

Project: Mustang
 Site: H Section 26
 Well: Hurley H35-746
 Wellbore: Wellbore #1
 Design: Plan #2

Northern Region - DJ Basin

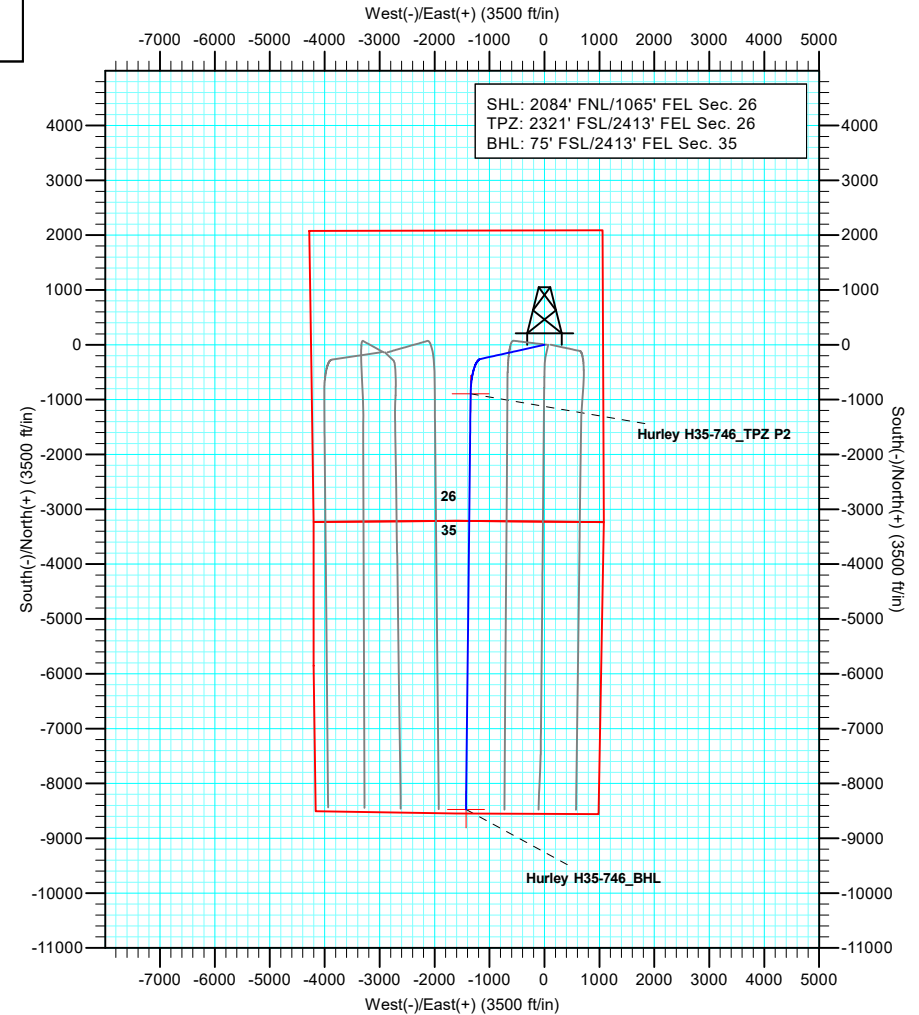
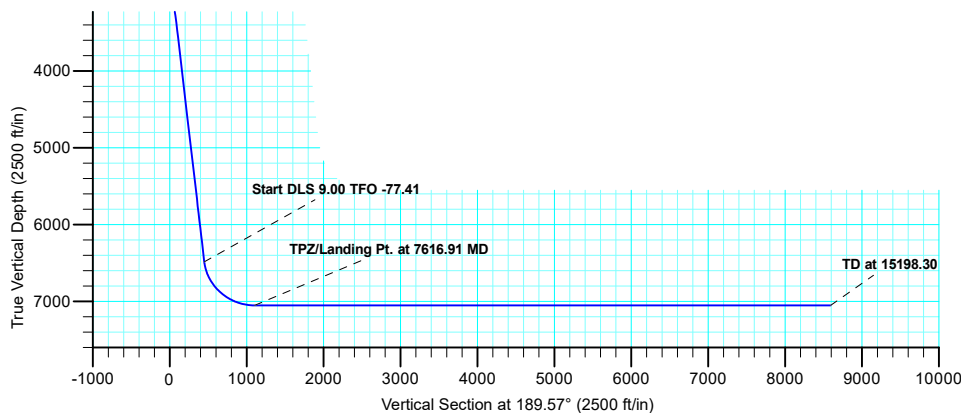
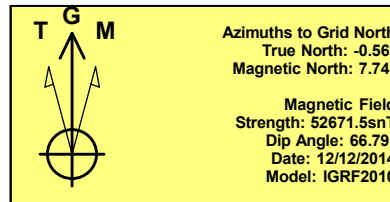
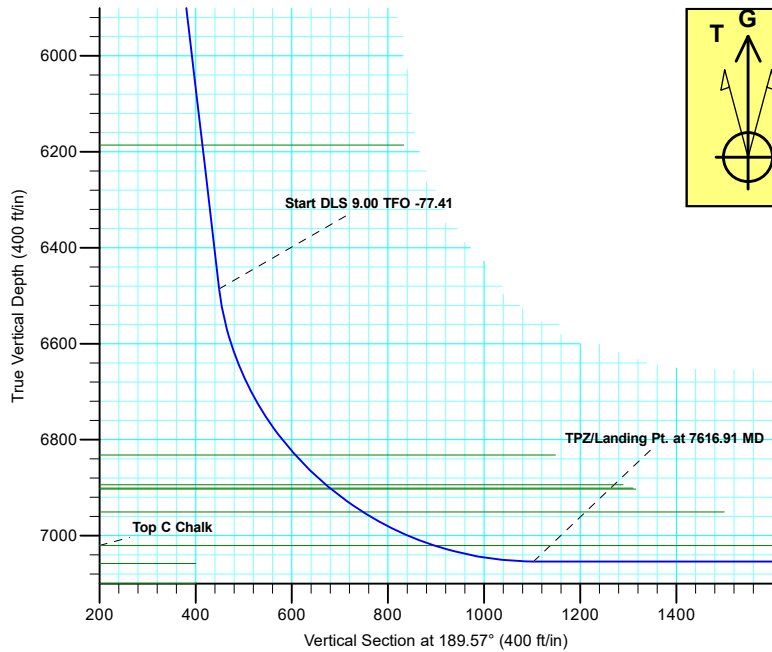
Geodetic System: US State Plane 1983
 Datum: North American Datum 1983
 Ellipsoid: GRS 1980
 Zone: Colorado Northern Zone
 System Datum: Mean Sea Level

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	2200.00	0.00	0.00	2200.00	0.00	0.00	0.00	0.00	0.00
3	3061.05	17.22	257.47	3048.14	-27.86	-125.37	2.00	257.47	48.31
4	6659.86	17.22	257.47	6485.62	-258.95	-1165.47	0.00	0.00	449.06
5	7616.91	90.00	180.64	7054.00	-892.18	-1344.05	9.00	-77.41	1103.17
6	15198.30	90.00	180.64	7054.00	-8473.10	-1428.22	0.00	0.00	8592.62

WELL DETAILS: Hurley H35-746

+N/-S	+E/-W	Ground Level: Northing	Ground Level: Easting	Ground Level: Latitude	Ground Level: Longitude	Slot
0.00	0.00	1316110.58	3244419.39	40.1978099	-104.6250000	



Plan: Plan #2 (Hurley H35-746/Wellbore #1)
 Created By: Shelly C. Peterkin Date: 15:53, May 28 2019

Northern Region - DJ Basin

Mustang

H Section 26

Hurley H35-746

Wellbore #1

Plan: Plan #2

Standard Planning Report

28 May, 2019

Noble Energy, Inc.

Planning Report

Database:	EDMP	Local Co-ordinate Reference:	Well Hurley H35-746
Company:	Northern Region - DJ Basin	TVD Reference:	WELL @ 4884.00ft (Original Well Elev)
Project:	Mustang	MD Reference:	WELL @ 4884.00ft (Original Well Elev)
Site:	H Section 26	North Reference:	Grid
Well:	Hurley H35-746	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2		

Project	Mustang, Weld County Colorado		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site	H Section 26				
Site Position:	Northing:	1,313,365.35 usft	Latitude:	40.1903751	
From: Map	Easting:	3,240,670.89 usft	Longitude:	-104.6385139	
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.56 °

Well	Hurley H35-746					
Well Position	+N/-S	2,745.23 ft	Northing:	1,316,110.58 usft	Latitude:	40.1978100
	+E/-W	3,748.51 ft	Easting:	3,244,419.40 usft	Longitude:	-104.6250000
Position Uncertainty		0.00 ft	Wellhead Elevation:	0.00 ft	Ground Level:	4,854.00 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	12/12/2014	8.30	66.79	52,671.52983712

Design	Plan #2			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	189.57

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,061.05	17.22	257.47	3,048.14	-27.86	-125.37	2.00	2.00	0.00	257.47	
6,659.86	17.22	257.47	6,485.62	-258.95	-1,165.47	0.00	0.00	0.00	0.00	
7,616.91	90.00	180.64	7,054.00	-892.18	-1,344.05	9.00	7.60	-8.03	-77.41	Hurley H35-746_TPZ
15,198.30	90.00	180.64	7,054.00	-8,473.10	-1,428.22	0.00	0.00	0.00	0.00	Hurley H35-746_BHL

Noble Energy, Inc.

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Project:	Mustang	MD Reference:	WELL @ 4884.00ft (Original Well Elev)
Site:	H Section 26	North Reference:	Grid
Well:	Hurley H35-746	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
635.00	0.00	0.00	635.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pierre										
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
787.00	0.00	0.00	787.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Upper Pierre Aquifer Top										
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,675.00	0.00	0.00	1,675.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Upper Pierre Aquifer Base										
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00										
2,300.00	2.00	257.47	2,299.98	-0.38	-1.70	0.66	2.00	2.00	2.00	0.00
2,400.00	4.00	257.47	2,399.84	-1.51	-6.81	2.62	2.00	2.00	2.00	0.00
2,500.00	6.00	257.47	2,499.45	-3.40	-15.32	5.90	2.00	2.00	2.00	0.00
2,600.00	8.00	257.47	2,598.70	-6.05	-27.22	10.49	2.00	2.00	2.00	0.00
2,700.00	10.00	257.47	2,697.47	-9.44	-42.49	16.37	2.00	2.00	2.00	0.00
2,800.00	12.00	257.47	2,795.62	-13.58	-61.11	23.55	2.00	2.00	2.00	0.00
2,900.00	14.00	257.47	2,893.06	-18.46	-83.07	32.01	2.00	2.00	2.00	0.00
3,000.00	16.00	257.47	2,989.64	-24.07	-108.34	41.74	2.00	2.00	2.00	0.00
3,061.05	17.22	257.47	3,048.14	-27.86	-125.37	48.31	2.00	2.00	2.00	0.00
Start 3598.81 hold at 3061.05 MD										
3,100.00	17.22	257.47	3,085.35	-30.36	-136.63	52.64	0.00	0.00	0.00	0.00
3,200.00	17.22	257.47	3,180.87	-36.78	-165.53	63.78	0.00	0.00	0.00	0.00
3,300.00	17.22	257.47	3,276.38	-43.20	-194.43	74.92	0.00	0.00	0.00	0.00
3,400.00	17.22	257.47	3,371.90	-49.62	-223.33	86.05	0.00	0.00	0.00	0.00
3,500.00	17.22	257.47	3,467.42	-56.04	-252.23	97.19	0.00	0.00	0.00	0.00
3,600.00	17.22	257.47	3,562.93	-62.46	-281.13	108.32	0.00	0.00	0.00	0.00
3,700.00	17.22	257.47	3,658.45	-68.89	-310.03	119.46	0.00	0.00	0.00	0.00
3,800.00	17.22	257.47	3,753.97	-75.31	-338.94	130.59	0.00	0.00	0.00	0.00
3,900.00	17.22	257.47	3,849.48	-81.73	-367.84	141.73	0.00	0.00	0.00	0.00
3,996.86	17.22	257.47	3,942.00	-87.95	-395.83	152.52	0.00	0.00	0.00	0.00
Parkman										
4,000.00	17.22	257.47	3,945.00	-88.15	-396.74	152.87	0.00	0.00	0.00	0.00
4,100.00	17.22	257.47	4,040.52	-94.57	-425.64	164.00	0.00	0.00	0.00	0.00

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Wellbore:	Wellbore #1		
Design:	Plan #2		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
4,200.00	17.22	257.47	4,136.04	-100.99	-454.54	175.14	0.00	0.00	0.00	
4,300.00	17.22	257.47	4,231.55	-107.41	-483.44	186.27	0.00	0.00	0.00	
4,400.00	17.22	257.47	4,327.07	-113.83	-512.34	197.41	0.00	0.00	0.00	
4,500.00	17.22	257.47	4,422.59	-120.26	-541.24	208.55	0.00	0.00	0.00	
4,600.00	17.22	257.47	4,518.10	-126.68	-570.14	219.68	0.00	0.00	0.00	
4,615.60	17.22	257.47	4,533.00	-127.68	-574.65	221.42	0.00	0.00	0.00	
Sussex										
4,700.00	17.22	257.47	4,613.62	-133.10	-599.05	230.82	0.00	0.00	0.00	
4,800.00	17.22	257.47	4,709.14	-139.52	-627.95	241.95	0.00	0.00	0.00	
4,900.00	17.22	257.47	4,804.65	-145.94	-656.85	253.09	0.00	0.00	0.00	
5,000.00	17.22	257.47	4,900.17	-152.36	-685.75	264.22	0.00	0.00	0.00	
5,100.00	17.22	257.47	4,995.69	-158.78	-714.65	275.36	0.00	0.00	0.00	
5,200.00	17.22	257.47	5,091.20	-165.21	-743.55	286.50	0.00	0.00	0.00	
5,300.00	17.22	257.47	5,186.72	-171.63	-772.45	297.63	0.00	0.00	0.00	
5,329.61	17.22	257.47	5,215.00	-173.53	-781.01	300.93	0.00	0.00	0.00	
Shannon										
5,400.00	17.22	257.47	5,282.24	-178.05	-801.35	308.77	0.00	0.00	0.00	
5,500.00	17.22	257.47	5,377.76	-184.47	-830.25	319.90	0.00	0.00	0.00	
5,600.00	17.22	257.47	5,473.27	-190.89	-859.15	331.04	0.00	0.00	0.00	
5,700.00	17.22	257.47	5,568.79	-197.31	-888.06	342.18	0.00	0.00	0.00	
5,800.00	17.22	257.47	5,664.31	-203.73	-916.96	353.31	0.00	0.00	0.00	
5,900.00	17.22	257.47	5,759.82	-210.16	-945.86	364.45	0.00	0.00	0.00	
6,000.00	17.22	257.47	5,855.34	-216.58	-974.76	375.58	0.00	0.00	0.00	
6,100.00	17.22	257.47	5,950.86	-223.00	-1,003.66	386.72	0.00	0.00	0.00	
6,200.00	17.22	257.47	6,046.37	-229.42	-1,032.56	397.85	0.00	0.00	0.00	
6,300.00	17.22	257.47	6,141.89	-235.84	-1,061.46	408.99	0.00	0.00	0.00	
6,346.18	17.22	257.47	6,186.00	-238.81	-1,074.81	414.13	0.00	0.00	0.00	
Teepee Buttes										
6,400.00	17.22	257.47	6,237.41	-242.26	-1,090.36	420.13	0.00	0.00	0.00	
6,500.00	17.22	257.47	6,332.93	-248.68	-1,119.26	431.26	0.00	0.00	0.00	
6,600.00	17.22	257.47	6,428.44	-255.11	-1,148.16	442.40	0.00	0.00	0.00	
6,659.86	17.22	257.47	6,485.62	-258.95	-1,165.47	449.06	0.00	0.00	0.00	
Start DLS 9.00 TFO -77.41										
6,700.00	18.34	246.20	6,523.85	-262.79	-1,177.05	454.77	9.00	2.79	-28.08	
6,750.00	20.53	234.35	6,571.02	-271.08	-1,191.38	465.33	9.00	4.37	-23.71	
6,800.00	23.36	224.96	6,617.41	-283.20	-1,205.51	479.64	9.00	5.67	-18.77	
6,850.00	26.63	217.64	6,662.73	-299.10	-1,219.37	497.62	9.00	6.55	-14.65	
6,900.00	30.20	211.87	6,706.70	-318.67	-1,232.86	519.15	9.00	7.14	-11.54	
6,950.00	33.98	207.24	6,749.06	-341.78	-1,245.90	544.11	9.00	7.55	-9.25	
7,000.00	37.89	203.46	6,789.55	-368.30	-1,258.41	572.35	9.00	7.83	-7.57	
7,050.00	41.91	200.29	6,827.90	-398.07	-1,270.32	603.67	9.00	8.03	-6.34	
7,055.53	42.36	199.97	6,832.00	-401.55	-1,271.60	607.32	9.00	8.12	-5.78	
Sharon Springs										
7,100.00	46.00	197.58	6,863.89	-430.89	-1,281.55	637.90	9.00	8.19	-5.36	
7,144.88	49.72	195.46	6,894.00	-462.78	-1,290.99	670.93	9.00	8.29	-4.74	
Top A Chalk										
7,150.00	50.14	195.23	6,897.30	-466.57	-1,292.03	674.83	9.00	8.33	-4.44	
7,155.81	50.63	194.98	6,901.00	-470.88	-1,293.19	679.28	9.00	8.34	-4.38	
Top A Marl										
7,158.97	50.89	194.84	6,903.00	-473.25	-1,293.82	681.72	9.00	8.35	-4.34	
Top B Chalk										
7,200.00	54.33	193.15	6,927.91	-504.88	-1,301.69	714.22	9.00	8.38	-4.12	
7,241.37	57.82	191.58	6,951.00	-538.41	-1,309.03	748.50	9.00	8.44	-3.78	

Noble Energy, Inc.

