

Project: Bronco  
Site: C Section 30  
Well: Johnson D06-766  
Wellbore: Wellbore #1  
Design: Plan #2

# Northern Region - DJ Basin

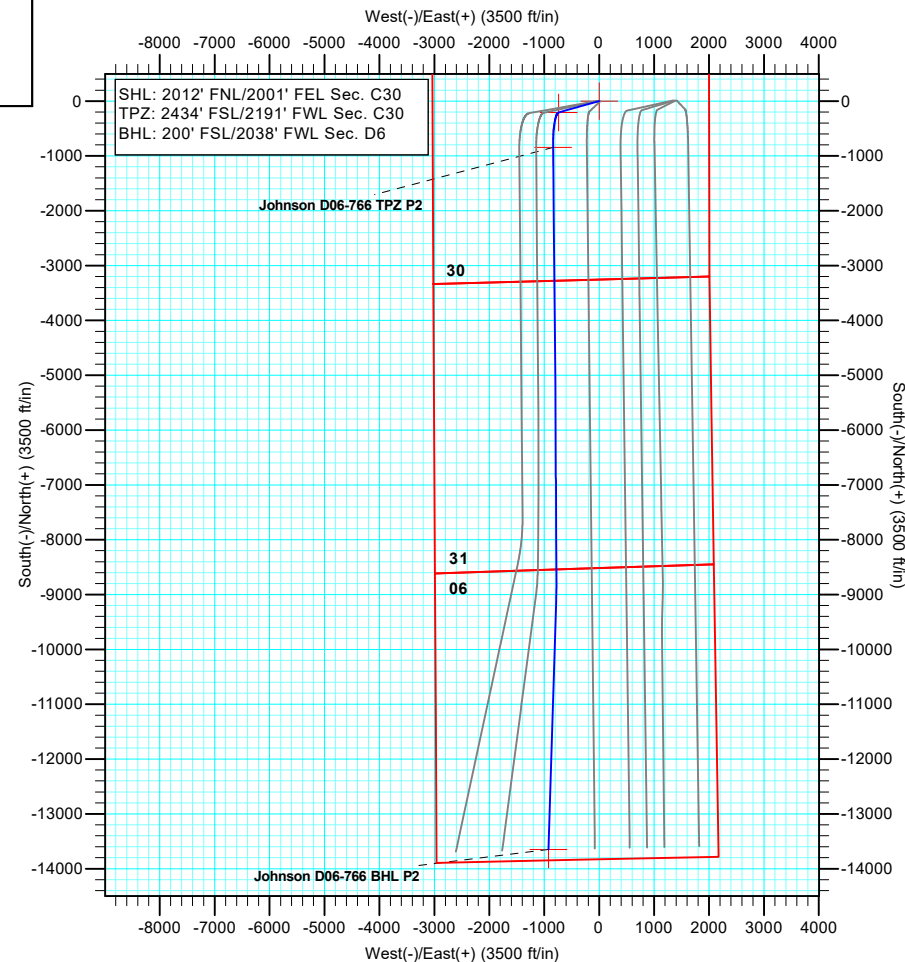
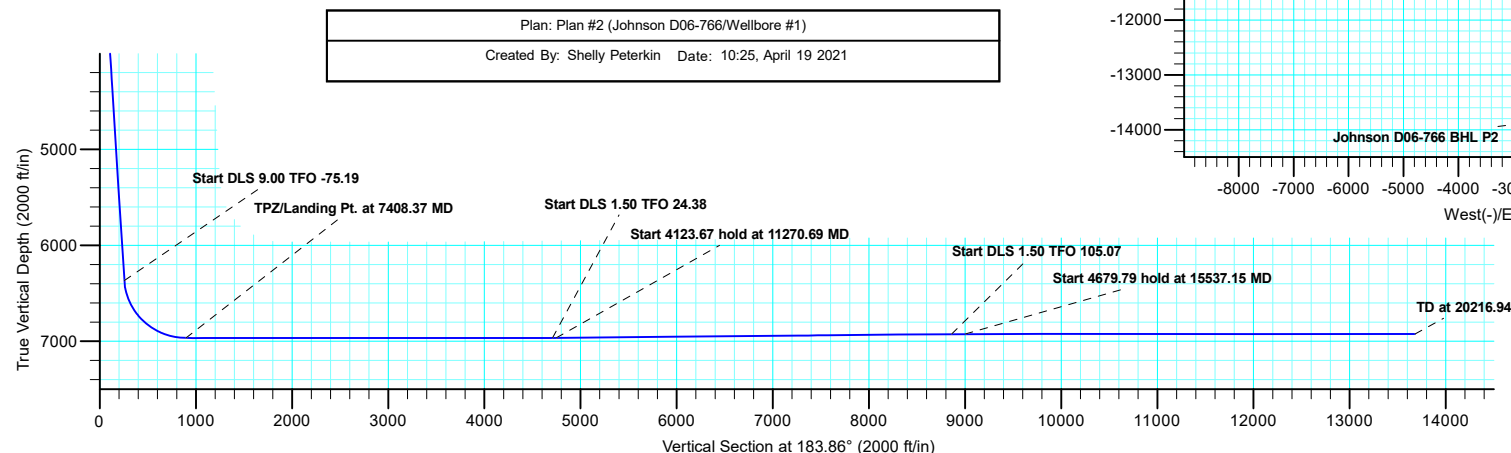
