

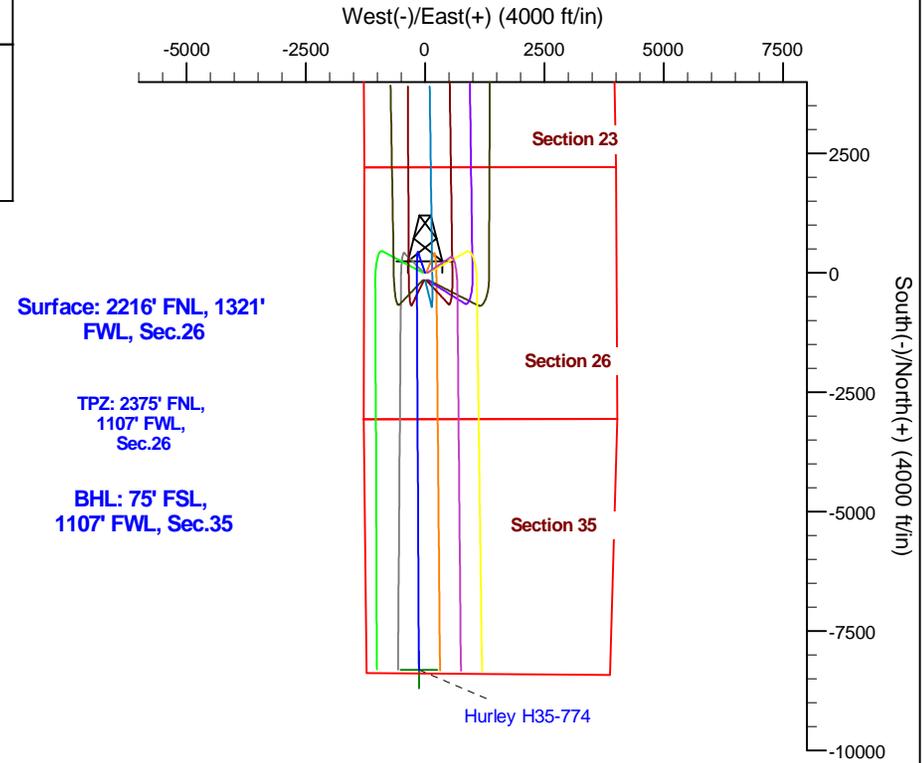
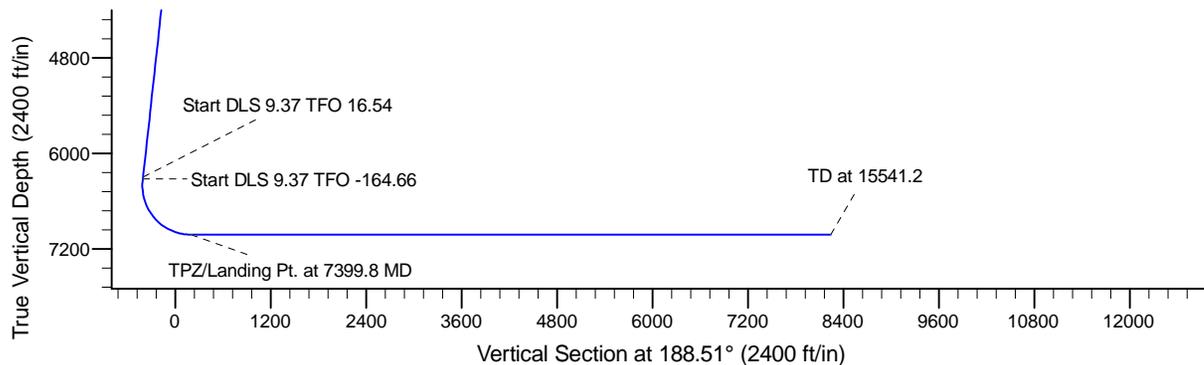
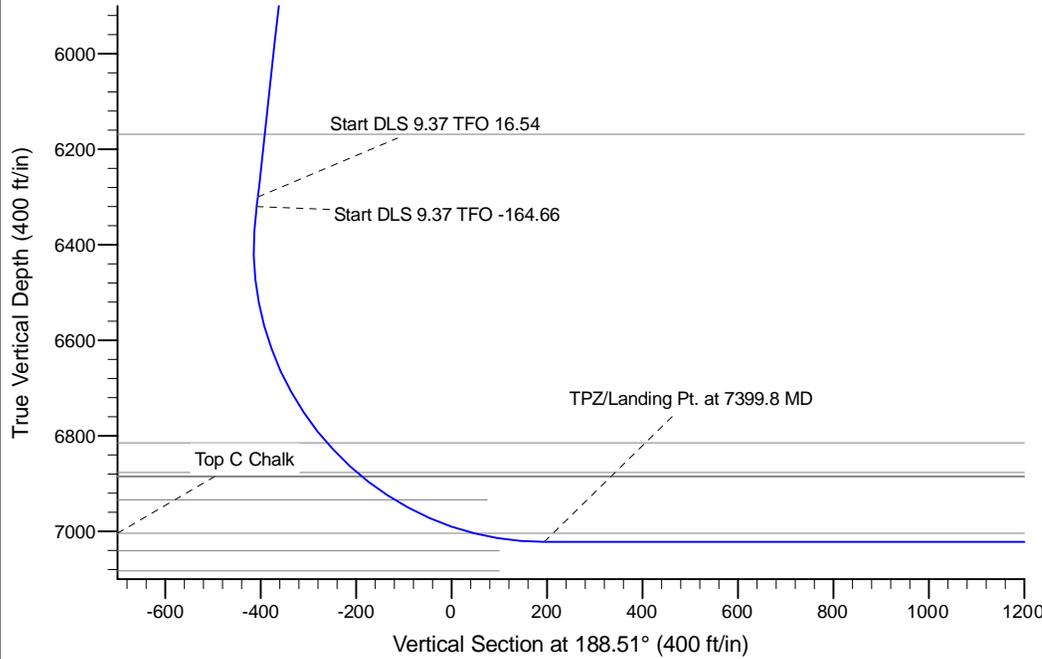
Project: Conceptual Wells
 Site: DP 408
 Well: Hurley H35-774
 Wellbore: Wellbore #1
 Design: Prelim - Rev 2

Northern Region Drilling - DJ Basin

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

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	2400.0	0.00	0.00	2400.0	0.0	0.0	0.00	0.00	0.0	
3	2750.0	7.00	341.00	2749.1	20.2	-7.0	2.00	341.00	-18.9	
4	6327.5	7.00	341.00	6300.0	432.4	-148.9	0.00	0.00	-405.6	
5	6347.8	8.84	344.53	6320.1	435.1	-149.7	9.37	16.54	-408.2	
6	7399.8	90.00	179.69	7022.0	-170.0	-175.0	9.37	-164.66	194.0	
7	15541.2	90.00	179.70	7022.0	-8311.3	-131.4	0.00	90.00	8239.3	Hurley H35-774 BHL



T G M

Azimuths to Grid North
 True North: -0.56°
 Magnetic North: 7.75°

Magnetic Field
 Strength: 52669.7snT
 Dip Angle: 66.79°
 Date: 12/15/2014
 Model: IGRF2010

WELL DETAILS: Hurley H35-774			
0.00.0	Ground Level: 4822.0	Latitude 40.197510	Longitude -104.635480
1315972.59	Eastings 3241493.11		
Plan: Prelim - Rev 2 (Hurley H35-774/Wellbore #1)			
Created By: Chad Stich	Date: 14:21, October 30 2017		
Checked: _____	Date: _____		
Reviewed: _____	Date: _____		
Approved: _____	Date: _____		

Northern Region Drilling - Sandbox

Conceptual Wells

DP 408

Hurley H35-774

Wellbore #1

Plan: Prelim - Rev 2

Standard Planning Report

30 October, 2017

Noble Energy, Inc.

Planning Report

Database:	EDMP	Local Co-ordinate Reference:	Well Hurley H35-774
Company:	Northern Region Drilling - Sandbox	TVD Reference:	WELL @ 4852.0ft (Original Well Elev)
Project:	Conceptual Wells	MD Reference:	WELL @ 4852.0ft (Original Well Elev)
Site:	DP 408	North Reference:	Grid
Well:	Hurley H35-774	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Prelim - Rev 2		

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

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

Well	Hurley H35-774					
Well Position	+N/-S	-2,212.2 ft	Northing:	1,315,972.59 usft	Latitude:	40.197510
	+E/-W	1,268.0 ft	Easting:	3,241,493.11 usft	Longitude:	-104.635480
Position Uncertainty		0.0 ft	Wellhead Elevation:	0.0 ft	Ground Level:	4,822.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	12/15/2014	8.31	66.79	52,669.65977268

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	188.51

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,750.0	7.00	341.00	2,749.1	20.2	-7.0	2.00	2.00	0.00	341.00	
6,327.5	7.00	341.00	6,300.0	432.4	-148.9	0.00	0.00	0.00	0.00	
6,347.8	8.84	344.53	6,320.1	435.1	-149.7	9.37	9.06	17.35	16.54	
7,399.8	90.00	179.69	7,022.0	-170.0	-175.0	9.37	7.72	-15.67	-164.66	
15,541.2	90.00	179.70	7,022.0	-8,311.3	-131.4	0.00	0.00	0.00	90.00	Hurley H35-774 BHL

Noble Energy, Inc.

Planning Report

Database:	EDMP	Local Co-ordinate Reference:	Well Hurley H35-774
Company:	Northern Region Drilling - Sandbox	TVD Reference:	WELL @ 4852.0ft (Original Well Elev)
Project:	Conceptual Wells	MD Reference:	WELL @ 4852.0ft (Original Well Elev)
Site:	DP 408	North Reference:	Grid
Well:	Hurley H35-774	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Prelim - Rev 2		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	2.00	341.00	2,500.0	1.7	-0.6	-1.5	2.00	2.00	0.00
2,600.0	4.00	341.00	2,599.8	6.6	-2.3	-6.2	2.00	2.00	0.00
2,700.0	6.00	341.00	2,699.5	14.8	-5.1	-13.9	2.00	2.00	0.00
2,750.0	7.00	341.00	2,749.1	20.2	-7.0	-18.9	2.00	2.00	0.00
2,800.0	7.00	341.00	2,798.8	26.0	-8.9	-24.3	0.00	0.00	0.00
2,900.0	7.00	341.00	2,898.0	37.5	-12.9	-35.2	0.00	0.00	0.00
3,000.0	7.00	341.00	2,997.3	49.0	-16.9	-46.0	0.00	0.00	0.00
3,100.0	7.00	341.00	3,096.5	60.5	-20.8	-56.8	0.00	0.00	0.00
3,200.0	7.00	341.00	3,195.8	72.0	-24.8	-67.6	0.00	0.00	0.00
3,300.0	7.00	341.00	3,295.0	83.6	-28.8	-78.4	0.00	0.00	0.00
3,400.0	7.00	341.00	3,394.3	95.1	-32.7	-89.2	0.00	0.00	0.00
3,500.0	7.00	341.00	3,493.5	106.6	-36.7	-100.0	0.00	0.00	0.00
3,600.0	7.00	341.00	3,592.8	118.1	-40.7	-110.8	0.00	0.00	0.00
3,700.0	7.00	341.00	3,692.0	129.7	-44.6	-121.6	0.00	0.00	0.00
3,800.0	7.00	341.00	3,791.3	141.2	-48.6	-132.4	0.00	0.00	0.00
3,900.0	7.00	341.00	3,890.6	152.7	-52.6	-143.2	0.00	0.00	0.00
4,000.0	7.00	341.00	3,989.8	164.2	-56.5	-154.1	0.00	0.00	0.00
4,100.0	7.00	341.00	4,089.1	175.8	-60.5	-164.9	0.00	0.00	0.00
4,200.0	7.00	341.00	4,188.3	187.3	-64.5	-175.7	0.00	0.00	0.00
4,300.0	7.00	341.00	4,287.6	198.8	-68.5	-186.5	0.00	0.00	0.00
4,400.0	7.00	341.00	4,386.8	210.3	-72.4	-197.3	0.00	0.00	0.00
4,500.0	7.00	341.00	4,486.1	221.8	-76.4	-208.1	0.00	0.00	0.00
4,600.0	7.00	341.00	4,585.3	233.4	-80.4	-218.9	0.00	0.00	0.00
4,700.0	7.00	341.00	4,684.6	244.9	-84.3	-229.7	0.00	0.00	0.00
4,800.0	7.00	341.00	4,783.8	256.4	-88.3	-240.5	0.00	0.00	0.00
4,900.0	7.00	341.00	4,883.1	267.9	-92.3	-251.3	0.00	0.00	0.00
5,000.0	7.00	341.00	4,982.4	279.5	-96.2	-262.1	0.00	0.00	0.00
5,100.0	7.00	341.00	5,081.6	291.0	-100.2	-273.0	0.00	0.00	0.00
5,200.0	7.00	341.00	5,180.9	302.5	-104.2	-283.8	0.00	0.00	0.00

Noble Energy, Inc.

