543.8	2,419.2	20.422	SF
HSR Eachus 05-23 - Original Drilling - Original Drilling - A	13,045.2	7,360.8	2,504.6	2,383.9	20.761	CC, ES
HSR Fruman 06-23 - Original Drilling - Original Drilling - A	13,427.6	7,020.1	1,448.4	1,362.6	16.878	CC, ES
HSR Fruman 06-23 - Original Drilling - Original Drilling - A	13,700.0	7,022.3	1,473.8	1,384.5	16.511	SF
HSR Grasshopper 09-23 - Original Drilling - Original Drill	11,444.5	6,939.1	1,286.7	1,220.0	19.276	CC, ES
HSR Grasshopper 09-23 - Original Drilling - Original Drill	11,500.0	6,936.3	1,287.9	1,221.0	19.258	SF
Ritchey 21-23 - Original Drilling - Original Drilling - As Dri	13,764.1	6,972.6	303.3	214.9	3.431	CC, ES
Ritchey 21-23 - Original Drilling - Original Drilling - As Dri	13,800.0	6,972.3	305.4	216.2	3.422	SF
Ritchey 24-23 - Original Drilling - Original Drilling - As Dri	12,332.8	7,055.2	741.8	663.7	9.499	CC, ES, SF
Ritchey 31-24 - Original Drilling - Original Drilling - As Dri	13,694.0	7,132.7	2,119.9	2,029.8	23.518	CC
Ritchey 31-24 - Original Drilling - Original Drilling - As Dri	13,700.0	7,132.8	2,119.9	2,029.7	23.502	ES
Ritchey 31-24 - Original Drilling - Original Drilling - As Dri	14,100.0	7,138.1	2,158.4	2,064.8	23.056	SF
UPRC 23-11J - Original Drilling - Original Drilling - As Dri	11,670.1	6,930.4	1,352.4	1,283.3	19.562	CC
UPRC 23-11J - Original Drilling - Original Drilling - As Dri	11,700.0	6,930.3	1,352.8	1,283.2	19.448	ES
UPRC 23-11J - Original Drilling - Original Drilling - As Dri	11,900.0	6,929.3	1,371.8	1,299.9	19.078	SF
UPRC 23-12J - Original Drilling - Original Drilling - As Dri	11,657.2	6,930.3	2,652.7	2,583.7	38.446	CC
UPRC 23-12J - Original Drilling - Original Drilling - As Dri	11,700.0	6,930.6	2,653.0	2,583.5	38.174	ES
UPRC 23-12J - Original Drilling - Original Drilling - As Dri	12,400.0	6,935.8	2,754.7	2,678.5	36.165	SF
UPRC H23-13 - Wellbore #1 - Wellbore #1 - As Drilled	10,506.2	6,950.9	2,638.9	2,580.0	44.751	CC, ES
UPRC H23-13 - Wellbore #1 - Wellbore #1 - As Drilled	11,400.0	6,982.4	2,786.0	2,718.8	41.400	SF
UPRC H23-14J - Original Drilling - Original Drilling - As D	10,383.1	6,969.5	929.1	871.3	16.062	CC
UPRC H23-14J - Original Drilling - Original Drilling - As D	10,400.0	6,970.6	929.3	871.2	15.994	ES
UPRC H23-14J - Original Drilling - Original Drilling - As D	10,500.0	6,977.4	936.4	877.0	15.752	SF
UPRC H23-24 - Original Drilling - Original Drilling - As Dr	11,295.4	6,945.2	698.9	633.1	10.609	CC
UPRC H23-24 - Original Drilling - Original Drilling - As Dr	11,300.0	6,945.4	698.9	633.0	10.595	ES
UPRC H23-24 - Original Drilling - Original Drilling - As Dr	11,400.0	6,948.6	706.7	639.2	10.471	SF
UPRR 53 Pan Am B#1 (PA) - Original Drilling - Original D	10,725.3	6,946.0	2,081.6	1,906.0	11.857	CC, ES
UPRR 53 Pan Am B#1 (PA) - Original Drilling - Original D	11,000.0	6,946.0	2,099.6	1,921.0	11.755	SF
UPRR 53 Pan Am UT V#1 - Original Drilling - Original Dr	13,454.3	7,013.5	1,005.6	919.5	11.681	CC, ES, SF

Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region Drilling - Sandbox	**Local Co-ordinate Reference:**	Well Hurley H26-743
Project:	Conceptual Wells	**TVD Reference:**	WELL @ 4884.0ft (Original Well Elev)
Reference Site:	DP 408	**MD Reference:**	WELL @ 4884.0ft (Original Well Elev)
Site Error:	0.0 ft	**North Reference:**	Grid
Reference Well:	Hurley H26-743	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDMP
Reference Design:	Prelim - Rev 2	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
H Section 24						
Gurtler 24-09J - Original Drilling - Original Drilling - As Dr	11,769.4	6,800.0	6,710.3	6,640.9	96.718	CC
Gurtler 24-09J - Original Drilling - Original Drilling - As Dr	11,800.0	6,800.0	6,710.3	6,640.7	96.382	ES
Gurtler 24-09J - Original Drilling - Original Drilling - As Dr	14,500.0	6,800.0	7,244.6	7,157.5	83.247	SF
Gurtler 24-10J - Original Drilling - Original Drilling - As Dr	11,779.8	6,974.8	5,518.3	5,448.1	78.610	CC
Gurtler 24-10J - Original Drilling - Original Drilling - As Dr	11,800.0	6,974.9	5,518.3	5,447.9	78.436	ES
Gurtler 24-10J - Original Drilling - Original Drilling - As Dr	13,700.0	6,985.9	5,842.8	5,760.5	71.020	SF
Gurtler 24-11J - Original Drilling - Original Drilling - As Dr	11,701.0	6,800.0	4,054.4	3,985.8	59.122	CC, ES
Gurtler 24-11J - Original Drilling - Original Drilling - As Dr	12,700.0	6,800.0	4,175.7	4,101.1	56.008	SF
Gurtler 24-12J - Original Drilling - Original Drilling - As Dr	11,702.9	6,500.0	2,889.4	2,823.1	43.563	CC, ES
Gurtler 24-12J - Original Drilling - Original Drilling - As Dr	12,200.0	6,500.0	2,931.9	2,862.8	42.469	SF
Gurtler 24-12J - Original Drilling - ST01 - ST01 Original D	11,684.9	6,682.0	2,882.3	2,815.8	43.356	CC
Gurtler 24-12J - Original Drilling - ST01 - ST01 Original D	11,700.0	6,682.0	2,882.4	2,815.8	43.293	ES
Gurtler 24-12J - Original Drilling - ST01 - ST01 Original D	12,200.0	6,647.7	2,927.6	2,858.6	42.418	SF
Gurtler 24-13J - Original Drilling - Original Drilling - As Dr	10,100.0	6,958.1	2,929.7	2,873.2	51.838	SF
Gurtler 24-13J - Original Drilling - Original Drilling - As Dr	10,398.1	6,400.0	2,919.9	2,865.6	53.819	CC
Gurtler 24-13J - Original Drilling - Original Drilling - As Dr	10,400.0	6,400.0	2,919.9	2,865.6	53.808	ES
Gurtler 24-15J - Original Drilling - Original Drilling - As Dr	100.0	16.0	5,163.3	5,163.2	10,000.000	CC
Gurtler 24-15J - Original Drilling - Original Drilling - As Dr	3,005.2	2,937.6	5,169.1	5,152.5	309.618	ES
Gurtler 24-15J - Original Drilling - Original Drilling - As Dr	12,600.0	6,992.5	5,862.9	5,791.3	81.818	SF
Gurtler 24-16J - Original Drilling - Original Drilling - As Dr	2,355.9	2,259.9	6,064.7	6,051.8	471.326	CC
Gurtler 24-16J - Original Drilling - Original Drilling - As Dr	2,400.0	2,294.5	6,064.7	6,051.6	463.416	ES
Gurtler 24-16J - Original Drilling - Original Drilling - As Dr	13,400.0	6,934.9	7,071.5	6,994.6	92.005	SF
Gurtler H24-14 - Original Drilling - Original Drilling - As D	2,077.8	2,022.1	4,116.0	4,104.5	359.882	CC
Gurtler H24-14 - Original Drilling - Original Drilling - As D	2,600.0	2,527.0	4,118.2	4,103.8	286.686	ES
Gurtler H24-14 - Original Drilling - Original Drilling - As D	11,700.0	6,913.7	4,508.1	4,443.1	69.322	SF
Gurtler H24-21 (PA) - Original Drilling - Original Drilling -	12,253.1	7,033.0	4,806.3	4,731.5	64.249	CC
Gurtler H24-21 (PA) - Original Drilling - Original Drilling -	12,300.0	7,036.2	4,806.5	4,731.3	63.937	ES
Gurtler H24-21 (PA) - Original Drilling - Original Drilling -	13,700.0	7,132.6	5,018.3	4,934.3	59.722	SF
Gurtler H24-23 - Original Drilling - Original Drilling - As D	2,044.0	1,960.2	6,063.3	6,052.2	544.977	CC
Gurtler H24-23 - Original Drilling - Original Drilling - As D	11,200.0	6,900.0	6,077.1	6,012.6	94.134	ES
Gurtler H24-23 - Original Drilling - Original Drilling - As D	13,600.0	6,900.0	6,566.6	6,487.1	82.554	SF
Gurtler H24-24 - Original Drilling - Original Drilling - As D	11,101.6	6,542.7	4,963.8	4,901.8	80.028	CC, ES
Gurtler H24-24 - Original Drilling - Original Drilling - As D	12,800.0	6,519.1	5,246.3	5,173.9	72.485	SF
Gurtler H24-99HZ - Wellbore #1 - Original Drilling	11,037.8	11,118.0	2,596.0	2,529.2	38.845	CC
Gurtler H24-99HZ - Wellbore #1 - Original Drilling	11,100.0	11,118.0	2,596.7	2,527.9	37.735	ES
Gurtler H24-99HZ - Wellbore #1 - Original Drilling	12,800.0	11,118.0	3,137.6	3,013.1	25.210	SF
Gurtler H25-27 - Original Drilling - Original Drilling - As D	3,612.4	4,716.7	5,760.8	5,736.2	234.159	CC, ES
Gurtler H25-27 - Original Drilling - Original Drilling - As D	12,800.0	6,934.4	6,702.6	6,628.3	90.268	SF
Gurtler Russell L1 (PA) - Original Drilling - Original Drillin	10,817.6	7,017.8	3,656.5	3,585.2	51.301	CC, ES
Gurtler Russell L1 (PA) - Original Drilling - Original Drillin	11,700.0	7,023.6	3,761.5	3,685.0	49.189	SF
HSR Brutschy 04-24 - Original Drilling - Original Drilling -	14,211.6	7,116.6	2,910.5	2,817.0	31.122	CC, ES
HSR Brutschy 04-24 - Original Drilling - Original Drilling -	14,600.0	7,132.3	2,936.3	2,840.7	30.708	SF
HSR Epstein 05-24 - Original Drilling - Original Drilling - A	13,396.7	6,993.4	3,444.9	3,359.7	40.431	CC
HSR Epstein 05-24 - Original Drilling - Original Drilling - A	13,400.0	6,993.5	3,444.9	3,359.7	40.420	ES
HSR Epstein 05-24 - Original Drilling - Original Drilling - A	14,000.0	7,013.0	3,497.3	3,408.6	39.426	SF
HSR Hoffman 03-24 - Original Drilling - Original Drilling -	14,276.6	6,999.7	4,221.7	4,122.0	42.320	CC
HSR Hoffman 03-24 - Original Drilling - Original Drilling -	14,300.0	6,999.3	4,221.8	4,121.8	42.248	ES
HSR Hoffman 03-24 - Original Drilling - Original Drilling -	15,100.0	6,985.7	4,301.2	4,196.7	41.137	SF
HSR Sarchet 02-24 - Original Drilling - Original Drilling - A	14,288.0	6,938.4	5,573.8	5,480.4	59.711	CC
HSR Sarchet 02-24 - Original Drilling - Original Drilling - A	14,300.0	6,938.4	5,573.8	5,480.3	59.650	ES
HSR Sarchet 02-24 - Original Drilling - Original Drilling - A	15,800.0	6,944.2	5,775.2	5,672.3	56.111	SF
HSR Traurig 01-24 - Original Drilling - Original Drilling - A	14,540.3	7,000.7	6,451.2	6,355.1	67.181	CC
HSR Traurig 01-24 - Original Drilling - Original Drilling - A	14,600.0	7,001.2	6,451.4	6,354.9	66.842	ES

CC - Min centre to center distance or covergent 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 H26-743
Project:	Conceptual Wells	**TVD Reference:**	WELL @ 4884.0ft (Original Well Elev)
Reference Site:	DP 408	**MD Reference:**	WELL @ 4884.0ft (Original Well Elev)
Site Error:	0.0 ft	**North Reference:**	Grid
Reference Well:	Hurley H26-743	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDMP
Reference Design:	Prelim - Rev 2	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
H Section 24						
HSR Traurig 01-24 - Original Drilling - Original Drilling - A	16,322.7	7,017.6	6,692.9	6,585.0	62.014	SF
Nopens D19-31 - Original Drilling - Original Drilling - As D	13,699.4	6,937.3	7,173.0	7,085.2	81.643	CC
Nopens D19-31 - Original Drilling - Original Drilling - As D	13,800.0	6,939.3	7,173.7	7,085.0	80.878	ES
Nopens D19-31 - Original Drilling - Original Drilling - As D	16,300.0	6,987.1	7,629.7	7,524.6	72.607	SF
Nopens H24-08 - Original Drilling - Original Drilling - As D	13,100.9	6,832.7	6,683.3	6,601.5	81.719	CC
Nopens H24-08 - Original Drilling - Original Drilling - As D	13,200.0	6,835.9	6,684.0	6,601.4	80.918	ES
Nopens H24-08 - Original Drilling - Original Drilling - As D	15,400.0	6,919.0	7,067.3	6,970.1	72.662	SF
Sarchet H24-22 - Original Drilling - Original Drilling - As D	12,767.5	6,961.1	5,849.5	5,770.2	73.800	CC
Sarchet H24-22 - Original Drilling - Original Drilling - As D	12,800.0	6,962.9	5,849.6	5,770.1	73.554	ES
Sarchet H24-22 - Original Drilling - Original Drilling - As D	14,800.0	7,114.7	6,190.6	6,097.9	66.767	SF
Weld County Lumber 01 - Original Drilling - Original Drilli	13,509.9	6,948.1	5,660.2	5,574.1	65.748	CC, ES
Weld County Lumber 01 - Original Drilling - Original Drilli	15,200.0	6,963.0	5,907.1	5,810.3	61.009	SF

Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region Drilling - Sandbox	**Local Co-ordinate Reference:**	Well Hurley H26-743
Project:	Conceptual Wells	**TVD Reference:**	WELL @ 4884.0ft (Original Well Elev)
Reference Site:	DP 408	**MD Reference:**	WELL @ 4884.0ft (Original Well Elev)
Site Error:	0.0 ft	**North Reference:**	Grid
Reference Well:	Hurley H26-743	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDMP
Reference Design:	Prelim - Rev 2	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
H Section 25						
Dechant 21-25 - Original Drilling - Original Drilling - As D	608.2	554.2	2,892.0	2,889.1	969.316	CC
Dechant 21-25 - Original Drilling - Original Drilling - As D	1,400.0	1,337.6	2,893.0	2,885.5	385.889	ES
Dechant 21-25 - Original Drilling - Original Drilling - As D	10,900.0	7,106.9	5,509.4	5,443.7	83.878	SF
Dechant D30-33D - Original Drilling - Original Drilling - As	100.0	18.4	5,587.4	5,587.3	10,000.000	CC, ES
Dechant D30-33D - Original Drilling - Original Drilling - As	12,300.0	6,846.4	9,758.8	9,696.7	156.987	SF
Dechant D31-30D - Original Drilling - Original Drilling - As	100.0	19.3	5,593.9	5,593.8	10,000.000	CC, ES
Dechant D31-30D - Original Drilling - Original Drilling - As	6,400.0	6,400.0	7,196.1	7,153.9	170.226	SF
Dechant H25-64-1HN - Original Drilling - Original Drilling	2,680.8	2,681.3	1,759.6	1,745.2	122.337	CC
Dechant H25-64-1HN - Original Drilling - Original Drilling	2,700.0	2,697.0	1,759.7	1,745.1	121.235	ES
Dechant H25-64-1HN - Original Drilling - Original Drilling	6,504.3	6,328.0	2,180.2	2,141.6	56.464	SF
Dechant H25-65HN - Original Drilling - Original Drilling	3,924.6	4,206.1	1,371.4	1,350.1	64.394	CC, ES
Dechant H25-65HN - Original Drilling - Original Drilling	6,300.0	6,190.1	1,908.8	1,873.3	53.732	SF
HSR Cohn 03-25 - Original Drilling - Original Drilling - As	3,022.3	2,996.5	3,208.1	3,191.1	189.172	CC, ES
HSR Cohn 03-25 - Original Drilling - Original Drilling - As	13,300.0	13,300.0	5,797.8	5,713.0	68.360	SF
HSR Crowe 06-25 - Original Drilling - Original Drilling - A	2,344.2	2,290.2	2,884.7	2,871.8	222.798	CC
HSR Crowe 06-25 - Original Drilling - Original Drilling - A	3,002.0	2,950.0	2,885.5	2,868.8	172.435	ES
HSR Crowe 06-25 - Original Drilling - Original Drilling - A	9,300.0	6,965.0	4,331.8	4,285.2	92.986	SF
HSR Dechant 04-25 - Original Drilling - Original Drilling -	2,256.8	2,261.6	2,015.1	1,999.3	126.934	CC
HSR Dechant 04-25 - Original Drilling - Original Drilling -	2,300.0	2,279.7	2,015.4	1,999.2	124.069	ES
HSR Dechant 04-25 - Original Drilling - Original Drilling -	9,400.0	7,414.7	2,909.4	2,837.9	40.677	SF
HSR Dechant 05-25 - Original Drilling - Original Drilling -	3,013.0	2,978.5	1,863.2	1,846.4	110.540	CC, ES
HSR Dechant 05-25 - Original Drilling - Original Drilling -	11,000.0	11,000.0	4,536.1	4,473.0	71.904	SF
KY Blue D30-32 - Original Drilling - Original Drilling - As D	2,507.1	2,417.2	6,017.2	6,003.4	437.482	CC
KY Blue D30-32 - Original Drilling - Original Drilling - As D	2,600.0	2,477.7	6,017.4	6,003.3	424.535	ES
KY Blue D30-32 - Original Drilling - Original Drilling - As D	12,500.0	6,929.8	9,042.3	8,979.3	143.561	SF
KY Blue H25-04J - Original Drilling - Original Drilling - As	3,000.0	2,916.0	5,607.2	5,595.5	479.687	CC, ES
KY Blue H25-04J - Original Drilling - Original Drilling - As	12,000.0	6,940.0	9,098.9	9,055.5	209.648	SF
KY Blue H25-09 - Original Drilling - Original Drilling - As D	2,238.8	2,151.8	5,644.0	5,631.8	461.716	CC
KY Blue H25-09 - Original Drilling - Original Drilling - As D	2,300.0	2,200.0	5,644.1	5,631.5	450.446	ES
KY Blue H25-09 - Original Drilling - Original Drilling - As D	11,700.0	6,910.1	8,462.2	8,405.1	148.081	SF
KY Blue H25-10 - Original Drilling - Original Drilling - As D	100.0	17.5	4,145.9	4,145.8	10,000.000	CC
KY Blue H25-10 - Original Drilling - Original Drilling - As D	3,016.9	2,955.8	4,152.8	4,136.0	247.323	ES
KY Blue H25-10 - Original Drilling - Original Drilling - As D	9,700.0	7,000.2	6,058.4	6,010.9	127.488	SF
KY Blue H25-11 - Original Drilling - Original Drilling - As D	760.8	693.8	3,154.1	3,150.3	826.913	CC
KY Blue H25-11 - Original Drilling - Original Drilling - As D	1,000.0	909.8	3,154.8	3,149.7	617.382	ES
KY Blue H25-11 - Original Drilling - Original Drilling - As D	7,400.0	6,999.7	4,164.9	4,092.9	57.854	SF
KY Blue H25-12 - Original Drilling - Original Drilling - As D	3,127.4	3,117.0	1,767.7	1,749.8	98.663	CC, ES
KY Blue H25-12 - Original Drilling - Original Drilling - As D	6,550.0	6,294.7	2,413.4	2,375.1	63.161	SF
KY Blue H25-14 - Original Drilling - Original Drilling - As D	100.0	23.7	3,940.1	3,940.0	10,000.000	CC
KY Blue H25-14 - Original Drilling - Original Drilling - As D	3,100.0	3,052.5	3,943.0	3,925.7	228.163	ES
KY Blue H25-14 - Original Drilling - Original Drilling - As D	6,850.0	6,578.0	4,490.1	4,449.7	111.103	SF
KY Blue H25-15 - Original Drilling - Original Drilling - As D	339.8	260.9	4,710.8	4,709.4	3,475.281	CC
KY Blue H25-15 - Original Drilling - Original Drilling - As D	3,200.0	3,245.9	4,712.5	4,694.3	259.594	ES
KY Blue H25-15 - Original Drilling - Original Drilling - As D	11,500.0	11,500.0	8,190.1	8,124.0	123.927	SF
KY H25-24 - Original Drilling - Original Drilling - As Drilled	227.0	150.0	4,055.5	4,054.8	5,676.863	CC
KY H25-24 - Original Drilling - Original Drilling - As Drilled	3,100.0	3,095.3	4,059.1	4,041.6	232.666	ES
KY H25-24 - Original Drilling - Original Drilling - As Drilled	7,000.0	6,725.4	4,881.5	4,840.8	120.166	SF
Moore UPRC H25-01 - Original Drilling - Original Drilling	3,010.4	2,930.2	5,856.7	5,840.0	350.511	CC, ES
Moore UPRC H25-01 - Original Drilling - Original Drilling	13,100.0	6,918.2	7,857.6	7,785.9	109.717	SF
Moore UPRC H25-02 - Original Drilling - Original Drilling	3,002.9	2,933.5	4,491.7	4,475.0	269.424	CC, ES
Moore UPRC H25-02 - Original Drilling - Original Drilling	11,700.0	6,936.3	6,039.2	5,976.7	96.722	SF
Moser 25-32 - Original Drilling - Original Drilling - As Drill	3,065.0	3,067.9	3,952.8	3,935.5	228.906	CC, ES
Moser 25-32 - Original Drilling - Original Drilling - As Drill	12,400.0	12,400.0	7,011.3	6,933.1	89.667	SF

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

Company:	Northern Region Drilling - Sandbox	**Local Co-ordinate Reference:**	Well Hurley H26-743
Project:	Conceptual Wells	**TVD Reference:**	WELL @ 4884.0ft (Original Well Elev)
Reference Site:	DP 408	**MD Reference:**	WELL @ 4884.0ft (Original Well Elev)
Site Error:	0.0 ft	**North Reference:**	Grid
Reference Well:	Hurley H26-743	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDMP
Reference Design:	Prelim - Rev 2	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
H Section 25						
Moser 25-42 - Original Drilling - Original Drilling - As Drill	805.9	713.9	5,617.6	5,613.6	1,409.758	CC
Moser 25-42 - Original Drilling - Original Drilling - As Drill	2,200.0	2,078.2	5,620.6	5,608.8	473.037	ES
Moser 25-42 - Original Drilling - Original Drilling - As Drill	12,400.0	6,919.3	8,179.8	8,115.5	127.353	SF
UPRR 53 Pan Am T#2 - Original Drilling - Original Drilling	3,061.8	3,075.7	2,699.5	2,682.2	156.150	CC, ES
UPRR 53 Pan Am T#2 - Original Drilling - Original Drilling	9,800.0	6,860.9	3,997.5	3,948.2	81.133	SF
UPRR 53 Pan Am UT T#1 - Original Drilling - Original Dr	3,000.0	2,909.0	5,027.1	4,962.3	77.606	CC
UPRR 53 Pan Am UT T#1 - Original Drilling - Original Dr	3,100.0	3,009.0	5,028.7	4,961.7	75.078	ES
UPRR 53 Pan Am UT T#1 - Original Drilling - Original Dr	9,600.0	6,933.0	6,276.4	6,112.0	38.173	SF
Von Feldt 1-25B - Original Drilling - Original Drilling - As D	3,162.2	3,142.0	2,927.8	2,910.0	165.299	CC
Von Feldt 1-25B - Original Drilling - Original Drilling - As D	3,200.0	3,173.0	2,927.9	2,910.0	163.662	ES
Von Feldt 1-25B - Original Drilling - Original Drilling - As D	6,700.0	6,382.0	3,367.3	3,327.8	85.402	SF

Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region Drilling - Sandbox	**Local Co-ordinate Reference:**	Well Hurley H26-743
Project:	Conceptual Wells	**TVD Reference:**	WELL @ 4884.0ft (Original Well Elev)
Reference Site:	DP 408	**MD Reference:**	WELL @ 4884.0ft (Original Well Elev)
Site Error:	0.0 ft	**North Reference:**	Grid
Reference Well:	Hurley H26-743	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDMP
Reference Design:	Prelim - Rev 2	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
H Section 26						
Bullard 31-26 - Original Drilling - Original Drilling - As Dril	9,333.2	6,986.7	106.2	56.4	2.133	CC, ES, SF
Bullard 32-26 - Original Drilling - Original Drilling - As Dril	7,647.2	6,994.7	272.2	230.7	6.555	CC, ES, SF
Bullard 41-26 - Original Drilling - Original Drilling - As Dril	8,819.8	7,021.2	1,067.1	1,020.6	22.932	CC, ES, SF
Dechant H25-29D - Original Drilling - Original Drilling - As	0.0	0.0	1,582.1			
Dechant H25-29D - Original Drilling - Original Drilling - As	11,500.0	7,434.4	4,055.5	3,978.8	52.828	SF
Dechant H25-33D - Original Drilling - Original Drilling - As	3,261.3	3,614.9	824.5	793.0	26.129	CC, ES
Dechant H25-33D - Original Drilling - Original Drilling - As	3,600.0	3,904.8	859.7	824.7	24.533	SF
Harsh H26-09D - Original Drilling - Original Drilling - As D	3,944.4	3,895.0	1,096.1	1,074.1	49.756	CC
Harsh H26-09D - Original Drilling - Original Drilling - As D	4,000.0	3,947.6	1,096.3	1,074.0	49.040	ES
Harsh H26-09D - Original Drilling - Original Drilling - As D	6,300.0	6,100.0	1,392.0	1,355.1	37.690	SF
Harsh H26-10 - Original Drilling - Original Drilling - As Dr	6,538.2	6,335.9	327.5	288.1	8.314	CC, ES
Harsh H26-10 - Original Drilling - Original Drilling - As Dr	6,550.0	6,346.9	327.6	288.1	8.298	SF
Harsh H26-15 - Original Drilling - Original Drilling - As Dr	6,608.7	6,409.6	1,749.3	1,709.8	44.380	CC, ES
Harsh H26-15 - Original Drilling - Original Drilling - As Dr	6,800.0	6,585.5	1,779.5	1,738.8	43.770	SF
Harsh H26-16 - Original Drilling - Original Drilling - As Dr	6,474.2	6,265.0	2,127.9	2,088.9	54.555	CC, ES
Harsh H26-16 - Original Drilling - Original Drilling - As Dr	6,700.0	6,459.9	2,161.5	2,121.1	53.478	SF
Harsh H26-23D - Original Drilling - Original Drilling - As D	1,088.0	1,074.0	1,233.9	1,229.1	256.683	CC
Harsh H26-23D - Original Drilling - Original Drilling - As D	1,200.0	1,182.6	1,234.0	1,228.5	227.622	ES
Harsh H26-23D - Original Drilling - Original Drilling - As D	6,600.0	6,519.5	1,370.7	1,330.7	34.246	SF
HSR Moser 04-26 - Original Drilling - Original Drilling - As	9,407.0	6,806.7	2,542.1	2,492.1	50.881	CC, ES
HSR Moser 04-26 - Original Drilling - Original Drilling - As	10,700.0	10,700.0	2,850.6	2,776.5	38.498	SF
HSR Moser 06-26 - Original Drilling - Original Drilling - As	7,703.5	6,979.9	871.5	829.9	20.965	CC, ES
HSR Moser 06-26 - Original Drilling - Original Drilling - As	7,800.0	6,981.7	876.8	834.9	20.953	SF
HSR Regalia 05-26 - Original Drilling - Original Drilling - A	8,245.0	6,986.6	1,963.3	1,920.1	45.492	CC, ES
HSR Regalia 05-26 - Original Drilling - Original Drilling - A	8,900.0	6,984.8	2,069.7	2,022.0	43.414	SF
HSR-Moser 03-26A - Original Drilling - Original Drilling - A	9,299.0	6,910.8	858.6	809.1	17.353	CC
HSR-Moser 03-26A - Original Drilling - Original Drilling - A	9,300.0	6,910.9	858.6	809.1	17.349	ES
HSR-Moser 03-26A - Original Drilling - Original Drilling - A	9,500.0	6,919.0	881.8	829.9	16.997	SF
John 03-26 - Original Drilling - Original Drilling - As Drille	9,044.5	6,905.0	1,000.4	952.7	20.979	CC, ES
John 03-26 - Original Drilling - Original Drilling - As Drille	9,300.0	6,914.5	1,032.5	982.1	20.485	SF
Lamp H25-31 - Original Drilling - Original Drilling - As Dri	390.5	365.5	1,269.3	1,267.5	691.941	CC
Lamp H25-31 - Original Drilling - Original Drilling - As Dri	3,049.9	3,046.8	1,276.8	1,259.6	74.382	ES
Lamp H25-31 - Original Drilling - Original Drilling - As Dri	8,700.0	7,042.5	2,083.4	2,038.2	46.102	SF
Lamp H26-01 - Original Drilling - Original Drilling - As Dri	1,558.1	1,533.3	1,273.3	1,264.8	148.979	CC
Lamp H26-01 - Original Drilling - Original Drilling - As Dri	1,600.0	1,568.9	1,273.4	1,264.6	145.262	ES
Lamp H26-01 - Original Drilling - Original Drilling - As Dri	9,300.0	7,090.3	1,692.9	1,640.5	32.313	SF
Lamp H26-08 - Original Drilling - Original Drilling - As Dri	2,950.5	2,920.0	487.1	470.6	29.452	CC
Lamp H26-08 - Original Drilling - Original Drilling - As Dri	3,000.0	2,968.2	487.2	470.4	28.968	ES
Lamp H26-08 - Original Drilling - Original Drilling - As Dri	3,400.0	3,360.0	517.8	498.8	27.337	SF
Lamp H26-22 - Original Drilling - Original Drilling - As Dri	3,643.0	3,697.0	139.9	117.2	6.158	CC, ES
Lamp H26-22 - Original Drilling - Original Drilling - As Dri	3,900.0	3,957.5	149.0	123.5	5.833	SF
Moser 05-26 - Original Drilling - Original Drilling - As Drill	7,609.3	6,993.3	2,500.7	2,459.3	60.333	CC, ES
Moser 05-26 - Original Drilling - Original Drilling - As Drill	8,600.0	7,004.3	2,689.8	2,643.8	58.477	SF
Moser 41-27 - Original Drilling - Original Drilling - As Drill	8,400.1	7,076.9	3,166.2	3,118.1	65.773	CC, ES
Moser 41-27 - Original Drilling - Original Drilling - As Drill	9,900.0	7,089.1	3,503.5	3,442.5	57.493	SF
Moser H26-11 - Original Drilling - Original Drilling - As Dr	7,101.6	6,805.1	1,437.3	1,397.4	36.001	CC, ES
Moser H26-11 - Original Drilling - Original Drilling - As Dr	7,200.0	6,867.7	1,443.0	1,402.7	35.820	SF
Moser H26-12 - Wellbore #1 - Wellbore #1 - As Drilled	7,160.6	6,851.5	2,589.4	2,549.2	64.420	CC, ES
Moser H26-12 - Wellbore #1 - Wellbore #1 - As Drilled	7,350.0	6,921.4	2,607.8	2,567.0	63.974	SF
Moser H26-13 - Wellbore #1 - Wellbore #1 - As Drilled	6,890.2	6,612.4	3,208.1	3,169.2	82.306	CC, ES
Moser H26-13 - Wellbore #1 - Wellbore #1 - As Drilled	7,150.0	6,762.8	3,248.3	3,208.1	80.977	SF
Moser H26-14 - Original Drilling - Original Drilling - As Dr	6,739.7	6,534.7	2,330.6	2,291.6	59.765	CC, ES
Moser H26-14 - Original Drilling - Original Drilling - As Dr	6,950.0	6,705.2	2,364.4	2,324.1	58.763	SF

Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region Drilling - Sandbox	**Local Co-ordinate Reference:**	Well Hurley H26-743
Project:	Conceptual Wells	**TVD Reference:**	WELL @ 4884.0ft (Original Well Elev)
Reference Site:	DP 408	**MD Reference:**	WELL @ 4884.0ft (Original Well Elev)
Site Error:	0.0 ft	**North Reference:**	Grid
Reference Well:	Hurley H26-743	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDMP
Reference Design:	Prelim - Rev 2	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
H Section 26						
Moser H26-18D - Original Drilling - Original Drilling - As D	8,300.0	7,420.1	366.9	313.8	6.912	SF
Moser H26-18D - Original Drilling - Original Drilling - As D	8,421.1	7,421.6	346.4	297.1	7.028	CC, ES
Moser H26-24 - Original Drilling - Original Drilling - As Dr	6,771.6	6,534.6	1,301.4	1,262.6	33.510	CC, ES
Moser H26-24 - Original Drilling - Original Drilling - As Dr	6,900.0	6,641.9	1,314.0	1,274.4	33.161	SF
Moser H26-25 - Original Drilling - Original Drilling - As Dr	6,891.3	6,709.1	2,019.7	1,980.4	51.423	CC
Moser H26-25 - Original Drilling - Original Drilling - As Dr	6,900.0	6,718.0	2,019.7	1,980.4	51.359	ES
Moser H26-25 - Original Drilling - Original Drilling - As Dr	7,050.0	6,816.2	2,036.7	1,996.6	50.833	SF
Moser H26-27D - Original Drilling - Original Drilling - As D	9,600.0	7,143.3	940.1	884.2	16.810	SF
Moser H26-27D - Original Drilling - Original Drilling - As D	9,671.3	7,143.0	937.4	881.7	16.828	CC, ES
Moser H26-28D - Original Drilling - Original Drilling - As D	9,885.6	7,577.4	570.1	507.0	9.037	CC
Moser H26-28D - Original Drilling - Original Drilling - As D	9,900.0	7,577.9	570.3	506.4	8.927	ES
Moser H26-28D - Original Drilling - Original Drilling - As D	10,100.0	7,583.8	609.0	534.9	8.213	SF
Moser H26-29D - Original Drilling - Original Drilling - As D	0.0	0.0	1,504.4			
Moser H26-29D - Original Drilling - Original Drilling - As D	900.0	877.0	1,507.4	1,502.4	300.321	ES
Moser H26-29D - Original Drilling - Original Drilling - As D	11,300.0	11,300.0	2,277.1	2,163.7	20.077	SF
Moser, Wesley E. G. U. B1 (PA) - Original Drilling - Origin	6,897.5	6,636.4	2,704.6	2,555.8	18.179	CC
Moser, Wesley E. G. U. B1 (PA) - Original Drilling - Origin	6,900.0	6,638.5	2,704.6	2,555.8	18.173	ES
Moser, Wesley E. G. U. B1 (PA) - Original Drilling - Origin	7,150.0	6,824.0	2,742.1	2,589.0	17.910	SF
H Section 27						
HSR Moser 1-27 - Original Drilling - Original Drilling - As	9,297.3	6,928.7	3,621.6	3,572.4	73.480	CC
HSR Moser 1-27 - Original Drilling - Original Drilling - As	9,300.0	6,928.7	3,621.6	3,572.3	73.445	ES
HSR Moser 1-27 - Original Drilling - Original Drilling - As	11,000.0	6,934.3	4,001.9	3,938.7	63.293	SF
HSR Moser 16-27 - Original Drilling - Original Drilling - As	6,963.9	6,707.5	4,228.0	4,188.6	107.381	CC, ES
HSR Moser 16-27 - Original Drilling - Original Drilling - As	7,350.0	6,946.9	4,304.3	4,263.3	104.927	SF
Moser 09-27X (PA) - Original Drilling - Original Drilling - A	7,225.6	6,885.1	3,752.5	3,711.6	91.834	CC, ES
Moser 09-27X (PA) - Original Drilling - Original Drilling - A	7,600.0	6,998.5	3,813.1	3,769.2	86.975	SF
Moser 24-27 - Original Drilling - Original Drilling - As Drill	7,435.4	6,965.6	4,367.8	4,324.2	100.146	CC, ES
Moser 24-27 - Original Drilling - Original Drilling - As Drill	10,000.0	6,946.1	5,259.4	5,199.6	87.909	SF
H Section 34						
Moser H34-09 - Wellbore #1 - Wellbore #1 - As Drilled	6,759.0	6,549.6	6,971.5	6,932.5	178.945	CC, ES
Moser H34-09 - Wellbore #1 - Wellbore #1 - As Drilled	7,250.0	6,942.0	7,131.3	7,089.7	171.505	SF
Moser H34-16 - Wellbore #1 - Wellbore #1 - As Drilled	6,733.9	6,518.7	8,038.5	7,999.5	206.252	CC, ES
Moser H34-16 - Wellbore #1 - Wellbore #1 - As Drilled	7,250.0	6,769.2	8,225.1	8,184.0	199.686	SF
Moser H34-31 - Wellbore #1 - Wellbore #1 - As Drilled	7,016.2	6,740.7	9,258.4	9,218.8	233.783	CC, ES
Moser H34-31 - Wellbore #1 - Wellbore #1 - As Drilled	8,700.0	6,981.8	9,975.7	9,929.0	213.724	SF

