

Project: Wells Ranch
Site: A Section 35
Well: Reveille A34-725
Wellbore: Reveille A34-725 OH
Design: APD - Rev 1

Northern Region - DJ Basin

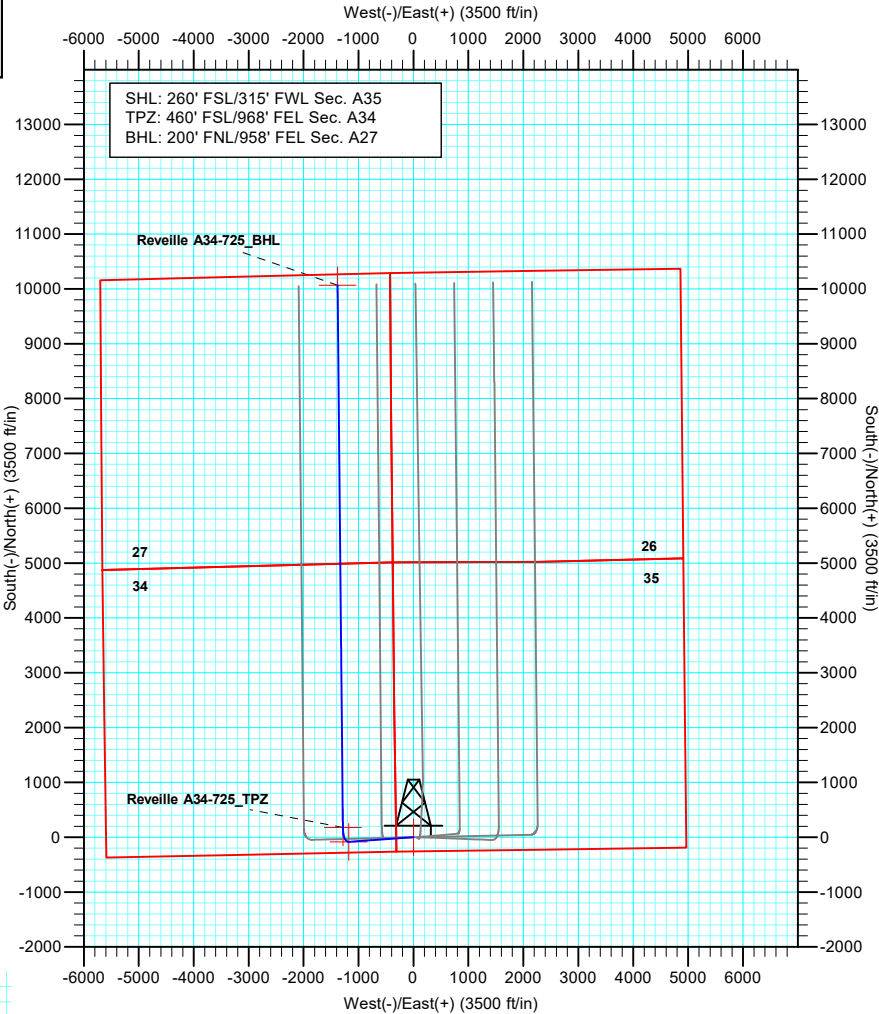
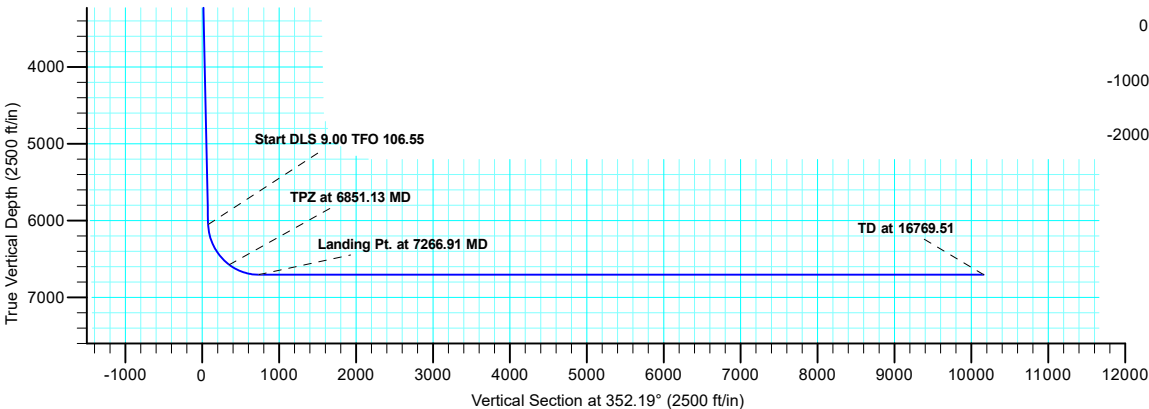
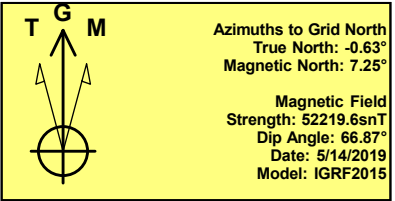
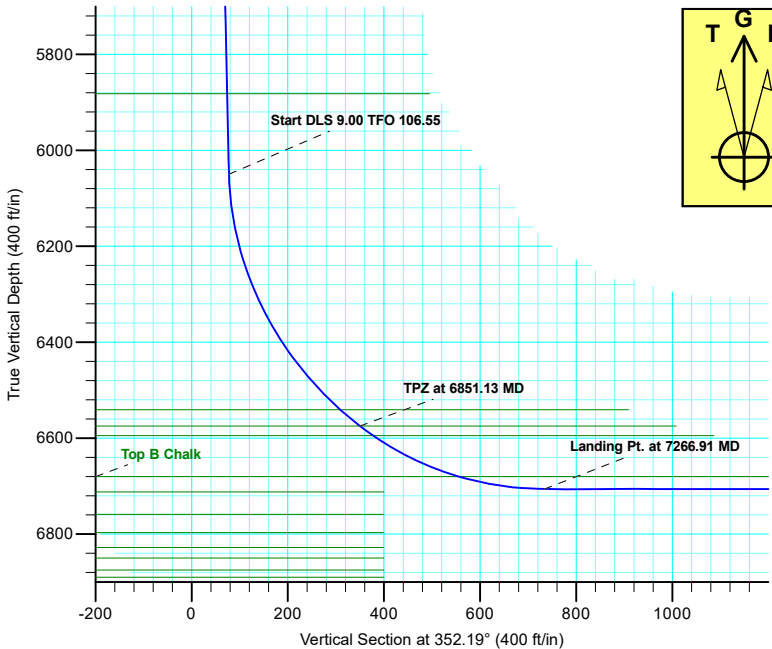
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Northern Zone
System Datum: Mean Sea Level

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	2909.46	18.19	265.96	2894.26	-10.09	-142.79	2.00	265.96	9.42
4	6231.25	18.19	265.96	6050.06	-83.14	-1177.13	0.00	0.00	77.63
5	6851.13	52.58	359.44	6575.00	177.08	-1284.67	9.00	106.55	350.05
6	7266.91	90.00	359.44	6706.01	563.90	-1288.44	9.00	0.00	733.80
7	16769.51	90.00	359.44	6706.00	10066.05	-1381.04	0.00	0.00	10160.35

WELL DETAILS: Reveille A34-725

+N/-S	+E/-W	Ground Level: Northing	Ground Level: Easting	Ground Level: Latitude	Ground Level: Longitude	Slot
0.00	0.00	1403285.40	3271215.68	40.4363300	-104.5256500	



Plan: APD - Rev 1 (Reveille A34-725/Reveille A34-725 OH)

Created By: Shelly C. Peterkin Date: 12:07, July 22 2019

Northern Region - DJ Basin

Wells Ranch

A Section 35

Reveille A34-725

Reveille A34-725 OH

Plan: APD - Rev 1

Standard Planning Report

22 July, 2019

Noble Energy, Inc.

Planning Report

Database:	EDMP	Local Co-ordinate Reference:	Well Reveille A34-725
Company:	Northern Region - DJ Basin	TVD Reference:	KB @ 4680.00ft
Project:	Wells Ranch	MD Reference:	KB @ 4680.00ft
Site:	A Section 35	North Reference:	Grid
Well:	Reveille A34-725	Survey Calculation Method:	Minimum Curvature
Wellbore:	Reveille A34-725 OH		
Design:	APD - Rev 1		

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 A34-725					
Well Position	+N/-S	-73.85 ft	Northing:	1,403,285.40 usft	Latitude:	40.4363300
	+E/-W	-2,727.29 ft	Easting:	3,271,215.69 usft	Longitude:	-104.5256500
Position Uncertainty		0.00 ft	Wellhead Elevation:	0.00 ft	Ground Level:	4,650.00 ft

Wellbore	Reveille A34-725 OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	5/14/2019	7.88	66.87	52,219.55082145

Design	APD - Rev 1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	352.19

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	
2,909.46	18.19	265.96	2,894.26	-10.09	-142.79	2.00	2.00	0.00	265.96	
6,231.25	18.19	265.96	6,050.06	-83.14	-1,177.13	0.00	0.00	0.00	0.00	
6,851.13	52.58	359.44	6,575.00	177.08	-1,284.67	9.00	5.55	15.08	106.55	Reveille A34-725_TP;
7,266.91	90.00	359.44	6,706.01	563.90	-1,288.44	9.00	9.00	0.00	0.00	
16,769.51	90.00	359.44	6,706.00	10,066.05	-1,381.04	0.00	0.00	0.00	0.00	Reveille A34-725_BH

Noble Energy, Inc.

Planning Report

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Company:	Northern Region - DJ Basin	TVD Reference:	KB @ 4680.00ft
Project:	Wells Ranch	MD Reference:	KB @ 4680.00ft
Site:	A Section 35	North Reference:	Grid
Well:	Reveille A34-725	Survey Calculation Method:	Minimum Curvature
Wellbore:	Reveille A34-725 OH		
Design:	APD - Rev 1		

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
293.00	0.00	0.00	293.00	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
415.00	0.00	0.00	415.00	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
1,458.00	0.00	0.00	1,458.00	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	265.96	2,099.98	-0.12	-1.74	0.11	2.00	2.00	0.00
2,200.00	4.00	265.96	2,199.84	-0.49	-6.96	0.46	2.00	2.00	0.00
2,300.00	6.00	265.96	2,299.45	-1.11	-15.65	1.03	2.00	2.00	0.00
2,400.00	8.00	265.96	2,398.70	-1.96	-27.81	1.83	2.00	2.00	0.00
2,500.00	10.00	265.96	2,497.47	-3.07	-43.41	2.86	2.00	2.00	0.00
2,600.00	12.00	265.96	2,595.62	-4.41	-62.45	4.12	2.00	2.00	0.00
2,700.00	14.00	265.96	2,693.06	-6.00	-84.88	5.60	2.00	2.00	0.00
2,800.00	16.00	265.96	2,789.64	-7.82	-110.70	7.30	2.00	2.00	0.00
2,909.46	18.19	265.96	2,894.26	-10.09	-142.79	9.42	2.00	2.00	0.00
Start 3321.79 hold at 2909.46 MD									
3,000.00	18.19	265.96	2,980.28	-12.08	-170.99	11.28	0.00	0.00	0.00
3,100.00	18.19	265.96	3,075.28	-14.28	-202.13	13.33	0.00	0.00	0.00
3,200.00	18.19	265.96	3,170.28	-16.48	-233.26	15.38	0.00	0.00	0.00
3,300.00	18.19	265.96	3,265.29	-18.68	-264.40	17.44	0.00	0.00	0.00
3,400.00	18.19	265.96	3,360.29	-20.87	-295.54	19.49	0.00	0.00	0.00
3,500.00	18.19	265.96	3,455.29	-23.07	-326.68	21.54	0.00	0.00	0.00
3,600.00	18.19	265.96	3,550.30	-25.27	-357.82	23.60	0.00	0.00	0.00
3,603.90	18.19	265.96	3,554.00	-25.36	-359.03	23.68	0.00	0.00	0.00
Parkman									
3,700.00	18.19	265.96	3,645.30	-27.47	-388.95	25.65	0.00	0.00	0.00
3,800.00	18.19	265.96	3,740.30	-29.67	-420.09	27.70	0.00	0.00	0.00
3,900.00	18.19	265.96	3,835.30	-31.87	-451.23	29.76	0.00	0.00	0.00
4,000.00	18.19	265.96	3,930.31	-34.07	-482.37	31.81	0.00	0.00	0.00
4,100.00	18.19	265.96	4,025.31	-36.27	-513.50	33.86	0.00	0.00	0.00
4,200.00	18.19	265.96	4,120.31	-38.47	-544.64	35.92	0.00	0.00	0.00

Noble Energy, Inc.

Planning Report

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Project:	Wells Ranch	MD Reference:	KB @ 4680.00ft
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Well:	Reveille A34-725	Survey Calculation Method:	Minimum Curvature
Wellbore:	Reveille A34-725 OH		
Design:	APD - Rev 1		

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)
4,300.00	18.19	265.96	4,215.32	-40.67	-575.78	37.97	0.00	0.00	0.00
4,336.51	18.19	265.96	4,250.00	-41.47	-587.15	38.72	0.00	0.00	0.00
Sussex									
4,400.00	18.19	265.96	4,310.32	-42.87	-606.92	40.02	0.00	0.00	0.00
4,500.00	18.19	265.96	4,405.32	-45.07	-638.06	42.08	0.00	0.00	0.00
4,600.00	18.19	265.96	4,500.33	-47.27	-669.19	44.13	0.00	0.00	0.00
4,700.00	18.19	265.96	4,595.33	-49.47	-700.33	46.19	0.00	0.00	0.00
4,800.00	18.19	265.96	4,690.33	-51.67	-731.47	48.24	0.00	0.00	0.00
4,900.00	18.19	265.96	4,785.34	-53.86	-762.61	50.29	0.00	0.00	0.00
4,970.17	18.19	265.96	4,852.00	-55.41	-784.46	51.73	0.00	0.00	0.00
Shannon									
5,000.00	18.19	265.96	4,880.34	-56.06	-793.75	52.35	0.00	0.00	0.00
5,100.00	18.19	265.96	4,975.34	-58.26	-824.88	54.40	0.00	0.00	0.00
5,200.00	18.19	265.96	5,070.35	-60.46	-856.02	56.45	0.00	0.00	0.00
5,300.00	18.19	265.96	5,165.35	-62.66	-887.16	58.51	0.00	0.00	0.00
5,400.00	18.19	265.96	5,260.35	-64.86	-918.30	60.56	0.00	0.00	0.00
5,500.00	18.19	265.96	5,355.35	-67.06	-949.44	62.61	0.00	0.00	0.00
5,600.00	18.19	265.96	5,450.36	-69.26	-980.57	64.67	0.00	0.00	0.00
5,700.00	18.19	265.96	5,545.36	-71.46	-1,011.71	66.72	0.00	0.00	0.00
5,800.00	18.19	265.96	5,640.36	-73.66	-1,042.85	68.77	0.00	0.00	0.00
5,900.00	18.19	265.96	5,735.37	-75.86	-1,073.99	70.83	0.00	0.00	0.00
6,000.00	18.19	265.96	5,830.37	-78.06	-1,105.13	72.88	0.00	0.00	0.00
6,054.35	18.19	265.96	5,882.00	-79.25	-1,122.05	74.00	0.00	0.00	0.00
Teepee Buttes									
6,100.00	18.19	265.96	5,925.37	-80.26	-1,136.26	74.93	0.00	0.00	0.00
6,200.00	18.19	265.96	6,020.38	-82.46	-1,167.40	76.99	0.00	0.00	0.00
6,231.25	18.19	265.96	6,050.06	-83.14	-1,177.13	77.63	0.00	0.00	0.00
Start DLS 9.00 TFO 106.55									
6,250.00	17.78	271.26	6,067.90	-83.29	-1,182.91	78.27	9.00	-2.18	28.29
6,300.00	17.43	286.14	6,115.58	-81.04	-1,197.75	82.52	9.00	-0.70	29.74
6,350.00	18.19	300.68	6,163.21	-74.97	-1,211.66	90.42	9.00	1.51	29.08
6,400.00	19.93	313.43	6,210.49	-65.13	-1,224.57	101.93	9.00	3.47	25.50
6,450.00	22.42	323.84	6,257.13	-51.57	-1,236.38	116.97	9.00	4.98	20.82
6,500.00	25.44	332.08	6,302.84	-34.37	-1,247.04	135.45	9.00	6.05	16.48
6,550.00	28.83	338.59	6,347.34	-13.65	-1,256.48	157.26	9.00	6.78	13.02
6,600.00	32.46	343.79	6,390.36	10.47	-1,264.63	182.27	9.00	7.28	10.41
6,650.00	36.28	348.03	6,431.62	37.84	-1,271.44	210.31	9.00	7.63	8.48
6,700.00	40.22	351.55	6,470.89	68.29	-1,276.89	241.22	9.00	7.88	7.05
6,750.00	44.24	354.54	6,507.91	101.64	-1,280.92	274.81	9.00	8.06	5.97
6,797.82	48.16	357.02	6,541.00	136.05	-1,283.43	309.24	9.00	8.19	5.18
Sharon Springs									
6,800.00	48.34	357.12	6,542.45	137.68	-1,283.52	310.86	9.00	8.24	4.84
6,851.13	52.58	359.44	6,575.00	177.08	-1,284.67	350.05	9.00	8.29	4.54
TPZ at 6851.13 MD - Top A Chalk									
6,885.26	55.65	359.44	6,595.00	204.72	-1,284.94	377.48	9.00	9.00	0.00
Top A Marl									
6,900.00	56.98	359.44	6,603.18	216.99	-1,285.06	389.65	9.00	9.00	0.00
6,950.00	61.48	359.44	6,628.75	259.94	-1,285.48	432.25	9.00	9.00	0.00
7,000.00	65.98	359.44	6,650.88	304.76	-1,285.92	476.72	9.00	9.00	0.00
7,050.00	70.48	359.44	6,669.42	351.18	-1,286.37	522.77	9.00	9.00	0.00
7,084.29	73.56	359.44	6,680.00	383.78	-1,286.69	555.11	9.00	9.00	0.00
Top B Chalk									
7,100.00	74.98	359.44	6,684.26	398.91	-1,286.84	570.12	9.00	9.00	0.00

