

Project: Wells Ranch
Site: A Section 35
Well: Reveille A35-772
Wellbore: Reveille A35-772 OH
Design: APD - Rev 2

Northern Region - DJ Basin

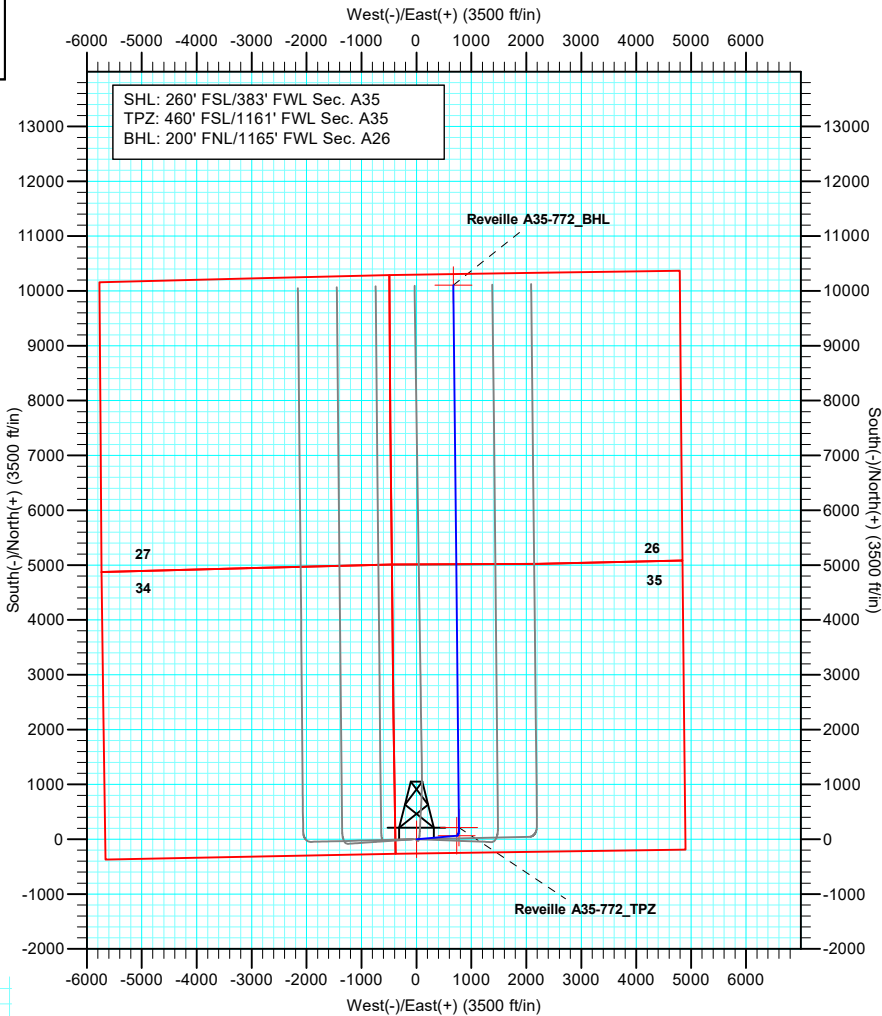
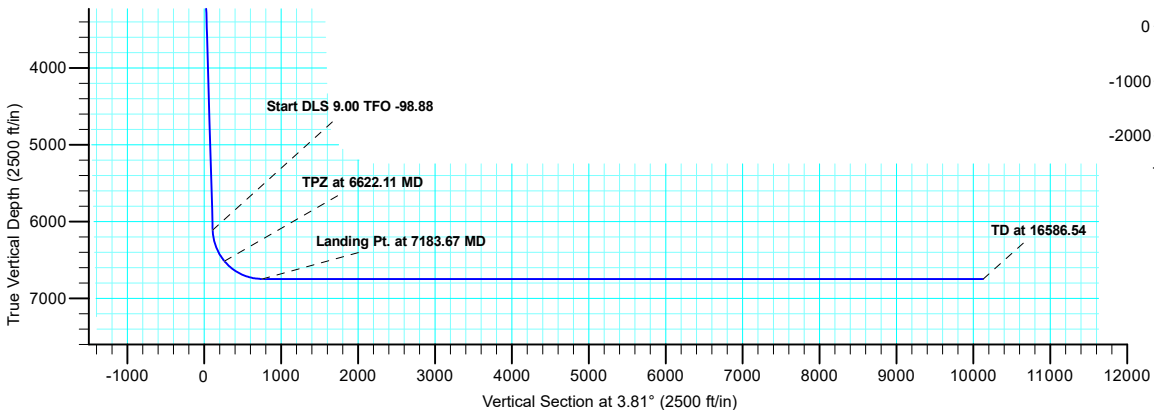
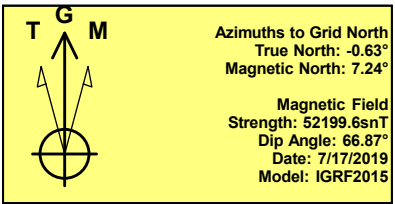
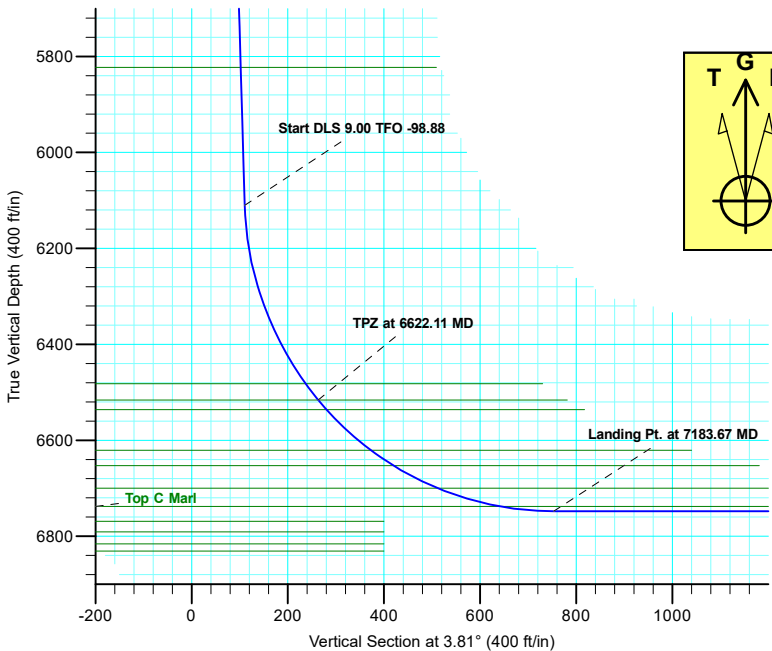
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Northern Zone
System Datum: Mean Sea Level

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	2000.00	0.00	0.00	2000.00	0.00	0.00	0.00	0.00	0.00
3	2542.09	10.84	85.17	2538.87	4.31	50.95	2.00	85.17	7.68
4	6178.74	10.84	85.17	6110.59	61.93	732.57	0.00	0.00	110.41
5	6622.11	39.46	359.41	6516.00	212.46	774.37	9.00	-98.88	263.38
6	7183.67	90.00	359.41	6748.02	703.95	769.29	9.00	0.00	753.45
7	16586.54	90.00	359.41	6748.00	10106.31	672.15	0.00	0.00	10128.64

WELL DETAILS: Reveille A35-772

+N/-S	+E/-W	Northing	Ground Level: Easting	4648.00 Latitude	Longitude	Slot
0.00	0.00	1403286.16	3271285.27	40.4363299	-104.5254000	



Plan: APD - Rev 2 (Reveille A35-772/Reveille A35-772 OH)

Created By: Shelly C. Peterkin Date: 12:34, July 22 2019

Northern Region - DJ Basin

Wells Ranch

A Section 35

Reveille A35-772

Reveille A35-772 OH

Plan: APD - Rev 2

Standard Planning Report

22 July, 2019

Noble Energy, Inc.

Planning Report

Database:	EDMP	Local Co-ordinate Reference:	Well Reveille A35-772
Company:	Northern Region - DJ Basin	TVD Reference:	KB @ 4678.00ft
Project:	Wells Ranch	MD Reference:	KB @ 4678.00ft
Site:	A Section 35	North Reference:	Grid
Well:	Reveille A35-772	Survey Calculation Method:	Minimum Curvature
Wellbore:	Reveille A35-772 OH		
Design:	APD - Rev 2		

Project	Wells Ranch, 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		A Section 35			
Site Position:		Northing:	1,403,359.25 usft	Latitude:	40.4364500
From:	Map	Easting:	3,273,942.97 usft	Longitude:	-104.5158500
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.64 °

Well		Reveille A35-772				
Well Position	+N/-S	-73.09 ft	Northing:	1,403,286.16 usft	Latitude:	40.4363300
	+E/-W	-2,657.71 ft	Easting:	3,271,285.27 usft	Longitude:	-104.5254000
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	4,648.00 ft

Wellbore	Reveille A35-772 OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	7/17/2019	7.86	66.87	52,199.56838312

Design	APD - Rev 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	3.81

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	
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,542.09	10.84	85.17	2,538.87	4.31	50.95	2.00	2.00	0.00	85.17	
6,178.74	10.84	85.17	6,110.59	61.93	732.57	0.00	0.00	0.00	0.00	
6,622.11	39.46	359.41	6,516.00	212.46	774.37	9.00	6.45	-19.34	-98.88	Reveille A35-772_TP;
7,183.67	90.00	359.41	6,748.02	703.95	769.29	9.00	9.00	0.00	0.00	
16,586.54	90.00	359.41	6,748.00	10,106.32	672.15	0.00	0.00	0.00	0.00	Reveille A35-772_BH

Noble Energy, Inc.

Planning Report

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Company:	Northern Region - DJ Basin	TVD Reference:	KB @ 4678.00ft
Project:	Wells Ranch	MD Reference:	KB @ 4678.00ft
Site:	A Section 35	North Reference:	Grid
Well:	Reveille A35-772	Survey Calculation Method:	Minimum Curvature
Wellbore:	Reveille A35-772 OH		
Design:	APD - Rev 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
100.00	0.00	0.00	100.00	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
234.00	0.00	0.00	234.00	0.00	0.00	0.00	0.00	0.00	0.00
Pierre									
300.00	0.00	0.00	300.00	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
413.00	0.00	0.00	413.00	0.00	0.00	0.00	0.00	0.00	0.00
Upper Pierre Aquifer Top									
500.00	0.00	0.00	500.00	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
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	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
1,000.00	0.00	0.00	1,000.00	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
1,200.00	0.00	0.00	1,200.00	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
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,456.00	0.00	0.00	1,456.00	0.00	0.00	0.00	0.00	0.00	0.00
Upper Pierre Aquifer Base									
1,500.00	0.00	0.00	1,500.00	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
1,700.00	0.00	0.00	1,700.00	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
1,900.00	0.00	0.00	1,900.00	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
Start Build 2.00									
2,100.00	2.00	85.17	2,099.98	0.15	1.74	0.26	2.00	2.00	0.00
2,200.00	4.00	85.17	2,199.84	0.59	6.95	1.05	2.00	2.00	0.00
2,300.00	6.00	85.17	2,299.45	1.32	15.64	2.36	2.00	2.00	0.00
2,400.00	8.00	85.17	2,398.70	2.35	27.78	4.19	2.00	2.00	0.00
2,500.00	10.00	85.17	2,497.47	3.67	43.37	6.54	2.00	2.00	0.00
2,542.09	10.84	85.17	2,538.87	4.31	50.95	7.68	2.00	2.00	0.00
Start 3636.64 hold at 2542.09 MD									
2,600.00	10.84	85.17	2,595.74	5.22	61.81	9.32	0.00	0.00	0.00
2,700.00	10.84	85.17	2,693.95	6.81	80.55	12.14	0.00	0.00	0.00
2,800.00	10.84	85.17	2,792.17	8.39	99.29	14.96	0.00	0.00	0.00
2,900.00	10.84	85.17	2,890.38	9.98	118.04	17.79	0.00	0.00	0.00
3,000.00	10.84	85.17	2,988.60	11.56	136.78	20.61	0.00	0.00	0.00
3,100.00	10.84	85.17	3,086.81	13.15	155.52	23.44	0.00	0.00	0.00
3,200.00	10.84	85.17	3,185.03	14.73	174.27	26.26	0.00	0.00	0.00
3,300.00	10.84	85.17	3,283.24	16.32	193.01	29.09	0.00	0.00	0.00
3,400.00	10.84	85.17	3,381.46	17.90	211.75	31.91	0.00	0.00	0.00
3,500.00	10.84	85.17	3,479.67	19.49	230.50	34.74	0.00	0.00	0.00
3,515.61	10.84	85.17	3,495.00	19.73	233.42	35.18	0.00	0.00	0.00
Parkman									
3,600.00	10.84	85.17	3,577.89	21.07	249.24	37.56	0.00	0.00	0.00
3,700.00	10.84	85.17	3,676.10	22.65	267.98	40.39	0.00	0.00	0.00
3,800.00	10.84	85.17	3,774.32	24.24	286.73	43.21	0.00	0.00	0.00
3,900.00	10.84	85.17	3,872.53	25.82	305.47	46.04	0.00	0.00	0.00
4,000.00	10.84	85.17	3,970.75	27.41	324.21	48.86	0.00	0.00	0.00
4,100.00	10.84	85.17	4,068.96	28.99	342.95	51.69	0.00	0.00	0.00

Noble Energy, Inc.

Planning Report

Database:	EDMP	Local Co-ordinate Reference:	Well Reveille A35-772
Company:	Northern Region - DJ Basin	TVD Reference:	KB @ 4678.00ft
Project:	Wells Ranch	MD Reference:	KB @ 4678.00ft
Site:	A Section 35	North Reference:	Grid
Well:	Reveille A35-772	Survey Calculation Method:	Minimum Curvature
Wellbore:	Reveille A35-772 OH		
Design:	APD - Rev 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	10.84	85.17	4,167.18	30.58	361.70	54.51	0.00	0.00	0.00
4,224.26	10.84	85.17	4,191.00	30.96	366.24	55.20	0.00	0.00	0.00
Sussex									
4,300.00	10.84	85.17	4,265.39	32.16	380.44	57.34	0.00	0.00	0.00
4,400.00	10.84	85.17	4,363.61	33.75	399.18	60.16	0.00	0.00	0.00
4,500.00	10.84	85.17	4,461.82	35.33	417.93	62.99	0.00	0.00	0.00
4,600.00	10.84	85.17	4,560.04	36.91	436.67	65.81	0.00	0.00	0.00
4,700.00	10.84	85.17	4,658.25	38.50	455.41	68.64	0.00	0.00	0.00
4,800.00	10.84	85.17	4,756.47	40.08	474.16	71.46	0.00	0.00	0.00
4,837.20	10.84	85.17	4,793.00	40.67	481.13	72.51	0.00	0.00	0.00
Shannon									
4,900.00	10.84	85.17	4,854.68	41.67	492.90	74.29	0.00	0.00	0.00
5,000.00	10.84	85.17	4,952.90	43.25	511.64	77.11	0.00	0.00	0.00
5,100.00	10.84	85.17	5,051.11	44.84	530.39	79.93	0.00	0.00	0.00
5,200.00	10.84	85.17	5,149.33	46.42	549.13	82.76	0.00	0.00	0.00
5,300.00	10.84	85.17	5,247.54	48.01	567.87	85.58	0.00	0.00	0.00
5,400.00	10.84	85.17	5,345.76	49.59	586.61	88.41	0.00	0.00	0.00
5,500.00	10.84	85.17	5,443.97	51.17	605.36	91.23	0.00	0.00	0.00
5,600.00	10.84	85.17	5,542.19	52.76	624.10	94.06	0.00	0.00	0.00
5,700.00	10.84	85.17	5,640.40	54.34	642.84	96.88	0.00	0.00	0.00
5,800.00	10.84	85.17	5,738.62	55.93	661.59	99.71	0.00	0.00	0.00
5,885.92	10.84	85.17	5,823.00	57.29	677.69	102.14	0.00	0.00	0.00
Teepee Buttes									
5,900.00	10.84	85.17	5,836.83	57.51	680.33	102.53	0.00	0.00	0.00
6,000.00	10.84	85.17	5,935.05	59.10	699.07	105.36	0.00	0.00	0.00
6,100.00	10.84	85.17	6,033.26	60.68	717.82	108.18	0.00	0.00	0.00
6,178.74	10.84	85.17	6,110.59	61.93	732.57	110.41	0.00	0.00	0.00
Start DLS 9.00 TFO -98.88									
6,200.00	10.71	74.94	6,131.48	62.61	736.48	111.35	9.00	-0.61	-48.08
6,250.00	11.69	52.17	6,180.55	66.93	744.97	116.22	9.00	1.96	-45.54
6,300.00	14.10	34.99	6,229.31	75.03	752.47	124.80	9.00	4.81	-34.36
6,350.00	17.34	23.40	6,277.44	86.86	758.92	137.03	9.00	6.49	-23.17
6,400.00	21.04	15.57	6,324.66	102.35	764.29	152.85	9.00	7.40	-15.66
6,450.00	25.00	10.06	6,370.68	121.41	768.55	172.15	9.00	7.91	-11.03
6,500.00	29.10	5.99	6,415.20	143.92	771.67	194.81	9.00	8.21	-8.14
6,550.00	33.30	2.86	6,457.97	169.73	773.62	220.69	9.00	8.40	-6.26
6,579.18	35.78	1.34	6,482.00	186.26	774.22	237.23	9.00	8.50	-5.21
Sharon Springs									
6,600.00	37.56	0.36	6,498.70	198.69	774.40	249.64	9.00	8.55	-4.69
6,622.11	39.46	359.41	6,516.00	212.46	774.37	263.38	9.00	8.59	-4.32
TPZ at 6622.11 MD - Top A Chalk									
6,648.47	41.83	359.41	6,536.00	229.63	774.20	280.50	9.00	9.00	0.00
Top A Marl									
6,650.00	41.97	359.41	6,537.14	230.65	774.18	281.52	9.00	9.00	0.00
6,700.00	46.47	359.41	6,572.96	265.51	773.82	316.28	9.00	9.00	0.00
6,750.00	50.97	359.41	6,605.94	303.07	773.44	353.73	9.00	9.00	0.00
6,774.50	53.18	359.41	6,621.00	322.40	773.24	373.00	9.00	9.00	0.00
Top B Chalk									
6,800.00	55.47	359.41	6,635.87	343.11	773.02	393.65	9.00	9.00	0.00
6,831.35	58.29	359.41	6,653.00	369.36	772.75	419.83	9.00	9.00	0.00
Top B Marl									
6,850.00	59.97	359.41	6,662.57	385.37	772.59	435.79	9.00	9.00	0.00
6,900.00	64.47	359.41	6,685.86	429.59	772.13	479.88	9.00	9.00	0.00

Noble Energy, Inc.

