

Project: Wells Ranch  
Site: A Section 35  
Well: Reveille A35-783  
Wellbore: Reveille A35-783 OH  
Design: APD - Rev 1

# Northern Region - DJ Basin

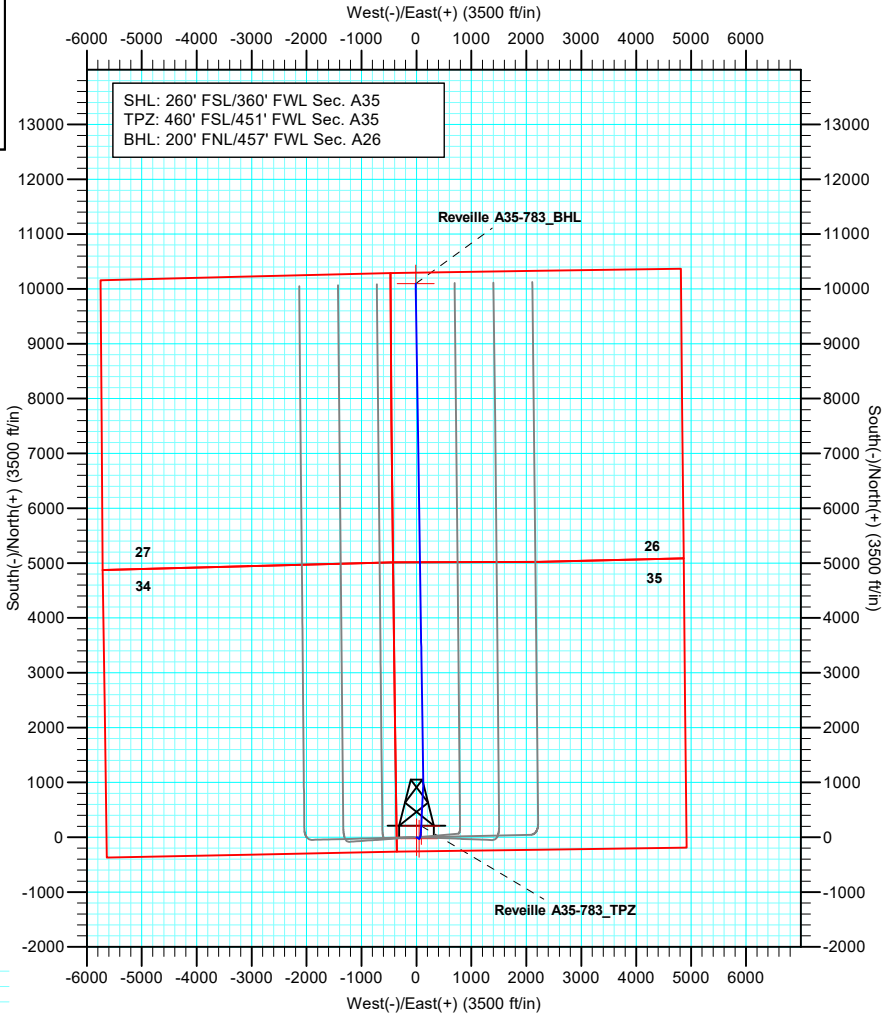
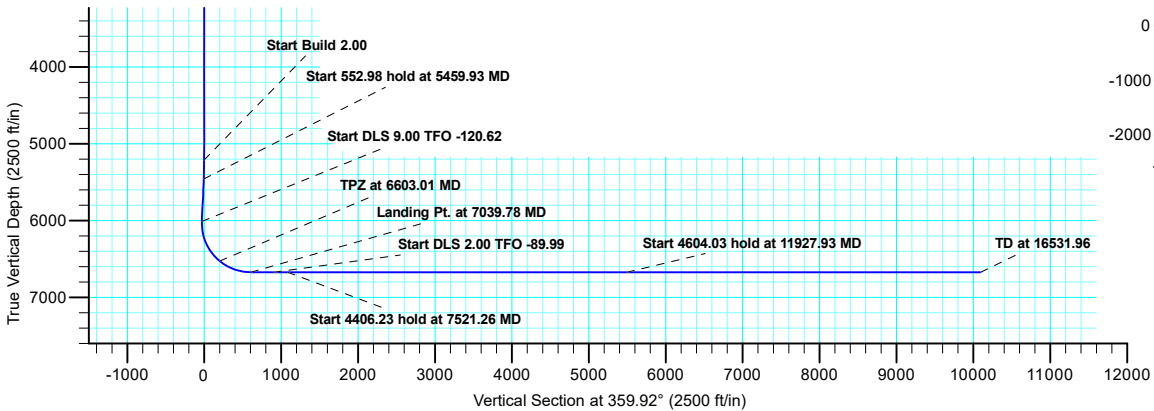
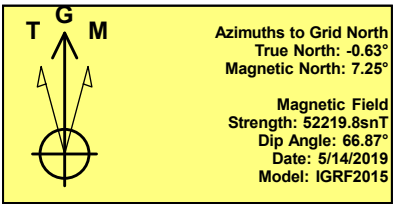
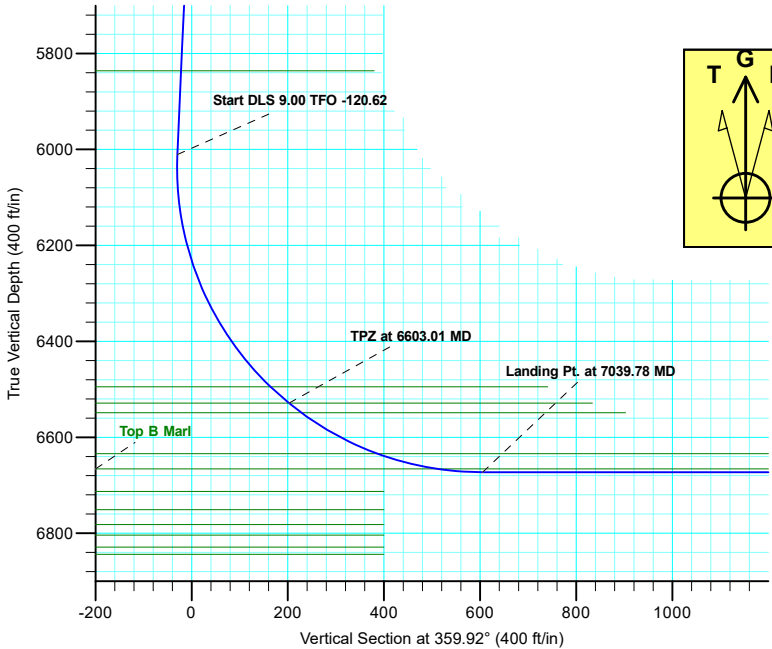
Geodetic System: US State Plane 1983  
Datum: North American Datum 1983  
Ellipsoid: GRS 1980  
Zone: Colorado Northern Zone  
System Datum: Mean Sea Level

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	5210.00	0.00	0.00	5210.00	0.00	0.00	0.00	0.00	0.00
3	5459.93	5.00	119.95	5459.62	-5.44	9.44	2.00	119.95	-5.45
4	6012.91	5.00	119.95	6010.49	-29.49	51.19	0.00	0.00	-29.56
5	6603.01	50.69	2.76	6529.00	202.55	87.06	9.00	-120.62	202.43
6	7039.78	90.00	2.76	6673.05	605.39	106.48	9.00	0.00	605.25
7	7339.78	90.00	2.76	6673.05	905.04	120.93	0.00	0.00	904.88
8	7521.26	90.00	359.13	6673.05	1086.46	123.92	2.00	-89.99	1086.30
9	11927.48	90.00	359.13	6673.00	5492.18	57.06	0.00	0.00	5492.10
10	11927.93	90.00	359.12	6673.00	5492.63	57.05	2.00	-93.96	5492.55
11	16531.96	90.00	359.12	6673.00	10096.12	-13.53	0.00	0.00	10096.13

WELL DETAILS: Reveille A35-783

+N/-S	+E/-W	Ground Level: Northing	Ground Level: Easting	Ground Level: Latitude	Ground Level: Longitude	Slot
0.00	0.00	1403285.92	3271263.00	40.4363300	-104.5254800	



Plan: APD - Rev 1 (Reveille A35-783/Reveille A35-783 OH)

Created By: Shelly C. Peterkin Date: 12:25, July 22 2019

# **Northern Region - DJ Basin**

**Wells Ranch**

**A Section 35**

**Reveille A35-783**

**Reveille A35-783 OH**

**Plan: APD - Rev 1**

## **Standard Planning Report**

**22 July, 2019**

# Noble Energy, Inc.

## Planning Report

<b>Database:</b>	EDMP	<b>Local Co-ordinate Reference:</b>	Well Reveille A35-783
<b>Company:</b>	Northern Region - DJ Basin	<b>TVD Reference:</b>	KB @ 4679.00ft
<b>Project:</b>	Wells Ranch	<b>MD Reference:</b>	KB @ 4679.00ft
<b>Site:</b>	A Section 35	<b>North Reference:</b>	Grid
<b>Well:</b>	Reveille A35-783	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Reveille A35-783 OH		
<b>Design:</b>	APD - Rev 1		

<b>Project</b>	Wells Ranch, Weld County Colorado		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Northern Zone		

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

<b>Well</b>	Reveille A35-783			
<b>Well Position</b>	<b>+N/-S</b>	-73.33 ft	<b>Northing:</b>	1,403,285.92 usft
	<b>+E/-W</b>	-2,679.97 ft	<b>Easting:</b>	3,271,263.01 usft
<b>Position Uncertainty</b>		0.00 ft	<b>Wellhead Elevation:</b>	0.00 ft
			<b>Ground Level:</b>	4,649.00 ft

<b>Wellbore</b>	Reveille A35-783 OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2015	5/14/2019	7.88	66.87	52,219.81766003

<b>Design</b>	APD - Rev 1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	359.92

<b>Plan Sections</b>										
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	
5,210.00	0.00	0.00	5,210.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,459.93	5.00	119.95	5,459.62	-5.44	9.44	2.00	2.00	0.00	119.95	
6,012.91	5.00	119.95	6,010.49	-29.49	51.19	0.00	0.00	0.00	0.00	
6,603.01	50.69	2.76	6,529.00	202.55	87.06	9.00	7.74	-19.86	-120.62	Reveille A35-783_TP;
7,039.78	90.00	2.76	6,673.05	605.39	106.48	9.00	9.00	0.00	0.00	
7,339.78	90.00	2.76	6,673.05	905.04	120.93	0.00	0.00	0.00	0.00	
7,521.26	90.00	359.13	6,673.05	1,086.46	123.92	2.00	0.00	-2.00	-89.99	
11,927.48	90.00	359.13	6,673.00	5,492.18	57.06	0.00	0.00	0.00	0.00	Reveille A35-783_IP
11,927.93	90.00	359.12	6,673.00	5,492.63	57.05	2.00	-0.14	-2.00	-93.96	
16,531.96	90.00	359.12	6,673.00	10,096.12	-13.53	0.00	0.00	0.00	0.00	Reveille A35-783_BH

# Noble Energy, Inc.

## Planning Report

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<b>Company:</b>	Northern Region - DJ Basin	<b>TVD Reference:</b>	KB @ 4679.00ft
<b>Project:</b>	Wells Ranch	<b>MD Reference:</b>	KB @ 4679.00ft
<b>Site:</b>	A Section 35	<b>North Reference:</b>	Grid
<b>Well:</b>	Reveille A35-783	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Reveille A35-783 OH		
<b>Design:</b>	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
247.00	0.00	0.00	247.00	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
414.00	0.00	0.00	414.00	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
1,457.00	0.00	0.00	1,457.00	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
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,508.00	0.00	0.00	3,508.00	0.00	0.00	0.00	0.00	0.00	0.00
Parkman									
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,204.00	0.00	0.00	4,204.00	0.00	0.00	0.00	0.00	0.00	0.00
Sussex									
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00

# Noble Energy, Inc.

## Planning Report

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<b>Company:</b>	Northern Region - DJ Basin	<b>TVD Reference:</b>	KB @ 4679.00ft
<b>Project:</b>	Wells Ranch	<b>MD Reference:</b>	KB @ 4679.00ft
<b>Site:</b>	A Section 35	<b>North Reference:</b>	Grid
<b>Well:</b>	Reveille A35-783	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Reveille A35-783 OH		
<b>Design:</b>	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)
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00
4,806.00	0.00	0.00	4,806.00	0.00	0.00	0.00	0.00	0.00	0.00
Shannon									
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00
5,210.00	0.00	0.00	5,210.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
5,300.00	1.80	119.95	5,299.99	-0.71	1.22	-0.71	2.00	2.00	0.00
5,400.00	3.80	119.95	5,399.86	-3.14	5.46	-3.15	2.00	2.00	0.00
5,459.93	5.00	119.95	5,459.62	-5.44	9.44	-5.45	2.00	2.00	0.00
Start 552.98 hold at 5459.93 MD									
5,500.00	5.00	119.95	5,499.53	-7.18	12.47	-7.20	0.00	0.00	0.00
5,600.00	5.00	119.95	5,599.15	-11.53	20.02	-11.56	0.00	0.00	0.00
5,700.00	5.00	119.95	5,698.77	-15.88	27.57	-15.92	0.00	0.00	0.00
5,800.00	5.00	119.95	5,798.39	-20.23	35.11	-20.28	0.00	0.00	0.00
5,837.75	5.00	119.95	5,836.00	-21.87	37.97	-21.93	0.00	0.00	0.00
Teepee Buttes									
5,900.00	5.00	119.95	5,898.01	-24.58	42.66	-24.64	0.00	0.00	0.00
6,000.00	5.00	119.95	5,997.63	-28.93	50.21	-29.00	0.00	0.00	0.00
6,012.91	5.00	119.95	6,010.49	-29.49	51.19	-29.56	0.00	0.00	0.00
Start DLS 9.00 TFO -120.62									
6,050.00	4.37	78.85	6,047.47	-30.03	53.98	-30.10	9.00	-1.69	-110.81
6,100.00	6.81	38.25	6,097.24	-27.33	57.68	-27.41	9.00	4.88	-81.20
6,150.00	10.68	22.72	6,146.66	-20.72	61.31	-20.81	9.00	7.74	-31.05
6,200.00	14.91	15.64	6,195.41	-10.25	64.84	-10.34	9.00	8.45	-14.17
6,250.00	19.26	11.66	6,243.19	4.02	68.24	3.93	9.00	8.70	-7.95
6,300.00	23.66	9.11	6,289.72	22.01	71.49	21.92	9.00	8.81	-5.10
6,350.00	28.09	7.33	6,334.69	43.61	74.59	43.51	9.00	8.87	-3.57
6,400.00	32.54	6.00	6,377.85	68.67	77.50	68.57	9.00	8.90	-2.66
6,450.00	37.00	4.96	6,418.91	97.05	80.20	96.94	9.00	8.92	-2.08
6,500.00	41.47	4.11	6,457.63	128.57	82.69	128.46	9.00	8.94	-1.69
6,550.00	45.94	3.40	6,493.76	163.03	84.94	162.92	9.00	8.95	-1.42
6,551.78	46.10	3.38	6,495.00	164.32	85.02	164.20	9.00	8.95	-1.30
Sharon Springs									
6,603.01	50.69	2.76	6,529.00	202.55	87.06	202.43	9.00	8.95	-1.21
TPZ at 6603.01 MD - Top A Chalk									
6,635.61	53.62	2.76	6,549.00	228.26	88.30	228.15	9.00	9.00	0.00
Top A Marl									
6,650.00	54.92	2.76	6,557.40	239.93	88.87	239.81	9.00	9.00	0.00
6,700.00	59.42	2.76	6,584.50	281.89	90.89	281.77	9.00	9.00	0.00
6,750.00	63.92	2.76	6,608.23	325.84	93.01	325.71	9.00	9.00	0.00
6,800.00	68.42	2.76	6,628.42	371.51	95.21	371.38	9.00	9.00	0.00
6,815.65	69.83	2.76	6,634.00	386.12	95.91	385.99	9.00	9.00	0.00
Top B Chalk									
6,850.00	72.92	2.76	6,644.97	418.62	97.48	418.49	9.00	9.00	0.00
6,900.00	77.42	2.76	6,657.76	466.89	99.81	466.76	9.00	9.00	0.00
6,944.96	81.47	2.76	6,666.00	511.03	101.93	510.90	9.00	9.00	0.00