CC - Min centre to center distance or covergent 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 H26-743
Project:	Conceptual Wells	**TVD Reference:**	WELL @ 4884.0ft (Original Well Elev)
Reference Site:	DP 408	**MD Reference:**	WELL @ 4884.0ft (Original Well Elev)
Site Error:	0.0 ft	**North Reference:**	Grid
Reference Well:	Hurley H26-743	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDMP
Reference Design:	Prelim - Rev 2	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
H Section 35						
Cannon Farms 01-35C - Original Drilling - Original Drillin	6,595.9	6,445.5	6,777.7	6,738.1	170.904	CC
Cannon Farms 01-35C - Original Drilling - Original Drillin	6,600.0	6,450.5	6,777.7	6,738.0	170.772	ES
Cannon Farms 01-35C - Original Drilling - Original Drillin	7,200.0	7,035.8	7,044.7	7,001.5	163.120	SF
Cannon H35-03D - Original Drilling - Original Drilling - As	6,667.3	6,400.4	6,403.8	6,364.8	164.493	CC, ES
Cannon H35-03D - Original Drilling - Original Drilling - As	7,050.0	6,637.3	6,517.2	6,476.4	159.659	SF
Cannon H35-09 - Original Drilling - Original Drilling - As D	6,581.9	6,455.2	5,923.3	5,883.5	148.846	CC, ES
Cannon H35-09 - Original Drilling - Original Drilling - As D	7,350.0	7,074.5	6,326.8	6,277.7	128.962	SF
Cannon H35-10 - Original Drilling - Original Drilling - As D	6,606.4	6,273.0	5,894.3	5,855.4	151.737	CC, ES
Cannon H35-10 - Original Drilling - Original Drilling - As D	7,500.0	7,500.0	6,431.6	6,386.9	143.696	SF
Cannon H35-11 - Original Drilling - Original Drilling - As D	6,663.6	6,512.3	5,895.7	5,856.2	149.306	CC, ES
Cannon H35-11 - Original Drilling - Original Drilling - As D	7,050.0	6,745.3	6,013.6	5,972.2	145.354	SF
Cannon H35-12 - Original Drilling - Original Drilling - As D	6,709.0	6,463.4	6,435.5	6,396.6	165.380	CC, ES
Cannon H35-12 - Original Drilling - Original Drilling - As D	7,200.0	6,842.1	6,608.1	6,566.6	159.154	SF
Cannon H35-13 - Wellbore #1 - Wellbore #1 - As Drilled	6,699.8	6,514.5	7,570.9	7,531.7	193.327	CC
Cannon H35-13 - Wellbore #1 - Wellbore #1 - As Drilled	6,700.0	6,514.7	7,570.9	7,531.7	193.321	ES
Cannon H35-13 - Wellbore #1 - Wellbore #1 - As Drilled	7,150.0	7,069.9	7,717.6	7,675.3	182.687	SF
Cannon H35-14 - Original Drilling - Original Drilling - As D	6,658.1	6,495.5	7,232.3	7,192.9	183.522	CC, ES
Cannon H35-14 - Original Drilling - Original Drilling - As D	7,450.0	7,022.5	7,668.0	7,618.1	153.635	SF
Cannon H35-15 (PA) - Original Drilling - Original Drilling -	6,616.5	6,393.7	7,152.2	7,007.2	49.323	CC, ES
Cannon H35-15 (PA) - Original Drilling - Original Drilling -	7,100.0	6,803.6	7,330.4	7,175.9	47.465	SF
Cannon H35-20 - Original Drilling - Original Drilling - As D	6,688.2	6,389.7	5,644.8	5,606.1	145.904	CC, ES
Cannon H35-20 - Original Drilling - Original Drilling - As D	7,100.0	6,739.9	5,769.7	5,728.7	140.619	SF
Cannon H35-21 - Original Drilling - Original Drilling - As D	6,626.0	6,296.2	5,405.2	5,366.3	139.247	CC, ES
Cannon H35-21 - Original Drilling - Original Drilling - As D	7,050.0	6,827.9	5,535.6	5,493.8	132.432	SF
Cannon H35-22 - Original Drilling - Original Drilling - As D	6,599.3	6,270.1	5,301.1	5,261.9	135.163	CC
Cannon H35-22 - Original Drilling - Original Drilling - As D	6,600.0	6,270.7	5,301.1	5,261.9	135.148	ES
Cannon H35-22 - Original Drilling - Original Drilling - As D	7,000.0	6,662.7	5,424.4	5,382.7	130.245	SF
Cannon H35-24 - Original Drilling - Original Drilling - As D	6,631.5	6,312.4	6,593.5	6,554.7	169.810	CC, ES
Cannon H35-24 - Original Drilling - Original Drilling - As D	7,100.0	6,660.8	6,762.2	6,720.9	163.819	SF
Cannon X02-27 - Original Drilling - Original Drilling - As D	6,605.3	6,420.5	7,643.8	7,604.3	193.496	CC, ES
Cannon X02-27 - Original Drilling - Original Drilling - As D	7,200.0	6,910.6	7,906.5	7,864.0	185.654	SF
Cannon X02-28 - Original Drilling - Original Drilling - As D	6,637.9	6,412.5	7,448.7	7,409.5	189.773	CC, ES
Cannon X02-28 - Original Drilling - Original Drilling - As D	7,100.0	6,816.1	7,610.9	7,569.0	181.827	SF
Cannon X02-29 - Original Drilling - Original Drilling - As D	6,639.4	5,931.6	7,718.6	7,681.2	206.126	CC, ES
Cannon X02-29 - Original Drilling - Original Drilling - As D	7,200.0	6,233.7	7,950.7	7,910.8	199.223	SF
Foster 18-35 - Original Drilling - Original Drilling - As Drill	6,724.3	6,389.1	4,194.4	4,155.9	109.093	CC, ES
Foster 18-35 - Original Drilling - Original Drilling - As Drill	7,050.0	6,749.3	4,263.9	4,223.4	105.064	SF
Foster UPRR 31-35 #1 (PA) - Original Drilling - Original D	6,615.2	6,404.5	3,048.7	2,903.7	21.022	CC, ES
Foster UPRR 31-35 #1 (PA) - Original Drilling - Original D	6,850.0	6,619.5	3,093.0	2,942.9	20.615	SF
Foster UPRR 32-35 - Original Drilling - Original Drilling -	6,624.5	6,432.4	4,386.6	4,347.2	111.267	CC, ES
Foster UPRR 32-35 - Original Drilling - Original Drilling -	7,000.0	6,809.2	4,497.9	4,456.1	107.689	SF
Foster UPRR 41-35 - Original Drilling - Original Drilling -	6,524.1	6,281.9	3,516.3	3,477.2	89.782	CC, ES
Foster UPRR 41-35 - Original Drilling - Original Drilling -	7,250.0	6,868.8	3,867.7	3,818.2	78.042	SF
Foster UPRR 42-35 #2 - Original Drilling - Original Drillin	6,572.3	6,504.8	4,543.1	4,503.0	113.523	CC, ES
Foster UPRR 42-35 #2 - Original Drilling - Original Drillin	6,900.0	6,700.0	4,627.7	4,586.1	111.164	SF
HSR Foster 03-35 - Original Drilling - Original Drilling - A	6,699.4	6,492.2	3,504.3	3,465.2	89.633	CC
HSR Foster 03-35 - Original Drilling - Original Drilling - A	6,700.0	6,492.9	3,504.3	3,465.2	89.624	ES
HSR Foster 03-35 - Original Drilling - Original Drilling - A	7,100.0	6,980.0	3,616.7	3,574.9	86.353	SF
HSR Foster 04-35 - Wellbore #1 - Wellbore #1 - As Drille	6,813.7	6,554.1	4,123.4	4,084.6	106.301	CC, ES
HSR Foster 04-35 - Wellbore #1 - Wellbore #1 - As Drille	7,550.0	7,181.4	4,448.0	4,405.2	103.919	SF
HSR Foster 05-35 - Wellbore #1 - Wellbore #1 - As Drille	6,695.5	6,100.0	5,263.6	5,226.3	140.807	CC, ES
HSR Foster 05-35 - Wellbore #1 - Wellbore #1 - As Drille	7,150.0	6,694.7	5,397.3	5,356.7	132.709	SF
HSR Foster 06-35 - Original Drilling - Original Drilling - A	6,682.6	6,488.4	4,639.6	4,600.4	118.352	CC, ES

CC - Min centre to center distance or covergent 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 H26-743
Project:	Conceptual Wells	**TVD Reference:**	WELL @ 4884.0ft (Original Well Elev)
Reference Site:	DP 408	**MD Reference:**	WELL @ 4884.0ft (Original Well Elev)
Site Error:	0.0 ft	**North Reference:**	Grid
Reference Well:	Hurley H26-743	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDMP
Reference Design:	Prelim - Rev 2	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
H Section 35						
HSR Foster 06-35 - Original Drilling - Original Drilling - A	7,000.0	6,757.0	4,716.5	4,675.5	114.919	SF
UPRR 53 Pan Am Unit P1 - Original Drilling - Original Dri	6,582.4	6,434.4	3,930.9	3,891.2	99.055	CC, ES
UPRR 53 Pan Am Unit P1 - Original Drilling - Original Dri	6,900.0	6,647.7	4,012.1	3,970.8	97.050	SF
UPRR 53 Pan Am UT P2 - Original Drilling - Original Drill	6,715.6	6,465.6	3,865.3	3,826.4	99.528	CC, ES
UPRR 53 Pan Am UT P2 - Original Drilling - Original Drill	7,050.0	6,665.6	3,951.1	3,910.6	97.563	SF

Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region Drilling - Sandbox	**Local Co-ordinate Reference:**	Well Hurley H26-743
Project:	Conceptual Wells	**TVD Reference:**	WELL @ 4884.0ft (Original Well Elev)
Reference Site:	DP 408	**MD Reference:**	WELL @ 4884.0ft (Original Well Elev)
Site Error:	0.0 ft	**North Reference:**	Grid
Reference Well:	Hurley H26-743	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDMP
Reference Design:	Prelim - Rev 2	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
H Section 36						
Dechant 07-36 - Original Drilling - Original Drilling - As D	3,292.6	3,298.7	6,606.9	6,588.4	356.545	CC
Dechant 07-36 - Original Drilling - Original Drilling - As D	3,400.0	3,393.6	6,607.2	6,588.2	346.519	ES
Dechant 07-36 - Original Drilling - Original Drilling - As D	7,000.0	6,600.6	7,033.6	6,992.4	170.751	SF
Dechant 13N-1HZ - Original Drilling - Original Drilling - A	6,542.4	6,325.4	7,999.5	7,956.5	186.192	CC, ES
Dechant 13N-1HZ - Original Drilling - Original Drilling - A	6,800.0	6,350.0	8,052.8	8,009.0	183.867	SF
Dechant 14C-1HZ - Original Drilling - Original Drilling - A	1,008.3	954.3	8,484.3	8,478.9	1,582.373	CC
Dechant 14C-1HZ - Original Drilling - Original Drilling - A	6,200.0	5,645.0	8,490.9	8,453.8	228.436	ES
Dechant 14C-1HZ - Original Drilling - Original Drilling - A	7,050.0	6,379.1	8,715.9	8,673.4	205.320	SF
Dechant 15-36 - Original Drilling - Original Drilling - As D	5,946.6	5,875.6	8,718.0	8,682.4	244.706	CC
Dechant 15-36 - Original Drilling - Original Drilling - As D	6,400.0	6,284.8	8,721.6	8,681.0	214.671	ES
Dechant 15-36 - Original Drilling - Original Drilling - As D	7,450.0	6,886.2	9,256.0	9,198.0	159.556	SF
Dechant 15C-1HZ - Original Drilling - Original Drilling - A	906.1	830.1	5,135.1	5,130.4	1,095.565	CC
Dechant 15C-1HZ - Original Drilling - Original Drilling - A	1,000.0	900.0	5,135.2	5,130.0	997.396	ES
Dechant 15C-1HZ - Original Drilling - Original Drilling - A	6,950.0	6,462.7	5,932.1	5,891.5	146.012	SF
Dechant 24-36 - Original Drilling - Original Drilling - As D	970.9	900.0	6,645.6	6,640.6	1,324.956	CC
Dechant 24-36 - Original Drilling - Original Drilling - As D	1,000.0	900.0	6,645.7	6,640.6	1,307.938	ES
Dechant 24-36 - Original Drilling - Original Drilling - As D	7,050.0	6,927.0	7,803.2	7,760.1	181.079	SF
Dechant 35N-E1HZ - Original Drilling - Original Drilling -	6,500.2	6,105.9	8,371.7	8,332.5	213.695	CC
Dechant 35N-E1HZ - Original Drilling - Original Drilling -	6,504.3	6,109.5	8,371.7	8,332.5	213.535	ES
Dechant 35N-E1HZ - Original Drilling - Original Drilling -	6,800.0	6,200.0	8,438.2	8,397.8	208.820	SF
Dechant 35N-W1HZ - Original Drilling - Original Drilling -	6,526.8	6,250.0	8,160.6	8,120.7	204.537	CC, ES
Dechant 35N-W1HZ - Original Drilling - Original Drilling -	6,800.0	6,300.0	8,218.9	8,178.1	201.066	SF
Dechant 36N-W1HZ - Original Drilling - Original Drilling -	907.1	854.1	8,491.4	8,486.7	1,778.206	CC
Dechant 36N-W1HZ - Original Drilling - Original Drilling -	1,000.0	925.6	8,491.5	8,486.3	1,621.077	ES
Dechant 36N-W1HZ - Original Drilling - Original Drilling -	7,050.0	6,218.9	8,823.8	8,780.8	205.229	SF
Dechant 37N-E1HZ - Original Drilling - Original Drilling -	901.5	844.5	8,906.9	8,902.2	1,883.726	CC
Dechant 37N-E1HZ - Original Drilling - Original Drilling -	1,000.0	900.0	8,907.0	8,901.9	1,729.998	ES
Dechant 37N-E1HZ - Original Drilling - Original Drilling -	7,100.0	5,300.3	9,839.6	9,797.3	232.855	SF
Dechant 37N-W1HZ - Original Drilling - Original Drilling -	1,201.5	1,144.5	8,934.1	8,927.6	1,379.131	CC
Dechant 37N-W1HZ - Original Drilling - Original Drilling -	1,300.0	1,200.0	8,934.2	8,927.3	1,295.139	ES
Dechant 37N-W1HZ - Original Drilling - Original Drilling -	7,050.0	5,950.9	9,511.6	9,470.0	228.499	SF
Dechant State 16C-1HZ - Original Drilling - Original Drillin	3,324.6	3,623.0	6,298.4	6,278.2	310.739	CC, ES
Dechant State 16C-1HZ - Original Drilling - Original Drillin	6,850.0	6,476.0	6,946.5	6,906.3	172.778	SF
Dechant State 36N-E1HZ - Original Drilling - Original Dril	3,024.7	2,963.6	5,118.7	5,101.8	301.671	CC
Dechant State 36N-E1HZ - Original Drilling - Original Dril	3,100.0	3,038.9	5,119.1	5,101.7	294.384	ES
Dechant State 36N-E1HZ - Original Drilling - Original Dril	6,650.0	6,350.0	5,584.9	5,545.1	140.653	SF
Dechant State 37N-E36HZ - Original Drilling - Original Dr	3,612.6	4,215.4	6,360.0	6,337.2	278.951	CC, ES
Dechant State 37N-E36HZ - Original Drilling - Original Dr	6,700.0	6,450.0	6,687.2	6,646.9	166.126	SF
Dechant State 37N-W36HZ - Original Drilling - Original D	906.7	829.7	5,145.3	5,140.6	1,097.790	CC
Dechant State 37N-W36HZ - Original Drilling - Original D	1,000.0	900.0	5,145.3	5,140.2	999.365	ES
Dechant State 37N-W36HZ - Original Drilling - Original D	7,000.0	6,245.5	6,194.4	6,154.1	153.716	SF
Dechant State 38N-1HZ - Original Drilling - Original Drillin	908.3	828.3	6,681.4	6,676.7	1,425.929	CC
Dechant State 38N-1HZ - Original Drilling - Original Drillin	1,000.0	900.0	6,681.4	6,676.3	1,297.720	ES
Dechant State 38N-1HZ - Original Drilling - Original Drillin	6,750.0	6,350.0	7,395.9	7,356.2	186.336	SF
Dechant State H36-11D - Original Drilling - Original Drillin	4,429.7	4,131.7	7,023.3	6,999.1	290.283	CC
Dechant State H36-11D - Original Drilling - Original Drillin	4,600.0	4,267.0	7,023.8	6,998.6	278.757	ES
Dechant State H36-11D - Original Drilling - Original Drillin	6,950.0	6,821.1	7,188.0	7,145.8	170.533	SF
Dechant State H36-18D - Original Drilling - Original Drillin	100.0	43.8	4,678.5	4,678.3	10,000.000	CC
Dechant State H36-18D - Original Drilling - Original Drillin	900.0	824.5	4,680.4	4,677.0	1,372.859	ES
Dechant State H36-18D - Original Drilling - Original Drillin	6,850.0	6,714.5	5,920.8	5,876.5	133.777	SF
Dechant State H36-19 - Original Drilling - Original Drilling	5,173.8	5,117.3	4,609.4	4,579.3	153.094	CC
Dechant State H36-19 - Original Drilling - Original Drilling	5,300.0	5,207.8	4,610.0	4,579.1	149.328	ES
Dechant State H36-19 - Original Drilling - Original Drilling	6,950.0	6,791.7	4,765.5	4,723.5	113.488	SF