Planning Report

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Company:	Northern Region - DJ Basin	TVD Reference:	KB @ 4678.00ft
Project:	Wells Ranch	MD Reference:	KB @ 4678.00ft
Site:	A Section 35	North Reference:	Grid
Well:	Reveille A35-772	Survey Calculation Method:	Minimum Curvature
Wellbore:	Reveille A35-772 OH		
Design:	APD - Rev 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)
6,934.81	67.60	359.41	6,700.00	461.39	771.80	511.59	9.00	9.00	0.00
Top C Chalk									
6,950.00	68.97	359.41	6,705.62	475.50	771.65	525.66	9.00	9.00	0.00
7,000.00	73.47	359.41	6,721.71	522.83	771.17	572.85	9.00	9.00	0.00
7,050.00	77.97	359.41	6,734.04	571.27	770.67	621.15	9.00	9.00	0.00
7,070.55	79.82	359.41	6,738.00	591.43	770.46	641.26	9.00	9.00	0.00
Top C Marl									
7,100.00	82.47	359.41	6,742.53	620.53	770.16	670.27	9.00	9.00	0.00
7,150.00	86.97	359.41	6,747.13	670.30	769.64	719.90	9.00	9.00	0.00
7,183.67	90.00	359.41	6,748.02	703.95	769.29	753.45	9.00	9.00	0.00
Landing Pt. at 7183.67 MD									
7,200.00	90.00	359.41	6,748.02	720.28	769.13	769.73	0.00	0.00	0.00
7,300.00	90.00	359.41	6,748.02	820.27	768.09	869.44	0.00	0.00	0.00
7,400.00	90.00	359.41	6,748.02	920.27	767.06	969.14	0.00	0.00	0.00
7,500.00	90.00	359.41	6,748.02	1,020.26	766.03	1,068.85	0.00	0.00	0.00
7,600.00	90.00	359.41	6,748.02	1,120.26	764.99	1,168.56	0.00	0.00	0.00
7,700.00	90.00	359.41	6,748.02	1,220.25	763.96	1,268.26	0.00	0.00	0.00
7,800.00	90.00	359.41	6,748.02	1,320.25	762.93	1,367.97	0.00	0.00	0.00
7,900.00	90.00	359.41	6,748.02	1,420.24	761.89	1,467.67	0.00	0.00	0.00
8,000.00	90.00	359.41	6,748.02	1,520.24	760.86	1,567.38	0.00	0.00	0.00
8,100.00	90.00	359.41	6,748.02	1,620.23	759.83	1,667.08	0.00	0.00	0.00
8,200.00	90.00	359.41	6,748.02	1,720.23	758.79	1,766.79	0.00	0.00	0.00
8,300.00	90.00	359.41	6,748.02	1,820.22	757.76	1,866.50	0.00	0.00	0.00
8,400.00	90.00	359.41	6,748.02	1,920.22	756.73	1,966.20	0.00	0.00	0.00
8,500.00	90.00	359.41	6,748.02	2,020.21	755.69	2,065.91	0.00	0.00	0.00
8,600.00	90.00	359.41	6,748.02	2,120.21	754.66	2,165.61	0.00	0.00	0.00
8,700.00	90.00	359.41	6,748.02	2,220.20	753.63	2,265.32	0.00	0.00	0.00
8,800.00	90.00	359.41	6,748.02	2,320.19	752.60	2,365.02	0.00	0.00	0.00
8,900.00	90.00	359.41	6,748.02	2,420.19	751.56	2,464.73	0.00	0.00	0.00
9,000.00	90.00	359.41	6,748.02	2,520.18	750.53	2,564.43	0.00	0.00	0.00
9,100.00	90.00	359.41	6,748.02	2,620.18	749.50	2,664.14	0.00	0.00	0.00
9,200.00	90.00	359.41	6,748.02	2,720.17	748.46	2,763.85	0.00	0.00	0.00
9,300.00	90.00	359.41	6,748.02	2,820.17	747.43	2,863.55	0.00	0.00	0.00
9,400.00	90.00	359.41	6,748.02	2,920.16	746.40	2,963.26	0.00	0.00	0.00
9,500.00	90.00	359.41	6,748.02	3,020.16	745.36	3,062.96	0.00	0.00	0.00
9,600.00	90.00	359.41	6,748.02	3,120.15	744.33	3,162.67	0.00	0.00	0.00
9,700.00	90.00	359.41	6,748.02	3,220.15	743.30	3,262.37	0.00	0.00	0.00
9,800.00	90.00	359.41	6,748.02	3,320.14	742.26	3,362.08	0.00	0.00	0.00
9,900.00	90.00	359.41	6,748.02	3,420.14	741.23	3,461.79	0.00	0.00	0.00
10,000.00	90.00	359.41	6,748.02	3,520.13	740.20	3,561.49	0.00	0.00	0.00
10,100.00	90.00	359.41	6,748.02	3,620.13	739.16	3,661.20	0.00	0.00	0.00
10,200.00	90.00	359.41	6,748.02	3,720.12	738.13	3,760.90	0.00	0.00	0.00
10,300.00	90.00	359.41	6,748.02	3,820.11	737.10	3,860.61	0.00	0.00	0.00
10,400.00	90.00	359.41	6,748.02	3,920.11	736.07	3,960.31	0.00	0.00	0.00
10,500.00	90.00	359.41	6,748.01	4,020.10	735.03	4,060.02	0.00	0.00	0.00
10,600.00	90.00	359.41	6,748.01	4,120.10	734.00	4,159.73	0.00	0.00	0.00
10,700.00	90.00	359.41	6,748.01	4,220.09	732.97	4,259.43	0.00	0.00	0.00
10,800.00	90.00	359.41	6,748.01	4,320.09	731.93	4,359.14	0.00	0.00	0.00
10,900.00	90.00	359.41	6,748.01	4,420.08	730.90	4,458.84	0.00	0.00	0.00
11,000.00	90.00	359.41	6,748.01	4,520.08	729.87	4,558.55	0.00	0.00	0.00
11,100.00	90.00	359.41	6,748.01	4,620.07	728.83	4,658.25	0.00	0.00	0.00
11,200.00	90.00	359.41	6,748.01	4,720.07	727.80	4,757.96	0.00	0.00	0.00
11,300.00	90.00	359.41	6,748.01	4,820.06	726.77	4,857.67	0.00	0.00	0.00

Noble Energy, Inc.

Planning Report

Database:	EDMP	Local Co-ordinate Reference:	Well Reveille A35-772
Company:	Northern Region - DJ Basin	TVD Reference:	KB @ 4678.00ft
Project:	Wells Ranch	MD Reference:	KB @ 4678.00ft
Site:	A Section 35	North Reference:	Grid
Well:	Reveille A35-772	Survey Calculation Method:	Minimum Curvature
Wellbore:	Reveille A35-772 OH		
Design:	APD - Rev 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)
11,400.00	90.00	359.41	6,748.01	4,920.06	725.73	4,957.37	0.00	0.00	0.00
11,500.00	90.00	359.41	6,748.01	5,020.05	724.70	5,057.08	0.00	0.00	0.00
11,600.00	90.00	359.41	6,748.01	5,120.05	723.67	5,156.78	0.00	0.00	0.00
11,700.00	90.00	359.41	6,748.01	5,220.04	722.63	5,256.49	0.00	0.00	0.00
11,800.00	90.00	359.41	6,748.01	5,320.03	721.60	5,356.19	0.00	0.00	0.00
11,900.00	90.00	359.41	6,748.01	5,420.03	720.57	5,455.90	0.00	0.00	0.00
12,000.00	90.00	359.41	6,748.01	5,520.02	719.53	5,555.61	0.00	0.00	0.00
12,100.00	90.00	359.41	6,748.01	5,620.02	718.50	5,655.31	0.00	0.00	0.00
12,200.00	90.00	359.41	6,748.01	5,720.01	717.47	5,755.02	0.00	0.00	0.00
12,300.00	90.00	359.41	6,748.01	5,820.01	716.44	5,854.72	0.00	0.00	0.00
12,400.00	90.00	359.41	6,748.01	5,920.00	715.40	5,954.43	0.00	0.00	0.00
12,500.00	90.00	359.41	6,748.01	6,020.00	714.37	6,054.13	0.00	0.00	0.00
12,600.00	90.00	359.41	6,748.01	6,119.99	713.34	6,153.84	0.00	0.00	0.00
12,700.00	90.00	359.41	6,748.01	6,219.99	712.30	6,253.55	0.00	0.00	0.00
12,800.00	90.00	359.41	6,748.01	6,319.98	711.27	6,353.25	0.00	0.00	0.00
12,900.00	90.00	359.41	6,748.01	6,419.98	710.24	6,452.96	0.00	0.00	0.00
13,000.00	90.00	359.41	6,748.01	6,519.97	709.20	6,552.66	0.00	0.00	0.00
13,100.00	90.00	359.41	6,748.01	6,619.97	708.17	6,652.37	0.00	0.00	0.00
13,200.00	90.00	359.41	6,748.01	6,719.96	707.14	6,752.07	0.00	0.00	0.00
13,300.00	90.00	359.41	6,748.01	6,819.95	706.10	6,851.78	0.00	0.00	0.00
13,400.00	90.00	359.41	6,748.01	6,919.95	705.07	6,951.48	0.00	0.00	0.00
13,500.00	90.00	359.41	6,748.01	7,019.94	704.04	7,051.19	0.00	0.00	0.00
13,600.00	90.00	359.41	6,748.01	7,119.94	703.00	7,150.90	0.00	0.00	0.00
13,700.00	90.00	359.41	6,748.01	7,219.93	701.97	7,250.60	0.00	0.00	0.00
13,800.00	90.00	359.41	6,748.01	7,319.93	700.94	7,350.31	0.00	0.00	0.00
13,900.00	90.00	359.41	6,748.01	7,419.92	699.90	7,450.01	0.00	0.00	0.00
14,000.00	90.00	359.41	6,748.01	7,519.92	698.87	7,549.72	0.00	0.00	0.00
14,100.00	90.00	359.41	6,748.01	7,619.91	697.84	7,649.42	0.00	0.00	0.00
14,200.00	90.00	359.41	6,748.01	7,719.91	696.81	7,749.13	0.00	0.00	0.00
14,300.00	90.00	359.41	6,748.01	7,819.90	695.77	7,848.84	0.00	0.00	0.00
14,400.00	90.00	359.41	6,748.01	7,919.90	694.74	7,948.54	0.00	0.00	0.00
14,500.00	90.00	359.41	6,748.01	8,019.89	693.71	8,048.25	0.00	0.00	0.00
14,600.00	90.00	359.41	6,748.00	8,119.89	692.67	8,147.95	0.00	0.00	0.00
14,700.00	90.00	359.41	6,748.00	8,219.88	691.64	8,247.66	0.00	0.00	0.00
14,800.00	90.00	359.41	6,748.00	8,319.87	690.61	8,347.36	0.00	0.00	0.00
14,900.00	90.00	359.41	6,748.00	8,419.87	689.57	8,447.07	0.00	0.00	0.00
15,000.00	90.00	359.41	6,748.00	8,519.86	688.54	8,546.78	0.00	0.00	0.00
15,100.00	90.00	359.41	6,748.00	8,619.86	687.51	8,646.48	0.00	0.00	0.00
15,200.00	90.00	359.41	6,748.00	8,719.85	686.47	8,746.19	0.00	0.00	0.00
15,300.00	90.00	359.41	6,748.00	8,819.85	685.44	8,845.89	0.00	0.00	0.00
15,400.00	90.00	359.41	6,748.00	8,919.84	684.41	8,945.60	0.00	0.00	0.00
15,500.00	90.00	359.41	6,748.00	9,019.84	683.37	9,045.30	0.00	0.00	0.00
15,600.00	90.00	359.41	6,748.00	9,119.83	682.34	9,145.01	0.00	0.00	0.00
15,700.00	90.00	359.41	6,748.00	9,219.83	681.31	9,244.72	0.00	0.00	0.00
15,800.00	90.00	359.41	6,748.00	9,319.82	680.28	9,344.42	0.00	0.00	0.00
15,900.00	90.00	359.41	6,748.00	9,419.82	679.24	9,444.13	0.00	0.00	0.00
16,000.00	90.00	359.41	6,748.00	9,519.81	678.21	9,543.83	0.00	0.00	0.00
16,100.00	90.00	359.41	6,748.00	9,619.81	677.18	9,643.54	0.00	0.00	0.00
16,200.00	90.00	359.41	6,748.00	9,719.80	676.14	9,743.24	0.00	0.00	0.00
16,300.00	90.00	359.41	6,748.00	9,819.79	675.11	9,842.95	0.00	0.00	0.00
16,400.00	90.00	359.41	6,748.00	9,919.79	674.08	9,942.66	0.00	0.00	0.00
16,500.00	90.00	359.41	6,748.00	10,019.78	673.04	10,042.36	0.00	0.00	0.00
16,586.54	90.00	359.41	6,748.00	10,106.32	672.15	10,128.64	0.00	0.00	0.00
TD at 16586.54									

Noble Energy, Inc.

Planning Report

Database:	EDMP	Local Co-ordinate Reference:	Well Reveille A35-772
Company:	Northern Region - DJ Basin	TVD Reference:	KB @ 4678.00ft
Project:	Wells Ranch	MD Reference:	KB @ 4678.00ft
Site:	A Section 35	North Reference:	Grid
Well:	Reveille A35-772	Survey Calculation Method:	Minimum Curvature
Wellbore:	Reveille A35-772 OH		
Design:	APD - Rev 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)

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Reveille A35-772_SHL - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	1,403,286.16	3,271,285.27	40.4363300	-104.5254000
Reveille A35-772_KOP - plan hits target center - Point	0.00	0.00	6,110.60	61.93	732.57	1,403,348.09	3,272,017.85	40.4364778	-104.5227660
Reveille A35-772_TPZ - plan hits target center - Point	0.00	0.00	6,516.00	212.46	774.37	1,403,498.62	3,272,059.64	40.4368897	-104.5226098
Reveille A35-772_BHL - plan hits target center - Point	0.00	0.00	6,748.00	10,106.32	672.15	1,413,392.46	3,271,957.42	40.4640496	-104.5225853

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
234.00	234.00	Pierre				
413.00	413.00	Upper Pierre Aquifer Top				
1,456.00	1,456.00	Upper Pierre Aquifer Base				
3,515.61	3,495.00	Parkman				
4,224.26	4,191.00	Sussex				
4,837.20	4,793.00	Shannon				
5,885.92	5,823.00	Teepee Buttes				
6,579.18	6,482.00	Sharon Springs				
6,622.11	6,516.00	Top A Chalk				
6,648.47	6,536.00	Top A Marl				
6,774.50	6,621.00	Top B Chalk				
6,831.35	6,653.00	Top B Marl				
6,934.81	6,700.00	Top C Chalk				
7,070.55	6,738.00	Top C Marl				

Noble Energy, Inc.