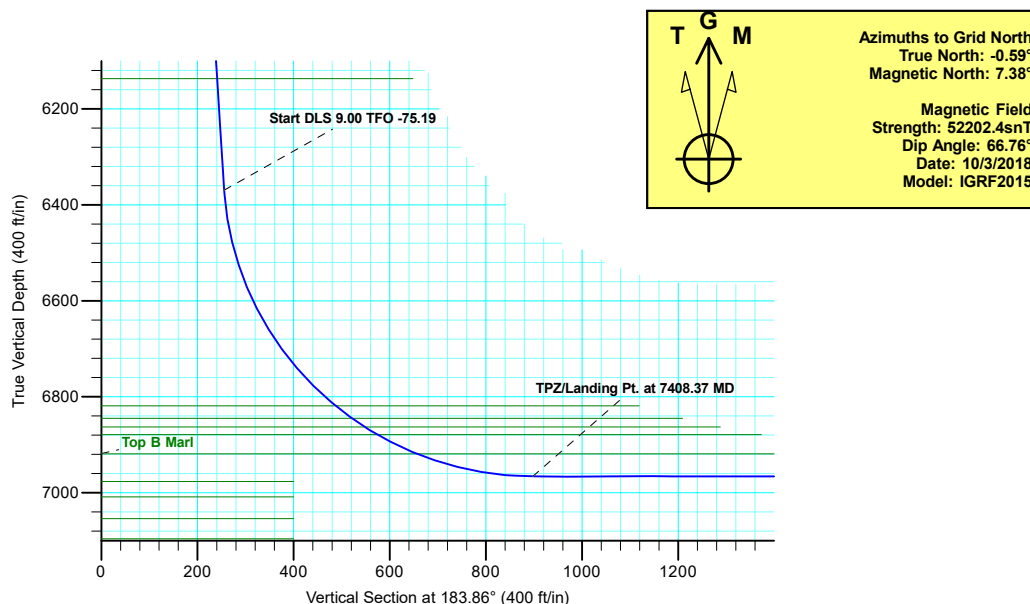
Geodetic System: US State Plane 1983  
Datum: North American Datum 1983  
Ellipsoid: GRS 1980  
Zone: Colorado Northern Zone  
System Datum: Mean Sea Level

## SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
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	2528.68	10.57	254.37	2525.68	-13.10	-46.85	2.00	254.37	16.23	
4	6438.73	10.57	254.37	6369.34	-206.38	-737.81	0.00	0.00	255.63	
5	7408.37	90.00	179.43	6966.00	-843.32	-838.99	9.00	-75.19	897.94	Johnson D06-766 TPZ P2
6	11229.90	90.00	179.43	6966.00	-4664.66	-800.75	0.00	0.00	4708.01	Johnson D06-766 T1 P2
7	11270.69	90.56	179.68	6965.80	-4705.45	-800.43	1.50	24.38	4748.69	
8	15394.36	90.56	179.68	6925.69	-8828.86	-777.34	0.00	0.00	8861.17	
9	15537.15	90.00	181.75	6925.00	-8971.63	-779.12	1.50	105.07	9003.73	Johnson D06-766 T3 P2
10	20216.94	90.00	181.75	6925.00	-13649.24	-921.81	0.00	0.00	13680.33	Johnson D06-766 BHL P2

## WELL DETAILS: Johnson D06-766

+N/-S	+E/-W	Northing	Ground Level: Easting	4879.00 Latitude	Longitude	Slot
0.00	0.00	1347981.37	3253475.82	40.2850440	-104.5914120	



# **Northern Region - DJ Basin**

**Bronco**

**C Section 30**

**Johnson D06-766**

**Wellbore #1**

**Plan: Plan #2**

## **Standard Planning Report**

**19 April, 2021**

# Noble Energy

## Planning Report

<b>Database:</b>	EDMP	<b>Local Co-ordinate Reference:</b>	Well Johnson D06-766
<b>Company:</b>	Northern Region - DJ Basin	<b>TVD Reference:</b>	KB @ 4909.00ft
<b>Project:</b>	Bronco	<b>MD Reference:</b>	KB @ 4909.00ft
<b>Site:</b>	C Section 30	<b>North Reference:</b>	Grid
<b>Well:</b>	Johnson D06-766	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #2		

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

Site		C Section 30			
Site Position:		Northing:	1,345,306.95 usft	Latitude:	40.2777815
From:	Map	Easting:	3,250,664.82 usft	Longitude:	-104.6015845
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.58 °

Well	Johnson D06-766					
Well Position	+N/-S	2,674.43 ft	Northing:	1,347,981.37 usft	Latitude:	40.2850440
	+E/-W	2,811.01 ft	Easting:	3,253,475.83 usft	Longitude:	-104.5914120
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	4,879.00 ft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2015	10/3/2018	7.97	66.76	52,202.39123446

<b>Design</b>	Plan #2			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	183.86

<b>Plan Sections</b>										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,528.68	10.57	254.37	2,525.68	-13.10	-46.85	2.00	2.00	0.00	254.37	
6,438.73	10.57	254.37	6,369.34	-206.38	-737.81	0.00	0.00	0.00	0.00	
7,408.37	90.00	179.43	6,966.00	-843.32	-838.99	9.00	8.19	-7.73	-75.19	Johnson D06-766 TP:
11,229.90	90.00	179.43	6,966.00	-4,664.66	-800.75	0.00	0.00	0.00	0.00	Johnson D06-766 T1
11,270.69	90.56	179.68	6,965.80	-4,705.45	-800.43	1.50	1.37	0.62	24.38	
15,394.36	90.56	179.68	6,925.69	-8,828.86	-777.34	0.00	0.00	0.00	0.00	
15,537.15	90.00	181.75	6,925.00	-8,971.63	-779.12	1.50	-0.39	1.45	105.07	Johnson D06-766 T3
20,216.94	90.00	181.75	6,925.00	-13,649.24	-921.81	0.00	0.00	0.00	0.00	Johnson D06-766 BH

# Noble Energy

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<b>Project:</b>	Bronco	<b>MD Reference:</b>	KB @ 4909.00ft
<b>Site:</b>	C Section 30	<b>North Reference:</b>	Grid
<b>Well:</b>	Johnson D06-766	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #2		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
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
602.00	0.00	0.00	602.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Pierre</b>									
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
744.00	0.00	0.00	744.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Upper Pierre Aquifer Top</b>									
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
1,386.00	0.00	0.00	1,386.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Upper Pierre Aquifer Base</b>									
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
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
<b>Start Build 2.00</b>									
2,100.00	2.00	254.37	2,099.98	-0.47	-1.68	0.58	2.00	2.00	0.00
2,200.00	4.00	254.37	2,199.84	-1.88	-6.72	2.33	2.00	2.00	0.00
2,300.00	6.00	254.37	2,299.45	-4.23	-15.11	5.24	2.00	2.00	0.00
2,400.00	8.00	254.37	2,398.70	-7.51	-26.85	9.30	2.00	2.00	0.00
2,500.00	10.00	254.37	2,497.47	-11.72	-41.91	14.52	2.00	2.00	0.00
2,528.68	10.57	254.37	2,525.68	-13.10	-46.85	16.23	2.00	2.00	0.00
<b>Start 3910.05 hold at 2528.68 MD</b>									
2,600.00	10.57	254.37	2,595.79	-16.63	-59.45	20.60	0.00	0.00	0.00
2,700.00	10.57	254.37	2,694.10	-21.57	-77.12	26.72	0.00	0.00	0.00
2,800.00	10.57	254.37	2,792.40	-26.52	-94.79	32.84	0.00	0.00	0.00
2,900.00	10.57	254.37	2,890.70	-31.46	-112.46	38.97	0.00	0.00	0.00
3,000.00	10.57	254.37	2,989.00	-36.40	-130.13	45.09	0.00	0.00	0.00
3,100.00	10.57	254.37	3,087.30	-41.35	-147.81	51.21	0.00	0.00	0.00
3,200.00	10.57	254.37	3,185.61	-46.29	-165.48	57.33	0.00	0.00	0.00
3,300.00	10.57	254.37	3,283.91	-51.23	-183.15	63.46	0.00	0.00	0.00
3,400.00	10.57	254.37	3,382.21	-56.17	-200.82	69.58	0.00	0.00	0.00
3,500.00	10.57	254.37	3,480.51	-61.12	-218.49	75.70	0.00	0.00	0.00
3,600.00	10.57	254.37	3,578.81	-66.06	-236.16	81.82	0.00	0.00	0.00
3,700.00	10.57	254.37	3,677.12	-71.00	-253.83	87.95	0.00	0.00	0.00
3,800.00	10.57	254.37	3,775.42	-75.95	-271.51	94.07	0.00	0.00	0.00
3,879.94	10.57	254.37	3,854.00	-79.90	-285.63	98.96	0.00	0.00	0.00
<b>Parkman</b>									
3,900.00	10.57	254.37	3,873.72	-80.89	-289.18	100.19	0.00	0.00	0.00
4,000.00	10.57	254.37	3,972.02	-85.83	-306.85	106.31	0.00	0.00	0.00
4,100.00	10.57	254.37	4,070.32	-90.78	-324.52	112.44	0.00	0.00	0.00