# Noble Energy, Inc.

## Planning Report

<b>Database:</b>	EDMP	<b>Local Co-ordinate Reference:</b>	Well Reveille A35-783
<b>Company:</b>	Northern Region - DJ Basin	<b>TVD Reference:</b>	KB @ 4679.00ft
<b>Project:</b>	Wells Ranch	<b>MD Reference:</b>	KB @ 4679.00ft
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Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
<b>Top B Marl</b>									
6,950.00	81.92	2.76	6,666.73	516.01	102.17	515.87	9.00	9.00	0.00
7,000.00	86.42	2.76	6,671.81	565.68	104.57	565.54	9.00	9.00	0.00
7,039.78	90.00	2.76	6,673.05	605.39	106.48	605.25	9.00	9.00	0.00
<b>Landing Pt. at 7039.78 MD</b>									
7,100.00	90.00	2.76	6,673.05	665.54	109.38	665.39	0.00	0.00	0.00
7,200.00	90.00	2.76	6,673.05	765.42	114.20	765.27	0.00	0.00	0.00
7,300.00	90.00	2.76	6,673.05	865.31	119.01	865.15	0.00	0.00	0.00
7,339.78	90.00	2.76	6,673.05	905.04	120.93	904.88	0.00	0.00	0.00
<b>Start DLS 2.00 TFO -89.99</b>									
7,400.00	90.00	1.56	6,673.05	965.22	123.20	965.05	2.00	0.00	-2.00
7,500.00	90.00	359.56	6,673.05	1,065.21	124.17	1,065.04	2.00	0.00	-2.00
7,521.26	90.00	359.13	6,673.05	1,086.46	123.92	1,086.30	2.00	0.00	-2.00
<b>Start 4406.23 hold at 7521.26 MD</b>									
7,600.00	90.00	359.13	6,673.05	1,165.20	122.73	1,165.03	0.00	0.00	0.00
7,700.00	90.00	359.13	6,673.05	1,265.18	121.21	1,265.02	0.00	0.00	0.00
7,800.00	90.00	359.13	6,673.04	1,365.17	119.69	1,365.01	0.00	0.00	0.00
7,900.00	90.00	359.13	6,673.04	1,465.16	118.18	1,465.00	0.00	0.00	0.00
8,000.00	90.00	359.13	6,673.04	1,565.15	116.66	1,564.99	0.00	0.00	0.00
8,100.00	90.00	359.13	6,673.04	1,665.14	115.14	1,664.98	0.00	0.00	0.00
8,200.00	90.00	359.13	6,673.04	1,765.13	113.62	1,764.97	0.00	0.00	0.00
8,300.00	90.00	359.13	6,673.04	1,865.12	112.10	1,864.96	0.00	0.00	0.00
8,400.00	90.00	359.13	6,673.04	1,965.10	110.59	1,964.95	0.00	0.00	0.00
8,500.00	90.00	359.13	6,673.04	2,065.09	109.07	2,064.94	0.00	0.00	0.00
8,600.00	90.00	359.13	6,673.04	2,165.08	107.55	2,164.94	0.00	0.00	0.00
8,700.00	90.00	359.13	6,673.03	2,265.07	106.03	2,264.93	0.00	0.00	0.00
8,800.00	90.00	359.13	6,673.03	2,365.06	104.52	2,364.92	0.00	0.00	0.00
8,900.00	90.00	359.13	6,673.03	2,465.05	103.00	2,464.91	0.00	0.00	0.00
9,000.00	90.00	359.13	6,673.03	2,565.04	101.48	2,564.90	0.00	0.00	0.00
9,100.00	90.00	359.13	6,673.03	2,665.02	99.96	2,664.89	0.00	0.00	0.00
9,200.00	90.00	359.13	6,673.03	2,765.01	98.45	2,764.88	0.00	0.00	0.00
9,300.00	90.00	359.13	6,673.03	2,865.00	96.93	2,864.87	0.00	0.00	0.00
9,400.00	90.00	359.13	6,673.03	2,964.99	95.41	2,964.86	0.00	0.00	0.00
9,500.00	90.00	359.13	6,673.03	3,064.98	93.89	3,064.85	0.00	0.00	0.00
9,600.00	90.00	359.13	6,673.03	3,164.97	92.38	3,164.84	0.00	0.00	0.00
9,700.00	90.00	359.13	6,673.02	3,264.95	90.86	3,264.83	0.00	0.00	0.00
9,800.00	90.00	359.13	6,673.02	3,364.94	89.34	3,364.82	0.00	0.00	0.00
9,900.00	90.00	359.13	6,673.02	3,464.93	87.82	3,464.81	0.00	0.00	0.00
10,000.00	90.00	359.13	6,673.02	3,564.92	86.31	3,564.80	0.00	0.00	0.00
10,100.00	90.00	359.13	6,673.02	3,664.91	84.79	3,664.79	0.00	0.00	0.00
10,200.00	90.00	359.13	6,673.02	3,764.90	83.27	3,764.78	0.00	0.00	0.00
10,300.00	90.00	359.13	6,673.02	3,864.89	81.75	3,864.77	0.00	0.00	0.00
10,400.00	90.00	359.13	6,673.02	3,964.87	80.24	3,964.76	0.00	0.00	0.00
10,500.00	90.00	359.13	6,673.02	4,064.86	78.72	4,064.75	0.00	0.00	0.00
10,600.00	90.00	359.13	6,673.01	4,164.85	77.20	4,164.74	0.00	0.00	0.00
10,700.00	90.00	359.13	6,673.01	4,264.84	75.68	4,264.73	0.00	0.00	0.00
10,800.00	90.00	359.13	6,673.01	4,364.83	74.17	4,364.72	0.00	0.00	0.00
10,900.00	90.00	359.13	6,673.01	4,464.82	72.65	4,464.71	0.00	0.00	0.00
11,000.00	90.00	359.13	6,673.01	4,564.80	71.13	4,564.71	0.00	0.00	0.00
11,100.00	90.00	359.13	6,673.01	4,664.79	69.61	4,664.70	0.00	0.00	0.00
11,200.00	90.00	359.13	6,673.01	4,764.78	68.10	4,764.69	0.00	0.00	0.00
11,300.00	90.00	359.13	6,673.01	4,864.77	66.58	4,864.68	0.00	0.00	0.00
11,400.00	90.00	359.13	6,673.01	4,964.76	65.06	4,964.67	0.00	0.00	0.00

# Noble Energy, Inc.

## Planning Report

<b>Database:</b>	EDMP	<b>Local Co-ordinate Reference:</b>	Well Reveille A35-783
<b>Company:</b>	Northern Region - DJ Basin	<b>TVD Reference:</b>	KB @ 4679.00ft
<b>Project:</b>	Wells Ranch	<b>MD Reference:</b>	KB @ 4679.00ft
<b>Site:</b>	A Section 35	<b>North Reference:</b>	Grid
<b>Well:</b>	Reveille A35-783	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Reveille A35-783 OH		
<b>Design:</b>	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)
11,500.00	90.00	359.13	6,673.00	5,064.75	63.54	5,064.66	0.00	0.00	0.00
11,600.00	90.00	359.13	6,673.00	5,164.74	62.03	5,164.65	0.00	0.00	0.00
11,700.00	90.00	359.13	6,673.00	5,264.72	60.51	5,264.64	0.00	0.00	0.00
11,800.00	90.00	359.13	6,673.00	5,364.71	58.99	5,364.63	0.00	0.00	0.00
11,900.00	90.00	359.13	6,673.00	5,464.70	57.47	5,464.62	0.00	0.00	0.00
11,927.48	90.00	359.13	6,673.00	5,492.18	57.06	5,492.10	0.00	0.00	0.00
11,927.93	90.00	359.12	6,673.00	5,492.63	57.05	5,492.55	2.00	-0.14	-2.00
Start 4604.03 hold at 11927.93 MD									
12,000.00	90.00	359.12	6,673.00	5,564.69	55.95	5,564.61	0.00	0.00	0.00
12,100.00	90.00	359.12	6,673.00	5,664.68	54.41	5,664.60	0.00	0.00	0.00
12,200.00	90.00	359.12	6,673.00	5,764.67	52.88	5,764.59	0.00	0.00	0.00
12,300.00	90.00	359.12	6,673.00	5,864.65	51.35	5,864.58	0.00	0.00	0.00
12,400.00	90.00	359.12	6,673.00	5,964.64	49.81	5,964.57	0.00	0.00	0.00
12,500.00	90.00	359.12	6,673.00	6,064.63	48.28	6,064.56	0.00	0.00	0.00
12,600.00	90.00	359.12	6,673.00	6,164.62	46.75	6,164.55	0.00	0.00	0.00
12,700.00	90.00	359.12	6,673.00	6,264.61	45.21	6,264.54	0.00	0.00	0.00
12,800.00	90.00	359.12	6,673.00	6,364.60	43.68	6,364.53	0.00	0.00	0.00
12,900.00	90.00	359.12	6,673.00	6,464.58	42.15	6,464.52	0.00	0.00	0.00
13,000.00	90.00	359.12	6,673.00	6,564.57	40.62	6,564.51	0.00	0.00	0.00
13,100.00	90.00	359.12	6,673.00	6,664.56	39.08	6,664.50	0.00	0.00	0.00
13,200.00	90.00	359.12	6,673.00	6,764.55	37.55	6,764.49	0.00	0.00	0.00
13,300.00	90.00	359.12	6,673.00	6,864.54	36.02	6,864.48	0.00	0.00	0.00
13,400.00	90.00	359.12	6,673.00	6,964.53	34.48	6,964.47	0.00	0.00	0.00
13,500.00	90.00	359.12	6,673.00	7,064.51	32.95	7,064.46	0.00	0.00	0.00
13,600.00	90.00	359.12	6,673.00	7,164.50	31.42	7,164.45	0.00	0.00	0.00
13,700.00	90.00	359.12	6,673.00	7,264.49	29.88	7,264.44	0.00	0.00	0.00
13,800.00	90.00	359.12	6,673.00	7,364.48	28.35	7,364.43	0.00	0.00	0.00
13,900.00	90.00	359.12	6,673.00	7,464.47	26.82	7,464.42	0.00	0.00	0.00
14,000.00	90.00	359.12	6,673.00	7,564.45	25.29	7,564.41	0.00	0.00	0.00
14,100.00	90.00	359.12	6,673.00	7,664.44	23.75	7,664.40	0.00	0.00	0.00
14,200.00	90.00	359.12	6,673.00	7,764.43	22.22	7,764.39	0.00	0.00	0.00
14,300.00	90.00	359.12	6,673.00	7,864.42	20.69	7,864.38	0.00	0.00	0.00
14,400.00	90.00	359.12	6,673.00	7,964.41	19.15	7,964.37	0.00	0.00	0.00
14,500.00	90.00	359.12	6,673.00	8,064.40	17.62	8,064.36	0.00	0.00	0.00
14,600.00	90.00	359.12	6,673.00	8,164.38	16.09	8,164.36	0.00	0.00	0.00
14,700.00	90.00	359.12	6,673.00	8,264.37	14.55	8,264.35	0.00	0.00	0.00
14,800.00	90.00	359.12	6,673.00	8,364.36	13.02	8,364.34	0.00	0.00	0.00
14,900.00	90.00	359.12	6,673.00	8,464.35	11.49	8,464.33	0.00	0.00	0.00
15,000.00	90.00	359.12	6,673.00	8,564.34	9.96	8,564.32	0.00	0.00	0.00
15,100.00	90.00	359.12	6,673.00	8,664.33	8.42	8,664.31	0.00	0.00	0.00
15,200.00	90.00	359.12	6,673.00	8,764.31	6.89	8,764.30	0.00	0.00	0.00
15,300.00	90.00	359.12	6,673.00	8,864.30	5.36	8,864.29	0.00	0.00	0.00
15,400.00	90.00	359.12	6,673.00	8,964.29	3.82	8,964.28	0.00	0.00	0.00
15,500.00	90.00	359.12	6,673.00	9,064.28	2.29	9,064.27	0.00	0.00	0.00
15,600.00	90.00	359.12	6,673.00	9,164.27	0.76	9,164.26	0.00	0.00	0.00
15,700.00	90.00	359.12	6,673.00	9,264.25	-0.78	9,264.25	0.00	0.00	0.00
15,800.00	90.00	359.12	6,673.00	9,364.24	-2.31	9,364.24	0.00	0.00	0.00
15,900.00	90.00	359.12	6,673.00	9,464.23	-3.84	9,464.23	0.00	0.00	0.00
16,000.00	90.00	359.12	6,673.00	9,564.22	-5.37	9,564.22	0.00	0.00	0.00
16,100.00	90.00	359.12	6,673.00	9,664.21	-6.91	9,664.21	0.00	0.00	0.00
16,200.00	90.00	359.12	6,673.00	9,764.20	-8.44	9,764.20	0.00	0.00	0.00
16,300.00	90.00	359.12	6,673.00	9,864.18	-9.97	9,864.19	0.00	0.00	0.00
16,400.00	90.00	359.12	6,673.00	9,964.17	-11.51	9,964.18	0.00	0.00	0.00
16,500.00	90.00	359.12	6,673.00	10,064.16	-13.04	10,064.17	0.00	0.00	0.00

# Noble Energy, Inc.

## Planning Report

<b>Database:</b>	EDMP	<b>Local Co-ordinate Reference:</b>	Well Reveille A35-783
<b>Company:</b>	Northern Region - DJ Basin	<b>TVD Reference:</b>	KB @ 4679.00ft
<b>Project:</b>	Wells Ranch	<b>MD Reference:</b>	KB @ 4679.00ft
<b>Site:</b>	A Section 35	<b>North Reference:</b>	Grid
<b>Well:</b>	Reveille A35-783	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Reveille A35-783 OH		
<b>Design:</b>	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)
16,531.96	90.00	359.12	6,673.00	10,096.12	-13.53	10,096.13	0.00	0.00	0.00
TD at 16531.96									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
Reveille A35-783_SHL	0.00	0.00	0.00	0.00	0.00	1,403,285.92	3,271,263.01	40.4363300	-104.5254800
- plan hits target center									
- Point									
Reveille A35-783_KOP	0.00	0.00	6,010.49	-29.49	51.19	1,403,256.43	3,271,314.19	40.4362475	-104.5252973
- plan hits target center									
- Point									
Reveille A35-783_TPZ	0.00	0.00	6,529.00	202.55	87.06	1,403,488.47	3,271,350.07	40.4368833	-104.5251592
- plan hits target center									
- Point									
Reveille A35-783_BHL	0.00	0.00	6,673.00	10,096.12	-13.53	1,413,382.02	3,271,249.48	40.4640423	-104.5251298
- plan hits target center									
- Point									

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
247.00	247.00	Pierre				
414.00	414.00	Upper Pierre Aquifer Top				
1,457.00	1,457.00	Upper Pierre Aquifer Base				
3,508.00	3,508.00	Parkman				
4,204.00	4,204.00	Sussex				
4,806.00	4,806.00	Shannon				
5,837.75	5,836.00	Teepee Buttes				
6,551.78	6,495.00	Sharon Springs				
6,603.01	6,529.00	Top A Chalk				
6,635.61	6,549.00	Top A Marl				
6,815.65	6,634.00	Top B Chalk				
6,944.96	6,666.00	Top B Marl				



# Noble Energy, Inc.

## Planning Report

<b>Database:</b>	EDMP	<b>Local Co-ordinate Reference:</b>	Well Reveille A35-783
<b>Company:</b>	Northern Region - DJ Basin	<b>TVD Reference:</b>	KB @ 4679.00ft
<b>Project:</b>	Wells Ranch	<b>MD Reference:</b>	KB @ 4679.00ft
<b>Site:</b>	A Section 35	<b>North Reference:</b>	Grid
<b>Well:</b>	Reveille A35-783	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Reveille A35-783 OH		
<b>Design:</b>	APD - Rev 1		

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
5,210.00	5,210.00	0.00	0.00	Start Build 2.00
5,459.93	5,459.62	-5.44	9.44	Start 552.98 hold at 5459.93 MD
6,012.91	6,010.49	-29.49	51.19	Start DLS 9.00 TFO -120.62
6,603.01	6,529.00	202.55	87.06	TPZ at 6603.01 MD
7,039.78	6,673.05	605.39	106.48	Landing Pt. at 7039.78 MD
7,339.78	6,673.05	905.04	120.93	Start DLS 2.00 TFO -89.99
7,521.26	6,673.05	1,086.46	123.92	Start 4406.23 hold at 7521.26 MD
11,927.93	6,673.00	5,492.63	57.05	Start 4604.03 hold at 11927.93 MD
16,531.96	6,673.00	10,096.12	-13.53	TD at 16531.96

# **Northern Region - DJ Basin**

**Wells Ranch**

**A Section 35**

**Reveille A35-783**

**Reveille A35-783 OH**

**APD - Rev 1**

## **Anticollision Summary Report**

**22 July, 2019**

**Noble Energy, Inc.**  
Anticollision Summary Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Reveille A35-783
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	KB @ 4679.00ft
<b>Reference Site:</b>	A Section 35	<b>MD Reference:</b>	KB @ 4679.00ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Reveille A35-783	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Reveille A35-783 OH	<b>Database:</b>	EDMP
<b>Reference Design:</b>	APD - Rev 1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>	APD - Rev 1		
<b>Filter type:</b>	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
<b>Interpolation Method:</b>	MD + Stations Interval 100.00ft	<b>Error Model:</b>	ISCWSA
<b>Depth Range:</b>	Unlimited	<b>Scan Method:</b>	Closest Approach 3D
<b>Results Limited by:</b>	Maximum center-center distance of 10,000.00 ft	<b>Error Surface:</b>	Pedal Curve
<b>Warning Levels Evaluated at:</b>	2.00 Sigma	<b>Casing Method:</b>	Not applied