Planning Report

Database:	EDMP	Local Co-ordinate Reference:	Well Reveille A35-772
Company:	Northern Region - DJ Basin	TVD Reference:	KB @ 4678.00ft
Project:	Wells Ranch	MD Reference:	KB @ 4678.00ft
Site:	A Section 35	North Reference:	Grid
Well:	Reveille A35-772	Survey Calculation Method:	Minimum Curvature
Wellbore:	Reveille A35-772 OH		
Design:	APD - Rev 2		

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
2,000.00	2,000.00	0.00	0.00	Start Build 2.00	
2,542.09	2,538.87	4.31	50.95	Start 3636.64 hold at 2542.09 MD	
6,178.74	6,110.59	61.93	732.57	Start DLS 9.00 TFO -98.88	
6,622.11	6,516.00	212.46	774.37	TPZ at 6622.11 MD	
7,183.67	6,748.02	703.95	769.29	Landing Pt. at 7183.67 MD	
16,586.54	6,748.00	10,106.32	672.15	TD at 16586.54	

Northern Region - DJ Basin

Wells Ranch

A Section 35

Reveille A35-772

Reveille A35-772 OH

APD - Rev 2

Anticollision Summary Report

22 July, 2019

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Reveille A35-772
Project:	Wells Ranch	TVD Reference:	KB @ 4678.00ft
Reference Site:	A Section 35	MD Reference:	KB @ 4678.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Reveille A35-772	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Reveille A35-772 OH	Database:	EDMP
Reference Design:	APD - Rev 2	Offset TVD Reference:	Offset Datum

Reference	APD - Rev 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	7/22/2019		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	16,586.54	APD - Rev 2 (Reveille A35-772 OH)	2_MWD+IFR1+MS	A008Mb: IFR dec & multi-station analysis

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						
A Section 21						
Culbreath 23-21 - Original Drilling - Original Drilling - As D	16,586.54	6,824.11	9,724.47	9,615.82	89.498	CC, ES, SF
Culbreath 33-21 (PA) - Original Drilling - Original Drilling -	16,586.54	6,788.00	8,669.23	8,448.70	39.310	CC, ES, SF
Harper A21-618 - Harper A21-618 OH - As-Drilled	16,586.54	16,240.00	1,356.21	1,215.95	9.670	CC, ES, SF
Harper A21-626 - Harper A21-626 OH - As-Drilled	16,586.54	16,140.00	1,776.56	1,623.87	11.635	CC, ES, SF
Harper A21-631 - Harper A21-631 OH - As-Drilled	16,586.54	16,120.00	2,062.38	1,905.57	13.152	CC, ES, SF
Harper A21-637 - Harper A21-637 OH - As-Drilled	16,586.54	16,223.00	2,395.37	2,236.91	15.116	CC, ES, SF
Harper A21-643 - Harper A21-643 OH - As-Drilled	16,586.54	16,273.00	2,754.36	2,596.79	17.480	CC, ES, SF
Harper A21-649 - Harper A21-649 OH - As-Drilled	16,586.54	16,403.00	3,032.90	2,874.69	19.170	CC, ES, SF
Harper A21-656 - Harper A21-656 OH - As-Drilled	16,586.54	16,378.00	3,393.76	3,235.33	21.421	CC, ES, SF
Harper A21-664 - Harper A21-664 OH - As-Drilled	16,586.54	16,571.00	3,859.12	3,700.75	24.368	CC, ES, SF
Harper A21-669 - Harper A21-669 OH - As-Drilled	16,586.54	16,585.00	4,171.83	4,013.46	26.343	CC, ES, SF
Harper A21-674 - Harper A21-674 OH - As-Drilled	16,586.54	16,788.00	4,528.33	4,370.02	28.606	CC, ES, SF
Harper A21-681 - Harper A21-681 OH - As-Drilled	16,586.54	16,642.00	4,895.99	4,739.75	31.337	CC, ES, SF
Kona A19-616 - Kona A19-616 - Kona A19-616 - As Drille						Out of range
Kona A19-624 - Kona A19-624 - Kona A19-624 - As Drille						Out of range
Kona A19-636 - Kona A19-636 - Kona A19-636 - As Drille						Out of range
Kona A19-646 - Original Drilling - Original Drilling - As Dr						Out of range
Kona A19-662 - Original Drilling - Original Drilling - As Dr						Out of range
Kona A19-670 - Kona A19-670 - Original Drilling - As Dril						Out of range
Kona A19-685 - Original Drilling - Original Drilling - As Dr						Out of range
McKee 12-21 (PA) - Original Drilling - Original Drilling - A						Out of range
McKee 21-21 (PA) - Original Drilling - Original Drilling - A						Out of range
McKee 22-21 - Original Drilling - Original Drilling - As Dril						Out of range
McKee 31-21 - Original Drilling - Original Drilling - As Dril	16,586.54	6,851.29	9,752.80	9,651.27	96.056	CC, ES, SF
McKee 32-21 - Original Drilling - Original Drilling - As Dril	16,586.54	6,869.91	9,076.39	8,970.43	85.663	CC, ES, SF
McKee 41-21 - Original Drilling - Original Drilling - As Dril	16,586.54	6,737.34	8,620.07	8,521.64	87.572	CC, ES, SF
McKee 42-21 - Original Drilling - Original Drilling - As Dril	16,586.54	6,821.04	7,755.75	7,651.14	74.142	CC, ES, SF
Rampart A33-730 - Rampart A33-730 - APD-Rev 1	5,348.21	17,720.27	7,693.92	7,580.00	67.538	CC, ES
Rampart A33-730 - Rampart A33-730 - APD-Rev 1	6,450.00	17,718.00	7,758.11	7,642.62	67.173	SF
Rampart A33-740 - Rampart A33-740 - APD-Rev 0	5,302.40	17,515.21	8,343.59	8,230.81	73.984	CC, ES
Rampart A33-740 - Rampart A33-740 - APD-Rev 0	6,500.00	17,515.21	8,409.07	8,293.76	72.926	SF
Rampart A33-750 - Rampart A33-750 - APD-Rev 0	5,088.87	17,093.98	8,986.54	8,875.94	81.254	CC
Rampart A33-750 - Rampart A33-750 - APD-Rev 0	5,100.00	17,093.98	8,986.55	8,875.92	81.230	ES
Rampart A33-750 - Rampart A33-750 - APD-Rev 0	6,400.00	17,097.89	9,072.31	8,958.16	79.482	SF
Rampart A33-760 - Rampart A33-760 - APD-Rev 1	5,007.98	16,956.23	9,617.30	9,507.96	87.957	CC, ES
Rampart A33-760 - Rampart A33-760 - APD-Rev 1	6,400.00	16,950.64	9,708.19	9,594.46	85.359	SF
Rampart A33-770 - Rampart A33-770 - APD-Rev 0						Out of range

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

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Reveille A35-772
Project:	Wells Ranch	TVD Reference:	KB @ 4678.00ft
Reference Site:	A Section 35	MD Reference:	KB @ 4678.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Reveille A35-772	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Reveille A35-772 OH	Database:	EDMP
Reference Design:	APD - Rev 2	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
A Section 21						
Sexton 43-21 (PA) - Original Drilling - Original Drilling - As	16,586.54	6,780.00	7,487.05	7,267.89	34.162	CC, ES, SF
Wells Trust 13-21 - Original Drilling - Original Drilling - As						Out of range
Wells Trust 14-21 - Original Drilling - Original Drilling - As						Out of range
Wells Trust 24-21 - Original Drilling - Original Drilling - As						Out of range
A Section 22						
Carpio 22-01 - Original Drilling - Original Drilling - As Drill	16,586.54	6,809.23	2,043.04	1,939.63	19.755	CC, ES, SF
Carpio 22-04-19 - Original Drilling - Original Drilling - As D	16,586.54	6,762.96	3,632.66	3,526.67	34.272	CC, ES, SF
Carpio 22-41 - Original Drilling - Original Drilling - As Drill	16,586.54	6,769.75	2,556.70	2,452.00	24.418	CC, ES, SF
Carpio 22-43 - Original Drilling - Original Drilling - As Drill	16,586.54	6,867.66	3,271.33	3,163.19	30.252	CC, ES, SF
Carpio 22-45 - Original Drilling - Original Drilling - As Drill	16,586.54	6,779.90	2,553.53	2,453.21	25.453	CC, ES, SF
Eisenstat 22-11 (PA) - Original Drilling - Original Drilling -	16,586.54	6,794.00	5,233.22	5,054.77	29.326	CC, ES, SF
Eisenstat 22-13 - Original Drilling - Original Drilling - As D	16,586.54	6,782.95	4,443.88	4,351.94	48.337	CC, ES, SF
Eisenstat 22-15 - Original Drilling - Original Drilling - As D	16,586.54	6,770.83	4,904.66	4,828.82	64.668	CC, ES, SF
Eisenstat 22-21 - Original Drilling - Original Drilling - As D	16,586.54	6,859.16	6,205.23	6,116.34	69.812	CC, ES, SF
Eisenstat 22-23 - Original Drilling - Original Drilling - As D	16,586.54	6,853.46	6,678.38	6,578.15	66.632	CC, ES, SF
Gill Land Assoc. 1 (PA) - Original Drilling - Original Drilling	16,586.54	6,795.00	3,846.21	3,659.91	20.645	CC, ES, SF
Gill Land Assoc. 22-02 (PA) - Original Drilling - Original D	16,586.54	6,805.00	5,602.50	5,393.34	26.786	CC, ES, SF
Gill Land Assoc. 22-03 - Original Drilling - Original Drilling	16,586.54	6,813.68	7,410.37	7,315.19	77.860	CC, ES, SF
Gill Land Assoc. 22-04 (PA) - Original Drilling - Original D	16,586.54	6,803.00	5,664.51	5,471.85	29.402	CC, ES, SF
Gruen 22-01 - Original Drilling - Original Drilling - As Drille	16,586.54	6,862.81	6,189.88	6,083.17	58.004	CC, ES, SF
Gruen 22-02 - Original Drilling - Original Drilling - As Drille	16,586.54	6,644.89	4,593.61	4,485.22	42.381	CC, ES, SF
Gruen 22-31 - Original Drilling - Original Drilling - As Drille	16,586.54	6,800.00	4,969.67	4,865.65	47.775	CC, ES, SF
Gruen 22-33 - Original Drilling - Original Drilling - As Drille	16,586.54	6,958.58	5,846.03	5,735.89	53.078	CC, ES, SF
Gruen 22-35 - Original Drilling - Original Drilling - As Drille	16,100.00	16,100.00	5,494.80	5,359.54	40.622	SF
Gruen 22-35 - Original Drilling - Original Drilling - As Drille	16,586.54	6,721.56	5,353.48	5,245.68	49.663	CC, ES
Ottinger 22-01 - Original Drilling - Original Drilling - As Dr	16,586.54	6,826.33	3,847.83	3,749.75	39.233	CC, ES, SF
A Section 23						
Cecil 23-13 - Original Drilling - Original Drilling - As Drilled	16,586.54	6,727.35	4,093.30	4,025.64	60.498	CC, ES, SF
Champlin 23-02 (PA) - Original Drilling - Original Drilling -	16,586.54	6,754.00	2,274.34	2,102.41	13.228	CC, ES, SF
Champlin 23-03 - Original Drilling - Original Drilling - As D	16,586.54	6,728.68	1,097.53	1,024.92	15.115	CC, ES, SF
Champlin Amoco A 1 #308 - Original Drilling - Original Dr	16,586.54	6,729.00	969.57	792.15	5.465	CC, ES, SF
Cooper 23-1-17 - Original Drilling - Original Drilling - As Dr	16,586.54	6,700.42	5,803.26	5,734.02	83.812	CC, ES, SF
Cooper 23-1-19 - Original Drilling - Original Drilling - As D	16,586.54	6,646.99	4,567.91	4,505.91	73.678	CC, ES, SF
Cooper 23-12 - Original Drilling - Original Drilling - As Dri	16,586.54	6,730.62	5,212.65	5,147.15	79.584	CC, ES, SF
Cooper 23-1-20 - Original Drilling - Original Drilling - As D	16,586.54	6,741.62	3,350.60	3,280.28	47.647	CC, ES, SF
Cooper 23-15 - Original Drilling - Original Drilling - As Dri	16,586.54	6,600.00	5,056.10	4,981.55	67.822	CC, ES, SF
Foss 41-23D - Original Drilling - Original Drilling - As Drill	16,586.54	6,910.18	5,893.36	5,812.31	72.715	CC, ES, SF
Foss 42-23 - Original Drilling - Original Drilling - As Drilled	16,586.54	6,710.56	4,653.50	4,568.55	54.782	CC, ES, SF
J&L Farms 23-11 - Original Drilling - Original Drilling - As	16,586.54	6,739.99	4,816.99	4,761.61	86.977	CC, ES, SF
J&L Farms 23-12 - Original Drilling - Original Drilling - As	16,586.54	6,600.00	3,367.61	3,308.96	57.414	CC, ES, SF
J&L Farms 23-21 - Original Drilling - Original Drilling - As	16,586.54	6,667.61	4,992.69	4,938.00	91.287	CC, ES, SF
J&L Farms 23-22 - Original Drilling - Original Drilling - As	16,586.54	6,653.14	3,591.67	3,536.52	65.126	CC, ES, SF
McIntosh 33-23 - Original Drilling - Original Drilling - As D	16,586.54	7,019.00	2,899.84	2,811.81	32.940	CC, ES, SF
McIntosh 34-23 - Original Drilling - Original Drilling - As D	16,586.54	6,726.48	2,439.81	2,336.45	23.606	CC, ES, SF
McIntosh 43-23 - Original Drilling - Original Drilling - As D	16,586.54	6,701.62	4,284.95	4,188.67	44.505	CC, ES, SF
McIntosh 44-23 - Original Drilling - Original Drilling - As D	16,586.54	6,740.34	3,765.61	3,658.02	35.001	CC, ES, SF
Schroeder 23-31 - Original Drilling - Original Drilling - As	16,586.54	6,789.75	2,160.38	2,092.17	31.673	CC, ES, SF
Schroeder 23-33 - Original Drilling - Original Drilling - As	16,586.54	6,761.34	905.72	813.88	9.862	CC, ES, SF