CC - Min centre to center distance or covergent 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 H26-743
Project:	Conceptual Wells	**TVD Reference:**	WELL @ 4884.0ft (Original Well Elev)
Reference Site:	DP 408	**MD Reference:**	WELL @ 4884.0ft (Original Well Elev)
Site Error:	0.0 ft	**North Reference:**	Grid
Reference Well:	Hurley H26-743	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDMP
Reference Design:	Prelim - Rev 2	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
H Section 36						
Dechant State H36-20D - Original Drilling - Original Drillin	6,483.7	6,418.6	6,194.0	6,150.1	141.212	CC, ES
Dechant State H36-20D - Original Drilling - Original Drillin	6,900.0	6,807.2	6,305.2	6,259.2	137.055	SF
Dechant State H36-21D - Original Drilling - Original Drillin	5,035.3	5,137.7	6,805.0	6,772.0	206.404	CC
Dechant State H36-21D - Original Drilling - Original Drillin	5,100.0	5,178.0	6,805.2	6,771.8	203.829	ES
Dechant State H36-21D - Original Drilling - Original Drillin	6,900.0	6,707.0	6,983.3	6,938.9	157.199	SF
Dechant State H36-24 - Original Drilling - Original Drilling	373.9	326.9	7,389.1	7,387.4	4,359.311	CC
Dechant State H36-24 - Original Drilling - Original Drilling	900.0	900.0	7,390.9	7,385.9	1,491.664	ES
Dechant State H36-24 - Original Drilling - Original Drilling	7,050.0	6,976.8	8,083.5	8,035.5	168.270	SF
Dechant State H36-31D - Original Drilling - Original Drillin	6,511.0	6,446.0	4,344.4	4,298.1	93.898	CC, ES
Dechant State H36-31D - Original Drilling - Original Drillin	6,750.0	6,626.7	4,386.8	4,339.4	92.570	SF
Dechant State H36-32D - Original Drilling - Original Drillin	6,531.6	6,349.9	5,492.3	5,453.6	141.810	CC, ES
Dechant State H36-32D - Original Drilling - Original Drillin	7,300.0	7,300.0	5,884.2	5,840.9	135.959	SF
Dechant State H36-33 - Original Drilling - Original Drilling	6,550.9	6,547.2	6,671.4	6,622.4	136.255	CC, ES
Dechant State H36-33 - Original Drilling - Original Drilling	6,950.0	6,980.6	6,788.7	6,737.6	132.854	SF
HSR Dechant State 02-36 - Original Drilling - Original Dri	3,195.2	3,231.3	5,297.7	5,279.6	292.603	CC
HSR Dechant State 02-36 - Original Drilling - Original Dri	3,200.0	3,233.9	5,297.7	5,279.6	292.317	ES
HSR Dechant State 02-36 - Original Drilling - Original Dri	7,000.0	6,602.5	5,912.0	5,871.2	144.918	SF
HSR Dechant/State 07-36 (PA) - Original Drilling - Origin	3,000.0	2,925.0	6,574.0	6,508.9	100.988	CC
HSR Dechant/State 07-36 (PA) - Original Drilling - Origin	3,300.0	3,224.5	6,577.6	6,506.0	91.791	ES
HSR Dechant/State 07-36 (PA) - Original Drilling - Origin	7,100.0	6,768.6	7,141.4	6,987.8	46.502	SF
Spike State GWS H36-03 - Original Drilling - Original Dri	375.0	300.0	4,747.1	4,745.5	3,018.657	CC
Spike State GWS H36-03 - Original Drilling - Original Dri	2,100.0	1,992.6	4,751.2	4,739.9	418.302	ES
Spike State GWS H36-03 - Original Drilling - Original Dri	6,850.0	6,442.0	5,158.1	5,117.8	128.082	SF
Spike State GWS H36-04 - Original Drilling - Original Dri	4,779.0	4,647.2	3,853.4	3,826.3	142.167	CC
Spike State GWS H36-04 - Original Drilling - Original Dri	5,000.0	4,849.8	3,854.4	3,825.8	134.973	ES
Spike State GWS H36-04 - Original Drilling - Original Dri	7,100.0	6,857.3	4,125.9	4,076.3	83.154	SF
Spike State GWS H36-13 - Original Drilling - Original Dri	6,620.8	7,444.0	7,631.6	7,585.8	166.794	CC, ES
Spike State GWS H36-13 - Original Drilling - Original Dri	6,900.0	7,444.0	7,693.0	7,646.4	164.930	SF
Spike State GWS H36-14 - Original Drilling - Original Dri	6,517.8	6,517.8	8,360.2	8,320.2	209.055	CC, ES
Spike State GWS H36-14 - Original Drilling - Original Dri	7,050.0	7,071.9	8,545.5	8,502.3	197.891	SF
Spike State H36-02J - Original Drilling - Original Drilling -	5,149.1	5,100.0	5,349.4	5,319.5	178.544	CC
Spike State H36-02J - Original Drilling - Original Drilling -	5,200.0	5,133.0	5,349.5	5,319.3	176.810	ES
Spike State H36-02J - Original Drilling - Original Drilling -	7,350.0	6,790.1	5,857.4	5,787.2	83.514	SF
Spike State H36-05 - Original Drilling - Original Drilling - A	6,424.5	6,123.2	5,002.1	4,963.8	130.571	CC
Spike State H36-05 - Original Drilling - Original Drilling - A	6,473.0	6,152.5	5,002.2	4,963.6	129.603	ES
Spike State H36-05 - Original Drilling - Original Drilling - A	7,150.0	7,150.0	5,287.3	5,243.7	121.404	SF
Spike State H36-11J - Original Drilling - Original Drilling -	6,513.6	6,320.9	7,289.8	7,250.6	185.639	CC, ES
Spike State H36-11J - Original Drilling - Original Drilling -	7,000.0	6,819.1	7,451.1	7,408.9	176.418	SF
Spike State H36-12 - Original Drilling - Original Drilling - A	6,525.8	6,288.7	6,116.1	6,077.0	156.150	CC, ES
Spike State H36-12 - Original Drilling - Original Drilling - A	7,000.0	6,824.3	6,274.3	6,232.1	148.529	SF

Noble Energy, Inc.

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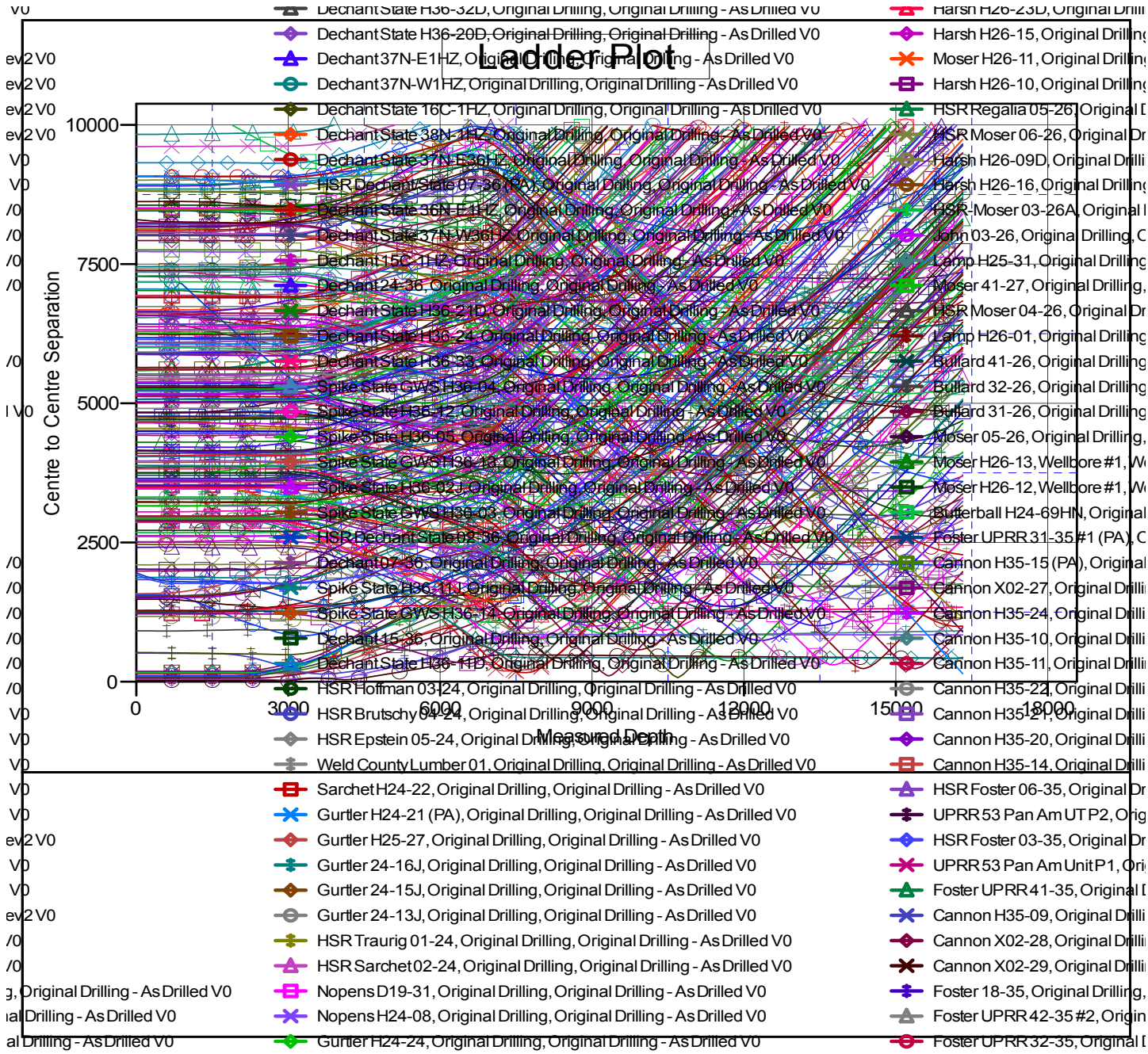
Reference Site:	DP 408	**MD Reference:**	WELL @ 4884.0ft (Original Well Elev)
Site Error:	0.0 ft	**North Reference:**	Grid
Reference Well:	Hurley H26-743	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDMP
Reference Design:	Prelim - Rev 2	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to WELL @ 4884.0ft (Original Well Elev)
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000

Coordinates are relative to: Hurley H26-743
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.57°



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Noble Energy, Inc.

Anticollision Summary Report

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Well Error:	0.0 ft	**Output errors are at**	2.00 sigma
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Reference Design:	Prelim - Rev 2	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to WELL @ 4884.0ft (Original Well Elev)
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000

Coordinates are relative to: Hurley H26-743
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.57°