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Project:	Mustang	MD Reference:	WELL @ 4884.00ft (Original Well Elev)
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Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
Top B Marl									
7,250.00	58.55	191.27	6,955.55	-545.60	-1,310.49	755.83	9.00	8.46	-3.60
7,300.00	62.80	189.56	6,980.03	-588.46	-1,318.35	799.40	9.00	8.49	-3.42
7,350.00	67.06	187.97	7,001.21	-633.21	-1,325.24	844.68	9.00	8.53	-3.17
7,400.00	71.34	186.49	7,018.96	-679.57	-1,331.11	891.37	9.00	8.56	-2.98
7,406.46	71.90	186.30	7,021.00	-685.66	-1,331.80	897.48	9.00	8.57	-2.89
Top C Chalk									
7,450.00	75.63	185.07	7,033.17	-727.25	-1,335.93	939.19	9.00	8.58	-2.82
7,500.00	79.93	183.71	7,043.75	-775.96	-1,339.67	987.84	9.00	8.60	-2.72
7,550.00	84.24	182.38	7,050.64	-825.40	-1,342.29	1,037.03	9.00	8.61	-2.65
7,600.00	88.54	181.08	7,053.79	-875.27	-1,343.80	1,086.45	9.00	8.61	-2.61
7,616.91	90.00	180.64	7,054.00	-892.18	-1,344.05	1,103.17	9.00	8.62	-2.60
TPZ/Landing Pt. at 7616.91 MD									
7,700.00	90.00	180.64	7,054.00	-975.26	-1,344.97	1,185.25	0.00	0.00	0.00
7,800.00	90.00	180.64	7,054.00	-1,075.25	-1,346.08	1,284.04	0.00	0.00	0.00
7,900.00	90.00	180.64	7,054.00	-1,175.25	-1,347.19	1,382.82	0.00	0.00	0.00
8,000.00	90.00	180.64	7,054.00	-1,275.24	-1,348.30	1,481.61	0.00	0.00	0.00
8,100.00	90.00	180.64	7,054.00	-1,375.24	-1,349.41	1,580.40	0.00	0.00	0.00
8,200.00	90.00	180.64	7,054.00	-1,475.23	-1,350.52	1,679.19	0.00	0.00	0.00
8,300.00	90.00	180.64	7,054.00	-1,575.22	-1,351.63	1,777.97	0.00	0.00	0.00
8,400.00	90.00	180.64	7,054.00	-1,675.22	-1,352.74	1,876.76	0.00	0.00	0.00
8,500.00	90.00	180.64	7,054.00	-1,775.21	-1,353.85	1,975.55	0.00	0.00	0.00
8,600.00	90.00	180.64	7,054.00	-1,875.21	-1,354.96	2,074.34	0.00	0.00	0.00
8,700.00	90.00	180.64	7,054.00	-1,975.20	-1,356.07	2,173.12	0.00	0.00	0.00
8,800.00	90.00	180.64	7,054.00	-2,075.19	-1,357.18	2,271.91	0.00	0.00	0.00
8,900.00	90.00	180.64	7,054.00	-2,175.19	-1,358.29	2,370.70	0.00	0.00	0.00
9,000.00	90.00	180.64	7,054.00	-2,275.18	-1,359.40	2,469.48	0.00	0.00	0.00
9,100.00	90.00	180.64	7,054.00	-2,375.17	-1,360.51	2,568.27	0.00	0.00	0.00
9,200.00	90.00	180.64	7,054.00	-2,475.17	-1,361.62	2,667.06	0.00	0.00	0.00
9,300.00	90.00	180.64	7,054.00	-2,575.16	-1,362.73	2,765.85	0.00	0.00	0.00
9,400.00	90.00	180.64	7,054.00	-2,675.16	-1,363.84	2,864.63	0.00	0.00	0.00
9,500.00	90.00	180.64	7,054.00	-2,775.15	-1,364.95	2,963.42	0.00	0.00	0.00
9,600.00	90.00	180.64	7,054.00	-2,875.14	-1,366.06	3,062.21	0.00	0.00	0.00
9,700.00	90.00	180.64	7,054.00	-2,975.14	-1,367.18	3,161.00	0.00	0.00	0.00
9,800.00	90.00	180.64	7,054.00	-3,075.13	-1,368.29	3,259.78	0.00	0.00	0.00
9,900.00	90.00	180.64	7,054.00	-3,175.13	-1,369.40	3,358.57	0.00	0.00	0.00
10,000.00	90.00	180.64	7,054.00	-3,275.12	-1,370.51	3,457.36	0.00	0.00	0.00
10,100.00	90.00	180.64	7,054.00	-3,375.11	-1,371.62	3,556.15	0.00	0.00	0.00
10,200.00	90.00	180.64	7,054.00	-3,475.11	-1,372.73	3,654.93	0.00	0.00	0.00
10,300.00	90.00	180.64	7,054.00	-3,575.10	-1,373.84	3,753.72	0.00	0.00	0.00
10,400.00	90.00	180.64	7,054.00	-3,675.09	-1,374.95	3,852.51	0.00	0.00	0.00
10,500.00	90.00	180.64	7,054.00	-3,775.09	-1,376.06	3,951.30	0.00	0.00	0.00
10,600.00	90.00	180.64	7,054.00	-3,875.08	-1,377.17	4,050.08	0.00	0.00	0.00
10,700.00	90.00	180.64	7,054.00	-3,975.08	-1,378.28	4,148.87	0.00	0.00	0.00
10,800.00	90.00	180.64	7,054.00	-4,075.07	-1,379.39	4,247.66	0.00	0.00	0.00
10,900.00	90.00	180.64	7,054.00	-4,175.06	-1,380.50	4,346.45	0.00	0.00	0.00
11,000.00	90.00	180.64	7,054.00	-4,275.06	-1,381.61	4,445.23	0.00	0.00	0.00
11,100.00	90.00	180.64	7,054.00	-4,375.05	-1,382.72	4,544.02	0.00	0.00	0.00
11,200.00	90.00	180.64	7,054.00	-4,475.05	-1,383.83	4,642.81	0.00	0.00	0.00
11,300.00	90.00	180.64	7,054.00	-4,575.04	-1,384.94	4,741.60	0.00	0.00	0.00
11,400.00	90.00	180.64	7,054.00	-4,675.03	-1,386.05	4,840.38	0.00	0.00	0.00
11,500.00	90.00	180.64	7,054.00	-4,775.03	-1,387.16	4,939.17	0.00	0.00	0.00
11,600.00	90.00	180.64	7,054.00	-4,875.02	-1,388.27	5,037.96	0.00	0.00	0.00

Noble Energy, Inc.

Planning Report

Database:	EDMP	Local Co-ordinate Reference:	Well Hurley H35-746
Company:	Northern Region - DJ Basin	TVD Reference:	WELL @ 4884.00ft (Original Well Elev)
Project:	Mustang	MD Reference:	WELL @ 4884.00ft (Original Well Elev)
Site:	H Section 26	North Reference:	Grid
Well:	Hurley H35-746	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
11,700.00	90.00	180.64	7,054.00	-4,975.01	-1,389.38	5,136.75	0.00	0.00	0.00
11,800.00	90.00	180.64	7,054.00	-5,075.01	-1,390.49	5,235.53	0.00	0.00	0.00
11,900.00	90.00	180.64	7,054.00	-5,175.00	-1,391.60	5,334.32	0.00	0.00	0.00
12,000.00	90.00	180.64	7,054.00	-5,275.00	-1,392.71	5,433.11	0.00	0.00	0.00
12,100.00	90.00	180.64	7,054.00	-5,374.99	-1,393.82	5,531.89	0.00	0.00	0.00
12,200.00	90.00	180.64	7,054.00	-5,474.98	-1,394.93	5,630.68	0.00	0.00	0.00
12,300.00	90.00	180.64	7,054.00	-5,574.98	-1,396.04	5,729.47	0.00	0.00	0.00
12,400.00	90.00	180.64	7,054.00	-5,674.97	-1,397.15	5,828.26	0.00	0.00	0.00
12,500.00	90.00	180.64	7,054.00	-5,774.97	-1,398.26	5,927.04	0.00	0.00	0.00
12,600.00	90.00	180.64	7,054.00	-5,874.96	-1,399.37	6,025.83	0.00	0.00	0.00
12,700.00	90.00	180.64	7,054.00	-5,974.95	-1,400.48	6,124.62	0.00	0.00	0.00
12,800.00	90.00	180.64	7,054.00	-6,074.95	-1,401.59	6,223.41	0.00	0.00	0.00
12,900.00	90.00	180.64	7,054.00	-6,174.94	-1,402.70	6,322.19	0.00	0.00	0.00
13,000.00	90.00	180.64	7,054.00	-6,274.93	-1,403.81	6,420.98	0.00	0.00	0.00
13,100.00	90.00	180.64	7,054.00	-6,374.93	-1,404.92	6,519.77	0.00	0.00	0.00
13,200.00	90.00	180.64	7,054.00	-6,474.92	-1,406.03	6,618.56	0.00	0.00	0.00
13,300.00	90.00	180.64	7,054.00	-6,574.92	-1,407.14	6,717.34	0.00	0.00	0.00
13,400.00	90.00	180.64	7,054.00	-6,674.91	-1,408.25	6,816.13	0.00	0.00	0.00
13,500.00	90.00	180.64	7,054.00	-6,774.90	-1,409.36	6,914.92	0.00	0.00	0.00
13,600.00	90.00	180.64	7,054.00	-6,874.90	-1,410.47	7,013.71	0.00	0.00	0.00
13,700.00	90.00	180.64	7,054.00	-6,974.89	-1,411.58	7,112.49	0.00	0.00	0.00
13,800.00	90.00	180.64	7,054.00	-7,074.89	-1,412.69	7,211.28	0.00	0.00	0.00
13,900.00	90.00	180.64	7,054.00	-7,174.88	-1,413.80	7,310.07	0.00	0.00	0.00
14,000.00	90.00	180.64	7,054.00	-7,274.87	-1,414.91	7,408.86	0.00	0.00	0.00
14,100.00	90.00	180.64	7,054.00	-7,374.87	-1,416.02	7,507.64	0.00	0.00	0.00
14,200.00	90.00	180.64	7,054.00	-7,474.86	-1,417.13	7,606.43	0.00	0.00	0.00
14,300.00	90.00	180.64	7,054.00	-7,574.85	-1,418.24	7,705.22	0.00	0.00	0.00
14,400.00	90.00	180.64	7,054.00	-7,674.85	-1,419.35	7,804.01	0.00	0.00	0.00
14,500.00	90.00	180.64	7,054.00	-7,774.84	-1,420.46	7,902.79	0.00	0.00	0.00
14,600.00	90.00	180.64	7,054.00	-7,874.84	-1,421.57	8,001.58	0.00	0.00	0.00
14,700.00	90.00	180.64	7,054.00	-7,974.83	-1,422.68	8,100.37	0.00	0.00	0.00
14,800.00	90.00	180.64	7,054.00	-8,074.82	-1,423.79	8,199.16	0.00	0.00	0.00
14,900.00	90.00	180.64	7,054.00	-8,174.82	-1,424.90	8,297.94	0.00	0.00	0.00
15,000.00	90.00	180.64	7,054.00	-8,274.81	-1,426.01	8,396.73	0.00	0.00	0.00
15,100.00	90.00	180.64	7,054.00	-8,374.81	-1,427.13	8,495.52	0.00	0.00	0.00
15,198.30	90.00	180.64	7,054.00	-8,473.10	-1,428.22	8,592.62	0.00	0.00	0.00
TD at 15198.30									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Hurley H35-746_TPZ P2 - hit/miss target - Shape - Point	0.00	0.00	7,054.00	-892.18	-1,344.05	1,315,218.40	3,243,075.35	40.1953973	-104.6298426
Hurley H35-746_BHL - plan hits target center - Point	0.00	0.00	7,054.00	-8,473.10	-1,428.22	1,307,637.50	3,242,991.18	40.1745900	-104.6304100

Noble Energy, Inc.
Planning Report

Database:	EDMP	Local Co-ordinate Reference:	Well Hurley H35-746
Company:	Northern Region - DJ Basin	TVD Reference:	WELL @ 4884.00ft (Original Well Elev)
Project:	Mustang	MD Reference:	WELL @ 4884.00ft (Original Well Elev)
Site:	H Section 26	North Reference:	Grid
Well:	Hurley H35-746	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2		

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
635.00	635.00	Pierre			
787.00	787.00	Upper Pierre Aquifer Top			
1,675.00	1,675.00	Upper Pierre Aquifer Base			
3,996.86	3,942.00	Parkman			
4,615.60	4,533.00	Sussex			
5,329.61	5,215.00	Shannon			
6,346.18	6,186.00	Teepee Buttes			
7,055.53	6,832.00	Sharon Springs			
7,144.88	6,894.00	Top A Chalk			
7,155.81	6,901.00	Top A Marl			
7,158.97	6,903.00	Top B Chalk			
7,241.37	6,951.00	Top B Marl			
7,406.46	7,021.00	Top C Chalk			

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
2,200.00	2,200.00	0.00	0.00	Start Build 2.00	
3,061.05	3,048.14	-27.86	-125.37	Start 3598.81 hold at 3061.05 MD	
6,659.86	6,485.62	-258.95	-1,165.47	Start DLS 9.00 TFO -77.41	
7,616.91	7,054.00	-892.18	-1,344.05	TPZ/Landing Pt. at 7616.91 MD	
15,198.30	7,054.00	-8,473.10	-1,428.22	TD at 15198.30	

Northern Region - DJ Basin

Mustang

H Section 26

Hurley H35-746

Wellbore #1

Plan #2

Anticollision Summary Report

29 May, 2019

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Hurley H35-746
Project:	Mustang	TVD Reference:	WELL @ 4884.00ft (Original Well Elev)
Reference Site:	H Section 26	MD Reference:	WELL @ 4884.00ft (Original Well Elev)
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Hurley H35-746	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Reference	Plan #2		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD + Stations Interval 100.00ft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 10,000.00 ft	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program	Date	5/29/2019		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	15,198.30	Plan #2 (Wellbore #1)	OWSG MWD+IFR1+MS	OWSG MWD + IFR1 + Multi-Station Correction