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

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Reveille A35-772
Project:	Wells Ranch	TVD Reference:	KB @ 4678.00ft
Reference Site:	A Section 35	MD Reference:	KB @ 4678.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Reveille A35-772	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Reveille A35-772 OH	Database:	EDMP
Reference Design:	APD - Rev 2	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
A Section 24						
Larson A23-622 - Larson A23-622 OH - As-drilled	16,586.54	16,166.26	1,031.29	881.18	6.870	CC, ES, SF
Larson A23-627 - Larson A23-627 OH - As-drilled	16,586.54	16,124.78	1,332.71	1,184.37	8.984	CC, ES, SF
Larson A23-633 - Larson A23-633 OH - As-drilled	16,586.54	16,052.29	1,710.23	1,562.35	11.565	CC, ES, SF
Larson A23-639 - Larson A23-639 OH - As-drilled	16,586.54	16,089.35	2,079.68	1,932.40	14.121	CC, ES, SF
Larson A23-645 - Larson A23-645 OH - As-drilled	16,586.54	16,844.28	2,497.22	2,339.17	15.801	CC, ES, SF
Larson A23-651 - Larson A23-651 OH - As-drilled	16,586.54	16,747.29	2,788.31	2,632.56	17.903	CC, ES, SF
Larson A23-656 - Larson A23-656 OH - As-drilled	16,586.54	16,960.06	3,115.99	2,955.87	19.460	CC, ES, SF
Larson A23-662 - Larson A23-662 OH - As-drilled	16,586.54	17,030.28	3,566.65	3,407.05	22.347	CC, ES, SF
Larson A23-668 - Larson A23-668 OH - As-Drilled	16,586.54	16,154.10	3,925.91	3,777.54	26.459	CC, ES, SF
Larson A23-672 - Larson A23-672 OH - As-Drilled	16,586.54	16,334.99	4,184.69	4,034.42	27.848	CC, ES, SF
Larson A23-678 - Larson A23-678 OH - As-Drilled	16,586.54	16,219.35	4,584.40	4,432.63	30.206	CC, ES, SF
Larson A23-683 - Larson A23-683 OH - As-Drilled	16,586.54	16,441.00	4,853.86	4,701.16	31.787	CC, ES, SF
Larson AA19-618 - Larson AA19-618 OH - As-Drilled	16,586.54	6,090.89	8,577.88	8,475.08	83.442	CC, ES, SF
Larson AA19-624 - Larson AA19-624 OH - As-Drilled	16,586.54	6,235.00	8,698.89	8,596.78	85.193	CC, ES, SF
Larson AA19-624 - Larson AA19-624 ST01 - As-Drilled	16,586.54	6,235.00	8,698.89	8,596.78	85.193	CC, ES, SF
Larson AA19-630 - Larson AA19-630 OH - As-Drilled	16,586.54	6,047.00	8,686.54	8,585.47	85.944	CC, ES, SF
Larson AA19-635 - Larson AA19-635 OH - As-Drilled	16,586.54	6,142.00	8,773.65	8,672.73	86.941	CC, ES, SF
Larson Farms 01-24 - Original Drilling - Original Drilling -	16,586.54	3,617.00	9,875.24	9,783.46	107.599	CC, ES, SF
Larson Farms 02-24 - Original Drilling - Original Drilling -	16,586.54	6,935.27	9,446.53	9,337.42	86.584	CC, ES, SF
Larson Farms 03-24 - Original Drilling - Original Drilling -	16,586.54	6,818.59	7,773.12	7,665.14	71.990	CC, ES, SF
Larson Farms 04-24 - Original Drilling - Original Drilling -	16,586.54	2,760.84	8,608.21	8,514.13	91.500	CC, ES, SF
Larson Farms 05-24 - Original Drilling - Original Drilling -	16,586.54	6,977.20	8,206.74	8,089.18	69.812	CC, ES, SF
Larson Farms 06-24 - Original Drilling - Original Drilling -	16,100.00	4,873.00	8,622.61	8,509.22	76.041	SF
Larson Farms 06-24 - Original Drilling - Original Drilling -	16,586.54	4,027.00	8,519.65	8,409.04	77.022	CC, ES
Larson Farms 07-24 - Original Drilling - Original Drilling -	16,586.54	6,981.97	7,503.05	7,378.90	60.436	CC, ES, SF
Peppler 24-32 - Original Drilling - Original Drilling - As Dri	16,586.54	6,500.00	5,197.79	5,098.62	52.412	CC, ES, SF
Roth 24-21 - Original Drilling - Original Drilling - As Drilled	16,586.54	6,840.59	7,672.04	7,580.13	83.475	CC, ES, SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Reveille A35-772
Project:	Wells Ranch	TVD Reference:	KB @ 4678.00ft
Reference Site:	A Section 35	MD Reference:	KB @ 4678.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Reveille A35-772	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Reveille A35-772 OH	Database:	EDMP
Reference Design:	APD - Rev 2	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
A Section 25						
Fairmeadows 03-25G - Original Drilling - Original Drilling	12,253.66	6,728.63	8,740.52	8,664.40	114.829	CC
Fairmeadows 03-25G - Original Drilling - Original Drilling	12,300.00	6,729.18	8,740.64	8,664.17	114.298	ES
Fairmeadows 03-25G - Original Drilling - Original Drilling	16,400.00	6,777.19	9,674.01	9,571.78	94.630	SF
Fairmeadows Land Co 1 - Original Drilling - Original Drilling	13,499.53	6,706.01	8,754.77	8,558.53	44.613	CC
Fairmeadows Land Co 1 - Original Drilling - Original Drilling	13,600.00	6,706.01	8,755.34	8,558.31	44.436	ES
Fairmeadows Land Co 1 - Original Drilling - Original Drilling	15,800.00	6,706.00	9,051.97	8,839.43	42.590	SF
Larsen 01-25G - Original Drilling - Original Drilling - As D	16,180.37	6,741.89	4,926.99	4,791.21	36.287	CC
Larsen 01-25G - Original Drilling - Original Drilling - As D	16,200.00	6,742.35	4,927.02	4,791.07	36.241	ES
Larsen 01-25G - Original Drilling - Original Drilling - As D	16,586.54	6,751.41	4,943.69	4,804.57	35.536	SF
Larsen A25-01 - Original Drilling - Original Drilling - As Dr	16,082.34	6,706.07	8,733.60	8,628.19	82.855	CC
Larsen A25-01 - Original Drilling - Original Drilling - As Dr	16,200.00	6,705.18	8,734.39	8,628.02	82.115	ES
Larsen A25-01 - Original Drilling - Original Drilling - As Dr	16,586.54	6,702.26	8,748.14	8,638.71	79.945	SF
Larsen A25-02 - Original Drilling - Original Drilling - As Dr	15,000.00	15,000.00	7,752.42	7,627.72	62.166	SF
Larsen A25-02 - Original Drilling - Original Drilling - As Dr	16,202.58	6,631.05	7,658.76	7,552.60	72.146	CC
Larsen A25-02 - Original Drilling - Original Drilling - As Dr	16,300.00	6,627.48	7,659.38	7,552.43	71.618	ES
Larsen A25-03 - Original Drilling - Original Drilling - As Dr	16,169.05	6,704.00	6,092.71	5,875.79	28.087	CC
Larsen A25-03 - Original Drilling - Original Drilling - As Dr	16,200.00	6,704.00	6,092.79	5,875.61	28.054	ES
Larsen A25-03 - Original Drilling - Original Drilling - As Dr	16,586.54	6,704.00	6,107.00	5,886.75	27.727	SF
Larsen A25-03X - Original Drilling - Original Drilling - As D	16,343.91	6,653.43	5,868.22	5,760.88	54.670	CC
Larsen A25-03X - Original Drilling - Original Drilling - As D	16,400.00	6,652.98	5,868.49	5,760.68	54.435	ES
Larsen A25-03X - Original Drilling - Original Drilling - As D	16,586.54	6,651.45	5,873.23	5,763.92	53.728	SF
Larsen A25-05 - Original Drilling - Original Drilling - As Dr	14,790.73	6,741.41	4,779.73	4,684.37	50.123	CC
Larsen A25-05 - Original Drilling - Original Drilling - As Dr	14,800.00	6,741.29	4,779.74	4,684.30	50.082	ES
Larsen A25-05 - Original Drilling - Original Drilling - As Dr	15,900.00	6,727.99	4,906.74	4,803.87	47.698	SF
Larsen A25-06 - Original Drilling - Original Drilling - As Dr	14,817.75	6,704.00	6,372.25	6,165.91	30.883	CC
Larsen A25-06 - Original Drilling - Original Drilling - As Dr	14,900.00	6,704.00	6,372.78	6,165.77	30.785	ES
Larsen A25-06 - Original Drilling - Original Drilling - As Dr	16,000.00	6,704.00	6,480.99	6,266.05	30.151	SF
Larsen A25-06X - Original Drilling - Original Drilling - As D	14,755.53	6,576.46	6,014.22	5,915.16	60.718	CC
Larsen A25-06X - Original Drilling - Original Drilling - As D	14,800.00	6,576.23	6,014.38	5,915.00	60.519	ES
Larsen A25-06X - Original Drilling - Original Drilling - As D	16,300.00	6,568.07	6,209.35	6,101.12	57.372	SF
Larsen A25-07 - Original Drilling - Original Drilling - As Dr	14,877.52	6,630.45	7,437.22	7,341.46	77.663	CC
Larsen A25-07 - Original Drilling - Original Drilling - As Dr	14,900.00	6,630.41	7,437.26	7,341.31	77.515	ES
Larsen A25-07 - Original Drilling - Original Drilling - As Dr	16,586.54	6,627.60	7,631.06	7,523.13	70.708	SF
Larsen A25-08 - Original Drilling - Original Drilling - As Dr	14,889.04	6,636.97	8,713.86	8,618.00	90.904	CC
Larsen A25-08 - Original Drilling - Original Drilling - As Dr	15,000.00	6,636.69	8,714.56	8,617.81	90.069	ES
Larsen A25-08 - Original Drilling - Original Drilling - As Dr	16,586.54	6,632.51	8,877.66	8,769.30	81.932	SF
Larsen A25-10 - Original Drilling - Original Drilling - Drilled	13,564.24	6,636.32	7,416.78	7,331.11	86.575	CC
Larsen A25-10 - Original Drilling - Original Drilling - Drilled	13,600.00	6,636.39	7,416.86	7,330.91	86.288	ES
Larsen A25-10 - Original Drilling - Original Drilling - Drilled	16,400.00	6,642.81	7,940.41	7,836.50	76.418	SF
Larsen A25-11 - Original Drilling - Original Drilling - As Dr	13,526.15	6,691.01	6,219.31	6,023.16	31.708	CC
Larsen A25-11 - Original Drilling - Original Drilling - As Dr	13,600.00	6,691.01	6,219.75	6,023.01	31.615	ES
Larsen A25-11 - Original Drilling - Original Drilling - As Dr	14,800.00	6,691.00	6,348.42	6,143.14	30.925	SF
Larsen A25-12 - Original Drilling - Original Drilling - As Dr	13,595.51	6,669.55	4,640.98	4,554.98	53.964	CC
Larsen A25-12 - Original Drilling - Original Drilling - As Dr	13,600.00	6,669.57	4,640.98	4,554.94	53.941	ES
Larsen A25-12 - Original Drilling - Original Drilling - As Dr	14,800.00	6,674.36	4,794.73	4,700.67	50.974	SF
Larsen A25-13 - Original Drilling - Original Drilling - As Dr	12,382.50	6,744.64	4,741.53	4,664.45	61.515	CC
Larsen A25-13 - Original Drilling - Original Drilling - As Dr	12,400.00	6,744.50	4,741.56	4,664.34	61.405	ES
Larsen A25-13 - Original Drilling - Original Drilling - As Dr	16,300.00	16,300.00	6,150.46	6,024.63	48.877	SF
Larsen A25-14 - Original Drilling - Original Drilling - As Dr	12,131.39	6,907.33	6,022.08	5,946.46	79.630	CC
Larsen A25-14 - Original Drilling - Original Drilling - As Dr	12,200.00	6,906.50	6,022.47	5,946.32	79.083	ES
Larsen A25-14 - Original Drilling - Original Drilling - As Dr	14,300.00	6,881.01	6,400.60	6,311.06	71.483	SF
Larsen A25-15 - Original Drilling - Original Drilling - As Dr	12,234.06	6,665.79	7,451.53	7,375.73	98.299	CC
Larsen A25-15 - Original Drilling - Original Drilling - As Dr	12,300.00	6,666.08	7,451.83	7,375.51	97.650	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 Reveille A35-772
Project:	Wells Ranch	TVD Reference:	KB @ 4678.00ft
Reference Site:	A Section 35	MD Reference:	KB @ 4678.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Reveille A35-772	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Reveille A35-772 OH	Database:	EDMP
Reference Design:	APD - Rev 2	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
A Section 25						
Larson A25-15 - Original Drilling - Original Drilling - As Dr	15,400.00	6,679.59	8,096.19	8,000.33	84.452	SF
Larson A25-17 - Original Drilling - Original Drilling - As D	15,448.05	6,622.97	8,182.67	8,082.46	81.655	CC
Larson A25-17 - Original Drilling - Original Drilling - As D	15,500.00	6,623.03	8,182.84	8,082.20	81.312	ES
Larson A25-17 - Original Drilling - Original Drilling - As D	16,586.54	6,624.30	8,261.49	8,152.62	75.881	SF
Larson A25-19 - Original Drilling - Original Drilling - As Dr	15,579.39	6,458.86	5,343.04	5,242.14	52.954	CC
Larson A25-19 - Original Drilling - Original Drilling - As Dr	15,600.00	6,459.00	5,343.08	5,242.01	52.864	ES
Larson A25-19 - Original Drilling - Original Drilling - As Dr	16,586.54	6,466.43	5,437.13	5,329.05	50.304	SF
Larson A25-23 - Original Drilling - Original Drilling - As Dr	12,899.87	6,707.97	8,148.53	8,067.69	100.798	CC
Larson A25-23 - Original Drilling - Original Drilling - As Dr	13,000.00	6,708.69	8,149.15	8,067.52	99.838	ES
Larson A25-23 - Original Drilling - Original Drilling - As Dr	16,400.00	6,723.11	8,868.44	8,765.33	86.011	SF
Larson A25-25 - Original Drilling - Original Drilling - As Dr	12,822.42	6,655.84	5,418.48	5,338.34	67.609	CC
Larson A25-25 - Original Drilling - Original Drilling - As Dr	12,900.00	6,655.24	5,419.03	5,338.28	67.103	ES
Larson A25-25 - Original Drilling - Original Drilling - As Dr	14,500.00	6,643.75	5,672.22	5,581.10	62.255	SF
A Section 26						
Barrett 11-26 (SI) - Original Drilling - Original Drilling - As	13,559.63	6,686.33	683.41	593.29	7.583	CC, ES
Barrett 11-26 (SI) - Original Drilling - Original Drilling - As	13,600.00	6,686.38	684.60	594.09	7.564	SF
Barrett 12-26 (SI) - Original Drilling - Original Drilling - As	13,544.36	6,710.68	633.79	549.30	7.502	CC, ES, SF
Brown-Orr 14-26 (SI) - Original Drilling - Original Drilling - As	11,979.07	6,712.49	714.81	640.72	9.648	CC, ES
Brown-Orr 14-26 (SI) - Original Drilling - Original Drilling - As	12,000.00	6,712.45	715.12	640.97	9.645	SF
Brown-Orr 24-26 - Original Drilling - Original Drilling - As	11,954.08	6,723.34	971.90	898.12	13.173	CC, ES
Brown-Orr 24-26 - Original Drilling - Original Drilling - As	12,000.00	6,724.37	972.99	898.79	13.113	SF
Carpio A26-04 - Original Drilling - Original Drilling - As Dr	16,165.12	6,734.71	535.72	429.52	5.044	CC, ES, SF
Carpio A26-05 - Original Drilling - Original Drilling - As Dr	14,635.93	6,710.04	425.55	331.47	4.523	CC, ES, SF
DCD Farm A26-02 - Original Drilling - Original Drilling - A	16,004.77	6,689.52	2,143.17	2,038.38	20.452	CC, ES
DCD Farm A26-02 - Original Drilling - Original Drilling - A	16,200.00	6,690.19	2,152.05	2,045.74	20.244	SF
DCD Farms 01-26 - Original Drilling - Original Drilling - As	14,791.25	6,754.49	3,436.52	3,341.16	36.037	CC
DCD Farms 01-26 - Original Drilling - Original Drilling - As	14,800.00	6,754.53	3,436.53	3,341.10	36.009	ES
DCD Farms 01-26 - Original Drilling - Original Drilling - As	15,400.00	6,756.74	3,490.02	3,390.40	35.031	SF
DCD Farms 02-26 (PA) - Original Drilling - Original Drilling - A	14,760.62	6,717.23	741.08	645.86	7.782	CC, ES
DCD Farms 02-26 (PA) - Original Drilling - Original Drilling - A	14,800.00	6,717.80	742.13	646.53	7.762	SF
DCD Farms A26-07 - Original Drilling - Original Drilling - A	15,034.43	6,707.39	2,103.93	2,006.70	21.639	CC, ES
DCD Farms A26-07 - Original Drilling - Original Drilling - A	15,300.00	6,701.19	2,120.61	2,021.49	21.394	SF
Pfeiffer 09-26 - Original Drilling - Original Drilling - As Dril	13,481.25	6,718.10	3,444.70	3,359.48	40.421	CC
Pfeiffer 09-26 - Original Drilling - Original Drilling - As Dril	13,500.00	6,717.92	3,444.75	3,359.37	40.348	ES
Pfeiffer 09-26 - Original Drilling - Original Drilling - As Dril	14,200.00	6,711.18	3,518.88	3,428.76	39.049	SF
Pfeiffer 10-26 - Wellbore #1 - Wellbore #1 - As Drilled	13,516.03	6,695.71	2,125.21	2,039.76	24.872	CC, ES
Pfeiffer 10-26 - Wellbore #1 - Wellbore #1 - As Drilled	13,800.00	6,694.08	2,144.09	2,056.57	24.498	SF
Pfeiffer 15-26 - Wellbore #1 - Wellbore #1 - As Drilled	12,130.15	6,789.44	1,943.73	1,868.57	25.861	CC, ES
Pfeiffer 15-26 - Wellbore #1 - Wellbore #1 - As Drilled	12,400.00	6,794.41	1,962.36	1,885.24	25.444	SF
Pfeiffer 16-26 - Original Drilling - Original Drilling - As Dril	12,006.40	6,693.01	3,477.82	3,292.95	18.813	CC, ES
Pfeiffer 16-26 - Original Drilling - Original Drilling - As Dril	12,400.00	6,693.01	3,500.02	3,312.23	18.638	SF
Sidwell 26-1G4 - Original Drilling - Original Drilling - As D	16,041.70	6,676.32	3,492.55	3,387.08	33.113	CC
Sidwell 26-1G4 - Original Drilling - Original Drilling - As D	16,100.00	6,677.13	3,493.04	3,387.06	32.960	ES
Sidwell 26-1G4 - Original Drilling - Original Drilling - As D	16,586.54	6,683.90	3,534.78	3,425.41	32.319	SF
Sidwell A26-03 (PA) - Original Drilling - Original Drilling -	16,209.95	6,979.81	872.56	754.26	7.376	CC, ES, SF

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

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Reveille A35-772
Project:	Wells Ranch	TVD Reference:	KB @ 4678.00ft
Reference Site:	A Section 35	MD Reference:	KB @ 4678.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Reveille A35-772	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Reveille A35-772 OH	Database:	EDMP
Reference Design:	APD - Rev 2	Offset TVD Reference:	Offset Datum

