Project: Wells Ranch
Site: A Section 34
Well: Reveille A34-757
Wellbore: Reveille A34-757 OH
Design: APD - Rev 1

Northern Region - DJ Basin

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

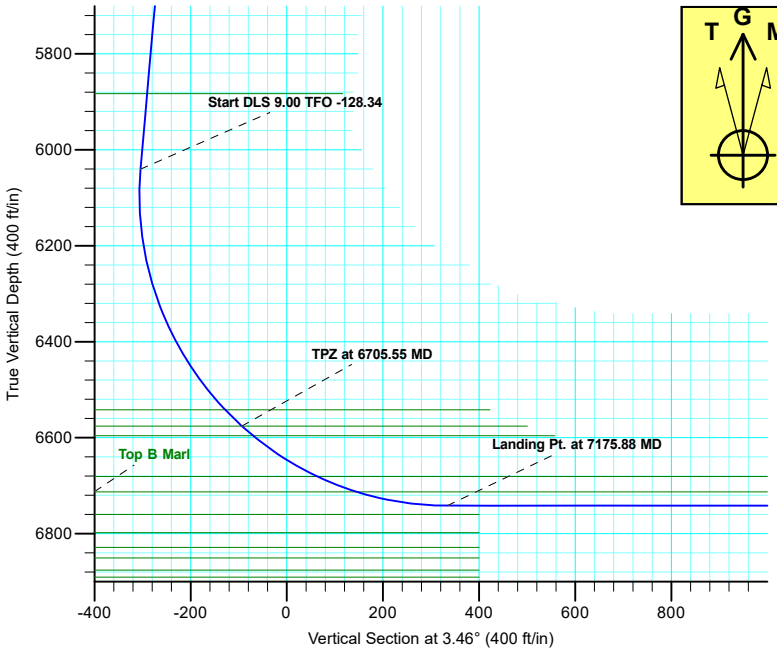
SECTION DETAILS

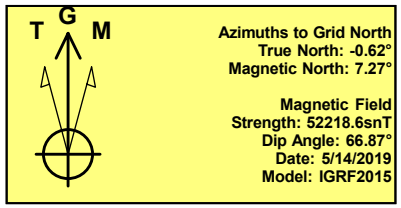
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	2000.00	0.00	0.00	2000.00	0.00	0.00	0.00	0.00	0.00
3	2541.00	10.82	100.00	2537.79	-8.84	50.16	2.00	100.00	-5.80
4	2732.59	10.82	120.52	2726.05	-21.10	83.37	2.00	100.11	-16.04
5	6107.19	10.82	120.52	6040.67	-342.76	629.00	0.00	0.00	-304.22
6	6705.55	47.67	359.47	6576.00	-134.55	679.09	9.00	-128.34	-93.37
7	7175.88	90.00	359.47	6741.98	294.13	675.16	9.00	0.00	334.29
8	16626.69	90.00	359.47	6742.00	9744.55	588.42	0.00	0.00	9762.29

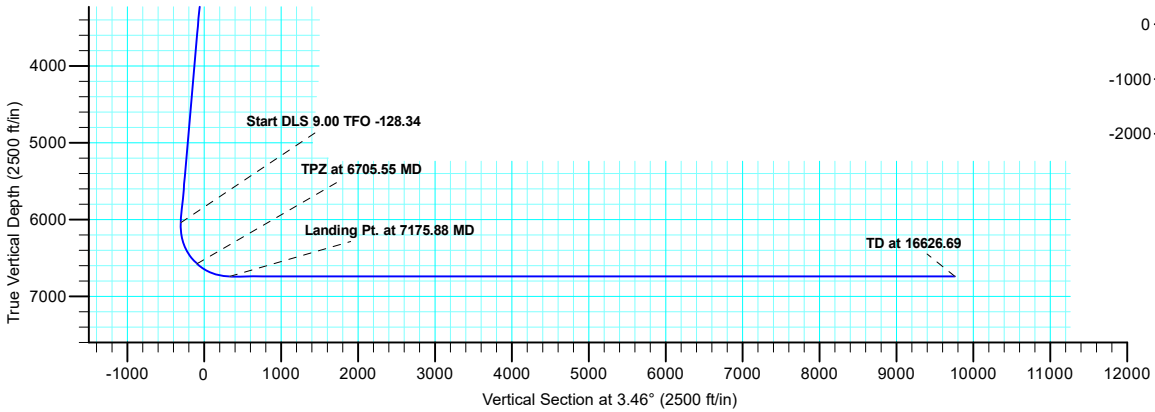
WELL DETAILS: Reveille A34-757

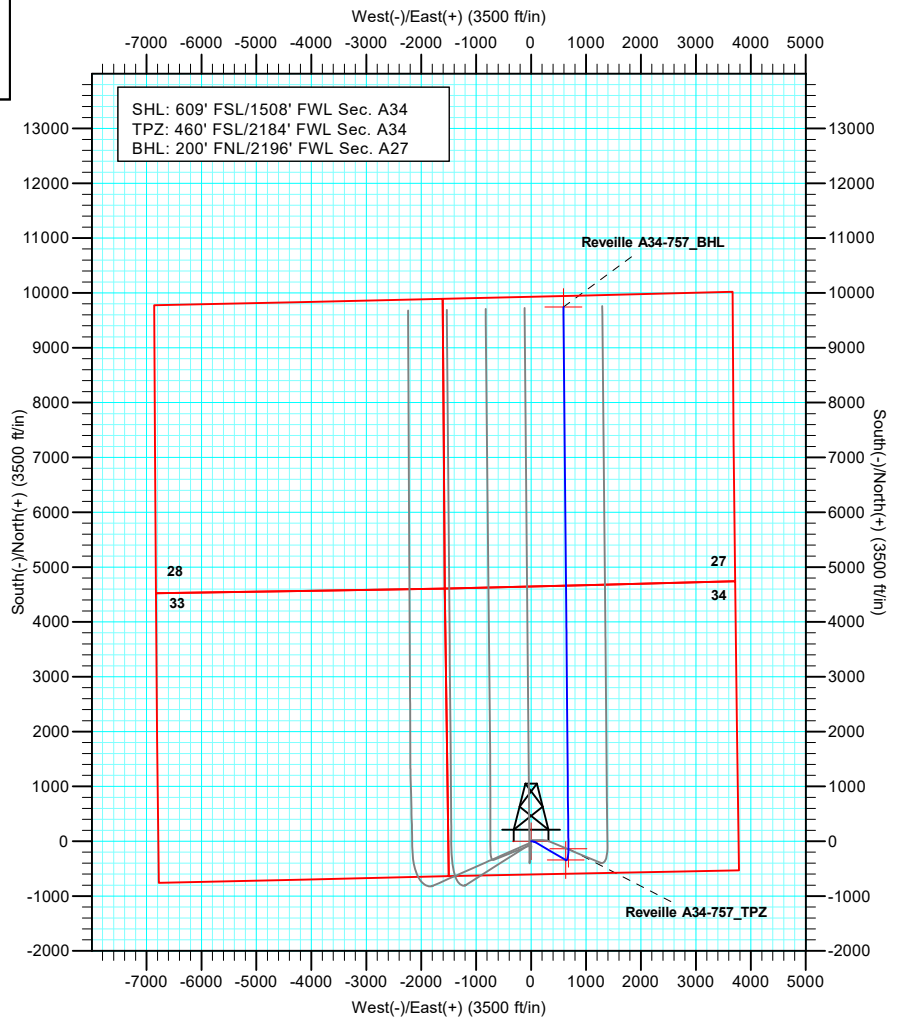
Ground Level: Ground Level: 4631.00

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	1403554.09	3267123.41	40.4371900	-104.5403400	









Plan: APD - Rev 1 (Reveille A34-757/Reveille A34-757 OH)

Created By: Shelly C. Peterkin Date: 11:04, July 22 2019

Northern Region - DJ Basin

Wells Ranch
A Section 34
Reveille A34-757

Reveille A34-757 OH

Plan: APD - Rev 1

Standard Planning Report

22 July, 2019

Database:	EDMP	**Local Co-ordinate Reference:**	Well Reveille A34-757
Company:	Northern Region - DJ Basin	**TVD Reference:**	KB @ 4661.00ft (Original Well Elev)
Project:	Wells Ranch	**MD Reference:**	KB @ 4661.00ft (Original Well Elev)
Site:	A Section 34	**North Reference:**	Grid
Well:	Reveille A34-757	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Reveille A34-757 OH		
Design:	APD - Rev 1		

Project Wells Ranch, Weld County Colorado

Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site A Section 34

Site Position:		**Northing:**	1,403,375.63 usft	**Latitude:**	40.4367000
From:	Map	**Easting:**	3,267,128.13 usft	**Longitude:**	-104.5403300
Position Uncertainty:	0.00 ft	**Slot Radius:**	13.200 in	**Grid Convergence:**	0.62 °

Well Reveille A34-757

Well Position	**+N/-S**	178.46 ft	**Northing:**	1,403,554.09 usft	**Latitude:**	40.4371900
	+E/-W	-4.72 ft	**Easting:**	3,267,123.42 usft	**Longitude:**	-104.5403400
Position Uncertainty		0.00 ft	**Wellhead Elevation:**	0.00 ft	**Ground Level:**	4,631.00 ft

Wellbore Reveille A34-757 OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	5/14/2019	7.89	66.87	52,218.64015294

Design APD - Rev 1

Audit Notes:

Version:		**Phase:**	PLAN	**Tie On Depth:**	0.00

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	3.46

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,541.00	10.82	100.00	2,537.79	-8.84	50.16	2.00	2.00	0.00	100.00	
2,732.59	10.82	120.52	2,726.05	-21.10	83.37	2.00	0.00	10.71	100.11	
6,107.19	10.82	120.52	6,040.67	-342.76	629.00	0.00	0.00	0.00	0.00	
6,705.55	47.67	359.47	6,576.00	-134.55	679.09	9.00	6.16	-20.23	-128.34	Reveille A34-757_TP2
7,175.88	90.00	359.47	6,741.98	294.13	675.16	9.00	9.00	0.00	0.00	
16,626.69	90.00	359.47	6,742.00	9,744.55	588.42	0.00	0.00	0.00	0.00	Reveille A34-757_BH

Database:	EDMP	**Local Co-ordinate Reference:**	Well Reveille A34-757
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Site:	A Section 34	**North Reference:**	Grid
Well:	Reveille A34-757	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Reveille A34-757 OH		
Design:	APD - Rev 1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
294.00	0.00	0.00	294.00	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
396.00	0.00	0.00	396.00	0.00	0.00	0.00	0.00	0.00	0.00
Upper Pierre Aquifer Top									
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
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
1,439.00	0.00	0.00	1,439.00	0.00	0.00	0.00	0.00	0.00	0.00
Upper Pierre Aquifer Base									
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
2,100.00	2.00	100.00	2,099.98	-0.30	1.72	-0.20	2.00	2.00	0.00
2,200.00	4.00	100.00	2,199.84	-1.21	6.87	-0.80	2.00	2.00	0.00
2,300.00	6.00	100.00	2,299.45	-2.73	15.46	-1.79	2.00	2.00	0.00
2,400.00	8.00	100.00	2,398.70	-4.84	27.46	-3.18	2.00	2.00	0.00
2,500.00	10.00	100.00	2,497.47	-7.56	42.86	-4.96	2.00	2.00	0.00
2,541.00	10.82	100.00	2,537.79	-8.84	50.16	-5.80	2.00	2.00	0.00
Start DLS 2.00 TFO 100.11									
2,600.00	10.68	106.28	2,595.76	-11.34	60.86	-7.65	2.00	-0.24	10.65
2,700.00	10.72	117.07	2,694.03	-18.17	78.03	-13.43	2.00	0.05	10.78
2,732.59	10.82	120.52	2,726.05	-21.10	83.37	-16.04	2.00	0.29	10.59
Start 3374.59 hold at 2732.59 MD									
2,800.00	10.82	120.52	2,792.26	-27.53	94.27	-21.80	0.00	0.00	0.00
2,900.00	10.82	120.52	2,890.48	-37.06	110.44	-30.34	0.00	0.00	0.00
3,000.00	10.82	120.52	2,988.70	-46.59	126.61	-38.88	0.00	0.00	0.00
3,100.00	10.82	120.52	3,086.93	-56.12	142.77	-47.41	0.00	0.00	0.00
3,200.00	10.82	120.52	3,185.15	-65.65	158.94	-55.95	0.00	0.00	0.00
3,300.00	10.82	120.52	3,283.37	-75.19	175.11	-64.49	0.00	0.00	0.00
3,400.00	10.82	120.52	3,381.59	-84.72	191.28	-73.03	0.00	0.00	0.00
3,500.00	10.82	120.52	3,479.82	-94.25	207.45	-81.57	0.00	0.00	0.00
3,576.54	10.82	120.52	3,555.00	-101.55	219.83	-88.11	0.00	0.00	0.00
Parkman									
3,600.00	10.82	120.52	3,578.04	-103.78	223.62	-90.11	0.00	0.00	0.00
3,700.00	10.82	120.52	3,676.26	-113.31	239.79	-98.65	0.00	0.00	0.00
3,800.00	10.82	120.52	3,774.48	-122.84	255.96	-107.19	0.00	0.00	0.00
3,900.00	10.82	120.52	3,872.71	-132.38	272.13	-115.73	0.00	0.00	0.00

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Well:	Reveille A34-757	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Reveille A34-757 OH		
Design:	APD - Rev 1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,000.00	10.82	120.52	3,970.93	-141.91	288.29	-124.27	0.00	0.00	0.00
4,100.00	10.82	120.52	4,069.15	-151.44	304.46	-132.81	0.00	0.00	0.00
4,200.00	10.82	120.52	4,167.38	-160.97	320.63	-141.35	0.00	0.00	0.00
4,285.14	10.82	120.52	4,251.00	-169.09	334.40	-148.62	0.00	0.00	0.00
Sussex									
4,300.00	10.82	120.52	4,265.60	-170.50	336.80	-149.89	0.00	0.00	0.00
4,400.00	10.82	120.52	4,363.82	-180.03	352.97	-158.43	0.00	0.00	0.00
4,500.00	10.82	120.52	4,462.04	-189.57	369.14	-166.97	0.00	0.00	0.00
4,600.00	10.82	120.52	4,560.27	-199.10	385.31	-175.51	0.00	0.00	0.00
4,700.00	10.82	120.52	4,658.49	-208.63	401.48	-184.05	0.00	0.00	0.00
4,800.00	10.82	120.52	4,756.71	-218.16	417.65	-192.59	0.00	0.00	0.00
4,898.03	10.82	120.52	4,853.00	-227.51	433.50	-200.96	0.00	0.00	0.00
Shannon									
4,900.00	10.82	120.52	4,854.94	-227.69	433.82	-201.13	0.00	0.00	0.00
5,000.00	10.82	120.52	4,953.16	-237.23	449.98	-209.67	0.00	0.00	0.00
5,100.00	10.82	120.52	5,051.38	-246.76	466.15	-218.21	0.00	0.00	0.00
5,200.00	10.82	120.52	5,149.60	-256.29	482.32	-226.75	0.00	0.00	0.00
5,300.00	10.82	120.52	5,247.83	-265.82	498.49	-235.29	0.00	0.00	0.00
5,400.00	10.82	120.52	5,346.05	-275.35	514.66	-243.83	0.00	0.00	0.00
5,500.00	10.82	120.52	5,444.27	-284.88	530.83	-252.37	0.00	0.00	0.00
5,600.00	10.82	120.52	5,542.49	-294.42	547.00	-260.91	0.00	0.00	0.00
5,700.00	10.82	120.52	5,640.72	-303.95	563.17	-269.45	0.00	0.00	0.00
5,800.00	10.82	120.52	5,738.94	-313.48	579.34	-277.99	0.00	0.00	0.00
5,900.00	10.82	120.52	5,837.16	-323.01	595.50	-286.53	0.00	0.00	0.00
5,946.67	10.82	120.52	5,883.00	-327.46	603.05	-290.51	0.00	0.00	0.00
Teepee Buttes									
6,000.00	10.82	120.52	5,935.39	-332.54	611.67	-295.07	0.00	0.00	0.00
6,107.19	10.82	120.52	6,040.67	-342.76	629.00	-304.22	0.00	0.00	0.00
Start DLS 9.00 TFO -128.34									
6,150.00	8.95	100.71	6,082.86	-345.42	635.74	-306.47	9.00	-4.37	-46.27
6,200.00	8.61	70.98	6,132.29	-344.92	643.10	-305.53	9.00	-0.67	-59.46
6,250.00	10.42	45.74	6,181.63	-340.54	649.88	-300.75	9.00	3.61	-50.49
6,300.00	13.53	29.89	6,230.55	-332.31	656.04	-292.17	9.00	6.23	-31.69
6,350.00	17.26	20.31	6,278.75	-320.28	661.53	-279.83	9.00	7.45	-19.16
6,400.00	21.28	14.15	6,325.95	-304.52	666.33	-263.81	9.00	8.04	-12.32
6,450.00	25.45	9.90	6,371.84	-285.13	670.40	-244.20	9.00	8.35	-8.49
6,500.00	29.72	6.80	6,416.15	-262.23	673.71	-221.14	9.00	8.53	-6.22
6,550.00	34.04	4.41	6,458.60	-235.96	676.26	-194.77	9.00	8.64	-4.77
6,600.00	38.40	2.51	6,498.93	-206.47	678.01	-165.23	9.00	8.72	-3.81
6,650.00	42.78	0.94	6,536.89	-173.97	678.97	-132.73	9.00	8.77	-3.14
6,657.00	43.39	0.74	6,542.00	-169.19	679.04	-127.95	9.00	8.79	-2.84
Sharon Springs									
6,700.00	47.18	359.61	6,572.25	-138.64	679.12	-97.45	9.00	8.80	-2.63
6,705.55	47.67	359.47	6,576.00	-134.55	679.09	-93.37	9.00	8.82	-2.44
TPZ at 6705.55 MD - Top A Chalk									
6,736.06	50.42	359.47	6,596.00	-111.51	678.88	-70.39	9.00	9.00	0.00
Top A Marl									
6,750.00	51.67	359.47	6,604.76	-100.67	678.78	-59.57	9.00	9.00	0.00
6,800.00	56.17	359.47	6,634.20	-60.27	678.41	-19.27	9.00	9.00	0.00
6,850.00	60.67	359.47	6,660.38	-17.69	678.02	23.21	9.00	9.00	0.00
6,894.96	64.72	359.47	6,681.00	22.25	677.65	63.06	9.00	9.00	0.00
Top B Chalk									
6,900.00	65.17	359.47	6,683.13	26.82	677.61	67.61	9.00	9.00	0.00