<b>Survey Tool Program</b>	<b>Date</b>	7/22/2019		
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.00	16,531.96	APD - Rev 1 (Reveille A35-783 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	16,531.96	6,754.96	9,035.94	8,928.93	84.440	CC, ES, SF
Culbreath 33-21 (PA) - Original Drilling - Original Drilling -	16,531.96	6,712.00	7,982.99	7,765.49	36.703	CC, ES, SF
Harper A21-618 - Harper A21-618 OH - As-Drilled	16,531.96	16,240.00	824.31	670.58	5.362	CC, ES, SF
Harper A21-626 - Harper A21-626 OH - As-Drilled	16,531.96	16,140.00	1,363.14	1,209.68	8.883	CC, ES, SF
Harper A21-631 - Harper A21-631 OH - As-Drilled	16,531.96	16,120.00	1,716.95	1,564.09	11.232	CC, ES, SF
Harper A21-637 - Harper A21-637 OH - As-Drilled	16,531.96	16,223.00	2,106.90	1,955.08	13.877	CC, ES, SF
Harper A21-643 - Harper A21-643 OH - As-Drilled	16,531.96	16,273.00	2,503.17	2,351.71	16.528	CC, ES, SF
Harper A21-649 - Harper A21-649 OH - As-Drilled	16,531.96	16,403.00	2,817.66	2,666.03	18.582	CC, ES, SF
Harper A21-656 - Harper A21-656 OH - As-Drilled	16,531.96	16,378.00	3,199.83	3,048.16	21.098	CC, ES, SF
Harper A21-664 - Harper A21-664 OH - As-Drilled	16,531.96	16,571.00	3,686.49	3,534.71	24.289	CC, ES, SF
Harper A21-669 - Harper A21-669 OH - As-Drilled	16,531.96	16,585.00	4,014.05	3,862.20	26.434	CC, ES, SF
Harper A21-674 - Harper A21-674 OH - As-Drilled	16,531.96	16,788.00	4,385.79	4,233.81	28.858	CC, ES, SF
Harper A21-681 - Harper A21-681 OH - As-Drilled	16,531.96	16,642.00	4,763.50	4,613.47	31.751	CC, ES, SF
Kona A19-616 - Kona A19-616 - Kona A19-616 - As Drille	16,531.96	6,234.00	9,618.43	9,516.21	94.093	CC, ES, SF
Kona A19-624 - Kona A19-624 - Kona A19-624 - As Drille	16,531.96	6,327.00	9,562.05	9,460.07	93.760	CC, ES, SF
Kona A19-636 - Kona A19-636 - Kona A19-636 - As Drille	16,531.96	6,327.00	9,366.84	9,262.78	90.016	CC, ES, SF
Kona A19-646 - Original Drilling - Original Drilling - As Dr	16,531.96	6,327.00	9,783.53	9,683.39	97.692	CC, ES, SF
Kona A19-662 - Original Drilling - Original Drilling - As Dr						Out of range
Kona A19-670 - Kona A19-670 - Original Drilling - As Dril						Out of range
Kona A19-685 - Original Drilling - Original Drilling - As Dr	16,531.96	6,149.00	9,986.35	9,887.34	100.862	CC, ES, SF
McKee 12-21 (PA) - Original Drilling - Original Drilling - A						Out of range
McKee 21-21 (PA) - Original Drilling - Original Drilling - A	16,531.96	6,764.00	9,874.97	9,662.12	46.393	CC, ES, SF
McKee 22-21 - Original Drilling - Original Drilling - As Dril	16,531.96	6,801.57	9,568.65	9,463.88	91.329	CC, ES, SF
McKee 31-21 - Original Drilling - Original Drilling - As Dril	16,531.96	6,791.57	9,146.62	9,048.67	93.376	CC, ES, SF
McKee 32-21 - Original Drilling - Original Drilling - As Dril	16,531.96	6,808.12	8,422.28	8,318.94	81.504	CC, ES, SF
McKee 41-21 - Original Drilling - Original Drilling - As Dril	16,531.96	6,663.14	8,041.66	7,947.55	85.446	CC, ES, SF
McKee 42-21 - Original Drilling - Original Drilling - As Dril	16,531.96	6,754.39	7,115.01	7,013.53	70.117	CC, ES, SF
Rampart A33-730 - Rampart A33-730 - APD-Rev 1	6,450.00	17,720.27	7,045.92	6,930.99	61.305	SF
Rampart A33-730 - Rampart A33-730 - APD-Rev 1	16,222.23	8,100.00	7,026.04	6,915.63	63.635	CC
Rampart A33-730 - Rampart A33-730 - APD-Rev 1	16,300.00	8,100.00	7,026.47	6,915.37	63.240	ES
Rampart A33-740 - Rampart A33-740 - APD-Rev 0	6,302.62	17,515.21	7,694.56	7,580.27	67.329	CC, ES
Rampart A33-740 - Rampart A33-740 - APD-Rev 0	6,500.00	17,515.21	7,696.53	7,581.77	67.066	SF
Rampart A33-750 - Rampart A33-750 - APD-Rev 0	6,450.00	17,097.38	8,362.73	8,248.99	73.528	SF
Rampart A33-750 - Rampart A33-750 - APD-Rev 0	16,221.94	7,469.38	8,351.65	8,244.94	78.264	CC
Rampart A33-750 - Rampart A33-750 - APD-Rev 0	16,300.00	7,450.00	8,352.01	8,244.72	77.848	ES
Rampart A33-760 - Rampart A33-760 - APD-Rev 1	6,150.00	16,956.23	8,993.93	8,881.39	79.914	ES
Rampart A33-760 - Rampart A33-760 - APD-Rev 1	6,450.00	16,950.11	8,998.52	8,885.16	79.379	SF

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

**Noble Energy, Inc.**  
Anticollision Summary Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Reveille A35-783
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	KB @ 4679.00ft
<b>Reference Site:</b>	A Section 35	<b>MD Reference:</b>	KB @ 4679.00ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Reveille A35-783	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Reveille A35-783 OH	<b>Database:</b>	EDMP
<b>Reference Design:</b>	APD - Rev 1	<b>Offset TVD Reference:</b>	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	16,220.30	7,322.73	8,986.98	8,881.78	85.427	CC
Rampart A33-770 - Rampart A33-770 - APD-Rev 0	6,012.91	16,811.58	9,675.79	9,563.68	86.299	ES
Rampart A33-770 - Rampart A33-770 - APD-Rev 0	6,400.00	16,811.58	9,682.55	9,569.15	85.387	SF
Rampart A33-770 - Rampart A33-770 - APD-Rev 0	16,257.16	7,135.98	9,671.82	9,567.62	92.827	CC
Sexton 43-21 (PA) - Original Drilling - Original Drilling - As	16,531.96	6,704.00	6,815.86	6,600.28	31.617	CC, ES, SF
Wells Trust 13-21 - Original Drilling - Original Drilling - As						Out of range
Wells Trust 14-21 - Original Drilling - Original Drilling - As						Out of range
Wells Trust 24-21 - Original Drilling - Original Drilling - As	16,531.96	6,816.26	9,706.78	9,597.70	88.987	CC, ES, SF
A Section 22						
Carpio 22-01 - Original Drilling - Original Drilling - As Drill	16,531.96	6,722.11	1,445.56	1,353.02	15.621	CC, ES, SF
Carpio 22-04-19 - Original Drilling - Original Drilling - As D	16,531.96	6,688.84	2,999.08	2,898.42	29.793	CC, ES, SF
Carpio 22-41 - Original Drilling - Original Drilling - As Drill	16,531.96	6,696.54	2,161.37	2,074.39	24.849	CC, ES, SF
Carpio 22-43 - Original Drilling - Original Drilling - As Drill	16,531.96	6,762.18	2,598.13	2,493.35	24.796	CC, ES, SF
Carpio 22-45 - Original Drilling - Original Drilling - As Drill	16,531.96	6,695.75	1,983.00	1,893.04	22.043	CC, ES, SF
Eisenstat 22-11 (PA) - Original Drilling - Original Drilling -	16,531.96	6,718.00	5,033.72	4,866.00	30.013	CC, ES, SF
Eisenstat 22-13 - Original Drilling - Original Drilling - As D	16,531.96	6,728.37	3,953.00	3,869.88	47.558	CC, ES, SF
Eisenstat 22-15 - Original Drilling - Original Drilling - As D	16,531.96	6,711.97	4,590.91	4,525.59	70.284	CC, ES, SF
Eisenstat 22-21 - Original Drilling - Original Drilling - As D	16,531.96	6,787.19	5,742.99	5,661.67	70.623	CC, ES, SF
Eisenstat 22-23 - Original Drilling - Original Drilling - As D	16,531.96	6,758.27	6,089.62	5,994.22	63.831	CC, ES, SF
Gill Land Assoc. 1 (PA) - Original Drilling - Original Drilling	16,531.96	6,719.00	3,568.61	3,396.34	20.716	CC, ES, SF
Gill Land Assoc. 22-02 (PA) - Original Drilling - Original D	16,531.96	6,729.00	5,053.78	4,852.16	25.066	CC, ES, SF
Gill Land Assoc. 22-03 - Original Drilling - Original Drilling	16,531.96	6,712.52	6,873.15	6,783.60	76.753	CC, ES, SF
Gill Land Assoc. 22-04 (PA) - Original Drilling - Original D	16,531.96	6,727.00	5,298.17	5,116.04	29.090	CC, ES, SF
Gruen 22-01 - Original Drilling - Original Drilling - As Drille	15,500.00	15,500.00	5,994.93	5,873.04	49.182	SF
Gruen 22-01 - Original Drilling - Original Drilling - As Drille	16,531.96	6,717.74	5,529.08	5,425.49	53.377	CC, ES
Gruen 22-02 - Original Drilling - Original Drilling - As Drille	16,531.96	6,586.83	3,896.13	3,789.17	36.425	CC, ES, SF
Gruen 22-31 - Original Drilling - Original Drilling - As Drille	16,531.96	6,750.21	4,338.18	4,238.28	43.428	CC, ES, SF
Gruen 22-33 - Original Drilling - Original Drilling - As Drille	16,531.96	6,864.94	5,148.53	5,039.95	47.416	CC, ES, SF
Gruen 22-35 - Original Drilling - Original Drilling - As Drille	16,531.96	6,598.62	4,671.54	4,566.12	44.312	CC, ES, SF
Ottinger 22-01 - Original Drilling - Original Drilling - As Dr	16,531.96	6,742.24	3,293.54	3,203.50	36.577	CC, ES, SF

**Noble Energy, Inc.**  
Anticollision Summary Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Reveille A35-783
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	KB @ 4679.00ft
<b>Reference Site:</b>	A Section 35	<b>MD Reference:</b>	KB @ 4679.00ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Reveille A35-783	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Reveille A35-783 OH	<b>Database:</b>	EDMP
<b>Reference Design:</b>	APD - Rev 1	<b>Offset TVD Reference:</b>	Offset Datum

**Summary**

Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
<b>Offset Well - Wellbore - Design</b>						
A Section 23						
Cecil 23-13 - Original Drilling - Original Drilling - As Drilled	16,531.96	6,666.78	4,460.64	4,383.61	57.908	CC, ES, SF
Champlin 23-02 (PA) - Original Drilling - Original Drilling -	16,531.96	6,678.00	2,214.05	2,052.07	13.668	CC, ES, SF
Champlin 23-03 - Original Drilling - Original Drilling - As D	16,531.96	6,653.04	1,590.40	1,496.36	16.911	CC, ES, SF
Champlin Amoco A 1 #308 - Original Drilling - Original Dr	16,531.96	6,653.00	1,426.03	1,223.56	7.043	CC, ES, SF
Cooper 23-1-17 - Original Drilling - Original Drilling - As Dr	16,531.96	6,638.03	6,174.69	6,098.42	80.961	CC, ES, SF
Cooper 23-1-19 - Original Drilling - Original Drilling - As D	16,531.96	6,560.21	4,868.08	4,797.56	69.035	CC, ES, SF
Cooper 23-12 - Original Drilling - Original Drilling - As Dri	16,531.96	6,639.49	5,547.07	5,473.84	75.754	CC, ES, SF
Cooper 23-1-20 - Original Drilling - Original Drilling - As D	16,531.96	6,663.36	3,753.55	3,672.62	46.380	CC, ES, SF
Cooper 23-15 - Original Drilling - Original Drilling - As Dri	16,531.96	6,532.08	5,483.57	5,401.92	67.154	CC, ES, SF
Foss 41-23D - Original Drilling - Original Drilling - As Drill	16,531.96	6,838.73	6,337.03	6,248.94	71.939	CC, ES, SF
Foss 42-23 - Original Drilling - Original Drilling - As Drilled	16,531.96	6,644.18	5,176.06	5,085.15	56.937	CC, ES, SF
J&L Farms 23-11 - Original Drilling - Original Drilling - As	16,531.96	6,666.19	4,777.94	4,726.90	93.598	CC, ES, SF
J&L Farms 23-12 - Original Drilling - Original Drilling - As	16,531.96	6,571.64	3,286.12	3,235.20	64.534	CC, ES, SF
J&L Farms 23-21 - Original Drilling - Original Drilling - As	16,531.96	6,594.20	5,179.92	5,118.84	84.807	CC, ES, SF
J&L Farms 23-22 - Original Drilling - Original Drilling - As	16,531.96	6,602.98	3,803.16	3,738.75	59.046	CC, ES, SF
McIntosh 33-23 - Original Drilling - Original Drilling - As D	16,531.96	7,019.00	3,461.35	3,365.05	35.945	CC, ES, SF
McIntosh 34-23 - Original Drilling - Original Drilling - As D	16,531.96	6,655.19	3,113.12	3,007.49	29.471	CC, ES, SF
McIntosh 43-23 - Original Drilling - Original Drilling - As D	16,531.96	6,645.32	4,901.19	4,801.32	49.076	CC, ES, SF
McIntosh 44-23 - Original Drilling - Original Drilling - As D	16,531.96	6,700.00	4,464.68	4,356.80	41.383	CC, ES, SF
Schroeder 23-31 - Original Drilling - Original Drilling - As	16,531.96	6,706.82	2,567.22	2,483.75	30.759	CC, ES, SF
Schroeder 23-33 - Original Drilling - Original Drilling - As	16,531.96	6,676.77	618.28	566.74	11.996	CC, ES, SF
A Section 24						
Larson A23-622 - Larson A23-622 OH - As-drilled	16,531.96	16,838.28	1,022.91	866.41	6.536	CC, ES, SF
Larson A23-627 - Larson A23-627 OH - As-drilled	16,531.96	16,932.10	1,372.00	1,214.24	8.697	CC, ES, SF
Larson A23-633 - Larson A23-633 OH - As-drilled	16,531.96	16,997.29	1,740.03	1,580.98	10.940	CC, ES, SF
Larson A23-639 - Larson A23-639 OH - As-drilled	16,531.96	16,823.00	2,038.26	1,882.88	13.118	CC, ES, SF
Larson A23-645 - Larson A23-645 OH - As-drilled	16,531.96	17,577.14	2,515.79	2,349.67	15.144	CC, ES, SF
Larson A23-651 - Larson A23-651 OH - As-drilled	16,531.96	17,444.70	2,818.98	2,655.17	17.209	CC, ES, SF
Larson A23-656 - Larson A23-656 OH - As-drilled	16,531.96	17,569.48	3,117.82	2,951.66	18.764	CC, ES, SF
Larson A23-662 - Larson A23-662 OH - As-drilled	16,531.96	17,811.54	3,545.32	3,377.31	21.102	CC, ES, SF
Larson A23-668 - Larson A23-668 OH - As-Drilled	16,531.96	16,928.47	3,930.57	3,773.47	25.019	CC, ES, SF
Larson A23-672 - Larson A23-672 OH - As-Drilled	16,531.96	16,723.00	4,194.22	4,040.41	27.269	CC, ES, SF
Larson A23-678 - Larson A23-678 OH - As-Drilled	16,531.96	16,524.59	4,574.86	4,421.27	29.785	CC, ES, SF
Larson A23-683 - Larson A23-683 OH - As-Drilled	16,531.96	16,778.51	4,854.18	4,699.03	31.287	CC, ES, SF
Larson AA19-618 - Larson AA19-618 OH - As-Drilled	16,531.96	6,045.00	9,275.75	9,173.65	90.854	CC, ES, SF
Larson AA19-624 - Larson AA19-624 OH - As-Drilled	16,531.96	6,235.00	9,395.21	9,293.42	92.295	CC, ES, SF
Larson AA19-624 - Larson AA19-624 ST01 - As-Drilled	16,531.96	6,235.00	9,395.21	9,293.42	92.295	CC, ES, SF
Larson AA19-630 - Larson AA19-630 OH - As-Drilled	16,531.96	6,047.00	9,376.05	9,275.23	92.998	CC, ES, SF
Larson AA19-635 - Larson AA19-635 OH - As-Drilled	16,531.96	6,142.00	9,459.96	9,359.09	93.781	CC, ES, SF
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 -	16,531.96	6,716.68	8,454.98	8,346.64	78.045	CC, ES, SF
Larson Farms 04-24 - Original Drilling - Original Drilling -	16,531.96	2,610.00	9,171.23	9,079.58	100.071	CC, ES, SF
Larson Farms 05-24 - Original Drilling - Original Drilling -	15,300.00	6,888.84	9,195.82	9,088.29	85.516	SF
Larson Farms 05-24 - Original Drilling - Original Drilling -	16,531.96	3,652.00	8,842.56	8,742.79	88.635	CC, ES
Larson Farms 06-24 - Original Drilling - Original Drilling -	16,531.96	3,837.00	9,141.05	9,033.36	84.886	CC, ES, SF
Larson Farms 07-24 - Original Drilling - Original Drilling -	16,531.96	6,889.04	8,205.32	8,081.62	66.334	CC, ES, SF
Peppler 24-32 - Original Drilling - Original Drilling - As Dri	16,531.96	6,426.56	5,834.58	5,733.32	57.624	CC, ES, SF
Roth 24-21 - Original Drilling - Original Drilling - As Drilled	16,531.96	6,783.24	8,244.49	8,149.18	86.505	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