Summary

Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
A Section 27						
Howard 02-27 (PA) - Original Drilling - Original Drilling - A	16,096.55	6,810.00	3,122.97	2,904.50	14.295	CC
Howard 02-27 (PA) - Original Drilling - Original Drilling - A	16,100.00	6,810.00	3,122.97	2,904.48	14.293	ES
Howard 02-27 (PA) - Original Drilling - Original Drilling - A	16,300.00	6,810.00	3,129.59	2,909.87	14.244	SF
Howard 03-27 - Original Drilling - Original Drilling - As Dri	16,009.94	6,737.65	4,531.15	4,426.29	43.210	CC, ES
Howard 03-27 - Original Drilling - Original Drilling - As Dri	16,586.54	6,736.22	4,567.69	4,459.28	42.135	SF
Howard 04-27 (PA) - Original Drilling - Original Drilling - A	16,118.88	6,770.00	5,773.34	5,555.50	26.502	CC
Howard 04-27 (PA) - Original Drilling - Original Drilling - A	16,200.00	6,770.00	5,773.91	5,555.48	26.433	ES
Howard 04-27 (PA) - Original Drilling - Original Drilling - A	16,586.54	6,770.00	5,792.25	5,571.21	26.204	SF
Howard 08-27 - Original Drilling - Original Drilling - As Dri	14,701.99	6,765.99	1,827.20	1,732.38	19.270	CC, ES
Howard 08-27 - Original Drilling - Original Drilling - As Dri	14,800.00	6,765.53	1,829.82	1,734.49	19.195	SF
Howard 10-27 - Original Drilling - Original Drilling - As Dri	13,389.74	6,754.57	3,054.08	2,969.35	36.044	CC
Howard 10-27 - Original Drilling - Original Drilling - As Dri	13,400.00	6,754.46	3,054.10	2,969.30	36.015	ES
Howard 10-27 - Original Drilling - Original Drilling - As Dri	13,800.00	6,749.94	3,081.51	2,994.54	35.431	SF
Howard 15-27 - Original Drilling - Original Drilling - As Dri	12,223.73	6,712.86	3,212.14	3,138.53	43.638	CC, ES
Howard 15-27 - Original Drilling - Original Drilling - As Dri	12,800.00	6,723.26	3,263.41	3,186.68	42.531	SF
Howard 4B-27 (DA) - Original Drilling - Original Drilling - A	16,078.81	3,765.00	6,515.50	6,370.51	44.938	CC
Howard 4B-27 (DA) - Original Drilling - Original Drilling - A	16,100.00	3,765.00	6,515.54	6,370.39	44.890	ES
Howard 4B-27 (DA) - Original Drilling - Original Drilling - A	16,586.54	3,765.00	6,535.25	6,386.71	43.994	SF
Howard A27-01 - Original Drilling - Original Drilling - As D	16,094.81	6,771.37	1,794.64	1,688.90	16.971	CC
Howard A27-01 - Original Drilling - Original Drilling - As D	16,100.00	6,771.35	1,794.65	1,688.87	16.966	ES
Howard A27-01 - Original Drilling - Original Drilling - As D	16,200.00	6,770.94	1,797.72	1,691.45	16.917	SF
Howard A27-05 (SI) - Original Drilling - Original Drilling - A	14,500.00	14,500.00	5,765.16	5,644.94	47.956	ES, SF
Howard A27-05 (SI) - Original Drilling - Original Drilling - A	14,718.19	6,817.24	5,761.02	5,665.81	60.509	CC
Howard A27-06 (PR) - Original Drilling - Original Drilling -	14,762.21	6,851.96	4,383.02	4,285.15	44.785	CC
Howard A27-06 (PR) - Original Drilling - Original Drilling -	14,800.00	6,852.00	4,383.18	4,285.00	44.641	ES
Howard A27-06 (PR) - Original Drilling - Original Drilling -	15,800.00	6,853.12	4,504.21	4,399.28	42.925	SF
Howard A27-07 - Original Drilling - Original Drilling - As D	14,691.20	6,826.76	3,033.32	2,938.35	31.940	CC
Howard A27-07 - Original Drilling - Original Drilling - As D	14,700.00	6,826.73	3,033.33	2,938.30	31.920	ES
Howard A27-07 - Original Drilling - Original Drilling - As D	15,100.00	6,825.36	3,060.74	2,963.58	31.500	SF
Howard A27-09 - Original Drilling - Original Drilling - As D	13,328.77	6,757.95	1,925.78	1,841.50	22.850	CC, ES
Howard A27-09 - Original Drilling - Original Drilling - As D	13,500.00	6,756.52	1,933.37	1,848.26	22.714	SF
Howard A27-16 - Original Drilling - Original Drilling - As D	12,058.11	6,739.68	1,648.00	1,573.26	22.050	CC, ES
Howard A27-16 - Original Drilling - Original Drilling - As D	12,200.00	6,740.84	1,654.09	1,578.69	21.937	SF
Howard A27-17D - Original Drilling - Original Drilling - As	15,503.41	6,867.50	2,379.52	2,274.68	22.696	CC, ES
Howard A27-17D - Original Drilling - Original Drilling - As	15,600.00	6,867.13	2,381.48	2,276.34	22.650	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 Reveille A35-772
Project:	Wells Ranch	TVD Reference:	KB @ 4678.00ft
Reference Site:	A Section 35	MD Reference:	KB @ 4678.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Reveille A35-772	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Reveille A35-772 OH	Database:	EDMP
Reference Design:	APD - Rev 2	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
A Section 28						
Ankeney 2-28 (SI) - Wellbore #1 - No Surveys	16,159.68	6,762.00	8,515.54	8,297.53	39.060	CC
Ankeney 2-28 (SI) - Wellbore #1 - No Surveys	16,200.00	6,762.00	8,515.64	8,297.32	39.007	ES
Ankeney 2-28 (SI) - Wellbore #1 - No Surveys	16,586.54	6,762.00	8,526.23	8,305.10	38.557	SF
Ankeney 28-01 (PA) - Wellbore #1 - Gyro Surveys	14,515.52	6,820.37	7,046.09	6,953.59	76.170	CC
Ankeney 28-01 (PA) - Wellbore #1 - Gyro Surveys	14,600.00	6,819.69	7,046.60	6,953.48	75.674	ES
Ankeney 28-01 (PA) - Wellbore #1 - Gyro Surveys	16,586.54	6,803.84	7,344.13	7,239.39	70.120	SF
Art Rohr 1 (PA) - Wellbore #1 - No Surveys	13,348.68	6,757.01	9,776.59	9,580.47	49.851	CC
Art Rohr 1 (PA) - Wellbore #1 - No Surveys	13,400.00	6,757.01	9,776.72	9,580.23	49.757	ES
Art Rohr 1 (PA) - Wellbore #1 - No Surveys	15,400.00	6,757.00	9,989.47	9,779.58	47.592	SF
Danley 1 (TA) - Wellbore #1 - Gyro Surveys						Out of range
Danley 12-28 (SI) - Wellbore #1 - Gyro Surveys						Out of range
Danley 13-28 (PR) - Wellbore #1 - Gyro Surveys						Out of range
Danley 14-28 (PR) - Wellbore #1 - Gyro Surveys						Out of range
Dewey 21-28 (TA) - Wellbore #1 - Gyro Surveys	15,874.57	7,062.00	9,716.64	9,612.14	92.982	CC
Dewey 21-28 (TA) - Wellbore #1 - Gyro Surveys	15,900.00	7,062.00	9,716.67	9,611.98	92.812	ES
Dewey 21-28 (TA) - Wellbore #1 - Gyro Surveys	16,586.54	7,062.00	9,742.68	9,632.99	88.820	SF
Dewey 22-28 (SI) - Wellbore #1 - Gyro Surveys	14,731.45	7,168.00	9,659.99	9,563.23	99.830	CC
Dewey 22-28 (SI) - Wellbore #1 - Gyro Surveys	14,800.00	7,168.00	9,660.23	9,562.96	99.308	ES
Dewey 22-28 (SI) - Wellbore #1 - Gyro Surveys	16,586.54	7,198.26	9,836.45	9,726.93	89.807	SF
Hannan Rohr 1 (PA) - Wellbore #1 - Gyro Surveys	11,948.30	6,744.30	9,733.62	9,659.81	131.883	CC
Hannan Rohr 1 (PA) - Wellbore #1 - Gyro Surveys	12,000.00	6,744.46	9,733.75	9,659.59	131.245	ES
Hannan Rohr 1 (PA) - Wellbore #1 - Gyro Surveys	14,200.00	6,751.33	9,990.66	9,902.06	112.755	SF
Rohr A 28-25 (SI) - Wellbore #1 - Gyro Surveys						Out of range
Wardlaw 16-28 (SI) - Wellbore #1 - Gyro Surveys	11,993.68	6,803.61	7,259.92	7,185.36	97.377	CC
Wardlaw 16-28 (SI) - Wellbore #1 - Gyro Surveys	12,000.00	6,803.67	7,259.92	7,185.32	97.320	ES
Wardlaw 16-28 (SI) - Wellbore #1 - Gyro Surveys	14,800.00	6,823.72	7,783.41	7,692.80	85.899	SF
Wardlaw 20-28 - Original Drilling - Original Drilling - As D	12,604.79	6,730.01	7,592.61	7,402.61	39.961	CC
Wardlaw 20-28 - Original Drilling - Original Drilling - As D	12,700.00	6,730.01	7,593.20	7,402.54	39.824	ES
Wardlaw 20-28 - Original Drilling - Original Drilling - As D	14,300.00	6,730.01	7,779.55	7,578.72	38.737	SF
Wardlaw 20-28 (SI) - Wellbore #1 - Gyro Surveys	12,638.31	6,780.48	7,583.60	7,504.41	95.768	CC
Wardlaw 20-28 (SI) - Wellbore #1 - Gyro Surveys	12,700.00	6,781.38	7,583.85	7,504.23	95.244	ES
Wardlaw 20-28 (SI) - Wellbore #1 - Gyro Surveys	15,500.00	6,823.60	8,105.46	8,009.57	84.528	SF
Wardlaw 33-28 (PA) - Wellbore #1 - Gyro Surveys	13,133.39	7,500.00	8,138.08	7,994.31	56.603	CC
Wardlaw 33-28 (PA) - Wellbore #1 - Gyro Surveys	13,300.00	7,500.00	8,139.79	7,992.97	55.440	ES
Wardlaw 33-28 (PA) - Wellbore #1 - Gyro Surveys	16,586.54	7,500.00	8,840.40	8,647.12	45.740	SF
Webster 09-28 (PR) - Original Drilling - Original Drilling -	13,404.17	6,745.01	7,303.78	7,107.48	37.208	CC
Webster 09-28 (PR) - Original Drilling - Original Drilling -	13,500.00	6,745.01	7,304.40	7,107.42	37.082	ES
Webster 09-28 (PR) - Original Drilling - Original Drilling -	14,900.00	6,745.00	7,455.38	7,249.45	36.204	SF
Webster 15-28 (SI) - Wellbore #1 - Gyro Surveys	12,067.14	6,796.37	8,597.01	8,522.12	114.803	CC
Webster 15-28 (SI) - Wellbore #1 - Gyro Surveys	12,100.00	6,796.27	8,597.07	8,521.96	114.454	ES
Webster 15-28 (SI) - Wellbore #1 - Gyro Surveys	15,800.00	6,784.70	9,372.44	9,276.04	97.222	SF
Webster 9-28 (PR) - Wellbore #1 - Gyro Surveys	13,443.88	6,781.08	7,288.39	7,203.22	85.576	CC
Webster 9-28 (PR) - Wellbore #1 - Gyro Surveys	13,500.00	6,781.30	7,288.61	7,203.04	85.176	ES
Webster 9-28 (PR) - Wellbore #1 - Gyro Surveys	16,000.00	6,790.96	7,723.62	7,623.65	77.255	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 Reveille A35-772
Project:	Wells Ranch	TVD Reference:	KB @ 4678.00ft
Reference Site:	A Section 35	MD Reference:	KB @ 4678.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Reveille A35-772	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Reveille A35-772 OH	Database:	EDMP
Reference Design:	APD - Rev 2	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
A Section 33						
Achziger 11-33 (PR) - Wellbore #1 - Gyro Surveys	100.00	26.47	8,960.38	8,960.21	10,000.000	CC
Achziger 11-33 (PR) - Wellbore #1 - Gyro Surveys	1,500.00	1,400.00	8,966.39	8,956.53	908.859	ES
Achziger 11-33 (PR) - Wellbore #1 - Gyro Surveys	11,200.00	6,786.34	9,980.96	9,914.22	149.554	SF
Achziger 14-33 (PA) - Wellbore #1 - No Surveys	2,000.00	1,947.00	8,982.01	8,936.13	195.786	CC
Achziger 14-33 (PA) - Wellbore #1 - No Surveys	2,100.00	2,046.98	8,983.74	8,935.52	186.283	ES
Achziger 14-33 (PA) - Wellbore #1 - No Surveys	8,700.00	6,695.02	9,982.46	9,819.12	61.114	SF
Briggs 15-33 (SI) - Wellbore #1 - Gyro Surveys	576.89	528.90	7,668.91	7,665.40	2,184.331	CC
Briggs 15-33 (SI) - Wellbore #1 - Gyro Surveys	1,300.00	1,202.94	7,671.76	7,663.31	907.470	ES
Briggs 15-33 (SI) - Wellbore #1 - Gyro Surveys	12,100.00	6,988.00	9,967.47	9,899.11	145.815	SF
Ehrlich 19-33 (PR) - Wellbore #1 - Gyro Survey	2,001.41	1,958.28	9,841.70	9,828.08	722.595	CC, ES
Ehrlich 19-33 (PR) - Wellbore #1 - Gyro Survey	3,100.00	3,075.19	9,994.34	9,973.01	468.653	SF
French 09-33 (SI) - Original Drilling - Original Drilling - As	1,330.44	1,285.50	6,512.70	6,503.83	734.858	CC
French 09-33 (SI) - Original Drilling - Original Drilling - As	2,025.49	2,035.53	6,513.59	6,499.62	466.379	ES
French 09-33 (SI) - Original Drilling - Original Drilling - As	12,000.00	6,657.11	8,078.94	8,010.75	118.481	SF
Hammerbeck 16-33 (PA) - Original Drilling - Original Drilling	100.00	29.65	6,266.73	6,266.55	10,000.000	CC
Hammerbeck 16-33 (PA) - Original Drilling - Original Drilling	1,000.00	911.15	6,270.81	6,264.44	984.439	ES
Hammerbeck 16-33 (PA) - Original Drilling - Original Drilling	11,000.00	6,400.00	8,232.43	8,172.03	136.304	SF
Hammerbeck 20-33 - Wellbore #1 - Gyro Surveys	1,072.43	1,024.45	7,046.43	7,039.41	1,004.363	CC
Hammerbeck 20-33 - Wellbore #1 - Gyro Surveys	1,900.00	1,800.00	7,048.48	7,035.79	555.503	ES
Hammerbeck 20-33 - Wellbore #1 - Gyro Surveys	12,300.00	6,558.23	9,187.20	9,118.86	134.431	SF
Noffsinger 11-33 (PR) - Wellbore #1 - Gyro Surveys						Out of range
Noffsinger 12-33 (PR) - Wellbore #1 - Gyro Surveys						Out of range
Noffsinger 21-33 (PA) - Wellbore #1 - No Surveys	10,895.12	6,735.01	9,735.51	9,557.90	54.814	CC
Noffsinger 21-33 (PA) - Wellbore #1 - No Surveys	11,000.00	6,735.01	9,736.08	9,557.77	54.605	ES
Noffsinger 21-33 (PA) - Wellbore #1 - No Surveys	13,100.00	6,735.01	9,982.07	9,790.31	52.055	SF
Noffsinger 22-33 (PR) - Wellbore #1 - Gyro Surveys	10,923.83	6,457.09	8,194.19	8,128.32	124.392	CC
Noffsinger 22-33 (PR) - Wellbore #1 - Gyro Surveys	11,000.00	6,459.19	8,194.55	8,128.17	123.448	ES
Noffsinger 22-33 (PR) - Wellbore #1 - Gyro Surveys	14,800.00	6,537.41	9,064.30	8,976.49	103.232	SF
Noffsinger 31-33 (PR) - Wellbore #1 - Gyro Surveys	10,884.57	6,760.25	8,309.51	8,242.97	124.877	CC
Noffsinger 31-33 (PR) - Wellbore #1 - Gyro Surveys	10,900.00	6,760.24	8,309.52	8,242.88	124.689	ES
Noffsinger 31-33 (PR) - Wellbore #1 - Gyro Surveys	14,800.00	6,759.90	9,185.78	9,097.30	103.820	SF
Noffsinger 32-33 (PR) - Wellbore #1 - Gyro Surveys	2,023.10	2,047.91	8,255.25	8,241.17	586.025	CC, ES
Noffsinger 32-33 (PR) - Wellbore #1 - Gyro Surveys	13,900.00	6,914.34	9,783.89	9,703.19	121.245	SF
Sitzman 12-33 (PR) - Wellbore #1 - Gyro Surveys						Out of range
Sitzman 13-33 (SI) - Wellbore #1 - Gyro Surveys						Out of range
Sughrue 41-33 (SI) - Original Drilling - Original Drilling -	10,879.79	6,500.00	7,020.58	6,955.20	107.386	CC
Sughrue 41-33 (SI) - Original Drilling - Original Drilling -	10,900.00	6,500.00	7,020.61	6,955.10	107.174	ES
Sughrue 41-33 (SI) - Original Drilling - Original Drilling -	13,800.00	6,500.00	7,603.69	7,522.13	93.219	SF
Webster 10-33 (PA) - Wellbore #1 - Gyro Surveys	100.00	40.29	7,858.58	7,858.38	10,000.000	CC
Webster 10-33 (PA) - Wellbore #1 - Gyro Surveys	400.00	319.38	7,859.41	7,857.27	3,665.281	ES
Webster 10-33 (PA) - Wellbore #1 - Gyro Surveys	13,200.00	6,930.00	9,784.03	9,708.51	129.553	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 Reveille A35-772
Project:	Wells Ranch	TVD Reference:	KB @ 4678.00ft
Reference Site:	A Section 35	MD Reference:	KB @ 4678.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Reveille A35-772	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Reveille A35-772 OH	Database:	EDMP
Reference Design:	APD - Rev 2	Offset TVD Reference:	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Separation Factor	Warning
A Section 34						
Barthol A34-05X - Original Drilling - Original Drilling - As D	847.32	828.34	5,821.43	5,815.90	1,052.402	CC
Barthol A34-05X - Original Drilling - Original Drilling - As D	900.00	852.42	5,821.56	5,815.75	1,002.922	ES
Barthol A34-05X - Original Drilling - Original Drilling - As D	12,000.00	6,688.17	6,381.39	6,311.01	90.677	SF
Ehlich A34-01 - Original Drilling - Original Drilling - As Dr	10,611.11	6,765.73	1,721.56	1,656.74	26.559	CC, ES
Ehlich A34-01 - Original Drilling - Original Drilling - As Dr	10,800.00	6,765.43	1,731.90	1,666.24	26.377	SF
Howard A34-03 (PA) - Original Drilling - Original Drilling -	10,756.96	6,751.01	4,496.22	4,318.98	25.368	CC
Howard A34-03 (PA) - Original Drilling - Original Drilling -	10,800.00	6,751.01	4,496.42	4,318.92	25.331	ES
Howard A34-03 (PA) - Original Drilling - Original Drilling -	11,400.00	6,751.01	4,541.97	4,360.97	25.095	SF
Howard BC A34-02 - Original Drilling - Original Drilling - A	10,629.51	6,726.38	3,387.05	3,322.40	52.388	CC, ES
Howard BC A34-02 - Original Drilling - Original Drilling - A	13,100.00	13,100.00	4,192.24	4,098.14	44.552	SF
Landwehr A34-03X - Original Drilling - Original Drilling - A	10,922.08	6,804.33	4,556.93	4,489.93	68.016	CC, ES
Landwehr A34-03X - Original Drilling - Original Drilling - A	12,200.00	6,793.83	4,732.71	4,658.87	64.098	SF
Landwehr A34-04 - Original Drilling - Original Drilling - As	10,940.59	6,886.70	6,043.40	5,975.88	89.515	CC
Landwehr A34-04 - Original Drilling - Original Drilling - As	11,000.00	6,888.64	6,043.69	5,975.78	89.004	ES
Landwehr A34-04 - Original Drilling - Original Drilling - As	13,200.00	6,960.61	6,451.52	6,371.31	80.434	SF
Petrikin A34-05 (PA) - Original Drilling - Original Drilling -	9,412.06	6,728.02	5,814.81	5,646.51	34.550	CC, ES
Petrikin A34-05 (PA) - Original Drilling - Original Drilling -	10,500.00	6,728.01	5,915.71	5,741.50	33.956	SF
Petrikin A34-06 - Original Drilling - Original Drilling - As D	9,446.86	6,802.29	4,480.87	4,423.27	77.796	CC, ES
Petrikin A34-06 - Original Drilling - Original Drilling - As D	10,900.00	6,811.41	4,710.60	4,645.80	72.702	SF
Petrikin A34-07 (PA) - Original Drilling - Original Drilling -	9,517.24	6,713.02	3,155.44	2,986.83	18.714	CC, ES
Petrikin A34-07 (PA) - Original Drilling - Original Drilling -	9,800.00	6,713.02	3,168.08	2,998.04	18.631	SF
Petrikin A34-08 - Original Drilling - Original Drilling - As D	9,531.99	6,744.14	1,723.88	1,665.93	29.748	CC, ES
Petrikin A34-08 - Original Drilling - Original Drilling - As D	9,700.00	6,738.18	1,732.03	1,673.40	29.541	SF
Petrikin A34-09 - Original Drilling - Original Drilling - As D	8,233.46	6,709.78	1,704.69	1,653.65	33.396	CC, ES
Petrikin A34-09 - Original Drilling - Original Drilling - As D	8,400.00	6,702.39	1,712.79	1,661.25	33.231	SF
Petrikin A34-10 - Original Drilling - Original Drilling - As D	0.00	0.00	2,782.31			
Petrikin A34-10 - Original Drilling - Original Drilling - As D	8,900.00	6,600.00	3,042.55	2,989.61	57.475	SF
Petrikin A34-11 - Original Drilling - Original Drilling - As D	1,914.72	1,875.74	4,053.41	4,040.40	311.482	CC
Petrikin A34-11 - Original Drilling - Original Drilling - As D	2,000.00	1,952.70	4,053.53	4,039.94	298.350	ES
Petrikin A34-11 - Original Drilling - Original Drilling - As D	9,700.00	6,714.81	4,691.82	4,634.63	82.035	SF
Petrikin A34-12 (PA) - Original Drilling - Original Drilling -	2,067.86	2,151.19	5,227.17	5,212.66	360.338	CC
Petrikin A34-12 (PA) - Original Drilling - Original Drilling -	2,100.00	2,190.46	5,227.31	5,212.56	354.262	ES
Petrikin A34-12 (PA) - Original Drilling - Original Drilling -	10,700.00	6,974.62	6,209.33	6,146.15	98.273	SF
Petrikin A34-13 - Original Drilling - Original Drilling - As D	1,747.91	1,700.00	5,032.65	5,020.84	426.285	CC
Petrikin A34-13 - Original Drilling - Original Drilling - As D	2,000.00	1,932.08	5,033.34	5,019.82	372.325	ES
Petrikin A34-13 - Original Drilling - Original Drilling - As D	9,500.00	6,636.60	6,365.46	6,310.55	115.922	SF
Petrikin A34-14 (PA) - Original Drilling - Original Drilling -	100.00	48.02	3,992.17	3,991.96	10,000.000	CC
Petrikin A34-14 (PA) - Original Drilling - Original Drilling -	400.00	331.59	3,993.88	3,991.69	1,825.244	ES
Petrikin A34-14 (PA) - Original Drilling - Original Drilling -	8,700.00	6,713.88	5,347.08	5,294.64	101.955	SF
Petrikin A34-15 - Original Drilling - Original Drilling - As D	100.00	56.72	2,411.56	2,411.33	10,000.000	CC
Petrikin A34-15 - Original Drilling - Original Drilling - As D	2,000.39	1,968.76	2,419.41	2,405.75	177.227	ES
Petrikin A34-15 - Original Drilling - Original Drilling - As D	7,183.67	6,670.23	3,169.59	3,121.77	66.274	SF
Petrikin A34-16 (PA) - Original Drilling - Original Drilling -	395.25	376.26	1,105.44	1,103.11	474.479	CC
Petrikin A34-16 (PA) - Original Drilling - Original Drilling -	2,000.00	1,979.10	1,109.16	1,095.48	81.070	ES
Petrikin A34-16 (PA) - Original Drilling - Original Drilling -	7,100.00	6,792.30	1,768.84	1,720.56	36.642	SF
Petrikin A34-25 - Original Drilling - Original Drilling - As D	100.00	36.73	4,443.68	4,443.49	10,000.000	CC
Petrikin A34-25 - Original Drilling - Original Drilling - As D	1,800.00	1,723.39	4,448.49	4,436.41	368.503	ES
Petrikin A34-25 - Original Drilling - Original Drilling - As D	9,600.00	6,571.49	5,432.71	5,377.10	97.684	SF
Reveille A33-720 - Reveille A33-720 OH - APD - Rev 1	2,000.00	1,983.00	4,168.90	4,155.09	301.834	CC, ES
Reveille A33-720 - Reveille A33-720 OH - APD - Rev 1	16,586.54	17,576.35	7,077.08	6,904.03	40.897	SF
Reveille A34-746 - Reveille A34-746 OH - APD - Rev 1	5,792.46	6,650.00	3,514.79	3,469.30	77.267	CC
Reveille A34-746 - Reveille A34-746 OH - APD - Rev 1	16,546.89	16,817.91	3,538.53	3,367.56	20.696	ES
Reveille A34-746 - Reveille A34-746 OH - APD - Rev 1	16,586.54	16,817.91	3,538.75	3,367.57	20.672	SF