Planning Report

Database:	EDMP	Local Co-ordinate Reference:	Well Hurley H35-774
Company:	Northern Region Drilling - Sandbox	TVD Reference:	WELL @ 4852.0ft (Original Well Elev)
Project:	Conceptual Wells	MD Reference:	WELL @ 4852.0ft (Original Well Elev)
Site:	DP 408	North Reference:	Grid
Well:	Hurley H35-774	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	7.00	341.00	5,280.1	314.0	-108.1	-294.6	0.00	0.00	0.00
5,400.0	7.00	341.00	5,379.4	325.5	-112.1	-305.4	0.00	0.00	0.00
5,500.0	7.00	341.00	5,478.6	337.1	-116.1	-316.2	0.00	0.00	0.00
5,600.0	7.00	341.00	5,577.9	348.6	-120.0	-327.0	0.00	0.00	0.00
5,700.0	7.00	341.00	5,677.1	360.1	-124.0	-337.8	0.00	0.00	0.00
5,800.0	7.00	341.00	5,776.4	371.6	-128.0	-348.6	0.00	0.00	0.00
5,900.0	7.00	341.00	5,875.7	383.2	-131.9	-359.4	0.00	0.00	0.00
6,000.0	7.00	341.00	5,974.9	394.7	-135.9	-370.2	0.00	0.00	0.00
6,100.0	7.00	341.00	6,074.2	406.2	-139.9	-381.0	0.00	0.00	0.00
6,200.0	7.00	341.00	6,173.4	417.7	-143.8	-391.9	0.00	0.00	0.00
6,300.0	7.00	341.00	6,272.7	429.3	-147.8	-402.7	0.00	0.00	0.00
6,327.5	7.00	341.00	6,300.0	432.4	-148.9	-405.6	0.00	0.00	0.00
6,347.8	8.84	344.53	6,320.1	435.1	-149.7	-408.2	9.37	9.06	17.35
6,400.0	4.33	327.15	6,371.9	440.6	-151.9	-413.3	9.37	-8.66	-33.32
6,500.0	6.18	201.78	6,471.7	438.8	-155.9	-410.9	9.37	1.85	-125.37
6,600.0	15.26	188.27	6,569.9	420.7	-159.8	-392.5	9.37	9.09	-13.51
6,700.0	24.56	184.80	6,663.8	386.9	-163.4	-358.5	9.37	9.30	-3.47
6,800.0	33.89	183.16	6,751.0	338.3	-166.7	-309.9	9.37	9.33	-1.64
6,900.0	43.24	182.17	6,829.1	276.1	-169.6	-247.9	9.37	9.35	-0.99
7,000.0	52.59	181.47	6,896.0	202.0	-171.9	-174.3	9.37	9.35	-0.70
7,100.0	61.94	180.93	6,950.0	118.0	-173.6	-91.0	9.37	9.36	-0.54
7,200.0	71.30	180.48	6,989.7	26.3	-174.7	-0.1	9.37	9.36	-0.45
7,300.0	80.66	180.07	7,013.9	-70.6	-175.2	95.8	9.37	9.36	-0.41
7,399.8	90.00	179.69	7,022.0	-170.0	-175.0	194.0	9.37	9.36	-0.38
7,400.0	90.00	179.69	7,022.0	-170.2	-175.0	194.2	0.00	0.00	0.00
7,500.0	90.00	179.69	7,022.0	-270.2	-174.5	293.0	0.00	0.00	0.00
7,600.0	90.00	179.69	7,022.0	-370.2	-173.9	391.8	0.00	0.00	0.00
7,700.0	90.00	179.69	7,022.0	-470.2	-173.4	490.7	0.00	0.00	0.00
7,800.0	90.00	179.69	7,022.0	-570.2	-172.8	589.5	0.00	0.00	0.00
7,900.0	90.00	179.69	7,022.0	-670.2	-172.3	688.3	0.00	0.00	0.00
8,000.0	90.00	179.69	7,022.0	-770.2	-171.8	787.1	0.00	0.00	0.00
8,100.0	90.00	179.69	7,022.0	-870.2	-171.2	885.9	0.00	0.00	0.00
8,200.0	90.00	179.69	7,022.0	-970.2	-170.7	984.7	0.00	0.00	0.00
8,300.0	90.00	179.69	7,022.0	-1,070.2	-170.1	1,083.6	0.00	0.00	0.00
8,400.0	90.00	179.69	7,022.0	-1,170.2	-169.6	1,182.4	0.00	0.00	0.00
8,500.0	90.00	179.69	7,022.0	-1,270.2	-169.1	1,281.2	0.00	0.00	0.00
8,600.0	90.00	179.69	7,022.0	-1,370.2	-168.5	1,380.0	0.00	0.00	0.00
8,700.0	90.00	179.69	7,022.0	-1,470.2	-168.0	1,478.8	0.00	0.00	0.00
8,800.0	90.00	179.69	7,022.0	-1,570.2	-167.4	1,577.7	0.00	0.00	0.00
8,900.0	90.00	179.69	7,022.0	-1,670.2	-166.9	1,676.5	0.00	0.00	0.00
9,000.0	90.00	179.69	7,022.0	-1,770.2	-166.4	1,775.3	0.00	0.00	0.00
9,100.0	90.00	179.69	7,022.0	-1,870.2	-165.8	1,874.1	0.00	0.00	0.00
9,200.0	90.00	179.69	7,022.0	-1,970.2	-165.3	1,972.9	0.00	0.00	0.00
9,300.0	90.00	179.69	7,022.0	-2,070.2	-164.7	2,071.7	0.00	0.00	0.00
9,400.0	90.00	179.69	7,022.0	-2,170.2	-164.2	2,170.6	0.00	0.00	0.00
9,500.0	90.00	179.69	7,022.0	-2,270.2	-163.7	2,269.4	0.00	0.00	0.00
9,600.0	90.00	179.69	7,022.0	-2,370.1	-163.1	2,368.2	0.00	0.00	0.00
9,700.0	90.00	179.69	7,022.0	-2,470.1	-162.6	2,467.0	0.00	0.00	0.00
9,800.0	90.00	179.69	7,022.0	-2,570.1	-162.0	2,565.8	0.00	0.00	0.00
9,900.0	90.00	179.69	7,022.0	-2,670.1	-161.5	2,664.7	0.00	0.00	0.00
10,000.0	90.00	179.69	7,022.0	-2,770.1	-161.0	2,763.5	0.00	0.00	0.00
10,100.0	90.00	179.69	7,022.0	-2,870.1	-160.4	2,862.3	0.00	0.00	0.00
10,200.0	90.00	179.69	7,022.0	-2,970.1	-159.9	2,961.1	0.00	0.00	0.00
10,300.0	90.00	179.69	7,022.0	-3,070.1	-159.4	3,059.9	0.00	0.00	0.00

Noble Energy, Inc.

Planning Report

Database:	EDMP	Local Co-ordinate Reference:	Well Hurley H35-774
Company:	Northern Region Drilling - Sandbox	TVD Reference:	WELL @ 4852.0ft (Original Well Elev)
Project:	Conceptual Wells	MD Reference:	WELL @ 4852.0ft (Original Well Elev)
Site:	DP 408	North Reference:	Grid
Well:	Hurley H35-774	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Prelim - Rev 2		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,400.0	90.00	179.69	7,022.0	-3,170.1	-158.8	3,158.7	0.00	0.00	0.00
10,500.0	90.00	179.69	7,022.0	-3,270.1	-158.3	3,257.6	0.00	0.00	0.00
10,600.0	90.00	179.69	7,022.0	-3,370.1	-157.7	3,356.4	0.00	0.00	0.00
10,700.0	90.00	179.69	7,022.0	-3,470.1	-157.2	3,455.2	0.00	0.00	0.00
10,800.0	90.00	179.69	7,022.0	-3,570.1	-156.7	3,554.0	0.00	0.00	0.00
10,900.0	90.00	179.69	7,022.0	-3,670.1	-156.1	3,652.8	0.00	0.00	0.00
11,000.0	90.00	179.69	7,022.0	-3,770.1	-155.6	3,751.7	0.00	0.00	0.00
11,100.0	90.00	179.69	7,022.0	-3,870.1	-155.1	3,850.5	0.00	0.00	0.00
11,200.0	90.00	179.69	7,022.0	-3,970.1	-154.5	3,949.3	0.00	0.00	0.00
11,300.0	90.00	179.69	7,022.0	-4,070.1	-154.0	4,048.1	0.00	0.00	0.00
11,400.0	90.00	179.69	7,022.0	-4,170.1	-153.5	4,146.9	0.00	0.00	0.00
11,500.0	90.00	179.69	7,022.0	-4,270.1	-152.9	4,245.7	0.00	0.00	0.00
11,600.0	90.00	179.69	7,022.0	-4,370.1	-152.4	4,344.6	0.00	0.00	0.00
11,700.0	90.00	179.69	7,022.0	-4,470.1	-151.8	4,443.4	0.00	0.00	0.00
11,800.0	90.00	179.69	7,022.0	-4,570.1	-151.3	4,542.2	0.00	0.00	0.00
11,900.0	90.00	179.69	7,022.0	-4,670.1	-150.8	4,641.0	0.00	0.00	0.00
12,000.0	90.00	179.69	7,022.0	-4,770.1	-150.2	4,739.8	0.00	0.00	0.00
12,100.0	90.00	179.69	7,022.0	-4,870.1	-149.7	4,838.7	0.00	0.00	0.00
12,200.0	90.00	179.69	7,022.0	-4,970.1	-149.2	4,937.5	0.00	0.00	0.00
12,300.0	90.00	179.69	7,022.0	-5,070.1	-148.6	5,036.3	0.00	0.00	0.00
12,400.0	90.00	179.69	7,022.0	-5,170.1	-148.1	5,135.1	0.00	0.00	0.00
12,500.0	90.00	179.69	7,022.0	-5,270.1	-147.6	5,233.9	0.00	0.00	0.00
12,600.0	90.00	179.69	7,022.0	-5,370.1	-147.0	5,332.8	0.00	0.00	0.00
12,700.0	90.00	179.69	7,022.0	-5,470.1	-146.5	5,431.6	0.00	0.00	0.00
12,800.0	90.00	179.69	7,022.0	-5,570.1	-146.0	5,530.4	0.00	0.00	0.00
12,900.0	90.00	179.69	7,022.0	-5,670.1	-145.4	5,629.2	0.00	0.00	0.00
13,000.0	90.00	179.69	7,022.0	-5,770.1	-144.9	5,728.0	0.00	0.00	0.00
13,100.0	90.00	179.69	7,022.0	-5,870.1	-144.4	5,826.9	0.00	0.00	0.00
13,200.0	90.00	179.69	7,022.0	-5,970.1	-143.8	5,925.7	0.00	0.00	0.00
13,300.0	90.00	179.69	7,022.0	-6,070.1	-143.3	6,024.5	0.00	0.00	0.00
13,400.0	90.00	179.69	7,022.0	-6,170.1	-142.8	6,123.3	0.00	0.00	0.00
13,500.0	90.00	179.69	7,022.0	-6,270.1	-142.2	6,222.1	0.00	0.00	0.00
13,600.0	90.00	179.69	7,022.0	-6,370.1	-141.7	6,320.9	0.00	0.00	0.00
13,700.0	90.00	179.69	7,022.0	-6,470.1	-141.2	6,419.8	0.00	0.00	0.00
13,800.0	90.00	179.69	7,022.0	-6,570.1	-140.6	6,518.6	0.00	0.00	0.00
13,900.0	90.00	179.69	7,022.0	-6,670.1	-140.1	6,617.4	0.00	0.00	0.00
14,000.0	90.00	179.69	7,022.0	-6,770.1	-139.6	6,716.2	0.00	0.00	0.00
14,100.0	90.00	179.69	7,022.0	-6,870.1	-139.0	6,815.0	0.00	0.00	0.00
14,200.0	90.00	179.69	7,022.0	-6,970.1	-138.5	6,913.9	0.00	0.00	0.00
14,300.0	90.00	179.69	7,022.0	-7,070.1	-138.0	7,012.7	0.00	0.00	0.00
14,400.0	90.00	179.69	7,022.0	-7,170.1	-137.4	7,111.5	0.00	0.00	0.00
14,500.0	90.00	179.70	7,022.0	-7,270.1	-136.9	7,210.3	0.00	0.00	0.00
14,600.0	90.00	179.70	7,022.0	-7,370.1	-136.4	7,309.1	0.00	0.00	0.00
14,700.0	90.00	179.70	7,022.0	-7,470.1	-135.8	7,408.0	0.00	0.00	0.00
14,800.0	90.00	179.70	7,022.0	-7,570.1	-135.3	7,506.8	0.00	0.00	0.00
14,900.0	90.00	179.70	7,022.0	-7,670.1	-134.8	7,605.6	0.00	0.00	0.00
15,000.0	90.00	179.70	7,022.0	-7,770.1	-134.2	7,704.4	0.00	0.00	0.00
15,100.0	90.00	179.70	7,022.0	-7,870.1	-133.7	7,803.2	0.00	0.00	0.00
15,200.0	90.00	179.70	7,022.0	-7,970.1	-133.2	7,902.1	0.00	0.00	0.00
15,300.0	90.00	179.70	7,022.0	-8,070.1	-132.6	8,000.9	0.00	0.00	0.00
15,400.0	90.00	179.70	7,022.0	-8,170.1	-132.1	8,099.7	0.00	0.00	0.00
15,500.0	90.00	179.70	7,022.0	-8,270.1	-131.6	8,198.5	0.00	0.00	0.00
15,541.2	90.00	179.70	7,022.0	-8,311.3	-131.4	8,239.3	0.00	0.00	0.00

Noble Energy, Inc.

Planning Report

Database:	EDMP	Local Co-ordinate Reference:	Well Hurley H35-774
Company:	Northern Region Drilling - Sandbox	TVD Reference:	WELL @ 4852.0ft (Original Well Elev)
Project:	Conceptual Wells	MD Reference:	WELL @ 4852.0ft (Original Well Elev)
Site:	DP 408	North Reference:	Grid
Well:	Hurley H35-774	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Prelim - Rev 2		

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(usft)	(usft)		
- Shape									
Hurley H35-774 BHL - plan hits target center - Point	0.00	0.00	7,022.0	-8,311.3	-131.4	1,307,661.65	3,241,361.76	40.174700	-104.636240

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(ft)	(ft)			(°)	(°)	
618.0	618.0	Pierre				
770.0	770.0	Upper Pierre Aquifer Top				
1,658.0	1,658.0	Upper Pierre Aquifer Base				
3,934.7	3,925.0	Parkman				
4,530.1	4,516.0	Sussex				
5,217.3	5,198.0	Shannon				
6,195.6	6,169.0	Teepee Buttes				
6,881.0	6,815.0	Sharon Springs				
6,969.6	6,877.0	Top A Chalk				
6,980.6	6,884.0	Top A Marl				
6,983.8	6,886.0	Top B Chalk				
7,067.5	6,934.0	Top B Marl				
7,251.0	7,004.0	Top C Chalk				

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates		Comment	
(ft)	(ft)	+N/-S	+E/-W		
		(ft)	(ft)		
2,400.0	2,400.0	0.0	0.0	KOP - Start Build 2.00	
6,327.5	6,300.0	432.4	-148.9	Start DLS 9.37 TFO 16.54	
6,347.8	6,320.1	435.1	-149.7	Start DLS 9.37 TFO -164.66	
7,399.8	7,022.0	-170.0	-175.0	TPZ/Landing Pt. at 7399.8 MD	
15,541.2	7,022.0	-8,311.3	-131.4	TD at 15541.2	

Northern Region Drilling - Sandbox

Conceptual Wells

DP 408

Hurley H35-774

Wellbore #1

Prelim - Rev 2

Anticollision Summary Report

30 October, 2017

Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region Drilling - Sandbox	Local Co-ordinate Reference:	Well Hurley H35-774
Project:	Conceptual Wells	TVD Reference:	WELL @ 4852.0ft (Original Well Elev)
Reference Site:	DP 408	MD Reference:	WELL @ 4852.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	Grid
Reference Well:	Hurley H35-774	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	10/30/2017		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	15,541.2	Prelim - Rev 2 (Wellbore #1)	MWD+IFR1+MS_WY	Fixed:v2:Rockies, crustal dec + 3-axis correction