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Reveille A35-783
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	KB @ 4679.00ft
<b>Reference Site:</b>	A Section 35	<b>MD Reference:</b>	KB @ 4679.00ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Reveille A35-783	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Reveille A35-783 OH	<b>Database:</b>	EDMP
<b>Reference Design:</b>	APD - Rev 1	<b>Offset TVD Reference:</b>	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 25						
Fairmeadows 03-25G - Original Drilling - Original Drilling	12,154.18	6,657.37	9,426.99	9,352.07	125.834	CC
Fairmeadows 03-25G - Original Drilling - Original Drilling	12,200.00	6,657.90	9,427.10	9,351.84	125.265	ES
Fairmeadows 03-25G - Original Drilling - Original Drilling	15,400.00	6,707.95	9,970.05	9,873.53	103.292	SF
Fairmeadows Land Co 1 - Original Drilling - Original Drilling	13,400.81	6,630.00	9,447.25	9,253.45	48.747	CC
Fairmeadows Land Co 1 - Original Drilling - Original Drilling	13,500.00	6,630.00	9,447.77	9,253.21	48.559	ES
Fairmeadows Land Co 1 - Original Drilling - Original Drilling	16,000.00	6,630.00	9,798.28	9,586.64	46.297	SF
Larsen 01-25G - Original Drilling - Original Drilling - As D	16,099.12	6,672.27	5,633.63	5,499.63	42.041	CC
Larsen 01-25G - Original Drilling - Original Drilling - As D	16,100.00	6,672.29	5,633.63	5,499.62	42.039	ES
Larsen 01-25G - Original Drilling - Original Drilling - As D	16,531.96	6,682.45	5,650.23	5,512.81	41.117	SF
Larsen A25-01 - Original Drilling - Original Drilling - As Dr	15,983.28	6,626.03	9,438.88	9,334.61	90.526	CC
Larsen A25-01 - Original Drilling - Original Drilling - As Dr	16,100.00	6,626.55	9,439.60	9,334.40	89.735	ES
Larsen A25-01 - Original Drilling - Original Drilling - As Dr	16,531.96	6,628.50	9,454.81	9,346.28	87.114	SF
Larsen A25-02 - Original Drilling - Original Drilling - As Dr	16,110.01	6,497.79	8,363.58	8,258.74	79.773	CC
Larsen A25-02 - Original Drilling - Original Drilling - As Dr	16,200.00	6,497.55	8,364.06	8,258.51	79.238	ES
Larsen A25-02 - Original Drilling - Original Drilling - As Dr	16,531.96	6,496.65	8,374.22	8,266.10	77.453	SF
Larsen A25-03 - Original Drilling - Original Drilling - As Dr	16,083.61	6,628.00	6,798.58	6,583.91	31.671	CC
Larsen A25-03 - Original Drilling - Original Drilling - As Dr	16,100.00	6,628.00	6,798.59	6,583.80	31.652	ES
Larsen A25-03 - Original Drilling - Original Drilling - As Dr	16,531.96	6,628.00	6,813.34	6,595.25	31.240	SF
Larsen A25-03X - Original Drilling - Original Drilling - As D	16,260.56	6,561.21	6,574.27	6,468.02	61.876	CC
Larsen A25-03X - Original Drilling - Original Drilling - As D	16,300.00	6,560.32	6,574.39	6,467.82	61.696	ES
Larsen A25-03X - Original Drilling - Original Drilling - As D	16,531.96	6,555.15	6,579.87	6,471.52	60.731	SF
Larsen A25-05 - Original Drilling - Original Drilling - As Dr	14,712.88	6,664.97	5,479.47	5,385.04	58.025	CC, ES
Larsen A25-05 - Original Drilling - Original Drilling - As Dr	16,100.00	6,624.66	5,652.24	5,549.09	54.800	SF
Larsen A25-06 - Original Drilling - Original Drilling - As Dr	14,730.93	6,628.00	7,071.35	6,867.32	34.659	CC
Larsen A25-06 - Original Drilling - Original Drilling - As Dr	14,800.00	6,628.00	7,071.69	6,867.12	34.568	ES
Larsen A25-06 - Original Drilling - Original Drilling - As Dr	16,200.00	6,628.00	7,222.34	7,008.16	33.721	SF
Larsen A25-06X - Original Drilling - Original Drilling - As D	14,671.19	6,500.00	6,709.88	6,612.00	68.557	CC
Larsen A25-06X - Original Drilling - Original Drilling - As D	14,700.00	6,500.00	6,709.94	6,611.86	68.414	ES
Larsen A25-06X - Original Drilling - Original Drilling - As D	16,531.96	6,494.55	6,963.11	6,854.64	64.194	SF
Larsen A25-07 - Original Drilling - Original Drilling - As Dr	14,785.58	6,541.08	8,135.82	8,041.25	86.031	CC
Larsen A25-07 - Original Drilling - Original Drilling - As Dr	14,800.00	6,541.03	8,135.84	8,041.15	85.928	ES
Larsen A25-07 - Original Drilling - Original Drilling - As Dr	16,531.96	6,534.60	8,321.14	8,214.40	77.951	SF
Larsen A25-08 - Original Drilling - Original Drilling - As Dr	14,790.67	6,574.23	9,412.67	9,317.95	99.377	CC
Larsen A25-08 - Original Drilling - Original Drilling - As Dr	14,900.00	6,574.20	9,413.31	9,317.73	98.492	ES
Larsen A25-08 - Original Drilling - Original Drilling - As Dr	16,531.96	6,573.81	9,572.38	9,465.10	89.224	SF
Larsen A25-10 - Original Drilling - Original Drilling - Drilled	13,472.12	6,559.32	8,108.85	8,024.37	95.987	CC
Larsen A25-10 - Original Drilling - Original Drilling - Drilled	13,500.00	6,559.35	8,108.90	8,024.20	95.744	ES
Larsen A25-10 - Original Drilling - Original Drilling - Drilled	16,531.96	6,561.93	8,666.95	8,563.22	83.553	SF
Larsen A25-11 - Original Drilling - Original Drilling - As Dr	13,440.11	6,615.00	6,911.95	6,718.15	35.665	CC
Larsen A25-11 - Original Drilling - Original Drilling - As Dr	13,500.00	6,615.00	6,912.21	6,717.95	35.582	ES
Larsen A25-11 - Original Drilling - Original Drilling - As Dr	14,900.00	6,615.00	7,064.45	6,860.58	34.652	SF
Larsen A25-12 - Original Drilling - Original Drilling - As Dr	13,517.12	6,602.48	5,333.73	5,248.75	62.764	CC, ES
Larsen A25-12 - Original Drilling - Original Drilling - As Dr	15,000.00	6,605.66	5,536.03	5,441.70	58.685	SF
Larsen A25-13 - Original Drilling - Original Drilling - As Dr	12,304.27	6,710.51	5,429.37	5,353.17	71.254	CC, ES
Larsen A25-13 - Original Drilling - Original Drilling - As Dr	14,000.00	6,686.76	5,687.99	5,601.33	65.639	SF
Larsen A25-14 - Original Drilling - Original Drilling - As Dr	12,046.99	6,855.98	6,710.02	6,635.25	89.738	CC
Larsen A25-14 - Original Drilling - Original Drilling - As Dr	12,100.00	6,855.35	6,710.23	6,635.07	89.274	ES
Larsen A25-14 - Original Drilling - Original Drilling - As Dr	14,600.00	6,825.46	7,179.23	7,088.85	79.434	SF
Larsen A25-15 - Original Drilling - Original Drilling - As Dr	12,141.47	6,577.95	8,137.25	8,062.70	109.149	CC
Larsen A25-15 - Original Drilling - Original Drilling - As Dr	12,200.00	6,578.31	8,137.46	8,062.47	108.518	ES
Larsen A25-15 - Original Drilling - Original Drilling - As Dr	15,700.00	6,599.17	8,881.30	8,784.89	92.119	SF
Larsen A25-17 - Original Drilling - Original Drilling - As D	15,352.05	6,566.40	8,884.23	8,785.12	89.640	CC
Larsen A25-17 - Original Drilling - Original Drilling - As D	15,400.00	6,566.53	8,884.36	8,784.87	89.299	ES

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



**Noble Energy, Inc.**  
Anticollision Summary Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Reveille A35-783
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	KB @ 4679.00ft
<b>Reference Site:</b>	A Section 35	<b>MD Reference:</b>	KB @ 4679.00ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Reveille A35-783	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Reveille A35-783 OH	<b>Database:</b>	EDMP
<b>Reference Design:</b>	APD - Rev 1	<b>Offset TVD Reference:</b>	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 25						
Larson A25-17 - Original Drilling - Original Drilling - As D	16,531.96	6,569.55	8,962.24	8,854.37	83.086	SF
Larson A25-19 - Original Drilling - Original Drilling - As Dr	15,497.57	6,346.24	6,041.43	5,941.90	60.695	CC
Larson A25-19 - Original Drilling - Original Drilling - As Dr	15,500.00	6,346.25	6,041.43	5,941.88	60.683	ES
Larson A25-19 - Original Drilling - Original Drilling - As Dr	16,531.96	6,349.19	6,129.34	6,022.61	57.424	SF
Larson A25-23 - Original Drilling - Original Drilling - As Dr	12,803.87	6,601.29	8,837.89	8,758.34	111.096	CC
Larson A25-23 - Original Drilling - Original Drilling - As Dr	12,900.00	6,601.39	8,838.42	8,758.14	110.095	ES
Larson A25-23 - Original Drilling - Original Drilling - As Dr	16,531.96	6,606.36	9,592.03	9,489.21	93.288	SF
Larson A25-25 - Original Drilling - Original Drilling - As Dr	12,740.86	6,582.72	6,107.01	6,027.98	77.274	CC
Larson A25-25 - Original Drilling - Original Drilling - As Dr	12,800.00	6,582.51	6,107.30	6,027.82	76.843	ES
Larson A25-25 - Original Drilling - Original Drilling - As Dr	14,800.00	6,576.31	6,444.81	6,353.04	70.229	SF
A Section 26						
Barrett 11-26 (SI) - Original Drilling - Original Drilling - As	13,501.16	6,599.96	1,375.08	1,287.27	15.659	CC, ES
Barrett 11-26 (SI) - Original Drilling - Original Drilling - As	13,600.00	6,600.08	1,378.63	1,290.14	15.580	SF
Barrett 12-26 (SI) - Original Drilling - Original Drilling - As	13,491.83	6,640.76	59.68	-24.28	0.711	Level 1, CC, ES, SF
Brown-Orr 14-26 (SI) - Original Drilling - Original Drilling -	11,927.48	6,635.00	30.00	-43.18	0.410	Level 1, ES
Brown-Orr 14-26 (SI) - Original Drilling - Original Drilling -	11,927.77	6,635.00	30.00	-43.18	0.410	Level 1, CC, SF
Brown-Orr 24-26 - Original Drilling - Original Drilling - As	11,893.23	6,658.42	1,658.44	1,585.43	22.714	CC
Brown-Orr 24-26 - Original Drilling - Original Drilling - As	11,900.00	6,658.57	1,658.45	1,585.39	22.698	ES
Brown-Orr 24-26 - Original Drilling - Original Drilling - As	12,100.00	6,663.17	1,671.30	1,596.98	22.489	SF
Carpio A26-04 - Original Drilling - Original Drilling - As Dr	16,112.70	6,654.30	169.71	64.30	1.610	CC, ES, SF
Carpio A26-05 - Original Drilling - Original Drilling - As Dr	14,583.50	6,636.00	272.94	179.62	2.925	CC, ES, SF
DCD Farm A26-02 - Original Drilling - Original Drilling - A	15,938.80	6,605.11	2,847.66	2,743.79	27.416	CC, ES
DCD Farm A26-02 - Original Drilling - Original Drilling - A	16,300.00	6,606.32	2,870.48	2,764.25	27.023	SF
DCD Farms 01-26 - Original Drilling - Original Drilling - As	14,718.86	6,689.60	4,136.70	4,042.16	43.753	CC, ES
DCD Farms 01-26 - Original Drilling - Original Drilling - As	15,600.00	6,693.43	4,229.50	4,129.40	42.252	SF
DCD Farms 02-26 (PA) - Original Drilling - Original Drillin	14,700.89	6,649.12	1,440.89	1,346.40	15.250	CC, ES
DCD Farms 02-26 (PA) - Original Drilling - Original Drillin	14,800.00	6,650.86	1,444.29	1,349.13	15.177	SF
DCD Farms A26-07 - Original Drilling - Original Drilling - A	14,967.68	6,636.46	2,804.19	2,707.86	29.111	CC
DCD Farms A26-07 - Original Drilling - Original Drilling - A	15,000.00	6,636.99	2,804.37	2,707.79	29.036	ES
DCD Farms A26-07 - Original Drilling - Original Drilling - A	15,400.00	6,643.49	2,837.30	2,738.24	28.642	SF
Pfeiffer 09-26 - Original Drilling - Original Drilling - As Dril	13,409.72	6,652.55	4,137.69	4,053.38	49.076	CC, ES
Pfeiffer 09-26 - Original Drilling - Original Drilling - As Dril	14,300.00	6,644.46	4,232.37	4,142.39	47.037	SF
Pfeiffer 10-26 - Wellbore #1 - Wellbore #1 - As Drilled	13,450.88	6,608.30	2,817.80	2,733.31	33.352	CC, ES
Pfeiffer 10-26 - Wellbore #1 - Wellbore #1 - As Drilled	13,900.00	6,605.83	2,853.37	2,766.02	32.668	SF
Pfeiffer 15-26 - Wellbore #1 - Wellbore #1 - As Drilled	12,064.71	6,746.34	2,632.31	2,557.77	35.312	CC
Pfeiffer 15-26 - Wellbore #1 - Wellbore #1 - As Drilled	12,100.00	6,747.00	2,632.55	2,557.74	35.190	ES
Pfeiffer 15-26 - Wellbore #1 - Wellbore #1 - As Drilled	12,500.00	6,754.48	2,668.05	2,590.74	34.510	SF
Pfeiffer 16-26 - Original Drilling - Original Drilling - As Dril	11,934.08	6,617.00	4,162.90	3,980.34	22.802	CC, ES
Pfeiffer 16-26 - Original Drilling - Original Drilling - As Dril	12,500.00	6,617.00	4,201.19	4,014.75	22.534	SF
Sidwell 26-1G4 - Original Drilling - Original Drilling - As D	15,968.13	6,594.50	4,197.18	4,092.89	40.244	CC
Sidwell 26-1G4 - Original Drilling - Original Drilling - As D	16,000.00	6,594.94	4,197.30	4,092.75	40.146	ES
Sidwell 26-1G4 - Original Drilling - Original Drilling - As D	16,531.96	6,602.32	4,234.88	4,126.66	39.133	SF
Sidwell A26-03 (PA) - Original Drilling - Original Drilling -	16,150.59	6,902.66	1,578.37	1,460.81	13.426	CC, ES
Sidwell A26-03 (PA) - Original Drilling - Original Drilling -	16,300.00	6,902.49	1,585.42	1,466.97	13.384	SF

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

**Noble Energy, Inc.**  
Anticollision Summary Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Reveille A35-783
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	KB @ 4679.00ft
<b>Reference Site:</b>	A Section 35	<b>MD Reference:</b>	KB @ 4679.00ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Reveille A35-783	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Reveille A35-783 OH	<b>Database:</b>	EDMP
<b>Reference Design:</b>	APD - Rev 1	<b>Offset TVD Reference:</b>	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	16,057.18	6,734.00	2,417.36	2,200.78	11.162	CC, ES
Howard 02-27 (PA) - Original Drilling - Original Drilling - A	16,200.00	6,734.00	2,421.57	2,204.04	11.132	SF
Howard 03-27 - Original Drilling - Original Drilling - As Dri	15,977.83	6,671.02	3,825.15	3,720.78	36.649	CC
Howard 03-27 - Original Drilling - Original Drilling - As Dri	16,000.00	6,670.92	3,825.22	3,720.68	36.591	ES
Howard 03-27 - Original Drilling - Original Drilling - As Dri	16,531.96	6,668.40	3,865.08	3,757.22	35.834	SF
Howard 04-27 (PA) - Original Drilling - Original Drilling - A	16,092.75	6,694.00	5,067.59	4,851.53	23.455	CC
Howard 04-27 (PA) - Original Drilling - Original Drilling - A	16,100.00	6,694.00	5,067.59	4,851.48	23.449	ES
Howard 04-27 (PA) - Original Drilling - Original Drilling - A	16,531.96	6,694.00	5,086.58	4,867.39	23.206	SF
Howard 08-27 - Original Drilling - Original Drilling - As Dri	14,656.35	6,689.03	1,128.70	1,034.62	11.998	CC, ES
Howard 08-27 - Original Drilling - Original Drilling - As Dri	14,700.00	6,688.99	1,129.54	1,035.20	11.973	SF
Howard 10-27 - Original Drilling - Original Drilling - As Dri	13,350.99	6,677.71	2,362.08	2,278.08	28.123	CC, ES
Howard 10-27 - Original Drilling - Original Drilling - As Dri	13,700.00	6,673.97	2,387.72	2,301.73	27.769	SF
Howard 15-27 - Original Drilling - Original Drilling - As Dri	12,183.65	6,646.32	2,524.93	2,451.91	34.579	CC
Howard 15-27 - Original Drilling - Original Drilling - As Dri	12,200.00	6,646.62	2,524.98	2,451.85	34.524	ES
Howard 15-27 - Original Drilling - Original Drilling - As Dri	12,600.00	6,653.87	2,559.02	2,483.56	33.914	SF
Howard 4B-27 (DA) - Original Drilling - Original Drilling - A	16,052.72	3,765.00	5,860.04	5,714.90	40.374	CC
Howard 4B-27 (DA) - Original Drilling - Original Drilling - A	16,100.00	3,765.00	5,860.24	5,714.73	40.275	ES
Howard 4B-27 (DA) - Original Drilling - Original Drilling - A	16,531.96	3,765.00	5,879.61	5,730.94	39.548	SF
Howard A27-01 - Original Drilling - Original Drilling - As D	16,049.08	6,692.45	1,089.15	984.12	10.370	CC, ES
Howard A27-01 - Original Drilling - Original Drilling - As D	16,100.00	6,692.31	1,090.34	985.01	10.352	SF
Howard A27-05 (SI) - Original Drilling - Original Drilling - A	14,693.15	6,688.33	5,062.61	4,968.21	53.633	CC
Howard A27-05 (SI) - Original Drilling - Original Drilling - A	14,700.00	6,688.29	5,062.61	4,968.17	53.603	ES
Howard A27-05 (SI) - Original Drilling - Original Drilling - A	15,900.00	6,681.24	5,204.46	5,102.72	51.153	SF
Howard A27-06 (PR) - Original Drilling - Original Drilling -	14,729.04	6,784.30	3,683.89	3,586.55	37.846	CC, ES
Howard A27-06 (PR) - Original Drilling - Original Drilling -	15,500.00	6,785.45	3,763.70	3,660.53	36.479	SF
Howard A27-07 - Original Drilling - Original Drilling - As D	14,651.74	6,741.13	2,335.14	2,240.92	24.786	CC, ES
Howard A27-07 - Original Drilling - Original Drilling - As D	14,900.00	6,739.74	2,348.29	2,252.57	24.532	SF
Howard A27-09 - Original Drilling - Original Drilling - As D	13,284.10	6,675.23	1,234.09	1,150.64	14.788	CC
Howard A27-09 - Original Drilling - Original Drilling - As D	13,300.00	6,675.10	1,234.19	1,150.63	14.770	ES
Howard A27-09 - Original Drilling - Original Drilling - As D	13,400.00	6,674.32	1,239.52	1,155.47	14.746	SF
Howard A27-16 - Original Drilling - Original Drilling - As D	12,011.07	6,666.76	962.51	888.61	13.024	CC, ES
Howard A27-16 - Original Drilling - Original Drilling - As D	12,100.00	6,667.08	966.61	892.28	13.004	SF
Howard A27-17D - Original Drilling - Original Drilling - As	15,460.51	6,796.01	1,676.93	1,572.76	16.097	CC, ES
Howard A27-17D - Original Drilling - Original Drilling - As	15,500.00	6,795.98	1,677.40	1,573.11	16.084	SF