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

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Project:	Wells Ranch	TVD Reference:	KB @ 4678.00ft
Reference Site:	A Section 35	MD Reference:	KB @ 4678.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Reveille A35-772	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Reveille A35-772 OH	Database:	EDMP
Reference Design:	APD - Rev 2	Offset TVD Reference:	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Separation Factor	Warning
A Section 34						
Reveille A34-757 - Reveille A34-757 OH - APD - Rev 1	2,484.58	3,165.69	4,111.91	4,092.51	212.017	CC
Reveille A34-757 - Reveille A34-757 OH - APD - Rev 1	16,586.54	16,626.69	4,246.65	4,075.54	24.819	ES, SF
Reveille A34-768 - Reveille A34-768 OH - APD - Rev 1	2,000.00	1,982.00	4,162.05	4,148.25	301.416	CC, ES
Reveille A34-768 - Reveille A34-768 OH - APD - Rev 1	16,586.54	16,558.98	4,953.91	4,781.98	28.814	SF
Reveille A34-778 - Reveille A34-778 OH - APD - Rev 1	2,000.00	1,982.00	4,163.30	4,149.49	301.506	CC, ES
Reveille A34-778 - Reveille A34-778 OH - APD - Rev 1	16,586.54	16,607.30	5,661.88	5,490.98	33.131	SF
Reveille A34-788 - Reveille A34-788 OH - APD - Rev 1	2,000.00	1,983.00	4,167.43	4,153.62	301.727	CC, ES
Reveille A34-788 - Reveille A34-788 OH - APD - Rev 1	16,586.54	17,226.69	6,369.23	6,196.12	36.795	SF
A Section 35						
Hoffner 13-35 - Original Drilling - Original Drilling - As Dri	8,281.42	6,738.45	774.48	722.99	15.044	CC, ES
Hoffner 13-35 - Original Drilling - Original Drilling - As Dri	8,300.00	6,737.19	774.70	723.18	15.037	SF
Hoffner 14-35 (SI) - Original Drilling - Original Drilling - As	2,784.19	2,769.38	182.99	163.79	9.529	CC
Hoffner 14-35 (SI) - Original Drilling - Original Drilling - As	2,800.00	2,784.88	183.01	163.70	9.476	ES
Hoffner 14-35 (SI) - Original Drilling - Original Drilling - As	3,200.00	3,179.17	196.72	174.60	8.893	SF
Hoffner 24-35 (SI) - Original Drilling - Original Drilling - As	6,883.77	6,614.32	745.26	698.14	15.816	CC, ES
Hoffner 24-35 (SI) - Original Drilling - Original Drilling - As	6,950.00	6,640.89	747.71	700.37	15.793	SF
Hoffner 33-35 - Original Drilling - Original Drilling - As Dri	8,029.36	6,752.99	2,407.92	2,357.58	47.834	CC, ES
Hoffner 33-35 - Original Drilling - Original Drilling - As Dri	8,500.00	6,735.92	2,453.42	2,401.07	46.868	SF
Hoffner 34-35 - Original Drilling - Original Drilling - As Dri	7,075.24	6,639.64	2,293.59	2,245.98	48.172	CC, ES
Hoffner 34-35 - Original Drilling - Original Drilling - As Dri	7,300.00	6,666.34	2,304.00	2,255.90	47.899	SF
Hoffner 44-35 - Wellbore #1 - Wellbore #1- As Drilled	6,910.45	6,668.92	3,620.18	3,572.82	76.450	CC, ES
Hoffner 44-35 - Wellbore #1 - Wellbore #1- As Drilled	7,800.00	6,709.95	3,729.10	3,679.49	75.163	SF
Reveille A34-714 - Reveille A34-714 OH - APD - Rev 1	2,000.00	2,001.00	44.54	30.66	3.210	CC, ES, SF
Reveille A34-725 - Reveille A34-725 OH - APD - Rev 1	2,000.00	2,002.00	69.59	55.71	5.014	CC, ES, SF
Reveille A34-735 - Reveille A34-735 OH - APD - Rev 1	2,000.00	2,003.00	91.86	77.98	6.616	CC, ES
Reveille A34-735 - Reveille A34-735 OH - APD - Rev 1	2,100.00	2,099.68	95.39	80.83	6.550	SF
Reveille A35-750 - Reveille A35-750 OH - APD - Rev 2	2,000.00	1,999.00	44.54	30.67	3.211	CC, ES
Reveille A35-750 - Reveille A35-750 OH - APD - Rev 2	2,100.00	2,096.73	45.30	30.76	3.115	SF
Reveille A35-762 - Reveille A35-762 OH - APD - Rev 2	2,287.31	2,284.10	22.15	6.37	1.404	Level 3, CC
Reveille A35-762 - Reveille A35-762 OH - APD - Rev 2	2,542.09	2,536.90	22.64	5.27	1.303	Level 3, ES, SF
Reveille A35-783 - Reveille A35-783 OH - APD - Rev 1	2,000.00	2,001.00	22.27	8.39	1.605	CC, ES, SF
Sharkey 31-35 - Original Drilling - Original Drilling - As Dr	10,862.41	6,694.58	2,139.91	2,073.78	32.358	CC, ES
Sharkey 31-35 - Original Drilling - Original Drilling - As Dr	11,200.00	6,698.75	2,166.37	2,097.89	31.636	SF
Sharkey 32-35 - Original Drilling - Original Drilling - As Dr	9,343.80	6,656.66	2,232.37	2,175.88	39.517	CC, ES
Sharkey 32-35 - Original Drilling - Original Drilling - As Dr	9,800.00	6,664.11	2,278.50	2,219.29	38.479	SF
Wardlaw 35-21 (SI) - Original Drilling - Original Drilling - A	10,637.64	6,701.06	780.49	715.89	12.082	CC, ES
Wardlaw 35-21 (SI) - Original Drilling - Original Drilling - A	10,700.00	6,700.61	782.98	717.85	12.022	SF
Wardlaw 35-22 - Original Drilling - Original Drilling - As D	10,956.65	6,703.63	511.68	444.86	7.658	CC, ES, SF
Wardlaw 35-23 (PA) - Original Drilling - Original Drilling -	9,502.36	6,696.25	575.57	515.58	9.595	CC, ES, SF
Wardlaw 35-24 - Original Drilling - Original Drilling - As D	9,529.30	6,712.16	802.89	745.34	13.952	CC, ES
Wardlaw 35-24 - Original Drilling - Original Drilling - As D	9,600.00	6,712.59	806.00	747.93	13.880	SF
Wardlaw 35-25 - Original Drilling - Original Drilling - As D	9,953.52	6,695.83	179.62	119.48	2.987	CC, ES, SF

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

Noble Energy, Inc.
Anticollision Summary Report

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Reference Site:	A Section 35	MD Reference:	KB @ 4678.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Reveille A35-772	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Reveille A35-772 OH	Database:	EDMP
Reference Design:	APD - Rev 2	Offset TVD Reference:	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Separation Factor	Warning
A Section 36						
Devries State A36-17 (Exist.) - Wellbore #1 - Wellbore #1	10,177.72	6,703.28	8,136.00	8,042.72	87.221	CC
Devries State A36-17 (Exist.) - Wellbore #1 - Wellbore #1	10,200.00	6,702.30	8,136.03	8,042.62	87.097	ES
Devries State A36-17 (Exist.) - Wellbore #1 - Wellbore #1	13,400.00	6,562.30	8,749.72	8,638.18	78.439	SF
Devries State A36-21 - Wellbore #1 - Wellbore #1 - As Dr	8,662.43	6,804.74	6,599.93	6,546.63	123.829	CC
Devries State A36-21 - Wellbore #1 - Wellbore #1 - As Dr	8,700.00	6,805.41	6,600.04	6,546.55	123.394	ES
Devries State A36-21 - Wellbore #1 - Wellbore #1 - As Dr	12,200.00	6,867.36	7,487.96	7,415.22	102.944	SF
Devries State A36-23 - Wellbore #1 - Wellbore #1 - As Dr	7,664.45	6,626.27	8,116.29	8,067.42	166.092	CC
Devries State A36-23 - Wellbore #1 - Wellbore #1 - As Dr	7,700.00	6,625.87	8,116.37	8,067.40	165.744	ES
Devries State A36-23 - Wellbore #1 - Wellbore #1 - As Dr	13,000.00	6,582.16	9,712.84	9,637.65	129.180	SF
Devries State A36-25 - Wellbore #1 - Wellbore #1 - As Dr	7,558.66	6,655.16	5,424.65	5,375.97	111.445	CC, ES
Devries State A36-25 - Wellbore #1 - Wellbore #1 - As Dr	10,300.00	6,631.53	6,077.94	6,017.18	100.031	SF
Scholfield A36-19 (Exist.) - Wellbore #1 - Wellbore #1 - A	10,190.34	6,766.27	5,267.76	5,205.89	85.141	CC
Scholfield A36-19 (Exist.) - Wellbore #1 - Wellbore #1 - A	10,200.00	6,765.94	5,267.77	5,205.83	85.052	ES
Scholfield A36-19 (Exist.) - Wellbore #1 - Wellbore #1 - A	16,586.54	16,586.54	8,284.14	8,162.18	67.925	SF
Scholfield A36-20 - Wellbore #1 - Wellbore #1 - As Drilled	8,933.26	6,641.51	5,275.72	5,221.55	97.401	CC, ES
Scholfield A36-20 - Wellbore #1 - Wellbore #1 - As Drilled	11,300.00	6,669.52	5,782.26	5,714.90	85.845	SF
Scholfield State A36-4X - Wellbore #1 - Wellbore #1 - As	10,926.75	6,836.01	4,648.46	4,581.58	69.495	CC
Scholfield State A36-4X - Wellbore #1 - Wellbore #1 - As	11,200.00	11,200.00	4,656.40	4,572.08	55.225	ES
Scholfield State A36-4X - Wellbore #1 - Wellbore #1 - As	11,300.00	11,300.00	4,663.25	4,577.87	54.616	SF
Scholfield State A36-69HN - Original Drilling - Original Dr	11,432.87	6,080.01	4,712.04	4,645.26	70.563	CC
Scholfield State A36-69HN - Original Drilling - Original Dr	11,500.00	6,080.01	4,712.52	4,645.23	70.040	ES
Scholfield State A36-69HN - Original Drilling - Original Dr	13,000.00	6,080.01	4,965.80	4,889.19	64.820	SF
Scholfield State A36-79HN - Wellbore #1 - Original Drillin	10,200.00	10,200.00	3,970.93	3,869.05	38.975	ES
Scholfield State A36-79HN - Wellbore #1 - Original Drillin	10,279.09	6,942.75	3,970.56	3,903.30	59.032	CC
Scholfield State A36-79HN - Wellbore #1 - Original Drillin	11,300.00	11,300.00	4,067.27	3,957.43	37.029	SF
Sinjin E 36-9 (SI) - Wellbore #1 - No Surveys						Out of range
State A36-05 - Wellbore #1 - Wellbore #1 - As Drilled	9,553.69	6,721.72	4,766.94	4,709.11	82.436	CC
State A36-05 - Wellbore #1 - Wellbore #1 - As Drilled	9,600.00	6,721.52	4,767.17	4,709.05	82.029	ES
State A36-05 - Wellbore #1 - Wellbore #1 - As Drilled	11,400.00	6,714.07	5,112.00	5,043.38	74.497	SF
State A36-06 - Wellbore #1 - Wellbore #1 - As Drilled	9,427.97	6,669.95	6,062.20	6,005.23	106.405	CC
State A36-06 - Wellbore #1 - Wellbore #1 - As Drilled	9,500.00	6,668.56	6,062.63	6,005.22	105.607	ES
State A36-06 - Wellbore #1 - Wellbore #1 - As Drilled	12,200.00	6,610.64	6,665.67	6,592.71	91.359	SF
State A36-07 - Wellbore #1 - Wellbore #1 - As Drilled	9,758.48	6,662.92	7,415.68	7,356.77	125.879	CC
State A36-07 - Wellbore #1 - Wellbore #1 - As Drilled	9,800.00	6,662.86	7,415.80	7,356.62	125.322	ES
State A36-07 - Wellbore #1 - Wellbore #1 - As Drilled	13,600.00	6,657.99	8,351.62	8,270.05	102.386	SF
State A36-08 - Wellbore #1 - Wellbore #1 - As Drilled	9,377.85	9,377.85	8,740.50	8,674.52	132.477	CC
State A36-08 - Wellbore #1 - Wellbore #1 - As Drilled	9,500.00	9,500.00	8,741.35	8,674.22	130.203	ES
State A36-08 - Wellbore #1 - Wellbore #1 - As Drilled	14,200.00	6,400.00	9,981.58	9,897.56	118.803	SF
State A36-09 - Wellbore #1 - Wellbore #1 - As Drilled	8,183.79	6,811.98	8,737.72	8,686.52	170.653	CC
State A36-09 - Wellbore #1 - Wellbore #1 - As Drilled	8,200.00	6,811.97	8,737.74	8,686.47	170.437	ES
State A36-09 - Wellbore #1 - Wellbore #1 - As Drilled	13,000.00	6,810.51	9,977.16	9,899.65	128.724	SF
State A36-10 - Wellbore #1 - Wellbore #1 - As Drilled	8,150.58	6,802.68	7,423.67	7,372.63	145.451	CC
State A36-10 - Wellbore #1 - Wellbore #1 - As Drilled	8,200.00	6,801.43	7,423.84	7,372.60	144.898	ES
State A36-10 - Wellbore #1 - Wellbore #1 - As Drilled	13,500.00	13,500.00	9,148.90	9,047.42	90.155	SF
State A36-11 - Wellbore #1 - Wellbore #1 - As Drilled	8,116.88	6,791.15	6,096.58	6,045.71	119.846	CC, ES
State A36-11 - Wellbore #1 - Wellbore #1 - As Drilled	12,500.00	12,500.00	7,508.15	7,416.23	81.679	SF
State A36-12 - Wellbore #1 - Wellbore #1 - As Drilled	8,194.04	6,730.74	4,719.18	4,668.20	92.583	CC
State A36-12 - Wellbore #1 - Wellbore #1 - As Drilled	8,200.00	6,730.74	4,719.18	4,668.18	92.538	ES
State A36-12 - Wellbore #1 - Wellbore #1 - As Drilled	10,200.00	6,728.23	5,127.82	5,066.93	84.211	SF
State A36-13 - Wellbore #1 - Wellbore #1 - As Drilled	6,959.30	6,595.41	4,734.61	4,687.39	100.259	CC, ES
State A36-13 - Wellbore #1 - Wellbore #1 - As Drilled	9,100.00	6,665.35	5,185.66	5,130.96	94.810	SF
State A36-14 - Wellbore #1 - Wellbore #1 - As Drilled	6,919.16	6,638.86	6,084.68	5,927.67	38.753	CC
State A36-14 - Wellbore #1 - Wellbore #1 - As Drilled	7,000.00	6,666.71	6,085.15	5,927.41	38.576	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 Reveille A35-772
Project:	Wells Ranch	TVD Reference:	KB @ 4678.00ft
Reference Site:	A Section 35	MD Reference:	KB @ 4678.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Reveille A35-772	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Reveille A35-772 OH	Database:	EDMP
Reference Design:	APD - Rev 2	Offset TVD Reference:	Offset Datum