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 -						Out of range
DP 408						
Emmy H25-711 - Wellbore #1 - Prelim - Rev 2	2,000.0	1,983.0	7,963.8	7,955.2	919.585	CC, ES
Emmy H25-711 - Wellbore #1 - Prelim - Rev 2	15,100.0	4,505.2	9,989.3	9,911.5	128.412	SF
Emmy State H25-718 - Wellbore #1 - Prelim - Rev 2	2,400.0	2,383.0	7,943.0	7,932.5	759.485	CC, ES
Emmy State H25-718 - Wellbore #1 - Prelim - Rev 2	15,500.0	5,106.7	9,986.1	9,905.1	123.329	SF
Emmy State H25-724 - Wellbore #1 - Prelim - Rev 2	2,400.0	2,383.0	7,922.1	7,911.7	757.491	CC, ES
Emmy State H25-724 - Wellbore #1 - Prelim - Rev 2	15,500.0	6,375.1	9,588.0	9,503.4	113.430	SF
Emmy State H25-731 - Wellbore #1 - Prelim - Rev 2	10,457.2	6,423.2	7,842.6	7,793.8	160.706	CC
Emmy State H25-731 - Wellbore #1 - Prelim - Rev 2	10,500.0	6,421.9	7,842.7	7,793.5	159.521	ES
Emmy State H25-731 - Wellbore #1 - Prelim - Rev 2	15,100.0	6,400.0	9,113.8	9,032.8	112.545	SF
Emmy State H25-738 - Wellbore #1 - Prelim - Rev 2	6,750.0	10,262.2	7,465.5	7,415.6	149.499	ES
Emmy State H25-738 - Wellbore #1 - Prelim - Rev 2	6,761.8	10,256.4	7,465.5	7,415.6	149.635	CC
Emmy State H25-738 - Wellbore #1 - Prelim - Rev 2	14,700.0	6,472.3	8,654.5	8,577.0	111.646	SF
Emmy State H25-744 - Wellbore #1 - Prelim - Rev 2	6,760.8	10,306.1	7,008.0	6,957.5	138.773	ES
Emmy State H25-744 - Wellbore #1 - Prelim - Rev 2	9,808.9	7,375.4	7,007.4	6,962.6	156.303	CC
Emmy State H25-744 - Wellbore #1 - Prelim - Rev 2	14,400.0	6,600.0	8,139.7	8,063.7	107.146	SF
Emmy State H25-751 - Wellbore #1 - Design #1	2,200.0	2,194.0	5,981.0	5,971.4	624.056	CC, ES
Emmy State H25-751 - Wellbore #1 - Design #1	14,100.0	6,024.3	7,327.4	7,253.1	98.558	SF
Emmy State H25-757 - Wellbore #1 - Design #1	2,400.0	2,394.0	5,961.3	5,950.9	568.663	CC, ES
Emmy State H25-757 - Wellbore #1 - Design #1	13,900.0	6,318.8	7,041.0	6,967.6	95.947	SF
Emmy State H25-764 - Wellbore #1 - Design #1	10,515.5	6,456.7	5,837.5	5,802.4	166.339	CC
Emmy State H25-764 - Wellbore #1 - Design #1	10,600.0	6,456.4	5,838.1	5,802.3	163.035	ES
Emmy State H25-764 - Wellbore #1 - Design #1	13,800.0	6,450.0	6,698.1	6,641.4	117.960	SF
Emmy State H25-771 - Wellbore #1 - Design #1	6,750.0	10,408.2	5,428.4	5,377.2	106.062	ES
Emmy State H25-771 - Wellbore #1 - Design #1	6,819.0	10,354.8	5,428.1	5,377.3	106.949	CC
Emmy State H25-771 - Wellbore #1 - Design #1	13,100.0	6,500.0	6,052.0	5,985.1	90.419	SF
Emmy State H25-777 - Wellbore #1 - Design #1	6,800.0	10,437.9	5,030.7	4,979.4	98.016	ES
Emmy State H25-777 - Wellbore #1 - Design #1	6,848.9	10,409.1	5,030.6	4,979.5	98.473	CC
Emmy State H25-777 - Wellbore #1 - Design #1	12,800.0	6,650.0	5,614.1	5,549.0	86.248	SF
Emmy State H25-785 - Wellbore #1 - Prelim - Rev 2	6,882.2	10,409.9	4,525.7	4,475.1	89.374	ES
Emmy State H25-785 - Wellbore #1 - Prelim - Rev 2	9,884.5	7,456.2	4,525.1	4,478.7	97.650	CC
Emmy State H25-785 - Wellbore #1 - Prelim - Rev 2	12,400.0	6,800.0	4,997.9	4,934.8	79.205	SF
Emmy State H36-753 - Wellbore #1 - Design #1	2,400.0	2,406.0	5,909.4	5,898.9	562.263	CC, ES
Emmy State H36-753 - Wellbore #1 - Design #1	15,541.2	12,699.7	6,495.4	6,359.2	47.710	SF
Emmy State H36-760 - Wellbore #1 - Design #1	2,400.0	2,365.0	5,889.6	5,879.1	563.506	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 H35-774
Project:	Conceptual Wells	TVD Reference:	WELL @ 4852.0ft (Original Well Elev)
Reference Site:	DP 408	MD Reference:	WELL @ 4852.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	Grid
Reference Well:	Hurley H35-774	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Prelim - Rev 2	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
DP 408						
Emmy State H36-760 - Wellbore #1 - Design #1	15,541.2	12,527.7	6,054.7	5,918.7	44.533	SF
Emmy State H36-766 - Wellbore #1 - Design #1	15,042.9	12,453.6	5,603.5	5,473.7	43.153	CC
Emmy State H36-766 - Wellbore #1 - Design #1	15,100.0	12,453.6	5,603.8	5,473.4	42.981	ES
Emmy State H36-766 - Wellbore #1 - Design #1	15,541.2	12,453.6	5,625.7	5,491.6	41.980	SF
Emmy State H36-773 - Wellbore #1 - Design #1	15,124.4	12,608.4	5,159.5	5,027.2	38.998	CC
Emmy State H36-773 - Wellbore #1 - Design #1	15,200.0	12,608.4	5,160.1	5,027.1	38.811	ES
Emmy State H36-773 - Wellbore #1 - Design #1	15,541.2	12,608.4	5,176.3	5,040.8	38.192	SF
Emmy State H36-780 - Wellbore #1 - Design #1	15,130.1	12,543.0	4,720.9	4,588.7	35.702	CC
Emmy State H36-780 - Wellbore #1 - Design #1	15,200.0	12,543.0	4,721.4	4,588.7	35.558	ES
Emmy State H36-780 - Wellbore #1 - Design #1	15,541.2	12,543.0	4,738.8	4,603.7	35.089	SF
Emmy State H36-787 - Wellbore #1 - Prelim - Rev 2	15,135.8	12,821.8	4,279.3	4,147.6	32.479	CC, ES
Emmy State H36-787 - Wellbore #1 - Prelim - Rev 2	15,541.2	12,821.8	4,298.5	4,164.5	32.088	SF
Hurley H26-712 - Wellbore #1 - Design #1	1,801.0	1,833.0	3,039.6	3,031.8	385.952	CC
Hurley H26-712 - Wellbore #1 - Design #1	1,900.0	1,900.0	3,039.8	3,031.6	368.519	ES
Hurley H26-712 - Wellbore #1 - Design #1	10,200.0	6,500.0	4,675.8	4,631.3	104.864	SF
Hurley H26-717 - Wellbore #1 - Design #1	1,901.0	1,933.0	3,017.3	3,009.0	362.428	CC
Hurley H26-717 - Wellbore #1 - Design #1	2,000.0	2,018.9	3,017.4	3,008.6	345.395	ES
Hurley H26-717 - Wellbore #1 - Design #1	9,900.0	6,500.0	4,275.1	4,233.3	102.342	SF
Hurley H26-724 - Wellbore #1 - Design #1	2,100.3	2,133.3	2,995.0	2,985.7	324.716	CC
Hurley H26-724 - Wellbore #1 - Design #1	2,300.0	2,324.0	2,995.2	2,985.1	297.818	ES
Hurley H26-724 - Wellbore #1 - Design #1	9,300.0	6,631.9	3,574.1	3,536.6	95.230	SF
Hurley H26-730 - Wellbore #1 - Design #1	7,000.0	7,311.7	2,800.8	2,770.5	92.417	ES
Hurley H26-730 - Wellbore #1 - Design #1	7,017.8	7,297.8	2,800.7	2,770.5	92.492	CC
Hurley H26-730 - Wellbore #1 - Design #1	8,800.0	6,650.0	3,101.8	3,067.8	91.245	SF
Hurley H26-736 - Wellbore #1 - Design #1	6,800.0	7,629.9	2,441.4	2,409.8	77.272	SF
Hurley H26-736 - Wellbore #1 - Design #1	7,013.8	7,493.4	2,435.6	2,404.2	77.696	CC, ES
Hurley H26-743 - Wellbore #1 - Prelim - Rev 2	6,750.0	7,904.9	1,963.9	1,930.6	59.104	SF
Hurley H26-743 - Wellbore #1 - Prelim - Rev 2	7,050.0	7,708.2	1,952.0	1,919.4	59.973	ES
Hurley H26-743 - Wellbore #1 - Prelim - Rev 2	7,065.1	7,679.0	1,951.9	1,919.5	60.082	CC
Hurley H26-750 - Wellbore #1 - Prelim - Rev 2	2,400.0	2,400.0	162.6	152.1	15.490	CC, ES
Hurley H26-750 - Wellbore #1 - Prelim - Rev 2	2,500.0	2,495.7	165.6	154.7	15.175	SF
Hurley H26-756 - Wellbore #1 - Prelim - Rev 2	2,400.0	2,400.0	155.1	144.6	14.779	CC, ES
Hurley H26-756 - Wellbore #1 - Prelim - Rev 2	2,600.0	2,599.8	162.1	150.7	14.226	SF
Hurley H26-762 - Wellbore #1 - Prelim - Rev 2	2,400.0	2,401.0	150.6	140.1	14.348	CC, ES
Hurley H26-762 - Wellbore #1 - Prelim - Rev 2	2,600.0	2,598.8	157.5	146.1	13.824	SF
Hurley H26-768 - Wellbore #1 - Prelim - Rev 2	2,400.0	2,399.0	149.4	138.9	14.235	CC, ES
Hurley H26-768 - Wellbore #1 - Prelim - Rev 2	7,153.4	7,566.3	320.9	290.2	10.461	SF
Hurley H26-776 - Wellbore #1 - Prelim - Rev 2	2,200.0	2,199.0	151.5	141.9	15.785	CC
Hurley H26-776 - Wellbore #1 - Prelim - Rev 2	7,465.0	7,257.2	166.8	135.9	5.400	ES, SF
Hurley H26-783 - Wellbore #1 - Prelim - Rev 2	2,000.0	1,999.0	156.7	148.0	18.022	CC, ES
Hurley H26-783 - Wellbore #1 - Prelim - Rev 2	7,545.8	7,147.9	476.8	445.4	15.187	SF
Hurley H35-720 - Wellbore #1 - Design #1	2,100.2	2,133.2	3,019.0	3,009.8	327.325	CC
Hurley H35-720 - Wellbore #1 - Design #1	2,200.0	2,223.1	3,019.1	3,009.4	312.888	ES
Hurley H35-720 - Wellbore #1 - Design #1	15,541.2	15,979.1	3,390.3	3,223.6	20.336	SF
Hurley H35-727 - Wellbore #1 - Design #1	15,541.2	15,763.0	2,948.9	2,781.9	17.660	CC, ES, SF
Hurley H35-733 - Wellbore #1 - Design #1	15,541.2	15,790.0	2,510.0	2,343.0	15.026	CC, ES, SF
Hurley H35-740 - Wellbore #1 - Design #1	15,541.2	15,834.9	2,068.6	1,901.7	12.397	CC, ES, SF
Hurley H35-746 - Wellbore #1 - Prelim - Rev 2	15,541.2	15,798.2	1,629.7	1,462.5	9.751	CC, ES, SF
Hurley H35-755 - Wellbore #1 - Prelim - Rev 2	2,400.0	2,400.0	67.0	56.5	6.387	CC, ES
Hurley H35-755 - Wellbore #1 - Prelim - Rev 2	2,600.0	2,599.8	69.6	58.2	6.108	SF
Hurley H35-761 - Wellbore #1 - Prelim - Rev 2	2,400.0	2,400.0	44.7	34.2	4.258	CC, ES
Hurley H35-761 - Wellbore #1 - Prelim - Rev 2	2,500.0	2,500.0	45.3	34.3	4.137	SF
Hurley H35-768 - Wellbore #1 - Prelim - Rev 2	2,400.0	2,400.0	22.3	11.9	2.129	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 H35-774
Project:	Conceptual Wells	TVD Reference:	WELL @ 4852.0ft (Original Well Elev)
Reference Site:	DP 408	MD Reference:	WELL @ 4852.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	Grid
Reference Well:	Hurley H35-774	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
DP 408						
Hurley H35-768 - Wellbore #1 - Prelim - Rev 2	2,500.0	2,500.0	23.0	12.0	2.098	SF
Hurley H35-779 - Wellbore #1 - Prelim - Rev 2	2,200.0	2,199.0	22.6	13.0	2.360	CC, ES, SF
Hurley H35-787 - Wellbore #1 - Prelim - Rev 2	2,000.0	1,999.0	44.8	36.1	5.157	CC, ES
Hurley H35-787 - Wellbore #1 - Prelim - Rev 2	2,100.0	2,097.6	46.4	37.3	5.080	SF
Hurley State H35-713 - Wellbore #1 - Design #1	1,901.0	1,933.0	3,041.3	3,033.0	365.315	CC
Hurley State H35-713 - Wellbore #1 - Design #1	2,000.0	2,000.0	3,041.5	3,032.8	349.669	ES
Hurley State H35-713 - Wellbore #1 - Design #1	15,541.2	15,707.5	3,829.2	3,662.1	22.922	SF
H Section 13						
Karakakes H13-25 - Original Drilling - Original Drilling - A	0.0	0.0	9,909.1			
Karakakes H13-25 - Original Drilling - Original Drilling - A	1,300.0	1,253.0	9,913.4	9,906.4	1,417.422	ES
Karakakes H13-25 - Original Drilling - Original Drilling - A	4,500.0	3,564.7	9,998.9	9,966.6	309.560	SF
Karakakes H13-33 - Original Drilling - Original Drilling - A	6,424.5	6,354.7	9,536.9	9,500.2	259.597	CC
Karakakes H13-33 - Original Drilling - Original Drilling - A	6,458.0	6,855.8	9,537.2	9,498.7	247.739	ES
Karakakes H13-33 - Original Drilling - Original Drilling - A	6,950.0	7,299.5	9,705.0	9,664.5	239.535	SF
Karakakes H14-63HN - Original Drilling - Original Drilling	6,479.3	10,956.1	8,564.5	8,442.1	69.975	CC, ES
Karakakes H14-63HN - Original Drilling - Original Drilling	6,600.0	10,960.5	8,577.2	8,454.4	69.860	SF
Sarchet H13-75HN - Original Drilling - Original Drilling	6,404.0	6,202.0	9,735.3	9,701.9	291.065	CC, ES
Sarchet H13-75HN - Original Drilling - Original Drilling	6,750.0	6,251.0	9,809.9	9,775.9	288.232	SF
UPRC 13-13J - Original Drilling - Original Drilling - As Dri	6,427.3	6,444.4	9,277.5	9,240.4	250.376	CC, ES
UPRC 13-13J - Original Drilling - Original Drilling - As Dri	6,950.0	7,118.3	9,446.4	9,406.5	236.703	SF
UPRC 13-14J - Original Drilling - Original Drilling - As Dri						Out of range
UPRC 13-15J - Original Drilling - Original Drilling - As Dri						Out of range
UPRC 13-16J - Wellbore #1 - Wellbore #1 - As Drilled						Out of range
UPRR 39 Pan Am B1 (PA) - Original Drilling - Original Dr	6,423.8	6,390.6	8,902.3	8,759.8	62.477	CC
UPRR 39 Pan Am B1 (PA) - Original Drilling - Original Dr	6,450.0	6,416.8	8,902.8	8,759.7	62.232	ES
UPRR 39 Pan Am B1 (PA) - Original Drilling - Original Dr	7,000.0	6,891.0	9,118.0	8,965.0	59.582	SF
H Section 14						
Bohlender H14-09 - Original Drilling - Original Drilling - A	6,431.4	6,409.4	9,865.9	9,829.0	267.347	CC, ES
Bohlender H14-09 - Original Drilling - Original Drilling - A	6,850.0	7,005.5	9,987.2	9,947.8	253.323	SF
Bohlender H14-15 - Original Drilling - Original Drilling - A	6,408.6	6,075.8	7,714.0	7,678.3	216.069	CC, ES
Bohlender H14-15 - Original Drilling - Original Drilling - A	6,800.0	6,800.0	7,820.5	7,781.8	202.059	SF
Bohlender H14-16 - Original Drilling - Original Drilling - A	6,434.5	6,420.4	8,583.3	8,546.3	232.412	CC, ES
Bohlender H14-16 - Original Drilling - Original Drilling - A	6,850.0	6,709.1	8,713.7	8,675.3	226.819	SF
Wilcox H14-03J - Original Drilling - Original Drilling - As D	188.1	159.1	8,301.3	8,300.7	10,000.000	CC
Wilcox H14-03J - Original Drilling - Original Drilling - As D	6,420.1	6,533.6	8,304.8	8,209.4	87.116	ES
Wilcox H14-03J - Original Drilling - Original Drilling - As D	6,550.0	7,118.3	8,317.9	8,221.8	86.581	SF
Wilcox H14-10 - Original Drilling - Original Drilling - As Dr	1,286.8	1,257.8	8,366.0	8,359.0	1,201.035	CC
Wilcox H14-10 - Original Drilling - Original Drilling - As Dr	1,300.0	1,263.1	8,366.0	8,359.0	1,192.819	ES
Wilcox H14-10 - Original Drilling - Original Drilling - As Dr	6,900.0	7,322.3	9,626.9	9,585.8	234.211	SF
Wilcox H14-11 - Original Drilling - Original Drilling - As Dr	329.8	300.9	8,332.2	8,330.7	5,660.221	CC
Wilcox H14-11 - Original Drilling - Original Drilling - As Dr	929.9	918.6	8,333.1	8,328.1	1,674.102	ES
Wilcox H14-11 - Original Drilling - Original Drilling - As Dr	6,600.0	7,324.2	9,288.5	9,207.9	115.234	SF
Wilcox H14-13 - Original Drilling - Original Drilling - As Dr	6,432.1	6,951.8	7,815.7	7,643.6	45.426	CC, ES
Wilcox H14-13 - Original Drilling - Original Drilling - As Dr	6,550.0	7,414.8	7,826.0	7,653.6	45.399	SF
H Section 19						
Butterball 13-19 - Original Drilling - Original Drilling - As D						Out of range
H Section 21						
Moser 24-21 - Wellbore #1 - Wellbore #1 - As Drilled	100.0	55.4	8,447.0	8,446.8	10,000.000	CC
Moser 24-21 - Wellbore #1 - Wellbore #1 - As Drilled	500.0	424.9	8,448.0	8,446.2	4,853.627	ES
Moser 24-21 - Wellbore #1 - Wellbore #1 - As Drilled	8,600.0	6,772.0	9,941.0	9,898.7	234.928	SF