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						
Eachus 32-23 - Original Drilling - Original Drilling - As Dri	635.02	585.10	5,352.91	5,348.98	1,361.544	CC
Eachus 32-23 - Original Drilling - Original Drilling - As Dri	2,200.00	2,100.00	5,355.02	5,340.21	361.429	ES
Eachus 32-23 - Original Drilling - Original Drilling - As Dri	7,050.00	6,824.56	5,774.26	5,724.19	115.315	SF
Eachus 41-23 (PA) - Original Drilling - Original Drilling - A	2,200.00	2,155.00	6,590.60	6,539.84	129.855	CC
Eachus 41-23 (PA) - Original Drilling - Original Drilling - A	2,400.00	2,354.84	6,592.47	6,537.03	118.917	ES
Eachus 41-23 (PA) - Original Drilling - Original Drilling - A	7,100.00	6,818.89	7,198.48	7,035.75	44.237	SF
Eachus UPRR 31-23 - Original Drilling - Original Drilling -	2,141.92	2,075.93	6,748.15	6,733.64	464.812	CC
Eachus UPRR 31-23 - Original Drilling - Original Drilling -	2,300.00	2,188.36	6,748.79	6,733.32	436.348	ES
Eachus UPRR 31-23 - Original Drilling - Original Drilling -	7,350.00	6,911.19	7,334.25	7,226.98	68.375	SF
Eachus UPRR 42-23 (PA) - Original Drilling - Original Dril	2,200.00	2,165.00	5,277.08	5,226.13	103.567	CC
Eachus UPRR 42-23 (PA) - Original Drilling - Original Dril	2,400.00	2,364.84	5,279.09	5,223.45	94.883	ES
Eachus UPRR 42-23 (PA) - Original Drilling - Original Dril	7,050.00	6,792.90	5,897.58	5,735.57	36.405	SF
HSR Alberstein 16-23 - Original Drilling - Original Drilling	419.95	390.96	2,901.22	2,898.75	1,176.616	CC
HSR Alberstein 16-23 - Original Drilling - Original Drilling	600.00	555.47	2,901.54	2,897.85	786.695	ES
HSR Alberstein 16-23 - Original Drilling - Original Drilling	6,900.00	6,647.25	3,594.04	3,545.51	74.060	SF
HSR Ashley 15-23A - Original Drilling - Original Drilling - A	3,355.73	3,215.32	3,076.20	3,053.38	134.827	CC
HSR Ashley 15-23A - Original Drilling - Original Drilling - A	3,400.00	3,250.64	3,076.27	3,053.17	133.141	ES
HSR Ashley 15-23A - Original Drilling - Original Drilling - A	6,900.00	6,587.30	3,331.86	3,283.09	68.317	SF
HSR Benirschke 10-23 - Original Drilling - Original Drilling	2,664.32	2,644.52	3,987.27	3,968.86	216.564	CC
HSR Benirschke 10-23 - Original Drilling - Original Drilling	2,800.00	2,753.07	3,987.88	3,968.62	207.034	ES
HSR Benirschke 10-23 - Original Drilling - Original Drilling	6,900.00	6,434.89	4,332.52	4,284.49	90.194	SF
HSR Eachus 03-23 - Original Drilling - Original Drilling - A	341.76	272.78	6,181.20	6,179.43	3,474.807	CC
HSR Eachus 03-23 - Original Drilling - Original Drilling - A	2,400.00	2,277.06	6,191.32	6,175.20	383.913	ES
HSR Eachus 03-23 - Original Drilling - Original Drilling - A	7,150.00	7,021.86	7,224.94	7,172.17	136.909	SF
HSR Eachus 04-23 - Original Drilling - Original Drilling - A	100.00	29.59	6,151.22	6,151.05	10,000.000	CC
HSR Eachus 04-23 - Original Drilling - Original Drilling - A	1,000.00	900.00	6,154.71	6,148.38	973.104	ES
HSR Eachus 04-23 - Original Drilling - Original Drilling - A	5,900.00	5,900.00	7,358.87	7,243.86	63.983	SF
HSR Eachus 05-23 - Original Drilling - Original Drilling - A	219.55	150.55	6,119.03	6,118.12	6,750.657	CC
HSR Eachus 05-23 - Original Drilling - Original Drilling - A	6,700.00	6,755.76	6,141.58	6,001.25	43.763	ES
HSR Eachus 05-23 - Original Drilling - Original Drilling - A	7,050.00	7,059.88	6,238.66	6,093.53	42.985	SF
HSR Fruman 06-23 - Original Drilling - Original Drilling - A	1,755.04	1,686.08	6,002.64	5,990.87	509.919	CC
HSR Fruman 06-23 - Original Drilling - Original Drilling - A	3,200.00	2,958.35	6,004.44	5,983.12	281.649	ES
HSR Fruman 06-23 - Original Drilling - Original Drilling - A	7,050.00	6,767.70	6,293.81	6,236.98	110.746	SF
HSR Grasshopper 09-23 - Original Drilling - Original Drilli	0.00	0.00	3,702.40			
HSR Grasshopper 09-23 - Original Drilling - Original Drilli	1,900.00	1,846.66	3,713.50	3,700.63	288.517	ES
HSR Grasshopper 09-23 - Original Drilling - Original Drilli	6,950.00	6,854.13	4,346.26	4,296.61	87.540	SF
Ritchey 06-23 - Original Drilling - Original Drilling - As Dri	6,272.88	6,116.54	5,596.47	5,551.00	123.063	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 - DJ Basin	Local Co-ordinate Reference:	Well Hurley H35-746
Project:	Mustang	TVD Reference:	WELL @ 4884.00ft (Original Well Elev)
Reference Site:	H Section 26	MD Reference:	WELL @ 4884.00ft (Original Well Elev)
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Hurley H35-746	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan #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						
Ritchey 06-23 - Original Drilling - Original Drilling - As Dri	6,500.00	6,324.93	5,597.02	5,549.93	118.858	ES
Ritchey 06-23 - Original Drilling - Original Drilling - As Dri	7,100.00	7,002.83	5,741.06	5,689.40	111.139	SF
Ritchey 21-23 - Original Drilling - Original Drilling - As Dri	321.80	258.82	6,231.52	6,229.86	3,756.538	CC
Ritchey 21-23 - Original Drilling - Original Drilling - As Dri	4,100.00	4,030.43	6,249.27	6,220.74	219.060	ES
Ritchey 21-23 - Original Drilling - Original Drilling - As Dri	7,100.00	6,863.19	6,527.97	6,477.52	129.408	SF
Ritchey 24-23 - Original Drilling - Original Drilling - As Dri	1,711.31	1,665.37	4,064.10	4,052.55	351.894	CC
Ritchey 24-23 - Original Drilling - Original Drilling - As Dri	1,800.00	1,734.72	4,064.25	4,052.14	335.621	ES
Ritchey 24-23 - Original Drilling - Original Drilling - As Dri	7,000.00	6,792.59	5,101.18	5,050.88	101.428	SF
Ritchey 31-24 - Original Drilling - Original Drilling - As Dri	1,482.13	1,447.15	5,745.35	5,735.39	576.898	CC
Ritchey 31-24 - Original Drilling - Original Drilling - As Dri	1,600.00	1,517.57	5,745.82	5,735.19	540.524	ES
Ritchey 31-24 - Original Drilling - Original Drilling - As Dri	6,950.00	6,854.31	6,738.00	6,676.54	109.623	SF
UPRC 23-11J - Original Drilling - Original Drilling - As Dri	6,675.00	6,417.93	4,463.07	4,415.64	94.100	CC, ES
UPRC 23-11J - Original Drilling - Original Drilling - As Dri	7,050.00	6,758.25	4,566.89	4,516.83	91.220	SF
UPRC 23-12J - Original Drilling - Original Drilling - As Dri	6,737.03	6,526.02	4,994.13	4,946.13	104.039	CC
UPRC 23-12J - Original Drilling - Original Drilling - As Dri	6,750.00	6,548.28	4,994.24	4,946.11	103.765	ES
UPRC 23-12J - Original Drilling - Original Drilling - As Dri	7,100.00	6,764.19	5,084.40	5,034.13	101.146	SF
UPRC H23-13 - Wellbore #1 - Wellbore #1 - As Drilled	6,760.19	6,456.50	4,039.02	3,991.11	84.298	CC, ES
UPRC H23-13 - Wellbore #1 - Wellbore #1 - As Drilled	7,150.00	6,746.08	4,135.96	4,085.50	81.970	SF
UPRC H23-14J - Original Drilling - Original Drilling - As D	6,662.91	6,351.95	3,086.32	3,039.12	65.387	CC, ES
UPRC H23-14J - Original Drilling - Original Drilling - As D	6,900.00	6,554.22	3,129.50	3,080.63	64.043	SF
UPRC H23-24 - Original Drilling - Original Drilling - As Dr	4,897.95	4,623.28	3,860.12	3,826.31	114.169	CC
UPRC H23-24 - Original Drilling - Original Drilling - As Dr	5,000.00	4,700.01	3,860.50	3,826.01	111.924	ES
UPRC H23-24 - Original Drilling - Original Drilling - As Dr	7,000.00	6,581.15	4,025.44	3,976.21	81.777	SF
UPRR 53 Pan Am B#1 (PA) - Original Drilling - Original D	6,731.44	6,475.59	3,900.77	3,745.92	25.190	CC
UPRR 53 Pan Am B#1 (PA) - Original Drilling - Original D	6,750.00	6,493.02	3,901.01	3,745.73	25.122	ES
UPRR 53 Pan Am B#1 (PA) - Original Drilling - Original D	7,050.00	6,749.90	3,970.39	3,808.78	24.568	SF
UPRR 53 Pan Am UT V#1 - Original Drilling - Original Dri	100.00	50.38	5,766.81	5,766.59	10,000.000	CC
UPRR 53 Pan Am UT V#1 - Original Drilling - Original Dri	1,500.00	1,421.69	5,772.28	5,762.33	580.604	ES
UPRR 53 Pan Am UT V#1 - Original Drilling - Original Dri	7,050.00	6,765.51	6,282.27	6,232.56	126.377	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 - DJ Basin	Local Co-ordinate Reference:	Well Hurley H35-746
Project:	Mustang	TVD Reference:	WELL @ 4884.00ft (Original Well Elev)
Reference Site:	H Section 26	MD Reference:	WELL @ 4884.00ft (Original Well Elev)
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Hurley H35-746	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan #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						
Offset Well - Wellbore - Design						
Dechant 21-25 - Original Drilling - Original Drilling - As Dr	607.99	554.00	2,881.78	2,878.07	777.054	CC
Dechant 21-25 - Original Drilling - Original Drilling - As Dr	1,400.00	1,337.90	2,882.59	2,873.31	310.533	ES
Dechant 21-25 - Original Drilling - Original Drilling - As Dr	7,200.00	7,148.32	5,174.18	5,121.62	98.443	SF
Dechant D30-33D - Original Drilling - Original Drilling - As	100.00	18.36	5,642.06	5,641.90	10,000.000	CC, ES
Dechant D30-33D - Original Drilling - Original Drilling - As	12,700.00	12,700.00	8,562.79	8,471.99	94.306	SF
Dechant D31-30D - Original Drilling - Original Drilling - As	100.00	19.22	5,649.20	5,649.04	10,000.000	CC
Dechant D31-30D - Original Drilling - Original Drilling - As	200.00	90.84	5,649.63	5,648.98	8,758.876	ES
Dechant D31-30D - Original Drilling - Original Drilling - As	13,000.00	7,096.94	8,155.50	8,074.23	100.355	SF
Dechant H25-64-1HN - Original Drilling - Original Drilling	892.13	859.14	1,855.24	1,851.98	569.535	CC
Dechant H25-64-1HN - Original Drilling - Original Drilling	1,900.00	1,879.76	1,860.75	1,849.95	172.226	ES
Dechant H25-64-1HN - Original Drilling - Original Drilling	8,400.00	6,472.99	2,527.61	2,480.01	53.095	SF
Dechant H25-65HN - Original Drilling - Original Drilling	3,371.62	3,735.89	1,649.37	1,626.96	73.608	CC
Dechant H25-65HN - Original Drilling - Original Drilling	3,500.52	3,873.67	1,649.82	1,626.37	70.345	ES
Dechant H25-65HN - Original Drilling - Original Drilling	6,400.00	6,259.77	2,216.74	2,173.37	51.106	SF
Emmy H25-711 - Emmy H25-711 OH - As-Drilled	831.19	782.20	5,392.84	5,387.56	1,021.308	CC
Emmy H25-711 - Emmy H25-711 OH - As-Drilled	2,100.00	2,032.11	5,393.60	5,379.68	387.295	ES
Emmy H25-711 - Emmy H25-711 OH - As-Drilled	10,500.00	10,500.00	7,117.13	7,045.75	99.696	SF
Emmy State H25-718 - Emmy State H25-718 OH - As-Dr	260.99	211.99	5,375.27	5,374.02	4,315.201	CC
Emmy State H25-718 - Emmy State H25-718 OH - As-Dr	2,200.00	2,142.10	5,376.03	5,361.73	375.850	ES
Emmy State H25-718 - Emmy State H25-718 OH - As-Dr	14,900.00	14,900.00	8,532.88	8,426.77	80.416	SF