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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)
6,950.00	69.67	359.47	6,702.33	72.97	677.19	113.65	9.00	9.00	0.00
6,983.05	72.65	359.47	6,713.00	104.25	676.90	144.86	9.00	9.00	0.00
Top B Marl									
7,000.00	74.17	359.47	6,717.84	120.49	676.75	161.06	9.00	9.00	0.00
7,050.00	78.67	359.47	6,729.58	169.07	676.30	209.53	9.00	9.00	0.00
7,100.00	83.17	359.47	6,737.46	218.43	675.85	258.77	9.00	9.00	0.00
7,150.00	87.67	359.47	6,741.45	268.26	675.39	308.48	9.00	9.00	0.00
7,175.88	90.00	359.47	6,741.98	294.13	675.16	334.29	9.00	9.00	0.00
Landing Pt. at 7175.88 MD									
7,200.00	90.00	359.47	6,741.98	318.25	674.94	358.35	0.00	0.00	0.00
7,300.00	90.00	359.47	6,741.98	418.25	674.02	458.11	0.00	0.00	0.00
7,400.00	90.00	359.47	6,741.98	518.24	673.10	557.87	0.00	0.00	0.00
7,500.00	90.00	359.47	6,741.98	618.24	672.18	657.63	0.00	0.00	0.00
7,600.00	90.00	359.47	6,741.98	718.23	671.26	757.39	0.00	0.00	0.00
7,700.00	90.00	359.47	6,741.98	818.23	670.35	857.15	0.00	0.00	0.00
7,800.00	90.00	359.47	6,741.98	918.22	669.43	956.90	0.00	0.00	0.00
7,900.00	90.00	359.47	6,741.98	1,018.22	668.51	1,056.66	0.00	0.00	0.00
8,000.00	90.00	359.47	6,741.98	1,118.22	667.59	1,156.42	0.00	0.00	0.00
8,100.00	90.00	359.47	6,741.98	1,218.21	666.68	1,256.18	0.00	0.00	0.00
8,200.00	90.00	359.47	6,741.98	1,318.21	665.76	1,355.94	0.00	0.00	0.00
8,300.00	90.00	359.47	6,741.98	1,418.20	664.84	1,455.70	0.00	0.00	0.00
8,400.00	90.00	359.47	6,741.98	1,518.20	663.92	1,555.46	0.00	0.00	0.00
8,500.00	90.00	359.47	6,741.98	1,618.19	663.00	1,655.21	0.00	0.00	0.00
8,600.00	90.00	359.47	6,741.98	1,718.19	662.09	1,754.97	0.00	0.00	0.00
8,700.00	90.00	359.47	6,741.98	1,818.19	661.17	1,854.73	0.00	0.00	0.00
8,800.00	90.00	359.47	6,741.98	1,918.18	660.25	1,954.49	0.00	0.00	0.00
8,900.00	90.00	359.47	6,741.98	2,018.18	659.33	2,054.25	0.00	0.00	0.00
9,000.00	90.00	359.47	6,741.98	2,118.17	658.42	2,154.01	0.00	0.00	0.00
9,100.00	90.00	359.47	6,741.98	2,218.17	657.50	2,253.77	0.00	0.00	0.00
9,200.00	90.00	359.47	6,741.98	2,318.17	656.58	2,353.53	0.00	0.00	0.00
9,300.00	90.00	359.47	6,741.98	2,418.16	655.66	2,453.28	0.00	0.00	0.00
9,400.00	90.00	359.47	6,741.99	2,518.16	654.74	2,553.04	0.00	0.00	0.00
9,500.00	90.00	359.47	6,741.99	2,618.15	653.83	2,652.80	0.00	0.00	0.00
9,600.00	90.00	359.47	6,741.99	2,718.15	652.91	2,752.56	0.00	0.00	0.00
9,700.00	90.00	359.47	6,741.99	2,818.14	651.99	2,852.32	0.00	0.00	0.00
9,800.00	90.00	359.47	6,741.99	2,918.14	651.07	2,952.08	0.00	0.00	0.00
9,900.00	90.00	359.47	6,741.99	3,018.14	650.16	3,051.84	0.00	0.00	0.00
10,000.00	90.00	359.47	6,741.99	3,118.13	649.24	3,151.59	0.00	0.00	0.00
10,100.00	90.00	359.47	6,741.99	3,218.13	648.32	3,251.35	0.00	0.00	0.00
10,200.00	90.00	359.47	6,741.99	3,318.12	647.40	3,351.11	0.00	0.00	0.00
10,300.00	90.00	359.47	6,741.99	3,418.12	646.48	3,450.87	0.00	0.00	0.00
10,400.00	90.00	359.47	6,741.99	3,518.11	645.57	3,550.63	0.00	0.00	0.00
10,500.00	90.00	359.47	6,741.99	3,618.11	644.65	3,650.39	0.00	0.00	0.00
10,600.00	90.00	359.47	6,741.99	3,718.11	643.73	3,750.15	0.00	0.00	0.00
10,700.00	90.00	359.47	6,741.99	3,818.10	642.81	3,849.91	0.00	0.00	0.00
10,800.00	90.00	359.47	6,741.99	3,918.10	641.90	3,949.66	0.00	0.00	0.00
10,900.00	90.00	359.47	6,741.99	4,018.09	640.98	4,049.42	0.00	0.00	0.00
11,000.00	90.00	359.47	6,741.99	4,118.09	640.06	4,149.18	0.00	0.00	0.00
11,100.00	90.00	359.47	6,741.99	4,218.09	639.14	4,248.94	0.00	0.00	0.00
11,200.00	90.00	359.47	6,741.99	4,318.08	638.22	4,348.70	0.00	0.00	0.00
11,300.00	90.00	359.47	6,741.99	4,418.08	637.31	4,448.46	0.00	0.00	0.00
11,400.00	90.00	359.47	6,741.99	4,518.07	636.39	4,548.22	0.00	0.00	0.00
11,500.00	90.00	359.47	6,741.99	4,618.07	635.47	4,647.97	0.00	0.00	0.00
11,600.00	90.00	359.47	6,741.99	4,718.06	634.55	4,747.73	0.00	0.00	0.00

Database:	EDMP	**Local Co-ordinate Reference:**	Well Reveille A34-757
Company:	Northern Region - DJ Basin	**TVD Reference:**	KB @ 4661.00ft (Original Well Elev)
Project:	Wells Ranch	**MD Reference:**	KB @ 4661.00ft (Original Well Elev)
Site:	A Section 34	**North Reference:**	Grid
Well:	Reveille A34-757	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Reveille A34-757 OH		
Design:	APD - Rev 1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
11,700.00	90.00	359.47	6,741.99	4,818.06	633.64	4,847.49	0.00	0.00	0.00
11,800.00	90.00	359.47	6,741.99	4,918.06	632.72	4,947.25	0.00	0.00	0.00
11,900.00	90.00	359.47	6,741.99	5,018.05	631.80	5,047.01	0.00	0.00	0.00
12,000.00	90.00	359.47	6,741.99	5,118.05	630.88	5,146.77	0.00	0.00	0.00
12,100.00	90.00	359.47	6,741.99	5,218.04	629.96	5,246.53	0.00	0.00	0.00
12,200.00	90.00	359.47	6,741.99	5,318.04	629.05	5,346.29	0.00	0.00	0.00
12,300.00	90.00	359.47	6,741.99	5,418.03	628.13	5,446.04	0.00	0.00	0.00
12,400.00	90.00	359.47	6,741.99	5,518.03	627.21	5,545.80	0.00	0.00	0.00
12,500.00	90.00	359.47	6,741.99	5,618.03	626.29	5,645.56	0.00	0.00	0.00
12,600.00	90.00	359.47	6,741.99	5,718.02	625.38	5,745.32	0.00	0.00	0.00
12,700.00	90.00	359.47	6,741.99	5,818.02	624.46	5,845.08	0.00	0.00	0.00
12,800.00	90.00	359.47	6,741.99	5,918.01	623.54	5,944.84	0.00	0.00	0.00
12,900.00	90.00	359.47	6,741.99	6,018.01	622.62	6,044.60	0.00	0.00	0.00
13,000.00	90.00	359.47	6,741.99	6,118.01	621.70	6,144.35	0.00	0.00	0.00
13,100.00	90.00	359.47	6,741.99	6,218.00	620.79	6,244.11	0.00	0.00	0.00
13,200.00	90.00	359.47	6,741.99	6,318.00	619.87	6,343.87	0.00	0.00	0.00
13,300.00	90.00	359.47	6,741.99	6,417.99	618.95	6,443.63	0.00	0.00	0.00
13,400.00	90.00	359.47	6,741.99	6,517.99	618.03	6,543.39	0.00	0.00	0.00
13,500.00	90.00	359.47	6,741.99	6,617.98	617.12	6,643.15	0.00	0.00	0.00
13,600.00	90.00	359.47	6,741.99	6,717.98	616.20	6,742.91	0.00	0.00	0.00
13,700.00	90.00	359.47	6,741.99	6,817.98	615.28	6,842.67	0.00	0.00	0.00
13,800.00	90.00	359.47	6,741.99	6,917.97	614.36	6,942.42	0.00	0.00	0.00
13,900.00	90.00	359.47	6,741.99	7,017.97	613.44	7,042.18	0.00	0.00	0.00
14,000.00	90.00	359.47	6,741.99	7,117.96	612.53	7,141.94	0.00	0.00	0.00
14,100.00	90.00	359.47	6,741.99	7,217.96	611.61	7,241.70	0.00	0.00	0.00
14,200.00	90.00	359.47	6,742.00	7,317.95	610.69	7,341.46	0.00	0.00	0.00
14,300.00	90.00	359.47	6,742.00	7,417.95	609.77	7,441.22	0.00	0.00	0.00
14,400.00	90.00	359.47	6,742.00	7,517.95	608.86	7,540.98	0.00	0.00	0.00
14,500.00	90.00	359.47	6,742.00	7,617.94	607.94	7,640.73	0.00	0.00	0.00
14,600.00	90.00	359.47	6,742.00	7,717.94	607.02	7,740.49	0.00	0.00	0.00
14,700.00	90.00	359.47	6,742.00	7,817.93	606.10	7,840.25	0.00	0.00	0.00
14,800.00	90.00	359.47	6,742.00	7,917.93	605.18	7,940.01	0.00	0.00	0.00
14,900.00	90.00	359.47	6,742.00	8,017.93	604.27	8,039.77	0.00	0.00	0.00
15,000.00	90.00	359.47	6,742.00	8,117.92	603.35	8,139.53	0.00	0.00	0.00
15,100.00	90.00	359.47	6,742.00	8,217.92	602.43	8,239.29	0.00	0.00	0.00
15,200.00	90.00	359.47	6,742.00	8,317.91	601.51	8,339.05	0.00	0.00	0.00
15,300.00	90.00	359.47	6,742.00	8,417.91	600.60	8,438.80	0.00	0.00	0.00
15,400.00	90.00	359.47	6,742.00	8,517.90	599.68	8,538.56	0.00	0.00	0.00
15,500.00	90.00	359.47	6,742.00	8,617.90	598.76	8,638.32	0.00	0.00	0.00
15,600.00	90.00	359.47	6,742.00	8,717.90	597.84	8,738.08	0.00	0.00	0.00
15,700.00	90.00	359.47	6,742.00	8,817.89	596.92	8,837.84	0.00	0.00	0.00
15,800.00	90.00	359.47	6,742.00	8,917.89	596.01	8,937.60	0.00	0.00	0.00
15,900.00	90.00	359.47	6,742.00	9,017.88	595.09	9,037.36	0.00	0.00	0.00
16,000.00	90.00	359.47	6,742.00	9,117.88	594.17	9,137.11	0.00	0.00	0.00
16,100.00	90.00	359.47	6,742.00	9,217.87	593.25	9,236.87	0.00	0.00	0.00
16,200.00	90.00	359.47	6,742.00	9,317.87	592.34	9,336.63	0.00	0.00	0.00
16,300.00	90.00	359.47	6,742.00	9,417.87	591.42	9,436.39	0.00	0.00	0.00
16,400.00	90.00	359.47	6,742.00	9,517.86	590.50	9,536.15	0.00	0.00	0.00
16,500.00	90.00	359.47	6,742.00	9,617.86	589.58	9,635.91	0.00	0.00	0.00
16,600.00	90.00	359.47	6,742.00	9,717.85	588.66	9,735.67	0.00	0.00	0.00
16,626.69	90.00	359.47	6,742.00	9,744.55	588.42	9,762.30	0.00	0.00	0.00

TD at 16626.69

Database:	EDMP	**Local Co-ordinate Reference:**	Well Reveille A34-757
Company:	Northern Region - DJ Basin	**TVD Reference:**	KB @ 4661.00ft (Original Well Elev)
Project:	Wells Ranch	**MD Reference:**	KB @ 4661.00ft (Original Well Elev)
Site:	A Section 34	**North Reference:**	Grid
Well:	Reveille A34-757	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Reveille A34-757 OH		
Design:	APD - Rev 1		

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Reveille A34-757_SHL - plan misses target center by 0.01ft at 0.00ft MD (0.00 TVD, 0.00 N, 0.00 E) - Point	0.00	0.00	0.00	0.01	0.00	1,403,554.10	3,267,123.42	40.4371900	-104.5403400
Reveille A34-757_KOP - plan hits target center - Point	0.00	0.00	6,040.67	-342.76	629.00	1,403,211.33	3,267,752.42	40.4362305	-104.5380938
Reveille A34-757_TPZ - plan hits target center - Point	0.00	0.00	6,576.00	-134.55	679.09	1,403,419.54	3,267,802.51	40.4368005	-104.5379057
Reveille A34-757_BHL - plan hits target center - Point	0.00	0.00	6,742.00	9,744.55	588.42	1,413,298.62	3,267,711.83	40.4639195	-104.5378464

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
294.00	294.00	Pierre			
396.00	396.00	Upper Pierre Aquifer Top			
1,439.00	1,439.00	Upper Pierre Aquifer Base			
3,576.54	3,555.00	Parkman			
4,285.14	4,251.00	Sussex			
4,898.03	4,853.00	Shannon			
5,946.67	5,883.00	Teepee Buttes			
6,657.00	6,542.00	Sharon Springs			
6,705.55	6,576.00	Top A Chalk			
6,736.06	6,596.00	Top A Marl			
6,894.96	6,681.00	Top B Chalk			
6,983.05	6,713.00	Top B Marl			

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
2,000.00	2,000.00	0.00	0.00	Start Build 2.00
2,541.00	2,537.79	-8.84	50.16	Start DLS 2.00 TFO 100.11
2,732.59	2,726.05	-21.10	83.37	Start 3374.59 hold at 2732.59 MD
6,107.19	6,040.67	-342.76	629.00	Start DLS 9.00 TFO -128.34
6,705.55	6,576.00	-134.55	679.09	TPZ at 6705.55 MD
7,175.88	6,741.98	294.13	675.16	Landing Pt. at 7175.88 MD
16,626.69	6,742.00	9,744.55	588.42	TD at 16626.69