Summary

Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
A Section 36						
State A36-14 - Wellbore #1 - Wellbore #1 - As Drilled	7,600.00	6,693.02	6,121.82	5,962.24	38.363	SF
State A36-15 - Wellbore #1 - Wellbore #1 - As Drilled	6,888.88	6,596.96	7,491.48	7,444.59	159.753	CC
State A36-15 - Wellbore #1 - Wellbore #1 - As Drilled	6,900.00	6,602.30	7,491.49	7,444.55	159.602	ES
State A36-15 - Wellbore #1 - Wellbore #1 - As Drilled	11,900.00	6,658.84	8,998.90	8,930.36	131.310	SF
State A36-16 - Wellbore #1 - Wellbore #1 - As Drilled	6,845.45	6,605.44	8,740.71	8,693.75	186.122	CC
State A36-16 - Wellbore #1 - Wellbore #1 - As Drilled	6,900.00	6,632.93	8,740.84	8,693.66	185.247	ES
State A36-16 - Wellbore #1 - Wellbore #1 - As Drilled	11,700.00	6,682.16	9,989.57	9,920.72	145.103	SF
State A36-3 (Exist.) - Wellbore #1 - Wellbore #1	10,817.90	6,510.36	6,124.41	6,058.88	93.472	CC
State A36-3 (Exist.) - Wellbore #1 - Wellbore #1	10,900.00	6,505.31	6,124.95	6,058.86	92.666	ES
State A36-3 (Exist.) - Wellbore #1 - Wellbore #1	13,400.00	6,463.32	6,646.20	6,564.88	81.730	SF
State A36-99HZ - Original Drilling - As Drilled	11,197.65	6,194.01	4,697.86	4,631.80	71.117	CC
State A36-99HZ - Original Drilling - As Drilled	11,200.00	6,194.01	4,697.86	4,631.78	71.098	ES
State A36-99HZ - Original Drilling - As Drilled	12,800.00	6,163.01	4,963.19	4,887.18	65.295	SF
AA Section 30						
Shadow A26-622 - Original Drilling - Original Drilling - As	12,169.63	17,520.00	2,156.84	2,074.86	26.309	CC
Shadow A26-622 - Original Drilling - Original Drilling - As	12,200.00	17,520.00	2,157.05	2,074.77	26.216	ES
Shadow A26-622 - Original Drilling - Original Drilling - As	13,500.00	17,520.00	2,534.14	2,418.26	21.869	SF
Shadow A26-627 - Original Drilling - Original Drilling - As	12,562.69	17,590.00	2,021.21	1,936.10	23.749	CC
Shadow A26-627 - Original Drilling - Original Drilling - As	12,600.00	17,590.00	2,021.55	1,936.08	23.653	ES
Shadow A26-627 - Original Drilling - Original Drilling - As	13,800.00	17,590.00	2,369.86	2,244.67	18.930	SF
Shadow A26-632 - Original Drilling - Original Drilling - As	12,862.75	17,781.00	2,029.35	1,946.50	24.495	CC
Shadow A26-632 - Original Drilling - Original Drilling - As	12,900.00	17,781.00	2,029.69	1,946.00	24.250	ES
Shadow A26-632 - Original Drilling - Original Drilling - As	14,200.00	17,781.00	2,430.33	2,288.75	17.165	SF
Shadow A26-637 - Original Drilling - Original Drilling - As	13,148.48	17,626.00	2,026.05	1,943.61	24.578	CC
Shadow A26-637 - Original Drilling - Original Drilling - As	13,200.00	17,626.00	2,026.70	1,943.09	24.238	ES
Shadow A26-637 - Original Drilling - Original Drilling - As	14,500.00	17,626.00	2,435.46	2,292.86	17.079	SF
Shadow A26-646 - Original Drilling - Original Drilling - As	13,827.48	17,659.00	2,026.22	1,937.07	22.726	CC, ES
Shadow A26-646 - Original Drilling - Original Drilling - As	15,100.00	17,659.00	2,392.67	2,249.62	16.726	SF
Shadow A26-656 - Original Drilling - Original Drilling - As	14,470.12	17,347.00	2,400.25	2,300.96	24.174	CC
Shadow A26-656 - Original Drilling - Original Drilling - As	14,500.00	17,347.00	2,400.44	2,300.79	24.089	ES
Shadow A26-656 - Original Drilling - Original Drilling - As	15,700.00	17,347.00	2,697.00	2,568.35	20.963	SF
Shadow A26-663 - Original Drilling - Original Drilling - As	15,027.03	17,466.00	2,256.72	2,152.46	21.646	CC, ES
Shadow A26-663 - Original Drilling - Original Drilling - As	16,200.00	17,466.00	2,543.35	2,409.59	19.015	SF
Shadow A26-672 - Original Drilling - Original Drilling - As	15,519.30	17,710.00	2,017.38	1,914.78	19.662	CC
Shadow A26-672 - Original Drilling - Original Drilling - As	15,600.00	17,710.00	2,019.00	1,914.75	19.366	ES
Shadow A26-672 - Original Drilling - Original Drilling - As	16,586.54	17,710.00	2,282.29	2,134.31	15.423	SF
Shadow A26-676 - Original Drilling - Original Drilling - As	15,805.21	17,725.00	2,026.55	1,916.37	18.394	CC, ES
Shadow A26-676 - Original Drilling - Original Drilling - As	16,586.54	17,725.00	2,171.95	2,038.58	16.285	SF
Shadow A26-685 - Original Drilling - Original Drilling - As	14,900.00	17,810.00	2,583.42	2,282.31	8.580	SF
Shadow A26-685 - Original Drilling - Original Drilling - As	16,200.00	17,810.00	2,054.33	1,909.67	14.201	ES
Shadow A26-685 - Original Drilling - Original Drilling - As	16,493.77	17,810.00	2,033.21	1,918.34	17.699	CC
Shadow A26-690 - Original Drilling - Original Drilling - As	15,800.00	17,780.00	2,214.50	2,080.80	16.564	SF
Shadow A26-690 - Original Drilling - Original Drilling - As	16,586.54	17,780.00	2,017.79	1,905.39	17.953	CC, ES
Shadow State A26-614 - Original Drilling - Original Drilling	11,633.22	17,675.00	2,024.88	1,946.28	25.764	CC, ES
Shadow State A26-614 - Original Drilling - Original Drilling	12,800.00	17,675.00	2,336.99	2,226.24	21.102	SF
Shadow State A26-618 - Original Drilling - Original Drilling	11,880.37	17,415.00	2,192.08	2,112.35	27.493	CC
Shadow State A26-618 - Original Drilling - Original Drilling	11,900.00	17,415.00	2,192.17	2,112.20	27.415	ES
Shadow State A26-618 - Original Drilling - Original Drilling	13,300.00	17,415.00	2,611.62	2,489.90	21.456	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 Reveille A35-772
Project:	Wells Ranch	TVD Reference:	KB @ 4678.00ft
Reference Site:	A Section 35	MD Reference:	KB @ 4678.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Reveille A35-772	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Reveille A35-772 OH	Database:	EDMP
Reference Design:	APD - Rev 2	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
B Section 01						
Lucci B01-69HNL - Original Drilling - Original Drilling - As	6,441.56	6,043.00	4,799.87	4,756.57	110.854	CC
Lucci B01-69HNL - Original Drilling - Original Drilling - As	6,450.00	6,043.00	4,799.90	4,756.57	110.783	ES
Lucci B01-69HNL - Original Drilling - Original Drilling - As	8,500.00	6,091.00	5,283.82	5,234.42	106.974	SF
Lucci B01-99HZ - Original Drilling - Original Drilling - As	6,369.10	5,903.40	4,885.88	4,843.85	116.242	CC, ES
Lucci B01-99HZ - Original Drilling - Original Drilling - As	7,050.00	5,981.00	5,011.48	4,967.42	113.725	SF
Lucci BC B 01-13 (PA) - Wellbore #1 - Gyro Surveys	6,246.37	5,929.85	6,805.75	6,762.86	158.673	CC
Lucci BC B 01-13 (PA) - Wellbore #1 - Gyro Surveys	6,250.00	5,934.02	6,805.76	6,762.84	158.570	ES
Lucci BC B 01-13 (PA) - Wellbore #1 - Gyro Surveys	6,750.00	6,329.37	6,969.90	6,924.11	152.205	SF
Lucci BC B 1-14 (PA) - Wellbore #1 - Gyro Surveys	6,290.06	6,154.52	7,885.27	7,841.49	180.095	CC
Lucci BC B 1-14 (PA) - Wellbore #1 - Gyro Surveys	6,300.00	6,165.46	7,885.33	7,841.47	179.793	ES
Lucci BC B 1-14 (PA) - Wellbore #1 - Gyro Surveys	6,850.00	6,597.17	8,065.38	8,018.48	171.950	SF
Lucci BC B 1-15 (PA) - Wellbore #1 - Gyro Surveys	6,321.08	6,288.19	8,801.67	8,757.38	198.757	CC, ES
Lucci BC B 1-15 (PA) - Wellbore #1 - Gyro Surveys	6,800.00	6,674.44	8,927.15	8,880.22	190.223	SF
Lucci BC B 1-16 (PA) - Wellbore #1 - Wellbore #1						Out of range
Lucci State B03-69HNL - Original Drilling - Original Drilling	6,542.36	11,085.28	415.17	292.98	3.398	CC
Lucci State B03-69HNL - Original Drilling - Original Drilling	6,600.00	11,084.51	421.62	291.11	3.231	ES
Lucci State B03-69HNL - Original Drilling - Original Drilling	6,622.11	11,084.61	427.42	294.37	3.212	SF
SLW Ranch B01-62-1HN - Original Drilling - As Drilled	6,306.21	11,286.02	7,011.58	6,899.03	62.299	CC, ES
SLW Ranch B01-62-1HN - Original Drilling - As Drilled	6,600.00	11,286.02	7,076.88	6,962.31	61.771	SF
SLW Ranch B01-63-1HN - Original Drilling - As Drilled	6,315.35	11,250.02	6,533.77	6,429.81	62.850	CC, ES
SLW Ranch B01-63-1HN - Original Drilling - As Drilled	6,700.00	11,250.02	6,640.28	6,533.30	62.071	SF
SLW Ranch B01-64-1HN - Original Drilling - As Drilled	6,340.52	11,274.02	6,107.50	6,012.48	64.281	CC
SLW Ranch B01-64-1HN - Original Drilling - As Drilled	6,350.00	11,274.02	6,107.56	6,012.47	64.229	ES
SLW Ranch B01-64-1HN - Original Drilling - As Drilled	6,900.00	11,274.02	6,306.84	6,206.72	62.992	SF
SLW Ranch B01-66-1HN - Original Drilling - Original Drill	6,390.20	11,201.02	5,367.40	5,272.92	56.812	CC
SLW Ranch B01-66-1HN - Original Drilling - Original Drill	6,400.00	11,201.02	5,367.46	5,272.88	56.751	ES
SLW Ranch B01-66-1HN - Original Drilling - Original Drill	7,800.00	11,201.02	6,042.90	5,930.47	53.751	SF
SLW Ranch B01-67-1HN - Original Drilling - As Drilled - S	6,424.82	11,165.02	5,072.24	4,993.82	64.680	CC, ES
SLW Ranch B01-67-1HN - Original Drilling - As Drilled - S	8,800.00	11,165.02	6,263.29	6,149.66	55.118	SF
SLW Ranch B01-68-1HN - Original Drilling - Original Drill	6,469.26	11,204.02	4,846.12	4,793.28	91.708	CC, ES
SLW Ranch B01-68-1HN - Original Drilling - Original Drill	8,900.00	11,204.02	5,891.05	5,820.75	83.788	SF
SLW Ranch B01-69-1HN - Original Drilling - As Drilled	6,527.73	11,247.02	4,712.01	4,657.25	86.044	CC, ES
SLW Ranch B01-69-1HN - Original Drilling - As Drilled	10,300.00	11,247.02	6,392.18	6,279.41	56.684	SF
SLW Ranch B12-69-1HN - Wellbore #1 - Wellbore #1 - As						Out of range