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Planning Report

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Company:	Northern Region - DJ Basin	TVD Reference:	KB @ 4680.00ft
Project:	Wells Ranch	MD Reference:	KB @ 4680.00ft
Site:	A Section 35	North Reference:	Grid
Well:	Reveille A34-725	Survey Calculation Method:	Minimum Curvature
Wellbore:	Reveille A34-725 OH		
Design:	APD - Rev 1		

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)
7,150.00	79.48	359.44	6,695.31	447.66	-1,287.31	618.48	9.00	9.00	0.00
7,200.00	83.98	359.44	6,702.50	497.12	-1,287.79	667.55	9.00	9.00	0.00
7,250.00	88.48	359.44	6,705.79	547.00	-1,288.28	717.03	9.00	9.00	0.00
7,266.91	90.00	359.44	6,706.01	563.90	-1,288.44	733.80	9.00	9.00	0.00
Landing Pt. at 7266.91 MD									
7,300.00	90.00	359.44	6,706.01	596.99	-1,288.77	766.63	0.00	0.00	0.00
7,400.00	90.00	359.44	6,706.01	696.99	-1,289.74	865.83	0.00	0.00	0.00
7,500.00	90.00	359.44	6,706.01	796.98	-1,290.71	965.03	0.00	0.00	0.00
7,600.00	90.00	359.44	6,706.01	896.98	-1,291.69	1,064.23	0.00	0.00	0.00
7,700.00	90.00	359.44	6,706.01	996.97	-1,292.66	1,163.42	0.00	0.00	0.00
7,800.00	90.00	359.44	6,706.01	1,096.97	-1,293.64	1,262.62	0.00	0.00	0.00
7,900.00	90.00	359.44	6,706.01	1,196.96	-1,294.61	1,361.82	0.00	0.00	0.00
8,000.00	90.00	359.44	6,706.01	1,296.96	-1,295.59	1,461.02	0.00	0.00	0.00
8,100.00	90.00	359.44	6,706.01	1,396.95	-1,296.56	1,560.22	0.00	0.00	0.00
8,200.00	90.00	359.44	6,706.01	1,496.95	-1,297.54	1,659.42	0.00	0.00	0.00
8,300.00	90.00	359.44	6,706.01	1,596.94	-1,298.51	1,758.62	0.00	0.00	0.00
8,400.00	90.00	359.44	6,706.01	1,696.94	-1,299.48	1,857.82	0.00	0.00	0.00
8,500.00	90.00	359.44	6,706.01	1,796.94	-1,300.46	1,957.02	0.00	0.00	0.00
8,600.00	90.00	359.44	6,706.01	1,896.93	-1,301.43	2,056.22	0.00	0.00	0.00
8,700.00	90.00	359.44	6,706.01	1,996.93	-1,302.41	2,155.42	0.00	0.00	0.00
8,800.00	90.00	359.44	6,706.01	2,096.92	-1,303.38	2,254.62	0.00	0.00	0.00
8,900.00	90.00	359.44	6,706.01	2,196.92	-1,304.36	2,353.82	0.00	0.00	0.00
9,000.00	90.00	359.44	6,706.01	2,296.91	-1,305.33	2,453.02	0.00	0.00	0.00
9,100.00	90.00	359.44	6,706.01	2,396.91	-1,306.30	2,552.22	0.00	0.00	0.00
9,200.00	90.00	359.44	6,706.01	2,496.90	-1,307.28	2,651.42	0.00	0.00	0.00
9,300.00	90.00	359.44	6,706.01	2,596.90	-1,308.25	2,750.62	0.00	0.00	0.00
9,400.00	90.00	359.44	6,706.01	2,696.89	-1,309.23	2,849.82	0.00	0.00	0.00
9,500.00	90.00	359.44	6,706.01	2,796.89	-1,310.20	2,949.02	0.00	0.00	0.00
9,600.00	90.00	359.44	6,706.01	2,896.88	-1,311.18	3,048.22	0.00	0.00	0.00
9,700.00	90.00	359.44	6,706.01	2,996.88	-1,312.15	3,147.42	0.00	0.00	0.00
9,800.00	90.00	359.44	6,706.01	3,096.87	-1,313.13	3,246.62	0.00	0.00	0.00
9,900.00	90.00	359.44	6,706.01	3,196.87	-1,314.10	3,345.82	0.00	0.00	0.00
10,000.00	90.00	359.44	6,706.01	3,296.86	-1,315.07	3,445.02	0.00	0.00	0.00
10,100.00	90.00	359.44	6,706.01	3,396.86	-1,316.05	3,544.22	0.00	0.00	0.00
10,200.00	90.00	359.44	6,706.01	3,496.85	-1,317.02	3,643.42	0.00	0.00	0.00
10,300.00	90.00	359.44	6,706.01	3,596.85	-1,318.00	3,742.62	0.00	0.00	0.00
10,400.00	90.00	359.44	6,706.01	3,696.85	-1,318.97	3,841.82	0.00	0.00	0.00
10,500.00	90.00	359.44	6,706.01	3,796.84	-1,319.95	3,941.02	0.00	0.00	0.00
10,600.00	90.00	359.44	6,706.01	3,896.84	-1,320.92	4,040.22	0.00	0.00	0.00
10,700.00	90.00	359.44	6,706.01	3,996.83	-1,321.90	4,139.41	0.00	0.00	0.00
10,800.00	90.00	359.44	6,706.01	4,096.83	-1,322.87	4,238.61	0.00	0.00	0.00
10,900.00	90.00	359.44	6,706.01	4,196.82	-1,323.84	4,337.81	0.00	0.00	0.00
11,000.00	90.00	359.44	6,706.01	4,296.82	-1,324.82	4,437.01	0.00	0.00	0.00
11,100.00	90.00	359.44	6,706.01	4,396.81	-1,325.79	4,536.21	0.00	0.00	0.00
11,200.00	90.00	359.44	6,706.01	4,496.81	-1,326.77	4,635.41	0.00	0.00	0.00
11,300.00	90.00	359.44	6,706.01	4,596.80	-1,327.74	4,734.61	0.00	0.00	0.00
11,400.00	90.00	359.44	6,706.01	4,696.80	-1,328.72	4,833.81	0.00	0.00	0.00
11,500.00	90.00	359.44	6,706.01	4,796.79	-1,329.69	4,933.01	0.00	0.00	0.00
11,600.00	90.00	359.44	6,706.01	4,896.79	-1,330.66	5,032.21	0.00	0.00	0.00
11,700.00	90.00	359.44	6,706.01	4,996.78	-1,331.64	5,131.41	0.00	0.00	0.00
11,800.00	90.00	359.44	6,706.01	5,096.78	-1,332.61	5,230.61	0.00	0.00	0.00
11,900.00	90.00	359.44	6,706.01	5,196.77	-1,333.59	5,329.81	0.00	0.00	0.00
12,000.00	90.00	359.44	6,706.01	5,296.77	-1,334.56	5,429.01	0.00	0.00	0.00
12,100.00	90.00	359.44	6,706.01	5,396.76	-1,335.54	5,528.21	0.00	0.00	0.00

Noble Energy, Inc.

Planning Report

Database:	EDMP	Local Co-ordinate Reference:	Well Reveille A34-725
Company:	Northern Region - DJ Basin	TVD Reference:	KB @ 4680.00ft
Project:	Wells Ranch	MD Reference:	KB @ 4680.00ft
Site:	A Section 35	North Reference:	Grid
Well:	Reveille A34-725	Survey Calculation Method:	Minimum Curvature
Wellbore:	Reveille A34-725 OH		
Design:	APD - Rev 1		

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)
12,200.00	90.00	359.44	6,706.01	5,496.76	-1,336.51	5,627.41	0.00	0.00	0.00
12,300.00	90.00	359.44	6,706.01	5,596.75	-1,337.49	5,726.61	0.00	0.00	0.00
12,400.00	90.00	359.44	6,706.01	5,696.75	-1,338.46	5,825.81	0.00	0.00	0.00
12,500.00	90.00	359.44	6,706.01	5,796.75	-1,339.43	5,925.01	0.00	0.00	0.00
12,600.00	90.00	359.44	6,706.01	5,896.74	-1,340.41	6,024.21	0.00	0.00	0.00
12,700.00	90.00	359.44	6,706.01	5,996.74	-1,341.38	6,123.41	0.00	0.00	0.00
12,800.00	90.00	359.44	6,706.01	6,096.73	-1,342.36	6,222.61	0.00	0.00	0.00
12,900.00	90.00	359.44	6,706.01	6,196.73	-1,343.33	6,321.81	0.00	0.00	0.00
13,000.00	90.00	359.44	6,706.01	6,296.72	-1,344.31	6,421.01	0.00	0.00	0.00
13,100.00	90.00	359.44	6,706.01	6,396.72	-1,345.28	6,520.21	0.00	0.00	0.00
13,200.00	90.00	359.44	6,706.01	6,496.71	-1,346.26	6,619.41	0.00	0.00	0.00
13,300.00	90.00	359.44	6,706.01	6,596.71	-1,347.23	6,718.61	0.00	0.00	0.00
13,400.00	90.00	359.44	6,706.01	6,696.70	-1,348.20	6,817.81	0.00	0.00	0.00
13,500.00	90.00	359.44	6,706.01	6,796.70	-1,349.18	6,917.01	0.00	0.00	0.00
13,600.00	90.00	359.44	6,706.01	6,896.69	-1,350.15	7,016.21	0.00	0.00	0.00
13,700.00	90.00	359.44	6,706.00	6,996.69	-1,351.13	7,115.40	0.00	0.00	0.00
13,800.00	90.00	359.44	6,706.00	7,096.68	-1,352.10	7,214.60	0.00	0.00	0.00
13,900.00	90.00	359.44	6,706.00	7,196.68	-1,353.08	7,313.80	0.00	0.00	0.00
14,000.00	90.00	359.44	6,706.00	7,296.67	-1,354.05	7,413.00	0.00	0.00	0.00
14,100.00	90.00	359.44	6,706.00	7,396.67	-1,355.03	7,512.20	0.00	0.00	0.00
14,200.00	90.00	359.44	6,706.00	7,496.66	-1,356.00	7,611.40	0.00	0.00	0.00
14,300.00	90.00	359.44	6,706.00	7,596.66	-1,356.97	7,710.60	0.00	0.00	0.00
14,400.00	90.00	359.44	6,706.00	7,696.66	-1,357.95	7,809.80	0.00	0.00	0.00
14,500.00	90.00	359.44	6,706.00	7,796.65	-1,358.92	7,909.00	0.00	0.00	0.00
14,600.00	90.00	359.44	6,706.00	7,896.65	-1,359.90	8,008.20	0.00	0.00	0.00
14,700.00	90.00	359.44	6,706.00	7,996.64	-1,360.87	8,107.40	0.00	0.00	0.00
14,800.00	90.00	359.44	6,706.00	8,096.64	-1,361.85	8,206.60	0.00	0.00	0.00
14,900.00	90.00	359.44	6,706.00	8,196.63	-1,362.82	8,305.80	0.00	0.00	0.00
15,000.00	90.00	359.44	6,706.00	8,296.63	-1,363.79	8,405.00	0.00	0.00	0.00
15,100.00	90.00	359.44	6,706.00	8,396.62	-1,364.77	8,504.20	0.00	0.00	0.00
15,200.00	90.00	359.44	6,706.00	8,496.62	-1,365.74	8,603.40	0.00	0.00	0.00
15,300.00	90.00	359.44	6,706.00	8,596.61	-1,366.72	8,702.60	0.00	0.00	0.00
15,400.00	90.00	359.44	6,706.00	8,696.61	-1,367.69	8,801.80	0.00	0.00	0.00
15,500.00	90.00	359.44	6,706.00	8,796.60	-1,368.67	8,901.00	0.00	0.00	0.00
15,600.00	90.00	359.44	6,706.00	8,896.60	-1,369.64	9,000.20	0.00	0.00	0.00
15,700.00	90.00	359.44	6,706.00	8,996.59	-1,370.62	9,099.40	0.00	0.00	0.00
15,800.00	90.00	359.44	6,706.00	9,096.59	-1,371.59	9,198.60	0.00	0.00	0.00
15,900.00	90.00	359.44	6,706.00	9,196.58	-1,372.56	9,297.80	0.00	0.00	0.00
16,000.00	90.00	359.44	6,706.00	9,296.58	-1,373.54	9,397.00	0.00	0.00	0.00
16,100.00	90.00	359.44	6,706.00	9,396.57	-1,374.51	9,496.20	0.00	0.00	0.00
16,200.00	90.00	359.44	6,706.00	9,496.57	-1,375.49	9,595.40	0.00	0.00	0.00
16,300.00	90.00	359.44	6,706.00	9,596.57	-1,376.46	9,694.60	0.00	0.00	0.00
16,400.00	90.00	359.44	6,706.00	9,696.56	-1,377.44	9,793.80	0.00	0.00	0.00
16,500.00	90.00	359.44	6,706.00	9,796.56	-1,378.41	9,893.00	0.00	0.00	0.00
16,600.00	90.00	359.44	6,706.00	9,896.55	-1,379.39	9,992.20	0.00	0.00	0.00
16,700.00	90.00	359.44	6,706.00	9,996.55	-1,380.36	10,091.39	0.00	0.00	0.00
16,769.51	90.00	359.44	6,706.00	10,066.05	-1,381.04	10,160.35	0.00	0.00	0.00
TD at 16769.51									

Noble Energy, Inc.

Planning Report

Database:	EDMP	Local Co-ordinate Reference:	Well Reveille A34-725
Company:	Northern Region - DJ Basin	TVD Reference:	KB @ 4680.00ft
Project:	Wells Ranch	MD Reference:	KB @ 4680.00ft
Site:	A Section 35	North Reference:	Grid
Well:	Reveille A34-725	Survey Calculation Method:	Minimum Curvature
Wellbore:	Reveille A34-725 OH		
Design:	APD - Rev 1		

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(usft)	(usft)		
Reveille A34-725_SHL - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	1,403,285.40	3,271,215.69	40.4363300	-104.5256500
Reveille A34-725_KOP - plan hits target center - Point	0.00	0.00	6,050.06	-83.14	-1,177.13	1,403,202.26	3,270,038.56	40.4361372	-104.5298818
Reveille A34-725_TPZ - plan hits target center - Point	0.00	0.00	6,575.00	177.08	-1,284.67	1,403,462.48	3,269,931.02	40.4368547	-104.5302579
Reveille A34-725_BHL - plan hits target center - Point	0.00	0.00	6,706.00	10,066.05	-1,381.04	1,413,351.44	3,269,834.65	40.4640010	-104.5302155

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(ft)	(ft)			(°)	(°)	
293.00	293.00	Pierre				
415.00	415.00	Upper Pierre Aquifer Top				
1,458.00	1,458.00	Upper Pierre Aquifer Base				
3,603.90	3,554.00	Parkman				
4,336.51	4,250.00	Sussex				
4,970.17	4,852.00	Shannon				
6,054.35	5,882.00	Teepee Buttes				
6,797.82	6,541.00	Sharon Springs				
6,851.13	6,575.00	Top A Chalk				
6,885.26	6,595.00	Top A Marl				
7,084.29	6,680.00	Top B Chalk				

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	Comment
2,000.00	2,000.00	0.00	0.00	Start Build 2.00
2,909.46	2,894.26	-10.09	-142.79	Start 3321.79 hold at 2909.46 MD
6,231.25	6,050.06	-83.14	-1,177.13	Start DLS 9.00 TFO 106.55
6,851.13	6,575.00	177.08	-1,284.67	TPZ at 6851.13 MD
7,266.91	6,706.01	563.90	-1,288.44	Landing Pt. at 7266.91 MD
16,769.51	6,706.00	10,066.05	-1,381.04	TD at 16769.51

Northern Region - DJ Basin

Wells Ranch

A Section 35

Reveille A34-725

Reveille A34-725 OH

APD - Rev 1

Anticollision Summary Report

22 July, 2019

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Reveille A34-725
Project:	Wells Ranch	TVD Reference:	KB @ 4680.00ft
Reference Site:	A Section 35	MD Reference:	KB @ 4680.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Reveille A34-725	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Reveille A34-725 OH	Database:	EDMP
Reference Design:	APD - Rev 1	Offset TVD Reference:	Offset Datum