**Noble Energy, Inc.**  
Anticollision Summary Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Reveille A35-783
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	KB @ 4679.00ft
<b>Reference Site:</b>	A Section 35	<b>MD Reference:</b>	KB @ 4679.00ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Reveille A35-783	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Reveille A35-783 OH	<b>Database:</b>	EDMP
<b>Reference Design:</b>	APD - Rev 1	<b>Offset TVD Reference:</b>	Offset Datum

**Summary**

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
A Section 28						
Ankeney 2-28 (SI) - Wellbore #1 - No Surveys	16,147.26	6,686.00	7,809.54	7,593.22	36.101	CC
Ankeney 2-28 (SI) - Wellbore #1 - No Surveys	16,200.00	6,686.00	7,809.72	7,592.99	36.033	ES
Ankeney 2-28 (SI) - Wellbore #1 - No Surveys	16,531.96	6,686.00	7,819.01	7,599.76	35.663	SF
Ankeney 28-01 (PA) - Wellbore #1 - Gyro Surveys	14,496.45	6,737.19	6,349.12	6,256.97	68.899	CC
Ankeney 28-01 (PA) - Wellbore #1 - Gyro Surveys	14,500.00	6,737.17	6,349.12	6,256.94	68.879	ES
Ankeney 28-01 (PA) - Wellbore #1 - Gyro Surveys	16,400.00	6,721.91	6,628.32	6,524.58	63.897	SF
Art Rohr 1 (PA) - Wellbore #1 - No Surveys	13,342.60	6,681.00	9,084.63	8,890.25	46.737	CC
Art Rohr 1 (PA) - Wellbore #1 - No Surveys	13,400.00	6,681.00	9,084.81	8,890.00	46.635	ES
Art Rohr 1 (PA) - Wellbore #1 - No Surveys	15,700.00	6,681.00	9,385.51	9,175.22	44.631	SF
Danley 1 (TA) - Wellbore #1 - Gyro Surveys						Out of range
Danley 12-28 (SI) - Wellbore #1 - Gyro Surveys						Out of range
Danley 13-28 (PR) - Wellbore #1 - Gyro Surveys						Out of range
Danley 14-28 (PR) - Wellbore #1 - Gyro Surveys						Out of range
Dewey 21-28 (TA) - Wellbore #1 - Gyro Surveys	15,868.73	7,031.38	9,015.11	8,910.91	86.521	CC
Dewey 21-28 (TA) - Wellbore #1 - Gyro Surveys	15,900.00	7,030.79	9,015.16	8,910.72	86.319	ES
Dewey 21-28 (TA) - Wellbore #1 - Gyro Surveys	16,531.96	7,018.74	9,039.47	8,930.28	82.791	SF
Dewey 22-28 (SI) - Wellbore #1 - Gyro Surveys	14,724.73	7,168.00	8,965.53	8,869.16	93.032	CC
Dewey 22-28 (SI) - Wellbore #1 - Gyro Surveys	14,800.00	7,168.00	8,965.85	8,868.90	92.478	ES
Dewey 22-28 (SI) - Wellbore #1 - Gyro Surveys	16,531.96	7,081.22	9,145.46	9,036.77	84.144	SF
Hannan Rohr 1 (PA) - Wellbore #1 - Gyro Surveys	11,941.79	6,667.71	9,048.74	8,975.42	123.416	CC
Hannan Rohr 1 (PA) - Wellbore #1 - Gyro Surveys	12,000.00	6,667.89	9,048.92	8,975.18	122.715	ES
Hannan Rohr 1 (PA) - Wellbore #1 - Gyro Surveys	16,100.00	6,680.65	9,958.42	9,860.03	101.214	SF
Rohr A 28-25 (SI) - Wellbore #1 - Gyro Surveys	12,822.37	7,011.64	9,530.72	9,450.13	118.263	CC
Rohr A 28-25 (SI) - Wellbore #1 - Gyro Surveys	12,900.00	7,010.28	9,531.04	9,449.87	117.427	ES
Rohr A 28-25 (SI) - Wellbore #1 - Gyro Surveys	15,800.00	6,959.57	9,984.90	9,884.70	99.648	SF
Wardlaw 16-28 (SI) - Wellbore #1 - Gyro Surveys	11,974.02	6,702.08	6,575.39	6,501.63	89.152	CC
Wardlaw 16-28 (SI) - Wellbore #1 - Gyro Surveys	12,000.00	6,702.49	6,575.44	6,501.49	88.925	ES
Wardlaw 16-28 (SI) - Wellbore #1 - Gyro Surveys	14,400.00	6,735.04	7,008.57	6,920.17	79.281	SF
Wardlaw 20-28 - Original Drilling - Original Drilling - As D	12,587.80	6,654.00	6,904.39	6,716.25	36.698	CC
Wardlaw 20-28 - Original Drilling - Original Drilling - As D	12,600.00	6,654.00	6,904.40	6,716.18	36.681	ES
Wardlaw 20-28 - Original Drilling - Original Drilling - As D	14,100.00	6,654.00	7,068.05	6,869.85	35.660	SF
Wardlaw 20-28 (SI) - Wellbore #1 - Gyro Surveys	12,620.30	6,695.45	6,895.70	6,817.19	87.833	CC
Wardlaw 20-28 (SI) - Wellbore #1 - Gyro Surveys	12,700.00	6,696.16	6,896.16	6,817.06	87.185	ES
Wardlaw 20-28 (SI) - Wellbore #1 - Gyro Surveys	15,200.00	6,724.92	7,362.39	7,268.31	78.250	SF
Wardlaw 33-28 (PA) - Wellbore #1 - Gyro Surveys	13,119.10	7,500.00	7,450.94	7,307.22	51.843	CC
Wardlaw 33-28 (PA) - Wellbore #1 - Gyro Surveys	13,300.00	7,500.00	7,453.14	7,305.88	50.613	ES
Wardlaw 33-28 (PA) - Wellbore #1 - Gyro Surveys	16,400.00	7,500.00	8,141.31	7,948.17	42.152	SF
Webster 09-28 (PR) - Original Drilling - Original Drilling -	13,385.73	6,669.00	6,611.57	6,417.11	33.999	CC
Webster 09-28 (PR) - Original Drilling - Original Drilling -	13,400.00	6,669.00	6,611.59	6,417.01	33.980	ES
Webster 09-28 (PR) - Original Drilling - Original Drilling -	14,700.00	6,669.00	6,740.93	6,537.63	33.157	SF
Webster 15-28 (SI) - Wellbore #1 - Gyro Surveys	12,055.36	6,727.48	7,912.08	7,837.63	106.278	CC
Webster 15-28 (SI) - Wellbore #1 - Gyro Surveys	12,100.00	6,727.49	7,912.20	7,837.43	105.820	ES
Webster 15-28 (SI) - Wellbore #1 - Gyro Surveys	15,400.00	6,727.87	8,589.97	8,495.46	90.894	SF
Webster 9-28 (PR) - Wellbore #1 - Gyro Surveys	13,425.09	6,709.15	6,596.39	6,511.75	77.934	CC
Webster 9-28 (PR) - Wellbore #1 - Gyro Surveys	13,500.00	6,709.44	6,596.81	6,511.61	77.425	ES
Webster 9-28 (PR) - Wellbore #1 - Gyro Surveys	15,600.00	6,714.56	6,945.69	6,847.79	70.948	SF

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

**Noble Energy, Inc.**  
Anticollision Summary Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Reveille A35-783
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	KB @ 4679.00ft
<b>Reference Site:</b>	A Section 35	<b>MD Reference:</b>	KB @ 4679.00ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Reveille A35-783	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Reveille A35-783 OH	<b>Database:</b>	EDMP
<b>Reference Design:</b>	APD - Rev 1	<b>Offset TVD Reference:</b>	Offset Datum

**Summary**

Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
<b>Offset Well - Wellbore - Design</b>						
A Section 33						
Achziger 11-33 (PR) - Wellbore #1 - Gyro Surveys	8,198.91	6,751.02	8,855.73	8,805.17	175.144	CC
Achziger 11-33 (PR) - Wellbore #1 - Gyro Surveys	8,200.00	6,750.97	8,855.73	8,805.17	175.129	ES
Achziger 11-33 (PR) - Wellbore #1 - Gyro Surveys	12,800.00	6,659.42	9,979.12	9,904.67	134.028	SF
Achziger 14-33 (PA) - Wellbore #1 - No Surveys	5,210.00	5,156.00	8,959.74	8,838.18	73.704	CC
Achziger 14-33 (PA) - Wellbore #1 - No Surveys	5,300.00	5,245.99	8,960.97	8,837.29	72.457	ES
Achziger 14-33 (PA) - Wellbore #1 - No Surveys	9,300.00	6,619.03	9,494.72	9,330.50	57.816	SF
Briggs 15-33 (SI) - Wellbore #1 - Gyro Surveys	577.84	528.85	7,646.66	7,643.15	2,175.980	CC
Briggs 15-33 (SI) - Wellbore #1 - Gyro Surveys	1,200.00	1,100.00	7,648.79	7,641.06	988.759	ES
Briggs 15-33 (SI) - Wellbore #1 - Gyro Surveys	12,000.00	6,920.01	9,369.73	9,302.15	138.643	SF
Ehrlich 19-33 (PR) - Wellbore #1 - Gyro Survey	5,040.51	4,993.80	9,773.99	9,738.84	278.051	CC
Ehrlich 19-33 (PR) - Wellbore #1 - Gyro Survey	5,200.00	5,100.00	9,774.51	9,738.42	270.826	ES
Ehrlich 19-33 (PR) - Wellbore #1 - Gyro Survey	8,800.00	6,621.92	9,985.99	9,933.29	189.519	SF
French 09-33 (SI) - Original Drilling - Original Drilling - As	8,095.19	8,095.19	6,418.08	6,363.36	117.280	CC
French 09-33 (SI) - Original Drilling - Original Drilling - As	8,100.00	8,100.00	6,418.09	6,363.33	117.205	ES
French 09-33 (SI) - Original Drilling - Original Drilling - As	8,600.00	8,600.00	6,437.90	6,379.26	109.782	SF
Hammerbeck 16-33 (PA) - Original Drilling - Original Drilling	5,246.72	5,269.34	6,228.18	6,191.39	169.278	CC, ES
Hammerbeck 16-33 (PA) - Original Drilling - Original Drilling	10,400.00	6,400.00	7,367.12	7,309.08	126.940	SF
Hammerbeck 20-33 - Wellbore #1 - Gyro Surveys	1,073.49	1,024.50	7,024.35	7,017.33	1,000.651	CC
Hammerbeck 20-33 - Wellbore #1 - Gyro Surveys	5,210.00	5,161.23	7,043.89	7,007.59	194.075	ES
Hammerbeck 20-33 - Wellbore #1 - Gyro Surveys	11,800.00	6,512.73	8,368.14	8,302.02	126.553	SF
Noffsinger 11-33 (PR) - Wellbore #1 - Gyro Surveys						Out of range
Noffsinger 12-33 (PR) - Wellbore #1 - Gyro Surveys						Out of range
Noffsinger 21-33 (PA) - Wellbore #1 - No Surveys	10,887.47	6,659.01	9,055.66	8,879.94	51.537	CC
Noffsinger 21-33 (PA) - Wellbore #1 - No Surveys	10,900.00	6,659.01	9,055.66	8,879.87	51.512	ES
Noffsinger 21-33 (PA) - Wellbore #1 - No Surveys	13,600.00	6,659.00	9,452.94	9,259.65	48.907	SF
Noffsinger 22-33 (PR) - Wellbore #1 - Gyro Surveys	10,905.48	6,362.27	7,514.60	7,449.54	115.501	CC
Noffsinger 22-33 (PR) - Wellbore #1 - Gyro Surveys	11,000.00	6,368.80	7,515.19	7,449.46	114.335	ES
Noffsinger 22-33 (PR) - Wellbore #1 - Gyro Surveys	14,400.00	6,469.61	8,286.06	8,200.37	96.699	SF
Noffsinger 31-33 (PR) - Wellbore #1 - Gyro Surveys	10,869.82	6,672.08	7,630.12	7,564.35	116.005	CC
Noffsinger 31-33 (PR) - Wellbore #1 - Gyro Surveys	10,900.00	6,672.21	7,630.18	7,564.20	115.644	ES
Noffsinger 31-33 (PR) - Wellbore #1 - Gyro Surveys	14,400.00	6,688.51	8,406.84	8,320.44	97.303	SF
Noffsinger 32-33 (PR) - Wellbore #1 - Gyro Surveys	9,096.85	6,912.04	7,862.61	7,807.51	142.689	CC
Noffsinger 32-33 (PR) - Wellbore #1 - Gyro Surveys	9,100.00	6,911.98	7,862.61	7,807.49	142.645	ES
Noffsinger 32-33 (PR) - Wellbore #1 - Gyro Surveys	13,400.00	6,823.36	8,962.49	8,884.19	114.456	SF
Sitzman 12-33 (PR) - Wellbore #1 - Gyro Surveys						Out of range
Sitzman 13-33 (SI) - Wellbore #1 - Gyro Surveys						Out of range
Sughrue 41-33 (SI) - Original Drilling - Original Drilling -	10,858.60	6,458.93	6,338.77	6,273.84	97.630	CC
Sughrue 41-33 (SI) - Original Drilling - Original Drilling -	10,900.00	6,459.14	6,338.90	6,273.70	97.211	ES
Sughrue 41-33 (SI) - Original Drilling - Original Drilling -	13,400.00	6,472.65	6,829.02	6,749.27	85.628	SF
Webster 10-33 (PA) - Wellbore #1 - Gyro Surveys	8,141.70	6,838.53	7,720.01	7,669.69	153.436	CC
Webster 10-33 (PA) - Wellbore #1 - Gyro Surveys	8,200.00	6,839.23	7,720.23	7,669.68	152.726	ES
Webster 10-33 (PA) - Wellbore #1 - Gyro Surveys	12,700.00	6,892.91	8,965.03	8,891.90	122.589	SF