Emmy State H25-724 - Emmy State H25-724 OH - As-Dr	2,122.90	2,074.00	5,342.13	5,328.06	379.586	CC
Emmy State H25-724 - Emmy State H25-724 OH - As-Dr	2,201.57	2,154.71	5,342.15	5,327.77	371.551	ES
Emmy State H25-724 - Emmy State H25-724 OH - As-Dr	12,900.00	6,174.72	7,106.78	7,041.34	108.604	SF
Emmy State H25-731 - Emmy State H25-731 OH - As-Dr	2,121.97	2,073.00	5,331.81	5,317.63	376.074	CC
Emmy State H25-731 - Emmy State H25-731 OH - As-Dr	2,200.43	2,152.01	5,331.82	5,317.34	368.335	ES
Emmy State H25-731 - Emmy State H25-731 OH - As-Dr	12,500.00	6,425.00	6,704.32	6,639.73	103.792	SF
Emmy State H25-738 - Emmy State H25-738 OH - As-Dr	2,212.97	2,180.78	5,314.44	5,300.06	369.753	CC, ES
Emmy State H25-738 - Emmy State H25-738 OH - As-Dr	11,800.00	6,805.00	6,122.10	6,059.89	98.409	SF
Emmy State H25-744 - Emmy State H25-744 OH - As-Dr	5,616.31	10,113.00	5,002.77	4,948.90	92.869	CC, ES
Emmy State H25-744 - Emmy State H25-744 OH - As-Dr	6,800.00	10,113.00	5,141.82	5,083.68	88.440	SF
Emmy State H25-751 - Emmy State H25-751 OH - As-Dr	1,959.94	1,922.00	3,766.72	3,755.90	348.243	CC
Emmy State H25-751 - Emmy State H25-751 OH - As-Dr	2,000.00	1,940.14	3,766.84	3,755.88	343.607	ES
Emmy State H25-751 - Emmy State H25-751 OH - As-Dr	12,700.00	12,700.00	5,371.17	5,283.21	61.068	SF
Emmy State H25-757 - Emmy State H25-757 OH - As-Dr	1,965.37	1,927.41	3,751.88	3,738.52	280.991	CC
Emmy State H25-757 - Emmy State H25-757 OH - As-Dr	2,211.59	2,182.32	3,751.99	3,737.59	260.492	ES
Emmy State H25-757 - Emmy State H25-757 OH - As-Dr	10,200.00	10,200.00	4,513.81	4,445.45	66.030	SF
Emmy State H25-764 - Emmy State H25-764 OH - As-Dr	1,995.00	1,957.07	3,730.64	3,717.12	275.868	CC
Emmy State H25-764 - Emmy State H25-764 OH - As-Dr	2,202.44	2,165.89	3,730.87	3,716.52	260.044	ES
Emmy State H25-764 - Emmy State H25-764 OH - As-Dr	11,900.00	11,900.00	4,591.57	4,514.18	59.337	SF
Emmy State H25-771 - Emmy State H25-771 OH - As-Dr	6,096.19	9,747.17	3,498.58	3,446.17	66.763	CC
Emmy State H25-771 - Emmy State H25-771 OH - As-Dr	6,100.00	9,746.84	3,498.58	3,446.16	66.738	ES
Emmy State H25-771 - Emmy State H25-771 OH - As-Dr	6,750.00	9,704.80	3,558.72	3,503.42	64.354	SF
Emmy State H25-777 - Emmy State H25-777 OH - As-Dr	6,299.76	9,790.93	3,125.79	3,072.13	58.256	CC
Emmy State H25-777 - Emmy State H25-777 OH - As-Dr	6,300.00	9,790.92	3,125.79	3,072.13	58.255	ES
Emmy State H25-777 - Emmy State H25-777 OH - As-Dr	6,800.00	9,762.71	3,164.61	3,109.06	56.970	SF
Emmy State H25-785 - Emmy State H25-785 OH - As-Dr	6,378.49	9,866.95	2,602.86	2,547.23	46.790	CC, ES
Emmy State H25-785 - Emmy State H25-785 OH - As-Dr	6,659.86	9,839.62	2,617.91	2,561.56	46.454	SF
Emmy State H36-753 - Wellbore #1 - Plan #2	2,200.00	2,162.00	3,650.21	3,637.84	295.164	CC, ES
Emmy State H36-753 - Wellbore #1 - Plan #2	15,198.30	11,885.88	4,873.51	4,747.48	38.668	SF
Emmy State H36-766 - Wellbore #1 - Plan #2	2,200.00	2,163.00	3,621.88	3,609.52	292.820	CC, ES
Emmy State H36-766 - Wellbore #1 - Plan #2	15,100.00	11,943.61	3,986.74	3,862.27	32.028	SF
Emmy State H36-773 - Wellbore #1 - Plan #2	14,697.53	11,925.00	3,327.44	3,205.07	27.193	CC
Emmy State H36-773 - Wellbore #1 - Plan #2	14,700.00	11,925.00	3,327.44	3,205.06	27.191	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 - DJ Basin	Local Co-ordinate Reference:	Well Hurley H35-746
Project:	Mustang	TVD Reference:	WELL @ 4884.00ft (Original Well Elev)
Reference Site:	H Section 26	MD Reference:	WELL @ 4884.00ft (Original Well Elev)
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Hurley H35-746	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan #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						
Emmy State H36-773 - Wellbore #1 - Plan #2	14,900.00	11,925.00	3,333.59	3,210.53	27.089	SF
Emmy State H36-787 - Wellbore #1 - Plan #2	14,716.59	11,923.93	2,642.32	2,519.11	21.446	CC, ES
Emmy State H36-787 - Wellbore #1 - Plan #2	14,800.00	11,923.93	2,643.64	2,520.34	21.442	SF
HSR Cohn 03-25 - Original Drilling - Original Drilling - As	2,220.91	2,186.33	3,143.70	3,128.50	206.771	CC, ES
HSR Cohn 03-25 - Original Drilling - Original Drilling - As	7,050.00	6,718.36	4,460.66	4,412.04	91.742	SF
HSR Crowe 06-25 - Original Drilling - Original Drilling - As	2,216.77	2,179.37	2,877.61	2,862.46	189.958	CC, ES
HSR Crowe 06-25 - Original Drilling - Original Drilling - As	7,400.00	7,009.23	4,279.10	4,228.36	84.329	SF
HSR Dechant 04-25 - Original Drilling - Original Drilling -	2,264.14	2,327.26	2,001.74	1,981.89	100.863	CC
HSR Dechant 04-25 - Original Drilling - Original Drilling -	2,300.00	2,356.61	2,002.08	1,981.59	97.729	ES
HSR Dechant 04-25 - Original Drilling - Original Drilling -	4,800.00	5,155.20	2,835.85	2,777.71	48.778	SF
HSR Dechant 05-25 - Original Drilling - Original Drilling -	2,031.97	1,990.01	1,869.88	1,856.05	135.227	CC
HSR Dechant 05-25 - Original Drilling - Original Drilling -	2,200.00	2,153.69	1,870.19	1,855.19	124.681	ES
HSR Dechant 05-25 - Original Drilling - Original Drilling -	7,250.00	6,958.22	3,228.99	3,178.74	64.264	SF
KY Blue D30-32 - Original Drilling - Original Drilling - As D	2,221.72	2,174.98	6,035.74	6,020.59	398.443	CC, ES
KY Blue D30-32 - Original Drilling - Original Drilling - As D	11,200.00	6,917.37	8,366.23	8,303.80	134.002	SF
KY Blue H25-04J - Original Drilling - Original Drilling - As	8,808.86	7,400.00	6,646.11	6,614.65	211.246	CC, ES
KY Blue H25-04J - Original Drilling - Original Drilling - As	12,700.00	7,400.00	7,701.42	7,654.79	165.171	SF
KY Blue H25-09 - Original Drilling - Original Drilling - As D	2,204.62	2,125.94	5,675.28	5,660.37	380.455	CC, ES
KY Blue H25-09 - Original Drilling - Original Drilling - As D	11,100.00	6,925.58	7,628.89	7,566.28	121.861	SF
KY Blue H25-10 - Original Drilling - Original Drilling - As D	100.00	17.68	4,183.50	4,183.35	10,000.000	CC
KY Blue H25-10 - Original Drilling - Original Drilling - As D	2,200.00	2,115.50	4,190.47	4,175.59	281.549	ES
KY Blue H25-10 - Original Drilling - Original Drilling - As D	9,500.00	7,032.32	5,742.74	5,686.17	101.513	SF
KY Blue H25-11 - Original Drilling - Original Drilling - As D	792.07	725.09	3,210.12	3,205.15	646.382	CC
KY Blue H25-11 - Original Drilling - Original Drilling - As D	1,000.00	912.13	3,210.65	3,204.28	504.158	ES
KY Blue H25-11 - Original Drilling - Original Drilling - As D	8,300.00	7,043.44	4,293.56	4,209.42	51.024	SF
KY Blue H25-12 - Original Drilling - Original Drilling - As D	2,355.56	2,376.45	1,885.98	1,869.20	112.402	CC
KY Blue H25-12 - Original Drilling - Original Drilling - As D	2,400.00	2,423.32	1,886.15	1,869.07	110.409	ES
KY Blue H25-12 - Original Drilling - Original Drilling - As D	8,100.00	6,953.43	2,832.74	2,780.65	54.385	SF
KY Blue H25-14 - Original Drilling - Original Drilling - As D	100.00	23.68	4,038.32	4,038.16	10,000.000	CC
KY Blue H25-14 - Original Drilling - Original Drilling - As D	2,200.00	2,125.17	4,040.62	4,025.72	271.196	ES
KY Blue H25-14 - Original Drilling - Original Drilling - As D	11,500.00	11,500.00	4,871.06	4,790.52	60.480	SF
KY Blue H25-15 - Original Drilling - Original Drilling - As D	340.04	261.03	4,789.30	4,787.58	2,777.694	CC
KY Blue H25-15 - Original Drilling - Original Drilling - As D	2,226.92	2,180.14	4,798.55	4,783.36	315.894	ES
KY Blue H25-15 - Original Drilling - Original Drilling - As D	11,000.00	6,921.77	5,732.83	5,669.08	89.931	SF
KY H25-24 - Original Drilling - Original Drilling - As Drilled	229.66	152.66	4,123.75	4,122.80	4,341.972	CC
KY H25-24 - Original Drilling - Original Drilling - As Drilled	600.00	506.14	4,124.34	4,120.83	1,174.494	ES
KY H25-24 - Original Drilling - Original Drilling - As Drilled	10,200.00	7,034.09	5,290.04	5,229.61	87.545	SF
Moore UPRC H25-01 - Original Drilling - Original Drilling	2,217.55	2,152.27	5,820.87	5,805.78	385.910	CC, ES
Moore UPRC H25-01 - Original Drilling - Original Drilling	7,400.00	6,896.78	7,348.57	7,298.39	146.446	SF
Moore UPRC H25-02 - Original Drilling - Original Drilling	1,348.63	1,274.64	4,444.60	4,435.71	500.293	CC
Moore UPRC H25-02 - Original Drilling - Original Drilling	2,207.66	2,145.51	4,445.64	4,430.64	296.440	ES
Moore UPRC H25-02 - Original Drilling - Original Drilling	7,350.00	6,924.50	5,977.37	5,927.26	119.280	SF
Moser 25-32 - Original Drilling - Original Drilling - As Drille	100.00	20.54	3,968.72	3,968.56	10,000.000	CC
Moser 25-32 - Original Drilling - Original Drilling - As Drille	2,225.62	2,185.23	3,969.20	3,954.00	261.122	ES
Moser 25-32 - Original Drilling - Original Drilling - As Drille	7,550.00	7,001.74	5,401.66	5,350.63	105.854	SF
Moser 25-42 - Original Drilling - Original Drilling - As Drille	808.65	716.66	5,613.73	5,608.74	1,123.873	CC
Moser 25-42 - Original Drilling - Original Drilling - As Drille	2,200.00	2,079.65	5,616.55	5,601.81	380.996	ES
Moser 25-42 - Original Drilling - Original Drilling - As Drille	9,700.00	6,949.25	7,726.64	7,670.61	137.909	SF
UPRR 53 Pan Am T#2 - Original Drilling - Original Drilling	2,260.85	2,274.63	2,670.55	2,654.92	170.869	CC
UPRR 53 Pan Am T#2 - Original Drilling - Original Drilling	2,300.00	2,314.77	2,670.78	2,654.87	167.918	ES
UPRR 53 Pan Am T#2 - Original Drilling - Original Drilling	7,000.00	6,631.45	3,981.76	3,933.68	82.803	SF
UPRR 53 Pan Am UT T#1 - Original Drilling - Original Dri	100.00	2.96	5,016.49	5,016.36	10,000.000	CC
UPRR 53 Pan Am UT T#1 - Original Drilling - Original Dri	2,225.80	2,173.86	5,019.87	5,004.70	330.947	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 - DJ Basin	Local Co-ordinate Reference:	Well Hurley H35-746
Project:	Mustang	TVD Reference:	WELL @ 4884.00ft (Original Well Elev)
Reference Site:	H Section 26	MD Reference:	WELL @ 4884.00ft (Original Well Elev)
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Hurley H35-746	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
H Section 25						
UPRR 53 Pan Am UT T#1 - Original Drilling - Original Dri	7,500.00	6,964.41	6,513.56	6,462.82	128.355	SF
Von Feldt 1-25B - Original Drilling - Original Drilling - As D	501.24	442.25	3,047.10	3,044.17	1,038.329	CC
Von Feldt 1-25B - Original Drilling - Original Drilling - As D	2,300.00	2,273.96	3,049.36	3,033.59	193.389	ES
Von Feldt 1-25B - Original Drilling - Original Drilling - As D	9,600.00	7,054.58	3,466.22	3,407.84	59.379	SF

Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Hurley H35-746
Project:	Mustang	TVD Reference:	WELL @ 4884.00ft (Original Well Elev)
Reference Site:	H Section 26	MD Reference:	WELL @ 4884.00ft (Original Well Elev)
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Hurley H35-746	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan #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						
Offset Well - Wellbore - Design						
Bullard 31-26 - Original Drilling - Original Drilling - As Dril	4,868.97	4,723.09	1,791.05	1,757.01	52.610	CC
Bullard 31-26 - Original Drilling - Original Drilling - As Dril	4,900.00	4,749.28	1,791.10	1,756.84	52.278	ES
Bullard 31-26 - Original Drilling - Original Drilling - As Dril	6,800.00	6,515.59	1,934.69	1,886.63	40.256	SF
Bullard 32-26 - Original Drilling - Original Drilling - As Dril	5,463.54	5,306.26	172.39	133.88	4.476	CC, ES
Bullard 32-26 - Original Drilling - Original Drilling - As Dril	5,500.00	5,341.33	172.76	133.98	4.455	SF
Bullard 41-26 - Original Drilling - Original Drilling - As Dril	100.00	64.21	1,104.22	1,103.98	4,629.425	CC
Bullard 41-26 - Original Drilling - Original Drilling - As Dril	1,000.00	959.21	1,107.21	1,100.67	169.455	ES
Bullard 41-26 - Original Drilling - Original Drilling - As Dril	6,700.00	6,453.71	1,782.79	1,736.01	38.110	SF
Dechant H25-29D - Original Drilling - Original Drilling - As	0.00	0.00	1,443.39			
Dechant H25-29D - Original Drilling - Original Drilling - As	100.00	77.71	1,443.57	1,443.32	5,941.790	ES
Dechant H25-29D - Original Drilling - Original Drilling - As	7,000.00	7,189.40	4,575.87	4,521.80	84.618	SF
Dechant H25-33D - Original Drilling - Original Drilling - As	2,737.83	3,099.63	876.33	847.83	30.748	CC, ES
Dechant H25-33D - Original Drilling - Original Drilling - As	3,300.00	3,561.00	974.08	938.45	27.338	SF
Harsh H26-09D - Original Drilling - Original Drilling - As D	2,732.80	2,735.46	1,271.47	1,252.58	67.296	CC
Harsh H26-09D - Original Drilling - Original Drilling - As D	2,800.00	2,800.86	1,271.67	1,252.31	65.692	ES
Harsh H26-09D - Original Drilling - Original Drilling - As D	7,900.00	7,015.41	1,841.15	1,789.12	35.387	SF
Harsh H26-10 - Original Drilling - Original Drilling - As Dri	7,718.14	7,030.07	550.28	498.53	10.633	CC, ES, SF
Harsh H26-15 - Original Drilling - Original Drilling - As Dri	9,162.41	7,020.49	507.43	450.68	8.942	CC, ES, SF
Harsh H26-16 - Original Drilling - Original Drilling - As Dri	9,222.04	7,006.90	1,571.13	1,513.98	27.494	CC, ES
Harsh H26-16 - Original Drilling - Original Drilling - As Dri	9,300.00	7,007.89	1,573.06	1,515.79	27.465	SF
Harsh H26-23D - Original Drilling - Original Drilling - As D	8,534.38	7,150.43	1,187.12	1,130.09	20.815	CC, ES
Harsh H26-23D - Original Drilling - Original Drilling - As D	8,600.00	7,149.96	1,188.94	1,131.63	20.746	SF
HSR Moser 04-26 - Original Drilling - Original Drilling - As	6,808.52	6,458.45	3,181.93	3,133.93	66.293	CC, ES
HSR Moser 04-26 - Original Drilling - Original Drilling - As	7,100.00	6,639.74	3,230.52	3,180.69	64.833	SF
HSR Moser 06-26 - Original Drilling - Original Drilling - As	6,960.18	6,706.54	857.34	808.28	17.472	CC, ES
HSR Moser 06-26 - Original Drilling - Original Drilling - As	7,050.00	6,771.14	862.56	812.82	17.343	SF
HSR Regalia 05-26 - Original Drilling - Original Drilling - A	6,977.30	6,750.08	2,083.98	2,034.74	42.324	CC, ES
HSR Regalia 05-26 - Original Drilling - Original Drilling - A	7,200.00	6,911.37	2,109.49	2,058.79	41.608	SF
HSR-Moser 03-26A - Original Drilling - Original Drilling - A	6,685.07	6,400.01	2,037.77	1,990.36	42.979	CC, ES
HSR-Moser 03-26A - Original Drilling - Original Drilling - A	6,850.00	6,514.66	2,059.43	2,010.93	42.469	SF
Hurley H26-712 - Hurley H26-712 OH - As-Drilled	1,990.99	1,991.06	179.18	165.64	13.229	CC
Hurley H26-712 - Hurley H26-712 OH - As-Drilled	2,000.00	1,999.30	179.20	165.62	13.198	ES
Hurley H26-712 - Hurley H26-712 OH - As-Drilled	2,100.00	2,090.81	182.02	168.08	13.061	SF
Hurley H26-717 - Hurley H26-717 OH - As-Drilled	1,987.40	1,987.49	173.28	159.75	12.806	CC
Hurley H26-717 - Hurley H26-717 OH - As-Drilled	2,000.00	1,999.56	173.30	159.72	12.763	ES
Hurley H26-717 - Hurley H26-717 OH - As-Drilled	2,100.00	2,094.45	174.87	160.93	12.538	SF
Hurley H26-724 - Hurley H26-724 OH - As-Drilled	2,066.58	2,067.62	156.75	142.77	11.209	CC
Hurley H26-724 - Hurley H26-724 OH - As-Drilled	2,200.00	2,199.13	157.06	142.56	10.827	ES
Hurley H26-724 - Hurley H26-724 OH - As-Drilled	2,300.00	2,293.29	160.41	145.53	10.779	SF
Hurley H26-730 - Hurley H26-730 OH - As-Drilled	0.00	0.00	155.90			
Hurley H26-730 - Hurley H26-730 OH - As-Drilled	2,400.00	2,400.13	157.42	142.25	10.374	ES
Hurley H26-730 - Hurley H26-730 OH - As-Drilled	2,600.00	2,594.56	160.68	144.64	10.019	SF
Hurley H26-736 - Hurley H26-736 OH - As-Drilled	0.00	0.00	151.02			
Hurley H26-736 - Hurley H26-736 OH - As-Drilled	2,100.00	2,099.43	153.68	139.73	11.015	ES
Hurley H26-736 - Hurley H26-736 OH - As-Drilled	3,200.00	3,184.54	197.47	178.30	10.298	SF
Hurley H26-743 - Hurley H26-743 OH - As-Drilled	495.48	495.49	147.34	144.27	47.981	CC
Hurley H26-743 - Hurley H26-743 OH - As-Drilled	7,061.39	7,137.74	165.95	118.71	3.513	ES, SF
Hurley H26-750 - Hurley H26-750 OH - As-Drilled	7,259.99	7,274.00	328.41	281.06	6.936	CC, ES, SF
Hurley H26-756 - Hurley H26-756 OH - As-Drilled	7,276.76	7,179.00	625.96	579.30	13.417	CC, ES
Hurley H26-756 - Hurley H26-756 OH - As-Drilled	7,300.00	7,179.00	626.50	579.78	13.408	SF
Hurley H26-762 - Hurley H26-762 OH - As-Drilled	7,378.31	7,131.04	1,037.26	990.77	22.310	CC, ES
Hurley H26-762 - Hurley H26-762 OH - As-Drilled	7,450.00	7,087.00	1,040.78	994.04	22.270	SF
Hurley H26-768 - Hurley H26-768 OH - As-Drilled	7,438.45	6,961.17	1,441.18	1,394.98	31.194	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 - DJ Basin	Local Co-ordinate Reference:	Well Hurley H35-746
Project:	Mustang	TVD Reference:	WELL @ 4884.00ft (Original Well Elev)
Reference Site:	H Section 26	MD Reference:	WELL @ 4884.00ft (Original Well Elev)
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Hurley H35-746	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan #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						
Hurley H26-768 - Hurley H26-768 OH - As-Drilled	7,550.00	6,914.56	1,446.18	1,399.71	31.125	SF
Hurley H26-776 - Hurley H26-776 OH - As-Drilled	7,460.97	6,951.17	1,938.43	1,892.03	41.772	CC, ES
Hurley H26-776 - Hurley H26-776 OH - As-Drilled	7,616.91	6,895.00	1,947.93	1,901.07	41.570	SF
Hurley H26-783 - Hurley H26-783 OH - As-drilled	7,427.13	7,427.13	2,200.05	2,152.56	46.330	CC, ES, SF
Hurley H35-727 - Wellbore #1 - Plan #2	2,200.00	2,201.00	67.04	51.73	4.379	CC, ES
Hurley H35-727 - Wellbore #1 - Plan #2	2,300.00	2,300.98	68.75	52.73	4.293	SF
Hurley H35-733 - Wellbore #1 - Plan #2	2,451.46	2,455.35	44.53	27.54	2.620	CC
Hurley H35-733 - Wellbore #1 - Plan #2	2,600.00	2,606.04	44.91	26.96	2.502	ES, SF
Hurley H35-755 - Wellbore #1 - Plan #2	15,198.30	15,342.74	496.75	349.67	3.378	CC, ES, SF
Hurley H35-768 - Wellbore #1 - Plan #2	15,197.60	14,908.06	1,188.26	1,042.26	8.139	CC
Hurley H35-768 - Wellbore #1 - Plan #2	15,198.30	14,908.06	1,188.26	1,042.25	8.138	ES, SF
Hurley H35-774 - Wellbore #1 - Plan #2	15,192.05	15,292.14	1,846.48	1,677.40	10.921	CC
Hurley H35-774 - Wellbore #1 - Plan #2	15,198.30	15,292.14	1,846.49	1,677.34	10.917	ES, SF
Hurley H35-787 - Wellbore #1 - Plan #2	15,188.72	15,029.39	2,510.09	2,364.04	17.187	CC
Hurley H35-787 - Wellbore #1 - Plan #2	15,198.30	15,029.39	2,510.10	2,363.94	17.173	ES, SF
Hurley State H35-713 - Wellbore #1 - Plan #2	2,200.00	2,200.00	111.74	96.43	7.300	CC, ES
Hurley State H35-713 - Wellbore #1 - Plan #2	2,300.00	2,300.02	113.44	97.43	7.085	SF
John 03-26 - Original Drilling - Original Drilling - As Drilled	6,716.90	6,456.60	1,884.81	1,837.10	39.503	CC, ES
John 03-26 - Original Drilling - Original Drilling - As Drilled	6,900.00	6,593.24	1,910.14	1,861.18	39.016	SF
Lamp H25-31 - Original Drilling - Original Drilling - As Dril	416.04	391.04	1,167.14	1,164.69	476.337	CC
Lamp H25-31 - Original Drilling - Original Drilling - As Dril	500.00	470.00	1,167.30	1,164.28	385.580	ES
Lamp H25-31 - Original Drilling - Original Drilling - As Dril	6,850.00	6,669.53	2,389.13	2,341.24	49.884	SF
Lamp H26-01 - Original Drilling - Original Drilling - As Dril	1,581.62	1,556.81	1,171.45	1,160.74	109.372	CC
Lamp H26-01 - Original Drilling - Original Drilling - As Dril	1,700.00	1,664.07	1,172.09	1,160.57	101.763	ES
Lamp H26-01 - Original Drilling - Original Drilling - As Dril	6,700.00	6,531.87	2,487.64	2,436.98	49.102	SF
Lamp H26-08 - Original Drilling - Original Drilling - As Dril	2,223.31	2,195.85	415.62	400.37	27.255	CC, ES
Lamp H26-08 - Original Drilling - Original Drilling - As Dril	2,800.00	2,775.82	464.34	445.09	24.124	SF
Lamp H26-22 - Original Drilling - Original Drilling - As Dril	2,838.86	2,895.35	307.39	286.98	15.063	CC, ES
Lamp H26-22 - Original Drilling - Original Drilling - As Dril	4,100.00	4,137.68	452.48	417.69	13.004	SF
Moser 05-26 - Original Drilling - Original Drilling - As Drille	7,248.58	6,918.95	2,389.55	2,339.10	47.368	CC
Moser 05-26 - Original Drilling - Original Drilling - As Drille	7,250.00	6,919.67	2,389.55	2,339.09	47.361	ES
Moser 05-26 - Original Drilling - Original Drilling - As Drille	7,450.00	6,993.35	2,407.80	2,356.38	46.827	SF
Moser 41-27 - Original Drilling - Original Drilling - As Drille	7,048.73	6,871.26	3,246.74	3,194.88	62.613	CC
Moser 41-27 - Original Drilling - Original Drilling - As Drille	7,050.00	6,872.20	3,246.74	3,194.88	62.605	ES
Moser 41-27 - Original Drilling - Original Drilling - As Drille	7,300.00	7,024.76	3,273.81	3,220.84	61.802	SF
Moser H26-11 - Original Drilling - Original Drilling - As Dri	7,745.23	7,013.02	1,084.45	1,032.80	20.996	CC, ES
Moser H26-11 - Original Drilling - Original Drilling - As Dri	7,900.00	7,008.26	1,095.43	1,043.04	20.911	SF
Moser H26-12 - Wellbore #1 - Wellbore #1 - As Drilled	7,986.48	7,013.42	2,221.55	2,169.25	42.480	CC
Moser H26-12 - Wellbore #1 - Wellbore #1 - As Drilled	8,000.00	7,013.79	2,221.59	2,169.24	42.437	ES
Moser H26-12 - Wellbore #1 - Wellbore #1 - As Drilled	8,500.00	7,027.64	2,280.08	2,225.36	41.666	SF
Moser H26-13 - Wellbore #1 - Wellbore #1 - As Drilled	9,296.84	7,010.41	2,245.60	2,188.00	38.990	CC
Moser H26-13 - Wellbore #1 - Wellbore #1 - As Drilled	9,300.00	7,010.61	2,245.60	2,187.98	38.975	ES
Moser H26-13 - Wellbore #1 - Wellbore #1 - As Drilled	9,800.00	7,030.31	2,301.20	2,240.09	37.657	SF
Moser H26-14 - Original Drilling - Original Drilling - As Dr	9,469.32	6,984.64	708.48	649.80	12.073	CC, ES
Moser H26-14 - Original Drilling - Original Drilling - As Dr	9,600.00	6,984.02	720.43	660.34	11.989	SF
Moser H26-18D - Original Drilling - Original Drilling - As D	6,682.10	6,914.08	1,059.22	989.02	15.089	CC, ES
Moser H26-18D - Original Drilling - Original Drilling - As D	6,750.00	6,971.63	1,063.09	992.48	15.055	SF
Moser H26-24 - Original Drilling - Original Drilling - As Dr	8,450.60	7,031.93	410.97	357.16	7.637	CC, ES
Moser H26-24 - Original Drilling - Original Drilling - As Dr	8,500.00	7,032.60	413.93	359.53	7.608	SF
Moser H26-25 - Original Drilling - Original Drilling - As Dr	8,665.94	7,027.27	1,208.27	1,153.59	22.098	CC, ES
Moser H26-25 - Original Drilling - Original Drilling - As Dr	8,900.00	7,026.56	1,230.73	1,174.35	21.829	SF
Moser H26-27D - Original Drilling - Original Drilling - As D	0.00	0.00	1,403.64			
Moser H26-27D - Original Drilling - Original Drilling - As D	800.00	777.23	1,406.65	1,401.46	271.095	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 - DJ Basin	Local Co-ordinate Reference:	Well Hurley H35-746
Project:	Mustang	TVD Reference:	WELL @ 4884.00ft (Original Well Elev)
Reference Site:	H Section 26	MD Reference:	WELL @ 4884.00ft (Original Well Elev)
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Hurley H35-746	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan #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						
Offset Well - Wellbore - Design						
Moser H26-27D - Original Drilling - Original Drilling - As D	6,750.00	6,703.22	2,478.73	2,425.22	46.324	SF
Moser H26-28D - Original Drilling - Original Drilling - As D	100.00	84.55	1,383.85	1,383.59	5,341.790	CC
Moser H26-28D - Original Drilling - Original Drilling - As D	400.00	379.16	1,384.98	1,382.63	590.459	ES
Moser H26-28D - Original Drilling - Original Drilling - As D	6,850.00	7,172.29	2,554.09	2,481.28	35.081	SF
Moser H26-29D - Original Drilling - Original Drilling - As D	0.00	0.00	1,364.19			
Moser H26-29D - Original Drilling - Original Drilling - As D	900.00	886.66	1,364.84	1,358.66	220.842	ES
Moser H26-29D - Original Drilling - Original Drilling - As D	7,300.00	7,351.84	3,231.42	3,145.44	37.585	SF
Moser, Wesley E. G. U. B1 (PA) - Original Drilling - Origin	8,969.93	7,002.00	1,851.52	1,679.76	10.780	CC, ES
Moser, Wesley E. G. U. B1 (PA) - Original Drilling - Origin	9,100.00	7,002.00	1,856.08	1,683.41	10.749	SF

Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Hurley H35-746
Project:	Mustang	TVD Reference:	WELL @ 4884.00ft (Original Well Elev)
Reference Site:	H Section 26	MD Reference:	WELL @ 4884.00ft (Original Well Elev)
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Hurley H35-746	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan #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 27						
Offset Well - Wellbore - Design						
HSR Moser 10-27 - Wellbore #1 - Wellbore #1 - As Drilled	8,048.45	7,101.06	4,820.53	4,767.86	91.513	CC, ES
HSR Moser 10-27 - Wellbore #1 - Wellbore #1 - As Drilled	9,900.00	9,900.00	5,163.68	5,091.82	71.857	SF
HSR Moser 1-27 - Original Drilling - Original Drilling - As	6,906.56	6,544.70	4,032.27	3,983.84	83.255	CC, ES
HSR Moser 1-27 - Original Drilling - Original Drilling - As	7,350.00	6,900.82	4,120.24	4,068.95	80.321	SF
HSR Moser 15-27 - Wellbore #1 - Wellbore #1 - As Drilled	9,368.31	6,935.09	5,052.72	4,994.94	87.434	CC
HSR Moser 15-27 - Wellbore #1 - Wellbore #1 - As Drilled	9,400.00	6,935.72	5,052.82	4,994.84	87.143	ES
HSR Moser 15-27 - Wellbore #1 - Wellbore #1 - As Drilled	11,600.00	6,978.85	5,523.31	5,451.74	77.176	SF
HSR Moser 16-27 - Original Drilling - Original Drilling - As	9,474.33	7,011.41	3,339.50	3,281.03	57.120	CC
HSR Moser 16-27 - Original Drilling - Original Drilling - As	9,500.00	7,011.51	3,339.60	3,280.96	56.953	ES
HSR Moser 16-27 - Original Drilling - Original Drilling - As	10,600.00	7,015.37	3,524.11	3,458.32	53.564	SF
HSR Thorson 09-27 - Wellbore #1 - Wellbore #1 - As Drilled	8,377.69	6,952.70	3,891.41	3,837.96	72.807	CC
HSR Thorson 09-27 - Wellbore #1 - Wellbore #1 - As Drilled	8,400.00	6,952.88	3,891.47	3,837.93	72.672	ES
HSR Thorson 09-27 - Wellbore #1 - Wellbore #1 - As Drilled	9,900.00	6,963.89	4,178.56	4,116.95	67.825	SF
Moser 09-27X (PA) - Original Drilling - Original Drilling - A	8,060.91	7,006.86	3,409.44	3,354.47	62.023	CC, ES
Moser 09-27X (PA) - Original Drilling - Original Drilling - A	9,100.00	6,988.77	3,564.22	3,504.70	59.885	SF
Moser 23-27 - Wellbore #1 - Wellbore #1 - As Drilled	8,722.22	7,400.01	5,509.18	5,430.14	69.703	CC
Moser 23-27 - Wellbore #1 - Wellbore #1 - As Drilled	8,800.00	7,400.01	5,509.73	5,430.14	69.225	ES
Moser 23-27 - Wellbore #1 - Wellbore #1 - As Drilled	10,800.00	7,400.01	5,887.98	5,794.81	63.195	SF
Moser 24-27 - Original Drilling - Original Drilling - As Drilled	7,542.54	7,019.64	4,152.17	4,098.96	78.032	CC, ES
Moser 24-27 - Original Drilling - Original Drilling - As Drilled	8,900.00	7,044.22	4,408.94	4,351.45	76.690	SF
Moser 39-27 - Original Drilling - Original Drilling - As Drilled	8,864.65	7,102.20	2,961.52	2,901.24	49.127	CC, ES
Moser 39-27 - Original Drilling - Original Drilling - As Drilled	9,500.00	7,102.86	3,028.91	2,965.52	47.780	SF
Moser 7-27 - Wellbore #1 - Wellbore #1 - As Drilled	7,332.42	6,874.93	4,857.20	4,806.66	96.091	CC, ES
Moser 7-27 - Wellbore #1 - Wellbore #1 - As Drilled	8,900.00	6,983.31	5,276.96	5,220.30	93.125	SF
Moser Farms UPRR 31-27 #1 - Wellbore #1 - Wellbore #	7,017.54	6,556.56	5,351.71	5,303.05	109.968	CC, ES
Moser Farms UPRR 31-27 #1 - Wellbore #1 - Wellbore #	7,500.00	6,749.73	5,439.40	5,388.36	106.568	SF
Moser Farms UPRR 42-27 #3 - Original Drilling - Original	7,298.39	6,843.09	3,495.33	3,444.97	69.411	CC
Moser Farms UPRR 42-27 #3 - Original Drilling - Original	7,300.00	6,843.71	3,495.33	3,444.96	69.400	ES
Moser Farms UPRR 42-27 #3 - Original Drilling - Original	7,600.00	6,906.22	3,528.62	3,477.08	68.463	SF
Moser H22-711 - Original Drilling - Original Drilling - As D	6,822.60	6,443.00	3,835.30	3,788.43	81.836	CC, ES
Moser H22-711 - Original Drilling - Original Drilling - As D	7,200.00	6,481.20	3,917.08	3,868.64	80.873	SF
Moser H22-715 - Original Drilling - Original Drilling - As D	6,831.19	6,399.14	4,058.98	4,012.05	86.481	CC, ES
Moser H22-715 - Original Drilling - Original Drilling - As D	7,100.00	6,443.00	4,099.09	4,050.91	85.081	SF
Moser H22-725 - Original Drilling - Original Drilling - As D	6,858.05	6,443.00	4,568.66	4,521.69	97.261	CC, ES
Moser H22-725 - Original Drilling - Original Drilling - As D	7,250.00	6,527.95	4,644.73	4,595.89	95.100	SF
Moser H22-735 - Original Drilling - Original Drilling - As D	6,877.23	6,357.52	5,307.24	5,262.65	119.037	CC, ES
Moser H22-735 - Original Drilling - Original Drilling - As D	7,300.00	6,403.00	5,388.98	5,342.59	116.163	SF
Moser H22-745 - Original Drilling - Original Drilling - As D	6,904.40	6,311.00	5,893.44	5,853.64	148.063	CC, ES
Moser H22-745 - Original Drilling - Original Drilling - As D	7,450.00	6,405.00	6,013.43	5,971.50	143.427	SF
Moser H22-748 - Original Drilling - Original Drilling - As D	6,909.27	6,311.00	6,034.91	5,991.80	139.972	CC, ES
Moser H22-748 - Original Drilling - Original Drilling - As D	7,450.00	6,311.00	6,152.46	6,107.37	136.446	SF
Moser H22-750 - Original Drilling - Original Drilling - As D	6,959.37	6,555.10	6,196.12	6,156.28	155.513	CC, ES
Moser H22-750 - Original Drilling - Original Drilling - As D	7,550.00	6,608.00	6,335.78	6,293.83	151.005	SF
Moser H22-755 - Original Drilling - Original Drilling - As D	6,952.04	6,324.00	6,689.99	6,649.73	166.194	CC, ES
Moser H22-755 - Original Drilling - Original Drilling - As D	9,400.00	6,230.00	7,790.97	7,742.17	159.652	SF
Moser H22-765 - Original Drilling - Original Drilling - As D	7,003.28	6,551.00	7,151.87	7,106.69	158.313	CC, ES
Moser H22-765 - Original Drilling - Original Drilling - As D	9,800.00	6,502.00	8,421.31	8,365.27	150.260	SF
Moser H22-776 - Original Drilling - Original Drilling - As D	6,993.11	6,486.92	7,862.88	7,816.55	169.702	CC, ES
Moser H22-776 - Original Drilling - Original Drilling - As D	10,100.00	6,472.71	9,316.82	9,258.95	160.995	SF
Moser H34-717 - Original Drilling - Original Drilling - As D	13,945.78	15,560.26	3,164.52	3,021.67	22.152	CC
Moser H34-717 - Original Drilling - Original Drilling - As D	14,727.49	16,342.00	3,168.53	3,013.65	20.458	ES
Moser H34-717 - Original Drilling - Original Drilling - As D	15,000.00	16,342.00	3,180.23	3,023.40	20.278	SF
Moser H34-725 - Original Drilling - Original Drilling - As D	12,319.44	14,280.00	3,724.03	3,606.49	31.682	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 - DJ Basin	Local Co-ordinate Reference:	Well Hurley H35-746
Project:	Mustang	TVD Reference:	WELL @ 4884.00ft (Original Well Elev)
Reference Site:	H Section 26	MD Reference:	WELL @ 4884.00ft (Original Well Elev)
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Hurley H35-746	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Summary						
Offset Well - Wellbore - Design						
H Section 27						
Moser H34-725 - Original Drilling - Original Drilling - As D	14,800.00	16,701.00	3,747.36	3,592.67	24.226	ES
Moser H34-725 - Original Drilling - Original Drilling - As D	15,198.30	16,701.00	3,774.83	3,617.04	23.923	SF
Moser H34-735 - Original Drilling - Original Drilling - As D	14,745.97	16,441.00	4,397.40	4,164.44	18.877	CC
Moser H34-735 - Original Drilling - Original Drilling - As D	14,800.00	16,441.00	4,397.73	4,164.36	18.845	ES
Moser H34-735 - Original Drilling - Original Drilling - As D	15,100.00	16,441.00	4,411.62	4,176.56	18.768	SF
Moser H34-748 - Original Drilling - Original Drilling - As D	14,525.94	16,327.12	5,200.38	4,962.05	21.821	CC
Moser H34-748 - Original Drilling - Original Drilling - As D	14,700.00	16,395.91	5,201.98	4,960.97	21.584	ES
Moser H34-748 - Original Drilling - Original Drilling - As D	15,198.30	16,561.00	5,224.44	4,976.85	21.101	SF
Moser H34-750 - Original Drilling - Original Drilling - As D	14,764.12	16,800.00	5,390.74	5,231.97	33.952	CC
Moser H34-750 - Original Drilling - Original Drilling - As D	14,800.00	16,800.00	5,390.86	5,231.80	33.892	ES
Moser H34-750 - Original Drilling - Original Drilling - As D	15,198.30	16,800.00	5,408.20	5,246.37	33.419	SF
Moser H34-757 - Original Drilling - Original Drilling - As D	14,769.30	16,873.00	5,837.22	5,679.59	37.030	CC
Moser H34-757 - Original Drilling - Original Drilling - As D	14,800.00	16,873.00	5,837.31	5,679.42	36.971	ES
Moser H34-757 - Original Drilling - Original Drilling - As D	15,198.30	16,873.00	5,852.97	5,692.11	36.386	SF
Moser H34-769 - Original Drilling - Original Drilling - As D	14,748.80	16,611.00	6,975.32	6,811.32	42.533	CC
Moser H34-769 - Original Drilling - Original Drilling - As D	14,800.00	16,650.95	6,975.39	6,810.68	42.350	ES
Moser H34-769 - Original Drilling - Original Drilling - As D	15,198.30	16,650.00	6,987.45	6,819.62	41.636	SF
Moser H34-778 - Original Drilling - Original Drilling -As Dr	13,887.72	15,792.00	7,258.84	7,108.91	48.415	CC
Moser H34-778 - Original Drilling - Original Drilling -As Dr	13,900.00	15,792.00	7,258.85	7,108.82	48.381	ES
Moser H34-778 - Original Drilling - Original Drilling -As Dr	15,198.30	16,453.00	7,308.79	7,143.62	44.249	SF
Moser H34-778 - Original Drilling - ST01 - Original Drilling	14,538.87	16,440.00	7,279.78	7,133.95	49.919	CC
Moser H34-778 - Original Drilling - ST01 - Original Drilling	14,600.00	16,440.00	7,280.04	7,133.70	49.747	ES
Moser H34-778 - Original Drilling - ST01 - Original Drilling	15,198.30	16,440.00	7,309.59	7,158.72	48.450	SF
Ritchey 1-27 1 - Wellbore #1 - Wellbore #1 - As Drilled	7,315.74	6,920.22	6,681.52	6,630.92	132.043	CC, ES
Ritchey 1-27 1 - Wellbore #1 - Wellbore #1 - As Drilled	11,800.00	11,800.00	8,550.82	8,465.65	100.401	SF
Ritchey H27-04 - Wellbore #1 - Wellbore #1 - As Drilled	7,141.30	6,653.92	8,135.98	8,086.63	164.846	CC
Ritchey H27-04 - Wellbore #1 - Wellbore #1 - As Drilled	7,150.00	6,661.47	8,136.00	8,086.59	164.656	ES
Ritchey H27-04 - Wellbore #1 - Wellbore #1 - As Drilled	11,400.00	6,724.54	9,992.49	9,925.29	148.708	SF
Ritchey H27-05 - Wellbore #1 - Wellbore #1 - As Drilled	7,392.45	7,023.76	7,925.86	7,874.73	155.017	CC
Ritchey H27-05 - Wellbore #1 - Wellbore #1 - As Drilled	7,400.00	7,025.25	7,925.87	7,874.72	154.932	ES
Ritchey H27-05 - Wellbore #1 - Wellbore #1 - As Drilled	12,200.00	7,000.01	9,695.03	9,622.04	132.819	SF
Ritchey H27-11 - Wellbore #1 - Wellbore #1 - As Drilled	8,017.01	7,020.90	6,285.04	6,232.61	119.867	CC, ES
Ritchey H27-11 - Wellbore #1 - Wellbore #1 - As Drilled	11,500.00	6,984.24	7,185.53	7,115.25	102.252	SF
Ritchey H27-12 - Wellbore #1 - Wellbore #1 - As Drilled	7,869.55	6,834.01	7,486.61	7,435.06	145.226	CC
Ritchey H27-12 - Wellbore #1 - Wellbore #1 - As Drilled	7,900.00	6,834.11	7,486.67	7,435.03	144.977	ES
Ritchey H27-12 - Wellbore #1 - Wellbore #1 - As Drilled	12,600.00	6,850.09	8,855.85	8,780.00	116.746	SF
Ritchey H27-14 - Wellbore #1 - Wellbore #1 - As Drilled	9,361.74	7,022.49	6,263.57	6,205.64	108.130	CC
Ritchey H27-14 - Wellbore #1 - Wellbore #1 - As Drilled	9,400.00	7,023.36	6,263.68	6,205.53	107.709	ES
Ritchey H27-14 - Wellbore #1 - Wellbore #1 - As Drilled	12,500.00	7,079.58	7,005.55	6,928.46	90.879	SF
Ritchey H27-20 - Wellbore #1 - Wellbore #1 - As Drilled	7,562.11	6,602.74	7,232.44	7,182.06	143.540	CC, ES
Ritchey H27-20 - Wellbore #1 - Wellbore #1 - As Drilled	12,000.00	6,509.67	8,561.38	8,489.89	119.754	SF
Ritchey H27-21 - Wellbore #1 - Wellbore #1 - As Drilled	7,529.66	7,000.01	5,665.14	5,613.79	110.325	CC, ES
Ritchey H27-21 - Wellbore #1 - Wellbore #1 - As Drilled	10,400.00	6,952.83	6,450.82	6,386.81	100.783	SF
Ritchey H27-25 - Wellbore #1 - Wellbore #1 - As Drilled	8,809.23	7,027.28	6,956.11	6,900.72	125.601	CC, ES
Ritchey H27-25 - Wellbore #1 - Wellbore #1 - As Drilled	12,800.00	7,101.10	8,018.55	7,940.21	102.355	SF
Ritchey H34-28 - Wellbore #1 - Wellbore #1 - As Drilled	10,029.71	6,610.69	5,827.78	5,766.98	95.844	CC
Ritchey H34-28 - Wellbore #1 - Wellbore #1 - As Drilled	10,100.00	6,611.45	5,828.21	5,766.92	95.099	ES
Ritchey H34-28 - Wellbore #1 - Wellbore #1 - As Drilled	12,700.00	6,634.42	6,410.35	6,332.57	82.424	SF
Ritchey H34-29 - Wellbore #1 - Wellbore #1 - As Drilled	9,741.17	7,078.32	6,941.02	6,880.83	115.310	CC
Ritchey H34-29 - Wellbore #1 - Wellbore #1 - As Drilled	9,800.00	7,075.10	6,941.27	6,880.71	114.618	ES
Ritchey H34-29 - Wellbore #1 - Wellbore #1 - As Drilled	13,300.00	6,876.84	7,797.76	7,715.99	95.361	SF
UPRR 53 Pan Am Unit "O" 1 - Original Drilling - Original D	7,195.06	6,850.05	4,334.60	4,284.51	86.534	CC
UPRR 53 Pan Am Unit "O" 1 - Original Drilling - Original D	7,200.00	6,852.23	4,334.61	4,284.49	86.489	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 - DJ Basin	Local Co-ordinate Reference:	Well Hurley H35-746
Project:	Mustang	TVD Reference:	WELL @ 4884.00ft (Original Well Elev)
Reference Site:	H Section 26	MD Reference:	WELL @ 4884.00ft (Original Well Elev)
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Hurley H35-746	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan #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 27						
UPRR 53 Pan Am Unit "O" 1 - Original Drilling - Original D	7,550.00	6,970.62	4,381.21	4,329.53	84.781	SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Hurley H35-746
Project:	Mustang	TVD Reference:	WELL @ 4884.00ft (Original Well Elev)
Reference Site:	H Section 26	MD Reference:	WELL @ 4884.00ft (Original Well Elev)
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Hurley H35-746	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan #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 34						
Cannon H34-11 - Wellbore #1 - Wellbore #1 - As Drilled	13,396.49	6,797.11	6,211.81	6,127.82	73.957	CC
Cannon H34-11 - Wellbore #1 - Wellbore #1 - As Drilled	13,400.00	6,797.16	6,211.81	6,127.79	73.930	ES
Cannon H34-11 - Wellbore #1 - Wellbore #1 - As Drilled	15,198.30	6,800.01	6,467.83	6,370.60	66.520	SF
Cannon H34-12 - Wellbore #1 - Wellbore #1 - As Drilled	13,359.06	7,030.34	7,440.55	7,356.39	88.412	CC
Cannon H34-12 - Wellbore #1 - Wellbore #1 - As Drilled	13,400.00	7,030.34	7,440.66	7,356.16	88.056	ES
Cannon H34-12 - Wellbore #1 - Wellbore #1 - As Drilled	15,198.30	7,030.61	7,664.50	7,566.44	78.164	SF
Cannon H34-13 - Wellbore #1 - Wellbore #1 - As Drilled	14,638.43	6,859.27	7,334.56	7,241.22	78.578	CC
Cannon H34-13 - Wellbore #1 - Wellbore #1 - As Drilled	14,700.00	6,859.03	7,334.82	7,240.95	78.138	ES
Cannon H34-13 - Wellbore #1 - Wellbore #1 - As Drilled	15,198.30	6,857.13	7,355.90	7,257.89	75.051	SF
Cannon H34-14 - Wellbore #1 - Wellbore #1 - As Drilled	14,688.49	7,100.01	6,162.33	6,068.03	65.352	CC
Cannon H34-14 - Wellbore #1 - Wellbore #1 - As Drilled	14,700.00	7,100.01	6,162.34	6,067.94	65.282	ES
Cannon H34-14 - Wellbore #1 - Wellbore #1 - As Drilled	15,198.30	7,100.01	6,183.38	6,084.76	62.701	SF
Cannon H34-25 - Wellbore #1 - Wellbore #1 - As Drilled	13,949.11	7,018.03	6,792.34	6,703.79	76.709	CC
Cannon H34-25 - Wellbore #1 - Wellbore #1 - As Drilled	14,000.00	7,017.37	6,792.53	6,703.55	76.336	ES
Cannon H34-25 - Wellbore #1 - Wellbore #1 - As Drilled	15,198.30	7,001.73	6,906.23	6,807.87	70.212	SF