Reference	APD - Rev 1		
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	16,769.51	APD - Rev 1 (Reveille A34-725 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	16,769.51	6,786.67	7,672.52	7,567.13	72.799	CC, ES, SF
Culbreath 33-21 (PA) - Original Drilling - Original Drilling -	16,769.51	6,744.00	6,628.17	6,412.17	30.686	CC, ES, SF
Harper A21-618 - Harper A21-618 OH - As-Drilled	16,769.51	15,323.94	689.81	549.56	4.919	CC, ES, SF
Harper A21-626 - Harper A21-626 OH - As-Drilled	16,769.51	15,268.18	1,240.27	1,102.04	8.972	CC, ES, SF
Harper A21-631 - Harper A21-631 OH - As-Drilled	16,769.51	15,279.94	1,613.65	1,474.27	11.577	CC, ES, SF
Harper A21-637 - Harper A21-637 OH - As-Drilled	16,769.51	15,250.23	1,968.73	1,831.94	14.392	CC, ES, SF
Harper A21-643 - Harper A21-643 OH - As-Drilled	16,769.51	15,397.05	2,409.07	2,269.40	17.249	CC, ES, SF
Harper A21-649 - Harper A21-649 OH - As-Drilled	16,769.51	15,440.00	2,812.61	2,673.50	20.219	CC, ES, SF
Harper A21-656 - Harper A21-656 OH - As-Drilled	16,769.51	15,346.00	3,150.44	3,012.07	22.767	CC, ES, SF
Harper A21-664 - Harper A21-664 OH - As-Drilled	16,769.51	15,915.00	3,652.17	3,507.61	25.265	CC, ES, SF
Harper A21-669 - Harper A21-669 OH - As-Drilled	16,769.51	15,720.03	3,994.43	3,852.99	28.241	CC, ES, SF
Harper A21-674 - Harper A21-674 OH - As-Drilled	16,769.51	16,002.00	4,326.89	4,183.90	30.261	CC, ES, SF
Harper A21-681 - Harper A21-681 OH - As-Drilled	16,769.51	16,097.00	4,749.72	4,605.12	32.848	CC, ES, SF
Kona A19-616 - Kona A19-616 - Kona A19-616 - As Drille	16,769.51	6,234.00	8,211.78	8,108.39	79.426	CC, ES, SF
Kona A19-624 - Kona A19-624 - Kona A19-624 - As Drille	16,769.51	6,371.60	8,160.23	8,057.61	79.517	CC, ES, SF
Kona A19-636 - Kona A19-636 - Kona A19-636 - As Drille	16,769.51	6,327.00	7,985.17	7,881.19	76.797	CC, ES, SF
Kona A19-646 - Original Drilling - Original Drilling - As Dr	16,769.51	6,327.00	8,428.56	8,329.54	85.117	CC, ES, SF
Kona A19-662 - Original Drilling - Original Drilling - As Dr	16,769.51	6,136.00	8,885.15	8,788.26	91.708	CC, ES, SF
Kona A19-670 - Kona A19-670 - Original Drilling - As Dril	16,769.51	6,325.00	8,812.20	8,715.49	91.124	CC, ES, SF
Kona A19-685 - Original Drilling - Original Drilling - As Dr	16,769.51	6,149.00	8,726.32	8,629.73	90.340	CC, ES, SF
McKee 12-21 (PA) - Original Drilling - Original Drilling - A	16,769.51	6,780.00	9,500.60	9,284.62	43.988	CC, ES, SF
McKee 21-21 (PA) - Original Drilling - Original Drilling - A	16,769.51	6,796.00	8,644.81	8,436.25	41.451	CC, ES, SF
McKee 22-21 - Original Drilling - Original Drilling - As Dril	16,769.51	6,830.67	8,258.76	8,157.13	81.265	CC, ES, SF
McKee 31-21 - Original Drilling - Original Drilling - As Dril	16,769.51	6,856.30	7,990.71	7,899.30	87.415	CC, ES, SF
McKee 32-21 - Original Drilling - Original Drilling - As Dril	16,769.51	6,819.91	7,148.78	7,049.93	72.315	CC, ES, SF
McKee 41-21 - Original Drilling - Original Drilling - As Dril	16,769.51	6,679.73	6,966.50	6,881.05	81.528	CC, ES, SF
McKee 42-21 - Original Drilling - Original Drilling - As Dril	16,769.51	6,781.45	5,885.08	5,789.79	61.758	CC, ES, SF
Rampart A33-730 - Rampart A33-730 - APD-Rev 1	6,750.00	17,721.95	5,635.05	5,518.61	48.395	SF
Rampart A33-730 - Rampart A33-730 - APD-Rev 1	16,424.66	8,119.18	5,608.91	5,497.99	50.569	CC
Rampart A33-730 - Rampart A33-730 - APD-Rev 1	16,500.00	8,100.00	5,609.29	5,497.66	50.245	ES
Rampart A33-740 - Rampart A33-740 - APD-Rev 0	6,800.00	17,500.94	6,280.88	6,164.76	54.090	SF
Rampart A33-740 - Rampart A33-740 - APD-Rev 0	7,050.00	17,287.42	6,276.45	6,161.72	54.706	ES
Rampart A33-740 - Rampart A33-740 - APD-Rev 0	7,172.51	17,168.74	6,276.16	6,162.21	55.080	CC
Rampart A33-750 - Rampart A33-750 - APD-Rev 0	6,750.00	17,081.22	6,952.19	6,837.07	60.389	SF
Rampart A33-750 - Rampart A33-750 - APD-Rev 0	16,411.26	7,482.67	6,934.53	6,827.32	64.683	CC
Rampart A33-750 - Rampart A33-750 - APD-Rev 0	16,500.00	7,462.81	6,934.96	6,827.03	64.251	ES
Rampart A33-760 - Rampart A33-760 - APD-Rev 1	6,750.00	16,933.92	7,587.90	7,473.14	66.118	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 A34-725
Project:	Wells Ranch	TVD Reference:	KB @ 4680.00ft
Reference Site:	A Section 35	MD Reference:	KB @ 4680.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Reveille A34-725	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Reveille A34-725 OH	Database:	EDMP
Reference Design:	APD - Rev 1	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						
Rampart A33-760 - Rampart A33-760 - APD-Rev 1	16,400.00	7,347.35	7,569.76	7,464.13	71.664	CC
Rampart A33-760 - Rampart A33-760 - APD-Rev 1	16,500.00	7,300.00	7,570.21	7,463.89	71.204	ES
Rampart A33-770 - Rampart A33-770 - APD-Rev 0	6,700.00	16,810.77	8,278.65	8,163.66	71.999	SF
Rampart A33-770 - Rampart A33-770 - APD-Rev 0	16,408.96	7,184.60	8,254.86	8,150.26	78.923	CC
Rampart A33-770 - Rampart A33-770 - APD-Rev 0	16,500.00	7,139.02	8,255.11	8,149.94	78.490	ES
Sexton 43-21 (PA) - Original Drilling - Original Drilling - As	16,769.51	6,736.00	5,506.11	5,293.90	25.947	CC, ES, SF
Wells Trust 13-21 - Original Drilling - Original Drilling - As	16,769.51	6,851.09	9,191.03	9,083.53	85.504	CC, ES, SF
Wells Trust 14-21 - Original Drilling - Original Drilling - As	16,769.51	6,730.15	9,143.29	9,034.07	83.714	CC, ES, SF
Wells Trust 24-21 - Original Drilling - Original Drilling - As	16,769.51	6,802.79	8,298.36	8,189.21	76.025	CC, ES, SF
A Section 22						
Carpio 22-01 - Original Drilling - Original Drilling - As Drill	16,769.51	6,731.91	965.37	899.70	14.699	CC, ES, SF
Carpio 22-04-19 - Original Drilling - Original Drilling - As D	16,769.51	6,724.28	1,909.76	1,829.77	23.873	CC, ES, SF
Carpio 22-41 - Original Drilling - Original Drilling - As Drill	16,769.51	6,734.15	1,996.14	1,916.63	25.105	CC, ES, SF
Carpio 22-43 - Original Drilling - Original Drilling - As Drill	16,769.51	6,774.51	1,361.54	1,273.42	15.452	CC, ES, SF
Carpio 22-45 - Original Drilling - Original Drilling - As Drill	16,769.51	6,711.23	1,338.43	1,285.49	25.280	CC, ES, SF
Eisenstat 22-11 (PA) - Original Drilling - Original Drilling -	16,769.51	6,750.00	4,934.03	4,767.48	29.625	CC, ES, SF
Eisenstat 22-13 - Original Drilling - Original Drilling - As D	16,769.51	6,756.15	3,233.43	3,172.43	53.008	CC, ES, SF
Eisenstat 22-15 - Original Drilling - Original Drilling - As D	16,769.51	6,729.26	4,268.44	4,215.57	80.731	CC, ES, SF
Eisenstat 22-21 - Original Drilling - Original Drilling - As D	16,769.51	6,828.56	5,002.12	4,936.84	76.634	CC, ES, SF
Eisenstat 22-23 - Original Drilling - Original Drilling - As D	16,769.51	6,791.52	5,011.70	4,927.20	59.304	CC, ES, SF
Gill Land Assoc. 1 (PA) - Original Drilling - Original Drilling	16,769.51	6,751.00	3,419.29	3,251.88	20.425	CC, ES, SF
Gill Land Assoc. 22-02 (PA) - Original Drilling - Original D	16,769.51	6,761.00	4,113.84	3,927.37	22.062	CC, ES, SF
Gill Land Assoc. 22-03 - Original Drilling - Original Drilling	16,769.51	6,758.20	5,916.42	5,838.67	76.094	CC, ES, SF
Gill Land Assoc. 22-04 (PA) - Original Drilling - Original D	16,769.51	6,759.00	4,810.34	4,643.18	28.776	CC, ES, SF
Gruen 22-01 - Original Drilling - Original Drilling - As Drille	16,700.00	16,700.00	4,290.53	4,159.47	32.738	SF
Gruen 22-01 - Original Drilling - Original Drilling - As Drille	16,769.51	6,820.67	4,256.29	4,158.67	43.599	CC, ES
Gruen 22-02 - Original Drilling - Original Drilling - As Drille	16,769.51	6,681.72	2,533.03	2,428.71	24.280	CC, ES, SF
Gruen 22-31 - Original Drilling - Original Drilling - As Drille	16,769.51	6,775.16	3,180.70	3,092.97	36.256	CC, ES, SF
Gruen 22-33 - Original Drilling - Original Drilling - As Drille	16,769.51	6,861.97	3,760.23	3,653.30	35.165	CC, ES, SF
Gruen 22-35 - Original Drilling - Original Drilling - As Drille	16,769.51	6,652.03	3,346.67	3,245.77	33.166	CC, ES, SF
Ottinger 22-01 - Original Drilling - Original Drilling - As Dr	16,769.51	6,774.69	2,444.41	2,379.66	37.753	CC, ES, SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Reveille A34-725
Project:	Wells Ranch	TVD Reference:	KB @ 4680.00ft
Reference Site:	A Section 35	MD Reference:	KB @ 4680.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Reveille A34-725	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Reveille A34-725 OH	Database:	EDMP
Reference Design:	APD - Rev 1	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 23						
Cecil 23-13 - Original Drilling - Original Drilling - As Drilled	16,769.51	6,677.37	5,408.22	5,314.64	57.789	CC, ES, SF
Champlin 23-02 (PA) - Original Drilling - Original Drilling -	16,769.51	6,710.00	2,721.91	2,527.95	14.033	CC, ES, SF
Champlin 23-03 - Original Drilling - Original Drilling - As D	16,769.51	6,668.90	2,863.77	2,756.56	26.714	CC, ES, SF
Champlin Amoco A 1 #308 - Original Drilling - Original Dr	16,769.51	6,685.00	2,690.85	2,473.01	12.352	CC, ES, SF
Cooper 23-1-17 - Original Drilling - Original Drilling - As Dr	16,769.51	6,659.85	7,080.20	6,989.60	78.153	CC, ES, SF
Cooper 23-1-19 - Original Drilling - Original Drilling - As D	16,769.51	6,576.34	5,698.81	5,610.77	64.730	CC, ES, SF
Cooper 23-12 - Original Drilling - Original Drilling - As Dri	16,769.51	6,665.07	6,408.11	6,318.97	71.888	CC, ES, SF
Cooper 23-1-20 - Original Drilling - Original Drilling - As D	16,769.51	6,681.27	4,781.37	4,684.01	49.109	CC, ES, SF
Cooper 23-15 - Original Drilling - Original Drilling - As Dri	16,769.51	6,555.57	6,496.40	6,401.52	68.466	CC, ES, SF
Foss 41-23D - Original Drilling - Original Drilling - As Drill	16,769.51	6,854.10	7,357.35	7,255.73	72.401	CC, ES, SF
Foss 42-23 - Original Drilling - Original Drilling - As Drilled	16,769.51	6,670.51	6,334.89	6,233.59	62.534	CC, ES, SF
J&L Farms 23-11 - Original Drilling - Original Drilling - As	16,769.51	6,701.46	5,018.27	4,952.96	76.843	CC, ES, SF
J&L Farms 23-12 - Original Drilling - Original Drilling - As	16,769.51	6,661.51	3,581.75	3,511.29	50.832	CC, ES, SF
J&L Farms 23-21 - Original Drilling - Original Drilling - As	16,769.51	6,610.94	5,810.82	5,731.09	72.884	CC, ES, SF
J&L Farms 23-22 - Original Drilling - Original Drilling - As	16,769.51	6,663.52	4,548.55	4,462.11	52.622	CC, ES, SF
McIntosh 33-23 - Original Drilling - Original Drilling - As D	16,769.51	7,019.00	4,694.24	4,587.31	43.901	CC, ES, SF
McIntosh 34-23 - Original Drilling - Original Drilling - As D	16,769.51	6,698.28	4,491.77	4,382.19	40.993	CC, ES, SF
McIntosh 43-23 - Original Drilling - Original Drilling - As D	16,769.51	6,660.25	6,195.53	6,089.15	58.239	CC, ES, SF
McIntosh 44-23 - Original Drilling - Original Drilling - As D	16,769.51	6,711.83	5,868.08	5,758.03	53.320	CC, ES, SF
Schroeder 23-31 - Original Drilling - Original Drilling - As	16,769.51	6,737.21	3,668.85	3,567.25	36.111	CC, ES, SF
Schroeder 23-33 - Original Drilling - Original Drilling - As	16,769.51	6,701.11	1,587.72	1,481.96	15.013	CC, ES, SF
A Section 24						
Larson A23-622 - Larson A23-622 OH - As-drilled	16,769.51	17,299.00	1,421.87	1,256.39	8.592	CC, ES, SF
Larson A23-627 - Larson A23-627 OH - As-drilled	16,769.51	17,330.00	1,688.34	1,517.83	9.902	CC, ES, SF
Larson A23-633 - Larson A23-633 OH - As-drilled	16,769.51	17,260.00	1,974.31	1,802.99	11.524	CC, ES, SF
Larson A23-639 - Larson A23-639 OH - As-drilled	16,769.51	17,355.00	2,333.10	2,160.68	13.532	CC, ES, SF
Larson A23-645 - Larson A23-645 OH - As-drilled	16,769.51	18,040.00	2,701.67	2,521.95	15.033	CC, ES, SF
Larson A23-651 - Larson A23-651 OH - As-drilled	16,769.51	18,045.00	2,994.71	2,815.40	16.702	CC, ES, SF
Larson A23-656 - Larson A23-656 OH - As-drilled	16,769.51	18,030.00	3,278.14	3,098.66	18.265	CC, ES, SF
Larson A23-662 - Larson A23-662 OH - As-drilled	16,769.51	18,100.00	3,674.61	3,495.86	20.557	CC, ES, SF
Larson A23-668 - Larson A23-668 OH - As-Drilled	16,769.51	17,400.00	4,061.58	3,892.13	23.969	CC, ES, SF
Larson A23-672 - Larson A23-672 OH - As-Drilled	16,769.51	17,415.00	4,330.50	4,161.64	25.645	CC, ES, SF
Larson A23-678 - Larson A23-678 OH - As-Drilled	16,769.51	17,106.00	4,706.04	4,538.88	28.154	CC, ES, SF
Larson A23-683 - Larson A23-683 OH - As-Drilled	16,769.51	17,368.00	5,001.23	4,832.56	29.651	CC, ES, SF