Northern Region - DJ Basin

Wells Ranch
A Section 34
Reveille A34-757

Reveille A34-757 OH
APD - Rev 1

Anticollision Summary Report

22 July, 2019

Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Reveille A34-757
Project:	Wells Ranch	**TVD Reference:**	KB @ 4661.00ft (Original Well Elev)
Reference Site:	A Section 34	**MD Reference:**	KB @ 4661.00ft (Original Well Elev)
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Reveille A34-757	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Reveille A34-757 OH	**Database:**	EDMP
Reference Design:	APD - Rev 1	**Offset TVD Reference:**	Offset Datum

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

Survey Tool Program **Date** 7/22/2019

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	16,626.69	APD - Rev 1 (Reveille A34-757 OH)	2_MWD+IFR1+MS	A008Mb: IFR dec & multi-station analysis

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 21						
Culbreath 23-21 - Original Drilling - Original Drilling - As D	16,626.69	6,830.81	5,677.17	5,573.42	54.718	CC, ES, SF
Culbreath 33-21 (PA) - Original Drilling - Original Drilling -	16,626.69	6,799.00	4,666.08	4,451.91	21.787	CC, ES, SF
Harper A21-618 - Harper A21-618 OH - As-Drilled	16,626.69	13,152.21	729.35	618.50	6.580	CC, ES, SF
Harper A21-626 - Harper A21-626 OH - As-Drilled	16,626.69	13,130.53	1,226.65	1,115.71	11.057	CC, ES, SF
Harper A21-631 - Harper A21-631 OH - As-Drilled	16,626.69	13,244.99	1,635.23	1,522.95	14.564	CC, ES, SF
Harper A21-637 - Harper A21-637 OH - As-Drilled	16,626.69	13,154.57	2,007.93	1,897.10	18.118	CC, ES, SF
Harper A21-643 - Harper A21-643 OH - As-Drilled	16,626.69	13,307.63	2,447.56	2,335.16	21.775	CC, ES, SF
Harper A21-649 - Harper A21-649 OH - As-Drilled	16,626.69	13,260.00	2,808.95	2,697.21	25.138	CC, ES, SF
Harper A21-656 - Harper A21-656 OH - As-Drilled	16,626.69	13,277.59	3,158.29	3,046.16	28.167	CC, ES, SF
Harper A21-664 - Harper A21-664 OH - As-Drilled	16,626.69	13,609.21	3,680.24	3,566.38	32.321	CC, ES, SF
Harper A21-669 - Harper A21-669 OH - As-Drilled	16,626.69	13,812.74	4,005.14	3,889.24	34.555	CC, ES, SF
Harper A21-674 - Harper A21-674 OH - As-Drilled	16,626.69	13,569.32	4,383.54	4,271.14	39.001	CC, ES, SF
Harper A21-681 - Harper A21-681 OH - As-Drilled	16,626.69	13,633.00	4,791.03	4,678.85	42.711	CC, ES, SF
Kona A19-616 - Kona A19-616 - Kona A19-616 - As Drille	16,626.69	6,234.00	6,110.20	6,009.36	60.592	CC, ES, SF
Kona A19-624 - Kona A19-624 - Kona A19-624 - As Drille	16,626.69	6,422.00	6,074.46	5,973.70	60.289	CC, ES, SF
Kona A19-636 - Kona A19-636 - Kona A19-636 - As Drille	16,626.69	6,327.00	5,944.66	5,843.33	58.667	CC, ES, SF
Kona A19-646 - Original Drilling - Original Drilling - As Dr	16,626.69	6,327.00	6,447.76	6,351.53	67.006	CC, ES, SF
Kona A19-662 - Original Drilling - Original Drilling - As Dr	16,626.69	6,136.00	6,985.65	6,892.48	74.977	CC, ES, SF
Kona A19-670 - Kona A19-670 - Original Drilling - As Dril	16,626.69	6,325.00	6,978.35	6,885.88	75.462	CC, ES, SF
Kona A19-685 - Original Drilling - Original Drilling - As Dr	16,626.69	6,093.40	6,952.91	6,862.06	76.539	CC, ES, SF
McKee 12-21 (PA) - Original Drilling - Original Drilling - A	16,626.69	6,835.00	7,541.74	7,326.11	34.976	CC, ES, SF
McKee 21-21 (PA) - Original Drilling - Original Drilling - A	16,626.69	6,851.00	6,937.19	6,731.75	33.767	CC, ES, SF
McKee 22-21 - Original Drilling - Original Drilling - As Dril	15,300.00	15,300.00	7,159.31	7,045.39	62.846	SF
McKee 22-21 - Original Drilling - Original Drilling - As Dril	16,626.69	6,892.28	6,381.87	6,282.72	64.365	CC, ES
McKee 31-21 - Original Drilling - Original Drilling - As Dril	16,626.69	6,960.70	6,457.26	6,371.87	75.618	CC, ES, SF
McKee 32-21 - Original Drilling - Original Drilling - As Dril	16,626.69	6,869.03	5,376.95	5,282.94	57.196	CC, ES, SF
McKee 41-21 - Original Drilling - Original Drilling - As Dril	16,626.69	6,712.89	5,648.46	5,573.57	75.427	CC, ES, SF
McKee 42-21 - Original Drilling - Original Drilling - As Dril	16,626.69	6,847.82	4,266.15	4,180.28	49.685	CC, ES, SF
Rampart A33-730 - Rampart A33-730 - APD-Rev 1	6,650.00	17,712.18	3,502.72	3,386.68	30.187	SF
Rampart A33-730 - Rampart A33-730 - APD-Rev 1	16,315.10	8,116.22	3,485.47	3,375.98	31.836	CC, ES
Rampart A33-740 - Rampart A33-740 - APD-Rev 0	6,650.00	17,515.21	4,152.91	4,037.02	35.837	SF
Rampart A33-740 - Rampart A33-740 - APD-Rev 0	6,900.00	17,316.42	4,147.47	4,033.22	36.301	ES
Rampart A33-740 - Rampart A33-740 - APD-Rev 0	7,047.45	17,176.66	4,146.93	4,033.74	36.637	CC
Rampart A33-750 - Rampart A33-750 - APD-Rev 0	5,982.20	17,093.98	4,811.99	4,698.49	42.394	ES
Rampart A33-750 - Rampart A33-750 - APD-Rev 0	6,600.00	17,102.35	4,819.66	4,704.97	42.022	SF
Rampart A33-750 - Rampart A33-750 - APD-Rev 0	16,297.85	7,482.67	4,811.20	4,705.39	45.472	CC
Rampart A33-760 - Rampart A33-760 - APD-Rev 1	5,919.33	16,956.23	5,444.15	5,331.61	48.377	CC, ES

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

Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Reveille A34-757
Project:	Wells Ranch	**TVD Reference:**	KB @ 4661.00ft (Original Well Elev)
Reference Site:	A Section 34	**MD Reference:**	KB @ 4661.00ft (Original Well Elev)
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Reveille A34-757	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Reveille A34-757 OH	**Database:**	EDMP
Reference Design:	APD - Rev 1	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
A Section 21						
Rampart A33-760 - Rampart A33-760 - APD-Rev 1	6,600.00	16,955.00	5,455.54	5,341.25	47.732	SF
Rampart A33-770 - Rampart A33-770 - APD-Rev 0	5,759.54	16,811.58	6,114.08	6,002.52	54.802	CC
Rampart A33-770 - Rampart A33-770 - APD-Rev 0	5,800.00	16,811.58	6,114.22	6,002.49	54.725	ES
Rampart A33-770 - Rampart A33-770 - APD-Rev 0	6,600.00	16,799.02	6,140.85	6,026.59	53.743	SF
Sexton 43-21 (PA) - Original Drilling - Original Drilling - As	16,626.69	6,791.00	3,694.19	3,488.21	17.934	CC, ES, SF
Wells Trust 13-21 - Original Drilling - Original Drilling - As	16,626.69	6,886.15	7,131.25	7,024.41	66.749	CC, ES, SF
Wells Trust 14-21 - Original Drilling - Original Drilling - As	16,626.69	6,791.40	7,031.31	6,922.96	64.897	CC, ES, SF
Wells Trust 24-21 - Original Drilling - Original Drilling - As	16,626.69	6,838.34	6,191.91	6,083.54	57.134	CC, ES, SF
A Section 22						
Carpio 22-01 - Original Drilling - Original Drilling - As Drill	16,626.69	6,753.70	2,593.37	2,490.95	25.320	CC, ES, SF
Carpio 22-04-19 - Original Drilling - Original Drilling - As D	16,626.69	6,784.25	1,777.11	1,703.00	23.981	CC, ES, SF
Carpio 22-41 - Original Drilling - Original Drilling - As Drill	16,626.69	6,797.61	3,239.33	3,128.87	29.325	CC, ES, SF
Carpio 22-43 - Original Drilling - Original Drilling - As Drill	16,626.69	6,791.53	1,427.26	1,337.48	15.896	CC, ES, SF
Carpio 22-45 - Original Drilling - Original Drilling - As Drill	16,626.69	6,741.30	2,472.92	2,378.13	26.088	CC, ES, SF
Eisenstat 22-11 (PA) - Original Drilling - Original Drilling -	16,626.69	6,805.00	5,516.88	5,337.30	30.720	CC, ES, SF
Eisenstat 22-13 - Original Drilling - Original Drilling - As D	16,626.69	6,810.91	3,201.85	3,142.51	53.957	CC, ES, SF
Eisenstat 22-15 - Original Drilling - Original Drilling - As D	16,626.69	6,763.26	4,637.78	4,574.27	73.027	CC, ES, SF
Eisenstat 22-21 - Original Drilling - Original Drilling - As D	16,626.69	6,897.12	4,544.20	4,492.02	87.094	CC, ES, SF
Eisenstat 22-23 - Original Drilling - Original Drilling - As D	16,626.69	6,833.37	3,837.51	3,771.18	57.850	CC, ES, SF
Gill Land Assoc. 1 (PA) - Original Drilling - Original Drilling	16,626.69	6,806.00	4,205.61	4,016.97	22.294	CC, ES, SF
Gill Land Assoc. 22-02 (PA) - Original Drilling - Original D	16,626.69	6,816.00	3,399.23	3,233.72	20.537	CC, ES, SF
Gill Land Assoc. 22-03 - Original Drilling - Original Drilling	16,626.69	6,822.94	4,921.49	4,858.68	78.360	CC, ES, SF
Gill Land Assoc. 22-04 (PA) - Original Drilling - Original D	16,626.69	6,814.00	4,829.00	4,660.93	28.731	CC, ES, SF
Gruen 22-01 - Original Drilling - Original Drilling - As Drille	16,626.69	6,850.57	2,640.20	2,558.84	32.449	CC, ES, SF
Gruen 22-02 - Original Drilling - Original Drilling - As Drille	16,626.69	6,822.05	876.33	812.94	13.826	CC, ES, SF
Gruen 22-31 - Original Drilling - Original Drilling - As Drille	16,626.69	6,867.06	2,145.04	2,090.61	39.409	CC, ES, SF
Gruen 22-33 - Original Drilling - Original Drilling - As Drille	16,626.69	6,864.71	1,763.47	1,662.70	17.499	CC, ES, SF
Gruen 22-35 - Original Drilling - Original Drilling - As Drille	16,626.69	6,718.07	1,671.06	1,593.20	21.462	CC, ES, SF
Ottinger 22-01 - Original Drilling - Original Drilling - As Dr	16,626.69	6,826.24	2,491.88	2,424.99	37.256	CC, ES, SF
A Section 23						
Cecil 23-13 - Original Drilling - Original Drilling - As Drilled	16,626.69	6,700.00	7,130.87	7,034.60	74.070	CC, ES, SF
Champlin 23-02 (PA) - Original Drilling - Original Drilling -	16,626.69	6,765.00	4,326.08	4,117.87	20.777	CC, ES, SF
Champlin 23-03 - Original Drilling - Original Drilling - As D	16,626.69	6,700.00	4,923.68	4,817.36	46.310	CC, ES, SF
Champlin Amoco A 1 #308 - Original Drilling - Original Dr	16,626.69	6,740.00	4,751.88	4,533.94	21.804	CC, ES, SF
Cooper 23-1-17 - Orignal Drilling - Orignal Drilling - As Dr	16,626.69	6,710.89	8,702.06	8,609.44	93.961	CC, ES, SF
Cooper 23-1-19 - Original Drilling - Original Drilling - As D	16,626.69	6,609.03	7,295.61	7,203.33	79.058	CC, ES, SF
Cooper 23-12 - Original Drilling - Original Drilling - As Dri	16,626.69	6,719.72	8,005.73	7,913.49	86.794	CC, ES, SF
Cooper 23-1-20 - Original Drilling - Original Drilling - As D	16,626.69	6,716.45	6,601.62	6,502.29	66.462	CC, ES, SF
Cooper 23-15 - Original Drilling - Original Drilling - As Dri	16,626.69	6,602.36	8,245.31	8,149.10	85.694	CC, ES, SF
Foss 41-23D - Original Drilling - Original Drilling - As Drill	16,626.69	6,880.37	9,092.92	8,989.23	87.694	CC, ES, SF
Foss 42-23 - Original Drilling - Original Drilling - As Drilled	16,626.69	6,708.03	8,228.48	8,127.68	81.633	CC, ES, SF
J&L Farms 23-11 - Original Drilling - Original Drilling - As	16,626.69	6,772.53	6,024.47	5,946.90	77.672	CC, ES, SF
J&L Farms 23-12 - Original Drilling - Original Drilling - As	16,626.69	6,733.27	4,838.46	4,751.95	55.927	CC, ES, SF
J&L Farms 23-21 - Original Drilling - Original Drilling - As	16,626.69	6,630.67	7,194.24	7,107.91	83.336	CC, ES, SF
J&L Farms 23-22 - Original Drilling - Original Drilling - As	16,626.69	6,734.69	6,130.59	6,037.36	65.759	CC, ES, SF
McIntosh 33-23 - Original Drilling - Original Drilling - As D	16,626.69	7,019.00	6,683.12	6,578.07	63.615	CC, ES, SF
McIntosh 34-23 - Original Drilling - Original Drilling - As D	16,626.69	6,775.40	6,590.11	6,482.64	61.316	CC, ES, SF
McIntosh 43-23 - Original Drilling - Original Drilling - As D	16,626.69	6,700.00	8,214.97	8,110.40	78.563	CC, ES, SF
McIntosh 44-23 - Original Drilling - Original Drilling - As D	16,626.69	6,760.65	7,982.24	7,874.34	73.981	CC, ES, SF
Schroeder 23-31 - Original Drilling - Original Drilling - As	16,626.69	6,787.79	5,595.51	5,492.56	54.354	CC, ES, SF
Schroeder 23-33 - Original Drilling - Original Drilling - As	16,626.69	6,775.63	3,640.73	3,533.84	34.063	CC, ES, SF

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

Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Reveille A34-757
Project:	Wells Ranch	**TVD Reference:**	KB @ 4661.00ft (Original Well Elev)
Reference Site:	A Section 34	**MD Reference:**	KB @ 4661.00ft (Original Well Elev)
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Reveille A34-757	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Reveille A34-757 OH	**Database:**	EDMP
Reference Design:	APD - Rev 1	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
A Section 24						
Larson A23-622 - Larson A23-622 OH - As-drilled	16,400.00	17,299.00	3,349.97	3,217.77	25.339	SF
Larson A23-622 - Larson A23-622 OH - As-drilled	16,626.69	17,299.00	3,268.05	3,139.32	25.388	CC, ES
Larson A23-627 - Larson A23-627 OH - As-drilled	16,626.69	17,330.00	3,394.59	3,257.25	24.717	CC, ES, SF
Larson A23-633 - Larson A23-633 OH - As-drilled	16,626.69	17,260.00	3,554.57	3,411.00	24.758	CC, ES, SF
Larson A23-639 - Larson A23-639 OH - As-drilled	16,626.69	17,355.00	3,768.67	3,617.69	24.962	CC, ES, SF
Larson A23-645 - Larson A23-645 OH - As-drilled	16,626.69	18,040.00	4,006.51	3,847.43	25.187	CC, ES, SF
Larson A23-651 - Larson A23-651 OH - As-drilled	16,626.69	18,045.00	4,213.42	4,051.08	25.955	CC, ES, SF
Larson A23-656 - Larson A23-656 OH - As-drilled	16,626.69	18,030.00	4,421.19	4,256.04	26.771	CC, ES, SF
Larson A23-662 - Larson A23-662 OH - As-drilled	16,626.69	18,100.00	4,725.55	4,558.17	28.232	CC, ES, SF
Larson A23-668 - Larson A23-668 OH - As-Drilled	16,626.69	17,400.00	5,036.01	4,875.07	31.291	CC, ES, SF
Larson A23-672 - Larson A23-672 OH - As-Drilled	16,626.69	17,415.00	5,253.09	5,091.77	32.564	CC, ES, SF
Larson A23-678 - Larson A23-678 OH - As-Drilled	16,626.69	17,106.00	5,570.32	5,408.53	34.430	CC, ES, SF
Larson A23-683 - Larson A23-683 OH - As-Drilled	16,626.69	17,368.00	5,823.48	5,659.70	35.556	CC, ES, SF
Larson AA19-618 - Larson AA19-618 OH - As-Drilled						Out of range
Larson AA19-624 - Larson AA19-624 OH - As-Drilled						Out of range
Larson AA19-624 - Larson AA19-624 ST01 - As-Drilled						Out of range
Larson AA19-630 - Larson AA19-630 OH - As-Drilled						Out of range
Larson AA19-635 - Larson AA19-635 OH - As-Drilled						Out of range
Larson Farms 01-24 - Original Drilling - Original Drilling -						Out of range
Larson Farms 02-24 - Original Drilling - Original Drilling -						Out of range
Larson Farms 03-24 - Original Drilling - Original Drilling -						Out of range
Larson Farms 04-24 - Original Drilling - Original Drilling -						Out of range
Larson Farms 05-24 - Original Drilling - Original Drilling -						Out of range
Larson Farms 06-24 - Original Drilling - Original Drilling -						Out of range
Larson Farms 07-24 - Original Drilling - Original Drilling -						Out of range
Peppler 24-32 - Original Drilling - Original Drilling - As Dri	16,200.00	16,200.00	9,315.52	9,181.57	69.545	SF
Peppler 24-32 - Original Drilling - Original Drilling - As Dri	16,626.69	6,419.77	9,193.68	9,089.49	88.241	CC, ES
Roth 24-21 - Original Drilling - Original Drilling - As Drilled						Out of range

Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Reveille A34-757
Project:	Wells Ranch	**TVD Reference:**	KB @ 4661.00ft (Original Well Elev)
Reference Site:	A Section 34	**MD Reference:**	KB @ 4661.00ft (Original Well Elev)
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Reveille A34-757	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Reveille A34-757 OH	**Database:**	EDMP
Reference Design:	APD - Rev 1	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
A Section 25						
Fairmeadows 03-25G - Original Drilling - Original Drilling						Out of range
Fairmeadows Land Co 1 - Original Drilling - Original Drilli						Out of range
Larsen 01-25G - Original Drilling - Original Drilling - As D	16,282.34	6,795.61	9,173.41	9,037.40	67.450	CC
Larsen 01-25G - Original Drilling - Original Drilling - As D	16,400.00	6,798.37	9,174.16	9,037.17	66.968	ES
Larsen 01-25G - Original Drilling - Original Drilling - As D	16,626.69	6,803.68	9,179.86	9,041.00	66.106	SF
Larson A25-01 - Original Drilling - Original Drilling - As Dr						Out of range
Larson A25-02 - Original Drilling - Original Drilling - As Dr						Out of range
Larson A25-03 - Original Drilling - Original Drilling - As Dr						Out of range
Larson A25-03X - Original Drilling - Original Drilling - As D						Out of range
Larson A25-05 - Original Drilling - Original Drilling - As Dr	14,890.59	6,797.46	9,027.72	8,932.81	95.121	CC
Larson A25-05 - Original Drilling - Original Drilling - As Dr	15,000.00	6,796.14	9,028.38	8,932.61	94.268	ES
Larson A25-05 - Original Drilling - Original Drilling - As Dr	16,626.69	6,776.49	9,193.11	9,085.63	85.532	SF
Larson A25-06 - Original Drilling - Original Drilling - As Dr						Out of range
Larson A25-06X - Original Drilling - Original Drilling - As D						Out of range
Larson A25-07 - Original Drilling - Original Drilling - As Dr						Out of range
Larson A25-08 - Original Drilling - Original Drilling - As Dr						Out of range
Larson A25-10 - Original Drilling - Original Drilling - Drilled						Out of range
Larson A25-11 - Original Drilling - Original Drilling - As Dr						Out of range
Larson A25-12 - Original Drilling - Original Drilling - As Dr	13,695.86	6,662.65	8,890.71	8,805.38	104.191	CC
Larson A25-12 - Original Drilling - Original Drilling - As Dr	13,800.00	6,663.07	8,891.32	8,805.18	103.215	ES
Larson A25-12 - Original Drilling - Original Drilling - As Dr	16,626.69	6,674.39	9,361.33	9,256.32	89.147	SF
Larson A25-13 - Original Drilling - Original Drilling - As Dr	12,482.68	6,768.01	8,992.43	8,915.88	117.465	CC
Larson A25-13 - Original Drilling - Original Drilling - As Dr	12,600.00	6,767.24	8,993.20	8,915.76	116.139	ES
Larson A25-13 - Original Drilling - Original Drilling - As Dr	16,626.69	6,744.02	9,901.28	9,798.98	96.792	SF
Larson A25-14 - Original Drilling - Original Drilling - As Dr						Out of range
Larson A25-15 - Original Drilling - Original Drilling - As Dr						Out of range
Larson A25-17 - Original Drillling - Original Drillling - As D						Out of range
Larson A25-19 - Original Drilling - Original Drilling - As Dr	15,680.06	6,300.01	9,586.25	9,486.59	96.187	CC
Larson A25-19 - Original Drilling - Original Drilling - As Dr	15,800.00	6,300.01	9,587.00	9,486.38	95.276	ES
Larson A25-19 - Original Drilling - Original Drilling - As Dr	16,626.69	6,300.01	9,632.88	9,525.92	90.065	SF
Larson A25-23 - Original Drilling - Original Drilling - As Dr						Out of range
Larson A25-25 - Original Drilling - Original Drilling - As Dr	12,923.86	6,634.63	9,669.04	9,589.61	121.721	CC
Larson A25-25 - Original Drilling - Original Drilling - As Dr	13,000.00	6,634.15	9,669.34	9,589.33	120.843	ES
Larson A25-25 - Original Drilling - Original Drilling - As Dr	15,400.00	6,620.71	9,981.05	9,884.25	103.107	SF

Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Reveille A34-757
Project:	Wells Ranch	**TVD Reference:**	KB @ 4661.00ft (Original Well Elev)
Reference Site:	A Section 34	**MD Reference:**	KB @ 4661.00ft (Original Well Elev)
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Reveille A34-757	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Reveille A34-757 OH	**Database:**	EDMP
Reference Design:	APD - Rev 1	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
A Section 26						
Barrett 11-26 (SI) - Original Drilling - Original Drilling - As	13,655.38	6,633.76	4,932.87	4,844.42	55.769	CC
Barrett 11-26 (SI) - Original Drilling - Original Drilling - As	13,700.00	6,633.82	4,933.07	4,844.27	55.549	ES
Barrett 11-26 (SI) - Original Drilling - Original Drilling - As	15,000.00	6,635.46	5,112.85	5,015.69	52.624	SF
Barrett 12-26 (SI) - Original Drilling - Original Drilling - As	13,639.17	6,759.11	3,615.74	3,531.92	43.138	CC, ES
Barrett 12-26 (SI) - Original Drilling - Original Drilling - As	14,400.00	6,767.18	3,694.91	3,606.13	41.616	SF
Brown-Orr 14-26 (SI) - Original Drilling - Original Drilling -	12,073.27	6,714.22	3,536.80	3,463.37	48.168	CC
Brown-Orr 14-26 (SI) - Original Drilling - Original Drilling -	12,100.00	6,714.18	3,536.90	3,463.27	48.036	ES
Brown-Orr 14-26 (SI) - Original Drilling - Original Drilling -	12,900.00	6,712.78	3,632.14	3,553.40	46.133	SF
Brown-Orr 24-26 - Original Drilling - Original Drilling - As	12,053.66	6,886.28	5,220.86	5,147.16	70.840	CC
Brown-Orr 24-26 - Original Drilling - Original Drilling - As	12,100.00	6,887.27	5,221.06	5,147.01	70.508	ES
Brown-Orr 24-26 - Original Drilling - Original Drilling - As	13,800.00	6,923.50	5,505.06	5,420.38	65.010	SF
Carpio A26-04 - Original Drilling - Original Drilling - As Dr	16,259.51	6,719.14	3,711.03	3,605.58	35.194	CC
Carpio A26-04 - Original Drilling - Original Drilling - As Dr	16,300.00	6,719.19	3,711.25	3,605.47	35.084	ES
Carpio A26-04 - Original Drilling - Original Drilling - As Dr	16,626.69	6,719.55	3,729.15	3,620.97	34.473	SF
Carpio A26-05 - Original Drilling - Original Drilling - As Dr	14,730.33	6,733.43	3,822.93	3,729.46	40.900	CC, ES
Carpio A26-05 - Original Drilling - Original Drilling - As Dr	15,500.00	6,729.10	3,899.64	3,801.10	39.576	SF
DCD Farm A26-02 - Original Drilling - Original Drilling - A	16,102.20	6,668.87	6,390.09	6,286.05	61.421	CC
DCD Farm A26-02 - Original Drilling - Original Drilling - A	16,200.00	6,669.22	6,390.84	6,286.01	60.963	ES
DCD Farm A26-02 - Original Drilling - Original Drilling - A	16,626.69	6,670.79	6,411.58	6,303.48	59.315	SF
DCD Farms 01-26 - Original Drilling - Original Drilling - As	14,890.55	6,836.57	7,684.09	7,589.09	80.886	CC
DCD Farms 01-26 - Original Drilling - Original Drilling - As	15,000.00	6,836.97	7,684.87	7,589.00	80.158	ES
DCD Farms 01-26 - Original Drilling - Original Drilling - As	16,626.69	6,842.94	7,877.78	7,770.57	73.479	SF
DCD Farms 02-26 (PA) - Original Drilling - Original Drillin	14,857.47	6,784.25	4,988.96	4,894.16	52.631	CC
DCD Farms 02-26 (PA) - Original Drilling - Original Drillin	14,900.00	6,784.86	4,989.14	4,894.00	52.442	ES
DCD Farms 02-26 (PA) - Original Drilling - Original Drillin	16,100.00	6,802.21	5,141.33	5,038.41	49.954	SF
DCD Farms A26-07 - Original Drilling - Original Drilling - A	15,131.73	6,714.12	6,352.00	6,255.43	65.774	CC
DCD Farms A26-07 - Original Drilling - Original Drilling - A	15,200.00	6,712.53	6,352.37	6,255.25	65.411	ES
DCD Farms A26-07 - Original Drilling - Original Drilling - A	16,626.69	6,720.78	6,525.46	6,418.70	61.121	SF
Pfeiffer 09-26 - Original Drilling - Original Drilling - As Dril	13,579.88	6,757.22	7,694.39	7,609.69	90.837	CC
Pfeiffer 09-26 - Original Drilling - Original Drilling - As Dril	13,600.00	6,757.03	7,694.42	7,609.56	90.670	ES
Pfeiffer 09-26 - Original Drilling - Original Drilling - As Dril	16,500.00	6,729.09	8,229.83	8,126.65	79.764	SF
Pfeiffer 10-26 - Wellbore #1 - Wellbore #1 - As Drilled	13,613.41	6,714.24	6,375.00	6,290.16	75.138	CC
Pfeiffer 10-26 - Wellbore #1 - Wellbore #1 - As Drilled	13,700.00	6,720.37	6,375.58	6,290.05	74.535	ES
Pfeiffer 10-26 - Wellbore #1 - Wellbore #1 - As Drilled	15,700.00	6,705.10	6,707.79	6,609.59	68.313	SF
Pfeiffer 15-26 - Wellbore #1 - Wellbore #1 - As Drilled	12,231.40	7,005.66	6,189.66	6,114.33	82.162	CC
Pfeiffer 15-26 - Wellbore #1 - Wellbore #1 - As Drilled	12,300.00	7,006.92	6,190.04	6,114.19	81.606	ES
Pfeiffer 15-26 - Wellbore #1 - Wellbore #1 - As Drilled	14,500.00	7,047.39	6,592.17	6,502.57	73.571	SF
Pfeiffer 16-26 - Original Drilling - Original Drilling - As Dril	12,105.44	6,703.99	7,729.38	7,544.93	41.905	CC
Pfeiffer 16-26 - Original Drilling - Original Drilling - As Dril	12,200.00	6,703.99	7,729.96	7,544.80	41.748	ES
Pfeiffer 16-26 - Original Drilling - Original Drilling - As Dril	14,000.00	6,703.99	7,958.18	7,760.68	40.293	SF
Sidwell 26-1G4 - Original Drilling - Original Drilling - As D	16,140.45	6,654.03	7,739.41	7,634.74	73.944	CC
Sidwell 26-1G4 - Original Drilling - Original Drilling - As D	16,200.00	6,654.86	7,739.64	7,634.49	73.603	ES
Sidwell 26-1G4 - Original Drilling - Original Drilling - As D	16,626.69	6,660.80	7,754.67	7,646.15	71.460	SF
Sidwell A26-03 (PA) - Original Drilling - Original Drilling -	16,305.97	6,971.12	5,119.27	5,001.69	43.537	CC, ES
Sidwell A26-03 (PA) - Original Drilling - Original Drilling -	16,626.69	6,971.43	5,129.31	5,009.22	42.711	SF

Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Reveille A34-757
Project:	Wells Ranch	**TVD Reference:**	KB @ 4661.00ft (Original Well Elev)
Reference Site:	A Section 34	**MD Reference:**	KB @ 4661.00ft (Original Well Elev)
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Reveille A34-757	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Reveille A34-757 OH	**Database:**	EDMP
Reference Design:	APD - Rev 1	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
A Section 27						
Howard 02-27 (PA) - Original Drilling - Original Drilling - A	16,187.97	6,821.00	1,123.88	905.91	5.156	CC
Howard 02-27 (PA) - Original Drilling - Original Drilling - A	16,200.00	6,821.00	1,123.94	905.86	5.154	ES, SF
Howard 03-27 - Original Drilling - Original Drilling - As Dri	16,099.60	6,797.73	284.67	180.34	2.729	CC, ES
Howard 03-27 - Original Drilling - Original Drilling - As Dri	16,100.00	6,797.73	284.67	180.34	2.729	SF
Howard 04-27 (PA) - Original Drilling - Original Drilling - A	16,207.24	6,781.00	1,526.52	1,309.20	7.024	CC, ES
Howard 04-27 (PA) - Original Drilling - Original Drilling - A	16,300.00	6,781.00	1,529.34	1,311.55	7.022	SF
Howard 08-27 - Original Drilling - Original Drilling - As Dri	14,794.89	6,770.80	2,421.27	2,327.14	25.723	CC
Howard 08-27 - Original Drilling - Original Drilling - As Dri	14,800.00	6,770.77	2,421.27	2,327.10	25.712	ES
Howard 08-27 - Original Drilling - Original Drilling - As Dri	15,100.00	6,769.26	2,440.42	2,344.17	25.356	SF
Howard 10-27 - Original Drilling - Original Drilling - As Dri	13,481.17	6,761.13	1,195.90	1,111.85	14.229	CC
Howard 10-27 - Original Drilling - Original Drilling - As Dri	13,500.00	6,760.92	1,196.05	1,111.84	14.203	ES
Howard 10-27 - Original Drilling - Original Drilling - As Dri	13,600.00	6,759.83	1,201.79	1,116.91	14.158	SF
Howard 15-27 - Original Drilling - Original Drilling - As Dri	12,316.29	6,781.21	1,038.64	965.57	14.215	CC, ES
Howard 15-27 - Original Drilling - Original Drilling - As Dri	12,400.00	6,782.72	1,042.01	968.34	14.144	SF
Howard 4B-27 (DA) - Original Drilling - Original Drilling - A	16,167.15	3,765.00	3,383.17	3,273.75	30.920	CC
Howard 4B-27 (DA) - Original Drilling - Original Drilling - A	16,200.00	3,765.00	3,383.33	3,273.64	30.846	ES
Howard 4B-27 (DA) - Original Drilling - Original Drilling - A	16,626.69	3,765.00	3,414.24	3,300.58	30.039	SF
Howard A27-01 - Original Drilling - Original Drilling - As D	16,187.75	6,774.28	2,452.22	2,347.18	23.345	CC
Howard A27-01 - Original Drilling - Original Drilling - As D	16,200.00	6,774.22	2,452.25	2,347.10	23.322	ES
Howard A27-01 - Original Drilling - Original Drilling - As D	16,500.00	6,772.99	2,472.02	2,364.86	23.069	SF
Howard A27-05 (SI) - Original Drilling - Original Drilling - A	14,806.97	6,781.45	1,512.64	1,418.32	16.037	CC, ES
Howard A27-05 (SI) - Original Drilling - Original Drilling - A	14,900.00	6,780.38	1,515.50	1,420.70	15.986	SF
Howard A27-06 (PR) - Original Drilling - Original Drilling -	14,852.20	6,876.03	134.69	37.49	1.386	Level 3, CC, ES, SF
Howard A27-07 - Original Drilling - Original Drilling - As D	14,782.78	6,812.42	1,215.14	1,120.94	12.900	CC
Howard A27-07 - Original Drilling - Original Drilling - As D	14,800.00	6,812.36	1,215.26	1,120.91	12.880	ES
Howard A27-07 - Original Drilling - Original Drilling - As D	14,900.00	6,812.02	1,220.78	1,125.77	12.849	SF
Howard A27-09 - Original Drilling - Original Drilling - As D	13,421.59	6,755.98	2,324.28	2,240.71	27.812	CC, ES
Howard A27-09 - Original Drilling - Original Drilling - As D	13,800.00	6,753.41	2,354.88	2,268.82	27.365	SF
Howard A27-16 - Original Drilling - Original Drilling - As D	12,151.42	6,759.44	2,603.47	2,529.34	35.120	CC, ES
Howard A27-16 - Original Drilling - Original Drilling - As D	12,600.00	6,763.74	2,641.83	2,564.73	34.262	SF
Howard A27-17D - Original Drilling - Original Drilling - As	15,595.64	6,880.09	1,868.00	1,763.83	17.932	CC
Howard A27-17D - Original Drilling - Original Drilling - As	15,600.00	6,880.07	1,868.01	1,763.78	17.922	ES
Howard A27-17D - Original Drilling - Original Drilling - As	15,800.00	6,879.30	1,879.15	1,772.83	17.675	SF

Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Reveille A34-757
Project:	Wells Ranch	**TVD Reference:**	KB @ 4661.00ft (Original Well Elev)
Reference Site:	A Section 34	**MD Reference:**	KB @ 4661.00ft (Original Well Elev)
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Reveille A34-757	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Reveille A34-757 OH	**Database:**	EDMP
Reference Design:	APD - Rev 1	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
A Section 28						
Ankeney 2-28 (SI) - Wellbore #1 - No Surveys	16,244.88	6,773.00	4,268.76	4,051.31	19.631	CC
Ankeney 2-28 (SI) - Wellbore #1 - No Surveys	16,300.00	6,773.00	4,269.12	4,051.26	19.596	ES
Ankeney 2-28 (SI) - Wellbore #1 - No Surveys	16,626.69	6,773.00	4,285.80	4,065.82	19.482	SF
Ankenney 28-01 (PA) - Wellbore #1 - Gyro Surveys	14,602.67	6,789.27	2,797.52	2,705.78	30.495	CC, ES
Ankenney 28-01 (PA) - Wellbore #1 - Gyro Surveys	15,000.00	6,786.11	2,825.59	2,731.68	30.089	SF
Art Rohr 1 (PA) - Wellbore #1 - No Surveys	13,432.43	6,767.99	5,526.57	5,331.00	28.259	CC
Art Rohr 1 (PA) - Wellbore #1 - No Surveys	13,500.00	6,767.99	5,526.98	5,330.93	28.191	ES
Art Rohr 1 (PA) - Wellbore #1 - No Surveys	14,300.00	6,768.00	5,594.25	5,393.04	27.803	SF
Danley 1 (TA) - Wellbore #1 - Gyro Surveys	16,311.14	6,886.51	6,561.13	6,454.73	61.664	CC
Danley 1 (TA) - Wellbore #1 - Gyro Surveys	16,400.00	6,887.34	6,561.74	6,454.67	61.286	ES
Danley 1 (TA) - Wellbore #1 - Gyro Surveys	16,626.69	6,889.45	6,568.72	6,460.01	60.428	SF
Danley 12-28 (SI) - Wellbore #1 - Gyro Surveys	14,722.67	6,846.14	6,723.64	6,629.75	71.609	CC
Danley 12-28 (SI) - Wellbore #1 - Gyro Surveys	14,800.00	6,842.66	6,724.09	6,629.64	71.191	ES
Danley 12-28 (SI) - Wellbore #1 - Gyro Surveys	16,626.69	6,771.78	6,987.58	6,882.49	66.494	SF
Danley 13-28 (PR) - Wellbore #1 - Gyro Surveys	13,402.01	6,901.10	6,759.85	6,676.19	80.803	CC, ES
Danley 13-28 (PR) - Wellbore #1 - Gyro Surveys	15,700.00	6,867.45	7,139.69	7,042.59	73.525	SF
Danley 14-28 (PR) - Wellbore #1 - Gyro Surveys	12,053.52	6,832.48	6,777.22	6,703.47	91.889	CC
Danley 14-28 (PR) - Wellbore #1 - Gyro Surveys	12,100.00	6,831.46	6,777.38	6,703.31	91.496	ES
Danley 14-28 (PR) - Wellbore #1 - Gyro Surveys	14,600.00	6,768.30	7,239.52	7,151.31	82.073	SF
Dewey 21-28 (TA) - Wellbore #1 - Gyro Surveys	15,959.81	6,986.85	5,471.82	5,368.13	52.775	CC
Dewey 21-28 (TA) - Wellbore #1 - Gyro Surveys	16,000.00	6,986.10	5,471.96	5,367.98	52.625	ES
Dewey 21-28 (TA) - Wellbore #1 - Gyro Surveys	16,626.69	6,974.29	5,512.29	5,404.18	50.988	SF
Dewey 22-28 (SI) - Wellbore #1 - Gyro Surveys	14,820.71	7,093.61	5,416.90	5,321.10	56.544	CC, ES
Dewey 22-28 (SI) - Wellbore #1 - Gyro Surveys	16,100.00	7,001.36	5,565.15	5,462.10	54.009	SF
Hannan Rohr 1 (PA) - Wellbore #1 - Gyro Surveys	12,032.12	6,750.99	5,481.97	5,408.89	75.015	CC
Hannan Rohr 1 (PA) - Wellbore #1 - Gyro Surveys	12,100.00	6,751.20	5,482.39	5,408.85	74.545	ES
Hannan Rohr 1 (PA) - Wellbore #1 - Gyro Surveys	13,800.00	6,756.52	5,759.98	5,676.81	69.254	SF
Rohr A 28-25 (SI) - Wellbore #1 - Gyro Surveys	12,910.15	6,974.08	5,968.60	5,888.40	74.423	CC, ES
Rohr A 28-25 (SI) - Wellbore #1 - Gyro Surveys	14,800.00	6,941.44	6,260.56	6,169.43	68.701	SF
Wardlaw 16-28 (SI) - Wellbore #1 - Gyro Surveys	12,080.07	6,772.05	3,008.40	2,934.69	40.814	CC
Wardlaw 16-28 (SI) - Wellbore #1 - Gyro Surveys	12,100.00	6,772.24	3,008.47	2,934.63	40.742	ES
Wardlaw 16-28 (SI) - Wellbore #1 - Gyro Surveys	12,600.00	6,777.00	3,053.00	2,976.38	39.846	SF
Wardlaw 20-28 - Original Drilling - Original Drilling - As D	12,691.06	6,740.99	3,341.73	3,152.25	17.636	CC
Wardlaw 20-28 - Original Drilling - Original Drilling - As D	12,700.00	6,740.99	3,341.74	3,152.20	17.631	ES
Wardlaw 20-28 - Original Drilling - Original Drilling - As D	13,000.00	6,740.99	3,355.98	3,164.56	17.532	SF
Wardlaw 20-28 (SI) - Wellbore #1 - Gyro Surveys	12,724.37	6,763.22	3,332.78	3,254.40	42.519	CC, ES
Wardlaw 20-28 (SI) - Wellbore #1 - Gyro Surveys	13,300.00	6,771.05	3,382.12	3,300.40	41.390	SF
Wardlaw 33-28 (PA) - Wellbore #1 - Gyro Surveys	13,219.04	7,500.00	3,892.39	3,749.44	27.230	CC
Wardlaw 33-28 (PA) - Wellbore #1 - Gyro Surveys	13,300.00	7,500.00	3,893.23	3,747.84	26.777	ES
Wardlaw 33-28 (PA) - Wellbore #1 - Gyro Surveys	14,700.00	7,500.00	4,164.61	3,987.15	23.469	SF
Webster 09-28 (PR) - Original Drilling - Original Drilling -	13,490.77	6,755.99	3,053.82	2,858.05	15.599	CC
Webster 09-28 (PR) - Original Drilling - Original Drilling -	13,500.00	6,755.99	3,053.83	2,858.00	15.594	ES
Webster 09-28 (PR) - Original Drilling - Original Drilling -	13,800.00	6,755.99	3,069.44	2,871.77	15.528	SF
Webster 15-28 (SI) - Wellbore #1 - Gyro Surveys	12,152.32	6,775.88	4,345.54	4,271.39	58.604	CC
Webster 15-28 (SI) - Wellbore #1 - Gyro Surveys	12,200.00	6,775.74	4,345.81	4,271.33	58.352	ES
Webster 15-28 (SI) - Wellbore #1 - Gyro Surveys	13,200.00	6,772.62	4,470.05	4,389.90	55.770	SF
Webster 9-28 (PR) - Wellbore #1 - Gyro Surveys	13,530.46	6,771.30	3,038.48	2,954.08	35.999	CC, ES
Webster 9-28 (PR) - Wellbore #1 - Gyro Surveys	14,000.00	6,773.12	3,074.55	2,987.48	35.314	SF

Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Reveille A34-757
Project:	Wells Ranch	**TVD Reference:**	KB @ 4661.00ft (Original Well Elev)
Reference Site:	A Section 34	**MD Reference:**	KB @ 4661.00ft (Original Well Elev)
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Reveille A34-757	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Reveille A34-757 OH	**Database:**	EDMP
Reference Design:	APD - Rev 1	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
A Section 33						
Achziger 11-33 (PR) - Wellbore #1 - Gyro Surveys	0.00	0.00	4,829.84			
Achziger 11-33 (PR) - Wellbore #1 - Gyro Surveys	1,400.00	1,346.77	4,836.27	4,826.94	518.791	ES
Achziger 11-33 (PR) - Wellbore #1 - Gyro Surveys	10,500.00	6,745.17	5,710.23	5,649.88	94.608	SF
Achziger 14-33 (PA) - Wellbore #1 - No Surveys	2,000.00	1,964.00	4,826.81	4,780.59	104.439	CC
Achziger 14-33 (PA) - Wellbore #1 - No Surveys	2,100.00	2,063.98	4,828.51	4,779.95	99.426	ES
Achziger 14-33 (PA) - Wellbore #1 - No Surveys	7,150.00	6,705.45	5,520.27	5,361.79	34.832	SF
Briggs 15-33 (SI) - Wellbore #1 - Gyro Surveys	565.55	534.56	3,503.40	3,499.91	1,003.822	CC
Briggs 15-33 (SI) - Wellbore #1 - Gyro Surveys	1,300.00	1,243.25	3,506.44	3,497.84	407.976	ES
Briggs 15-33 (SI) - Wellbore #1 - Gyro Surveys	7,700.00	6,877.66	4,263.66	4,214.75	87.169	SF
Ehrlich 19-33 (PR) - Wellbore #1 - Gyro Survey	2,000.35	1,970.15	5,673.11	5,659.45	415.372	CC, ES
Ehrlich 19-33 (PR) - Wellbore #1 - Gyro Survey	10,800.00	6,705.13	7,121.73	7,060.92	117.114	SF
French 09-33 (SI) - Original Drilling - Original Drilling - As	1,281.63	1,253.68	2,510.70	2,502.13	292.803	CC
French 09-33 (SI) - Original Drilling - Original Drilling - As	2,012.82	1,995.44	2,513.55	2,499.77	182.429	ES
French 09-33 (SI) - Original Drilling - Original Drilling - As	8,800.00	6,726.04	2,891.78	2,839.41	55.213	SF
Hammerbeck 16-33 (PA) - Original Drilling - Original Drilli	100.00	55.36	2,105.28	2,105.05	9,401.102	CC
Hammerbeck 16-33 (PA) - Original Drilling - Original Drilli	1,000.00	951.67	2,109.37	2,102.85	323.939	ES
Hammerbeck 16-33 (PA) - Original Drilling - Original Drilli	7,100.00	6,640.73	2,787.93	2,740.68	59.004	SF
Hammerbeck 20-33 - Wellbore #1 - Gyro Surveys	1,065.75	1,034.75	2,892.18	2,885.15	411.497	CC
Hammerbeck 20-33 - Wellbore #1 - Gyro Surveys	1,900.00	1,843.43	2,894.07	2,881.23	225.394	ES
Hammerbeck 20-33 - Wellbore #1 - Gyro Surveys	8,400.00	6,638.39	3,643.36	3,593.06	72.433	SF
Noffsinger 11-33 (PR) - Wellbore #1 - Gyro Surveys	10,953.51	6,740.35	6,908.45	6,842.80	105.236	CC
Noffsinger 11-33 (PR) - Wellbore #1 - Gyro Surveys	11,000.00	6,739.86	6,908.61	6,842.66	104.757	ES
Noffsinger 11-33 (PR) - Wellbore #1 - Gyro Surveys	13,900.00	6,712.05	7,510.54	7,428.48	91.524	SF
Noffsinger 12-33 (PR) - Wellbore #1 - Gyro Surveys	0.00	0.00	6,503.39			
Noffsinger 12-33 (PR) - Wellbore #1 - Gyro Surveys	2,010.62	2,020.43	6,504.91	6,491.05	469.501	ES
Noffsinger 12-33 (PR) - Wellbore #1 - Gyro Surveys	12,500.00	6,769.23	7,474.41	7,402.70	104.228	SF
Noffsinger 21-33 (PA) - Wellbore #1 - No Surveys	10,978.92	6,745.99	5,482.66	5,305.54	30.955	CC
Noffsinger 21-33 (PA) - Wellbore #1 - No Surveys	11,000.00	6,745.99	5,482.70	5,305.44	30.931	ES
Noffsinger 21-33 (PA) - Wellbore #1 - No Surveys	11,900.00	6,745.99	5,559.49	5,376.70	30.415	SF
Noffsinger 22-33 (PR) - Wellbore #1 - Gyro Surveys	11,009.10	6,446.38	3,941.37	3,876.24	60.514	CC, ES
Noffsinger 22-33 (PR) - Wellbore #1 - Gyro Surveys	12,000.00	6,471.96	4,063.94	3,993.27	57.505	SF
Noffsinger 31-33 (PR) - Wellbore #1 - Gyro Surveys	10,970.01	6,748.79	4,056.65	3,990.85	61.651	CC
Noffsinger 31-33 (PR) - Wellbore #1 - Gyro Surveys	11,000.00	6,748.80	4,056.76	3,990.77	61.474	ES
Noffsinger 31-33 (PR) - Wellbore #1 - Gyro Surveys	12,000.00	6,749.32	4,185.36	4,113.89	58.554	SF
Noffsinger 32-33 (PR) - Wellbore #1 - Gyro Surveys	9,196.29	6,874.55	4,278.05	4,222.83	77.480	CC
Noffsinger 32-33 (PR) - Wellbore #1 - Gyro Surveys	9,200.00	6,874.48	4,278.05	4,222.81	77.454	ES
Noffsinger 32-33 (PR) - Wellbore #1 - Gyro Surveys	10,600.00	6,845.93	4,502.36	4,440.44	72.715	SF
Sitzman 12-33 (PR) - Wellbore #1 - Gyro Surveys	0.00	0.00	6,345.68			
Sitzman 12-33 (PR) - Wellbore #1 - Gyro Surveys	2,002.20	1,978.13	6,348.99	6,335.31	464.125	ES
Sitzman 12-33 (PR) - Wellbore #1 - Gyro Surveys	11,800.00	6,755.36	7,769.14	7,702.50	116.591	SF
Sitzman 13-33 (SI) - Wellbore #1 - Gyro Surveys	2,004.28	1,979.64	6,150.15	6,136.43	448.292	CC, ES
Sitzman 13-33 (SI) - Wellbore #1 - Gyro Surveys	10,700.00	6,708.18	7,991.58	7,932.00	134.141	SF
Sughroue 41-33 (SI) - Original Drilling - Original Drilling -	10,967.98	6,610.30	2,771.28	2,706.26	42.625	CC
Sughroue 41-33 (SI) - Original Drilling - Original Drilling -	11,000.00	6,610.59	2,771.46	2,706.24	42.497	ES
Sughroue 41-33 (SI) - Original Drilling - Original Drilling -	11,500.00	6,615.02	2,821.88	2,754.02	41.588	SF
Webster 10-33 (PA) - Wellbore #1 - Gyro Surveys	100.00	60.72	3,770.38	3,770.15	10,000.000	CC
Webster 10-33 (PA) - Wellbore #1 - Gyro Surveys	400.00	344.53	3,771.37	3,769.14	1,689.188	ES
Webster 10-33 (PA) - Wellbore #1 - Gyro Surveys	9,600.00	6,842.07	4,347.35	4,291.20	77.419	SF

Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Reveille A34-757
Project:	Wells Ranch	**TVD Reference:**	KB @ 4661.00ft (Original Well Elev)
Reference Site:	A Section 34	**MD Reference:**	KB @ 4661.00ft (Original Well Elev)
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Reveille A34-757	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Reveille A34-757 OH	**Database:**	EDMP
Reference Design:	APD - Rev 1	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
A Section 34						
Barthol A34-05X - Original Drilling - Original Drilling - As D	9,660.30	6,743.59	1,647.32	1,589.84	28.657	CC, ES
Barthol A34-05X - Original Drilling - Original Drilling - As D	9,800.00	6,741.54	1,653.23	1,595.09	28.435	SF
Ehlrich A34-01 - Original Drilling - Original Drilling - As Dr	10,704.26	6,720.05	2,531.35	2,467.35	39.552	CC, ES
Ehlrich A34-01 - Original Drilling - Original Drilling - As Dr	11,200.00	6,718.33	2,579.43	2,512.33	38.439	SF
Howard A34-03 (PA) - Original Drilling - Original Drilling -	10,846.80	6,761.99	243.21	66.41	1.376	Level 3, CC, ES, SF
Howard BC A34-02 - Original Drilling - Original Drilling - A	10,722.70	6,759.56	865.95	801.84	13.507	CC, ES
Howard BC A34-02 - Original Drilling - Original Drilling - A	10,800.00	6,758.25	869.62	804.97	13.452	SF
Landwehr A34-03X - Original Drilling - Original Drilling - A	11,012.12	6,771.77	304.21	238.00	4.595	CC, ES, SF
Landwehr A34-04 - Original Drilling - Original Drilling - As	11,025.54	6,791.79	1,791.62	1,725.16	26.957	CC, ES
Landwehr A34-04 - Original Drilling - Original Drilling - As	11,200.00	6,797.98	1,800.09	1,732.69	26.708	SF
Petrikin A34-05 (PA) - Original Drilling - Original Drilling -	9,500.38	6,738.99	1,560.25	1,392.33	9.291	CC, ES
Petrikin A34-05 (PA) - Original Drilling - Original Drilling -	9,600.00	6,738.99	1,563.43	1,395.04	9.285	SF
Petrikin A34-06 - Original Drilling - Original Drilling - As D	9,536.39	6,745.59	226.76	169.96	3.992	CC, ES, SF
Petrikin A34-07 (PA) - Original Drilling - Original Drilling -	9,608.63	6,723.99	1,099.00	930.75	6.532	CC, ES, SF
Petrikin A34-08 - Original Drilling - Original Drilling - As D	9,626.67	6,703.10	2,530.37	2,473.13	44.203	CC, ES
Petrikin A34-08 - Original Drilling - Original Drilling - As D	10,200.00	6,683.94	2,594.42	2,533.98	42.924	SF
Petrikin A34-09 - Original Drilling - Original Drilling - As D	8,323.13	6,800.64	2,550.29	2,499.38	50.095	CC, ES
Petrikin A34-09 - Original Drilling - Original Drilling - As D	8,900.00	6,780.58	2,614.65	2,561.32	49.024	SF
Petrikin A34-10 - Original Drilling - Original Drilling - As D	8,329.58	6,802.13	1,280.95	1,230.12	25.203	CC, ES
Petrikin A34-10 - Original Drilling - Original Drilling - As D	8,500.00	6,796.46	1,292.22	1,240.69	25.075	SF
Petrikin A34-11 - Original Drilling - Original Drilling - As D	8,290.90	6,720.81	189.95	139.35	3.754	CC, ES, SF
Petrikin A34-12 (PA) - Original Drilling - Original Drilling -	8,304.18	6,783.00	1,438.60	1,387.58	28.200	CC, ES
Petrikin A34-12 (PA) - Original Drilling - Original Drilling -	8,400.00	6,784.81	1,441.78	1,390.43	28.075	SF
Petrikin A34-13 - Original Drilling - Original Drilling - As D	1,717.50	1,686.59	863.79	852.15	74.151	CC
Petrikin A34-13 - Original Drilling - Original Drilling - As D	2,000.00	1,963.94	864.82	851.19	63.456	ES
Petrikin A34-13 - Original Drilling - Original Drilling - As D	7,000.00	6,677.38	1,504.34	1,457.03	31.794	SF
Petrikin A34-14 (PA) - Original Drilling - Original Drilling -	2,817.66	2,786.15	42.95	23.45	2.202	CC, ES, SF
Petrikin A34-15 - Original Drilling - Original Drilling - As D	6,973.22	6,706.27	1,102.16	1,054.85	23.296	CC, ES
Petrikin A34-15 - Original Drilling - Original Drilling - As D	7,000.00	6,712.79	1,102.47	1,055.10	23.274	SF
Petrikin A34-16 (PA) - Original Drilling - Original Drilling -	7,004.51	6,616.06	2,491.54	2,444.38	52.830	CC, ES
Petrikin A34-16 (PA) - Original Drilling - Original Drilling -	7,175.88	6,633.68	2,496.34	2,448.90	52.618	SF
Petrikin A34-25 - Original Drilling - Original Drilling - As D	7,701.95	6,708.72	801.06	752.44	16.477	CC, ES, SF
Reveille A33-720 - Reveille A33-720 OH - APD - Rev 1	2,000.00	2,000.00	21.86	7.99	1.576	CC
Reveille A33-720 - Reveille A33-720 OH - APD - Rev 1	2,100.00	2,099.59	22.47	7.91	1.543	ES, SF
Reveille A34-746 - Reveille A34-746 OH - APD - Rev 1	2,000.00	2,000.00	21.86	7.99	1.576	CC
Reveille A34-746 - Reveille A34-746 OH - APD - Rev 1	2,100.00	2,100.01	22.16	7.59	1.521	ES
Reveille A34-746 - Reveille A34-746 OH - APD - Rev 1	2,200.00	2,200.01	23.07	7.81	1.512	SF
Reveille A34-768 - Reveille A34-768 OH - APD - Rev 1	2,228.02	2,226.00	86.11	70.65	5.569	CC, ES
Reveille A34-768 - Reveille A34-768 OH - APD - Rev 1	16,621.17	16,564.78	708.93	538.51	4.160	SF
Reveille A34-778 - Reveille A34-778 OH - APD - Rev 1	2,291.53	2,309.97	63.94	47.95	3.999	CC, ES
Reveille A34-778 - Reveille A34-778 OH - APD - Rev 1	2,400.00	2,397.70	65.26	48.58	3.913	SF
Reveille A34-788 - Reveille A34-788 OH - APD - Rev 1	2,000.00	2,000.00	43.72	29.85	3.151	CC, ES
Reveille A34-788 - Reveille A34-788 OH - APD - Rev 1	2,100.00	2,099.10	44.42	29.86	3.051	SF

Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Reveille A34-757
Project:	Wells Ranch	**TVD Reference:**	KB @ 4661.00ft (Original Well Elev)
Reference Site:	A Section 34	**MD Reference:**	KB @ 4661.00ft (Original Well Elev)
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Reveille A34-757	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Reveille A34-757 OH	**Database:**	EDMP
Reference Design:	APD - Rev 1	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
A Section 35						
Hoffner 13-35 - Original Drilling - Original Drilling - As Dri	8,373.91	6,762.77	3,481.33	3,430.21	68.097	CC
Hoffner 13-35 - Original Drilling - Original Drilling - As Dri	8,400.00	6,761.00	3,481.43	3,430.20	67.963	ES
Hoffner 13-35 - Original Drilling - Original Drilling - As Dri	10,500.00	10,500.00	4,076.56	4,003.09	55.484	SF
Hoffner 14-35 (SI) - Original Drilling - Original Drilling - As	6,771.46	6,682.68	3,575.35	3,528.52	76.346	CC
Hoffner 14-35 (SI) - Original Drilling - Original Drilling - As	6,800.00	6,696.46	3,575.44	3,528.50	76.175	ES
Hoffner 14-35 (SI) - Original Drilling - Original Drilling - As	7,150.00	6,798.88	3,594.99	3,547.16	75.165	SF
Hoffner 24-35 (SI) - Original Drilling - Original Drilling - As	6,974.14	6,618.95	5,003.01	4,955.94	106.283	CC
Hoffner 24-35 (SI) - Original Drilling - Original Drilling - As	7,000.00	6,629.20	5,003.07	4,955.92	106.116	ES
Hoffner 24-35 (SI) - Original Drilling - Original Drilling - As	9,200.00	6,575.93	5,467.76	5,414.09	101.886	SF
Hoffner 33-35 - Original Drilling - Original Drilling - As Dri	8,122.39	6,884.77	6,662.04	6,611.64	132.175	CC, ES
Hoffner 33-35 - Original Drilling - Original Drilling - As Dri	11,800.00	6,751.29	7,608.53	7,540.53	111.880	SF
Hoffner 34-35 - Original Drilling - Original Drilling - As Dri	7,170.95	6,455.33	6,549.66	6,502.85	139.912	CC
Hoffner 34-35 - Original Drilling - Original Drilling - As Dri	7,175.88	6,455.51	6,549.66	6,502.85	139.893	ES
Hoffner 34-35 - Original Drilling - Original Drilling - As Dri	11,200.00	6,786.55	7,684.98	7,621.12	120.338	SF
Hoffner 44-35 - Wellbore #1 - Wellbore #1- As Drilled	7,014.09	6,735.91	7,877.15	7,829.61	165.714	CC, ES
Hoffner 44-35 - Wellbore #1 - Wellbore #1- As Drilled	12,400.00	6,709.99	9,548.85	9,479.03	136.770	SF
Reveille A34-714 - Reveille A34-714 OH - APD - Rev 1	16,626.69	16,575.17	2,830.36	2,659.43	16.558	CC, ES, SF
Reveille A34-725 - Reveille A34-725 OH - APD - Rev 1	16,626.69	16,737.38	2,123.95	1,952.75	12.406	CC, ES, SF
Reveille A34-735 - Reveille A34-735 OH - APD - Rev 1	16,626.69	17,002.15	1,416.20	1,244.61	8.253	CC, ES, SF
Reveille A35-750 - Reveille A35-750 OH - APD - Rev 2	2,991.08	2,300.00	4,169.40	4,151.27	229.882	CC
Reveille A35-750 - Reveille A35-750 OH - APD - Rev 2	3,000.00	2,300.00	4,169.41	4,151.25	229.546	ES
Reveille A35-750 - Reveille A35-750 OH - APD - Rev 2	16,626.69	17,010.04	5,661.40	5,489.74	32.979	SF
Reveille A35-762 - Reveille A35-762 OH - APD - Rev 2	3,150.60	2,473.98	4,134.03	4,114.73	214.181	CC
Reveille A35-762 - Reveille A35-762 OH - APD - Rev 2	3,200.00	2,500.00	4,134.11	4,114.55	211.413	ES
Reveille A35-762 - Reveille A35-762 OH - APD - Rev 2	16,626.69	16,771.53	4,954.23	4,782.46	28.842	SF
Reveille A35-772 - Reveille A35-772 OH - APD - Rev 2	3,181.01	2,500.00	4,111.95	4,092.45	210.844	CC
Reveille A35-772 - Reveille A35-772 OH - APD - Rev 2	16,626.69	16,536.57	4,246.35	4,075.57	24.864	ES, SF
Reveille A35-783 - Reveille A35-783 OH - APD - Rev 1	6,478.81	6,166.02	3,538.75	3,494.05	79.160	CC
Reveille A35-783 - Reveille A35-783 OH - APD - Rev 1	16,626.69	16,502.80	3,539.58	3,369.01	20.751	ES, SF
Sharkey 31-35 - Original Drilling - Original Drilling - As Dr	10,960.11	6,709.84	6,392.78	6,327.21	97.493	CC
Sharkey 31-35 - Original Drilling - Original Drilling - As Dr	11,000.00	6,710.36	6,392.90	6,327.05	97.080	ES
Sharkey 31-35 - Original Drilling - Original Drilling - As Dr	13,700.00	6,745.48	6,955.09	6,872.90	84.619	SF
Sharkey 32-35 - Original Drilling - Original Drilling - As Dr	9,439.61	6,570.23	6,486.62	6,430.96	116.536	CC
Sharkey 32-35 - Original Drilling - Original Drilling - As Dr	9,500.00	6,573.37	6,486.90	6,430.89	115.798	ES
Sharkey 32-35 - Original Drilling - Original Drilling - As Dr	12,600.00	6,656.46	7,215.05	7,141.41	97.965	SF
Wardlaw 35-21 (SI) - Original Drilling - Original Drilling - A	10,733.20	6,753.41	5,033.33	4,969.16	78.438	CC
Wardlaw 35-21 (SI) - Original Drilling - Original Drilling - A	10,800.00	6,752.93	5,033.77	4,969.14	77.885	ES
Wardlaw 35-21 (SI) - Original Drilling - Original Drilling - A	12,500.00	6,740.76	5,334.40	5,259.54	71.256	SF
Wardlaw 35-22 - Original Drilling - Original Drilling - As D	11,051.28	6,714.45	3,741.09	3,674.87	56.498	CC
Wardlaw 35-22 - Original Drilling - Original Drilling - As D	11,100.00	6,715.29	3,741.41	3,674.84	56.204	ES
Wardlaw 35-22 - Original Drilling - Original Drilling - As D	12,100.00	6,732.57	3,885.26	3,812.56	53.444	SF
Wardlaw 35-23 (PA) - Original Drilling - Original Drilling -	9,595.34	6,725.06	3,678.80	3,619.07	61.594	CC
Wardlaw 35-23 (PA) - Original Drilling - Original Drilling -	9,600.00	6,724.84	3,678.80	3,619.05	61.568	ES
Wardlaw 35-23 (PA) - Original Drilling - Original Drilling -	10,600.00	6,676.99	3,813.21	3,748.21	58.663	SF
Wardlaw 35-24 - Original Drilling - Original Drilling - As D	9,625.93	6,824.66	5,055.84	4,998.44	88.091	CC, ES
Wardlaw 35-24 - Original Drilling - Original Drilling - As D	11,600.00	6,836.59	5,427.55	5,358.94	79.115	SF
Wardlaw 35-25 - Original Drilling - Original Drilling - As D	10,049.83	6,739.62	4,433.34	4,373.62	74.241	CC
Wardlaw 35-25 - Original Drilling - Original Drilling - As D	10,100.00	6,740.85	4,433.62	4,373.58	73.843	ES
Wardlaw 35-25 - Original Drilling - Original Drilling - As D	11,600.00	6,777.60	4,696.39	4,627.58	68.253	SF

Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Reveille A34-757
Project:	Wells Ranch	**TVD Reference:**	KB @ 4661.00ft (Original Well Elev)
Reference Site:	A Section 34	**MD Reference:**	KB @ 4661.00ft (Original Well Elev)
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Reveille A34-757	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Reveille A34-757 OH	**Database:**	EDMP
Reference Design:	APD - Rev 1	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
A Section 36						
Devries State A36-17 (Exist.) - Wellbore #1 - Wellbore #1						Out of range
Devries State A36-21 - Wellbore #1 - Wellbore #1 - As Dr						Out of range
Devries State A36-23 - Wellbore #1 - Wellbore #1 - As Dr						Out of range
Devries State A36-25 - Wellbore #1 - Wellbore #1 - As Dr	7,660.14	6,629.09	9,681.28	9,633.00	200.526	CC
Devries State A36-25 - Wellbore #1 - Wellbore #1 - As Dr	7,700.00	6,628.72	9,681.36	9,632.99	200.126	ES
Devries State A36-25 - Wellbore #1 - Wellbore #1 - As Dr	10,100.00	6,598.91	9,983.96	9,924.63	168.279	SF
Scholfield A36-19 (Exist.) - Wellbore #1 - Wellbore #1 - A	10,289.55	6,822.24	9,521.07	9,459.57	154.831	CC
Scholfield A36-19 (Exist.) - Wellbore #1 - Wellbore #1 - A	10,400.00	6,818.49	9,521.71	9,459.50	153.075	ES
Scholfield A36-19 (Exist.) - Wellbore #1 - Wellbore #1 - A	13,300.00	6,727.33	9,985.16	9,904.32	123.523	SF
Scholfield A36-20 - Wellbore #1 - Wellbore #1 - As Drilled	9,034.49	6,607.67	9,530.71	9,477.15	177.950	CC
Scholfield A36-20 - Wellbore #1 - Wellbore #1 - As Drilled	9,100.00	6,607.34	9,530.93	9,477.03	176.832	ES
Scholfield A36-20 - Wellbore #1 - Wellbore #1 - As Drilled	12,000.00	6,596.83	9,981.41	9,910.07	139.911	SF
Scholfield State A36-4X - Wellbore #1 - Wellbore #1 - As	11,018.15	6,959.13	8,899.50	8,832.81	133.441	CC
Scholfield State A36-4X - Wellbore #1 - Wellbore #1 - As	11,100.00	6,953.15	8,899.87	8,832.63	132.349	ES
Scholfield State A36-4X - Wellbore #1 - Wellbore #1 - As	12,900.00	12,900.00	9,095.22	8,994.58	90.380	SF
Scholfield State A36-69HN - Original Drilling - Original Dr	11,532.80	6,048.01	8,942.19	8,876.35	135.812	CC
Scholfield State A36-69HN - Original Drilling - Original Dr	11,600.00	6,048.01	8,942.45	8,876.12	134.821	ES
Scholfield State A36-69HN - Original Drilling - Original Dr	16,000.00	6,048.01	9,995.93	9,902.87	107.413	SF
Scholfield State A36-79HN - Wellbore #1 - Original Drillin	8,100.00	9,267.02	8,237.24	8,148.73	93.072	ES
Scholfield State A36-79HN - Wellbore #1 - Original Drillin	10,380.05	6,938.91	8,223.61	8,157.00	123.463	CC
Scholfield State A36-79HN - Wellbore #1 - Original Drillin	16,000.00	16,000.00	9,746.45	9,603.83	68.336	SF
Sinjin E 36-9 (SI) - Wellbore #1 - No Surveys						Out of range
State A36-05 - Wellbore #1 - Wellbore #1 - As Drilled	9,654.14	6,738.51	9,021.29	8,963.94	157.297	CC
State A36-05 - Wellbore #1 - Wellbore #1 - As Drilled	9,700.00	6,738.33	9,021.41	8,963.79	156.558	ES
State A36-05 - Wellbore #1 - Wellbore #1 - As Drilled	13,900.00	6,722.61	9,970.49	9,887.68	120.403	SF
State A36-06 - Wellbore #1 - Wellbore #1 - As Drilled						Out of range
State A36-07 - Wellbore #1 - Wellbore #1 - As Drilled						Out of range
State A36-08 - Wellbore #1 - Wellbore #1 - As Drilled						Out of range
State A36-09 - Wellbore #1 - Wellbore #1 - As Drilled						Out of range
State A36-10 - Wellbore #1 - Wellbore #1 - As Drilled						Out of range
State A36-11 - Wellbore #1 - Wellbore #1 - As Drilled						Out of range
State A36-12 - Wellbore #1 - Wellbore #1 - As Drilled	8,294.41	6,783.62	8,974.80	8,924.04	176.821	CC
State A36-12 - Wellbore #1 - Wellbore #1 - As Drilled	8,300.00	6,783.61	8,974.80	8,924.02	176.747	ES
State A36-12 - Wellbore #1 - Wellbore #1 - As Drilled	12,700.00	6,774.06	9,997.80	9,923.25	134.096	SF
State A36-13 - Wellbore #1 - Wellbore #1 - As Drilled	7,066.07	6,585.28	8,992.12	8,945.02	190.938	CC
State A36-13 - Wellbore #1 - Wellbore #1 - As Drilled	7,100.00	6,590.17	8,992.17	8,945.01	190.681	ES
State A36-13 - Wellbore #1 - Wellbore #1 - As Drilled	11,400.00	6,648.57	9,973.58	9,907.56	151.071	SF
State A36-14 - Wellbore #1 - Wellbore #1 - As Drilled						Out of range
State A36-15 - Wellbore #1 - Wellbore #1 - As Drilled						Out of range
State A36-16 - Wellbore #1 - Wellbore #1 - As Drilled						Out of range
State A36-3 (Exist.) - Wellbore #1 - Wellbore #1						Out of range
State A36-99HZ - Original Drilling - As Drilled	11,301.09	6,131.01	8,935.07	8,870.00	137.312	CC
State A36-99HZ - Original Drilling - As Drilled	11,400.00	6,131.01	8,935.62	8,869.84	135.846	ES
State A36-99HZ - Original Drilling - As Drilled	15,700.00	6,131.01	9,959.22	9,867.16	108.183	SF

Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Reveille A34-757
Project:	Wells Ranch	**TVD Reference:**	KB @ 4661.00ft (Original Well Elev)
Reference Site:	A Section 34	**MD Reference:**	KB @ 4661.00ft (Original Well Elev)
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Reveille A34-757	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Reveille A34-757 OH	**Database:**	EDMP
Reference Design:	APD - Rev 1	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
AA Section 30						
Shadow A26-622 - Original Drilling - Original Drilling - As	12,267.14	17,520.00	6,408.22	6,326.88	78.782	CC
Shadow A26-622 - Original Drilling - Original Drilling - As	12,300.00	17,520.00	6,408.31	6,326.71	78.533	ES
Shadow A26-622 - Original Drilling - Original Drilling - As	16,600.00	17,520.00	7,735.56	7,599.65	56.917	SF
Shadow A26-627 - Original Drilling - Original Drilling - As	12,660.05	17,590.00	6,271.80	6,187.48	74.377	CC
Shadow A26-627 - Original Drilling - Original Drilling - As	12,700.00	17,590.00	6,271.93	6,187.30	74.109	ES
Shadow A26-627 - Original Drilling - Original Drilling - As	16,626.69	17,590.00	7,420.90	7,278.07	51.957	SF
Shadow A26-632 - Original Drilling - Original Drilling - As	12,960.12	17,781.00	6,278.14	6,195.84	76.282	CC
Shadow A26-632 - Original Drilling - Original Drilling - As	13,000.00	17,781.00	6,278.27	6,195.49	75.848	ES
Shadow A26-632 - Original Drilling - Original Drilling - As	16,626.69	17,781.00	7,270.41	7,118.37	47.821	SF
Shadow A26-637 - Original Drilling - Original Drilling - As	13,245.84	17,626.00	6,275.48	6,193.99	77.017	CC
Shadow A26-637 - Original Drilling - Original Drilling - As	13,300.00	17,626.00	6,275.71	6,193.60	76.431	ES
Shadow A26-637 - Original Drilling - Original Drilling - As	16,626.69	17,626.00	7,128.23	6,980.49	48.248	SF
Shadow A26-646 - Original Drilling - Original Drilling - As	13,924.85	17,659.00	6,275.61	6,187.25	71.022	CC
Shadow A26-646 - Original Drilling - Original Drilling - As	14,000.00	17,659.00	6,276.06	6,186.97	70.448	ES
Shadow A26-646 - Original Drilling - Original Drilling - As	16,626.69	17,659.00	6,832.51	6,693.13	49.019	SF
Shadow A26-656 - Original Drilling - Original Drilling - As	14,567.91	17,347.00	6,648.97	6,550.39	67.450	CC
Shadow A26-656 - Original Drilling - Original Drilling - As	14,600.00	17,347.00	6,649.04	6,550.18	67.253	ES
Shadow A26-656 - Original Drilling - Original Drilling - As	16,626.69	17,347.00	6,960.41	6,835.06	55.528	SF
Shadow A26-663 - Original Drilling - Original Drilling - As	15,124.66	17,466.00	6,504.04	6,400.89	63.053	CC
Shadow A26-663 - Original Drilling - Original Drilling - As	15,200.00	17,466.00	6,504.47	6,400.72	62.691	ES
Shadow A26-663 - Original Drilling - Original Drilling - As	16,626.69	17,466.00	6,675.22	6,553.62	54.894	SF
Shadow A26-672 - Original Drilling - Original Drilling - As	15,616.65	17,710.00	6,264.50	6,163.16	61.821	CC
Shadow A26-672 - Original Drilling - Original Drilling - As	15,700.00	17,710.00	6,265.05	6,162.84	61.294	ES
Shadow A26-672 - Original Drilling - Original Drilling - As	16,626.69	17,710.00	6,345.40	6,227.39	53.769	SF
Shadow A26-676 - Original Drilling - Original Drilling - As	15,902.57	17,725.00	6,273.71	6,164.30	57.341	CC
Shadow A26-676 - Original Drilling - Original Drilling - As	16,000.00	17,725.00	6,274.47	6,164.09	56.849	ES
Shadow A26-676 - Original Drilling - Original Drilling - As	16,626.69	17,725.00	6,315.36	6,197.15	53.426	SF
Shadow A26-685 - Original Drilling - Original Drilling - As	11,500.00	17,810.00	8,083.43	7,797.43	28.263	SF
Shadow A26-685 - Original Drilling - Original Drilling - As	16,591.14	17,810.00	6,278.71	6,164.32	54.887	CC
Shadow A26-685 - Original Drilling - Original Drilling - As	16,626.69	17,810.00	6,278.81	6,163.97	54.675	ES
Shadow A26-690 - Original Drilling - Original Drilling - As	16,626.69	17,780.00	6,261.78	6,152.13	57.104	CC, ES, SF
Shadow State A26-614 - Original Drilling - Original Drilling	11,730.58	17,675.00	6,276.88	6,198.91	80.498	CC
Shadow State A26-614 - Original Drilling - Original Drilling	11,800.00	17,675.00	6,277.26	6,198.63	79.833	ES
Shadow State A26-614 - Original Drilling - Original Drilling	16,000.00	17,675.00	7,591.26	7,458.61	57.228	SF
Shadow State A26-618 - Original Drilling - Original Drilling	11,977.93	17,415.00	6,443.46	6,364.48	81.586	CC
Shadow State A26-618 - Original Drilling - Original Drilling	12,000.00	17,415.00	6,443.50	6,364.33	81.392	ES
Shadow State A26-618 - Original Drilling - Original Drilling	16,500.00	17,415.00	7,871.93	7,729.78	55.376	SF

Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Reveille A34-757
Project:	Wells Ranch	**TVD Reference:**	KB @ 4661.00ft (Original Well Elev)
Reference Site:	A Section 34	**MD Reference:**	KB @ 4661.00ft (Original Well Elev)
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Reveille A34-757	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Reveille A34-757 OH	**Database:**	EDMP
Reference Design:	APD - Rev 1	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
B Section 01						
Lucci B01-69HNL - Original Drilling - Original Drilling - As	6,522.23	6,007.73	9,049.17	9,005.81	208.715	CC, ES
Lucci B01-69HNL - Original Drilling - Original Drilling - As	10,600.00	6,043.00	9,966.87	9,908.04	169.411	SF
Lucci B01-99HZ - Original Drilling - Original Drilling - As	6,455.32	5,887.00	9,108.28	9,066.08	215.839	CC, ES
Lucci B01-99HZ - Original Drilling - Original Drilling - As	10,100.00	5,918.00	9,998.03	9,942.91	181.398	SF
Lucci BC B 01-13 (PA) - Wellbore #1 - Gyro Surveys						Out of range
Lucci BC B 1-14 (PA) - Wellbore #1 - Gyro Surveys						Out of range
Lucci BC B 1-15 (PA) - Wellbore #1 - Gyro Surveys						Out of range
Lucci BC B 1-16 (PA) - Wellbore #1 - Wellbore #1						Out of range
Lucci State B03-69HNL - Original Drilling - Original Drillin	6,561.80	15,345.94	360.93	147.30	1.690	CC
Lucci State B03-69HNL - Original Drilling - Original Drillin	6,600.00	15,344.65	364.06	137.69	1.608	ES
Lucci State B03-69HNL - Original Drilling - Original Drillin	6,650.00	15,343.65	377.30	138.11	1.577	SF
SLW Ranch B01-62-1HN - Original Drilling - As Drilled						Out of range
SLW Ranch B01-63-1HN - Original Drilling - As Drilled	6,352.49	11,250.02	9,964.53	9,886.22	127.239	CC, ES
SLW Ranch B01-63-1HN - Original Drilling - As Drilled	6,600.00	11,250.02	9,995.55	9,915.53	124.917	SF
SLW Ranch B01-64-1HN - Original Drilling - As Drilled	6,380.64	11,274.02	9,699.66	9,628.71	136.712	CC, ES
SLW Ranch B01-64-1HN - Original Drilling - As Drilled	7,300.00	11,274.02	9,990.17	9,911.76	127.408	SF
SLW Ranch B01-66-1HN - Original Drilling - Original Drill	6,438.94	11,201.02	9,272.04	9,198.25	125.654	CC
SLW Ranch B01-66-1HN - Original Drilling - Original Drill	6,450.00	11,201.02	9,272.09	9,198.22	125.518	ES
SLW Ranch B01-66-1HN - Original Drilling - Original Drill	8,500.00	11,201.02	9,956.12	9,861.00	104.668	SF
SLW Ranch B01-67-1HN - Original Drilling - As Drilled - S	6,479.34	11,165.02	9,114.20	9,052.67	148.108	CC
SLW Ranch B01-67-1HN - Original Drilling - As Drilled - S	6,500.00	11,165.02	9,114.36	9,052.67	147.745	ES
SLW Ranch B01-67-1HN - Original Drilling - As Drilled - S	9,200.00	11,165.02	9,974.59	9,882.33	108.121	SF
SLW Ranch B01-68-1HN - Original Drilling - Original Drill	6,530.93	11,204.02	8,999.73	8,949.03	177.481	CC, ES
SLW Ranch B01-68-1HN - Original Drilling - Original Drill	9,900.00	11,204.02	9,987.02	9,918.02	144.725	SF
SLW Ranch B01-69-1HN - Original Drilling - As Drilled	6,596.49	11,247.02	8,935.38	8,881.68	166.399	CC
SLW Ranch B01-69-1HN - Original Drilling - As Drilled	6,600.00	11,247.02	8,935.38	8,881.68	166.371	ES
SLW Ranch B01-69-1HN - Original Drilling - As Drilled	10,500.00	11,247.02	9,974.17	9,883.62	110.156	SF
SLW Ranch B12-69-1HN - Wellbore #1 - Wellbore #1- As						Out of range

Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Reveille A34-757
Project:	Wells Ranch	**TVD Reference:**	KB @ 4661.00ft (Original Well Elev)
Reference Site:	A Section 34	**MD Reference:**	KB @ 4661.00ft (Original Well Elev)
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Reveille A34-757	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Reveille A34-757 OH	**Database:**	EDMP
Reference Design:	APD - Rev 1	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
B Section 02						
Baker B02-04 - Wellbore #1 - Original Drilling - As Drilled	6,435.02	6,424.21	3,973.77	3,928.77	88.306	CC, ES
Baker B02-04 - Wellbore #1 - Original Drilling - As Drilled	6,900.00	6,704.82	4,042.02	3,995.01	85.993	SF
Baker B02-05 - Wellbore #1 - Wellbore #1-As Drilled	6,294.59	6,195.83	4,541.81	4,498.08	103.863	CC
Baker B02-05 - Wellbore #1 - Wellbore #1-As Drilled	6,300.00	6,203.78	4,541.82	4,498.05	103.758	ES
Baker B02-05 - Wellbore #1 - Wellbore #1-As Drilled	6,705.55	6,548.89	4,628.12	4,582.09	100.545	SF
Bucklen 01-02 - Wellbore #1 - Wellbore #1- As Drilled	6,239.04	6,177.53	6,163.13	6,119.63	141.689	CC, ES
Bucklen 01-02 - Wellbore #1 - Wellbore #1- As Drilled	6,705.55	6,566.41	6,310.38	6,264.30	136.958	SF
Bucklen B02-12 - Wellbore #1 - Wellbore #1-As drilled	6,242.73	6,047.81	5,162.03	5,118.96	119.843	CC
Bucklen B02-12 - Wellbore #1 - Wellbore #1-As drilled	6,250.00	6,055.94	5,162.07	5,118.94	119.695	ES
Bucklen B02-12 - Wellbore #1 - Wellbore #1-As drilled	6,600.00	6,343.51	5,240.52	5,195.40	116.136	SF
Buckmur B02-14 - Wellbore #1 - Wellbore #1- As Drilled	6,237.76	5,938.30	7,148.29	7,105.62	167.549	CC, ES
Buckmur B02-14 - Wellbore #1 - Wellbore #1- As Drilled	6,750.00	6,316.37	7,303.73	7,258.42	161.224	SF
Buckmur B02-25 - Wellbore #1 - Wellbore #1- As Drilled	6,257.91	6,155.94	6,040.30	5,996.85	139.024	CC, ES
Buckmur B02-25 - Wellbore #1 - Wellbore #1- As Drilled	6,705.55	6,498.61	6,163.69	6,117.86	134.501	SF
Cougar B02-67-1HN - Original Drilling - Original Drilling -	6,213.97	5,817.05	4,208.84	4,166.31	98.983	CC, ES
Cougar B02-67-1HN - Original Drilling - Original Drilling -	6,600.00	6,040.00	4,275.85	4,231.31	96.012	SF
Cougar B02-68-1HN - Original Drilling - Original Drilling -	6,304.11	6,066.66	4,049.08	4,009.27	101.709	CC, ES
Cougar B02-68-1HN - Original Drilling - Original Drilling -	6,600.00	6,149.00	4,087.43	4,046.56	100.012	SF
Cougar B02-69-1HN - Original Drilling - Original Drilling -	6,317.57	5,948.00	3,870.40	3,832.12	101.124	CC, ES
Cougar B02-69-1HN - Original Drilling - Original Drilling -	6,700.00	6,101.00	3,915.43	3,875.70	98.534	SF
Foe A35-73HN - Original Drilling - Original Drilling - As Dr	6,700.26	6,810.01	6,981.35	6,934.58	149.252	CC
Foe A35-73HN - Original Drilling - Original Drilling - As Dr	11,100.00	11,165.07	7,043.17	6,912.18	53.769	ES
Foe A35-73HN - Original Drilling - Original Drilling - As Dr	12,600.00	11,176.02	7,208.37	7,068.24	51.442	SF
Foe B02-02 - Wellbore #1 - Wellbore #1- As Drilled	6,482.24	6,434.53	6,458.04	6,412.76	142.652	CC, ES
Foe B02-02 - Wellbore #1 - Wellbore #1- As Drilled	9,400.00	6,677.58	7,442.50	7,388.28	137.261	SF
Foe B02-07 - Wellbore #1 - Wellbore #1-As Drilled	6,360.53	6,240.44	6,676.51	6,632.39	151.299	CC, ES
Foe B02-07 - Wellbore #1 - Wellbore #1-As Drilled	6,950.00	6,611.91	6,800.51	6,753.74	145.419	SF
Foemeyer B02-17 - Original Drilling - Original Drilling - As	6,395.97	6,174.26	6,962.70	6,918.60	157.906	CC
Foemeyer B02-17 - Original Drilling - Original Drilling - As	6,400.00	6,176.23	6,962.70	6,918.59	157.835	ES
Foemeyer B02-17 - Original Drilling - Original Drilling - As	9,600.00	6,520.84	8,181.83	8,127.53	150.677	SF
Fritzler B02-03 - Wellbore #1 - Original Drilling	6,454.09	6,326.52	5,300.43	5,151.06	35.485	CC
Fritzler B02-03 - Wellbore #1 - Original Drilling	6,500.00	6,367.15	5,301.04	5,150.72	35.267	ES
Fritzler B02-03 - Wellbore #1 - Original Drilling	7,000.00	6,668.84	5,376.76	5,219.39	34.166	SF
Fritzler B02-06 - Original Drilling - Original Drilling	6,328.03	6,213.68	5,339.53	5,192.87	36.408	CC
Fritzler B02-06 - Original Drilling - Original Drilling	6,350.00	6,234.75	5,339.74	5,192.59	36.288	ES
Fritzler B02-06 - Original Drilling - Original Drilling	6,850.00	6,616.38	5,455.28	5,299.33	34.981	SF
Fritzler B2-19 - Original Drilling - Original Drilling	6,369.15	6,264.97	4,490.95	4,343.11	30.377	CC
Fritzler B2-19 - Original Drilling - Original Drilling	6,400.00	6,293.95	4,491.30	4,342.79	30.242	ES
Fritzler B2-19 - Original Drilling - Original Drilling	6,850.00	6,628.38	4,576.17	4,419.93	29.290	SF
Lonewolf B02-65HC - Original Drilling - As Drilled	6,258.53	6,155.53	4,478.25	4,435.03	103.602	CC, ES
Lonewolf B02-65HC - Original Drilling - As Drilled	6,450.00	6,251.01	4,505.50	4,461.35	102.042	SF
Lonewolf B02-65HC - Original Drilling - ST01 - ST01 As D	6,258.58	6,155.54	4,477.91	4,434.18	102.400	CC, ES
Lonewolf B02-65HC - Original Drilling - ST01 - ST01 As D	6,450.00	6,251.01	4,505.16	4,460.50	100.881	SF
Lonewolf B02-65HC - Wellbore #3 - Wellbore #3	6,258.53	6,155.53	4,478.25	4,435.03	103.600	CC, ES
Lonewolf B02-65HC - Wellbore #3 - Wellbore #3	6,450.00	6,251.01	4,505.50	4,461.35	102.040	SF
M&M 02-23 - Wellbore #1 - Wellbore #1- As Drilled	6,296.05	6,265.82	8,192.23	8,144.15	170.418	CC
M&M 02-23 - Wellbore #1 - Wellbore #1- As Drilled	6,300.00	6,267.83	8,192.23	8,144.14	170.351	ES
M&M 02-23 - Wellbore #1 - Wellbore #1- As Drilled	6,800.00	6,468.57	8,320.20	8,270.36	166.957	SF
Meyer B02-01 - Original Driling - Original Driling - As Drill	6,499.47	6,343.67	7,768.68	7,723.70	172.712	CC
Meyer B02-01 - Original Driling - Original Driling - As Drill	6,500.00	6,344.00	7,768.68	7,723.70	172.701	ES
Meyer B02-01 - Original Driling - Original Driling - As Drill	11,400.00	6,444.06	9,611.87	9,549.26	153.523	SF
Meyer B02-08 - Wellbore #1 - Wellbore #1-As Drilled	6,388.34	6,274.39	8,010.07	7,965.73	180.662	CC
Meyer B02-08 - Wellbore #1 - Wellbore #1-As Drilled	6,400.00	6,280.37	8,010.12	7,965.72	180.427	ES

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

Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Reveille A34-757
Project:	Wells Ranch	**TVD Reference:**	KB @ 4661.00ft (Original Well Elev)
Reference Site:	A Section 34	**MD Reference:**	KB @ 4661.00ft (Original Well Elev)
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Reveille A34-757	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Reveille A34-757 OH	**Database:**	EDMP
Reference Design:	APD - Rev 1	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
B Section 02						
Meyer B02-08 - Wellbore #1 - Wellbore #1-As Drilled	10,700.00	6,544.07	9,969.41	9,910.88	170.341	SF
Meyer B02-09 - Wellbore #1 - Wellbore #1-As Drilled	6,318.81	6,124.40	8,437.09	8,393.50	193.548	CC, ES
Meyer B02-09 - Wellbore #1 - Wellbore #1-As Drilled	6,950.00	6,492.81	8,597.41	8,551.08	185.588	SF
Meyer B02-16 (PA) - Wellbore #1 - Gyro Surveys	6,283.41	6,056.39	9,070.61	9,027.39	209.873	CC, ES
Meyer B02-16 (PA) - Wellbore #1 - Gyro Surveys	6,900.00	6,452.39	9,251.17	9,205.12	200.890	SF
Pherson 02-02 - Wellbore #1 - Wellbore #1-As Drilled	6,283.85	6,169.72	6,164.55	6,120.92	141.307	CC, ES
Pherson 02-02 - Wellbore #1 - Wellbore #1-As Drilled	6,750.00	6,477.93	6,280.86	6,234.97	136.839	SF
Trebor B02-10 - Wellbore #1 - Wellbore #1 - As Drilled	6,301.23	6,076.02	7,269.55	7,226.07	167.167	CC, ES
Trebor B02-10 - Wellbore #1 - Wellbore #1 - As Drilled	6,800.00	6,320.32	7,383.69	7,338.08	161.894	SF
Trebor B02-15 - Wellbore #1 - Wellbore #1- As Drilled	6,340.70	6,804.43	7,881.97	7,836.26	172.410	CC
Trebor B02-15 - Wellbore #1 - Wellbore #1- As Drilled	6,350.00	6,813.37	7,882.02	7,836.25	172.183	ES
Trebor B02-15 - Wellbore #1 - Wellbore #1- As Drilled	6,705.55	6,916.01	7,959.62	7,912.49	168.892	SF
Wolfpack B02-62-1HN - Original Drilling - Original Drilling	6,135.75	5,338.38	5,836.14	5,795.40	143.232	CC, ES
Wolfpack B02-62-1HN - Original Drilling - Original Drilling	6,500.00	5,672.18	5,928.15	5,884.95	137.254	SF
Wolfpack B02-63-1HN - Original Drilling - Original Drilling	6,205.02	5,955.00	5,535.85	5,493.98	132.225	CC, ES
Wolfpack B02-63-1HN - Original Drilling - Original Drilling	6,500.00	6,045.00	5,601.13	5,558.09	130.133	SF
Wolfpack B02-64-1HN - Original Drilling - Original Drilling	6,210.91	5,931.48	5,014.40	4,972.74	120.356	CC, ES
Wolfpack B02-64-1HN - Original Drilling - Original Drilling	6,500.00	6,000.01	5,075.97	5,033.21	118.719	SF
Wolfpack B02-65-1HN - Original Drilling - Original Drilling	6,220.98	5,952.01	4,693.51	4,652.80	115.314	CC, ES
Wolfpack B02-65-1HN - Original Drilling - Original Drilling	6,450.00	6,062.01	4,728.32	4,686.52	113.116	SF
Wolfpack B02-65HN - Original Drilling - Original Drilling -	6,234.68	6,040.71	4,571.52	4,530.30	110.913	CC, ES
Wolfpack B02-65HN - Original Drilling - Original Drilling -	6,550.00	6,087.16	4,636.92	4,594.64	109.667	SF
Wolfpack B02-66-1HN - Original Drilling - Original Drilling	6,240.05	6,108.01	4,104.48	4,060.50	93.311	CC, ES
Wolfpack B02-66-1HN - Original Drilling - Original Drilling	6,400.00	6,108.01	4,122.12	4,077.71	92.822	SF
Wolfpack PC B03-63-1HN - Original Drilling - Original Dri	5,259.99	7,072.01	4,109.53	3,997.75	36.765	CC, ES
Wolfpack PC B03-63-1HN - Original Drilling - Original Dri	5,400.00	7,072.01	4,111.91	3,999.96	36.731	SF
B Section 03						
Annie B3-9 - Wellbore #1 - Wellbore #1- As Drilled	6,232.02	6,142.92	4,537.86	4,494.51	104.677	CC, ES
Annie B3-9 - Wellbore #1 - Wellbore #1- As Drilled	6,500.00	6,491.73	4,585.48	4,540.16	101.178	SF
Clemons 2-3 - Wellbore #1 - Wellbore #1- As Drilled	6,238.06	6,122.65	1,339.86	1,296.54	30.931	CC, ES
Clemons 2-3 - Wellbore #1 - Wellbore #1- As Drilled	6,400.00	6,287.15	1,356.26	1,311.85	30.546	SF
Clemons 42-3 - Wellbore #1 - Wellbore #1- As Drilled	6,250.62	6,154.52	3,434.83	3,391.36	79.005	CC, ES
Clemons 42-3 - Wellbore #1 - Wellbore #1- As Drilled	6,550.00	6,434.64	3,491.68	3,446.36	77.047	SF
Schoenleber 16-3 - Wellbore #1 - Wellbore #1- As Drilled	6,200.44	5,957.48	5,322.44	5,279.73	124.599	CC, ES
Schoenleber 16-3 - Wellbore #1 - Wellbore #1- As Drilled	6,550.00	6,215.38	5,413.07	5,368.40	121.188	SF
Sitzman 03-01 - Wellbore #1 - Wellbore #1- As Drilled	6,190.07	6,065.62	4,995.49	4,952.43	115.999	CC
Sitzman 03-01 - Wellbore #1 - Wellbore #1- As Drilled	6,200.00	6,080.39	4,995.57	4,952.41	115.769	ES
Sitzman 03-01 - Wellbore #1 - Wellbore #1- As Drilled	6,550.00	6,511.15	5,093.13	5,047.47	111.545	SF
B Section 04						
Bauer 1 (PA) - Wellbore #1 - No Surveys	2,000.00	1,967.00	6,293.74	6,247.46	136.003	CC
Bauer 1 (PA) - Wellbore #1 - No Surveys	2,100.00	2,066.98	6,295.35	6,246.72	129.470	ES
Bauer 1 (PA) - Wellbore #1 - No Surveys	7,050.00	6,696.58	6,990.74	6,832.52	44.184	SF
Bauer 2 (PA) - Wellbore #1 - No Surveys	2,000.00	1,964.00	3,751.74	3,727.66	155.831	CC, ES
Bauer 2 (PA) - Wellbore #1 - No Surveys	6,900.00	6,647.13	4,399.00	4,316.90	53.584	SF
Bauer 21-4 (PR) - Wellbore #1 - Gyro Surveys	1,634.94	1,601.34	4,966.73	4,955.66	448.858	CC
Bauer 21-4 (PR) - Wellbore #1 - Gyro Surveys	1,800.00	1,728.97	4,967.38	4,955.28	410.485	ES
Bauer 21-4 (PR) - Wellbore #1 - Gyro Surveys	6,850.00	6,621.66	5,658.08	5,611.63	121.809	SF

Noble Energy, Inc.

Anticollision Summary Report

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Reveille A34-757
Project:	Wells Ranch	**TVD Reference:**	KB @ 4661.00ft (Original Well Elev)
Reference Site:	A Section 34	**MD Reference:**	KB @ 4661.00ft (Original Well Elev)
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Reveille A34-757	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Reveille A34-757 OH	**Database:**	EDMP
Reference Design:	APD - Rev 1	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
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	756.15	725.16	7,556.23	7,551.39	1,561.401	CC
Mininger Pfeif 41-5 (SI) - Wellbore #1 - Gyro Surveys	2,000.00	1,945.67	7,561.85	7,548.29	557.728	ES
Mininger Pfeif 41-5 (SI) - Wellbore #1 - Gyro Surveys	11,300.00	6,701.66	9,952.73	9,891.59	162.802	SF
Noffsinger 21-5 (TA) - Wellbore #1 - Gyro Surveys						Out of range
Noffsinger 31-5 (TA) - Wellbore #1 - Gyro Surveys	100.00	33.62	8,841.03	8,840.84	10,000.000	CC
Noffsinger 31-5 (TA) - Wellbore #1 - Gyro Surveys	2,008.70	1,986.24	8,843.61	8,829.88	644.201	ES
Noffsinger 31-5 (TA) - Wellbore #1 - Gyro Surveys	9,000.00	6,778.30	9,983.05	9,930.73	190.821	SF
Snowmass 10N (DG) - Wellbore #1 - Permitted-PDC	6,231.48	16,156.48	3,586.45	3,376.28	17.064	CC, ES
Snowmass 10N (DG) - Wellbore #1 - Permitted-PDC	6,450.00	16,156.48	3,618.60	3,405.29	16.964	SF
Snowmass 1C (DG) - Wellbore #1 - Permitted-PDC	6,454.77	14,787.56	2,298.62	2,214.95	27.472	CC
Snowmass 1C (DG) - Wellbore #1 - Permitted-PDC	6,550.00	14,787.56	2,301.58	2,213.75	26.205	ES
Snowmass 1C (DG) - Wellbore #1 - Permitted-PDC	8,000.00	14,787.56	2,955.66	2,784.15	17.232	SF
Snowmass 2N (DG) - Wellbore #1 - Permitted-PDC	6,339.78	14,729.08	2,374.33	2,269.88	22.730	CC
Snowmass 2N (DG) - Wellbore #1 - Permitted-PDC	6,400.00	14,729.08	2,375.78	2,269.59	22.373	ES
Snowmass 2N (DG) - Wellbore #1 - Permitted-PDC	7,700.00	14,729.08	2,956.58	2,784.75	17.207	SF
Snowmass 3N (DG) - Wellbore #1 - Permitted-PDC	6,288.01	15,299.73	2,440.10	2,317.08	19.836	CC
Snowmass 3N (DG) - Wellbore #1 - Permitted-PDC	6,300.00	15,299.73	2,440.16	2,316.89	19.795	ES
Snowmass 3N (DG) - Wellbore #1 - Permitted-PDC	7,500.00	15,299.73	2,955.41	2,774.58	16.344	SF
Snowmass 4N (DG) - Wellbore #1 - Permitted-PDC	6,294.85	15,736.33	2,565.37	2,422.80	17.994	CC
Snowmass 4N (DG) - Wellbore #1 - Permitted-PDC	6,300.00	15,736.33	2,565.38	2,422.70	17.980	ES
Snowmass 4N (DG) - Wellbore #1 - Permitted-PDC	7,300.00	15,736.33	2,983.62	2,796.58	15.952	SF
Snowmass 5N (DG) - Wellbore #1 - Permitted-PDC	6,257.52	15,406.96	2,682.08	2,527.41	17.341	CC, ES
Snowmass 5N (DG) - Wellbore #1 - Permitted-PDC	7,050.00	15,406.96	2,979.13	2,796.48	16.310	SF
Snowmass 6N (DG) - Wellbore #1 - Permitted-PDC	6,264.64	15,878.12	2,862.98	2,690.45	16.594	CC, ES
Snowmass 6N (DG) - Wellbore #1 - Permitted-PDC	6,850.00	15,878.12	3,046.10	2,855.76	16.003	SF
Snowmass 7N (DG) - Wellbore #1 - Permitted-PDC	6,232.91	15,556.58	2,999.58	2,819.58	16.665	CC
Snowmass 7N (DG) - Wellbore #1 - Permitted-PDC	6,250.00	15,556.58	2,999.76	2,819.54	16.646	ES
Snowmass 7N (DG) - Wellbore #1 - Permitted-PDC	6,650.00	15,556.58	3,100.92	2,911.94	16.408	SF
Snowmass 8N (DG) - Wellbore #1 - Permitted-PDC	6,245.24	16,001.51	3,161.55	2,969.97	16.502	CC
Snowmass 8N (DG) - Wellbore #1 - Permitted-PDC	6,250.00	16,001.51	3,161.56	2,969.92	16.497	ES
Snowmass 8N (DG) - Wellbore #1 - Permitted-PDC	6,600.00	16,001.51	3,238.69	3,039.84	16.288	SF
Snowmass 9N (DG) - Wellbore #1 - Permitted-PDC	6,222.01	15,681.01	3,347.49	3,148.97	16.862	CC, ES
Snowmass 9N (DG) - Wellbore #1 - Permitted-PDC	6,450.00	15,681.01	3,381.37	3,179.57	16.756	SF