Cannon Land 11-34 - Wellbore #1 - Wellbore #1 - As Drill	13,169.95	6,864.30	6,190.32	6,107.85	75.064	CC
Cannon Land 11-34 - Wellbore #1 - Wellbore #1 - As Drill	13,200.00	6,864.71	6,190.39	6,107.67	74.833	ES
Cannon Land 11-34 - Wellbore #1 - Wellbore #1 - As Drill	15,198.30	6,895.39	6,514.12	6,417.06	67.112	SF
Cannon X 03-29 - Wellbore #1 - Wellbore #1 - As Drilled	14,300.00	14,300.00	6,778.92	6,663.97	58.972	SF
Cannon X 03-29 - Wellbore #1 - Wellbore #1 - As Drilled	15,193.88	7,088.17	6,719.76	6,621.70	68.526	CC
Cannon X 03-29 - Wellbore #1 - Wellbore #1 - As Drilled	15,198.30	7,088.04	6,719.76	6,621.66	68.499	ES
Cannon X 03-30D - Wellbore #1 - Wellbore #1 - As Drilled	15,198.30	7,303.39	7,945.00	7,843.04	77.922	CC, ES, SF
Moser 34-06 - Original Drilling - Original Drilling - As Drille	11,687.23	7,013.40	6,502.06	6,429.89	90.087	CC
Moser 34-06 - Original Drilling - Original Drilling - As Drille	11,700.00	7,013.42	6,502.07	6,429.80	89.962	ES
Moser 34-06 - Original Drilling - Original Drilling - As Drille	14,500.00	7,016.70	7,084.38	6,993.31	77.790	SF
Moser H34-01 - Original Drilling - Original Drilling - As Dr	10,785.60	7,100.01	3,491.52	3,425.28	52.713	CC
Moser H34-01 - Original Drilling - Original Drilling - As Dr	10,800.00	7,100.01	3,491.55	3,425.19	52.620	ES
Moser H34-01 - Original Drilling - Original Drilling - As Dr	11,800.00	7,080.95	3,635.81	3,562.18	49.375	SF
Moser H34-02 - Wellbore #1 - Wellbore #1 - As Drilled	10,716.07	7,186.65	4,793.47	4,727.46	72.616	CC, ES
Moser H34-02 - Wellbore #1 - Wellbore #1 - As Drilled	12,600.00	7,294.92	5,149.26	5,070.31	65.227	SF
Moser H34-04 - Wellbore #1 - Wellbore #1 - As Drilled	10,754.80	6,900.01	7,555.79	7,489.99	114.844	CC
Moser H34-04 - Wellbore #1 - Wellbore #1 - As Drilled	10,800.00	6,900.01	7,555.92	7,489.80	114.281	ES
Moser H34-04 - Wellbore #1 - Wellbore #1 - As Drilled	14,600.00	6,961.55	8,477.61	8,387.02	93.581	SF
Moser H34-06 - Wellbore #1 - Wellbore #1 - As Drilled	11,687.23	7,013.40	6,502.06	6,429.89	90.087	CC
Moser H34-06 - Wellbore #1 - Wellbore #1 - As Drilled	11,700.00	7,013.42	6,502.07	6,429.80	89.962	ES
Moser H34-06 - Wellbore #1 - Wellbore #1 - As Drilled	14,500.00	7,016.71	7,084.38	6,993.31	77.790	SF
Moser H34-08 - Original Drilling - Original Drilling - As Dr	11,651.24	7,061.90	3,861.48	3,789.42	53.591	CC
Moser H34-08 - Original Drilling - Original Drilling - As Dr	11,700.00	7,062.09	3,861.78	3,789.31	53.285	ES
Moser H34-08 - Original Drilling - Original Drilling - As Dr	12,800.00	7,066.35	4,028.72	3,948.17	50.015	SF
Moser H34-09 - Wellbore #1 - Wellbore #1 - As Drilled	13,294.97	7,034.87	3,348.09	3,264.46	40.035	CC
Moser H34-09 - Wellbore #1 - Wellbore #1 - As Drilled	13,300.00	7,034.89	3,348.10	3,264.42	40.012	ES
Moser H34-09 - Wellbore #1 - Wellbore #1 - As Drilled	14,100.00	7,037.56	3,443.51	3,353.58	38.288	SF
Moser H34-10 - Wellbore #1 - Wellbore #1 - As Drilled	13,211.36	6,975.19	4,803.76	4,720.78	57.886	CC, ES
Moser H34-10 - Wellbore #1 - Wellbore #1 - As Drilled	14,700.00	6,980.86	5,029.13	4,935.32	53.606	SF
Moser H34-15 - Wellbore #1 - Wellbore #1 - As Drilled	14,549.34	7,046.83	4,738.97	4,645.88	50.908	CC
Moser H34-15 - Wellbore #1 - Wellbore #1 - As Drilled	14,600.00	7,047.41	4,739.24	4,645.69	50.658	ES
Moser H34-15 - Wellbore #1 - Wellbore #1 - As Drilled	15,198.30	7,054.30	4,783.19	4,684.66	48.544	SF
Moser H34-16 - Wellbore #1 - Wellbore #1 - As Drilled	14,543.15	7,020.91	3,333.61	3,240.54	35.816	CC
Moser H34-16 - Wellbore #1 - Wellbore #1 - As Drilled	14,600.00	7,019.36	3,334.10	3,240.48	35.613	ES
Moser H34-16 - Wellbore #1 - Wellbore #1 - As Drilled	15,198.30	7,003.02	3,397.34	3,299.05	34.565	SF
Moser H34-18 - Wellbore #1 - Wellbore #1 - As Drilled	11,368.96	6,955.88	5,640.00	5,570.09	80.675	CC
Moser H34-18 - Wellbore #1 - Wellbore #1 - As Drilled	11,400.00	6,955.90	5,640.08	5,569.93	80.395	ES
Moser H34-18 - Wellbore #1 - Wellbore #1 - As Drilled	13,600.00	6,957.63	6,065.24	5,980.12	71.257	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 - DJ Basin	Local Co-ordinate Reference:	Well Hurley H35-746
Project:	Mustang	TVD Reference:	WELL @ 4884.00ft (Original Well Elev)
Reference Site:	H Section 26	MD Reference:	WELL @ 4884.00ft (Original Well Elev)
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Hurley H35-746	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan #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 34						
Moser H34-20 - Wellbore #1 - Wellbore #1 - As Drilled	12,100.00	12,100.00	6,830.15	6,738.02	74.139	SF
Moser H34-20 - Wellbore #1 - Wellbore #1 - As Drilled	12,561.19	7,057.20	6,814.71	6,736.29	86.901	CC
Moser H34-20 - Wellbore #1 - Wellbore #1 - As Drilled	12,600.00	7,053.25	6,814.82	6,736.09	86.559	ES
Moser H34-21 - Wellbore #1 - Wellbore #1 - As Drilled	12,433.94	6,966.37	5,678.68	5,601.38	73.465	CC
Moser H34-21 - Wellbore #1 - Wellbore #1 - As Drilled	12,500.00	6,966.40	5,679.07	5,601.22	72.949	ES
Moser H34-21 - Wellbore #1 - Wellbore #1 - As Drilled	14,500.00	6,967.38	6,042.85	5,951.09	65.854	SF
Moser H34-22 - Wellbore #1 - Wellbore #1 - As Drilled	12,463.93	7,005.16	4,035.95	3,958.34	51.999	CC
Moser H34-22 - Wellbore #1 - Wellbore #1 - As Drilled	12,500.00	7,005.05	4,036.11	3,958.18	51.787	ES
Moser H34-22 - Wellbore #1 - Wellbore #1 - As Drilled	13,600.00	7,001.23	4,192.80	4,106.68	48.688	SF
Moser H34-23 - Wellbore #1 - Wellbore #1 - As Drilled	13,909.23	7,046.57	4,101.97	4,013.75	46.494	CC, ES
Moser H34-23 - Wellbore #1 - Wellbore #1 - As Drilled	15,000.00	7,067.51	4,244.47	4,147.99	43.994	SF
Moser H34-31 - Wellbore #1 - Wellbore #1 - As Drilled	11,362.91	7,123.44	8,033.55	7,963.30	114.365	CC
Moser H34-31 - Wellbore #1 - Wellbore #1 - As Drilled	11,400.00	7,124.32	8,033.63	7,963.11	113.910	ES
Moser H34-31 - Wellbore #1 - Wellbore #1 - As Drilled	15,198.30	7,200.01	8,901.59	8,805.84	92.967	SF
Moser H35-32 - Wellbore #1 - Wellbore #1 - As Drilled	12,452.82	7,026.33	2,972.02	2,894.46	38.322	CC
Moser H35-32 - Wellbore #1 - Wellbore #1 - As Drilled	12,500.00	7,026.39	2,972.39	2,894.39	38.108	ES
Moser H35-32 - Wellbore #1 - Wellbore #1 - As Drilled	13,100.00	7,027.19	3,041.66	2,958.87	36.737	SF
Moser H35-33 - Wellbore #1 - Wellbore #1 - As Drilled	13,944.96	7,067.72	2,870.35	2,781.84	32.428	CC
Moser H35-33 - Wellbore #1 - Wellbore #1 - As Drilled	14,000.00	7,066.19	2,870.88	2,781.82	32.235	ES
Moser H35-33 - Wellbore #1 - Wellbore #1 - As Drilled	14,500.00	7,052.34	2,923.48	2,830.39	31.404	SF
Moser X 3-27 - Wellbore #1 - Wellbore #1 - As Drilled	15,149.66	6,817.86	4,117.96	4,020.61	42.302	CC
Moser X 3-27 - Wellbore #1 - Wellbore #1 - As Drilled	15,198.30	6,820.32	4,118.24	4,020.43	42.106	ES, SF
Moser X 3-28 - Wellbore #1 - Wellbore #1 - As Drilled	15,172.71	6,897.28	5,368.29	5,270.68	54.996	CC
Moser X 3-28 - Wellbore #1 - Wellbore #1 - As Drilled	15,198.30	6,898.61	5,368.35	5,270.51	54.865	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 - DJ Basin	Local Co-ordinate Reference:	Well Hurley H35-746
Project:	Mustang	TVD Reference:	WELL @ 4884.00ft (Original Well Elev)
Reference Site:	H Section 26	MD Reference:	WELL @ 4884.00ft (Original Well Elev)
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Hurley H35-746	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan #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 35						
Cannon Farms 01-35C - Original Drilling - Original Drilling	14,123.68	7,017.27	1,318.61	1,228.70	14.666	CC, ES, SF
Cannon H35-03D - Original Drilling - Original Drilling - As	13,650.70	6,987.16	1,116.94	1,030.50	12.921	CC, ES
Cannon H35-03D - Original Drilling - Original Drilling - As	13,800.00	6,993.22	1,126.86	1,038.79	12.795	SF
Cannon H35-09 - Original Drilling - Original Drilling - As D	13,187.43	7,024.90	1,681.52	1,593.50	19.104	CC, ES
Cannon H35-09 - Original Drilling - Original Drilling - As D	13,200.00	7,024.63	1,681.57	1,593.52	19.099	SF
Cannon H35-10 - Original Drilling - Original Drilling - As D	13,300.00	7,007.76	443.46	359.67	5.292	SF
Cannon H35-10 - Original Drilling - Original Drilling - As D	13,319.16	7,007.82	443.05	359.40	5.296	CC, ES
Cannon H35-11 - Original Drilling - Original Drilling - As D	13,221.54	7,004.68	628.00	544.65	7.534	CC, ES
Cannon H35-11 - Original Drilling - Original Drilling - As D	13,300.00	7,006.10	632.88	548.42	7.493	SF
Cannon H35-12 - Original Drilling - Original Drilling - As D	13,350.97	7,025.22	2,091.31	2,007.29	24.892	CC, ES
Cannon H35-12 - Original Drilling - Original Drilling - As D	13,700.00	7,028.43	2,120.23	2,033.07	24.324	SF
Cannon H35-13 - Wellbore #1 - Wellbore #1 - As Drilled	14,542.88	7,031.76	2,131.75	2,038.80	22.934	CC, ES
Cannon H35-13 - Wellbore #1 - Wellbore #1 - As Drilled	14,900.00	7,022.24	2,161.44	2,065.30	22.481	SF
Cannon H35-14 - Original Drilling - Original Drilling - As D	14,551.87	7,022.47	738.12	638.08	7.379	CC, ES
Cannon H35-14 - Original Drilling - Original Drilling - As D	14,600.00	7,022.17	739.69	638.91	7.340	SF
Cannon H35-15 (PA) - Original Drilling - Original Drilling -	14,566.33	7,014.00	478.69	269.58	2.289	CC, ES, SF
Cannon H35-20 - Original Drilling - Original Drilling - As D	12,738.57	6,951.04	1,501.41	1,421.61	18.814	CC, ES
Cannon H35-20 - Original Drilling - Original Drilling - As D	13,000.00	6,954.90	1,524.00	1,441.71	18.522	SF
Cannon H35-21 - Original Drilling - Original Drilling - As D	12,796.04	7,022.87	80.65	0.70	1.009	Level 2, CC
Cannon H35-21 - Original Drilling - Original Drilling - As D	12,800.00	7,022.89	80.75	0.45	1.006	Level 2, ES, SF
Cannon H35-22 - Original Drilling - Original Drilling - As D	12,697.50	6,895.60	846.59	767.99	10.770	CC, ES, SF
Cannon H35-24 - Original Drilling - Original Drilling - As D	13,986.70	7,009.38	263.45	174.33	2.956	CC
Cannon H35-24 - Original Drilling - Original Drilling - As D	14,000.00	7,009.58	263.79	174.27	2.947	ES, SF
Cannon X02-27 - Original Drilling - Original Drilling - As D	15,042.16	7,008.70	908.19	811.48	9.391	CC, ES, SF
Cannon X02-28 - Original Drilling - Original Drilling - As D	14,831.81	7,016.93	279.87	184.49	2.934	CC, ES, SF
Cannon X02-29 - Original Drilling - Original Drilling - As D	14,942.78	7,089.09	1,602.81	1,506.56	16.652	CC, ES
Cannon X02-29 - Original Drilling - Original Drilling - As D	15,100.00	7,097.11	1,610.48	1,512.64	16.460	SF
Foster 18-35 - Original Drilling - Original Drilling - As Drill	11,078.10	6,967.61	1,658.39	1,590.20	24.317	CC
Foster 18-35 - Original Drilling - Original Drilling - As Drill	11,100.00	6,967.78	1,658.54	1,590.11	24.238	ES
Foster 18-35 - Original Drilling - Original Drilling - As Drill	11,400.00	6,970.04	1,689.34	1,618.29	23.774	SF
Foster UPRR 31-35 #1 (PA) - Original Drilling - Original D	10,462.91	7,026.01	459.86	279.70	2.553	CC, ES, SF
Foster UPRR 32-35 - Original Drilling - Original Drilling - A	11,798.64	7,022.59	351.54	278.57	4.818	CC, ES, SF
Foster UPRR 41-35 - Original Drilling - Original Drilling - A	10,660.52	7,009.56	1,791.40	1,716.37	23.877	CC, ES
Foster UPRR 41-35 - Original Drilling - Original Drilling - A	10,800.00	7,010.32	1,796.82	1,721.46	23.843	SF
Foster UPRR 42-35 #2 - Original Drilling - Original Drilling	11,752.92	6,947.97	1,763.95	1,691.91	24.486	CC, ES
Foster UPRR 42-35 #2 - Original Drilling - Original Drilling	11,800.00	6,949.17	1,764.58	1,692.41	24.449	SF
HSR Foster 03-35 - Original Drilling - Original Drilling - As	10,699.51	7,025.40	776.96	711.37	11.845	CC
HSR Foster 03-35 - Original Drilling - Original Drilling - As	10,700.00	7,025.39	776.96	711.36	11.844	ES
HSR Foster 03-35 - Original Drilling - Original Drilling - As	10,800.00	7,022.45	783.43	716.54	11.713	SF
HSR Foster 04-35 - Wellbore #1 - Wellbore #1 - As Drille	10,427.37	6,844.98	2,450.73	2,386.82	38.345	CC, ES
HSR Foster 04-35 - Wellbore #1 - Wellbore #1 - As Drille	11,000.00	6,846.55	2,516.74	2,448.46	36.857	SF
HSR Foster 05-35 - Wellbore #1 - Wellbore #1 - As Drille	12,013.10	6,867.49	2,215.67	2,141.16	29.737	CC, ES
HSR Foster 05-35 - Wellbore #1 - Wellbore #1 - As Drille	12,400.00	6,871.87	2,249.19	2,171.34	28.892	SF
HSR Foster 06-35 - Original Drilling - Original Drilling - As	11,882.19	7,013.91	846.89	773.29	11.507	CC
HSR Foster 06-35 - Original Drilling - Original Drilling - As	11,900.00	7,014.10	847.07	773.22	11.469	ES
HSR Foster 06-35 - Original Drilling - Original Drilling - As	12,000.00	7,015.17	855.04	780.00	11.394	SF
UPRR 53 Pan Am Unit P1 - Original Drilling - Original Dri	11,255.93	7,019.88	1,245.99	1,176.66	17.972	CC, ES, SF
UPRR 53 Pan Am UT P2 - Original Drilling - Original Drill	10,927.57	6,963.63	1,240.08	1,172.79	18.429	CC, ES
UPRR 53 Pan Am UT P2 - Original Drilling - Original Drill	11,100.00	6,963.13	1,252.01	1,182.97	18.134	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 - DJ Basin	Local Co-ordinate Reference:	Well Hurley H35-746
Project:	Mustang	TVD Reference:	WELL @ 4884.00ft (Original Well Elev)
Reference Site:	H Section 26	MD Reference:	WELL @ 4884.00ft (Original Well Elev)
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Hurley H35-746	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan #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						
Dechant 07-36 - Original Drilling - Original Drilling - As Dr	12,085.44	6,879.84	5,448.38	5,374.10	73.347	CC
Dechant 07-36 - Original Drilling - Original Drilling - As Dr	12,100.00	6,879.89	5,448.40	5,374.04	73.265	ES
Dechant 07-36 - Original Drilling - Original Drilling - As Dr	13,600.00	6,885.34	5,654.98	5,573.48	69.394	SF
Dechant 13N-1HZ - Production Hole - Production Hole - A	15,198.30	6,970.68	2,937.50	2,840.78	30.373	CC, ES, SF
Dechant 13N-1HZ - Surface Hole - Surface Hole - As Dril	14,967.97	600.00	7,408.06	7,343.16	114.156	CC
Dechant 13N-1HZ - Surface Hole - Surface Hole - As Dril	15,000.00	600.00	7,408.13	7,343.01	113.775	ES
Dechant 13N-1HZ - Surface Hole - Surface Hole - As Dril	15,198.30	600.00	7,411.64	7,345.20	111.554	SF
Dechant 14C-1HZ - Production Hole - Production Hole - A	15,152.49	6,932.67	4,281.15	4,186.30	45.136	CC
Dechant 14C-1HZ - Production Hole - Production Hole - A	15,198.30	6,953.00	4,281.33	4,186.10	44.954	ES, SF
Dechant 14C-1HZ - Surface Hole - Surface Hole - As Dril	14,970.09	610.00	7,447.13	7,382.21	114.711	CC
Dechant 14C-1HZ - Surface Hole - Surface Hole - As Dril	15,000.00	610.00	7,447.19	7,382.07	114.354	ES
Dechant 14C-1HZ - Surface Hole - Surface Hole - As Dril	15,198.30	610.00	7,450.63	7,384.18	112.122	SF
Dechant 15-36 - Original Drilling - Original Drilling - As Dr	14,538.76	6,965.02	5,481.60	5,371.46	49.772	CC
Dechant 15-36 - Original Drilling - Original Drilling - As Dr	14,600.00	6,965.28	5,481.94	5,371.42	49.603	ES
Dechant 15-36 - Original Drilling - Original Drilling - As Dr	15,198.30	6,967.79	5,521.13	5,407.27	48.491	SF