Larson AA19-618 - Larson AA19-618 OH - As-Drilled						Out of range
Larson AA19-624 - Larson AA19-624 OH - As-Drilled						Out of range
Larson AA19-624 - Larson AA19-624 ST01 - As-Drilled						Out of range
Larson AA19-630 - Larson AA19-630 OH - As-Drilled						Out of range
Larson AA19-635 - Larson AA19-635 OH - As-Drilled						Out of range
Larson Farms 01-24 - Original Drilling - Original Drilling -						Out of range
Larson Farms 02-24 - Original Drilling - Original Drilling -						Out of range
Larson Farms 03-24 - Original Drilling - Original Drilling -	16,769.51	6,749.69	9,831.64	9,720.43	88.408	CC, ES, SF
Larson Farms 04-24 - Original Drilling - Original Drilling -						Out of range
Larson Farms 05-24 - Original Drilling - Original Drilling -						Out of range
Larson Farms 06-24 - Original Drilling - Original Drilling -						Out of range
Larson Farms 07-24 - Original Drilling - Original Drilling -	16,769.51	6,893.97	9,615.30	9,490.36	76.959	CC, ES, SF
Peppler 24-32 - Original Drilling - Original Drilling - As Dri	16,100.00	16,100.00	7,406.80	7,273.99	55.766	SF
Peppler 24-32 - Original Drilling - Original Drilling - As Dri	16,769.51	6,421.69	7,156.09	7,050.04	67.478	CC, ES
Roth 24-21 - Original Drilling - Original Drilling - As Drilled	16,769.51	6,852.37	9,446.01	9,342.89	91.606	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 A34-725
Project:	Wells Ranch	TVD Reference:	KB @ 4680.00ft
Reference Site:	A Section 35	MD Reference:	KB @ 4680.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Reveille A34-725	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Reveille A34-725 OH	Database:	EDMP
Reference Design:	APD - Rev 1	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						Out of range
Fairmeadows Land Co 1 - Original Drilling - Original Drilling						Out of range
Larsen 01-25G - Original Drilling - Original Drilling - As D	16,386.04	6,719.22	7,050.63	6,914.46	51.777	CC
Larsen 01-25G - Original Drilling - Original Drilling - As D	16,400.00	6,719.54	7,050.64	6,914.37	51.738	ES
Larsen 01-25G - Original Drilling - Original Drilling - As D	16,769.51	6,728.21	7,061.04	6,922.13	50.829	SF
Larsen A25-01 - Original Drilling - Original Drilling - As Dr						Out of range
Larsen A25-02 - Original Drilling - Original Drilling - As Dr	16,411.05	6,509.39	9,781.20	9,675.07	92.163	CC
Larsen A25-02 - Original Drilling - Original Drilling - As Dr	16,500.00	6,509.06	9,781.60	9,674.83	91.612	ES
Larsen A25-02 - Original Drilling - Original Drilling - As Dr	16,769.51	6,508.10	9,787.76	9,679.08	90.058	SF
Larsen A25-03 - Original Drilling - Original Drilling - As Dr	16,375.94	6,660.00	8,216.03	7,999.38	37.923	CC
Larsen A25-03 - Original Drilling - Original Drilling - As Dr	16,400.00	6,660.00	8,216.07	7,999.24	37.893	ES
Larsen A25-03 - Original Drilling - Original Drilling - As Dr	16,769.51	6,660.00	8,225.45	8,006.06	37.493	SF
Larsen A25-03X - Original Drilling - Original Drilling - As D	16,000.00	16,000.00	8,009.93	7,873.70	58.798	ES, SF
Larsen A25-03X - Original Drilling - Original Drilling - As D	16,551.16	6,604.46	7,990.98	7,883.33	74.232	CC
Larsen A25-05 - Original Drilling - Original Drilling - As Dr	14,997.11	6,720.04	6,904.20	6,808.12	71.855	CC
Larsen A25-05 - Original Drilling - Original Drilling - As Dr	15,000.00	6,720.00	6,904.20	6,808.10	71.840	ES
Larsen A25-05 - Original Drilling - Original Drilling - As Dr	16,769.51	6,696.91	7,128.04	7,022.05	67.248	SF
Larsen A25-06 - Original Drilling - Original Drilling - As Dr	15,024.80	6,660.00	8,496.36	8,290.27	41.226	CC
Larsen A25-06 - Original Drilling - Original Drilling - As Dr	15,100.00	6,660.00	8,496.69	8,290.07	41.122	ES
Larsen A25-06 - Original Drilling - Original Drilling - As Dr	16,769.51	6,660.00	8,673.65	8,456.63	39.968	SF
Larsen A25-06X - Original Drilling - Original Drilling - As D	14,963.05	6,497.35	8,135.50	8,036.60	82.260	CC
Larsen A25-06X - Original Drilling - Original Drilling - As D	15,000.00	6,497.06	8,135.58	8,036.45	82.066	ES
Larsen A25-06X - Original Drilling - Original Drilling - As D	16,769.51	6,483.30	8,333.63	8,224.89	76.636	SF
Larsen A25-07 - Original Drilling - Original Drilling - As Dr	15,085.34	6,564.36	9,560.77	9,464.76	99.586	CC
Larsen A25-07 - Original Drilling - Original Drilling - As Dr	15,200.00	6,563.96	9,561.46	9,464.64	98.755	ES
Larsen A25-07 - Original Drilling - Original Drilling - As Dr	16,769.51	6,558.35	9,707.97	9,600.97	90.731	SF
Larsen A25-08 - Original Drilling - Original Drilling - As Dr						Out of range
Larsen A25-10 - Original Drilling - Original Drilling - Drilled	13,771.83	6,577.39	9,541.11	9,455.13	110.977	CC
Larsen A25-10 - Original Drilling - Original Drilling - Drilled	13,800.00	6,577.41	9,541.15	9,454.98	110.723	ES
Larsen A25-10 - Original Drilling - Original Drilling - Drilled	16,700.00	6,579.85	9,980.33	9,876.65	96.264	SF
Larsen A25-11 - Original Drilling - Original Drilling - As Dr	13,733.11	6,647.00	8,344.18	8,148.25	42.589	CC
Larsen A25-11 - Original Drilling - Original Drilling - As Dr	13,800.00	6,647.00	8,344.44	8,148.06	42.491	ES
Larsen A25-11 - Original Drilling - Original Drilling - As Dr	15,600.00	6,647.00	8,550.47	8,343.03	41.218	SF
Larsen A25-12 - Original Drilling - Original Drilling - As Dr	13,801.37	6,625.01	6,765.62	6,679.18	78.270	CC, ES
Larsen A25-12 - Original Drilling - Original Drilling - As Dr	15,900.00	6,630.63	7,083.63	6,985.75	72.369	SF
Larsen A25-13 - Original Drilling - Original Drilling - As Dr	12,588.75	6,732.47	6,867.42	6,789.53	88.169	CC
Larsen A25-13 - Original Drilling - Original Drilling - As Dr	12,600.00	6,732.40	6,867.42	6,789.46	88.086	ES
Larsen A25-13 - Original Drilling - Original Drilling - As Dr	15,600.00	15,600.00	7,498.59	7,374.70	60.525	SF
Larsen A25-14 - Original Drilling - Original Drilling - As Dr	12,337.86	6,938.37	8,148.00	8,071.01	105.829	CC
Larsen A25-14 - Original Drilling - Original Drilling - As Dr	12,400.00	6,937.62	8,148.24	8,070.84	105.274	ES
Larsen A25-14 - Original Drilling - Original Drilling - As Dr	15,600.00	6,898.72	8,776.67	8,681.98	92.692	SF
Larsen A25-15 - Original Drilling - Original Drilling - As Dr	12,441.48	6,607.61	9,576.87	9,500.67	125.672	CC
Larsen A25-15 - Original Drilling - Original Drilling - As Dr	12,500.00	6,607.97	9,577.05	9,500.45	125.025	ES
Larsen A25-15 - Original Drilling - Original Drilling - As Dr	15,300.00	6,620.47	9,994.37	9,900.75	106.748	SF
Larsen A25-17 - Original Drilling - Original Drilling - As D						Out of range
Larsen A25-19 - Original Drilling - Original Drilling - As Dr	15,785.51	6,323.03	7,462.14	7,361.82	74.385	CC
Larsen A25-19 - Original Drilling - Original Drilling - As Dr	15,800.00	6,323.10	7,462.15	7,361.73	74.309	ES
Larsen A25-19 - Original Drilling - Original Drilling - As Dr	16,769.51	6,327.30	7,526.73	7,420.08	70.573	SF
Larsen A25-23 - Original Drilling - Original Drilling - As Dr						Out of range
Larsen A25-25 - Original Drilling - Original Drilling - As Dr	13,029.29	6,601.11	7,543.35	7,462.84	93.702	CC
Larsen A25-25 - Original Drilling - Original Drilling - As Dr	13,100.00	6,600.76	7,543.68	7,462.70	93.159	ES
Larsen A25-25 - Original Drilling - Original Drilling - As Dr	15,700.00	6,590.59	8,002.16	7,907.03	84.118	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 A34-725
Project:	Wells Ranch	TVD Reference:	KB @ 4680.00ft
Reference Site:	A Section 35	MD Reference:	KB @ 4680.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Reveille A34-725	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Reveille A34-725 OH	Database:	EDMP
Reference Design:	APD - Rev 1	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 26						
Barrett 11-26 (SI) - Original Drilling - Original Drilling - As	13,763.24	6,610.56	2,807.37	2,718.27	31.510	CC, ES
Barrett 11-26 (SI) - Original Drilling - Original Drilling - As	14,100.00	6,610.98	2,827.49	2,736.87	31.202	SF
Barrett 12-26 (SI) - Original Drilling - Original Drilling - As	13,747.02	6,685.38	1,491.38	1,406.13	17.494	CC, ES
Barrett 12-26 (SI) - Original Drilling - Original Drilling - As	13,800.00	6,685.95	1,492.32	1,406.89	17.469	SF
Brown-Orr 14-26 (SI) - Original Drilling - Original Drilling - As	12,182.02	6,663.42	1,410.86	1,336.31	18.925	CC, ES
Brown-Orr 14-26 (SI) - Original Drilling - Original Drilling - As	12,200.00	6,663.41	1,410.97	1,336.36	18.911	SF
Brown-Orr 24-26 - Original Drilling - Original Drilling - As	12,158.39	6,744.58	3,098.08	3,023.09	41.309	CC, ES
Brown-Orr 24-26 - Original Drilling - Original Drilling - As	12,600.00	6,757.81	3,129.38	3,052.23	40.563	SF
Carpio A26-04 - Original Drilling - Original Drilling - As Dr	16,368.04	6,677.55	1,587.28	1,480.80	14.906	CC, ES
Carpio A26-04 - Original Drilling - Original Drilling - As Dr	16,400.00	6,677.60	1,587.60	1,481.00	14.892	SF
Carpio A26-05 - Original Drilling - Original Drilling - As Dr	14,839.20	6,672.02	1,698.78	1,604.18	17.957	CC, ES
Carpio A26-05 - Original Drilling - Original Drilling - As Dr	14,900.00	6,671.68	1,699.87	1,605.04	17.926	SF
DCD Farm A26-02 - Original Drilling - Original Drilling - A	16,209.13	6,626.83	4,266.20	4,161.15	40.613	CC, ES
DCD Farm A26-02 - Original Drilling - Original Drilling - A	16,769.51	6,628.78	4,302.84	4,194.79	39.821	SF
DCD Farms 01-26 - Original Drilling - Original Drilling - As	14,996.55	6,746.12	5,561.09	5,464.87	57.795	CC
DCD Farms 01-26 - Original Drilling - Original Drilling - As	15,000.00	6,746.13	5,561.09	5,464.84	57.781	ES
DCD Farms 01-26 - Original Drilling - Original Drilling - As	16,300.00	6,750.92	5,711.80	5,608.61	55.355	SF
DCD Farms 02-26 (PA) - Original Drilling - Original Drilling - As	14,964.13	6,701.32	2,865.62	2,769.63	29.853	CC, ES
DCD Farms 02-26 (PA) - Original Drilling - Original Drilling - As	15,300.00	6,706.30	2,885.24	2,787.70	29.583	SF
DCD Farms A26-07 - Original Drilling - Original Drilling - A	15,238.26	6,661.08	4,227.86	4,130.20	43.294	CC, ES
DCD Farms A26-07 - Original Drilling - Original Drilling - A	15,900.00	6,670.79	4,279.31	4,178.17	42.307	SF
Pfeiffer 09-26 - Original Drilling - Original Drilling - As Dril	13,686.87	6,711.82	5,569.84	5,483.89	64.800	CC
Pfeiffer 09-26 - Original Drilling - Original Drilling - As Dril	13,700.00	6,711.95	5,569.86	5,483.82	64.735	ES
Pfeiffer 09-26 - Original Drilling - Original Drilling - As Dril	15,100.00	6,725.43	5,746.29	5,652.79	61.456	SF
Pfeiffer 10-26 - Wellbore #1 - Wellbore #1 - As Drilled	13,720.84	6,643.56	4,250.09	4,164.19	49.476	CC, ES
Pfeiffer 10-26 - Wellbore #1 - Wellbore #1 - As Drilled	14,500.00	6,638.75	4,320.92	4,231.05	48.082	SF
Pfeiffer 15-26 - Wellbore #1 - Wellbore #1 - As Drilled	12,335.68	6,848.08	4,069.06	3,992.24	52.964	CC, ES
Pfeiffer 15-26 - Wellbore #1 - Wellbore #1 - As Drilled	13,200.00	6,864.00	4,159.82	4,078.66	51.259	SF
Pfeiffer 16-26 - Original Drilling - Original Drilling - As Dril	12,211.75	6,649.01	5,603.58	5,418.91	30.343	CC, ES
Pfeiffer 16-26 - Original Drilling - Original Drilling - As Dril	13,100.00	6,649.01	5,673.54	5,483.75	29.893	SF
Sidwell 26-1G4 - Original Drilling - Original Drilling - As D	16,246.22	6,615.68	5,615.53	5,509.95	53.187	CC
Sidwell 26-1G4 - Original Drilling - Original Drilling - As D	16,300.00	6,616.43	5,615.79	5,509.84	53.004	ES
Sidwell 26-1G4 - Original Drilling - Original Drilling - As D	16,769.51	6,622.96	5,639.85	5,530.97	51.796	SF
Sidwell A26-03 (PA) - Original Drilling - Original Drilling - As	16,413.74	6,928.32	2,995.64	2,876.94	25.238	CC, ES
Sidwell A26-03 (PA) - Original Drilling - Original Drilling - As	16,700.00	6,928.26	3,009.28	2,889.26	25.073	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 A34-725
Project:	Wells Ranch	TVD Reference:	KB @ 4680.00ft
Reference Site:	A Section 35	MD Reference:	KB @ 4680.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Reveille A34-725	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Reveille A34-725 OH	Database:	EDMP
Reference Design:	APD - Rev 1	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	16,298.02	6,766.00	999.61	781.45	4.582	CC
Howard 02-27 (PA) - Original Drilling - Original Drilling - A	16,300.00	6,766.00	999.61	781.43	4.581	ES, SF