# Noble Energy

## Planning Report

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<b>Company:</b>	Northern Region - DJ Basin	<b>TVD Reference:</b>	KB @ 4909.00ft
<b>Project:</b>	Bronco	<b>MD Reference:</b>	KB @ 4909.00ft
<b>Site:</b>	C Section 30	<b>North Reference:</b>	Grid
<b>Well:</b>	Johnson D06-766	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #2		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,200.00	10.57	254.37	4,168.63	-95.72	-342.19	118.56	0.00	0.00	0.00
4,300.00	10.57	254.37	4,266.93	-100.66	-359.86	124.68	0.00	0.00	0.00
4,400.00	10.57	254.37	4,365.23	-105.61	-377.53	130.80	0.00	0.00	0.00
4,448.60	10.57	254.37	4,413.00	-108.01	-386.12	133.78	0.00	0.00	0.00
<b>Sussex</b>									
4,500.00	10.57	254.37	4,463.53	-110.55	-395.21	136.93	0.00	0.00	0.00
4,600.00	10.57	254.37	4,561.83	-115.49	-412.88	143.05	0.00	0.00	0.00
4,700.00	10.57	254.37	4,660.14	-120.44	-430.55	149.17	0.00	0.00	0.00
4,800.00	10.57	254.37	4,758.44	-125.38	-448.22	155.30	0.00	0.00	0.00
4,900.00	10.57	254.37	4,856.74	-130.32	-465.89	161.42	0.00	0.00	0.00
5,000.00	10.57	254.37	4,955.04	-135.26	-483.56	167.54	0.00	0.00	0.00
5,036.58	10.57	254.37	4,991.00	-137.07	-490.03	169.78	0.00	0.00	0.00
<b>Shannon</b>									
5,100.00	10.57	254.37	5,053.34	-140.21	-501.23	173.66	0.00	0.00	0.00
5,200.00	10.57	254.37	5,151.65	-145.15	-518.91	179.79	0.00	0.00	0.00
5,300.00	10.57	254.37	5,249.95	-150.09	-536.58	185.91	0.00	0.00	0.00
5,400.00	10.57	254.37	5,348.25	-155.04	-554.25	192.03	0.00	0.00	0.00
5,500.00	10.57	254.37	5,446.55	-159.98	-571.92	198.15	0.00	0.00	0.00
5,600.00	10.57	254.37	5,544.85	-164.92	-589.59	204.28	0.00	0.00	0.00
5,700.00	10.57	254.37	5,643.16	-169.87	-607.26	210.40	0.00	0.00	0.00
5,800.00	10.57	254.37	5,741.46	-174.81	-624.93	216.52	0.00	0.00	0.00
5,900.00	10.57	254.37	5,839.76	-179.75	-642.61	222.64	0.00	0.00	0.00
6,000.00	10.57	254.37	5,938.06	-184.70	-660.28	228.77	0.00	0.00	0.00
6,100.00	10.57	254.37	6,036.36	-189.64	-677.95	234.89	0.00	0.00	0.00
6,200.00	10.57	254.37	6,134.67	-194.58	-695.62	241.01	0.00	0.00	0.00
6,202.37	10.57	254.37	6,137.00	-194.70	-696.04	241.16	0.00	0.00	0.00
<b>Teepee Buttes</b>									
6,300.00	10.57	254.37	6,232.97	-199.53	-713.29	247.13	0.00	0.00	0.00
6,400.00	10.57	254.37	6,331.27	-204.47	-730.96	253.26	0.00	0.00	0.00
6,438.73	10.57	254.37	6,369.34	-206.38	-737.81	255.63	0.00	0.00	0.00