Dechant 24-36 - Original Drilling - Original Drilling - As Dr	12,408.64	7,120.61	6,143.71	6,063.97	77.048	CC, ES
Dechant 24-36 - Original Drilling - Original Drilling - As Dr	14,600.00	7,121.63	6,522.83	6,429.53	69.912	SF
Dechant 35N-E1HZ - Production Hole - Production Hole -	15,198.30	6,979.49	4,002.19	3,906.62	41.878	CC, ES, SF
Dechant 35N-E1HZ - Surface Hole - Surface Hole - As D	14,969.46	612.00	7,431.35	7,366.43	114.476	CC
Dechant 35N-E1HZ - Surface Hole - Surface Hole - As D	15,000.00	612.00	7,431.41	7,366.29	114.112	ES
Dechant 35N-E1HZ - Surface Hole - Surface Hole - As D	15,198.30	612.00	7,434.87	7,368.42	111.885	SF
Dechant 35N-W1HZ - Original Drilling - Original Drilling -	14,800.00	14,800.00	3,596.23	3,465.97	27.607	ES, SF
Dechant 35N-W1HZ - Original Drilling - Original Drilling -	15,198.30	6,900.77	3,569.56	3,474.32	37.482	CC
Dechant 36N-W1HZ - Original Drilling - Original Drilling -	14,961.33	6,383.65	4,641.23	4,547.83	49.696	CC
Dechant 36N-W1HZ - Original Drilling - Original Drilling -	15,000.00	6,387.51	4,641.39	4,547.74	49.564	ES
Dechant 36N-W1HZ - Original Drilling - Original Drilling -	15,198.30	6,414.23	4,647.18	4,552.25	48.955	SF
Dechant 37N-E1HZ - Production Hole - Production Hole -	15,198.30	7,071.11	6,677.31	6,578.92	67.864	CC, ES, SF
Dechant 37N-E1HZ - Surface Hole - Surface Hole - As D	14,918.16	648.00	8,166.31	8,101.44	125.879	CC
Dechant 37N-E1HZ - Surface Hole - Surface Hole - As D	15,000.00	648.00	8,166.72	8,101.29	124.822	ES
Dechant 37N-E1HZ - Surface Hole - Surface Hole - As D	15,198.30	648.00	8,171.11	8,104.37	122.421	SF
Dechant 37N-W1HZ - Production Hole - Production Hole	14,786.80	7,256.02	6,012.52	5,918.11	63.681	CC
Dechant 37N-W1HZ - Production Hole - Production Hole	14,900.00	7,320.29	6,013.22	5,917.86	63.062	ES
Dechant 37N-W1HZ - Production Hole - Production Hole	15,198.30	7,508.03	6,020.38	5,922.23	61.343	SF
Dechant 37N-W1HZ - Surface Hole - Surface Hole - As D	14,936.02	655.00	8,175.03	8,110.00	125.702	CC
Dechant 37N-W1HZ - Surface Hole - Surface Hole - As D	15,000.00	655.00	8,175.28	8,109.82	124.876	ES
Dechant 37N-W1HZ - Surface Hole - Surface Hole - As D	15,198.30	655.00	8,179.24	8,112.45	122.464	SF
Dechant State 15C-1HZ - Wellbore #1 - As Drilled	100.00	48.23	5,230.46	5,230.25	10,000.000	CC
Dechant State 15C-1HZ - Wellbore #1 - As Drilled	2,300.26	2,366.90	5,231.35	5,217.06	366.127	ES
Dechant State 15C-1HZ - Wellbore #1 - As Drilled	15,198.30	11,771.00	5,628.24	5,496.23	42.636	SF
Dechant State 16C-1HZ - Original Drilling - Original Drillin	2,619.86	3,253.45	6,445.31	6,424.52	310.005	CC, ES
Dechant State 16C-1HZ - Original Drilling - Original Drillin	14,100.00	14,100.00	6,883.09	6,690.41	35.723	SF
Dechant State 36N-E1HZ - Wellbore #1 - Wellbore #1	10,974.38	7,614.66	5,216.48	5,149.25	77.594	CC
Dechant State 36N-E1HZ - Wellbore #1 - Wellbore #1	14,500.00	14,500.00	5,269.68	5,114.88	34.043	ES, SF
Dechant State 37N-E36HZ - Wellbore #1 - As Drilled	2,743.57	3,587.00	6,387.20	6,366.72	311.869	CC, ES
Dechant State 37N-E36HZ - Wellbore #1 - As Drilled	15,198.30	11,466.00	6,641.18	6,512.53	51.620	SF
Dechant State 37N-W36HZ - Wellbore #1 - As Drilled	704.58	653.58	5,238.89	5,234.60	1,220.655	CC
Dechant State 37N-W36HZ - Wellbore #1 - As Drilled	1,000.00	915.46	5,239.88	5,234.20	921.904	ES
Dechant State 37N-W36HZ - Wellbore #1 - As Drilled	15,198.30	11,490.00	6,103.10	5,973.87	47.226	SF
Dechant State 38N-1HZ - Wellbore #1 - As Drilled	2,316.18	2,478.00	6,743.19	6,728.16	448.575	CC, ES
Dechant State 38N-1HZ - Wellbore #1 - As Drilled	14,100.00	14,100.00	7,344.98	7,197.39	49.766	SF
Dechant State H36-11D - Original Drilling - Original Drillin	13,295.67	6,934.88	4,303.08	4,219.83	51.684	CC
Dechant State H36-11D - Original Drilling - Original Drillin	13,300.00	6,934.82	4,303.08	4,219.80	51.669	ES
Dechant State H36-11D - Original Drilling - Original Drillin	14,100.00	6,923.38	4,377.59	4,290.72	50.394	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 - DJ Basin	Local Co-ordinate Reference:	Well Hurley H35-746
Project:	Mustang	TVD Reference:	WELL @ 4884.00ft (Original Well Elev)
Reference Site:	H Section 26	MD Reference:	WELL @ 4884.00ft (Original Well Elev)
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Hurley H35-746	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan #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						
Dechant State H36-18D - Dechant State H36-18D Gyros	369.78	301.79	4,811.69	4,809.71	2,435.423	CC
Dechant State H36-18D - Dechant State H36-18D Gyros	11,300.00	7,110.16	4,824.31	4,752.54	67.216	ES
Dechant State H36-18D - Dechant State H36-18D Gyros	13,800.00	7,224.48	5,463.04	5,363.98	55.152	SF
Dechant State H36-18D - Dechant State H36-18D OH - A	369.78	314.79	4,811.67	4,809.70	2,435.438	CC
Dechant State H36-18D - Dechant State H36-18D OH - A	11,300.00	7,123.16	4,824.35	4,752.58	67.216	ES
Dechant State H36-18D - Dechant State H36-18D OH - A	13,800.00	7,237.48	5,463.09	5,364.03	55.152	SF
Dechant State H36-19 - Original Drilling - Original Drilling	10,915.76	7,182.70	3,424.98	3,356.86	50.281	CC, ES
Dechant State H36-19 - Original Drilling - Original Drilling	11,500.00	7,188.15	3,474.45	3,403.97	49.298	SF
Dechant State H36-20D - Dechant State H36-20D Gyros	12,697.38	7,282.53	3,657.68	3,572.90	43.146	CC
Dechant State H36-20D - Dechant State H36-20D Gyros	12,700.00	7,282.60	3,657.68	3,572.90	43.145	ES
Dechant State H36-20D - Dechant State H36-20D Gyros	14,300.00	14,300.00	3,992.74	3,885.39	37.192	SF
Dechant State H36-20D - Dechant State H36-20D OH - A	12,697.39	7,295.53	3,657.68	3,572.91	43.146	CC
Dechant State H36-20D - Dechant State H36-20D OH - A	12,700.00	7,295.60	3,657.68	3,572.90	43.145	ES
Dechant State H36-20D - Dechant State H36-20D OH - A	14,300.00	14,300.00	3,992.74	3,885.43	37.206	SF
Dechant State H36-21D - Dechant State H36-21D Gyros	12,660.11	7,053.55	4,872.80	4,787.50	57.125	CC, ES
Dechant State H36-21D - Dechant State H36-21D Gyros	13,300.00	7,052.77	4,914.63	4,827.53	56.421	SF
Dechant State H36-21D - Dechant State H36-21D OH - A	12,660.13	7,066.55	4,872.77	4,787.47	57.125	CC, ES
Dechant State H36-21D - Dechant State H36-21D OH - A	13,300.00	7,065.77	4,914.61	4,827.50	56.421	SF
Dechant State H36-24 - Original Drilling - Original Drilling	13,856.66	7,195.15	4,956.56	4,866.98	55.331	CC
Dechant State H36-24 - Original Drilling - Original Drilling	13,900.00	7,194.62	4,956.75	4,866.91	55.171	ES
Dechant State H36-24 - Original Drilling - Original Drilling	15,000.00	7,181.74	5,086.70	4,991.25	53.287	SF
Dechant State H36-31D - Dechant State H36-31D OH - A	11,291.05	7,122.11	2,429.25	2,359.34	34.748	CC
Dechant State H36-31D - Dechant State H36-31D OH - A	11,300.00	7,122.18	2,429.26	2,359.33	34.738	ES
Dechant State H36-31D - Dechant State H36-31D OH - A	11,400.00	7,122.91	2,431.69	2,361.54	34.667	SF
Dechant State H36-32D - Dechant State H36-32D Gyros	12,534.62	6,950.00	2,436.93	2,353.80	29.312	CC, ES
Dechant State H36-32D - Dechant State H36-32D Gyros	12,800.00	6,950.00	2,451.34	2,366.64	28.940	SF
Dechant State H36-32D - Dechant State H36-32D OH - A	12,536.70	7,082.53	2,433.05	2,349.21	29.019	CC, ES
Dechant State H36-32D - Dechant State H36-32D OH - A	12,800.00	7,086.50	2,447.25	2,361.83	28.648	SF
Dechant State H36-33 - Dechant State H36-33D Gyros -	13,750.26	7,306.20	2,498.46	2,410.07	28.265	CC, ES
Dechant State H36-33 - Dechant State H36-33D Gyros -	14,500.00	7,305.95	2,608.53	2,512.88	27.271	SF
Dechant State H36-33 - Dechant State H36-33D OH - As	13,750.28	7,319.20	2,498.47	2,410.08	28.265	CC, ES
Dechant State H36-33 - Dechant State H36-33D OH - As	14,500.00	7,318.95	2,608.53	2,512.88	27.271	SF
HSR Dechant State 01-36 - Wellbore #1 - As Drilled	796.41	727.42	6,829.41	6,824.41	1,367.268	CC
HSR Dechant State 01-36 - Wellbore #1 - As Drilled	2,300.00	2,364.27	6,831.49	6,815.41	424.775	ES
HSR Dechant State 01-36 - Wellbore #1 - As Drilled	13,200.00	6,900.00	7,646.58	7,570.04	99.902	SF
HSR Dechant State 02-36 - Original Drilling - Original Dri	10,333.62	6,889.14	5,369.52	5,306.71	85.498	CC, ES
HSR Dechant State 02-36 - Original Drilling - Original Dri	12,000.00	6,923.90	5,622.00	5,551.67	79.929	SF
HSR Dechant/State 07-36 (PA) - Original Drilling - Origina	11,515.30	6,979.00	5,977.72	5,791.43	32.089	CC, ES
HSR Dechant/State 07-36 (PA) - Original Drilling - Origina	12,400.00	6,979.00	6,042.83	5,851.86	31.642	SF
Spike State GWS H36-03 - Original Drilling - Original Dril	10,200.00	10,200.00	4,462.46	4,388.30	60.173	SF
Spike State GWS H36-03 - Original Drilling - Original Dril	10,500.25	7,027.50	4,452.39	4,387.80	68.938	CC, ES
Spike State GWS H36-04 - Original Drilling - Original Dril	10,363.14	7,051.18	2,947.62	2,874.96	40.569	CC, ES
Spike State GWS H36-04 - Original Drilling - Original Dril	10,700.00	7,048.84	2,966.81	2,892.95	40.170	SF
Spike State GWS H36-13 - Original Drilling - Original Dril	14,688.62	6,643.25	2,916.54	2,825.16	31.917	CC
Spike State GWS H36-13 - Original Drilling - Original Dril	14,700.00	6,642.65	2,916.57	2,825.14	31.900	ES
Spike State GWS H36-13 - Original Drilling - Original Dril	14,900.00	6,632.61	2,924.15	2,831.98	31.727	SF
Spike State GWS H36-14 - Original Drilling - Original Dril	14,649.83	6,913.12	4,584.87	4,491.60	49.157	CC, ES
Spike State GWS H36-14 - Original Drilling - Original Dril	15,198.30	6,900.01	4,617.49	4,521.47	48.093	SF
Spike State H36-02J - Original Drilling - Original Drilling -	11,570.04	6,943.29	3,917.72	3,814.20	37.847	CC
Spike State H36-02J - Original Drilling - Original Drilling -	11,600.00	6,943.80	3,917.83	3,814.15	37.787	ES
Spike State H36-02J - Original Drilling - Original Drilling -	12,200.00	6,954.04	3,968.03	3,861.37	37.203	SF
Spike State H36-05 - Original Drilling - Original Drilling - A	11,765.16	7,102.95	2,912.20	2,838.84	39.697	CC, ES
Spike State H36-05 - Original Drilling - Original Drilling - A	12,100.00	7,102.08	2,931.38	2,856.73	39.268	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 - DJ Basin	Local Co-ordinate Reference:	Well Hurley H35-746
Project:	Mustang	TVD Reference:	WELL @ 4884.00ft (Original Well Elev)
Reference Site:	H Section 26	MD Reference:	WELL @ 4884.00ft (Original Well Elev)
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Hurley H35-746	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMP
Reference Design:	Plan #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						
Spike State H36-11J - Original Drilling - Original Drilling -	13,910.14	6,973.51	3,723.62	3,635.62	42.313	CC, ES
Spike State H36-11J - Original Drilling - Original Drilling -	14,400.00	6,964.81	3,755.69	3,665.54	41.658	SF
Spike State H36-12 - Original Drilling - Original Drilling - A	13,035.64	7,000.86	2,826.37	2,744.67	34.594	CC, ES
Spike State H36-12 - Original Drilling - Original Drilling - A	13,300.00	6,998.72	2,838.71	2,755.98	34.313	SF
X Section 01						
Dechant USX X1-6 - Wellbore #1 - As Drilled	15,198.30	6,800.00	4,464.12	4,368.47	46.672	CC, ES, SF
Dechant USX X1-7 - Wellbore #1 - As Drilled	15,198.30	6,916.99	5,722.39	5,626.71	59.809	CC, ES, SF
Dechant X01-02 - Wellbore #1 - As Drilled	15,198.30	7,139.12	5,613.67	5,514.58	56.654	CC, ES, SF
Dechant X01-03 - Wellbore #1 - Wellbore #1	15,198.30	6,873.68	4,476.42	4,378.78	45.844	CC, ES, SF
Dechant X01-04 - Wellbore #1 - As Drilled	15,198.30	7,012.67	3,147.91	3,049.51	31.992	CC, ES, SF
Dechant X01-06 - Wellbore #1 - As Drilled	15,198.30	7,020.79	5,084.95	4,989.29	53.152	CC, ES, SF
Dechant X12-01 - Wellbore #1 - As Drilled	15,198.30	6,794.68	3,493.83	3,402.73	38.353	CC, ES, SF
X Section 02						
Greenleaf 1C-2HZ - Original Hole - As-Drilled	15,198.30	12,178.00	2,029.93	1,873.54	12.981	CC, ES, SF
Greenleaf 1N-2HZ - Original Hole - As-Drilled	15,198.30	11,854.00	1,471.71	1,320.99	9.764	CC, ES, SF
Greenleaf 26N-2HZ - Original Hole - As-Drilled	15,198.30	11,967.00	2,262.59	2,106.11	14.459	CC, ES, SF
Greenleaf 27N-2HZ - Original Hole - As-Drilled	15,198.30	11,754.00	819.25	698.23	6.770	CC, ES, SF
Greenleaf 28C-2HZ - Original Hole - Original Hole	15,198.30	12,005.00	632.31	563.87	9.238	CC, ES, SF
Greenleaf 29C-2HZ - Original Hole - Original Hole	15,198.30	12,733.00	1,446.56	1,297.80	9.724	CC, ES, SF
Greenleaf 29N-2HZ - Original Hole - Original Hole	15,198.30	12,533.00	1,673.73	1,522.08	11.036	CC, ES, SF
Greenleaf 2N-2HZ - Original Hole - Original Hole	15,198.30	12,018.00	601.15	541.98	10.160	CC, ES, SF
Greenleaf 30N-2HZ - Original Hole - Original Hole	15,198.30	11,541.00	2,756.81	2,605.64	18.236	CC, ES, SF
Greenleaf 3N-2HZR - Original Hole - Original Hole	15,198.30	12,432.00	807.82	689.67	6.837	CC, ES, SF
Greenleaf 4N-2HZ - Original Hole - Original Hole	15,198.30	12,764.00	1,968.49	1,813.17	12.674	CC, ES, SF
Harkis 11-02 - Original Drilling - Original Drilling - As Drille	15,198.30	6,964.24	2,355.56	2,261.48	25.037	CC, ES, SF
Harkis 31-2 - Original Hole - As-Drilled	15,198.30	7,015.97	744.93	663.96	9.200	CC, ES, SF
Pioneer 1-2 - Original Hole - As-Drilled	15,198.30	7,308.23	1,951.34	1,815.93	14.411	CC, ES, SF
Pioneer 3-2 - Original Hole - Original Hole	15,198.30	7,297.37	1,000.10	884.09	8.621	CC, ES, SF
Pioneer 3-2 - Surface Gyros - Surface Gyros	15,198.30	7,280.37	1,000.17	883.77	8.592	CC, ES, SF
X Section 03						
Brown 3-3A - Wellbore #1 - Wellbore #1 - As Drilled	15,198.30	7,137.66	5,849.59	5,752.48	60.233	CC, ES, SF
Cannon 1-3 - Wellbore #1 - Wellbore #1 - As Drilled	15,198.30	6,968.20	3,279.01	3,183.25	34.242	CC, ES, SF
Cannon 13C-3HZ - Wellbore #1 - Wellbore #1 - As Drilled	15,198.30	6,853.00	7,319.22	7,223.97	76.842	CC, ES, SF
Cannon 13N-3HZ - Wellbore #1 - Wellbore #1 - As Drilled	15,198.30	6,979.00	7,539.92	7,444.39	78.920	CC, ES, SF
Cannon 14N-E3HZ - Wellbore #1 - Wellbore #1 - As Drille	15,198.30	5,912.00	6,175.03	6,080.41	65.258	CC, ES, SF
Cannon 14N-W3HZ - Wellbore #1 - Wellbore #1 - As Drill	15,198.30	6,649.54	6,869.66	6,775.50	72.956	CC, ES, SF
Cannon 15N-W3HZ - Wellbore #1 - Wellbore #1 - As Drill	15,198.30	7,275.00	4,514.79	4,419.40	47.328	CC, ES, SF
Cannon 16N-E3HZ - Wellbore #1 - Wellbore #1 - As Drille	15,198.30	6,811.00	3,460.13	3,365.70	36.639	CC, ES, SF
Cannon 26-3 - Wellbore #1 - Wellbore #1 - As Drilled	15,198.30	7,380.31	2,864.63	2,753.57	25.794	CC, ES, SF
Cannon 36N-E3HZ - Wellbore #1 - Wellbore #1 - As Drille	15,198.30	6,826.06	5,166.45	5,071.75	54.560	CC, ES, SF
Cannon 36N-W3HZX - Original Hole - Original Hole	15,198.30	6,252.00	5,691.24	5,596.72	60.215	CC, ES, SF
Cannon 36N-W3HZX - Sidetrack 01 - Sidetrack 01	15,198.30	6,252.00	5,691.24	5,596.72	60.215	CC, ES, SF
Cannon 37C-3HZ - Wellbore #1 - Wellbore #1 - As Drilled	15,198.30	6,875.00	3,084.77	2,990.03	32.558	CC, ES, SF
Cannon 37N-E3HZ - Wellbore #1 - Wellbore #1 - As Drille	15,198.30	6,703.59	3,809.42	3,713.71	39.803	CC, ES, SF

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