Howard 03-27 - Original Drilling - Original Drilling - As Dri	16,210.64	6,719.64	2,407.38	2,301.83	22.808	CC, ES
Howard 03-27 - Original Drilling - Original Drilling - As Dri	16,500.00	6,718.81	2,424.70	2,316.71	22.453	SF
Howard 04-27 (PA) - Original Drilling - Original Drilling - A	16,318.79	6,726.00	3,650.00	3,432.47	16.780	CC, ES
Howard 04-27 (PA) - Original Drilling - Original Drilling - A	16,769.51	6,726.00	3,677.72	3,456.50	16.625	SF
Howard 08-27 - Original Drilling - Original Drilling - As Dri	14,900.00	6,718.81	296.94	201.67	3.117	ES, SF
Howard 08-27 - Original Drilling - Original Drilling - As Dri	14,904.38	6,718.80	296.91	201.68	3.118	CC
Howard 10-27 - Original Drilling - Original Drilling - As Dri	13,591.81	6,708.43	929.18	844.00	10.908	CC
Howard 10-27 - Original Drilling - Original Drilling - As Dri	13,600.00	6,708.31	929.21	843.92	10.895	ES
Howard 10-27 - Original Drilling - Original Drilling - As Dri	13,700.00	6,707.00	935.45	849.15	10.839	SF
Howard 15-27 - Original Drilling - Original Drilling - As Dri	12,424.88	6,697.51	1,086.10	1,011.66	14.590	CC, ES
Howard 15-27 - Original Drilling - Original Drilling - As Dri	12,500.00	6,698.87	1,088.70	1,013.44	14.467	SF
Howard 4B-27 (DA) - Original Drilling - Original Drilling - A	16,278.71	3,765.00	4,705.82	4,561.46	32.598	CC
Howard 4B-27 (DA) - Original Drilling - Original Drilling - A	16,300.00	3,765.00	4,705.87	4,561.33	32.557	ES
Howard 4B-27 (DA) - Original Drilling - Original Drilling - A	16,769.51	3,765.00	4,731.35	4,582.95	31.882	SF
Howard A27-01 - Original Drilling - Original Drilling - As D	16,297.25	6,723.62	328.64	222.51	3.096	CC, ES, SF
Howard A27-05 (SI) - Original Drilling - Original Drilling - A	14,919.00	6,725.37	3,637.16	3,541.77	38.129	CC, ES
Howard A27-05 (SI) - Original Drilling - Original Drilling - A	15,700.00	6,717.76	3,720.06	3,618.89	36.770	SF
Howard A27-06 (PR) - Original Drilling - Original Drilling -	14,962.89	6,816.60	2,258.77	2,160.38	22.959	CC
Howard A27-06 (PR) - Original Drilling - Original Drilling -	15,000.00	6,816.66	2,259.07	2,160.21	22.851	ES
Howard A27-06 (PR) - Original Drilling - Original Drilling -	15,400.00	6,817.25	2,300.67	2,197.73	22.349	SF
Howard A27-07 - Original Drilling - Original Drilling - As D	14,892.94	6,768.99	909.42	814.14	9.545	CC
Howard A27-07 - Original Drilling - Original Drilling - As D	14,900.00	6,768.96	909.44	814.07	9.535	ES
Howard A27-07 - Original Drilling - Original Drilling - As D	15,000.00	6,768.52	915.70	819.34	9.503	SF
Howard A27-09 - Original Drilling - Original Drilling - As D	13,531.34	6,707.90	199.13	114.42	2.351	CC, ES, SF
Howard A27-16 - Original Drilling - Original Drilling - As D	12,260.22	6,699.34	477.80	402.52	6.347	CC, ES, SF
Howard A27-17D - Original Drilling - Original Drilling - As	15,705.47	6,824.63	255.81	150.52	2.429	CC, ES, SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Reveille A34-725
Project:	Wells Ranch	TVD Reference:	KB @ 4680.00ft
Reference Site:	A Section 35	MD Reference:	KB @ 4680.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Reveille A34-725	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Reveille A34-725 OH	Database:	EDMP
Reference Design:	APD - Rev 1	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 28						
Ankeney 2-28 (SI) - Wellbore #1 - No Surveys	16,357.98	6,718.00	6,392.22	6,174.55	29.366	CC
Ankeney 2-28 (SI) - Wellbore #1 - No Surveys	16,400.00	6,718.00	6,392.36	6,174.32	29.317	ES
Ankeney 2-28 (SI) - Wellbore #1 - No Surveys	16,769.51	6,718.00	6,405.45	6,184.31	28.966	SF
Ankeney 28-01 (PA) - Wellbore #1 - Gyro Surveys	14,715.21	6,755.33	4,922.34	4,829.44	52.983	CC
Ankeney 28-01 (PA) - Wellbore #1 - Gyro Surveys	14,800.00	6,754.66	4,923.07	4,829.43	52.569	ES
Ankeney 28-01 (PA) - Wellbore #1 - Gyro Surveys	16,000.00	6,745.09	5,087.24	4,985.12	49.817	SF
Art Rohr 1 (PA) - Wellbore #1 - No Surveys	13,546.25	6,713.01	7,651.61	7,455.78	39.073	CC
Art Rohr 1 (PA) - Wellbore #1 - No Surveys	13,600.00	6,713.01	7,651.80	7,455.53	38.986	ES
Art Rohr 1 (PA) - Wellbore #1 - No Surveys	15,400.00	6,713.00	7,872.97	7,663.37	37.563	SF
Danley 1 (TA) - Wellbore #1 - Gyro Surveys	16,425.74	6,840.42	8,685.04	8,577.59	80.827	CC
Danley 1 (TA) - Wellbore #1 - Gyro Surveys	16,500.00	6,839.85	8,685.36	8,577.28	80.358	ES
Danley 1 (TA) - Wellbore #1 - Gyro Surveys	16,769.51	6,837.78	8,691.84	8,581.51	78.780	SF
Danley 12-28 (SI) - Wellbore #1 - Gyro Surveys	14,838.73	6,809.29	8,848.39	8,753.41	93.164	CC
Danley 12-28 (SI) - Wellbore #1 - Gyro Surveys	14,900.00	6,806.54	8,848.60	8,753.12	92.673	ES
Danley 12-28 (SI) - Wellbore #1 - Gyro Surveys	16,769.51	6,745.99	9,056.30	8,946.87	82.758	SF
Danley 13-28 (PR) - Wellbore #1 - Gyro Surveys	13,516.71	6,888.53	8,885.59	8,800.87	104.888	CC
Danley 13-28 (PR) - Wellbore #1 - Gyro Surveys	13,600.00	6,887.31	8,885.98	8,800.59	104.057	ES
Danley 13-28 (PR) - Wellbore #1 - Gyro Surveys	16,769.51	6,840.85	9,462.14	9,354.77	88.125	SF
Danley 14-28 (PR) - Wellbore #1 - Gyro Surveys	12,168.61	6,813.72	8,903.59	8,828.73	118.932	CC
Danley 14-28 (PR) - Wellbore #1 - Gyro Surveys	12,200.00	6,813.07	8,903.65	8,828.54	118.548	ES
Danley 14-28 (PR) - Wellbore #1 - Gyro Surveys	16,500.00	6,693.16	9,900.49	9,797.75	96.359	SF
Dewey 21-28 (TA) - Wellbore #1 - Gyro Surveys	16,073.13	7,011.25	7,596.00	7,491.55	72.722	CC
Dewey 21-28 (TA) - Wellbore #1 - Gyro Surveys	16,100.00	7,010.75	7,596.05	7,491.37	72.561	ES
Dewey 21-28 (TA) - Wellbore #1 - Gyro Surveys	16,769.51	6,998.12	7,627.85	7,517.68	69.237	SF
Dewey 22-28 (SI) - Wellbore #1 - Gyro Surveys	14,929.39	7,163.88	7,540.70	7,444.25	78.178	CC
Dewey 22-28 (SI) - Wellbore #1 - Gyro Surveys	15,000.00	7,158.78	7,541.03	7,443.99	77.707	ES
Dewey 22-28 (SI) - Wellbore #1 - Gyro Surveys	16,769.51	7,031.11	7,760.84	7,650.99	70.650	SF
Hannan Rohr 1 (PA) - Wellbore #1 - Gyro Surveys	12,145.75	6,698.13	7,607.86	7,533.55	102.379	CC
Hannan Rohr 1 (PA) - Wellbore #1 - Gyro Surveys	12,200.00	6,698.30	7,608.06	7,533.32	101.796	ES
Hannan Rohr 1 (PA) - Wellbore #1 - Gyro Surveys	15,600.00	6,708.90	8,355.32	8,258.41	86.216	SF
Rohr A 28-25 (SI) - Wellbore #1 - Gyro Surveys	13,023.87	6,993.95	8,094.56	8,013.52	99.890	CC
Rohr A 28-25 (SI) - Wellbore #1 - Gyro Surveys	13,100.00	6,992.64	8,094.91	8,013.26	99.139	ES
Rohr A 28-25 (SI) - Wellbore #1 - Gyro Surveys	16,600.00	6,932.12	8,849.11	8,744.45	84.548	SF
Wardlaw 16-28 (SI) - Wellbore #1 - Gyro Surveys	12,192.02	6,728.40	5,134.58	5,059.78	68.644	CC
Wardlaw 16-28 (SI) - Wellbore #1 - Gyro Surveys	12,200.00	6,728.51	5,134.59	5,059.72	68.583	ES
Wardlaw 16-28 (SI) - Wellbore #1 - Gyro Surveys	13,900.00	6,749.02	5,411.17	5,324.55	62.472	SF
Wardlaw 20-28 - Original Drilling - Original Drilling - As D	12,803.64	6,686.01	5,467.19	5,277.45	28.814	CC, ES
Wardlaw 20-28 - Original Drilling - Original Drilling - As D	13,900.00	6,686.00	5,576.04	5,378.01	28.157	SF
Wardlaw 20-28 (SI) - Wellbore #1 - Gyro Surveys	12,836.43	6,719.56	5,458.52	5,379.03	68.669	CC
Wardlaw 20-28 (SI) - Wellbore #1 - Gyro Surveys	12,900.00	6,720.28	5,458.89	5,378.87	68.217	ES
Wardlaw 20-28 (SI) - Wellbore #1 - Gyro Surveys	14,700.00	6,742.67	5,767.84	5,675.51	62.476	SF
Wardlaw 33-28 (PA) - Wellbore #1 - Gyro Surveys	13,331.92	7,500.00	6,016.94	5,873.43	41.927	CC
Wardlaw 33-28 (PA) - Wellbore #1 - Gyro Surveys	13,500.00	7,500.00	6,019.29	5,871.85	40.826	ES
Wardlaw 33-28 (PA) - Wellbore #1 - Gyro Surveys	16,000.00	7,500.00	6,581.96	6,390.62	34.400	SF
Webster 09-28 (PR) - Original Drilling - Original Drilling -	13,603.19	6,701.01	5,178.83	4,982.82	26.420	CC, ES
Webster 09-28 (PR) - Original Drilling - Original Drilling -	14,500.00	6,701.00	5,255.91	5,052.93	25.894	SF
Webster 15-28 (SI) - Wellbore #1 - Gyro Surveys	12,265.58	6,763.36	6,471.66	6,396.26	85.821	CC
Webster 15-28 (SI) - Wellbore #1 - Gyro Surveys	12,300.00	6,763.47	6,471.76	6,396.07	85.509	ES
Webster 15-28 (SI) - Wellbore #1 - Gyro Surveys	14,800.00	6,771.27	6,950.23	6,857.79	75.189	SF
Webster 9-28 (PR) - Wellbore #1 - Gyro Surveys	13,642.70	6,728.91	5,163.72	5,078.15	60.349	CC
Webster 9-28 (PR) - Wellbore #1 - Gyro Surveys	13,700.00	6,729.10	5,164.04	5,077.98	60.008	ES
Webster 9-28 (PR) - Wellbore #1 - Gyro Surveys	15,200.00	6,734.23	5,393.44	5,296.94	55.896	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 A34-725
Project:	Wells Ranch	TVD Reference:	KB @ 4680.00ft
Reference Site:	A Section 35	MD Reference:	KB @ 4680.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Reveille A34-725	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Reveille A34-725 OH	Database:	EDMP
Reference Design:	APD - Rev 1	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	8,404.74	6,776.07	7,394.26	7,342.33	142.392	CC, ES
Achziger 11-33 (PR) - Wellbore #1 - Gyro Surveys	12,900.00	6,677.91	8,652.87	8,576.53	113.338	SF
Achziger 14-33 (PA) - Wellbore #1 - No Surveys	6,837.73	6,511.75	7,629.40	7,474.68	49.312	CC
Achziger 14-33 (PA) - Wellbore #1 - No Surveys	6,900.00	6,548.18	7,630.03	7,474.44	49.042	ES
Achziger 14-33 (PA) - Wellbore #1 - No Surveys	8,400.00	6,651.01	7,796.55	7,634.70	48.171	SF
Briggs 15-33 (SI) - Wellbore #1 - Gyro Surveys	7,071.89	6,880.91	6,315.36	6,267.13	130.959	CC, ES
Briggs 15-33 (SI) - Wellbore #1 - Gyro Surveys	10,900.00	6,898.41	7,423.83	7,359.58	115.536	SF
Ehrlich 19-33 (PR) - Wellbore #1 - Gyro Survey	7,573.20	6,664.74	8,417.76	8,368.78	171.868	CC
Ehrlich 19-33 (PR) - Wellbore #1 - Gyro Survey	7,600.00	6,664.60	8,417.80	8,368.76	171.655	ES
Ehrlich 19-33 (PR) - Wellbore #1 - Gyro Survey	12,900.00	6,641.18	9,961.57	9,885.68	131.257	SF
French 09-33 (SI) - Original Drilling - Original Drilling - As	8,317.35	6,593.81	4,957.21	4,906.10	96.982	CC, ES
French 09-33 (SI) - Original Drilling - Original Drilling - As	10,700.00	6,630.40	5,499.93	5,436.18	86.270	SF
Hammerbeck 16-33 (PA) - Original Drilling - Original Drilling	6,840.29	6,419.00	4,894.34	4,847.52	104.542	CC, ES
Hammerbeck 16-33 (PA) - Original Drilling - Original Drilling	9,300.00	6,444.84	5,450.14	5,394.59	98.118	SF
Hammerbeck 20-33 - Wellbore #1 - Gyro Surveys	7,627.89	6,520.53	5,660.94	5,612.21	116.167	CC, ES
Hammerbeck 20-33 - Wellbore #1 - Gyro Surveys	10,700.00	6,550.58	6,440.72	6,377.54	101.932	SF
Noffsinger 11-33 (PR) - Wellbore #1 - Gyro Surveys	11,068.32	6,673.22	9,034.82	8,968.02	135.256	CC
Noffsinger 11-33 (PR) - Wellbore #1 - Gyro Surveys	11,100.00	6,673.19	9,034.88	8,967.85	134.791	ES
Noffsinger 11-33 (PR) - Wellbore #1 - Gyro Surveys	15,300.00	6,669.98	9,976.73	9,882.18	105.526	SF
Noffsinger 12-33 (PR) - Wellbore #1 - Gyro Surveys	9,337.07	6,721.22	8,845.24	8,789.06	157.422	CC
Noffsinger 12-33 (PR) - Wellbore #1 - Gyro Surveys	9,400.00	6,721.30	8,845.47	8,788.91	156.409	ES
Noffsinger 12-33 (PR) - Wellbore #1 - Gyro Surveys	14,000.00	6,726.68	9,999.06	9,914.37	118.066	SF
Noffsinger 21-33 (PA) - Wellbore #1 - No Surveys	11,092.71	6,691.01	7,609.09	7,431.69	42.892	CC
Noffsinger 21-33 (PA) - Wellbore #1 - No Surveys	11,100.00	6,691.01	7,609.10	7,431.64	42.879	ES
Noffsinger 21-33 (PA) - Wellbore #1 - No Surveys	13,200.00	6,691.01	7,895.50	7,703.20	41.058	SF
Noffsinger 22-33 (PR) - Wellbore #1 - Gyro Surveys	11,120.63	6,403.24	6,068.04	6,001.78	91.570	CC
Noffsinger 22-33 (PR) - Wellbore #1 - Gyro Surveys	11,200.00	6,407.54	6,068.56	6,001.69	90.745	ES
Noffsinger 22-33 (PR) - Wellbore #1 - Gyro Surveys	13,700.00	6,469.53	6,593.05	6,509.84	79.231	SF
Noffsinger 31-33 (PR) - Wellbore #1 - Gyro Surveys	11,082.92	6,707.21	6,183.35	6,116.41	92.367	CC
Noffsinger 31-33 (PR) - Wellbore #1 - Gyro Surveys	11,100.00	6,707.29	6,183.37	6,116.30	92.190	ES
Noffsinger 31-33 (PR) - Wellbore #1 - Gyro Surveys	13,700.00	6,719.94	6,714.37	6,630.28	79.848	SF
Noffsinger 32-33 (PR) - Wellbore #1 - Gyro Surveys	9,309.00	6,893.96	6,406.11	6,350.04	114.258	CC, ES
Noffsinger 32-33 (PR) - Wellbore #1 - Gyro Surveys	12,600.00	6,826.78	7,201.70	7,126.00	95.138	SF
Sitzman 12-33 (PR) - Wellbore #1 - Gyro Surveys	8,254.60	6,706.92	8,981.36	8,930.22	175.592	CC
Sitzman 12-33 (PR) - Wellbore #1 - Gyro Surveys	8,300.00	6,706.97	8,981.48	8,930.15	174.980	ES