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Reveille A35-772
Project:	Wells Ranch	TVD Reference:	KB @ 4678.00ft
Reference Site:	A Section 35	MD Reference:	KB @ 4678.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Reveille A35-772	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Reveille A35-772 OH	Database:	EDMP
Reference Design:	APD - Rev 2	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
B Section 02						
Baker B02-04 - Wellbore #1 - Original Drilling - As Drilled	3,370.39	3,292.37	876.32	853.16	37.849	CC
Baker B02-04 - Wellbore #1 - Original Drilling - As Drilled	4,000.00	3,924.92	879.86	852.15	31.753	ES
Baker B02-04 - Wellbore #1 - Original Drilling - As Drilled	6,250.00	6,126.48	1,001.87	957.98	22.827	SF
Baker B02-05 - Wellbore #1 - Wellbore #1-As Drilled	2,912.24	2,847.68	2,364.92	2,345.00	118.706	CC
Baker B02-05 - Wellbore #1 - Wellbore #1-As Drilled	3,200.00	3,120.99	2,365.94	2,344.02	107.944	ES
Baker B02-05 - Wellbore #1 - Wellbore #1-As Drilled	6,400.00	6,256.35	2,521.27	2,476.43	56.230	SF
Bucklen 01-02 - Wellbore #1 - Wellbore #1- As Drilled	1,992.36	1,925.93	5,027.06	5,013.56	372.557	CC
Bucklen 01-02 - Wellbore #1 - Wellbore #1- As Drilled	2,300.00	2,221.74	5,028.11	5,012.52	322.543	ES
Bucklen 01-02 - Wellbore #1 - Wellbore #1- As Drilled	6,622.11	6,444.07	5,268.77	5,222.61	114.129	SF
Bucklen B02-12 - Wellbore #1 - Wellbore #1-As drilled	1,962.22	1,909.59	3,558.79	3,545.47	267.121	CC
Bucklen B02-12 - Wellbore #1 - Wellbore #1-As drilled	2,100.00	2,025.75	3,559.15	3,544.94	250.412	ES
Bucklen B02-12 - Wellbore #1 - Wellbore #1-As drilled	6,550.00	6,339.57	3,805.17	3,759.58	83.458	SF
Buckmur B02-14 - Wellbore #1 - Wellbore #1- As Drilled	6,180.79	5,949.45	5,055.69	5,012.80	117.859	CC, ES
Buckmur B02-14 - Wellbore #1 - Wellbore #1- As Drilled	6,550.00	6,259.28	5,161.11	5,115.88	114.108	SF
Buckmur B02-25 - Wellbore #1 - Wellbore #1- As Drilled	3,342.83	3,200.01	4,246.33	4,223.62	186.951	CC
Buckmur B02-25 - Wellbore #1 - Wellbore #1- As Drilled	6,179.38	6,093.64	4,254.70	4,211.24	97.919	ES
Buckmur B02-25 - Wellbore #1 - Wellbore #1- As Drilled	6,550.00	6,457.21	4,358.48	4,312.49	94.770	SF
Cougar B02-67-1HN - Original Drilling - Original Drilling -	100.00	86.28	872.78	872.51	3,250.373	CC
Cougar B02-67-1HN - Original Drilling - Original Drilling -	500.00	479.65	874.03	871.36	327.546	ES
Cougar B02-67-1HN - Original Drilling - Original Drilling -	6,550.00	6,550.00	2,015.60	1,972.72	47.006	SF
Cougar B02-68-1HN - Original Drilling - Original Drilling -	0.00	0.00	888.62			
Cougar B02-68-1HN - Original Drilling - Original Drilling -	200.00	180.93	889.04	888.26	1,147.102	ES
Cougar B02-68-1HN - Original Drilling - Original Drilling -	6,500.00	6,793.47	1,364.97	1,322.49	32.134	SF
Cougar B02-69-1HN - Original Drilling - Original Drilling -	4,154.96	4,143.35	601.57	576.64	24.125	CC
Cougar B02-69-1HN - Original Drilling - Original Drilling -	4,200.00	4,182.99	601.68	576.46	23.859	ES
Cougar B02-69-1HN - Original Drilling - Original Drilling -	6,550.00	6,750.41	753.77	710.99	17.618	SF
Foe A35-73HN - Original Drilling - Original Drilling - As Dr	6,679.76	6,865.69	2,725.94	2,678.64	57.637	CC
Foe A35-73HN - Original Drilling - Original Drilling - As Dr	11,000.00	11,176.02	2,791.11	2,659.23	21.163	ES
Foe A35-73HN - Original Drilling - Original Drilling - As Dr	11,300.00	11,176.02	2,810.71	2,676.90	21.006	SF
Foe B02-02 - Wellbore #1 - Wellbore #1- As Drilled	6,352.03	6,277.86	2,404.92	2,360.55	54.208	CC, ES
Foe B02-02 - Wellbore #1 - Wellbore #1- As Drilled	6,600.00	6,459.15	2,441.16	2,395.34	53.283	SF
Foe B02-07 - Wellbore #1 - Wellbore #1-As Drilled	6,256.49	6,097.15	3,074.52	3,031.02	70.675	CC, ES
Foe B02-07 - Wellbore #1 - Wellbore #1-As Drilled	6,550.00	6,337.89	3,136.00	3,090.67	69.180	SF
Foemeyer B02-17 - Original Drilling - Original Drilling - As	6,300.31	6,130.29	3,014.15	2,970.44	68.947	CC, ES
Foemeyer B02-17 - Original Drilling - Original Drilling - As	6,622.11	6,411.34	3,076.23	3,030.52	67.290	SF
Fritzler B02-03 - Wellbore #1 - Original Drilling	6,270.03	6,134.14	1,384.01	1,238.92	9.539	CC
Fritzler B02-03 - Wellbore #1 - Original Drilling	6,300.00	6,163.31	1,384.63	1,238.85	9.498	ES
Fritzler B02-03 - Wellbore #1 - Original Drilling	6,400.00	6,258.66	1,395.78	1,247.73	9.428	SF
Fritzler B02-06 - Original Drilling - Original Drilling	6,201.14	6,071.61	2,377.59	2,233.81	16.536	CC, ES
Fritzler B02-06 - Original Drilling - Original Drilling	6,450.00	6,309.68	2,426.04	2,276.61	16.235	SF
Fritzler B2-19 - Original Drilling - Original Drilling	5,777.08	5,667.11	1,469.40	1,335.25	10.953	CC
Fritzler B2-19 - Original Drilling - Original Drilling	6,178.74	6,061.59	1,471.34	1,327.77	10.248	ES
Fritzler B2-19 - Original Drilling - Original Drilling	6,300.00	6,180.31	1,483.92	1,337.52	10.136	SF
Lonewolf B02-65HC - Original Drilling - As Drilled	4,600.00	4,754.20	3,053.25	3,021.85	97.230	CC
Lonewolf B02-65HC - Original Drilling - As Drilled	6,300.00	7,471.30	3,065.78	3,013.00	58.084	ES
Lonewolf B02-65HC - Original Drilling - As Drilled	6,500.00	7,501.00	3,103.13	3,048.93	57.253	SF
Lonewolf B02-65HC - Original Drilling - ST01 - ST01 As D	4,600.00	4,754.19	3,052.44	3,020.52	95.656	CC
Lonewolf B02-65HC - Original Drilling - ST01 - ST01 As D	6,300.00	7,470.86	3,064.83	3,011.72	57.703	ES
Lonewolf B02-65HC - Original Drilling - ST01 - ST01 As D	6,500.00	7,500.60	3,102.18	3,047.63	56.875	SF
Lonewolf B02-65HC - Wellbore #3 - Wellbore #3	4,600.00	4,754.20	3,053.25	3,021.85	97.230	CC
Lonewolf B02-65HC - Wellbore #3 - Wellbore #3	6,300.00	7,471.30	3,065.78	3,013.00	58.080	ES
Lonewolf B02-65HC - Wellbore #3 - Wellbore #3	6,500.00	7,501.00	3,103.13	3,048.93	57.250	SF
M&M 02-23 - Wellbore #1 - Wellbore #1- As Drilled	6,241.28	6,225.77	5,111.38	5,064.91	110.005	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 Reveille A35-772
Project:	Wells Ranch	TVD Reference:	KB @ 4678.00ft
Reference Site:	A Section 35	MD Reference:	KB @ 4678.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Reveille A35-772	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Reveille A35-772 OH	Database:	EDMP
Reference Design:	APD - Rev 2	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
B Section 02						
M&M 02-23 - Wellbore #1 - Wellbore #1- As Drilled	6,550.00	6,400.01	5,184.36	5,136.43	108.173	SF
Meyer B02-01 - Original Drilling - Original Drilling - As Drill	6,385.26	6,198.81	3,601.74	3,557.53	81.485	CC
Meyer B02-01 - Original Drilling - Original Drilling - As Drill	6,400.00	6,215.31	3,601.82	3,557.51	81.291	ES
Meyer B02-01 - Original Drilling - Original Drilling - As Drill	6,800.00	6,497.22	3,670.56	3,624.11	79.027	SF
Meyer B02-08 - Wellbore #1 - Wellbore #1-As Drilled	6,316.21	6,225.65	4,144.81	4,100.76	94.102	CC, ES
Meyer B02-08 - Wellbore #1 - Wellbore #1-As Drilled	6,700.00	6,464.09	4,234.80	4,188.73	91.906	SF
Meyer B02-09 - Wellbore #1 - Wellbore #1-As Drilled	6,261.26	6,082.51	4,964.31	4,920.84	114.217	CC, ES
Meyer B02-09 - Wellbore #1 - Wellbore #1-As Drilled	6,650.00	6,383.01	5,067.38	5,021.64	110.788	SF
Meyer B02-16 (PA) - Wellbore #1 - Gyro Surveys	6,243.23	6,084.10	5,985.88	5,942.42	137.751	CC
Meyer B02-16 (PA) - Wellbore #1 - Gyro Surveys	6,250.00	6,088.58	5,985.91	5,942.42	137.622	ES
Meyer B02-16 (PA) - Wellbore #1 - Gyro Surveys	6,700.00	6,400.00	6,135.53	6,089.57	133.485	SF
Pherson 02-02 - Wellbore #1 - Wellbore #1-As Drilled	6,193.90	6,050.80	3,657.53	3,614.23	84.464	CC
Pherson 02-02 - Wellbore #1 - Wellbore #1-As Drilled	6,200.00	6,056.08	3,657.56	3,614.22	84.384	ES
Pherson 02-02 - Wellbore #1 - Wellbore #1-As Drilled	6,500.00	6,311.24	3,731.27	3,686.00	82.417	SF
Trebor B02-10 - Wellbore #1 - Wellbore #1 - As Drilled	6,229.14	6,019.20	4,022.83	3,979.55	92.936	CC, ES
Trebor B02-10 - Wellbore #1 - Wellbore #1 - As Drilled	6,550.00	6,237.07	4,100.58	4,055.47	90.901	SF
Trebor B02-15 - Wellbore #1 - Wellbore #1- As Drilled	6,246.66	6,344.56	5,241.84	5,197.46	118.108	CC
Trebor B02-15 - Wellbore #1 - Wellbore #1- As Drilled	6,250.00	6,350.21	5,241.85	5,197.44	118.025	ES
Trebor B02-15 - Wellbore #1 - Wellbore #1- As Drilled	6,650.00	6,833.69	5,358.96	5,311.64	113.256	SF
Wolfpack B02-62-1HN - Original Drilling - Original Drilling	806.31	759.33	4,168.55	4,164.11	939.755	CC
Wolfpack B02-62-1HN - Original Drilling - Original Drilling	900.00	825.63	4,168.95	4,164.11	861.946	ES
Wolfpack B02-62-1HN - Original Drilling - Original Drilling	6,450.00	6,450.00	5,203.62	5,158.90	116.375	SF
Wolfpack B02-63-1HN - Original Drilling - Original Drilling	666.99	619.99	4,146.08	4,142.34	1,106.409	CC
Wolfpack B02-63-1HN - Original Drilling - Original Drilling	700.00	645.25	4,146.11	4,142.20	1,060.361	ES
Wolfpack B02-63-1HN - Original Drilling - Original Drilling	6,450.00	7,496.76	4,671.91	4,617.17	85.342	SF
Wolfpack B02-64-1HN - Original Drilling - Original Drilling	3,171.77	3,280.23	3,972.03	3,950.23	182.156	CC
Wolfpack B02-64-1HN - Original Drilling - Original Drilling	6,250.00	7,536.55	4,000.46	3,945.01	72.137	ES
Wolfpack B02-64-1HN - Original Drilling - Original Drilling	6,450.00	7,564.94	4,036.11	3,979.31	71.059	SF
Wolfpack B02-65-1HN - Original Drilling - Original Drilling	6,264.74	7,245.44	3,329.11	3,283.57	73.101	CC, ES
Wolfpack B02-65-1HN - Original Drilling - Original Drilling	6,450.00	7,284.79	3,359.95	3,313.48	72.304	SF
Wolfpack B02-65HN - Original Drilling - Original Drilling -	4,130.19	4,245.71	3,002.46	2,974.63	107.881	CC, ES
Wolfpack B02-65HN - Original Drilling - Original Drilling -	6,400.00	7,157.91	3,061.74	3,015.51	66.230	SF
Wolfpack B02-66-1HN - Original Drilling - Original Drilling	6,275.97	7,507.02	2,728.82	2,675.83	51.502	CC, ES
Wolfpack B02-66-1HN - Original Drilling - Original Drilling	6,450.00	7,524.07	2,756.98	2,702.92	51.000	SF
Wolfpack PC B03-63-1HN - Original Drilling - Original Dri	100.00	52.13	4,125.09	4,124.88	10,000.000	CC
Wolfpack PC B03-63-1HN - Original Drilling - Original Dri	1,500.00	1,392.11	4,134.87	4,114.35	201.493	ES
Wolfpack PC B03-63-1HN - Original Drilling - Original Dri	5,000.00	3,621.16	4,809.74	4,752.25	83.656	SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Reveille A35-772
Project:	Wells Ranch	TVD Reference:	KB @ 4678.00ft
Reference Site:	A Section 35	MD Reference:	KB @ 4678.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Reveille A35-772	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Reveille A35-772 OH	Database:	EDMP
Reference Design:	APD - Rev 2	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
B Section 03						
Annie B3-9 - Wellbore #1 - Wellbore #1- As Drilled	313.18	248.18	3,880.21	3,878.63	2,449.066	CC
Annie B3-9 - Wellbore #1 - Wellbore #1- As Drilled	500.00	413.08	3,880.85	3,878.02	1,371.906	ES
Annie B3-9 - Wellbore #1 - Wellbore #1- As Drilled	6,550.00	6,540.22	4,342.44	4,296.09	93.701	SF
Clemons 2-3 - Wellbore #1 - Wellbore #1- As Drilled	1,743.15	1,707.29	2,706.02	2,694.22	229.187	CC
Clemons 2-3 - Wellbore #1 - Wellbore #1- As Drilled	2,000.00	1,951.06	2,706.33	2,692.75	199.335	ES
Clemons 2-3 - Wellbore #1 - Wellbore #1- As Drilled	6,800.00	6,615.83	3,574.02	3,527.00	76.012	SF
Clemons 42-3 - Wellbore #1 - Wellbore #1- As Drilled	1,564.03	1,520.04	2,629.29	2,618.79	250.213	CC
Clemons 42-3 - Wellbore #1 - Wellbore #1- As Drilled	1,800.00	1,737.72	2,630.51	2,618.40	217.179	ES
Clemons 42-3 - Wellbore #1 - Wellbore #1- As Drilled	6,500.00	6,340.31	3,245.42	3,200.00	71.456	SF
Schoenleber 16-3 - Wellbore #1 - Wellbore #1- As Drilled	100.00	22.30	4,831.25	4,831.08	10,000.000	CC
Schoenleber 16-3 - Wellbore #1 - Wellbore #1- As Drilled	200.00	100.00	4,831.62	4,830.96	7,309.814	ES
Schoenleber 16-3 - Wellbore #1 - Wellbore #1- As Drilled	6,650.00	6,371.33	5,327.07	5,281.08	115.827	SF
Sitzman 03-01 - Wellbore #1 - Wellbore #1- As Drilled	229.27	161.28	5,457.14	5,456.16	5,576.509	CC
Sitzman 03-01 - Wellbore #1 - Wellbore #1- As Drilled	2,100.00	2,078.66	5,465.42	5,451.05	380.240	ES
Sitzman 03-01 - Wellbore #1 - Wellbore #1- As Drilled	6,650.00	6,650.00	6,038.66	5,991.72	128.647	SF
B Section 04						
Bauer 1 (PA) - Wellbore #1 - No Surveys						Out of range
Bauer 2 (PA) - Wellbore #1 - No Surveys	2,000.00	1,947.00	7,738.08	7,714.15	323.399	CC, ES
Bauer 2 (PA) - Wellbore #1 - No Surveys	9,300.00	6,695.02	9,271.05	9,181.47	103.503	SF
Bauer 21-4 (PR) - Wellbore #1 - Gyro Surveys	1,697.69	1,646.90	9,008.68	8,997.23	786.774	CC
Bauer 21-4 (PR) - Wellbore #1 - Gyro Surveys	1,900.00	1,788.97	9,009.42	8,996.75	711.063	ES
Bauer 21-4 (PR) - Wellbore #1 - Gyro Surveys	7,600.00	6,687.00	9,994.05	9,946.07	208.287	SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Reveille A35-772
Project:	Wells Ranch	TVD Reference:	KB @ 4678.00ft
Reference Site:	A Section 35	MD Reference:	KB @ 4678.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Reveille A35-772	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Reveille A35-772 OH	Database:	EDMP
Reference Design:	APD - Rev 2	Offset TVD Reference:	Offset Datum

Summary

Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
B Section 05						
Ehrlich 1 (TA) - Wellbore #1 - Gyro Surveys						Out of range
Ehrlich 5E-323 (PR) - Wellbore #1 - Permitted-PDC						Out of range
Ehrlich 5E-423 (DG) - Wellbore #1 - Permitted-PDC						Out of range
Ehrlich 5J-203 (PR) - Wellbore #1 - Permitted-PDC						Out of range
Ehrlich 5J-223 (PR) - Wellbore #1 - Permitted-PDC						Out of range
Ehrlich 5J-243 (PR) - Wellbore #1 - Permitted-PDC						Out of range
Ehrlich 5J-303 (PR) - Wellbore #1 - Permitted-PDC						Out of range
Ehrlich 5J-323 (PR) - Wellbore #1 - Permitted-PDC						Out of range
Ehrlich 5M-243 (PR) - Wellbore #1 - Permitted-PDC						Out of range
Ehrlich 5M-343 (PR) - Wellbore #1 - Permitted-PDC						Out of range
Mininger Pfeif 41-5 (SI) - Wellbore #1 - Gyro Surveys						Out of range
Noffsinger 21-5 (TA) - Wellbore #1 - Gyro Surveys						Out of range
Noffsinger 31-5 (TA) - Wellbore #1 - Gyro Surveys						Out of range
Snowmass 10N (DG) - Wellbore #1 - Permitted-PDC	5,562.39	16,156.48	7,045.16	6,917.21	55.062	CC
Snowmass 10N (DG) - Wellbore #1 - Permitted-PDC	5,600.00	16,156.48	7,045.26	6,917.11	54.978	ES
Snowmass 10N (DG) - Wellbore #1 - Permitted-PDC	9,800.00	16,156.48	8,920.67	8,721.18	44.717	SF
Snowmass 1C (DG) - Wellbore #1 - Permitted-PDC	5,705.31	14,787.56	6,453.30	6,400.19	121.516	CC, ES
Snowmass 1C (DG) - Wellbore #1 - Permitted-PDC	12,100.00	14,787.56	8,925.86	8,735.61	46.916	SF
Snowmass 2N (DG) - Wellbore #1 - Permitted-PDC	5,605.49	14,729.08	6,474.39	6,413.60	106.507	CC, ES
Snowmass 2N (DG) - Wellbore #1 - Permitted-PDC	11,800.00	14,729.08	8,927.98	8,738.48	47.115	SF
Snowmass 3N (DG) - Wellbore #1 - Permitted-PDC	5,540.27	15,299.73	6,495.13	6,428.05	96.834	CC, ES
Snowmass 3N (DG) - Wellbore #1 - Permitted-PDC	11,700.00	15,299.73	8,995.81	8,796.05	45.033	SF
Snowmass 4N (DG) - Wellbore #1 - Permitted-PDC	5,598.57	15,736.33	6,554.81	6,478.97	86.419	CC
Snowmass 4N (DG) - Wellbore #1 - Permitted-PDC	5,600.00	15,736.33	6,554.81	6,478.96	86.412	ES
Snowmass 4N (DG) - Wellbore #1 - Permitted-PDC	11,500.00	15,736.33	9,025.55	8,821.27	44.183	SF
Snowmass 5N (DG) - Wellbore #1 - Permitted-PDC	5,532.71	15,406.96	6,599.05	6,515.88	79.346	CC, ES
Snowmass 5N (DG) - Wellbore #1 - Permitted-PDC	11,200.00	15,406.96	8,985.31	8,787.09	45.330	SF
Snowmass 6N (DG) - Wellbore #1 - Permitted-PDC	5,590.61	15,878.12	6,686.85	6,593.37	71.527	CC
Snowmass 6N (DG) - Wellbore #1 - Permitted-PDC	5,600.00	15,878.12	6,686.86	6,593.33	71.493	ES
Snowmass 6N (DG) - Wellbore #1 - Permitted-PDC	11,000.00	15,878.12	9,043.51	8,840.60	44.569	SF
Snowmass 7N (DG) - Wellbore #1 - Permitted-PDC	5,504.22	15,556.58	6,742.47	6,642.15	67.208	CC, ES
Snowmass 7N (DG) - Wellbore #1 - Permitted-PDC	10,700.00	15,556.58	8,997.41	8,800.08	45.596	SF
Snowmass 8N (DG) - Wellbore #1 - Permitted-PDC	5,571.61	16,001.51	6,827.62	6,719.20	62.969	CC
Snowmass 8N (DG) - Wellbore #1 - Permitted-PDC	5,600.00	16,001.51	6,827.68	6,719.11	62.888	ES
Snowmass 8N (DG) - Wellbore #1 - Permitted-PDC	10,500.00	16,001.51	9,009.22	8,808.32	44.844	SF
Snowmass 9N (DG) - Wellbore #1 - Permitted-PDC	5,496.58	15,681.01	6,913.39	6,795.90	58.845	CC
Snowmass 9N (DG) - Wellbore #1 - Permitted-PDC	5,500.00	15,681.01	6,913.39	6,795.89	58.836	ES
Snowmass 9N (DG) - Wellbore #1 - Permitted-PDC	10,100.00	15,681.01	8,921.29	8,724.98	45.445	SF

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