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

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region Drilling - Sandbox	Local Co-ordinate Reference:	Well Hurley H35-774
Project:	Conceptual Wells	TVD Reference:	WELL @ 4852.0ft (Original Well Elev)
Reference Site:	DP 408	MD Reference:	WELL @ 4852.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	Grid
Reference Well:	Hurley H35-774	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
H Section 22						
Offset Well - Wellbore - Design						
HSR Demeules 09-22 - Original Drilling - Original Drilling	6,445.1	6,341.0	4,024.3	3,987.7	110.093	CC
HSR Demeules 09-22 - Original Drilling - Original Drilling	6,450.0	6,344.8	4,024.3	3,987.7	110.028	ES
HSR Demeules 09-22 - Original Drilling - Original Drilling	6,850.0	6,708.4	4,144.3	4,106.0	108.178	SF
HSR Duryea - Wellbore #1 - Wellbore #1 - As Drilled	6,446.4	6,316.1	3,570.7	3,534.2	97.959	CC
HSR Duryea - Wellbore #1 - Wellbore #1 - As Drilled	6,450.0	6,318.8	3,570.7	3,534.2	97.917	ES
HSR Duryea - Wellbore #1 - Wellbore #1 - As Drilled	6,750.0	6,571.7	3,630.0	3,592.3	96.244	SF
Sarchet 16-22 - Wellbore #1 - Wellbore #1 - As Drilled	6,449.8	6,346.1	2,891.4	2,854.7	78.690	CC
Sarchet 16-22 - Wellbore #1 - Wellbore #1 - As Drilled	6,450.0	6,346.3	2,891.4	2,854.7	78.688	ES
Sarchet 16-22 - Wellbore #1 - Wellbore #1 - As Drilled	6,750.0	6,640.3	2,946.8	2,908.6	77.282	SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region Drilling - Sandbox	Local Co-ordinate Reference:	Well Hurley H35-774
Project:	Conceptual Wells	TVD Reference:	WELL @ 4852.0ft (Original Well Elev)
Reference Site:	DP 408	MD Reference:	WELL @ 4852.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	Grid
Reference Well:	Hurley H35-774	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
H Section 23						
Offset Well - Wellbore - Design						
Eachus 32-23 - Original Drilling - Original Drilling - As Dri	6,405.3	6,175.0	5,529.8	5,493.7	153.363	CC, ES
Eachus 32-23 - Original Drilling - Original Drilling - As Dri	6,800.0	6,770.0	5,631.4	5,592.8	145.870	SF
Eachus 41-23 (PA) - Original Drilling - Original Drilling - A	6,425.2	6,384.1	7,150.9	7,008.6	50.232	CC
Eachus 41-23 (PA) - Original Drilling - Original Drilling - A	6,450.0	6,408.8	7,151.4	7,008.5	50.046	ES
Eachus 41-23 (PA) - Original Drilling - Original Drilling - A	6,950.0	6,851.1	7,336.7	7,184.5	48.198	SF
Eachus UPRR 31-23 - Original Drilling - Original Drilling -	6,425.8	6,317.5	6,741.3	6,666.9	90.682	CC
Eachus UPRR 31-23 - Original Drilling - Original Drilling -	6,450.0	6,341.6	6,741.7	6,666.5	89.633	ES
Eachus UPRR 31-23 - Original Drilling - Original Drilling -	7,200.0	6,908.0	7,146.6	7,051.2	74.938	SF
Eachus UPRR 42-23 (PA) - Original Drilling - Original Dri	6,421.4	6,390.2	6,048.3	5,905.8	42.450	CC
Eachus UPRR 42-23 (PA) - Original Drilling - Original Dri	6,450.0	6,418.8	6,048.9	5,905.8	42.270	ES
Eachus UPRR 42-23 (PA) - Original Drilling - Original Dri	6,900.0	6,826.1	6,194.2	6,042.5	40.834	SF
HSR Alberstein 16-23 - Original Drilling - Original Drilling	6,408.7	6,393.0	4,271.4	4,234.6	116.026	CC, ES
HSR Alberstein 16-23 - Original Drilling - Original Drilling	6,900.0	6,937.8	4,383.8	4,344.5	111.765	SF
HSR Ashley 15-23A - Original Drilling - Original Drilling -	6,405.1	6,295.3	3,374.3	3,337.8	92.397	CC, ES
HSR Ashley 15-23A - Original Drilling - Original Drilling -	6,750.0	6,691.8	3,447.3	3,408.9	89.926	SF
HSR Benirschke 10-23 - Original Drilling - Original Drillin	6,401.3	6,232.0	4,344.5	4,308.3	119.917	CC, ES
HSR Benirschke 10-23 - Original Drilling - Original Drillin	7,000.0	7,000.0	4,579.4	4,540.0	115.976	SF
HSR Eachus 03-23 - Original Drilling - Original Drilling - A	3,149.6	2,439.8	6,086.3	6,071.0	399.396	CC, ES
HSR Eachus 03-23 - Original Drilling - Original Drilling - A	6,750.0	6,868.0	6,529.8	6,486.6	151.339	SF
HSR Eachus 04-23 - Original Drilling - Original Drilling - A	100.0	55.5	6,070.1	6,069.9	10,000.000	CC
HSR Eachus 04-23 - Original Drilling - Original Drilling - A	1,000.0	936.6	6,072.5	6,067.3	1,163.334	ES
HSR Eachus 04-23 - Original Drilling - Original Drilling - A	6,500.0	6,835.0	6,422.9	6,314.0	58.936	SF
HSR Eachus 05-23 - Original Drilling - Original Drilling - A	6,428.0	6,731.9	5,092.2	4,963.4	39.522	CC, ES
HSR Eachus 05-23 - Original Drilling - Original Drilling - A	6,700.0	6,995.0	5,151.4	5,019.4	39.036	SF
HSR Fruman 06-23 - Original Drilling - Original Drilling - A	6,442.6	6,513.7	5,474.7	5,430.0	122.565	CC, ES
HSR Fruman 06-23 - Original Drilling - Original Drilling - A	6,650.0	6,654.0	5,510.5	5,465.1	121.523	SF
HSR Grasshopper 09-23 - Original Drilling - Original Drill	6,400.9	6,291.6	4,732.5	4,696.0	129.650	CC, ES
HSR Grasshopper 09-23 - Original Drilling - Original Drill	6,800.0	6,800.0	4,819.6	4,780.9	124.420	SF
Ritchey 21-23 - Original Drilling - Original Drilling - As Dri	6,433.0	6,386.5	6,017.6	5,980.7	163.360	CC, ES
Ritchey 21-23 - Original Drilling - Original Drilling - As Dri	6,800.0	6,747.7	6,119.9	6,081.4	158.798	SF
Ritchey 24-23 - Original Drilling - Original Drilling - As Dri	1,041.3	1,027.3	4,653.8	4,648.2	828.868	CC
Ritchey 24-23 - Original Drilling - Original Drilling - As Dri	1,600.0	1,556.1	4,656.6	4,647.9	534.417	ES
Ritchey 24-23 - Original Drilling - Original Drilling - As Dri	6,750.0	6,731.0	5,184.7	5,146.0	133.991	SF
Ritchey 31-24 - Original Drilling - Original Drilling - As Dri	1,403.0	1,400.0	6,553.1	6,545.3	848.709	CC
Ritchey 31-24 - Original Drilling - Original Drilling - As Dri	1,500.0	1,448.2	6,553.3	6,545.2	808.281	ES
Ritchey 31-24 - Original Drilling - Original Drilling - As Dri	6,800.0	6,855.8	7,100.4	7,053.6	151.594	SF
UPRC 23-11J - Original Drilling - Original Drilling - As Dri	6,434.7	6,362.3	3,746.3	3,709.5	102.017	CC, ES
UPRC 23-11J - Original Drilling - Original Drilling - As Dri	6,700.0	6,655.0	3,800.9	3,762.8	99.787	SF
UPRC 23-12J - Original Drilling - Original Drilling - As Dri	6,446.9	6,396.0	3,755.7	3,718.9	102.045	CC
UPRC 23-12J - Original Drilling - Original Drilling - As Dri	6,450.0	6,399.4	3,755.7	3,718.9	101.999	ES
UPRC 23-12J - Original Drilling - Original Drilling - As Dri	6,650.0	6,619.4	3,788.1	3,750.2	100.068	SF
UPRC H23-13 - Wellbore #1 - Wellbore #1 - As Drilled	6,435.4	6,330.4	2,616.8	2,580.2	71.415	CC, ES
UPRC H23-13 - Wellbore #1 - Wellbore #1 - As Drilled	6,650.0	6,522.2	2,653.4	2,615.7	70.525	SF
UPRC H23-14J - Original Drilling - Original Drilling - As D	6,410.8	6,274.3	2,581.9	2,545.5	70.866	CC, ES
UPRC H23-14J - Original Drilling - Original Drilling - As D	6,600.0	6,454.2	2,608.8	2,571.4	69.846	SF
UPRC H23-24 - Original Drilling - Original Drilling - As Dr	6,399.2	6,173.4	3,522.6	3,486.5	97.708	CC
UPRC H23-24 - Original Drilling - Original Drilling - As Dr	6,400.0	6,174.2	3,522.6	3,486.5	97.696	ES
UPRC H23-24 - Original Drilling - Original Drilling - As Dr	6,700.0	6,514.5	3,588.0	3,550.3	95.246	SF
UPRR 53 Pan Am B#1 (PA) - Original Drilling - Original D	6,440.1	6,366.0	2,756.8	2,614.8	19.422	CC
UPRR 53 Pan Am B#1 (PA) - Original Drilling - Original D	6,450.0	6,375.8	2,756.9	2,614.7	19.393	ES
UPRR 53 Pan Am B#1 (PA) - Original Drilling - Original D	6,700.0	6,617.8	2,811.1	2,663.8	19.080	SF
UPRR 53 Pan Am UT V#1 - Original Drilling - Original Dr	6,440.0	6,541.1	6,223.1	6,185.7	166.601	CC, ES
UPRR 53 Pan Am UT V#1 - Original Drilling - Original Dr	6,800.0	6,772.0	6,316.9	6,278.3	163.680	SF

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

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region Drilling - Sandbox	Local Co-ordinate Reference:	Well Hurley H35-774
Project:	Conceptual Wells	TVD Reference:	WELL @ 4852.0ft (Original Well Elev)
Reference Site:	DP 408	MD Reference:	WELL @ 4852.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	Grid
Reference Well:	Hurley H35-774	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						

Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region Drilling - Sandbox	Local Co-ordinate Reference:	Well Hurley H35-774
Project:	Conceptual Wells	TVD Reference:	WELL @ 4852.0ft (Original Well Elev)
Reference Site:	DP 408	MD Reference:	WELL @ 4852.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	Grid
Reference Well:	Hurley H35-774	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	100.0	0.0	9,423.2			
Gurtler 24-09J - Original Drilling - Original Drilling - As Dr	5,400.0	5,163.2	9,423.9	9,393.8	313.138	ES
Gurtler 24-09J - Original Drilling - Original Drilling - As Dr	6,900.0	6,900.0	9,519.4	9,480.4	243.802	SF
Gurtler 24-10J - Original Drilling - Original Drilling - As Dr	3,731.0	3,500.0	8,298.0	8,277.7	408.507	CC
Gurtler 24-10J - Original Drilling - Original Drilling - As Dr	4,000.0	3,718.6	8,298.6	8,276.9	382.409	ES
Gurtler 24-10J - Original Drilling - Original Drilling - As Dr	9,600.0	6,964.8	9,971.1	9,924.9	215.965	SF
Gurtler 24-11J - Original Drilling - Original Drilling - As Dr	6,400.4	6,367.6	7,047.8	7,011.2	192.104	CC, ES
Gurtler 24-11J - Original Drilling - Original Drilling - As Dr	6,700.0	6,700.0	7,084.4	7,046.2	185.309	SF
Gurtler 24-12J - Original Drilling - Original Drilling - As Dr	6,405.0	6,363.0	6,062.0	6,025.3	165.244	CC, ES
Gurtler 24-12J - Original Drilling - Original Drilling - As Dr	6,550.0	6,506.6	6,072.6	6,035.2	162.304	SF
Gurtler 24-12J - Original Drilling - ST01 - ST01 Original D	6,407.1	6,378.4	6,065.8	6,030.1	169.672	CC, ES
Gurtler 24-12J - Original Drilling - ST01 - ST01 Original D	6,950.0	6,950.1	6,203.8	6,165.3	161.486	SF
Gurtler 24-13J - Original Drilling - Original Drilling - As Dr	6,062.7	5,930.9	5,336.1	5,301.7	155.205	CC, ES
Gurtler 24-13J - Original Drilling - Original Drilling - As Dr	6,750.0	7,416.5	5,376.8	5,332.3	120.658	SF
Gurtler 24-15J - Original Drilling - Original Drilling - As Dr	100.0	33.5	7,757.2	7,757.1	10,000.000	CC
Gurtler 24-15J - Original Drilling - Original Drilling - As Dr	6,356.0	6,254.4	7,776.5	7,740.3	205.336	ES
Gurtler 24-15J - Original Drilling - Original Drilling - As Dr	11,000.0	7,086.1	9,941.8	9,887.1	181.720	SF
Gurtler 24-16J - Original Drilling - Original Drilling - As Dr	5,151.8	5,100.0	8,725.0	8,695.8	298.358	CC
Gurtler 24-16J - Original Drilling - Original Drilling - As Dr	6,373.5	6,362.3	8,725.7	8,689.1	238.579	ES
Gurtler 24-16J - Original Drilling - Original Drilling - As Dr	9,700.0	6,963.8	9,961.0	9,912.4	205.336	SF
Gurtler H24-14 - Original Drilling - Original Drilling - As D	2,058.8	2,035.0	6,575.9	6,564.5	574.911	CC
Gurtler H24-14 - Original Drilling - Original Drilling - As D	3,100.0	2,973.5	6,576.6	6,559.6	386.381	ES
Gurtler H24-14 - Original Drilling - Original Drilling - As D	10,800.0	6,849.7	8,877.8	8,826.4	172.585	SF
Gurtler H24-21 (PA) - Original Drilling - Original Drilling -	3,995.1	3,700.0	7,945.5	7,923.9	367.182	CC
Gurtler H24-21 (PA) - Original Drilling - Original Drilling -	4,100.0	3,751.7	7,945.9	7,923.9	360.154	ES
Gurtler H24-21 (PA) - Original Drilling - Original Drilling -	6,950.0	6,797.6	8,102.5	8,063.8	209.307	SF
Gurtler H24-23 - Original Drilling - Original Drilling - As D	6,377.8	6,307.8	8,599.4	8,563.0	236.205	CC, ES
Gurtler H24-23 - Original Drilling - Original Drilling - As D	9,600.0	6,900.0	9,982.6	9,935.6	212.671	SF
Gurtler H24-24 - Original Drilling - Original Drilling - As D	4,001.0	3,834.2	7,414.2	7,392.1	335.026	CC
Gurtler H24-24 - Original Drilling - Original Drilling - As D	4,100.0	3,900.0	7,414.7	7,392.1	328.180	ES
Gurtler H24-24 - Original Drilling - Original Drilling - As D	10,900.0	6,547.6	9,996.2	9,945.5	197.035	SF
Gurtler H24-99HZ - Wellbore #1 - Original Drilling	6,492.9	11,118.0	5,488.8	5,415.8	75.261	CC, ES
Gurtler H24-99HZ - Wellbore #1 - Original Drilling	8,900.0	11,118.0	6,885.5	6,785.9	69.129	SF
Gurtler H25-27 - Original Drilling - Original Drilling - As D	6,217.9	6,233.5	8,195.8	8,158.7	220.907	CC
Gurtler H25-27 - Original Drilling - Original Drilling - As D	6,359.6	6,360.4	8,195.9	8,158.0	216.497	ES
Gurtler H25-27 - Original Drilling - Original Drilling - As D	10,900.0	7,020.5	9,987.3	9,931.2	178.166	SF
Gurtler Russell L1 (PA) - Original Drilling - Original Drillin	0.0	0.0	6,271.2			
Gurtler Russell L1 (PA) - Original Drilling - Original Drillin	6,386.7	6,340.6	6,271.9	6,235.3	171.362	ES
Gurtler Russell L1 (PA) - Original Drilling - Original Drillin	7,300.0	7,034.2	6,537.4	6,488.0	132.202	SF
HSR Brutschy 04-24 - Original Drilling - Original Drilling -	6,399.5	6,168.4	7,882.2	7,846.1	218.791	CC
HSR Brutschy 04-24 - Original Drilling - Original Drilling -	6,400.0	6,168.8	7,882.2	7,846.1	218.776	ES
HSR Brutschy 04-24 - Original Drilling - Original Drilling -	6,900.0	6,900.0	8,035.9	7,996.8	205.506	SF
HSR Epstein 05-24 - Original Drilling - Original Drilling - A	6,391.1	6,147.8	7,624.2	7,588.3	212.263	CC
HSR Epstein 05-24 - Original Drilling - Original Drilling - A	6,400.0	6,156.5	7,624.2	7,588.3	211.986	ES
HSR Epstein 05-24 - Original Drilling - Original Drilling - A	6,850.0	6,715.2	7,739.9	7,701.5	201.500	SF
HSR Hoffman 03-24 - Original Drilling - Original Drilling -	6,428.6	6,527.8	8,818.1	8,777.7	218.321	CC, ES
HSR Hoffman 03-24 - Original Drilling - Original Drilling -	7,200.0	7,124.2	9,124.7	9,077.7	194.296	SF
HSR Sarchet 02-24 - Original Drilling - Original Drilling - A	6,414.6	6,416.7	9,806.5	9,769.6	265.721	CC, ES
HSR Sarchet 02-24 - Original Drilling - Original Drilling - A	7,000.0	6,816.7	9,978.1	9,939.3	257.099	SF
HSR Sarchet 06-24 - Original Drilling - Original Drilling - A	6,374.2	6,064.6	7,987.5	7,951.9	224.390	CC, ES
HSR Sarchet 06-24 - Original Drilling - Original Drilling - A	7,000.0	7,000.0	8,173.8	8,134.3	207.195	SF
HSR Traurig 01-24 - Original Drilling - Original Drilling - A						Out of range
Nopens D19-31 - Original Drilling - Original Drilling - As D						Out of range

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

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region Drilling - Sandbox	Local Co-ordinate Reference:	Well Hurley H35-774
Project:	Conceptual Wells	TVD Reference:	WELL @ 4852.0ft (Original Well Elev)
Reference Site:	DP 408	MD Reference:	WELL @ 4852.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	Grid
Reference Well:	Hurley H35-774	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
H Section 24						
Offset Well - Wellbore - Design						
Nopens H24-08 - Original Drilling - Original Drilling - As D	4,114.8	3,780.9	9,984.3	9,962.1	449.706	CC
Nopens H24-08 - Original Drilling - Original Drilling - As D	4,200.0	3,830.3	9,984.5	9,961.9	442.288	ES
Nopens H24-08 - Original Drilling - Original Drilling - As D	5,900.0	5,500.0	10,000.0	9,967.5	307.781	SF
Sarchet H24-22 - Original Drilling - Original Drilling - As D	4,022.4	3,700.0	9,124.9	9,103.2	420.571	CC
Sarchet H24-22 - Original Drilling - Original Drilling - As D	6,383.3	6,200.0	9,125.4	9,089.3	252.868	ES
Sarchet H24-22 - Original Drilling - Original Drilling - As D	6,900.0	6,621.5	9,233.0	9,194.9	242.393	SF
Weld County Lumber 01 - Original Drilling - Original Drilli	6,398.7	6,279.5	9,396.3	9,359.8	257.938	CC
Weld County Lumber 01 - Original Drilling - Original Drilli	6,400.0	6,280.6	9,396.3	9,359.8	257.890	ES
Weld County Lumber 01 - Original Drilling - Original Drilli	6,850.0	6,819.3	9,487.5	9,448.7	244.627	SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region Drilling - Sandbox	Local Co-ordinate Reference:	Well Hurley H35-774
Project:	Conceptual Wells	TVD Reference:	WELL @ 4852.0ft (Original Well Elev)
Reference Site:	DP 408	MD Reference:	WELL @ 4852.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	Grid
Reference Well:	Hurley H35-774	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	576.0	554.0	5,811.6	5,808.6	1,996.682	CC
Dechant 21-25 - Original Drilling - Original Drilling - As D	1,400.0	1,358.0	5,812.5	5,804.9	768.037	ES
Dechant 21-25 - Original Drilling - Original Drilling - As D	12,400.0	7,240.8	9,064.0	8,997.9	137.029	SF
Dechant D30-33D - Original Drilling - Original Drilling - As	100.0	33.5	8,398.0	8,397.9	10,000.000	CC, ES
Dechant D30-33D - Original Drilling - Original Drilling - As	12,900.0	6,811.9	9,996.4	9,919.4	129.842	SF
Dechant D31-30D - Original Drilling - Original Drilling - As	100.0	36.8	8,401.5	8,401.4	10,000.000	CC, ES
Dechant D31-30D - Original Drilling - Original Drilling - As	14,100.0	7,088.9	9,971.7	9,878.4	106.864	SF
Dechant H25-64-1HN - Original Drilling - Original Drilling	8,736.9	6,423.0	4,234.2	4,192.4	101.199	CC, ES
Dechant H25-64-1HN - Original Drilling - Original Drilling	10,700.0	6,423.0	4,667.2	4,614.0	87.659	SF
Dechant H25-65HN - Original Drilling - Original Drilling	4,301.5	4,614.0	4,143.4	4,118.8	168.164	CC, ES
Dechant H25-65HN - Original Drilling - Original Drilling	10,200.0	6,417.0	4,870.1	4,819.7	96.675	SF
HSR Cohn 03-25 - Original Drilling - Original Drilling - As	3,676.6	3,717.6	5,941.3	5,920.3	283.539	CC
HSR Cohn 03-25 - Original Drilling - Original Drilling - As	3,900.0	3,914.9	5,942.1	5,919.9	268.099	ES
HSR Cohn 03-25 - Original Drilling - Original Drilling - As	10,800.0	6,876.6	7,805.1	7,751.9	146.784	SF
HSR Crowe 06-25 - Original Drilling - Original Drilling - A	2,307.5	2,285.6	5,806.8	5,794.0	451.940	CC
HSR Crowe 06-25 - Original Drilling - Original Drilling - A	2,400.0	2,360.6	5,807.0	5,793.6	436.012	ES
HSR Crowe 06-25 - Original Drilling - Original Drilling - A	11,400.0	7,114.2	7,385.7	7,325.8	123.446	SF
HSR Dechant 04-25 - Original Drilling - Original Drilling -	2,678.9	2,969.0	4,914.0	4,885.2	171.122	CC
HSR Dechant 04-25 - Original Drilling - Original Drilling -	4,724.0	5,200.0	4,919.6	4,865.0	90.016	ES
HSR Dechant 04-25 - Original Drilling - Original Drilling -	6,700.0	7,080.1	4,987.8	4,925.8	80.542	SF
HSR Dechant 05-25 - Original Drilling - Original Drilling -	1,999.9	1,989.9	4,794.1	4,783.0	430.901	CC
HSR Dechant 05-25 - Original Drilling - Original Drilling -	2,600.0	2,645.5	4,795.7	4,781.0	324.936	ES
HSR Dechant 05-25 - Original Drilling - Original Drilling -	10,300.0	7,065.1	5,883.6	5,830.6	111.070	SF
KY Blue D30-32 - Original Drilling - Original Drilling - As D	2,418.0	2,381.8	8,937.2	8,923.8	665.453	CC, ES
KY Blue D30-32 - Original Drilling - Original Drilling - As D	11,800.0	6,919.1	9,995.2	9,928.5	150.009	SF
KY Blue H25-04J - Original Drilling - Original Drilling - As	9,292.3	6,970.0	8,328.8	8,291.6	223.826	CC
KY Blue H25-04J - Original Drilling - Original Drilling - As	9,400.0	6,970.0	8,329.5	8,291.5	219.044	ES
KY Blue H25-04J - Original Drilling - Original Drilling - As	14,800.0	6,970.0	9,985.4	9,910.8	133.892	SF
KY Blue H25-09 - Original Drilling - Original Drilling - As D	2,191.4	2,136.4	8,538.7	8,526.6	707.815	CC
KY Blue H25-09 - Original Drilling - Original Drilling - As D	2,300.0	2,200.0	8,538.9	8,526.3	681.489	ES
KY Blue H25-09 - Original Drilling - Original Drilling - As D	13,300.0	6,919.2	9,976.6	9,900.1	130.552	SF
KY Blue H25-10 - Original Drilling - Original Drilling - As D	100.0	38.1	7,030.5	7,030.4	10,000.000	CC
KY Blue H25-10 - Original Drilling - Original Drilling - As D	2,400.0	2,330.0	7,041.2	7,028.0	532.216	ES
KY Blue H25-10 - Original Drilling - Original Drilling - As D	13,100.0	7,049.8	8,742.7	8,669.9	119.942	SF
KY Blue H25-11 - Original Drilling - Original Drilling - As D	292.2	257.2	5,988.9	5,987.7	4,843.024	CC
KY Blue H25-11 - Original Drilling - Original Drilling - As D	8,308.8	7,074.1	6,020.7	5,946.4	81.028	ES
KY Blue H25-11 - Original Drilling - Original Drilling - As D	11,000.0	7,031.5	6,594.7	6,503.5	72.345	SF
KY Blue H25-12 - Original Drilling - Original Drilling - As D	2,527.7	2,629.4	4,476.1	4,461.2	301.076	CC, ES
KY Blue H25-12 - Original Drilling - Original Drilling - As D	10,700.0	6,874.6	5,168.8	5,112.4	91.678	SF
KY Blue H25-14 - Original Drilling - Original Drilling - As D	9,795.0	6,890.0	6,094.5	6,041.6	115.093	CC
KY Blue H25-14 - Original Drilling - Original Drilling - As D	9,800.0	6,890.0	6,094.5	6,041.6	115.006	ES
KY Blue H25-14 - Original Drilling - Original Drilling - As D	13,700.0	13,700.0	7,238.1	7,136.3	71.070	SF
KY Blue H25-15 - Original Drilling - Original Drilling - As D	9,619.2	6,916.4	7,155.5	7,103.8	138.623	CC
KY Blue H25-15 - Original Drilling - Original Drilling - As D	9,700.0	6,916.1	7,155.9	7,103.7	136.944	ES
KY Blue H25-15 - Original Drilling - Original Drilling - As D	13,800.0	6,893.2	8,287.4	8,207.1	103.272	SF
KY H25-24 - Original Drilling - Original Drilling - As Drilled	8,972.7	7,017.8	6,752.8	6,705.9	143.930	CC
KY H25-24 - Original Drilling - Original Drilling - As Drilled	9,000.0	7,018.5	6,752.9	6,705.8	143.348	ES
KY H25-24 - Original Drilling - Original Drilling - As Drilled	13,200.0	7,090.5	7,966.7	7,890.1	104.124	SF
Moore UPRC H25-01 - Original Drilling - Original Drilling	2,484.6	2,452.1	8,705.0	8,691.1	628.413	CC
Moore UPRC H25-01 - Original Drilling - Original Drilling	2,600.0	2,563.8	8,705.3	8,690.8	600.453	ES
Moore UPRC H25-01 - Original Drilling - Original Drilling	10,300.0	6,922.5	9,962.4	9,908.9	186.272	SF
Moore UPRC H25-02 - Original Drilling - Original Drilling	1,325.6	1,283.6	7,310.9	7,303.7	1,022.710	CC
Moore UPRC H25-02 - Original Drilling - Original Drilling	2,600.0	2,578.3	7,311.2	7,296.6	503.471	ES