Sitzman 12-33 (PR) - Wellbore #1 - Gyro Surveys	12,600.00	6,712.00	9,977.34	9,901.45	131.464	SF
Sitzman 13-33 (SI) - Wellbore #1 - Gyro Surveys	6,828.22	6,520.70	8,980.22	8,933.16	190.817	CC, ES
Sitzman 13-33 (SI) - Wellbore #1 - Gyro Surveys	11,100.00	6,662.98	9,999.67	9,933.48	151.095	SF
Sughrue 41-33 (SI) - Original Drilling - Original Drilling -	11,078.98	6,500.00	4,893.89	4,827.29	73.481	CC
Sughrue 41-33 (SI) - Original Drilling - Original Drilling -	11,100.00	6,500.00	4,893.93	4,827.17	73.303	ES
Sughrue 41-33 (SI) - Original Drilling - Original Drilling -	12,900.00	6,521.28	5,221.65	5,142.94	66.338	SF
Webster 10-33 (PA) - Wellbore #1 - Gyro Surveys	8,354.15	6,829.56	6,258.23	6,206.73	121.533	CC
Webster 10-33 (PA) - Wellbore #1 - Gyro Surveys	8,400.00	6,830.12	6,258.39	6,206.71	121.077	ES
Webster 10-33 (PA) - Wellbore #1 - Gyro Surveys	11,800.00	6,871.20	7,144.06	7,073.87	101.784	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 A34-725
Project:	Wells Ranch	TVD Reference:	KB @ 4680.00ft
Reference Site:	A Section 35	MD Reference:	KB @ 4680.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Reveille A34-725	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Reveille A34-725 OH	Database:	EDMP
Reference Design:	APD - Rev 1	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 34						
Barthol A34-05X - Original Drilling - Original Drilling - As D	9,772.66	6,666.15	3,774.30	3,715.67	64.378	CC
Barthol A34-05X - Original Drilling - Original Drilling - As D	9,800.00	6,665.97	3,774.40	3,715.58	64.173	ES
Barthol A34-05X - Original Drilling - Original Drilling - As D	11,100.00	6,659.33	4,000.89	3,933.80	59.634	SF
Ehlich A34-01 - Original Drilling - Original Drilling - As Dr	10,800.00	6,691.65	404.51	339.38	6.211	SF
Ehlich A34-01 - Original Drilling - Original Drilling - As Dr	10,813.67	6,691.57	404.28	339.20	6.212	CC, ES
Howard A34-03 (PA) - Original Drilling - Original Drilling -	10,957.63	6,707.01	2,369.72	2,192.67	13.384	CC, ES
Howard A34-03 (PA) - Original Drilling - Original Drilling -	11,200.00	6,707.01	2,382.08	2,203.05	13.305	SF
Howard BC A34-02 - Original Drilling - Original Drilling - A	10,831.17	6,695.45	1,260.39	1,195.11	19.307	CC, ES
Howard BC A34-02 - Original Drilling - Original Drilling - A	11,000.00	6,693.28	1,271.65	1,204.84	19.036	SF
Landwehr A34-03X - Original Drilling - Original Drilling - A	11,123.35	6,736.44	2,431.06	2,363.75	36.122	CC, ES
Landwehr A34-03X - Original Drilling - Original Drilling - A	11,700.00	6,729.20	2,498.50	2,426.94	34.916	SF
Landwehr A34-04 - Original Drilling - Original Drilling - As	11,137.12	6,788.03	3,918.74	3,851.30	58.104	CC
Landwehr A34-04 - Original Drilling - Original Drilling - As	11,200.00	6,790.53	3,919.24	3,851.30	57.681	ES
Landwehr A34-04 - Original Drilling - Original Drilling - As	12,400.00	6,831.26	4,116.98	4,040.86	54.081	SF
Petrikin A34-05 (PA) - Original Drilling - Original Drilling -	9,611.95	6,684.01	3,687.52	3,519.37	21.929	CC, ES
Petrikin A34-05 (PA) - Original Drilling - Original Drilling -	10,100.00	6,684.01	3,719.68	3,548.25	21.698	SF
Petrikin A34-06 - Original Drilling - Original Drilling - As D	9,647.12	6,729.53	2,354.66	2,296.84	40.724	CC, ES
Petrikin A34-06 - Original Drilling - Original Drilling - As D	10,200.00	6,732.07	2,418.70	2,357.13	39.285	SF
Petrikin A34-07 (PA) - Original Drilling - Original Drilling -	9,718.69	6,669.01	1,028.22	859.74	6.103	CC, ES
Petrikin A34-07 (PA) - Original Drilling - Original Drilling -	9,800.00	6,669.01	1,031.43	862.22	6.096	SF
Petrikin A34-08 - Original Drilling - Original Drilling - As D	9,736.99	6,677.44	402.66	344.34	6.904	CC, ES, SF
Petrikin A34-09 - Original Drilling - Original Drilling - As D	8,436.02	6,704.02	423.73	371.71	8.145	CC, ES, SF
Petrikin A34-10 - Original Drilling - Original Drilling - As D	8,444.20	6,661.68	843.09	791.03	16.194	CC, ES
Petrikin A34-10 - Original Drilling - Original Drilling - As D	8,500.00	6,659.82	844.93	792.49	16.113	SF
Petrikin A34-11 - Original Drilling - Original Drilling - As D	8,401.81	6,669.75	2,318.02	2,266.41	44.917	CC, ES
Petrikin A34-11 - Original Drilling - Original Drilling - As D	9,000.00	6,668.98	2,393.96	2,339.19	43.710	SF
Petrikin A34-12 (PA) - Original Drilling - Original Drilling -	8,416.12	6,805.97	3,567.14	3,515.28	68.792	CC, ES
Petrikin A34-12 (PA) - Original Drilling - Original Drilling -	9,700.00	6,830.16	3,791.07	3,732.42	64.633	SF
Petrikin A34-13 - Original Drilling - Original Drilling - As D	6,945.15	6,533.98	3,626.00	3,578.55	76.427	CC
Petrikin A34-13 - Original Drilling - Original Drilling - As D	6,950.00	6,536.09	3,626.00	3,578.54	76.399	ES
Petrikin A34-13 - Original Drilling - Original Drilling - As D	8,000.00	6,605.53	3,767.02	3,716.67	74.815	SF
Petrikin A34-14 (PA) - Original Drilling - Original Drilling -	7,044.66	6,613.97	2,890.07	2,841.99	60.109	CC
Petrikin A34-14 (PA) - Original Drilling - Original Drilling -	7,050.00	6,616.13	2,890.08	2,841.98	60.088	ES
Petrikin A34-14 (PA) - Original Drilling - Original Drilling -	7,500.00	6,660.44	2,924.09	2,874.95	59.506	SF
Petrikin A34-15 - Original Drilling - Original Drilling - As D	7,081.04	6,635.31	1,025.95	977.91	21.359	CC, ES
Petrikin A34-15 - Original Drilling - Original Drilling - As D	7,150.00	6,648.42	1,028.14	979.93	21.325	SF
Petrikin A34-16 (PA) - Original Drilling - Original Drilling -	7,139.59	6,657.27	362.77	314.89	7.576	CC, ES
Petrikin A34-16 (PA) - Original Drilling - Original Drilling -	7,150.00	6,659.10	362.91	315.01	7.575	SF
Petrikin A34-25 - Original Drilling - Original Drilling - As D	7,815.61	6,635.28	2,928.89	2,879.35	59.124	CC, ES
Petrikin A34-25 - Original Drilling - Original Drilling - As D	8,600.00	6,597.57	3,031.90	2,979.14	57.459	SF
Reveille A33-720 - Reveille A33-720 OH - APD - Rev 1	4,283.59	3,000.00	3,876.51	3,851.50	154.996	CC
Reveille A33-720 - Reveille A33-720 OH - APD - Rev 1	4,300.00	3,000.00	3,876.54	3,851.49	154.715	ES
Reveille A33-720 - Reveille A33-720 OH - APD - Rev 1	16,769.51	17,576.35	4,954.37	4,781.09	28.593	SF
Reveille A34-746 - Reveille A34-746 OH - APD - Rev 1	16,747.79	16,818.17	1,415.09	1,243.31	8.238	CC
Reveille A34-746 - Reveille A34-746 OH - APD - Rev 1	16,769.51	16,817.91	1,415.25	1,243.30	8.231	ES, SF
Reveille A34-757 - Reveille A34-757 OH - APD - Rev 1	16,738.83	16,629.35	2,123.95	1,952.72	12.404	CC
Reveille A34-757 - Reveille A34-757 OH - APD - Rev 1	16,769.51	16,626.69	2,124.19	1,952.70	12.387	ES, SF
Reveille A34-768 - Reveille A34-768 OH - APD - Rev 1	16,727.62	16,562.30	2,830.27	2,658.14	16.443	CC
Reveille A34-768 - Reveille A34-768 OH - APD - Rev 1	16,769.51	16,558.98	2,830.59	2,658.09	16.409	ES, SF
Reveille A34-778 - Reveille A34-778 OH - APD - Rev 1	6,535.24	5,678.13	3,500.07	3,455.88	79.214	CC
Reveille A34-778 - Reveille A34-778 OH - APD - Rev 1	16,769.51	16,607.30	3,539.24	3,368.08	20.677	ES, SF
Reveille A34-788 - Reveille A34-788 OH - APD - Rev 1	4,349.41	3,077.93	3,861.45	3,835.92	151.205	CC
Reveille A34-788 - Reveille A34-788 OH - APD - Rev 1	4,400.00	3,100.00	3,861.53	3,835.74	149.761	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 A34-725
Project:	Wells Ranch	TVD Reference:	KB @ 4680.00ft
Reference Site:	A Section 35	MD Reference:	KB @ 4680.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Reveille A34-725	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Reveille A34-725 OH	Database:	EDMP
Reference Design:	APD - Rev 1	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 34						
Reveille A34-788 - Reveille A34-788 OH - APD - Rev 1	16,769.51	17,226.69	4,245.90	4,072.26	24.453	SF
A Section 35						
Hoffner 13-35 - Original Drilling - Original Drilling - As Dri	8,486.82	6,701.09	1,353.60	1,301.44	25.948	CC, ES
Hoffner 13-35 - Original Drilling - Original Drilling - As Dri	8,500.00	6,700.20	1,353.67	1,301.48	25.939	SF
Hoffner 14-35 (SI) - Original Drilling - Original Drilling - As	1,793.35	1,784.43	238.92	226.66	19.483	CC
Hoffner 14-35 (SI) - Original Drilling - Original Drilling - As	2,018.91	2,011.05	239.34	225.48	17.268	ES
Hoffner 14-35 (SI) - Original Drilling - Original Drilling - As	2,400.00	2,388.18	262.18	245.70	15.905	SF
Hoffner 24-35 (SI) - Original Drilling - Original Drilling - As	1,190.36	1,130.37	1,685.09	1,677.28	215.712	CC
Hoffner 24-35 (SI) - Original Drilling - Original Drilling - As	2,003.39	1,945.37	1,685.62	1,672.05	124.232	ES
Hoffner 24-35 (SI) - Original Drilling - Original Drilling - As	7,266.91	6,610.64	2,878.86	2,830.74	59.821	SF
Hoffner 33-35 - Original Drilling - Original Drilling - As Dri	100.00	30.46	3,561.46	3,561.28	10,000.000	CC
Hoffner 33-35 - Original Drilling - Original Drilling - As Dri	1,200.00	1,109.52	3,566.15	3,558.37	458.679	ES
Hoffner 33-35 - Original Drilling - Original Drilling - As Dri	9,600.00	6,719.84	4,737.50	4,681.29	84.295	SF
Hoffner 34-35 - Original Drilling - Original Drilling - As Dri	100.00	22.75	3,215.47	3,215.30	10,000.000	CC, ES
Hoffner 34-35 - Original Drilling - Original Drilling - As Dri	10,300.00	10,300.00	5,350.88	5,281.95	77.623	SF
Hoffner 44-35 - Wellbore #1 - Wellbore #1- As Drilled	2,022.93	2,000.00	4,504.95	4,491.13	325.890	CC, ES
Hoffner 44-35 - Wellbore #1 - Wellbore #1- As Drilled	9,500.00	6,679.94	6,226.09	6,171.37	113.783	SF
Reveille A34-714 - Reveille A34-714 OH - APD - Rev 1	2,415.83	2,418.48	24.91	8.31	1.501	CC, ES, SF
Reveille A34-735 - Reveille A34-735 OH - APD - Rev 1	2,519.44	2,516.42	22.26	5.04	1.292	Level 3, CC
Reveille A34-735 - Reveille A34-735 OH - APD - Rev 1	2,909.46	2,903.46	22.62	3.08	1.157	Level 2, ES, SF
Reveille A35-750 - Reveille A35-750 OH - APD - Rev 2	2,000.00	1,997.00	114.13	100.27	8.233	CC, ES
Reveille A35-750 - Reveille A35-750 OH - APD - Rev 2	2,100.00	2,091.36	118.19	103.66	8.135	SF
Reveille A35-762 - Reveille A35-762 OH - APD - Rev 2	2,000.00	1,997.00	91.86	78.00	6.627	CC, ES
Reveille A35-762 - Reveille A35-762 OH - APD - Rev 2	2,100.00	2,093.88	95.19	80.65	6.545	SF
Reveille A35-772 - Reveille A35-772 OH - APD - Rev 2	2,000.00	1,998.00	69.59	55.72	5.019	CC, ES
Reveille A35-772 - Reveille A35-772 OH - APD - Rev 2	2,100.00	2,095.57	72.96	58.41	5.015	SF
Reveille A35-783 - Reveille A35-783 OH - APD - Rev 1	2,000.00	2,001.00	47.32	33.45	3.410	CC, ES
Reveille A35-783 - Reveille A35-783 OH - APD - Rev 1	2,100.00	2,101.02	49.06	34.48	3.364	SF
Sharkey 31-35 - Original Drilling - Original Drilling - As Dr	11,066.42	6,657.59	4,266.42	4,199.67	63.922	CC
Sharkey 31-35 - Original Drilling - Original Drilling - As Dr	11,100.00	6,658.08	4,266.55	4,199.61	63.740	ES
Sharkey 31-35 - Original Drilling - Original Drilling - As Dr	12,100.00	6,671.70	4,389.80	4,317.96	61.102	SF
Sharkey 32-35 - Original Drilling - Original Drilling - As Dr	100.00	21.71	4,201.01	4,200.85	10,000.000	CC
Sharkey 32-35 - Original Drilling - Original Drilling - As Dr	2,031.05	2,002.37	4,205.13	4,191.27	303.361	ES
Sharkey 32-35 - Original Drilling - Original Drilling - As Dr	10,800.00	6,594.51	4,535.24	4,472.86	72.702	SF
Wardlaw 35-21 (SI) - Original Drilling - Original Drilling - A	10,841.57	6,677.49	2,907.39	2,842.00	44.462	CC, ES
Wardlaw 35-21 (SI) - Original Drilling - Original Drilling - A	11,300.00	6,674.62	2,943.31	2,875.93	43.685	SF
Wardlaw 35-22 - Original Drilling - Original Drilling - As D	11,158.96	6,666.54	1,614.78	1,547.36	23.948	CC, ES
Wardlaw 35-22 - Original Drilling - Original Drilling - As D	11,300.00	6,668.91	1,620.93	1,553.04	23.878	SF
Wardlaw 35-23 (PA) - Original Drilling - Original Drilling -	9,707.01	6,661.17	1,551.83	1,491.40	25.679	CC, ES
Wardlaw 35-23 (PA) - Original Drilling - Original Drilling -	9,800.00	6,656.72	1,554.61	1,493.97	25.636	SF
Wardlaw 35-24 - Original Drilling - Original Drilling - As D	9,733.12	6,718.93	2,930.55	2,871.87	49.942	CC, ES
Wardlaw 35-24 - Original Drilling - Original Drilling - As D	10,200.00	6,721.75	2,967.51	2,906.89	48.952	SF
Wardlaw 35-25 - Original Drilling - Original Drilling - As D	10,156.30	6,668.70	2,306.87	2,245.96	37.878	CC, ES
Wardlaw 35-25 - Original Drilling - Original Drilling - As D	10,500.00	6,676.42	2,332.32	2,270.07	37.470	SF