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

**Noble Energy, Inc.**  
Anticollision Summary Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Reveille A35-783
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	KB @ 4679.00ft
<b>Reference Site:</b>	A Section 35	<b>MD Reference:</b>	KB @ 4679.00ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Reveille A35-783	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Reveille A35-783 OH	<b>Database:</b>	EDMP
<b>Reference Design:</b>	APD - Rev 1	<b>Offset TVD Reference:</b>	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	9,546.56	6,595.73	5,227.71	5,170.75	91.767	CC
Barthol A34-05X - Original Drilling - Original Drilling - As D	9,600.00	6,596.04	5,227.99	5,170.70	91.265	ES
Barthol A34-05X - Original Drilling - Original Drilling - As D	11,600.00	6,607.61	5,616.54	5,548.37	82.391	SF
Ehlich A34-01 - Original Drilling - Original Drilling - As Dr	10,564.98	6,675.24	1,044.17	980.42	16.377	CC, ES
Ehlich A34-01 - Original Drilling - Original Drilling - As Dr	10,600.00	6,675.09	1,044.76	980.80	16.335	SF
Howard A34-03 (PA) - Original Drilling - Original Drilling -	10,723.93	6,675.01	3,817.09	3,641.94	21.793	CC, ES
Howard A34-03 (PA) - Original Drilling - Original Drilling -	11,200.00	6,675.01	3,846.67	3,668.53	21.594	SF
Howard BC A34-02 - Original Drilling - Original Drilling - A	10,592.06	6,634.97	2,708.27	2,644.52	42.487	CC
Howard BC A34-02 - Original Drilling - Original Drilling - A	10,600.00	6,634.83	2,708.28	2,644.49	42.454	ES
Howard BC A34-02 - Original Drilling - Original Drilling - A	11,100.00	6,625.65	2,755.48	2,688.92	41.396	SF
Landwehr A34-03X - Original Drilling - Original Drilling - A	10,890.22	6,716.61	3,877.76	3,811.67	58.673	CC
Landwehr A34-03X - Original Drilling - Original Drilling - A	10,900.00	6,716.47	3,877.77	3,811.61	58.615	ES
Landwehr A34-03X - Original Drilling - Original Drilling - A	11,900.00	6,701.58	4,007.05	3,935.20	55.764	SF
Landwehr A34-04 - Original Drilling - Original Drilling - As	10,911.99	6,793.14	5,365.46	5,298.93	80.644	CC, ES
Landwehr A34-04 - Original Drilling - Original Drilling - As	12,800.00	6,856.14	5,687.48	5,609.78	73.205	SF
Petrikin A34-05 (PA) - Original Drilling - Original Drilling -	9,385.43	6,652.03	5,142.19	4,976.04	30.949	CC
Petrikin A34-05 (PA) - Original Drilling - Original Drilling -	9,400.00	6,652.03	5,142.21	4,975.98	30.934	ES
Petrikin A34-05 (PA) - Original Drilling - Original Drilling -	10,300.00	6,652.02	5,222.89	5,051.50	30.475	SF
Petrikin A34-06 - Original Drilling - Original Drilling - As D	9,413.34	6,724.75	3,809.49	3,752.92	67.331	CC, ES
Petrikin A34-06 - Original Drilling - Original Drilling - As D	10,500.00	6,729.39	3,961.45	3,899.11	63.548	SF
Petrikin A34-07 (PA) - Original Drilling - Original Drilling -	9,477.72	6,637.03	2,482.34	2,315.95	14.919	CC
Petrikin A34-07 (PA) - Original Drilling - Original Drilling -	9,500.00	6,637.03	2,482.44	2,315.92	14.908	ES
Petrikin A34-07 (PA) - Original Drilling - Original Drilling -	9,700.00	6,637.02	2,492.27	2,324.66	14.870	SF
Petrikin A34-08 - Original Drilling - Original Drilling - As D	9,489.10	6,657.59	1,051.61	994.74	18.491	CC, ES
Petrikin A34-08 - Original Drilling - Original Drilling - As D	9,600.00	6,651.91	1,057.43	1,000.07	18.435	SF
Petrikin A34-09 - Original Drilling - Original Drilling - As D	8,189.62	6,650.77	1,036.70	986.59	20.689	CC, ES
Petrikin A34-09 - Original Drilling - Original Drilling - As D	8,300.00	6,646.23	1,042.55	992.08	20.656	SF
Petrikin A34-10 - Original Drilling - Original Drilling - As D	8,205.04	6,575.39	2,301.62	2,251.75	46.156	CC, ES
Petrikin A34-10 - Original Drilling - Original Drilling - As D	8,600.00	6,565.45	2,335.23	2,283.85	45.452	SF
Petrikin A34-11 - Original Drilling - Original Drilling - As D	8,167.89	6,639.69	3,779.33	3,729.33	75.595	CC, ES
Petrikin A34-11 - Original Drilling - Original Drilling - As D	9,400.00	6,639.61	3,975.10	3,919.81	71.892	SF
Petrikin A34-12 (PA) - Original Drilling - Original Drilling -	8,189.35	6,828.01	5,028.48	4,977.73	99.079	CC
Petrikin A34-12 (PA) - Original Drilling - Original Drilling -	8,200.00	6,828.21	5,028.49	4,977.70	98.995	ES
Petrikin A34-12 (PA) - Original Drilling - Original Drilling -	10,300.00	6,867.34	5,453.34	5,392.73	89.969	SF
Petrikin A34-13 - Original Drilling - Original Drilling - As D	5,245.68	5,252.48	4,972.78	4,936.01	135.256	CC, ES
Petrikin A34-13 - Original Drilling - Original Drilling - As D	9,000.00	6,551.39	5,567.72	5,515.33	106.266	SF
Petrikin A34-14 (PA) - Original Drilling - Original Drilling -	100.00	47.22	3,969.94	3,969.73	10,000.000	CC
Petrikin A34-14 (PA) - Original Drilling - Original Drilling -	400.00	330.83	3,971.64	3,969.45	1,817.297	ES
Petrikin A34-14 (PA) - Original Drilling - Original Drilling -	8,200.00	6,608.36	4,570.11	4,520.26	91.675	SF
Petrikin A34-15 - Original Drilling - Original Drilling - As D	4,181.86	4,149.32	2,375.41	2,346.34	81.708	CC
Petrikin A34-15 - Original Drilling - Original Drilling - As D	4,400.00	4,353.82	2,376.27	2,345.70	77.739	ES
Petrikin A34-15 - Original Drilling - Original Drilling - As D	6,950.00	6,602.31	2,465.93	2,419.40	52.993	SF
Petrikin A34-16 (PA) - Original Drilling - Original Drilling -	6,839.32	6,673.14	1,070.20	1,023.63	22.977	CC, ES
Petrikin A34-16 (PA) - Original Drilling - Original Drilling -	6,900.00	6,690.42	1,071.94	1,025.19	22.929	SF
Petrikin A34-25 - Original Drilling - Original Drilling - As D	7,587.00	6,589.27	4,392.98	4,345.19	91.925	CC
Petrikin A34-25 - Original Drilling - Original Drilling - As D	7,600.00	6,588.77	4,393.00	4,345.18	91.862	ES
Petrikin A34-25 - Original Drilling - Original Drilling - As D	9,200.00	6,523.04	4,679.22	4,625.63	87.313	SF
Reveille A33-720 - Reveille A33-720 OH - APD - Rev 1	2,000.00	1,982.00	4,146.68	4,132.88	300.303	CC
Reveille A33-720 - Reveille A33-720 OH - APD - Rev 1	2,100.00	2,035.86	4,147.14	4,132.79	288.908	ES
Reveille A33-720 - Reveille A33-720 OH - APD - Rev 1	16,531.96	17,576.35	6,369.84	6,197.44	36.948	SF
Reveille A34-746 - Reveille A34-746 OH - APD - Rev 1	16,509.58	16,817.91	2,830.41	2,659.45	16.556	CC
Reveille A34-746 - Reveille A34-746 OH - APD - Rev 1	16,531.96	16,817.91	2,830.49	2,659.41	16.545	ES, SF
Reveille A34-757 - Reveille A34-757 OH - APD - Rev 1	6,166.02	6,478.81	3,538.75	3,494.05	79.160	CC

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

**Noble Energy, Inc.**  
Anticollision Summary Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Reveille A35-783
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	KB @ 4679.00ft
<b>Reference Site:</b>	A Section 35	<b>MD Reference:</b>	KB @ 4679.00ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Reveille A35-783	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Reveille A35-783 OH	<b>Database:</b>	EDMP
<b>Reference Design:</b>	APD - Rev 1	<b>Offset TVD Reference:</b>	Offset Datum

**Summary**

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Separation Factor	Warning
A Section 34						
Reveille A34-757 - Reveille A34-757 OH - APD - Rev 1	16,531.96	16,626.69	3,539.70	3,368.93	20.727	ES, SF
Reveille A34-768 - Reveille A34-768 OH - APD - Rev 1	2,200.00	2,181.00	4,139.82	4,124.58	271.666	CC
Reveille A34-768 - Reveille A34-768 OH - APD - Rev 1	16,531.96	16,558.98	4,245.89	4,074.35	24.752	ES, SF
Reveille A34-778 - Reveille A34-778 OH - APD - Rev 1	2,400.00	2,381.00	4,141.07	4,124.39	248.377	CC
Reveille A34-778 - Reveille A34-778 OH - APD - Rev 1	2,500.00	2,435.03	4,141.52	4,124.30	240.515	ES
Reveille A34-778 - Reveille A34-778 OH - APD - Rev 1	16,531.96	16,607.30	4,954.74	4,784.39	29.085	SF
Reveille A34-788 - Reveille A34-788 OH - APD - Rev 1	2,000.00	1,982.00	4,145.21	4,131.40	300.196	CC
Reveille A34-788 - Reveille A34-788 OH - APD - Rev 1	2,100.00	2,037.65	4,145.65	4,131.29	288.688	ES
Reveille A34-788 - Reveille A34-788 OH - APD - Rev 1	16,531.96	17,226.69	5,661.12	5,488.55	32.804	SF
A Section 35						
Hoffner 13-35 - Original Drilling - Original Drilling - As Dri	8,235.53	6,664.13	107.08	56.67	2.124	CC, ES, SF
Hoffner 14-35 (SI) - Original Drilling - Original Drilling - As	6,579.48	6,506.62	30.75	-14.69	0.677	Level 1, CC, ES, SF
Hoffner 24-35 (SI) - Original Drilling - Original Drilling - As	6,927.56	6,586.96	1,439.88	1,393.42	30.989	CC, ES
Hoffner 24-35 (SI) - Original Drilling - Original Drilling - As	7,000.00	6,592.87	1,441.64	1,395.04	30.939	SF
Hoffner 33-35 - Original Drilling - Original Drilling - As Dri	7,964.98	6,696.02	3,075.65	3,026.29	62.311	CC, ES
Hoffner 33-35 - Original Drilling - Original Drilling - As Dri	8,700.00	6,667.28	3,162.14	3,109.84	60.468	SF
Hoffner 34-35 - Original Drilling - Original Drilling - As Dri	7,198.98	6,510.69	2,973.48	2,926.88	63.812	CC
Hoffner 34-35 - Original Drilling - Original Drilling - As Dri	7,200.00	6,510.76	2,973.48	2,926.88	63.809	ES
Hoffner 34-35 - Original Drilling - Original Drilling - As Dri	7,521.26	6,532.73	2,996.54	2,949.15	63.230	SF
Hoffner 44-35 - Wellbore #1 - Wellbore #1- As Drilled	7,103.77	6,659.01	4,309.98	4,262.97	91.673	CC, ES
Hoffner 44-35 - Wellbore #1 - Wellbore #1- As Drilled	8,300.00	6,654.38	4,525.52	4,475.19	89.908	SF
Reveille A34-714 - Reveille A34-714 OH - APD - Rev 1	2,000.00	2,000.00	22.27	8.40	1.605	CC, ES, SF
Reveille A34-725 - Reveille A34-725 OH - APD - Rev 1	2,000.00	2,001.00	47.32	33.45	3.410	CC, ES
Reveille A34-725 - Reveille A34-725 OH - APD - Rev 1	2,100.00	2,099.32	49.07	34.50	3.368	SF
Reveille A34-735 - Reveille A34-735 OH - APD - Rev 1	2,000.00	2,002.00	69.59	55.71	5.014	CC, ES
Reveille A34-735 - Reveille A34-735 OH - APD - Rev 1	2,100.00	2,099.54	71.36	56.79	4.897	SF
Reveille A35-750 - Reveille A35-750 OH - APD - Rev 2	2,000.00	1,998.00	66.81	52.94	4.818	CC, ES
Reveille A35-750 - Reveille A35-750 OH - APD - Rev 2	2,100.00	2,094.61	69.23	54.69	4.759	SF
Reveille A35-762 - Reveille A35-762 OH - APD - Rev 2	2,000.00	1,998.00	44.54	30.67	3.212	CC, ES
Reveille A35-762 - Reveille A35-762 OH - APD - Rev 2	2,100.00	2,096.47	46.19	31.62	3.172	SF
Reveille A35-772 - Reveille A35-772 OH - APD - Rev 2	2,000.00	1,999.00	22.27	8.40	1.606	CC, ES, SF
Sharkey 31-35 - Original Drilling - Original Drilling - As Dr	10,796.09	6,624.63	2,819.63	2,754.52	43.310	CC
Sharkey 31-35 - Original Drilling - Original Drilling - As Dr	10,800.00	6,624.70	2,819.63	2,754.50	43.292	ES
Sharkey 31-35 - Original Drilling - Original Drilling - As Dr	11,400.00	6,634.86	2,883.55	2,814.79	41.937	SF
Sharkey 32-35 - Original Drilling - Original Drilling - As Dr	9,275.80	6,548.71	2,903.14	2,847.97	52.620	CC
Sharkey 32-35 - Original Drilling - Original Drilling - As Dr	9,300.00	6,549.62	2,903.24	2,847.93	52.484	ES
Sharkey 32-35 - Original Drilling - Original Drilling - As Dr	10,000.00	6,573.04	2,992.02	2,932.87	50.585	SF
Wardlaw 35-21 (SI) - Original Drilling - Original Drilling - A	10,579.45	6,631.26	1,459.68	1,396.01	22.928	CC, ES
Wardlaw 35-21 (SI) - Original Drilling - Original Drilling - A	10,700.00	6,630.73	1,464.65	1,400.21	22.729	SF
Wardlaw 35-22 - Original Drilling - Original Drilling - As D	10,902.77	6,628.93	168.69	102.84	2.562	CC, ES, SF
Wardlaw 35-23 (PA) - Original Drilling - Original Drilling -	9,453.85	6,623.05	97.76	39.30	1.672	CC, ES, SF
Wardlaw 35-24 - Original Drilling - Original Drilling - As D	9,470.30	6,656.68	1,477.69	1,421.04	26.085	CC, ES
Wardlaw 35-24 - Original Drilling - Original Drilling - As D	9,700.00	6,657.68	1,495.44	1,437.54	25.830	SF
Wardlaw 35-25 - Original Drilling - Original Drilling - As D	9,896.31	6,625.38	855.37	796.22	14.460	CC
Wardlaw 35-25 - Original Drilling - Original Drilling - As D	9,900.00	6,625.45	855.38	796.20	14.454	ES
Wardlaw 35-25 - Original Drilling - Original Drilling - As D	10,000.00	6,627.36	861.63	801.90	14.426	SF

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



**Noble Energy, Inc.**  
Anticollision Summary Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Reveille A35-783
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	KB @ 4679.00ft
<b>Reference Site:</b>	A Section 35	<b>MD Reference:</b>	KB @ 4679.00ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Reveille A35-783	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Reveille A35-783 OH	<b>Database:</b>	EDMP
<b>Reference Design:</b>	APD - Rev 1	<b>Offset TVD Reference:</b>	Offset Datum

**Summary**

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Separation Factor	Warning
A Section 36						
Devries State A36-17 (Exist.) - Wellbore #1 - Wellbore #1	10,086.81	6,627.72	8,812.03	8,720.96	96.762	CC
Devries State A36-17 (Exist.) - Wellbore #1 - Wellbore #1	10,100.00	6,627.14	8,812.04	8,720.90	96.681	ES
Devries State A36-17 (Exist.) - Wellbore #1 - Wellbore #1	13,700.00	6,469.60	9,522.96	9,412.12	85.916	SF
Devries State A36-21 - Wellbore #1 - Wellbore #1 - As Dr	8,574.51	6,739.23	7,269.94	7,217.79	139.413	CC
Devries State A36-21 - Wellbore #1 - Wellbore #1 - As Dr	8,600.00	6,739.68	7,269.98	7,217.71	139.083	ES
Devries State A36-21 - Wellbore #1 - Wellbore #1 - As Dr	12,600.00	6,810.78	8,309.81	8,236.13	112.782	SF
Devries State A36-23 - Wellbore #1 - Wellbore #1 - As Dr	7,571.11	6,555.85	8,779.69	8,732.07	184.353	CC
Devries State A36-23 - Wellbore #1 - Wellbore #1 - As Dr	7,600.00	6,555.62	8,779.74	8,732.03	184.048	ES
Devries State A36-23 - Wellbore #1 - Wellbore #1 - As Dr	12,300.00	6,525.32	9,972.22	9,901.26	140.528	SF
Devries State A36-25 - Wellbore #1 - Wellbore #1 - As Dr	7,507.55	6,572.23	6,087.60	6,040.09	128.124	CC, ES
Devries State A36-25 - Wellbore #1 - Wellbore #1 - As Dr	10,800.00	6,540.43	6,934.66	6,872.92	112.327	SF
Scholfield A36-19 (Exist.) - Wellbore #1 - Wellbore #1 - A	10,112.03	6,700.00	5,944.76	5,883.97	97.790	CC, ES
Scholfield A36-19 (Exist.) - Wellbore #1 - Wellbore #1 - A	14,400.00	14,400.00	7,329.43	7,220.88	67.522	SF
Scholfield A36-20 - Wellbore #1 - Wellbore #1 - As Drilled	8,853.05	6,534.72	5,944.98	5,892.18	112.614	CC
Scholfield A36-20 - Wellbore #1 - Wellbore #1 - As Drilled	8,900.00	6,534.86	5,945.16	5,892.12	112.093	ES
Scholfield A36-20 - Wellbore #1 - Wellbore #1 - As Drilled	11,700.00	6,541.31	6,591.50	6,523.55	97.010	SF
Scholfield State A36-4X - Wellbore #1 - Wellbore #1 - As	10,500.00	10,500.00	5,341.46	5,264.86	69.734	SF
Scholfield State A36-4X - Wellbore #1 - Wellbore #1 - As	10,859.20	6,645.94	5,329.52	5,263.93	81.252	CC
Scholfield State A36-4X - Wellbore #1 - Wellbore #1 - As	10,900.00	6,643.85	5,329.68	5,263.81	80.912	ES
Scholfield State A36-69HN - Original Drilling - Original Dr	11,355.18	6,064.17	5,379.63	5,314.39	82.456	CC
Scholfield State A36-69HN - Original Drilling - Original Dr	11,400.00	6,064.26	5,379.82	5,314.26	82.054	ES
Scholfield State A36-69HN - Original Drilling - Original Dr	13,300.00	6,080.01	5,720.65	5,643.75	74.393	SF
Scholfield State A36-79HN - Wellbore #1 - Original Drillin	6,400.00	10,427.45	4,786.76	4,683.33	46.280	SF
Scholfield State A36-79HN - Wellbore #1 - Original Drillin	7,882.98	9,267.02	4,645.67	4,557.99	52.984	CC
Scholfield State A36-79HN - Wellbore #1 - Original Drillin	7,900.00	9,267.02	4,645.71	4,557.93	52.930	ES
Sinjin E 36-9 (SI) - Wellbore #1 - No Surveys						Out of range
State A36-05 - Wellbore #1 - Wellbore #1 - As Drilled	9,476.21	6,630.02	5,440.27	5,383.68	96.121	CC
State A36-05 - Wellbore #1 - Wellbore #1 - As Drilled	9,500.00	6,629.89	5,440.33	5,383.59	95.882	ES
State A36-05 - Wellbore #1 - Wellbore #1 - As Drilled	11,700.00	6,617.51	5,877.22	5,808.21	85.158	SF
State A36-06 - Wellbore #1 - Wellbore #1 - As Drilled	9,345.40	6,593.58	6,734.59	6,678.85	120.827	CC
State A36-06 - Wellbore #1 - Wellbore #1 - As Drilled	9,400.00	6,592.30	6,734.81	6,678.76	120.151	ES
State A36-06 - Wellbore #1 - Wellbore #1 - As Drilled	12,600.00	6,514.42	7,479.48	7,405.75	101.452	SF
State A36-07 - Wellbore #1 - Wellbore #1 - As Drilled	9,667.83	6,589.05	8,089.47	8,031.83	140.362	CC
State A36-07 - Wellbore #1 - Wellbore #1 - As Drilled	9,700.00	6,589.03	8,089.53	8,031.70	139.883	ES
State A36-07 - Wellbore #1 - Wellbore #1 - As Drilled	14,000.00	6,586.12	9,176.73	9,094.31	111.341	SF
State A36-08 - Wellbore #1 - Wellbore #1 - As Drilled	9,282.96	6,422.23	9,414.54	9,359.81	171.997	CC
State A36-08 - Wellbore #1 - Wellbore #1 - As Drilled	9,300.00	6,421.32	9,414.56	9,359.73	171.700	ES
State A36-08 - Wellbore #1 - Wellbore #1 - As Drilled	12,600.00	6,369.60	9,981.65	9,906.70	133.187	SF
State A36-09 - Wellbore #1 - Wellbore #1 - As Drilled	8,086.75	6,743.43	9,405.15	9,355.15	188.127	CC
State A36-09 - Wellbore #1 - Wellbore #1 - As Drilled	8,100.00	6,743.41	9,405.16	9,355.11	187.934	ES
State A36-09 - Wellbore #1 - Wellbore #1 - As Drilled	11,400.00	6,737.58	9,971.68	9,903.66	146.603	SF
State A36-10 - Wellbore #1 - Wellbore #1 - As Drilled	8,061.45	6,741.18	8,091.09	8,041.19	162.166	CC
State A36-10 - Wellbore #1 - Wellbore #1 - As Drilled	8,100.00	6,740.19	8,091.18	8,041.14	161.693	ES
State A36-10 - Wellbore #1 - Wellbore #1 - As Drilled	11,600.00	11,600.00	8,830.27	8,744.75	103.249	SF
State A36-11 - Wellbore #1 - Wellbore #1 - As Drilled	8,033.73	6,727.86	6,764.06	6,714.31	135.936	CC, ES
State A36-11 - Wellbore #1 - Wellbore #1 - As Drilled	11,800.00	6,581.38	7,741.25	7,673.45	114.165	SF
State A36-12 - Wellbore #1 - Wellbore #1 - As Drilled	8,116.46	6,666.65	5,386.56	5,336.71	108.063	CC, ES
State A36-12 - Wellbore #1 - Wellbore #1 - As Drilled	10,600.00	6,663.05	5,931.52	5,869.80	96.104	SF
State A36-13 - Wellbore #1 - Wellbore #1 - As Drilled	7,249.60	6,555.89	5,417.14	5,370.26	115.551	CC, ES
State A36-13 - Wellbore #1 - Wellbore #1 - As Drilled	9,600.00	6,577.76	6,029.58	5,974.00	108.498	SF
State A36-14 - Wellbore #1 - Wellbore #1 - As Drilled	7,270.70	6,617.05	6,768.82	6,612.29	43.242	CC, ES
State A36-14 - Wellbore #1 - Wellbore #1 - As Drilled	7,800.00	6,617.04	6,812.75	6,654.82	43.136	SF
State A36-15 - Wellbore #1 - Wellbore #1 - As Drilled	7,340.06	6,584.76	8,173.87	8,126.86	173.872	CC, ES