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

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region Drilling - Sandbox	Local Co-ordinate Reference:	Well Hurley H35-774
Project:	Conceptual Wells	TVD Reference:	WELL @ 4852.0ft (Original Well Elev)
Reference Site:	DP 408	MD Reference:	WELL @ 4852.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	Grid
Reference Well:	Hurley H35-774	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
H Section 25						
Moore UPRC H25-02 - Original Drilling - Original Drilling	12,400.0	6,920.2	9,968.4	9,905.2	157.601	SF
Moser 25-32 - Original Drilling - Original Drilling - As Drill	2,614.8	2,736.3	6,889.9	6,874.8	456.179	CC, ES
Moser 25-32 - Original Drilling - Original Drilling - As Drill	12,600.0	7,059.8	8,945.3	8,877.7	132.320	SF
Moser 25-42 - Original Drilling - Original Drilling - As Drill	775.7	715.7	8,543.0	8,539.0	2,177.530	CC
Moser 25-42 - Original Drilling - Original Drilling - As Drill	2,300.0	2,194.8	8,546.6	8,534.1	682.920	ES
Moser 25-42 - Original Drilling - Original Drilling - As Drill	11,700.0	6,946.6	9,989.6	9,925.3	155.380	SF
UPRR 53 Pan Am T#2 - Original Drilling - Original Drilling	2,594.4	2,652.7	5,563.2	5,548.4	376.739	CC
UPRR 53 Pan Am T#2 - Original Drilling - Original Drilling	2,600.0	2,657.0	5,563.2	5,548.4	376.045	ES
UPRR 53 Pan Am T#2 - Original Drilling - Original Drilling	10,800.0	6,700.0	7,180.3	7,126.7	134.000	SF
UPRR 53 Pan Am UT T#1 - Original Drilling - Original Dr	2,400.0	2,341.0	7,935.4	7,883.4	152.404	CC
UPRR 53 Pan Am UT T#1 - Original Drilling - Original Dr	2,700.0	2,640.5	7,939.2	7,880.5	135.205	ES
UPRR 53 Pan Am UT T#1 - Original Drilling - Original Dr	9,500.0	6,963.0	8,596.9	8,432.6	52.325	SF
Von Feldt 1-25B - Original Drilling - Original Drilling - As D	9,364.6	7,051.3	5,133.2	5,083.0	102.193	CC
Von Feldt 1-25B - Original Drilling - Original Drilling - As D	9,400.0	7,052.6	5,133.3	5,082.8	101.645	ES
Von Feldt 1-25B - Original Drilling - Original Drilling - As D	11,900.0	7,141.9	5,724.5	5,656.8	84.472	SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region Drilling - Sandbox	Local Co-ordinate Reference:	Well Hurley H35-774
Project:	Conceptual Wells	TVD Reference:	WELL @ 4852.0ft (Original Well Elev)
Reference Site:	DP 408	MD Reference:	WELL @ 4852.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	Grid
Reference Well:	Hurley H35-774	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
H Section 26						
Bullard 31-26 - Original Drilling - Original Drilling - As Dril	5,008.5	4,890.4	2,441.4	2,413.1	86.551	CC
Bullard 31-26 - Original Drilling - Original Drilling - As Dril	6,400.0	6,353.1	2,442.1	2,405.5	66.627	ES
Bullard 31-26 - Original Drilling - Original Drilling - As Dril	6,650.0	6,575.3	2,471.8	2,434.1	65.425	SF
Bullard 32-26 - Original Drilling - Original Drilling - As Dril	2,121.0	2,121.3	1,995.9	1,984.0	168.212	CC
Bullard 32-26 - Original Drilling - Original Drilling - As Dril	2,200.0	2,187.7	1,996.1	1,983.8	162.635	ES
Bullard 32-26 - Original Drilling - Original Drilling - As Dril	7,300.0	7,018.1	2,233.1	2,193.5	56.437	SF
Bullard 41-26 - Original Drilling - Original Drilling - As Dril	6,371.4	6,379.4	3,120.7	3,084.0	85.060	CC, ES
Bullard 41-26 - Original Drilling - Original Drilling - As Dril	7,000.0	6,967.4	3,208.6	3,169.3	81.631	SF
Dechant H25-29D - Original Drilling - Original Drilling - As	112.1	131.3	3,773.5	3,773.1	9,147.321	CC
Dechant H25-29D - Original Drilling - Original Drilling - As	200.0	197.1	3,773.8	3,773.0	4,480.273	ES
Dechant H25-29D - Original Drilling - Original Drilling - As	10,400.0	10,400.0	7,808.3	7,728.2	97.506	SF
Dechant H25-33D - Original Drilling - Original Drilling - As	2,445.1	2,622.3	3,680.6	3,659.9	178.121	CC
Dechant H25-33D - Original Drilling - Original Drilling - As	2,500.0	2,655.6	3,680.9	3,659.8	174.524	ES
Dechant H25-33D - Original Drilling - Original Drilling - As	10,400.0	10,400.0	4,483.3	4,378.0	42.601	SF
Harsh H26-09D - Original Drilling - Original Drilling - As D	2,492.5	2,563.8	3,496.5	3,482.3	245.318	CC
Harsh H26-09D - Original Drilling - Original Drilling - As D	2,500.0	2,569.4	3,496.5	3,482.2	244.690	ES
Harsh H26-09D - Original Drilling - Original Drilling - As D	9,800.0	7,041.2	3,912.1	3,860.9	76.428	SF
Harsh H26-10 - Original Drilling - Original Drilling - As Dr	8,103.8	7,033.6	2,302.7	2,260.9	55.095	CC, ES
Harsh H26-10 - Original Drilling - Original Drilling - As Dr	8,700.0	7,031.9	2,378.6	2,334.1	53.442	SF
Harsh H26-15 - Original Drilling - Original Drilling - As Dr	9,546.7	6,985.4	2,235.6	2,184.3	43.612	CC, ES
Harsh H26-15 - Original Drilling - Original Drilling - As Dr	10,100.0	6,991.5	2,303.0	2,248.3	42.076	SF
Harsh H26-16 - Original Drilling - Original Drilling - As Dr	9,624.2	6,991.7	3,298.6	3,246.6	63.523	CC, ES
Harsh H26-16 - Original Drilling - Original Drilling - As Dr	10,700.0	7,005.1	3,469.5	3,410.4	58.705	SF
Harsh H26-23D - Original Drilling - Original Drilling - As D	1,056.0	1,074.0	2,347.4	2,342.7	496.004	CC
Harsh H26-23D - Original Drilling - Original Drilling - As D	1,100.0	1,108.5	2,347.5	2,342.6	474.534	ES
Harsh H26-23D - Original Drilling - Original Drilling - As D	9,900.0	7,130.2	3,082.4	3,025.7	54.352	SF
HSR Moser 04-26 - Original Drilling - Original Drilling - As	6,432.6	6,336.4	1,539.8	1,503.1	42.013	CC, ES
HSR Moser 04-26 - Original Drilling - Original Drilling - As	6,550.0	6,451.9	1,549.9	1,512.7	41.627	SF
HSR Moser 06-26 - Original Drilling - Original Drilling - As	1,787.9	1,770.0	826.6	816.7	83.568	CC
HSR Moser 06-26 - Original Drilling - Original Drilling - As	2,500.0	2,483.2	828.4	814.4	59.292	ES
HSR Moser 06-26 - Original Drilling - Original Drilling - As	7,100.0	6,934.9	1,081.4	1,042.3	27.631	SF
HSR Regalia 05-26 - Original Drilling - Original Drilling - A	6,449.4	6,394.7	280.3	243.5	7.611	CC
HSR Regalia 05-26 - Original Drilling - Original Drilling - A	6,450.0	6,395.3	280.3	243.5	7.610	ES, SF
HSR-Moser 03-26A - Original Drilling - Original Drilling - A	6,395.1	6,286.6	1,690.5	1,654.0	46.357	CC
A HSR-Moser 03-26A - Original Drilling - Original Drilling - A	6,400.0	6,291.7	1,690.5	1,654.0	46.324	ES
HSR-Moser 03-26A - Original Drilling - Original Drilling - A	6,550.0	6,430.5	1,705.8	1,668.6	45.836	SF
John 03-26 - Original Drilling - Original Drilling - As Drille	6,420.2	6,371.9	1,421.0	1,384.3	38.681	CC, ES
John 03-26 - Original Drilling - Original Drilling - As Drille	6,550.0	6,483.4	1,431.9	1,394.5	38.354	SF
Lamp H25-31 - Original Drilling - Original Drilling - As Dri	487.7	494.7	3,912.1	3,909.6	1,560.996	CC
Lamp H25-31 - Original Drilling - Original Drilling - As Dri	3,100.0	3,136.2	3,913.2	3,895.6	222.527	ES
Lamp H25-31 - Original Drilling - Original Drilling - As Dri	7,150.0	7,070.0	4,100.2	4,060.6	103.471	SF
Lamp H26-01 - Original Drilling - Original Drilling - As Dri	5,761.4	5,831.6	3,808.4	3,770.6	100.752	CC
Lamp H26-01 - Original Drilling - Original Drilling - As Dri	5,800.0	5,859.6	3,808.5	3,770.5	100.300	ES
Lamp H26-01 - Original Drilling - Original Drilling - As Dri	6,850.0	6,858.4	3,887.2	3,844.5	90.946	SF
Lamp H26-08 - Original Drilling - Original Drilling - As Dri	2,699.1	2,782.0	3,306.0	3,290.6	213.710	CC
Lamp H26-08 - Original Drilling - Original Drilling - As Dri	2,750.0	2,821.7	3,306.2	3,290.5	210.309	ES
Lamp H26-08 - Original Drilling - Original Drilling - As Dri	7,399.8	6,893.5	3,594.6	3,555.4	91.675	SF
Lamp H26-22 - Original Drilling - Original Drilling - As Dri	7,500.0	7,186.8	2,830.4	2,784.1	61.045	SF
Lamp H26-22 - Original Drilling - Original Drilling - As Dri	7,681.3	7,187.6	2,824.6	2,778.4	61.093	CC, ES
Moser 05-26 - Original Drilling - Original Drilling - As Drill	7,153.9	6,949.4	549.0	509.8	13.993	CC, ES, SF
Moser 41-27 - Original Drilling - Original Drilling - As Drill	937.0	908.6	822.7	817.7	165.589	CC, ES
Moser 41-27 - Original Drilling - Original Drilling - As Drill	6,650.0	6,701.6	1,311.2	1,271.1	32.683	SF
Moser H26-11 - Original Drilling - Original Drilling - As Dr	8,104.4	6,994.3	667.6	625.9	16.038	CC, ES, SF

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

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region Drilling - Sandbox	Local Co-ordinate Reference:	Well Hurley H35-774
Project:	Conceptual Wells	TVD Reference:	WELL @ 4852.0ft (Original Well Elev)
Reference Site:	DP 408	MD Reference:	WELL @ 4852.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	Grid
Reference Well:	Hurley H35-774	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 H26-12 - Wellbore #1 - Wellbore #1 - As Drilled	8,326.0	6,999.2	473.4	430.6	11.066	CC, ES
Moser H26-12 - Wellbore #1 - Wellbore #1 - As Drilled	8,400.0	7,001.2	479.1	435.8	11.063	SF
Moser H26-13 - Wellbore #1 - Wellbore #1 - As Drilled	9,635.9	7,002.3	519.0	466.9	9.964	CC, ES
Moser H26-13 - Wellbore #1 - Wellbore #1 - As Drilled	9,700.0	7,005.5	522.9	470.2	9.923	SF
Moser H26-14 - Original Drilling - Original Drilling - As Dr	9,833.5	7,057.7	1,013.7	959.8	18.807	CC, ES
Moser H26-14 - Original Drilling - Original Drilling - As Dr	9,900.0	7,057.0	1,015.9	961.6	18.718	SF
Moser H26-18D - Original Drilling - Original Drilling - As D	6,374.1	6,794.8	1,648.8	1,608.3	40.664	CC, ES
Moser H26-18D - Original Drilling - Original Drilling - As D	6,700.0	7,103.2	1,673.4	1,631.5	39.967	SF
Moser H26-24 - Original Drilling - Original Drilling - As Dr	8,819.9	7,001.4	1,329.2	1,283.3	28.986	CC, ES
Moser H26-24 - Original Drilling - Original Drilling - As Dr	9,000.0	7,004.0	1,341.3	1,294.5	28.651	SF
Moser H26-25 - Original Drilling - Original Drilling - As Dr	9,022.6	7,005.1	528.5	481.2	11.171	CC, ES, SF
Moser H26-27D - Original Drilling - Original Drilling - As D	6,404.1	6,540.6	3,338.3	3,295.4	77.951	CC, ES
Moser H26-27D - Original Drilling - Original Drilling - As D	6,700.0	6,830.4	3,373.9	3,329.9	76.662	SF
Moser H26-28D - Original Drilling - Original Drilling - As D	6,415.4	6,967.6	2,342.6	2,276.8	35.555	CC, ES
Moser H26-28D - Original Drilling - Original Drilling - As D	6,500.0	7,056.6	2,347.2	2,281.0	35.460	SF
Moser H26-29D - Original Drilling - Original Drilling - As D	6,418.3	7,360.0	1,911.3	1,821.8	21.357	CC, ES
Moser H26-29D - Original Drilling - Original Drilling - As D	6,500.0	7,446.3	1,916.8	1,826.8	21.297	SF
Moser, Wesley E. G. U. B1 (PA) - Original Drilling - Origin	9,315.9	7,002.0	119.5	-45.7	0.723	Level 1, CC, ES, SF
H Section 27						
HSR Moser 1-27 - Original Drilling - Original Drilling - As	6,452.9	6,350.0	2,135.7	2,099.1	58.310	CC, ES
HSR Moser 1-27 - Original Drilling - Original Drilling - As	6,700.0	6,564.3	2,168.6	2,130.9	57.545	SF
HSR Moser 16-27 - Original Drilling - Original Drilling - As	9,795.6	7,002.7	1,615.7	1,562.4	30.273	CC
HSR Moser 16-27 - Original Drilling - Original Drilling - As	9,800.0	7,002.7	1,615.7	1,562.3	30.249	ES
HSR Moser 16-27 - Original Drilling - Original Drilling - As	10,100.0	7,004.2	1,644.1	1,588.2	29.417	SF
Moser 09-27X (PA) - Original Drilling - Original Drilling - A	8,381.1	7,010.9	1,662.3	1,616.7	36.433	CC
Moser 09-27X (PA) - Original Drilling - Original Drilling - A	8,400.0	7,010.6	1,662.4	1,616.7	36.348	ES
Moser 09-27X (PA) - Original Drilling - Original Drilling - A	8,700.0	7,005.3	1,692.6	1,645.1	35.613	SF
Moser 24-27 - Original Drilling - Original Drilling - As Drill	850.9	818.9	2,044.3	2,039.8	459.325	CC
Moser 24-27 - Original Drilling - Original Drilling - As Drill	900.0	858.4	2,044.4	2,039.7	435.008	ES
Moser 24-27 - Original Drilling - Original Drilling - As Drill	8,200.0	7,047.4	2,439.4	2,395.8	56.020	SF
H Section 34						
Moser H34-09 - Wellbore #1 - Wellbore #1 - As Drilled	13,615.9	7,021.5	1,687.3	1,599.0	19.120	CC, ES
Moser H34-09 - Wellbore #1 - Wellbore #1 - As Drilled	13,800.0	7,022.0	1,697.3	1,607.4	18.886	SF
Moser H34-16 - Wellbore #1 - Wellbore #1 - As Drilled	14,864.6	7,008.6	1,693.3	1,593.1	16.912	CC, ES
Moser H34-16 - Wellbore #1 - Wellbore #1 - As Drilled	15,000.0	7,004.9	1,698.7	1,597.3	16.760	SF
Moser H34-31 - Wellbore #1 - Wellbore #1 - As Drilled	11,606.1	7,101.0	6,340.6	6,270.9	90.946	CC
Moser H34-31 - Wellbore #1 - Wellbore #1 - As Drilled	11,700.0	7,104.0	6,341.3	6,270.7	89.797	ES
Moser H34-31 - Wellbore #1 - Wellbore #1 - As Drilled	14,500.0	7,168.1	6,969.3	6,877.3	75.752	SF