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Reveille A34-725
Project:	Wells Ranch	TVD Reference:	KB @ 4680.00ft
Reference Site:	A Section 35	MD Reference:	KB @ 4680.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Reveille A34-725	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Reveille A34-725 OH	Database:	EDMP
Reference Design:	APD - Rev 1	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						
Devries State A36-17 (Exist.) - Wellbore #1 - Wellbore #1	0.00	0.00	9,740.76			
Devries State A36-17 (Exist.) - Wellbore #1 - Wellbore #1	2,000.00	1,965.58	9,745.31	9,731.69	716.027	ES
Devries State A36-17 (Exist.) - Wellbore #1 - Wellbore #1	3,200.00	3,055.20	9,970.18	9,948.62	462.545	SF
Devries State A36-21 - Wellbore #1 - Wellbore #1 - As Dr	2,035.63	2,073.21	7,882.66	7,868.56	559.146	CC, ES
Devries State A36-21 - Wellbore #1 - Wellbore #1 - As Dr	13,700.00	6,881.59	9,975.29	9,897.28	127.877	SF
Devries State A36-23 - Wellbore #1 - Wellbore #1 - As Dr	2,021.35	2,031.77	9,058.55	9,044.64	650.991	CC, ES
Devries State A36-23 - Wellbore #1 - Wellbore #1 - As Dr	5,500.00	5,372.72	9,994.09	9,955.80	261.065	SF
Devries State A36-25 - Wellbore #1 - Wellbore #1 - As Dr	2,006.34	1,968.76	6,390.38	6,376.72	468.050	CC, ES
Devries State A36-25 - Wellbore #1 - Wellbore #1 - As Dr	12,000.00	6,549.54	8,658.42	8,592.57	131.480	SF
Scholfield A36-19 (Exist.) - Wellbore #1 - Wellbore #1 - A	2,008.59	1,987.69	7,171.06	7,157.34	522.897	CC, ES
Scholfield A36-19 (Exist.) - Wellbore #1 - Wellbore #1 - A	16,300.00	16,300.00	9,460.49	9,339.91	78.460	SF
Scholfield A36-20 - Wellbore #1 - Wellbore #1 - As Drilled	2,070.62	2,169.20	6,601.20	6,586.63	453.187	CC
Scholfield A36-20 - Wellbore #1 - Wellbore #1 - As Drilled	2,100.00	2,191.41	6,601.36	6,586.61	447.648	ES
Scholfield A36-20 - Wellbore #1 - Wellbore #1 - As Drilled	12,800.00	6,557.38	8,258.11	8,186.22	114.875	SF
Scholfield State A36-4X - Wellbore #1 - Wellbore #1 - As	11,131.91	6,848.04	6,775.28	6,707.21	99.536	CC
Scholfield State A36-4X - Wellbore #1 - Wellbore #1 - As	11,400.00	11,400.00	6,780.52	6,694.92	79.205	ES
Scholfield State A36-4X - Wellbore #1 - Wellbore #1 - As	11,700.00	11,700.00	6,798.74	6,710.31	76.885	SF
Scholfield State A36-69HN - Original Drilling - Original Dr	11,638.44	6,048.01	6,819.18	6,753.41	103.679	CC
Scholfield State A36-69HN - Original Drilling - Original Dr	11,700.00	6,048.01	6,819.46	6,753.30	103.080	ES
Scholfield State A36-69HN - Original Drilling - Original Dr	14,300.00	6,048.01	7,320.18	7,240.53	91.898	SF
Scholfield State A36-79HN - Wellbore #1 - Original Drillin	4,898.85	10,444.02	5,970.72	5,874.75	62.214	CC
Scholfield State A36-79HN - Wellbore #1 - Original Drillin	4,900.00	10,444.02	5,970.72	5,874.74	62.208	ES
Scholfield State A36-79HN - Wellbore #1 - Original Drillin	11,800.00	11,800.00	6,208.17	6,096.68	55.682	SF
Sinjin E 36-9 (SI) - Wellbore #1 - No Surveys						Out of range
State A36-05 - Wellbore #1 - Wellbore #1 - As Drilled	2,029.02	2,046.88	6,409.27	6,395.28	458.280	CC, ES
State A36-05 - Wellbore #1 - Wellbore #1 - As Drilled	12,800.00	6,659.59	7,534.73	7,461.40	102.753	SF
State A36-06 - Wellbore #1 - Wellbore #1 - As Drilled	456.85	390.85	7,521.99	7,519.39	2,896.341	CC
State A36-06 - Wellbore #1 - Wellbore #1 - As Drilled	2,001.98	1,940.87	7,525.94	7,512.39	555.354	ES
State A36-06 - Wellbore #1 - Wellbore #1 - As Drilled	13,900.00	6,518.94	9,232.51	9,154.13	117.790	SF
State A36-07 - Wellbore #1 - Wellbore #1 - As Drilled	100.00	23.97	8,896.90	8,896.73	10,000.000	CC
State A36-07 - Wellbore #1 - Wellbore #1 - As Drilled	2,000.00	1,919.76	8,907.52	8,894.03	660.398	ES
State A36-07 - Wellbore #1 - Wellbore #1 - As Drilled	12,900.00	6,609.87	9,983.34	9,907.22	131.161	SF
State A36-08 - Wellbore #1 - Wellbore #1 - As Drilled						Out of range
State A36-09 - Wellbore #1 - Wellbore #1 - As Drilled	2,017.68	2,025.46	9,749.53	9,735.64	702.328	CC, ES
State A36-09 - Wellbore #1 - Wellbore #1 - As Drilled	3,200.00	3,164.34	9,976.19	9,954.25	454.709	SF
State A36-10 - Wellbore #1 - Wellbore #1 - As Drilled	2,013.95	1,997.73	8,461.52	8,447.74	614.232	CC, ES
State A36-10 - Wellbore #1 - Wellbore #1 - As Drilled	11,300.00	6,708.13	9,994.43	9,928.60	151.803	SF
State A36-11 - Wellbore #1 - Wellbore #1 - As Drilled	367.27	295.44	7,146.93	7,145.02	3,734.682	CC
State A36-11 - Wellbore #1 - Wellbore #1 - As Drilled	2,000.00	1,885.59	7,151.17	7,137.84	536.730	ES
State A36-11 - Wellbore #1 - Wellbore #1 - As Drilled	12,900.00	12,900.00	9,411.86	9,318.17	100.455	SF
State A36-12 - Wellbore #1 - Wellbore #1 - As Drilled	1,039.28	969.28	5,887.33	5,880.65	880.686	CC
State A36-12 - Wellbore #1 - Wellbore #1 - As Drilled	2,024.17	2,002.47	5,890.34	5,876.53	426.559	ES
State A36-12 - Wellbore #1 - Wellbore #1 - As Drilled	11,800.00	6,707.03	7,645.10	7,578.70	115.136	SF
State A36-13 - Wellbore #1 - Wellbore #1 - As Drilled	100.00	24.13	5,659.87	5,659.70	10,000.000	CC, ES
State A36-13 - Wellbore #1 - Wellbore #1 - As Drilled	10,900.00	6,600.00	7,801.15	7,740.96	129.606	SF
State A36-14 - Wellbore #1 - Wellbore #1 - As Drilled	2,000.00	1,943.00	6,944.69	6,898.89	151.642	CC
State A36-14 - Wellbore #1 - Wellbore #1 - As Drilled	2,100.00	2,042.98	6,946.43	6,898.29	144.282	ES
State A36-14 - Wellbore #1 - Wellbore #1 - As Drilled	8,700.00	6,649.01	8,361.46	8,199.33	51.574	SF
State A36-15 - Wellbore #1 - Wellbore #1 - As Drilled	100.00	33.69	8,304.06	8,303.87	10,000.000	CC
State A36-15 - Wellbore #1 - Wellbore #1 - As Drilled	1,500.00	1,386.62	8,310.84	8,301.19	861.551	ES
State A36-15 - Wellbore #1 - Wellbore #1 - As Drilled	9,800.00	6,617.61	9,985.98	9,929.28	176.095	SF
State A36-16 - Wellbore #1 - Wellbore #1 - As Drilled	689.19	636.21	9,611.76	9,607.47	2,240.528	CC
State A36-16 - Wellbore #1 - Wellbore #1 - As Drilled	2,014.63	2,010.72	9,612.37	9,598.54	694.929	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 A34-725
Project:	Wells Ranch	TVD Reference:	KB @ 4680.00ft
Reference Site:	A Section 35	MD Reference:	KB @ 4680.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Reveille A34-725	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Reveille A34-725 OH	Database:	EDMP
Reference Design:	APD - Rev 1	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 A36-16 - Wellbore #1 - Wellbore #1 - As Drilled	3,700.00	3,400.00	9,994.99	9,970.46	407.456	SF
State A36-3 (Exist.) - Wellbore #1 - Wellbore #1	2,000.21	1,964.77	8,241.19	8,227.49	601.787	CC
State A36-3 (Exist.) - Wellbore #1 - Wellbore #1	11,100.00	6,438.37	8,248.78	8,182.77	124.964	ES
State A36-3 (Exist.) - Wellbore #1 - Wellbore #1	14,800.00	6,400.01	9,070.36	8,984.90	106.136	SF
State A36-99HZ - Original Drilling - As Drilled	11,405.45	6,163.01	6,810.30	6,744.94	104.184	CC, ES
State A36-99HZ - Original Drilling - As Drilled	14,100.00	6,131.01	7,323.74	7,244.48	92.409	SF
AA Section 30						
Shadow A26-622 - Original Drilling - Original Drilling - As	12,374.20	17,520.00	4,282.73	4,199.95	51.735	CC
Shadow A26-622 - Original Drilling - Original Drilling - As	12,400.00	17,520.00	4,282.81	4,199.86	51.631	ES
Shadow A26-622 - Original Drilling - Original Drilling - As	15,000.00	17,520.00	5,023.61	4,903.10	41.688	SF
Shadow A26-627 - Original Drilling - Original Drilling - As	12,767.18	17,590.00	4,146.02	4,060.45	48.451	CC
Shadow A26-627 - Original Drilling - Original Drilling - As	12,800.00	17,590.00	4,146.15	4,060.38	48.339	ES
Shadow A26-627 - Original Drilling - Original Drilling - As	15,500.00	17,590.00	4,965.66	4,832.96	37.420	SF
Shadow A26-632 - Original Drilling - Original Drilling - As	13,067.25	17,781.00	4,154.66	4,070.60	49.423	CC
Shadow A26-632 - Original Drilling - Original Drilling - As	13,100.00	17,781.00	4,154.79	4,070.32	49.188	ES
Shadow A26-632 - Original Drilling - Original Drilling - As	15,900.00	17,781.00	5,028.49	4,879.86	33.832	SF
Shadow A26-637 - Original Drilling - Original Drilling - As	13,352.98	17,626.00	4,149.84	4,067.23	50.231	CC
Shadow A26-637 - Original Drilling - Original Drilling - As	13,400.00	17,626.00	4,150.11	4,066.93	49.893	ES
Shadow A26-637 - Original Drilling - Original Drilling - As	16,200.00	17,626.00	5,032.57	4,883.91	33.854	SF
Shadow A26-646 - Original Drilling - Original Drilling - As	14,031.98	17,659.00	4,150.75	4,061.17	46.337	CC
Shadow A26-646 - Original Drilling - Original Drilling - As	14,100.00	17,659.00	4,151.30	4,061.10	46.023	ES
Shadow A26-646 - Original Drilling - Original Drilling - As	16,769.51	17,659.00	4,972.20	4,822.13	33.134	SF
Shadow A26-656 - Original Drilling - Original Drilling - As	14,674.83	17,347.00	4,524.57	4,424.76	45.333	CC
Shadow A26-656 - Original Drilling - Original Drilling - As	14,700.00	17,347.00	4,524.64	4,424.63	45.242	ES
Shadow A26-656 - Original Drilling - Original Drilling - As	16,769.51	17,347.00	4,985.92	4,856.11	38.408	SF
Shadow A26-663 - Original Drilling - Original Drilling - As	15,231.67	17,466.00	4,379.47	4,275.25	42.024	CC, ES
Shadow A26-663 - Original Drilling - Original Drilling - As	16,769.51	17,466.00	4,641.63	4,515.48	36.797	SF
Shadow A26-672 - Original Drilling - Original Drilling - As	15,723.79	17,710.00	4,140.35	4,038.04	40.468	CC
Shadow A26-672 - Original Drilling - Original Drilling - As	15,800.00	17,710.00	4,141.05	4,037.95	40.163	ES
Shadow A26-672 - Original Drilling - Original Drilling - As	16,769.51	17,710.00	4,270.37	4,145.36	34.160	SF
Shadow A26-676 - Original Drilling - Original Drilling - As	16,009.70	17,725.00	4,150.06	4,039.48	37.528	CC, ES
Shadow A26-676 - Original Drilling - Original Drilling - As	16,769.51	17,725.00	4,219.04	4,097.70	34.771	SF
Shadow A26-685 - Original Drilling - Original Drilling - As	13,400.00	17,810.00	5,306.30	5,007.71	17.772	SF
Shadow A26-685 - Original Drilling - Original Drilling - As	16,698.27	17,810.00	4,156.71	4,040.76	35.849	CC
Shadow A26-685 - Original Drilling - Original Drilling - As	16,769.51	17,810.00	4,157.32	4,040.01	35.438	ES
Shadow A26-690 - Original Drilling - Original Drilling - As	15,100.00	17,780.00	4,520.91	4,391.30	34.882	SF
Shadow A26-690 - Original Drilling - Original Drilling - As	16,769.51	17,780.00	4,138.29	4,026.95	37.166	CC, ES
Shadow State A26-614 - Original Drilling - Original Drilling	11,837.71	17,675.00	4,151.07	4,071.68	52.290	CC
Shadow State A26-614 - Original Drilling - Original Drilling	11,900.00	17,675.00	4,151.54	4,071.59	51.927	ES
Shadow State A26-614 - Original Drilling - Original Drilling	14,400.00	17,675.00	4,878.18	4,760.67	41.513	SF
Shadow State A26-618 - Original Drilling - Original Drilling	12,084.97	17,415.00	4,317.28	4,237.06	53.820	CC
Shadow State A26-618 - Original Drilling - Original Drilling	12,100.00	17,415.00	4,317.30	4,236.97	53.744	ES
Shadow State A26-618 - Original Drilling - Original Drilling	14,900.00	17,415.00	5,153.96	5,027.24	40.671	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 A34-725
Project:	Wells Ranch	TVD Reference:	KB @ 4680.00ft
Reference Site:	A Section 35	MD Reference:	KB @ 4680.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Reveille A34-725	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Reveille A34-725 OH	Database:	EDMP
Reference Design:	APD - Rev 1	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	1,909.77	1,871.00	5,635.52	5,623.70	476.481	CC
Lucci B01-69HNL - Original Drilling - Original Drilling - As	2,000.00	1,945.11	5,635.73	5,623.32	454.009	ES
Lucci B01-69HNL - Original Drilling - Original Drilling - As	10,700.00	6,043.00	8,079.91	8,024.94	146.984	SF
Lucci B01-99HZ - Original Drilling - Original Drilling - As	100.00	52.32	5,690.50	5,690.28	10,000.000	CC
Lucci B01-99HZ - Original Drilling - Original Drilling - As	500.00	425.97	5,691.69	5,689.39	2,475.906	ES
Lucci B01-99HZ - Original Drilling - Original Drilling - As	10,400.00	5,918.00	8,212.54	8,160.20	156.924	SF
Lucci BC B 1-14 (PA) - Wellbore #1 - Gyro Surveys	2,018.38	1,981.65	7,321.73	7,307.97	532.304	CC
Lucci BC B 01-13 (PA) - Wellbore #1 - Gyro Surveys	2,100.00	2,114.51	7,322.28	7,307.78	504.883	ES
Lucci BC B 01-13 (PA) - Wellbore #1 - Gyro Surveys	6,900.00	6,296.63	8,495.27	8,448.41	181.288	SF
Lucci BC B 1-14 (PA) - Wellbore #1 - Gyro Surveys	100.00	14.84	8,457.37	8,457.22	10,000.000	CC
Lucci BC B 1-14 (PA) - Wellbore #1 - Gyro Surveys	2,000.00	1,872.48	8,462.12	8,448.82	636.160	ES
Lucci BC B 1-14 (PA) - Wellbore #1 - Gyro Surveys	7,050.00	6,620.53	9,772.40	9,724.13	202.458	SF
Lucci BC B 1-15 (PA) - Wellbore #1 - Gyro Surveys	100.00	13.46	9,511.82	9,511.67	10,000.000	CC
Lucci BC B 1-15 (PA) - Wellbore #1 - Gyro Surveys	2,008.77	1,950.08	9,516.45	9,502.84	699.419	ES
Lucci BC B 1-15 (PA) - Wellbore #1 - Gyro Surveys	4,200.00	3,743.29	9,991.19	9,963.45	360.075	SF
Lucci BC B 1-16 (PA) - Wellbore #1 - Wellbore #1						Out of range
Lucci State B03-69HNL - Original Drilling - Original Drilling	6,683.00	13,201.48	358.20	197.07	2.223	CC
Lucci State B03-69HNL - Original Drilling - Original Drilling	6,750.00	13,205.11	367.57	188.54	2.053	ES
Lucci State B03-69HNL - Original Drilling - Original Drilling	6,800.00	13,206.16	386.05	197.79	2.051	SF
SLW Ranch B01-62-1HN - Original Drilling - As Drilled	4,884.90	11,286.02	8,281.28	8,185.79	86.729	CC
SLW Ranch B01-62-1HN - Original Drilling - As Drilled	4,900.00	11,286.02	8,281.29	8,185.74	86.670	ES
SLW Ranch B01-62-1HN - Original Drilling - As Drilled	7,000.00	11,286.02	8,689.28	8,584.66	83.051	SF
SLW Ranch B01-63-1HN - Original Drilling - As Drilled	4,823.06	11,250.02	7,882.64	7,797.46	92.542	CC, ES
SLW Ranch B01-63-1HN - Original Drilling - As Drilled	8,000.00	11,250.02	8,909.80	8,807.63	87.202	SF
SLW Ranch B01-64-1HN - Original Drilling - As Drilled	4,886.84	11,274.02	7,561.86	7,485.32	98.793	CC
SLW Ranch B01-64-1HN - Original Drilling - As Drilled	4,900.00	11,274.02	7,561.87	7,485.28	98.729	ES
SLW Ranch B01-64-1HN - Original Drilling - As Drilled	9,200.00	11,274.02	9,287.52	9,183.24	89.064	SF
SLW Ranch B01-66-1HN - Original Drilling - Original Drill	4,863.42	11,201.02	7,008.08	6,932.47	92.695	CC
SLW Ranch B01-66-1HN - Original Drilling - Original Drill	4,900.00	11,201.02	7,008.17	6,932.39	92.485	ES
SLW Ranch B01-66-1HN - Original Drilling - Original Drill	10,000.00	11,201.02	8,958.18	8,839.89	75.727	SF
SLW Ranch B01-67-1HN - Original Drilling - As Drilled - S	4,832.93	11,165.02	6,797.18	6,736.12	111.322	CC, ES
SLW Ranch B01-67-1HN - Original Drilling - As Drilled - S	11,100.00	11,165.02	9,248.68	9,128.77	77.126	SF
SLW Ranch B01-68-1HN - Original Drilling - Original Drill	4,779.82	11,204.02	6,638.30	6,593.33	147.619	CC
SLW Ranch B01-68-1HN - Original Drilling - Original Drill	4,800.00	11,204.02	6,638.33	6,593.27	147.315	ES
SLW Ranch B01-68-1HN - Original Drilling - Original Drill	11,000.00	11,204.02	8,736.81	8,660.68	114.757	SF
SLW Ranch B01-69-1HN - Original Drilling - As Drilled	4,727.01	11,247.02	6,548.52	6,501.79	140.121	CC, ES
SLW Ranch B01-69-1HN - Original Drilling - As Drilled	12,600.00	11,247.02	9,377.51	9,258.55	78.830	SF
SLW Ranch B12-69-1HN - Wellbore #1 - Wellbore #1- As						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 A34-725
Project:	Wells Ranch	TVD Reference:	KB @ 4680.00ft
Reference Site:	A Section 35	MD Reference:	KB @ 4680.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Reveille A34-725	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Reveille A34-725 OH	Database:	EDMP
Reference Design:	APD - Rev 1	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
B Section 02						
Baker B02-04 - Wellbore #1 - Original Drilling - As Drilled	100.00	55.36	938.82	938.60	4,195.093	CC
Baker B02-04 - Wellbore #1 - Original Drilling - As Drilled	1,800.00	1,751.44	948.45	936.27	77.917	ES
Baker B02-04 - Wellbore #1 - Original Drilling - As Drilled	6,500.00	6,296.78	1,901.57	1,855.73	41.478	SF
Baker B02-05 - Wellbore #1 - Wellbore #1-As Drilled	1,917.41	1,876.51	2,378.38	2,365.34	182.448	CC
Baker B02-05 - Wellbore #1 - Wellbore #1-As Drilled	2,100.00	2,054.37	2,378.93	2,364.63	166.361	ES
Baker B02-05 - Wellbore #1 - Wellbore #1-As Drilled	6,450.00	6,201.69	2,891.72	2,845.87	63.062	SF
Bucklen 01-02 - Wellbore #1 - Wellbore #1- As Drilled	2,002.88	1,934.37	5,029.62	5,016.06	370.900	CC
Bucklen 01-02 - Wellbore #1 - Wellbore #1- As Drilled	3,000.00	2,920.39	5,029.81	5,009.29	245.083	ES
Bucklen 01-02 - Wellbore #1 - Wellbore #1- As Drilled	6,650.00	6,378.52	5,275.58	5,228.25	111.464	SF
Bucklen B02-12 - Wellbore #1 - Wellbore #1-As drilled	1,972.00	1,917.37	3,564.48	3,551.10	266.304	CC
Bucklen B02-12 - Wellbore #1 - Wellbore #1-As drilled	2,100.00	2,025.29	3,564.84	3,550.63	250.862	ES
Bucklen B02-12 - Wellbore #1 - Wellbore #1-As drilled	6,550.00	6,203.85	3,920.31	3,873.98	84.619	SF
Buckmur B02-14 - Wellbore #1 - Wellbore #1- As Drilled	1,605.62	1,541.68	5,198.33	5,187.58	483.771	CC
Buckmur B02-14 - Wellbore #1 - Wellbore #1- As Drilled	1,800.00	1,700.32	5,199.09	5,187.10	433.550	ES
Buckmur B02-14 - Wellbore #1 - Wellbore #1- As Drilled	6,650.00	6,195.74	5,832.41	5,785.99	125.644	SF
Buckmur B02-25 - Wellbore #1 - Wellbore #1- As Drilled	2,309.46	2,325.21	4,295.15	4,279.20	269.288	CC
Buckmur B02-25 - Wellbore #1 - Wellbore #1- As Drilled	2,400.00	2,413.81	4,295.42	4,278.84	259.162	ES
Buckmur B02-25 - Wellbore #1 - Wellbore #1- As Drilled	6,650.00	6,377.29	4,787.54	4,740.34	101.421	SF
Cougar B02-67-1HN - Original Drilling - Original Drilling -	100.00	84.37	898.27	898.01	3,385.084	CC
Cougar B02-67-1HN - Original Drilling - Original Drilling -	500.00	478.18	899.36	896.70	337.696	ES
Cougar B02-67-1HN - Original Drilling - Original Drilling -	6,300.00	5,793.82	2,309.84	2,268.45	55.802	SF
Cougar B02-68-1HN - Original Drilling - Original Drilling -	100.00	81.74	917.05	916.79	3,567.121	CC
Cougar B02-68-1HN - Original Drilling - Original Drilling -	200.00	179.04	917.45	916.67	1,188.401	ES
Cougar B02-68-1HN - Original Drilling - Original Drilling -	6,200.00	6,011.00	1,976.67	1,936.82	49.604	SF
Cougar B02-69-1HN - Original Drilling - Original Drilling -	2,749.46	2,855.34	821.56	804.66	48.604	CC, ES
Cougar B02-69-1HN - Original Drilling - Original Drilling -	5,300.00	5,185.08	1,366.95	1,334.23	41.774	SF
Foe A35-73HN - Original Drilling - Original Drilling - As Dr	1,641.33	1,595.39	3,432.82	3,424.00	389.322	CC, ES
Foe A35-73HN - Original Drilling - Original Drilling - As Dr	11,800.00	11,176.02	4,956.19	4,820.86	36.623	SF
Foe B02-02 - Wellbore #1 - Wellbore #1- As Drilled	1,068.24	999.26	3,115.91	3,109.00	450.733	CC
Foe B02-02 - Wellbore #1 - Wellbore #1- As Drilled	1,600.00	1,507.58	3,117.19	3,106.60	294.309	ES
Foe B02-02 - Wellbore #1 - Wellbore #1- As Drilled	6,950.00	6,605.53	4,431.03	4,383.11	92.474	SF
Foe B02-07 - Wellbore #1 - Wellbore #1-As Drilled	100.00	26.47	3,625.34	3,625.17	10,000.000	CC
Foe B02-07 - Wellbore #1 - Wellbore #1-As Drilled	2,100.00	2,073.20	3,630.98	3,616.62	252.883	ES
Foe B02-07 - Wellbore #1 - Wellbore #1-As Drilled	6,750.00	6,412.65	4,766.10	4,719.18	101.567	SF
Foemeyer B02-17 - Original Drilling - Original Drilling - As	439.40	373.40	3,770.19	3,767.72	1,525.570	CC
Foemeyer B02-17 - Original Drilling - Original Drilling - As	2,037.13	2,014.31	3,772.33	3,758.41	270.927	ES
Foemeyer B02-17 - Original Drilling - Original Drilling - As	6,950.00	6,492.22	4,996.02	4,948.60	105.368	SF
Fritzler B02-03 - Wellbore #1 - Original Drilling	2,000.00	1,932.00	2,016.40	1,970.83	44.242	CC
Fritzler B02-03 - Wellbore #1 - Original Drilling	2,100.00	2,031.98	2,017.91	1,969.98	42.105	ES
Fritzler B02-03 - Wellbore #1 - Original Drilling	6,900.00	6,535.18	3,285.18	3,129.62	21.117	SF
Fritzler B02-06 - Original Drilling - Original Drilling	2,000.00	1,937.00	2,654.84	2,609.16	58.123	CC
Fritzler B02-06 - Original Drilling - Original Drilling	2,100.00	2,036.98	2,655.68	2,607.66	55.298	ES
Fritzler B02-06 - Original Drilling - Original Drilling	6,600.00	6,327.36	3,514.46	3,363.35	23.256	SF
Fritzler B2-19 - Original Drilling - Original Drilling	2,000.00	1,949.00	1,644.89	1,598.98	35.824	CC
Fritzler B2-19 - Original Drilling - Original Drilling	2,100.00	2,048.98	1,645.69	1,597.42	34.097	ES
Fritzler B2-19 - Original Drilling - Original Drilling	6,450.00	6,206.13	2,489.03	2,340.95	16.809	SF
Lonewolf B02-65HC - Original Drilling - As Drilled	4,669.94	4,745.17	2,995.58	2,963.06	92.109	CC, ES
Lonewolf B02-65HC - Original Drilling - As Drilled	4,450.00	4,251.01	3,148.29	3,103.11	69.689	SF
Lonewolf B02-65HC - Original Drilling - ST01 - ST01 As D	4,669.87	4,745.12	2,994.86	2,961.84	90.698	CC, ES
Lonewolf B02-65HC - Original Drilling - ST01 - ST01 As D	6,450.00	6,251.01	3,147.65	3,101.95	68.880	SF
Lonewolf B02-65HC - Wellbore #3 - Wellbore #3	4,669.94	4,745.17	2,995.58	2,963.06	92.108	CC, ES
Lonewolf B02-65HC - Wellbore #3 - Wellbore #3	6,450.00	6,251.01	3,148.29	3,103.11	69.688	SF
M&M 02-23 - Wellbore #1 - Wellbore #1- As Drilled	2,936.50	4,032.25	5,977.97	5,951.65	227.168	CC