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

**Noble Energy, Inc.**  
Anticollision Summary Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Reveille A35-783
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	KB @ 4679.00ft
<b>Reference Site:</b>	A Section 35	<b>MD Reference:</b>	KB @ 4679.00ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Reveille A35-783	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Reveille A35-783 OH	<b>Database:</b>	EDMP
<b>Reference Design:</b>	APD - Rev 1	<b>Offset TVD Reference:</b>	Offset Datum

**Summary**

Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Separation Factor	Warning
<b>Offset Well - Wellbore - Design</b>						
A Section 36						
State A36-15 - Wellbore #1 - Wellbore #1 - As Drilled	12,500.00	6,591.83	9,933.54	9,863.61	142.036	SF
State A36-16 - Wellbore #1 - Wellbore #1 - As Drilled	7,345.26	6,614.60	9,424.01	9,376.74	199.347	CC, ES
State A36-16 - Wellbore #1 - Wellbore #1 - As Drilled	10,100.00	6,597.43	9,974.25	9,914.96	168.230	SF
State A36-3 (Exist.) - Wellbore #1 - Wellbore #1	10,735.10	6,444.91	6,800.97	6,736.75	105.892	CC
State A36-3 (Exist.) - Wellbore #1 - Wellbore #1	10,800.00	6,443.98	6,801.28	6,736.61	105.168	ES
State A36-3 (Exist.) - Wellbore #1 - Wellbore #1	13,700.00	6,400.01	7,419.21	7,337.49	90.794	SF
State A36-99HZ - Original Drilling - As Drilled	11,121.99	6,163.01	5,367.53	5,302.95	83.115	CC, ES
State A36-99HZ - Original Drilling - As Drilled	13,100.00	6,163.01	5,720.56	5,644.20	74.915	SF
AA Section 30						
Shadow A26-622 - Original Drilling - Original Drilling - As	12,103.91	17,520.00	2,843.78	2,762.47	34.976	CC, ES
Shadow A26-622 - Original Drilling - Original Drilling - As	13,800.00	17,520.00	3,311.16	3,195.74	28.687	SF
Shadow A26-627 - Original Drilling - Original Drilling - As	12,497.65	17,590.00	2,708.59	2,624.35	32.154	CC
Shadow A26-627 - Original Drilling - Original Drilling - As	12,500.00	17,590.00	2,708.59	2,624.33	32.148	ES
Shadow A26-627 - Original Drilling - Original Drilling - As	14,300.00	17,590.00	3,253.45	3,124.71	25.272	SF
Shadow A26-632 - Original Drilling - Original Drilling - As	12,797.67	17,781.00	2,721.95	2,639.47	33.004	CC
Shadow A26-632 - Original Drilling - Original Drilling - As	12,800.00	17,781.00	2,721.95	2,639.44	32.990	ES
Shadow A26-632 - Original Drilling - Original Drilling - As	14,600.00	17,781.00	3,264.56	3,122.06	22.908	SF
Shadow A26-637 - Original Drilling - Original Drilling - As	13,083.41	17,626.00	2,715.44	2,634.18	33.416	CC
Shadow A26-637 - Original Drilling - Original Drilling - As	13,100.00	17,626.00	2,715.50	2,633.99	33.319	ES
Shadow A26-637 - Original Drilling - Original Drilling - As	14,900.00	17,626.00	3,267.05	3,123.96	22.831	SF
Shadow A26-646 - Original Drilling - Original Drilling - As	13,762.40	17,659.00	2,720.65	2,632.50	30.866	CC
Shadow A26-646 - Original Drilling - Original Drilling - As	13,800.00	17,659.00	2,720.91	2,632.36	30.730	ES
Shadow A26-646 - Original Drilling - Original Drilling - As	15,600.00	17,659.00	3,283.09	3,136.39	22.380	SF
Shadow A26-656 - Original Drilling - Original Drilling - As	14,403.15	17,347.00	3,098.14	2,999.80	31.504	CC, ES
Shadow A26-656 - Original Drilling - Original Drilling - As	16,100.00	17,347.00	3,532.39	3,401.47	26.982	SF
Shadow A26-663 - Original Drilling - Original Drilling - As	14,960.79	17,466.00	2,955.54	2,852.54	28.694	CC
Shadow A26-663 - Original Drilling - Original Drilling - As	15,000.00	17,466.00	2,955.80	2,852.52	28.619	ES
Shadow A26-663 - Original Drilling - Original Drilling - As	16,531.96	17,466.00	3,347.21	3,212.56	24.859	SF
Shadow A26-672 - Original Drilling - Original Drilling - As	15,454.24	17,710.00	2,719.39	2,618.55	26.968	CC
Shadow A26-672 - Original Drilling - Original Drilling - As	15,500.00	17,710.00	2,719.77	2,618.36	26.820	ES
Shadow A26-672 - Original Drilling - Original Drilling - As	16,531.96	17,710.00	2,925.16	2,788.65	21.429	SF
Shadow A26-676 - Original Drilling - Original Drilling - As	15,740.09	17,725.00	2,731.14	2,622.01	25.027	CC
Shadow A26-676 - Original Drilling - Original Drilling - As	15,800.00	17,725.00	2,731.80	2,621.98	24.875	ES
Shadow A26-676 - Original Drilling - Original Drilling - As	16,531.96	17,725.00	2,843.62	2,717.09	22.473	SF
Shadow A26-685 - Original Drilling - Original Drilling - As	14,200.00	17,810.00	3,534.54	3,230.15	11.612	SF
Shadow A26-685 - Original Drilling - Original Drilling - As	16,100.00	17,810.00	2,763.01	2,624.96	20.015	ES
Shadow A26-685 - Original Drilling - Original Drilling - As	16,428.62	17,810.00	2,743.40	2,628.92	23.964	CC
Shadow A26-690 - Original Drilling - Original Drilling - As	15,400.00	17,780.00	2,997.49	2,865.63	22.732	SF
Shadow A26-690 - Original Drilling - Original Drilling - As	16,531.96	17,780.00	2,723.88	2,613.50	24.679	CC, ES
Shadow State A26-614 - Original Drilling - Original Drilling	11,568.58	17,675.00	2,709.18	2,631.39	34.829	CC
Shadow State A26-614 - Original Drilling - Original Drilling	11,600.00	17,675.00	2,709.36	2,631.21	34.669	ES
Shadow State A26-614 - Original Drilling - Original Drilling	13,200.00	17,675.00	3,162.63	3,050.11	28.108	SF
Shadow State A26-618 - Original Drilling - Original Drilling	11,814.93	17,415.00	2,876.01	2,797.22	36.503	CC, ES
Shadow State A26-618 - Original Drilling - Original Drilling	13,700.00	17,415.00	3,438.97	3,316.36	28.047	SF

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

**Noble Energy, Inc.**  
Anticollision Summary Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Reveille A35-783
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	KB @ 4679.00ft
<b>Reference Site:</b>	A Section 35	<b>MD Reference:</b>	KB @ 4679.00ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Reveille A35-783	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Reveille A35-783 OH	<b>Database:</b>	EDMP
<b>Reference Design:</b>	APD - Rev 1	<b>Offset TVD Reference:</b>	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
B Section 01						
Lucci B01-69HNL - Original Drilling - Original Drilling - As	6,308.28	6,011.26	5,509.61	5,467.32	130.267	CC
Lucci B01-69HNL - Original Drilling - Original Drilling - As	6,361.97	6,043.00	5,509.72	5,467.16	129.445	ES
Lucci B01-69HNL - Original Drilling - Original Drilling - As	9,200.00	6,043.00	6,203.97	6,153.32	122.501	SF
Lucci B01-99HZ - Original Drilling - Original Drilling - As	6,194.70	5,887.00	5,580.17	5,539.20	136.204	CC
Lucci B01-99HZ - Original Drilling - Original Drilling - As	6,200.00	5,887.00	5,580.17	5,539.19	136.148	ES
Lucci B01-99HZ - Original Drilling - Original Drilling - As	8,700.00	5,950.00	6,233.53	6,185.85	130.739	SF
Lucci BC B 01-13 (PA) - Wellbore #1 - Gyro Surveys	6,066.28	5,786.19	7,248.33	7,206.99	175.338	CC, ES
Lucci BC B 01-13 (PA) - Wellbore #1 - Gyro Surveys	6,700.00	6,307.55	7,446.76	7,401.79	165.599	SF
Lucci BC B 1-14 (PA) - Wellbore #1 - Gyro Surveys	6,110.25	6,047.59	8,401.59	8,359.15	197.975	CC, ES
Lucci BC B 1-14 (PA) - Wellbore #1 - Gyro Surveys	6,800.00	6,564.59	8,604.25	8,558.15	186.660	SF
Lucci BC B 1-15 (PA) - Wellbore #1 - Gyro Surveys	6,140.04	6,187.46	9,366.50	9,323.50	217.823	CC
Lucci BC B 1-15 (PA) - Wellbore #1 - Gyro Surveys	6,150.00	6,196.17	9,366.54	9,323.47	217.495	ES
Lucci BC B 1-15 (PA) - Wellbore #1 - Gyro Surveys	6,800.00	6,673.54	9,531.71	9,485.32	205.489	SF
Lucci BC B 1-16 (PA) - Wellbore #1 - Wellbore #1						Out of range
Lucci State B03-69HNL - Original Drilling - Original Drilling	6,479.06	11,783.14	378.29	251.13	2.975	CC
Lucci State B03-69HNL - Original Drilling - Original Drilling	6,550.00	11,781.47	388.74	247.04	2.743	ES
Lucci State B03-69HNL - Original Drilling - Original Drilling	6,600.00	11,780.31	407.85	258.99	2.740	SF
SLW Ranch B01-62-1HN - Original Drilling - As Drilled	6,155.85	11,286.02	7,444.79	7,338.33	69.932	CC, ES
SLW Ranch B01-62-1HN - Original Drilling - As Drilled	6,603.01	11,286.02	7,563.47	7,453.86	69.005	SF
SLW Ranch B01-63-1HN - Original Drilling - As Drilled	6,164.37	11,250.02	7,005.25	6,908.40	72.329	CC, ES
SLW Ranch B01-63-1HN - Original Drilling - As Drilled	6,900.00	11,250.02	7,279.56	7,176.48	70.616	SF
SLW Ranch B01-64-1HN - Original Drilling - As Drilled	6,192.73	11,274.02	6,620.24	6,532.42	75.381	CC
SLW Ranch B01-64-1HN - Original Drilling - As Drilled	6,200.00	11,274.02	6,620.27	6,532.39	75.337	ES
SLW Ranch B01-64-1HN - Original Drilling - As Drilled	7,400.00	11,274.02	7,163.75	7,064.31	72.047	SF
SLW Ranch B01-66-1HN - Original Drilling - Original Drill	6,252.72	11,201.02	5,966.31	5,878.84	68.207	CC, ES
SLW Ranch B01-66-1HN - Original Drilling - Original Drill	8,400.00	11,201.02	6,974.06	6,860.44	61.380	SF
SLW Ranch B01-67-1HN - Original Drilling - As Drilled - S	6,300.56	11,165.02	5,713.25	5,641.22	79.316	CC, ES
SLW Ranch B01-67-1HN - Original Drilling - As Drilled - S	9,400.00	11,165.02	7,199.56	7,084.90	62.791	SF
SLW Ranch B01-68-1HN - Original Drilling - Original Drill	6,372.07	11,204.02	5,523.72	5,472.36	107.563	CC, ES
SLW Ranch B01-68-1HN - Original Drilling - Original Drill	9,500.00	11,204.02	6,823.03	6,751.38	95.220	SF
SLW Ranch B01-69-1HN - Original Drilling - As Drilled	6,487.41	11,247.02	5,413.26	5,359.60	100.882	CC
SLW Ranch B01-69-1HN - Original Drilling - As Drilled	6,500.00	11,247.02	5,413.29	5,359.56	100.753	ES
SLW Ranch B01-69-1HN - Original Drilling - As Drilled	11,000.00	11,247.02	7,402.50	7,287.62	64.435	SF
SLW Ranch B12-69-1HN - Wellbore #1 - Wellbore #1- As						Out of range