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

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region Drilling - Sandbox	Local Co-ordinate Reference:	Well Hurley H35-774
Project:	Conceptual Wells	TVD Reference:	WELL @ 4852.0ft (Original Well Elev)
Reference Site:	DP 408	MD Reference:	WELL @ 4852.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	Grid
Reference Well:	Hurley H35-774	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Prelim - Rev 2	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
H Section 35						
Cannon Farms 01-35C - Original Drilling - Original Drillin	14,521.2	7,018.5	2,965.5	2,868.5	30.586	CC, ES
Cannon Farms 01-35C - Original Drilling - Original Drillin	15,000.0	7,010.7	3,003.9	2,903.7	29.989	SF
Cannon H35-03D - Original Drilling - Original Drilling - As	14,009.9	7,070.4	537.3	445.0	5.823	CC, ES, SF
Cannon H35-09 - Original Drilling - Original Drilling - As D	13,590.5	7,049.6	3,343.6	3,250.1	35.767	CC
Cannon H35-09 - Original Drilling - Original Drilling - As D	13,600.0	7,049.4	3,343.6	3,250.0	35.737	ES
Cannon H35-09 - Original Drilling - Original Drilling - As D	14,200.0	7,036.5	3,398.6	3,301.0	34.830	SF
Cannon H35-10 - Original Drilling - Original Drilling - As D	13,702.3	7,017.2	2,103.0	2,014.0	23.619	CC, ES
Cannon H35-10 - Original Drilling - Original Drilling - As D	14,000.0	7,016.2	2,124.0	2,033.1	23.355	SF
Cannon H35-11 - Original Drilling - Original Drilling - As D	13,587.9	7,048.9	1,033.3	945.2	11.727	CC
Cannon H35-11 - Original Drilling - Original Drilling - As D	13,600.0	7,049.0	1,033.3	945.1	11.717	ES, SF
Cannon H35-12 - Original Drilling - Original Drilling - As D	13,692.4	7,010.9	431.5	342.6	4.852	CC
Cannon H35-12 - Original Drilling - Original Drilling - As D	13,700.0	7,011.0	431.6	342.5	4.847	ES, SF
Cannon H35-13 - Wellbore #1 - Wellbore #1 - As Drilled	14,884.1	7,016.6	491.5	391.2	4.899	CC, ES
Cannon H35-13 - Wellbore #1 - Wellbore #1 - As Drilled	14,900.0	7,016.2	491.8	391.3	4.893	SF
Cannon H35-14 - Original Drilling - Original Drilling - As D	14,915.6	7,021.4	901.9	794.3	8.382	CC, ES, SF
Cannon H35-15 (PA) - Original Drilling - Original Drilling -	14,950.0	7,014.0	2,118.4	1,901.5	9.766	CC, ES
Cannon H35-15 (PA) - Original Drilling - Original Drilling -	15,100.0	7,014.0	2,123.7	1,905.7	9.741	SF
Cannon H35-20 - Original Drilling - Original Drilling - As D	13,091.5	7,025.5	166.3	83.0	1.996	CC, ES, SF
Cannon H35-21 - Original Drilling - Original Drilling - As D	13,170.7	7,011.7	1,588.1	1,504.1	18.907	CC, ES
Cannon H35-21 - Original Drilling - Original Drilling - As D	13,300.0	7,012.6	1,593.4	1,508.5	18.777	SF
Cannon H35-22 - Original Drilling - Original Drilling - As D	13,087.6	6,857.3	2,516.3	2,433.6	30.429	CC
Cannon H35-22 - Original Drilling - Original Drilling - As D	13,100.0	6,857.2	2,516.3	2,433.5	30.390	ES
Cannon H35-22 - Original Drilling - Original Drilling - As D	13,500.0	6,856.6	2,549.9	2,464.3	29.810	SF
Cannon H35-24 - Original Drilling - Original Drilling - As D	14,358.9	7,062.7	1,384.8	1,289.3	14.504	CC, ES
Cannon H35-24 - Original Drilling - Original Drilling - As D	14,500.0	7,063.9	1,392.0	1,295.7	14.463	SF
Cannon X02-27 - Original Drilling - Original Drilling - As D	15,432.8	7,006.0	2,540.0	2,434.5	24.070	CC, ES
Cannon X02-27 - Original Drilling - Original Drilling - As D	15,541.2	7,006.2	2,542.3	2,436.0	23.900	SF
Cannon X02-28 - Original Drilling - Original Drilling - As D	15,203.1	7,045.1	1,355.2	1,251.7	13.094	CC, ES
Cannon X02-28 - Original Drilling - Original Drilling - As D	15,300.0	7,045.2	1,358.7	1,254.6	13.055	SF
Cannon X02-29 - Original Drilling - Original Drilling - As D	15,288.8	7,037.4	30.0	-74.5	0.287	Level 1, CC, ES, SF
Foster 18-35 - Original Drilling - Original Drilling - As Drill	11,427.4	7,008.2	38.2	-29.6	0.564	Level 1, CC, ES, SF
Foster UPRR 31-35 #1 (PA) - Original Drilling - Original D	10,846.8	7,026.0	2,167.0	1,988.5	12.141	CC, ES
Foster UPRR 31-35 #1 (PA) - Original Drilling - Original D	11,000.0	7,026.0	2,172.4	1,992.8	12.093	SF
Foster UPRR 32-35 - Original Drilling - Original Drilling -	12,180.5	7,018.2	2,036.7	1,962.0	27.247	CC
Foster UPRR 32-35 - Original Drilling - Original Drilling -	12,200.0	7,018.3	2,036.8	1,961.9	27.191	ES
Foster UPRR 32-35 - Original Drilling - Original Drilling -	12,500.0	7,019.5	2,061.6	1,984.8	26.836	SF
Foster UPRR 41-35 - Original Drilling - Original Drilling -	11,066.3	7,006.7	3,495.2	3,421.1	47.198	CC
Foster UPRR 41-35 - Original Drilling - Original Drilling -	11,100.0	7,006.9	3,495.3	3,421.0	47.018	ES
Foster UPRR 41-35 - Original Drilling - Original Drilling -	12,000.0	7,011.8	3,617.7	3,537.0	44.815	SF
Foster UPRR 42-35 #2 - Original Drilling - Original Drillin	12,156.6	6,866.9	3,448.3	3,374.4	46.640	CC
Foster UPRR 42-35 #2 - Original Drilling - Original Drillin	12,200.0	6,867.5	3,448.6	3,374.3	46.407	ES
Foster UPRR 42-35 #2 - Original Drilling - Original Drillin	13,000.0	6,879.6	3,549.9	3,470.0	44.435	SF
HSR Foster 03-35 - Original Drilling - Original Drilling - A	11,063.6	7,003.7	926.3	861.8	14.377	CC, ES
HSR Foster 03-35 - Original Drilling - Original Drilling - A	11,100.0	7,002.6	927.0	862.3	14.340	SF
HSR Foster 04-35 - Wellbore #1 - Wellbore #1 - As Drille	10,763.2	6,944.0	747.3	685.8	12.140	CC, ES
HSR Foster 04-35 - Wellbore #1 - Wellbore #1 - As Drille	10,800.0	6,942.2	748.2	686.3	12.077	SF
HSR Foster 05-35 - Wellbore #1 - Wellbore #1 - As Drille	12,354.3	6,976.3	537.2	460.9	7.045	CC, ES
HSR Foster 05-35 - Wellbore #1 - Wellbore #1 - As Drille	12,400.0	6,976.8	539.1	462.4	7.028	SF
HSR Foster 06-35 - Original Drilling - Original Drilling - A	12,244.5	7,026.3	837.0	761.6	11.106	CC, ES
HSR Foster 06-35 - Original Drilling - Original Drilling - A	12,300.0	7,026.9	838.8	763.2	11.090	SF
UPRR 53 Pan Am Unit P1 - Original Drilling - Original Dri	11,652.6	7,026.8	2,940.0	2,870.1	42.065	CC
UPRR 53 Pan Am Unit P1 - Original Drilling - Original Dri	11,700.0	7,026.6	2,940.4	2,870.1	41.834	ES
UPRR 53 Pan Am Unit P1 - Original Drilling - Original Dri	12,300.0	7,024.6	3,010.4	2,936.1	40.491	SF

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

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region Drilling - Sandbox	Local Co-ordinate Reference:	Well Hurley H35-774
Project:	Conceptual Wells	TVD Reference:	WELL @ 4852.0ft (Original Well Elev)
Reference Site:	DP 408	MD Reference:	WELL @ 4852.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	Grid
Reference Well:	Hurley H35-774	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 UT P2 - Original Drilling - Original Drill	11,283.0	7,031.1	458.2	391.7	6.886	CC, ES
UPRR 53 Pan Am UT P2 - Original Drilling - Original Drill	11,300.0	7,030.9	458.5	391.9	6.886	SF

Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region Drilling - Sandbox	Local Co-ordinate Reference:	Well Hurley H35-774
Project:	Conceptual Wells	TVD Reference:	WELL @ 4852.0ft (Original Well Elev)
Reference Site:	DP 408	MD Reference:	WELL @ 4852.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	Grid
Reference Well:	Hurley H35-774	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Prelim - Rev 2	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
H Section 36						
Dechant 07-36 - Original Drilling - Original Drilling - As D	12,551.0	6,850.8	7,128.1	7,050.5	91.872	CC
Dechant 07-36 - Original Drilling - Original Drilling - As D	12,600.0	6,851.0	7,128.2	7,050.2	91.351	ES
Dechant 07-36 - Original Drilling - Original Drilling - As D	15,500.0	6,862.5	7,714.0	7,615.0	77.923	SF
Dechant 13N-1HZ - Original Drilling - Original Drilling - A	15,541.2	7,085.8	4,558.5	4,450.3	42.123	CC, ES, SF
Dechant 14C-1HZ - Original Drilling - Original Drilling - A	15,411.5	6,423.6	6,018.6	5,914.8	57.999	CC
Dechant 14C-1HZ - Original Drilling - Original Drilling - A	15,500.0	6,425.7	6,019.2	5,914.6	57.548	ES
Dechant 14C-1HZ - Original Drilling - Original Drilling - A	15,541.2	6,426.9	6,020.0	5,915.0	57.363	SF
Dechant 15-36 - Original Drilling - Original Drilling - As D	15,004.6	6,956.3	7,121.2	7,002.8	60.101	CC
Dechant 15-36 - Original Drilling - Original Drilling - As D	15,100.0	6,956.8	7,121.9	7,002.5	59.659	ES
Dechant 15-36 - Original Drilling - Original Drilling - As D	15,541.2	6,958.6	7,141.4	7,018.2	57.929	SF
Dechant 15C-1HZ - Original Drilling - Original Drilling - A	15,541.2	11,910.8	7,268.0	7,092.1	41.320	CC, ES, SF
Dechant 24-36 - Original Drilling - Original Drilling - As D	12,885.7	7,127.9	7,818.3	7,734.3	93.115	CC
Dechant 24-36 - Original Drilling - Original Drilling - As D	13,000.0	7,127.9	7,819.1	7,734.0	91.850	ES
Dechant 24-36 - Original Drilling - Original Drilling - As D	15,541.2	7,128.9	8,257.0	8,149.5	76.812	SF
Dechant 35N-E1HZ - Original Drilling - Original Drilling -	15,541.2	6,731.6	5,720.1	5,614.1	53.939	CC, ES, SF
Dechant 35N-W1HZ - Original Drilling - Original Drilling -	15,541.2	6,936.3	5,118.5	5,011.6	47.862	CC, ES, SF
Dechant 36N-W1HZ - Original Drilling - Original Drilling -	15,406.9	6,181.7	6,258.0	6,155.1	60.798	CC
Dechant 36N-W1HZ - Original Drilling - Original Drilling -	15,500.0	6,181.8	6,258.7	6,154.9	60.301	ES
Dechant 36N-W1HZ - Original Drilling - Original Drilling -	15,541.2	6,181.8	6,259.5	6,155.3	60.107	SF
Dechant 37N-E1HZ - Original Drilling - Original Drilling -	15,393.7	5,008.8	8,033.1	7,934.7	81.697	CC
Dechant 37N-E1HZ - Original Drilling - Original Drilling -	15,500.0	5,009.3	8,033.8	7,934.5	80.889	ES
Dechant 37N-E1HZ - Original Drilling - Original Drilling -	15,541.2	5,009.5	8,034.4	7,934.8	80.608	SF
Dechant 37N-W1HZ - Original Drilling - Original Drilling -	15,398.3	5,885.2	7,566.3	7,464.7	74.444	CC
Dechant 37N-W1HZ - Original Drilling - Original Drilling -	15,500.0	5,885.3	7,567.0	7,464.4	73.766	ES
Dechant 37N-W1HZ - Original Drilling - Original Drilling -	15,541.2	5,885.3	7,567.7	7,464.8	73.520	SF
Dechant State 16C-1HZ - Original Drilling - Original Drilling	15,541.2	12,676.7	8,461.7	8,275.7	45.491	CC, ES, SF
Dechant State 36N-E1HZ - Original Drilling - Original Drilling	15,541.2	11,737.2	6,989.7	6,814.2	39.834	CC, ES, SF
Dechant State 37N-E36HZ - Original Drilling - Original Drilling	15,166.8	11,401.3	8,209.0	8,044.8	50.011	CC
Dechant State 37N-E36HZ - Original Drilling - Original Drilling	15,200.0	11,401.3	8,209.0	8,044.6	49.928	ES
Dechant State 37N-E36HZ - Original Drilling - Original Drilling	15,541.2	11,401.3	8,217.5	8,050.4	49.184	SF
Dechant State 37N-W36HZ - Original Drilling - Original Drilling	15,183.5	11,489.0	7,613.1	7,447.1	45.858	CC
Dechant State 37N-W36HZ - Original Drilling - Original Drilling	15,300.0	11,489.0	7,614.0	7,446.8	45.544	ES
Dechant State 37N-W36HZ - Original Drilling - Original Drilling	15,541.2	11,489.0	7,621.5	7,452.1	44.979	SF
Dechant State 38N-1HZ - Original Drilling - Original Drilling	15,541.2	11,654.5	8,915.3	8,741.5	51.291	CC, ES, SF
Dechant State H36-11D - Original Drilling - Original Drilling	13,742.6	6,922.7	5,963.2	5,874.0	66.917	CC
Dechant State H36-11D - Original Drilling - Original Drilling	13,800.0	6,922.0	5,963.4	5,873.8	66.533	ES
Dechant State H36-11D - Original Drilling - Original Drilling	15,541.2	6,900.0	6,228.4	6,126.2	60.912	SF
Dechant State H36-18D - Original Drilling - Original Drilling	11,688.2	7,095.6	6,528.9	6,457.7	91.673	CC
Dechant State H36-18D - Original Drilling - Original Drilling	11,800.0	7,099.7	6,529.9	6,457.6	90.321	ES
Dechant State H36-18D - Original Drilling - Original Drilling	14,800.0	7,246.5	7,231.3	7,134.9	74.985	SF
Dechant State H36-19 - Original Drilling - Original Drilling	11,349.3	7,265.3	5,121.9	5,053.9	75.371	CC
Dechant State H36-19 - Original Drilling - Original Drilling	11,400.0	7,266.0	5,122.1	5,053.7	74.890	ES
Dechant State H36-19 - Original Drilling - Original Drilling	13,300.0	7,293.6	5,480.7	5,399.0	67.051	SF
Dechant State H36-20D - Original Drilling - Original Drilling	12,600.0	12,600.0	5,357.7	5,262.3	56.177	SF
Dechant State H36-20D - Original Drilling - Original Drilling	13,136.6	7,424.0	5,330.8	5,245.8	62.768	CC
Dechant State H36-20D - Original Drilling - Original Drilling	13,200.0	7,424.0	5,331.1	5,245.7	62.387	ES
Dechant State H36-21D - Original Drilling - Original Drilling	13,105.5	7,063.8	6,538.4	6,453.8	77.324	CC
Dechant State H36-21D - Original Drilling - Original Drilling	13,200.0	7,063.7	6,539.1	6,453.7	76.599	ES
Dechant State H36-21D - Original Drilling - Original Drilling	15,500.0	7,061.4	6,963.1	6,862.2	69.011	SF
Dechant State H36-24 - Original Drilling - Original Drilling	14,313.8	7,210.4	6,607.4	6,510.7	68.376	CC
Dechant State H36-24 - Original Drilling - Original Drilling	14,400.0	7,209.1	6,607.9	6,510.5	67.820	ES
Dechant State H36-24 - Original Drilling - Original Drilling	15,541.2	7,194.1	6,720.4	6,613.4	62.780	SF
Dechant State H36-31D - Original Drilling - Original Drilling	11,696.5	7,104.4	4,119.8	4,049.3	58.375	CC