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

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Reveille A34-725
Project:	Wells Ranch	TVD Reference:	KB @ 4680.00ft
Reference Site:	A Section 35	MD Reference:	KB @ 4680.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Reveille A34-725	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Reveille A34-725 OH	Database:	EDMP
Reference Design:	APD - Rev 1	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	3,000.00	4,077.52	5,978.09	5,951.30	223.154	ES
M&M 02-23 - Wellbore #1 - Wellbore #1- As Drilled	6,700.00	6,400.01	6,508.25	6,457.83	129.099	SF
Meyer B02-01 - Original Drilling - Original Drilling - As Drill	1,557.67	1,485.68	4,392.30	4,381.93	423.835	CC
Meyer B02-01 - Original Drilling - Original Drilling - As Drill	2,000.00	1,917.12	4,393.81	4,380.36	326.559	ES
Meyer B02-01 - Original Drilling - Original Drilling - As Drill	7,100.00	6,518.17	5,733.75	5,686.15	120.460	SF
Meyer B02-08 - Wellbore #1 - Wellbore #1-As Drilled	439.57	366.57	4,828.98	4,826.53	1,971.921	CC
Meyer B02-08 - Wellbore #1 - Wellbore #1-As Drilled	2,000.00	1,916.39	4,835.81	4,822.35	359.406	ES
Meyer B02-08 - Wellbore #1 - Wellbore #1-As Drilled	7,000.00	6,500.01	6,110.71	6,063.15	128.499	SF
Meyer B02-09 - Wellbore #1 - Wellbore #1-As Drilled	2,058.45	2,063.91	5,536.18	5,521.98	390.052	CC
Meyer B02-09 - Wellbore #1 - Wellbore #1-As Drilled	2,100.00	2,111.15	5,536.38	5,521.87	381.717	ES
Meyer B02-09 - Wellbore #1 - Wellbore #1-As Drilled	6,900.00	6,412.97	6,687.30	6,640.03	141.486	SF
Meyer B02-16 (PA) - Wellbore #1 - Gyro Surveys	100.00	12.95	6,453.09	6,452.94	10,000.000	CC
Meyer B02-16 (PA) - Wellbore #1 - Gyro Surveys	2,010.17	1,944.31	6,456.88	6,443.29	475.010	ES
Meyer B02-16 (PA) - Wellbore #1 - Gyro Surveys	6,800.00	6,357.01	7,456.32	7,409.25	158.421	SF
Pherson 02-02 - Wellbore #1 - Wellbore #1-As Drilled	1,576.06	1,522.07	3,900.16	3,889.60	369.317	CC
Pherson 02-02 - Wellbore #1 - Wellbore #1-As Drilled	2,100.00	2,076.65	3,900.55	3,886.19	271.521	ES
Pherson 02-02 - Wellbore #1 - Wellbore #1-As Drilled	6,600.00	6,293.87	4,579.68	4,533.10	98.322	SF
Trebor B02-10 - Wellbore #1 - Wellbore #1 - As Drilled	2,008.94	1,952.73	4,444.19	4,430.35	321.121	CC, ES
Trebor B02-10 - Wellbore #1 - Wellbore #1 - As Drilled	6,650.00	6,200.01	5,471.67	5,425.56	118.646	SF
Trebor B02-15 - Wellbore #1 - Wellbore #1- As Drilled	1,853.24	1,783.30	5,552.71	5,540.25	445.388	CC
Trebor B02-15 - Wellbore #1 - Wellbore #1- As Drilled	2,000.00	1,916.25	5,552.88	5,539.42	412.656	ES
Trebor B02-15 - Wellbore #1 - Wellbore #1- As Drilled	6,750.00	6,912.65	6,382.99	6,333.77	129.678	SF
Wolfpack B02-62-1HN - Original Drilling - Original Drilling	807.00	758.02	4,164.70	4,160.26	938.545	CC, ES
Wolfpack B02-62-1HN - Original Drilling - Original Drilling	6,550.00	6,550.00	5,064.58	5,017.58	107.751	SF
Wolfpack B02-63-1HN - Original Drilling - Original Drilling	668.99	619.99	4,142.18	4,138.43	1,103.257	CC
Wolfpack B02-63-1HN - Original Drilling - Original Drilling	700.00	643.63	4,142.21	4,138.30	1,060.137	ES
Wolfpack B02-63-1HN - Original Drilling - Original Drilling	6,550.00	6,151.13	4,696.75	4,652.05	105.053	SF
Wolfpack B02-64-1HN - Original Drilling - Original Drilling	4,708.41	4,629.41	3,892.27	3,859.71	119.523	CC
Wolfpack B02-64-1HN - Original Drilling - Original Drilling	4,800.00	4,687.28	3,892.71	3,859.57	117.471	ES
Wolfpack B02-64-1HN - Original Drilling - Original Drilling	6,900.00	6,900.00	4,301.27	4,252.98	89.067	SF
Wolfpack B02-65-1HN - Original Drilling - Original Drilling	5,004.73	5,066.01	3,297.22	3,263.06	96.535	CC, ES
Wolfpack B02-65-1HN - Original Drilling - Original Drilling	6,400.00	6,062.01	3,414.23	3,370.94	78.868	SF
Wolfpack B02-65HN - Original Drilling - Original Drilling	4,125.24	4,211.01	2,979.68	2,951.69	106.452	CC, ES
Wolfpack B02-65HN - Original Drilling - Original Drilling	6,400.00	6,109.01	3,188.94	3,145.42	73.282	SF
Wolfpack B02-66-1HN - Original Drilling - Original Drilling	5,461.75	5,554.30	2,661.32	2,622.51	68.566	CC
Wolfpack B02-66-1HN - Original Drilling - Original Drilling	5,500.00	5,575.08	2,661.46	2,622.41	68.162	ES
Wolfpack B02-66-1HN - Original Drilling - Original Drilling	6,350.00	6,131.51	2,727.17	2,682.83	61.505	SF
Wolfpack PC B03-63-1HN - Original Drilling - Original Dri	100.00	50.25	4,121.22	4,121.01	10,000.000	CC
Wolfpack PC B03-63-1HN - Original Drilling - Original Dri	1,600.00	1,498.67	4,130.27	4,107.91	184.670	ES
Wolfpack PC B03-63-1HN - Original Drilling - Original Dri	6,300.00	5,047.62	4,544.54	4,462.84	55.622	SF

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

Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Reveille A34-725
Project:	Wells Ranch	TVD Reference:	KB @ 4680.00ft
Reference Site:	A Section 35	MD Reference:	KB @ 4680.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Reveille A34-725	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Reveille A34-725 OH	Database:	EDMP
Reference Design:	APD - Rev 1	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	6,007.94	5,757.75	3,749.16	3,706.45	87.780	CC
Annie B3-9 - Wellbore #1 - Wellbore #1- As Drilled	6,231.44	5,994.33	3,749.68	3,705.19	84.282	ES
Annie B3-9 - Wellbore #1 - Wellbore #1- As Drilled	6,650.00	6,650.00	3,872.25	3,823.99	80.232	SF
Clemons 2-3 - Wellbore #1 - Wellbore #1- As Drilled	6,446.72	6,224.35	1,556.25	1,511.13	34.490	CC
Clemons 2-3 - Wellbore #1 - Wellbore #1- As Drilled	6,450.00	6,227.07	1,556.26	1,511.12	34.473	ES
Clemons 2-3 - Wellbore #1 - Wellbore #1- As Drilled	6,600.00	6,351.27	1,572.94	1,526.80	34.086	SF
Clemons 42-3 - Wellbore #1 - Wellbore #1- As Drilled	6,206.82	5,975.33	2,430.67	2,386.34	54.843	CC
Clemons 42-3 - Wellbore #1 - Wellbore #1- As Drilled	6,231.25	5,995.11	2,430.69	2,386.20	54.630	ES
Clemons 42-3 - Wellbore #1 - Wellbore #1- As Drilled	6,450.00	6,200.75	2,467.80	2,421.70	53.539	SF
Schoenleber 16-3 - Wellbore #1 - Wellbore #1- As Drilled	6,053.26	5,754.12	4,696.86	4,653.96	109.492	CC
Schoenleber 16-3 - Wellbore #1 - Wellbore #1- As Drilled	6,231.25	5,916.14	4,697.58	4,653.35	106.227	ES
Schoenleber 16-3 - Wellbore #1 - Wellbore #1- As Drilled	6,600.00	6,180.29	4,802.85	4,756.35	103.285	SF
Sitzman 03-01 - Wellbore #1 - Wellbore #1- As Drilled	6,284.57	6,000.01	4,971.66	4,927.14	111.661	CC, ES
Sitzman 03-01 - Wellbore #1 - Wellbore #1- As Drilled	6,750.00	6,750.00	5,134.08	5,085.39	105.443	SF
B Section 04						
Bauer 1 (PA) - Wellbore #1 - No Surveys	6,711.22	6,427.40	9,030.63	8,877.94	59.144	CC
Bauer 1 (PA) - Wellbore #1 - No Surveys	6,750.00	6,455.91	9,031.20	8,877.84	58.888	ES
Bauer 1 (PA) - Wellbore #1 - No Surveys	7,250.00	6,653.79	9,095.88	8,937.51	57.433	SF
Bauer 2 (PA) - Wellbore #1 - No Surveys	6,674.29	6,395.97	6,419.13	6,339.27	80.386	CC, ES
Bauer 2 (PA) - Wellbore #1 - No Surveys	7,200.00	6,647.50	6,499.36	6,416.13	78.086	SF
Bauer 21-4 (PR) - Wellbore #1 - Gyro Surveys	6,701.75	6,422.14	7,724.97	7,678.56	166.463	CC, ES
Bauer 21-4 (PR) - Wellbore #1 - Gyro Surveys	11,600.00	6,622.87	9,642.80	9,576.64	145.746	SF

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Noble Energy, Inc.
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Reveille A34-725
Project:	Wells Ranch	TVD Reference:	KB @ 4680.00ft
Reference Site:	A Section 35	MD Reference:	KB @ 4680.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Reveille A34-725	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Reveille A34-725 OH	Database:	EDMP
Reference Design:	APD - Rev 1	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	6,526.70	16,156.48	5,218.16	5,058.06	32.593	CC
Snowmass 10N (DG) - Wellbore #1 - Permitted-PDC	6,550.00	16,156.48	5,218.55	5,057.90	32.485	ES
Snowmass 10N (DG) - Wellbore #1 - Permitted-PDC	7,900.00	16,156.48	5,930.35	5,735.56	30.445	SF
Snowmass 1C (DG) - Wellbore #1 - Permitted-PDC	6,757.54	14,787.56	4,382.27	4,316.10	66.218	CC
Snowmass 1C (DG) - Wellbore #1 - Permitted-PDC	6,800.00	14,787.56	4,383.22	4,315.66	64.882	ES
Snowmass 1C (DG) - Wellbore #1 - Permitted-PDC	10,300.00	14,787.56	6,006.43	5,819.80	32.183	SF
Snowmass 2N (DG) - Wellbore #1 - Permitted-PDC	6,699.84	14,729.08	4,434.63	4,356.96	57.094	CC
Snowmass 2N (DG) - Wellbore #1 - Permitted-PDC	6,750.00	14,729.08	4,436.01	4,356.71	55.942	ES
Snowmass 2N (DG) - Wellbore #1 - Permitted-PDC	9,900.00	14,729.08	5,938.23	5,754.19	32.266	SF
Snowmass 3N (DG) - Wellbore #1 - Permitted-PDC	6,665.41	15,299.73	4,478.22	4,390.41	51.001	CC
Snowmass 3N (DG) - Wellbore #1 - Permitted-PDC	6,700.00	15,299.73	4,478.89	4,389.92	50.340	ES
Snowmass 3N (DG) - Wellbore #1 - Permitted-PDC	9,800.00	15,299.73	6,005.24	5,810.14	30.781	SF
Snowmass 4N (DG) - Wellbore #1 - Permitted-PDC	6,648.06	15,736.33	4,550.78	4,451.21	45.705	CC
Snowmass 4N (DG) - Wellbore #1 - Permitted-PDC	6,700.00	15,736.33	4,552.37	4,451.04	44.923	ES
Snowmass 4N (DG) - Wellbore #1 - Permitted-PDC	9,600.00	15,736.33	6,035.21	5,835.40	30.204	SF
Snowmass 5N (DG) - Wellbore #1 - Permitted-PDC	6,614.43	15,406.96	4,625.22	4,516.98	42.733	CC
Snowmass 5N (DG) - Wellbore #1 - Permitted-PDC	6,650.00	15,406.96	4,625.99	4,516.67	42.316	ES
Snowmass 5N (DG) - Wellbore #1 - Permitted-PDC	9,300.00	15,406.96	5,994.61	5,801.01	30.964	SF
Snowmass 6N (DG) - Wellbore #1 - Permitted-PDC	6,598.42	15,878.12	4,735.18	4,613.87	39.033	CC
Snowmass 6N (DG) - Wellbore #1 - Permitted-PDC	6,600.00	15,878.12	4,735.18	4,613.82	39.018	ES
Snowmass 6N (DG) - Wellbore #1 - Permitted-PDC	9,000.00	15,878.12	5,983.43	5,786.90	30.445	SF
Snowmass 7N (DG) - Wellbore #1 - Permitted-PDC	6,568.29	15,556.58	4,826.03	4,697.16	37.447	CC
Snowmass 7N (DG) - Wellbore #1 - Permitted-PDC	6,600.00	15,556.58	4,826.69	4,696.96	37.207	ES
Snowmass 7N (DG) - Wellbore #1 - Permitted-PDC	8,800.00	15,556.58	6,006.39	5,813.32	31.110	SF
Snowmass 8N (DG) - Wellbore #1 - Permitted-PDC	6,562.34	16,001.51	4,928.83	4,790.07	35.520	CC
Snowmass 8N (DG) - Wellbore #1 - Permitted-PDC	6,600.00	16,001.51	4,929.78	4,790.01	35.271	ES
Snowmass 8N (DG) - Wellbore #1 - Permitted-PDC	8,600.00	16,001.51	6,018.48	5,821.80	30.600	SF
Snowmass 9N (DG) - Wellbore #1 - Permitted-PDC	6,535.22	15,681.01	5,055.68	4,907.49	34.118	CC
Snowmass 9N (DG) - Wellbore #1 - Permitted-PDC	6,550.00	15,681.01	5,055.83	4,907.29	34.039	ES
Snowmass 9N (DG) - Wellbore #1 - Permitted-PDC	8,200.00	15,681.01	5,930.64	5,739.03	30.952	SF

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