**Noble Energy, Inc.**  
Anticollision Summary Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Reveille A35-783
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	KB @ 4679.00ft
<b>Reference Site:</b>	A Section 35	<b>MD Reference:</b>	KB @ 4679.00ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Reveille A35-783	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Reveille A35-783 OH	<b>Database:</b>	EDMP
<b>Reference Design:</b>	APD - Rev 1	<b>Offset TVD Reference:</b>	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	6,048.58	5,988.91	912.94	870.91	21.720	CC
Baker B02-04 - Wellbore #1 - Original Drilling - As Drilled	6,050.00	5,990.34	912.95	870.90	21.715	ES
Baker B02-04 - Wellbore #1 - Original Drilling - As Drilled	6,150.00	6,094.19	920.21	877.45	21.520	SF
Baker B02-05 - Wellbore #1 - Wellbore #1-As Drilled	1,918.17	1,878.27	2,370.12	2,357.08	181.691	CC
Baker B02-05 - Wellbore #1 - Wellbore #1-As Drilled	6,036.28	5,950.87	2,384.84	2,343.00	57.007	ES
Baker B02-05 - Wellbore #1 - Wellbore #1-As Drilled	6,300.00	6,226.07	2,437.67	2,393.96	55.774	SF
Bucklen 01-02 - Wellbore #1 - Wellbore #1- As Drilled	6,048.60	6,032.08	4,992.94	4,950.76	118.390	CC
Bucklen 01-02 - Wellbore #1 - Wellbore #1- As Drilled	6,050.00	6,033.02	4,992.94	4,950.76	118.367	ES
Bucklen 01-02 - Wellbore #1 - Wellbore #1- As Drilled	6,450.00	6,354.54	5,118.17	5,073.57	114.756	SF
Bucklen B02-12 - Wellbore #1 - Wellbore #1-As drilled	1,965.68	1,912.05	3,560.47	3,547.13	266.826	CC
Bucklen B02-12 - Wellbore #1 - Wellbore #1-As drilled	6,032.57	5,914.97	3,570.00	3,528.30	85.599	ES
Bucklen B02-12 - Wellbore #1 - Wellbore #1-As drilled	6,350.00	6,204.34	3,647.87	3,604.08	83.306	SF
Buckmur B02-14 - Wellbore #1 - Wellbore #1- As Drilled	6,044.32	5,876.99	5,156.37	5,114.78	123.975	CC
Buckmur B02-14 - Wellbore #1 - Wellbore #1- As Drilled	6,050.00	5,881.94	5,156.40	5,114.77	123.866	ES
Buckmur B02-14 - Wellbore #1 - Wellbore #1- As Drilled	6,450.00	6,211.17	5,276.47	5,232.40	119.742	SF
Buckmur B02-25 - Wellbore #1 - Wellbore #1- As Drilled	6,057.67	6,043.39	4,251.01	4,208.77	100.658	CC, ES
Buckmur B02-25 - Wellbore #1 - Wellbore #1- As Drilled	6,450.00	6,398.44	4,368.27	4,323.53	97.631	SF
Cougar B02-67-1HN - Original Drilling - Original Drilling -	100.00	85.31	880.42	880.15	3,298.495	CC
Cougar B02-67-1HN - Original Drilling - Original Drilling -	500.00	478.84	881.62	878.95	330.746	ES
Cougar B02-67-1HN - Original Drilling - Original Drilling -	6,100.00	5,783.33	1,729.67	1,692.48	46.511	SF
Cougar B02-68-1HN - Original Drilling - Original Drilling -	100.00	82.70	897.23	896.97	3,469.210	CC
Cougar B02-68-1HN - Original Drilling - Original Drilling -	200.00	179.97	897.64	896.87	1,160.495	ES
Cougar B02-68-1HN - Original Drilling - Original Drilling -	6,200.00	6,200.95	1,279.98	1,241.66	33.402	SF
Cougar B02-69-1HN - Original Drilling - Original Drilling -	6,032.32	6,001.35	625.93	589.16	17.021	CC, ES
Cougar B02-69-1HN - Original Drilling - Original Drilling -	6,100.00	6,051.86	630.05	592.93	16.975	SF
Foe A35-73HN - Original Drilling - Original Drilling - As Dr	1,640.30	1,595.36	3,386.07	3,377.25	384.185	CC
Foe A35-73HN - Original Drilling - Original Drilling - As Dr	10,900.00	11,136.72	3,469.56	3,339.54	26.685	ES
Foe A35-73HN - Original Drilling - Original Drilling - As Dr	11,300.00	11,176.02	3,492.92	3,359.71	26.223	SF
Foe B02-02 - Wellbore #1 - Wellbore #1- As Drilled	6,215.17	6,231.48	3,025.68	2,982.22	69.616	CC, ES
Foe B02-02 - Wellbore #1 - Wellbore #1- As Drilled	6,603.01	6,483.91	3,077.02	3,031.54	67.656	SF
Foe B02-07 - Wellbore #1 - Wellbore #1-As Drilled	6,095.41	6,006.46	3,532.92	3,490.70	83.690	CC
Foe B02-07 - Wellbore #1 - Wellbore #1-As Drilled	6,100.00	6,011.42	3,532.93	3,490.68	83.624	ES
Foe B02-07 - Wellbore #1 - Wellbore #1-As Drilled	6,500.00	6,345.58	3,614.65	3,569.98	80.914	SF
Foemeyer B02-17 - Original Drilling - Original Drilling - As	6,137.05	6,061.33	3,595.98	3,553.41	84.468	CC
Foemeyer B02-17 - Original Drilling - Original Drilling - As	6,150.00	6,069.99	3,596.04	3,553.40	84.321	ES
Foemeyer B02-17 - Original Drilling - Original Drilling - As	6,603.01	6,418.08	3,677.76	3,632.57	81.376	SF
Fritzler B02-03 - Wellbore #1 - Original Drilling	6,130.11	6,060.06	1,910.27	1,767.53	13.383	CC
Fritzler B02-03 - Wellbore #1 - Original Drilling	6,150.00	6,079.66	1,910.42	1,767.22	13.341	ES
Fritzler B02-03 - Wellbore #1 - Original Drilling	6,450.00	6,351.91	1,951.18	1,801.59	13.043	SF
Fritzler B02-06 - Original Drilling - Original Drilling	6,069.54	6,004.94	2,575.58	2,434.14	18.211	CC
Fritzler B02-06 - Original Drilling - Original Drilling	6,100.00	6,035.24	2,576.21	2,434.06	18.124	ES
Fritzler B02-06 - Original Drilling - Original Drilling	6,350.00	6,272.69	2,628.48	2,480.75	17.792	SF
Fritzler B2-19 - Original Drilling - Original Drilling	6,066.32	6,013.73	1,568.69	1,427.09	11.078	CC, ES
Fritzler B2-19 - Original Drilling - Original Drilling	6,250.00	6,193.19	1,592.24	1,446.42	10.919	SF
Lonewolf B02-65HC - Original Drilling - As Drilled	6,058.95	6,177.95	2,925.96	2,884.78	71.059	CC
Lonewolf B02-65HC - Original Drilling - As Drilled	6,100.00	6,348.03	2,926.14	2,884.19	69.750	ES
Lonewolf B02-65HC - Original Drilling - As Drilled	6,350.00	6,536.01	2,983.85	2,940.22	68.389	SF
Lonewolf B02-65HC - Original Drilling - ST01 - ST01 As D	6,058.95	6,177.87	2,925.16	2,883.45	70.135	CC
Lonewolf B02-65HC - Original Drilling - ST01 - ST01 As D	6,100.00	6,347.92	2,925.34	2,882.86	68.860	ES
Lonewolf B02-65HC - Original Drilling - ST01 - ST01 As D	6,350.00	6,536.01	2,983.06	2,938.90	67.552	SF
Lonewolf B02-65HC - Wellbore #3 - Wellbore #3	6,058.95	6,177.95	2,925.96	2,884.78	71.059	CC
Lonewolf B02-65HC - Wellbore #3 - Wellbore #3	6,100.00	6,348.03	2,926.14	2,884.19	69.750	ES
Lonewolf B02-65HC - Wellbore #3 - Wellbore #3	6,350.00	6,536.01	2,983.85	2,940.22	68.388	SF

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



**Noble Energy, Inc.**  
Anticollision Summary Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Reveille A35-783
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	KB @ 4679.00ft
<b>Reference Site:</b>	A Section 35	<b>MD Reference:</b>	KB @ 4679.00ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Reveille A35-783	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Reveille A35-783 OH	<b>Database:</b>	EDMP
<b>Reference Design:</b>	APD - Rev 1	<b>Offset TVD Reference:</b>	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>B Section 02</b>						
M&M 02-23 - Wellbore #1 - Wellbore #1- As Drilled	6,085.64	6,157.96	5,463.09	5,417.34	119.410	CC, ES
M&M 02-23 - Wellbore #1 - Wellbore #1- As Drilled	6,500.00	6,400.01	5,569.33	5,521.68	116.898	SF
Meyer B02-01 - Original Drilling - Original Drilling - As Drill	6,226.78	6,116.00	4,275.12	4,232.08	99.319	CC
Meyer B02-01 - Original Drilling - Original Drilling - As Drill	6,250.00	6,136.48	4,275.23	4,232.04	98.978	ES
Meyer B02-01 - Original Drilling - Original Drilling - As Drill	6,850.00	6,498.03	4,356.21	4,310.23	94.728	SF
Meyer B02-08 - Wellbore #1 - Wellbore #1-As Drilled	6,150.90	6,154.10	4,713.59	4,670.68	109.854	CC, ES
Meyer B02-08 - Wellbore #1 - Wellbore #1-As Drilled	6,650.00	6,442.37	4,814.41	4,769.05	106.126	SF
Meyer B02-09 - Wellbore #1 - Wellbore #1-As Drilled	6,096.14	6,013.47	5,420.87	5,378.62	128.298	CC
Meyer B02-09 - Wellbore #1 - Wellbore #1-As Drilled	6,100.00	6,016.09	5,420.88	5,378.60	128.230	ES
Meyer B02-09 - Wellbore #1 - Wellbore #1-As Drilled	6,603.01	6,366.97	5,553.00	5,508.00	123.421	SF
Meyer B02-16 (PA) - Wellbore #1 - Gyro Surveys	6,085.09	6,008.19	6,353.38	6,311.18	150.571	CC, ES
Meyer B02-16 (PA) - Wellbore #1 - Gyro Surveys	6,550.00	6,335.25	6,482.86	6,438.10	144.832	SF
Pherson 02-02 - Wellbore #1 - Wellbore #1-As Drilled	6,060.71	5,996.27	3,803.82	3,761.74	90.380	CC, ES
Pherson 02-02 - Wellbore #1 - Wellbore #1-As Drilled	6,400.00	6,280.20	3,886.62	3,842.42	87.945	SF
Trebor B02-10 - Wellbore #1 - Wellbore #1 - As Drilled	6,063.43	5,890.74	4,392.65	4,350.84	105.067	CC, ES
Trebor B02-10 - Wellbore #1 - Wellbore #1 - As Drilled	6,450.00	6,200.01	4,478.12	4,434.00	101.505	SF
Trebor B02-15 - Wellbore #1 - Wellbore #1- As Drilled	6,069.34	5,999.58	5,487.09	5,444.98	130.313	CC, ES
Trebor B02-15 - Wellbore #1 - Wellbore #1- As Drilled	6,550.00	6,825.08	5,614.80	5,568.42	121.061	SF
Wolfpack B02-62-1HN - Original Drilling - Original Drilling	806.89	758.91	4,167.19	4,162.76	939.065	CC, ES
Wolfpack B02-62-1HN - Original Drilling - Original Drilling	6,400.00	6,400.00	5,055.65	5,011.97	115.729	SF
Wolfpack B02-63-1HN - Original Drilling - Original Drilling	667.99	619.99	4,144.71	4,140.96	1,104.984	CC
Wolfpack B02-63-1HN - Original Drilling - Original Drilling	700.00	644.46	4,144.74	4,140.83	1,060.389	ES
Wolfpack B02-63-1HN - Original Drilling - Original Drilling	10,100.00	10,100.00	8,229.89	8,133.44	85.328	SF
Wolfpack B02-64-1HN - Original Drilling - Original Drilling	6,075.20	6,289.14	3,901.03	3,858.81	92.398	CC, ES
Wolfpack B02-64-1HN - Original Drilling - Original Drilling	6,350.00	6,717.01	3,958.31	3,912.62	86.621	SF
Wolfpack B02-65-1HN - Original Drilling - Original Drilling	6,050.00	6,146.82	3,211.75	3,171.16	79.109	ES
Wolfpack B02-65-1HN - Original Drilling - Original Drilling	6,058.15	6,058.15	3,211.67	3,171.35	79.666	CC
Wolfpack B02-65-1HN - Original Drilling - Original Drilling	6,600.00	6,708.96	3,449.07	3,404.81	77.938	SF
Wolfpack B02-65HN - Original Drilling - Original Drilling -	6,065.27	6,212.56	2,931.30	2,890.29	71.472	CC, ES
Wolfpack B02-65HN - Original Drilling - Original Drilling -	6,350.00	6,555.54	2,998.96	2,955.74	69.388	SF
Wolfpack B02-66-1HN - Original Drilling - Original Drilling	6,055.77	6,203.01	2,604.01	2,562.21	62.296	CC, ES
Wolfpack B02-66-1HN - Original Drilling - Original Drilling	6,250.00	6,369.73	2,633.84	2,590.93	61.375	SF
Wolfpack PC B03-63-1HN - Original Drilling - Original Dri	100.00	51.18	4,123.73	4,123.52	10,000.000	CC
Wolfpack PC B03-63-1HN - Original Drilling - Original Dri	1,500.00	1,396.14	4,132.80	4,112.22	200.796	ES
Wolfpack PC B03-63-1HN - Original Drilling - Original Dri	5,300.00	4,034.49	4,691.16	4,627.12	73.259	SF
<b>B Section 03</b>						
Annie B3-9 - Wellbore #1 - Wellbore #1- As Drilled	314.43	248.43	3,874.67	3,873.08	2,437.341	CC
Annie B3-9 - Wellbore #1 - Wellbore #1- As Drilled	500.00	412.33	3,875.29	3,872.46	1,371.203	ES
Annie B3-9 - Wellbore #1 - Wellbore #1- As Drilled	6,400.00	6,460.55	4,015.03	3,970.21	89.583	SF
Clemons 2-3 - Wellbore #1 - Wellbore #1- As Drilled	1,744.78	1,707.93	2,685.09	2,673.27	227.257	CC
Clemons 2-3 - Wellbore #1 - Wellbore #1- As Drilled	2,000.00	1,950.34	2,685.39	2,671.81	197.828	ES
Clemons 2-3 - Wellbore #1 - Wellbore #1- As Drilled	6,550.00	6,468.46	2,850.45	2,805.20	62.997	SF
Clemons 42-3 - Wellbore #1 - Wellbore #1- As Drilled	1,564.93	1,519.94	2,620.31	2,609.80	249.289	CC
Clemons 42-3 - Wellbore #1 - Wellbore #1- As Drilled	2,100.00	2,040.53	2,623.40	2,609.15	184.181	ES
Clemons 42-3 - Wellbore #1 - Wellbore #1- As Drilled	6,300.00	6,225.33	2,778.40	2,734.68	63.548	SF
Schoenleber 16-3 - Wellbore #1 - Wellbore #1- As Drilled	100.00	21.52	4,826.20	4,826.04	10,000.000	CC
Schoenleber 16-3 - Wellbore #1 - Wellbore #1- As Drilled	6,025.57	5,918.85	4,861.26	4,819.54	116.513	ES
Schoenleber 16-3 - Wellbore #1 - Wellbore #1- As Drilled	6,400.00	6,189.54	4,968.04	4,924.14	113.155	SF
Sitzman 03-01 - Wellbore #1 - Wellbore #1- As Drilled	3,787.28	3,718.51	5,446.59	5,420.44	208.243	CC
Sitzman 03-01 - Wellbore #1 - Wellbore #1- As Drilled	6,016.25	5,937.03	5,450.87	5,409.15	130.667	ES
Sitzman 03-01 - Wellbore #1 - Wellbore #1- As Drilled	6,600.00	6,600.00	5,675.60	5,629.81	123.952	SF

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

**Noble Energy, Inc.**  
Anticollision Summary Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Reveille A35-783
<b>Project:</b>	Wells Ranch	<b>TVD Reference:</b>	KB @ 4679.00ft
<b>Reference Site:</b>	A Section 35	<b>MD Reference:</b>	KB @ 4679.00ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Reveille A35-783	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Reveille A35-783 OH	<b>Database:</b>	EDMP
<b>Reference Design:</b>	APD - Rev 1	<b>Offset TVD Reference:</b>	Offset Datum

**Summary**

Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
<b>Offset Well - Wellbore - Design</b>						
B Section 04						
Bauer 1 (PA) - Wellbore #1 - No Surveys						Out of range
Bauer 2 (PA) - Wellbore #1 - No Surveys	5,210.00	5,156.00	7,716.00	7,652.56	121.631	CC, ES
Bauer 2 (PA) - Wellbore #1 - No Surveys	6,950.00	6,612.73	7,905.19	7,823.84	97.180	SF
Bauer 21-4 (PR) - Wellbore #1 - Gyro Surveys	1,698.61	1,646.82	8,986.54	8,975.09	784.636	CC
Bauer 21-4 (PR) - Wellbore #1 - Gyro Surveys	3,400.00	3,300.00	8,991.57	8,968.24	385.408	ES
Bauer 21-4 (PR) - Wellbore #1 - Gyro Surveys	9,600.00	6,600.04	9,993.28	9,938.13	181.197	SF
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	6,093.55	16,156.48	6,409.53	6,273.55	47.134	CC
Snowmass 10N (DG) - Wellbore #1 - Permitted-PDC	6,100.00	16,156.48	6,409.55	6,273.51	47.117	ES
Snowmass 10N (DG) - Wellbore #1 - Permitted-PDC	9,100.00	16,156.48	7,987.75	7,790.77	40.550	SF
Snowmass 1C (DG) - Wellbore #1 - Permitted-PDC	6,249.57	14,787.56	5,771.40	5,716.41	104.944	CC
Snowmass 1C (DG) - Wellbore #1 - Permitted-PDC	6,300.00	14,787.56	5,771.83	5,716.19	103.740	ES
Snowmass 1C (DG) - Wellbore #1 - Permitted-PDC	11,500.00	14,787.56	8,055.18	7,865.76	42.525	SF
Snowmass 2N (DG) - Wellbore #1 - Permitted-PDC	6,168.73	14,729.08	5,801.75	5,738.45	91.660	CC
Snowmass 2N (DG) - Wellbore #1 - Permitted-PDC	6,200.00	14,729.08	5,801.94	5,738.31	91.177	ES
Snowmass 2N (DG) - Wellbore #1 - Permitted-PDC	11,200.00	14,729.08	8,057.33	7,868.62	42.697	SF
Snowmass 3N (DG) - Wellbore #1 - Permitted-PDC	6,130.19	15,299.73	5,829.22	5,758.58	82.517	CC
Snowmass 3N (DG) - Wellbore #1 - Permitted-PDC	6,150.00	15,299.73	5,829.31	5,758.46	82.281	ES
Snowmass 3N (DG) - Wellbore #1 - Permitted-PDC	11,000.00	15,299.73	8,055.78	7,858.24	40.781	SF
Snowmass 4N (DG) - Wellbore #1 - Permitted-PDC	6,139.79	15,736.33	5,885.89	5,805.67	73.376	CC
Snowmass 4N (DG) - Wellbore #1 - Permitted-PDC	6,150.00	15,736.33	5,885.92	5,805.59	73.274	ES
Snowmass 4N (DG) - Wellbore #1 - Permitted-PDC	10,800.00	15,736.33	8,086.83	7,884.77	40.023	SF
Snowmass 5N (DG) - Wellbore #1 - Permitted-PDC	6,110.24	15,406.96	5,938.50	5,850.33	67.354	CC, ES
Snowmass 5N (DG) - Wellbore #1 - Permitted-PDC	10,500.00	15,406.96	8,047.00	7,851.07	41.071	SF
Snowmass 6N (DG) - Wellbore #1 - Permitted-PDC	6,118.75	15,878.12	6,025.84	5,926.55	60.691	CC
Snowmass 6N (DG) - Wellbore #1 - Permitted-PDC	6,150.00	15,878.12	6,026.15	5,926.55	60.502	ES
Snowmass 6N (DG) - Wellbore #1 - Permitted-PDC	10,300.00	15,878.12	8,106.53	7,905.84	40.392	SF
Snowmass 7N (DG) - Wellbore #1 - Permitted-PDC	6,091.94	15,556.58	6,092.86	5,986.09	57.067	CC
Snowmass 7N (DG) - Wellbore #1 - Permitted-PDC	6,100.00	15,556.58	6,092.88	5,986.05	57.033	ES
Snowmass 7N (DG) - Wellbore #1 - Permitted-PDC	10,000.00	15,556.58	8,060.66	7,865.60	41.324	SF
Snowmass 8N (DG) - Wellbore #1 - Permitted-PDC	6,104.01	16,001.51	6,177.02	6,061.67	53.548	CC, ES
Snowmass 8N (DG) - Wellbore #1 - Permitted-PDC	9,800.00	16,001.51	8,073.83	7,875.23	40.655	SF
Snowmass 9N (DG) - Wellbore #1 - Permitted-PDC	6,084.02	15,681.01	6,275.27	6,150.25	50.192	CC
Snowmass 9N (DG) - Wellbore #1 - Permitted-PDC	6,100.00	15,681.01	6,275.37	6,150.23	50.145	ES
Snowmass 9N (DG) - Wellbore #1 - Permitted-PDC	9,400.00	15,681.01	7,986.65	7,792.79	41.198	SF

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