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

Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region Drilling - Sandbox	Local Co-ordinate Reference:	Well Hurley H35-774
Project:	Conceptual Wells	TVD Reference:	WELL @ 4852.0ft (Original Well Elev)
Reference Site:	DP 408	MD Reference:	WELL @ 4852.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	Grid
Reference Well:	Hurley H35-774	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
H Section 36						
Offset Well - Wellbore - Design						
Dechant State H36-31D - Original Drilling - Original Drilling	11,700.0	7,104.4	4,119.8	4,049.2	58.352	ES
Dechant State H36-31D - Original Drilling - Original Drilling	12,900.0	7,113.9	4,292.0	4,213.4	54.566	SF
Dechant State H36-32D - Original Drilling - Original Drilling	12,949.1	7,077.6	4,103.4	4,020.4	49.468	CC
Dechant State H36-32D - Original Drilling - Original Drilling	13,000.0	7,078.2	4,103.7	4,020.3	49.189	ES
Dechant State H36-32D - Original Drilling - Original Drilling	14,000.0	7,090.7	4,235.8	4,144.9	46.597	SF
Dechant State H36-33 - Original Drilling - Original Drilling	14,165.5	7,460.6	4,142.4	4,046.0	42.984	CC
Dechant State H36-33 - Original Drilling - Original Drilling	14,200.0	7,461.2	4,142.5	4,045.8	42.845	ES
Dechant State H36-33 - Original Drilling - Original Drilling	15,300.0	15,300.0	4,295.0	4,163.2	32.606	SF
HSR Dechant State 02-36 - Original Drilling - Original Drilling	10,797.6	6,859.7	7,078.1	7,016.6	115.046	CC
HSR Dechant State 02-36 - Original Drilling - Original Drilling	10,900.0	6,862.7	7,078.8	7,016.4	113.407	ES
HSR Dechant State 02-36 - Original Drilling - Original Drilling	14,400.0	6,934.5	7,941.7	7,854.4	91.018	SF
HSR Dechant/State 07-36 (PA) - Original Drilling - Original Drilling	11,989.8	6,979.0	7,667.0	7,478.8	40.734	CC
HSR Dechant/State 07-36 (PA) - Original Drilling - Original Drilling	12,100.0	6,979.0	7,667.8	7,478.6	40.526	ES
HSR Dechant/State 07-36 (PA) - Original Drilling - Original Drilling	14,100.0	6,979.0	7,952.2	7,746.9	38.747	SF
Spike State GWS H36-03 - Original Drilling - Original Drilling	10,951.0	7,050.2	6,158.5	6,094.8	96.800	CC
Spike State GWS H36-03 - Original Drilling - Original Drilling	11,000.0	7,052.6	6,158.6	6,094.6	96.151	ES
Spike State GWS H36-03 - Original Drilling - Original Drilling	13,800.0	7,187.7	6,784.2	6,700.1	80.648	SF
Spike State GWS H36-04 - Original Drilling - Original Drilling	10,787.7	7,085.7	4,655.8	4,584.5	65.307	CC
Spike State GWS H36-04 - Original Drilling - Original Drilling	10,800.0	7,085.6	4,655.9	4,584.5	65.213	ES
Spike State GWS H36-04 - Original Drilling - Original Drilling	12,400.0	7,073.9	4,927.1	4,844.4	59.608	SF
Spike State GWS H36-13 - Original Drilling - Original Drilling	15,116.4	6,600.0	4,544.9	4,444.0	45.071	CC, ES
Spike State GWS H36-13 - Original Drilling - Original Drilling	15,541.2	6,600.0	4,564.7	4,460.3	43.741	SF
Spike State GWS H36-14 - Original Drilling - Original Drilling	14,000.0	14,000.0	6,319.1	6,203.3	54.573	SF
Spike State GWS H36-14 - Original Drilling - Original Drilling	15,101.6	6,900.0	6,222.5	6,120.5	60.995	CC
Spike State GWS H36-14 - Original Drilling - Original Drilling	15,200.0	6,900.0	6,223.3	6,120.4	60.470	ES
Spike State H36-02J - Original Drilling - Original Drilling	12,010.4	6,926.4	5,606.2	5,501.4	53.479	CC
Spike State H36-02J - Original Drilling - Original Drilling	12,100.0	6,928.0	5,606.9	5,501.3	53.060	ES
Spike State H36-02J - Original Drilling - Original Drilling	13,800.0	6,957.3	5,884.9	5,765.8	49.400	SF
Spike State H36-05 - Original Drilling - Original Drilling - A	12,189.0	7,162.8	4,596.6	4,521.3	61.011	CC
Spike State H36-05 - Original Drilling - Original Drilling - A	12,200.0	7,162.8	4,596.6	4,521.2	60.933	ES
Spike State H36-05 - Original Drilling - Original Drilling - A	13,600.0	7,158.4	4,808.3	4,723.0	56.345	SF
Spike State H36-11J - Original Drilling - Original Drilling	14,347.4	6,959.4	5,373.7	5,278.8	56.573	CC
Spike State H36-11J - Original Drilling - Original Drilling	14,400.0	6,958.4	5,374.0	5,278.5	56.295	ES
Spike State H36-11J - Original Drilling - Original Drilling	15,541.2	6,935.5	5,504.7	5,400.7	52.942	SF
Spike State H36-12 - Original Drilling - Original Drilling - A	13,458.1	7,000.5	4,491.0	4,404.3	51.808	CC
Spike State H36-12 - Original Drilling - Original Drilling - A	13,500.0	7,000.2	4,491.2	4,404.1	51.589	ES
Spike State H36-12 - Original Drilling - Original Drilling - A	14,600.0	6,990.7	4,633.9	4,539.0	48.849	SF

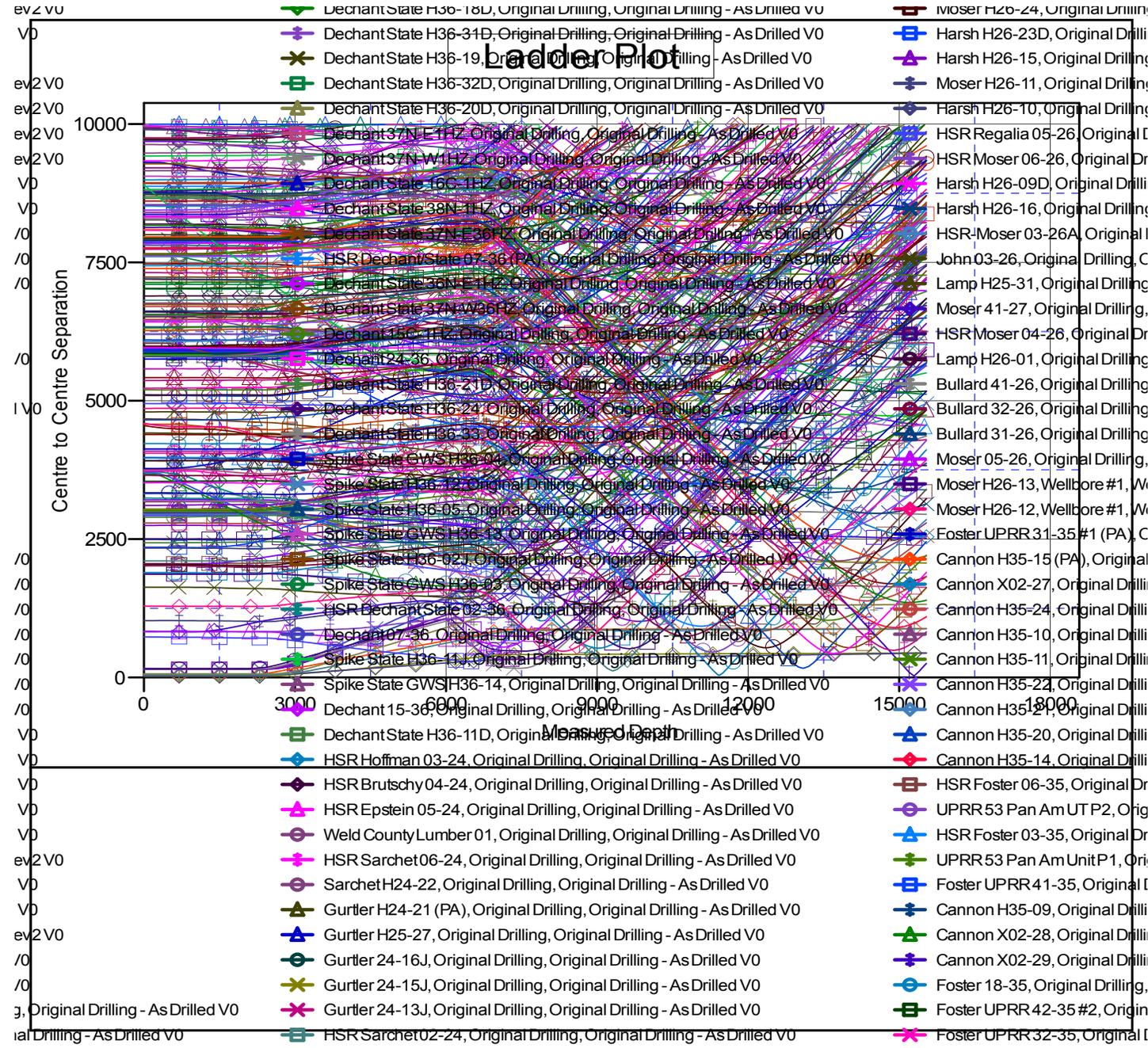
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Noble Energy, Inc.

Anticollision Summary Report

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Project:	Conceptual Wells	TVD Reference:	WELL @ 4852.0ft (Original Well Elev)
Reference Site:	DP 408	MD Reference:	WELL @ 4852.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	Grid
Reference Well:	Hurley H35-774	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Prelim - Rev 2	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4852.0ft (Original Well Elev) Coordinates are relative to: Hurley H35-774
 Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Northern Zone
 Central Meridian is -105.500000 Grid Convergence at Surface is: 0.56°



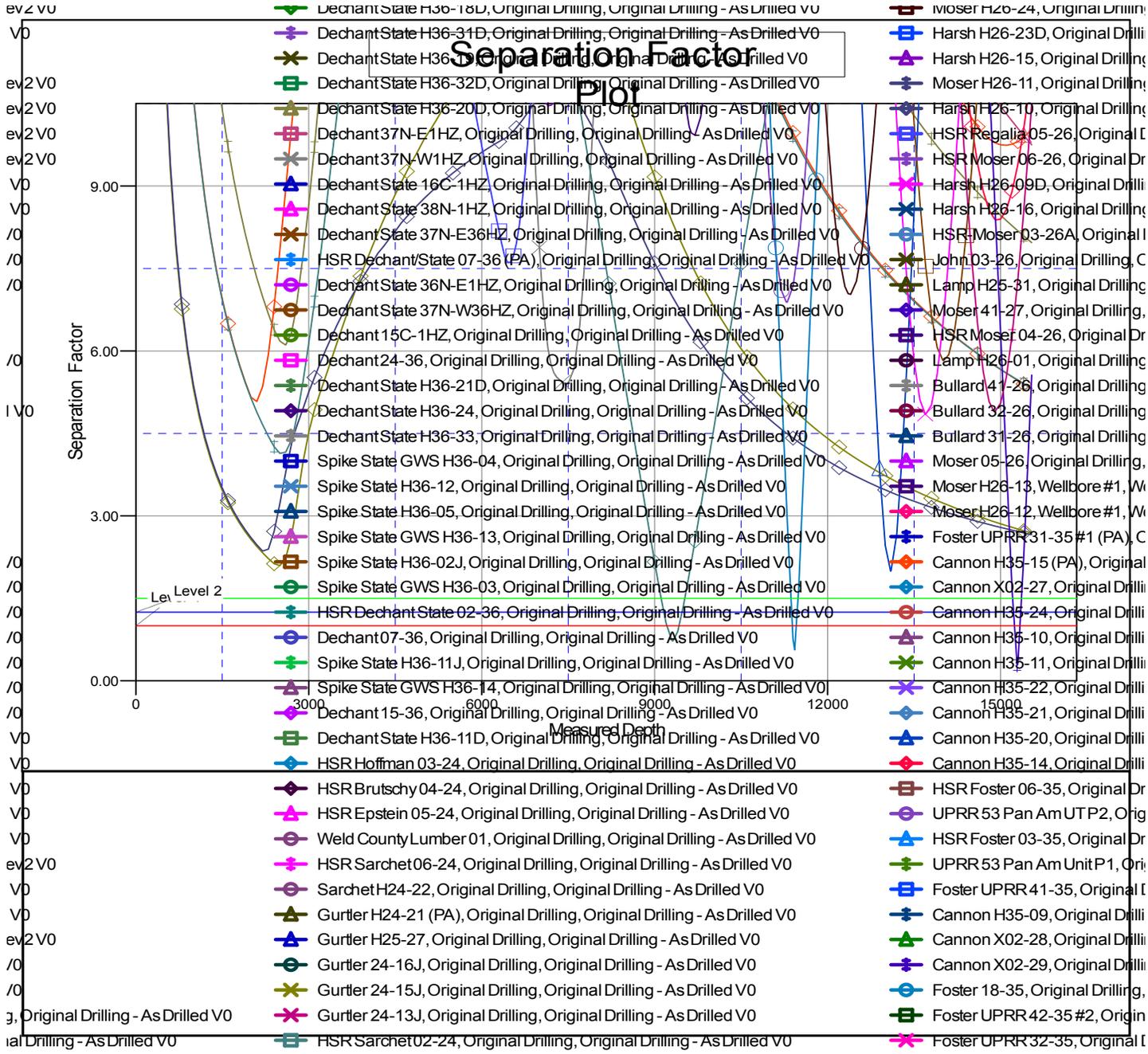
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