<b>Start DLS 9.00 TFO -75.19</b>									
6,450.00	10.88	249.17	6,380.42	-207.04	-739.80	256.42	9.00	2.69	-46.17
6,500.00	13.10	230.18	6,429.34	-212.35	-748.56	262.31	9.00	4.45	-37.98
6,550.00	16.28	217.53	6,477.71	-221.54	-757.19	272.06	9.00	6.36	-25.30
6,600.00	19.97	209.17	6,525.23	-234.56	-765.63	285.62	9.00	7.37	-16.72
6,650.00	23.92	203.40	6,571.60	-251.33	-773.82	302.90	9.00	7.91	-11.54
6,700.00	28.03	199.21	6,616.55	-271.74	-781.72	323.79	9.00	8.22	-8.38
6,750.00	32.24	196.03	6,659.78	-295.66	-789.27	348.17	9.00	8.42	-6.36
6,800.00	36.51	193.52	6,701.04	-322.96	-796.44	375.89	9.00	8.54	-5.03
6,850.00	40.83	191.47	6,740.07	-353.46	-803.17	406.77	9.00	8.63	-4.10
6,900.00	45.17	189.75	6,776.63	-386.97	-809.42	440.63	9.00	8.69	-3.44
6,950.00	49.54	188.27	6,810.50	-423.28	-815.16	477.25	9.00	8.73	-2.96
6,963.26	50.70	187.91	6,819.00	-433.36	-816.60	487.40	9.00	8.76	-2.71
<b>Sharon Springs</b>									
7,000.00	53.92	186.97	6,841.46	-462.18	-820.36	516.41	9.00	8.77	-2.55
7,006.05	54.45	186.83	6,845.00	-467.05	-820.95	521.31	9.00	8.78	-2.43
<b>Top A Chalk</b>									
7,038.13	57.27	186.08	6,863.00	-493.44	-823.93	547.83	9.00	8.79	-2.33
<b>Top A Marl</b>									
7,050.00	58.32	185.81	6,869.32	-503.42	-824.97	557.87	9.00	8.80	-2.23
7,068.87	59.98	185.41	6,879.00	-519.54	-826.55	574.06	9.00	8.81	-2.17
<b>Top B Chalk</b>									
7,100.00	62.72	184.76	6,893.92	-546.75	-828.97	601.37	9.00	8.81	-2.07

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## Planning Report

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<b>Wellbore:</b>	Wellbore #1		
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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)
7,150.00	67.14	183.79	6,915.11	-591.91	-832.33	646.65	9.00	8.83	-1.95
7,160.21	68.04	183.60	6,919.00	-601.33	-832.94	656.09	9.00	8.83	-1.87
<b>Top B Marl</b>									
7,200.00	71.55	182.87	6,932.74	-638.60	-835.05	693.42	9.00	8.84	-1.81
7,250.00	75.98	182.01	6,946.71	-686.55	-837.08	741.40	9.00	8.84	-1.73
7,300.00	80.40	181.17	6,956.94	-735.46	-838.44	790.29	9.00	8.85	-1.67
7,350.00	84.83	180.36	6,963.37	-785.03	-839.10	839.79	9.00	8.85	-1.62
7,400.00	89.26	179.56	6,965.95	-834.95	-839.07	889.59	9.00	8.86	-1.60
7,408.37	90.00	179.43	6,966.00	-843.32	-838.99	897.94	9.00	8.86	-1.60
<b>TPZ/Landing Pt. at 7408.37 MD</b>									
7,500.00	90.00	179.43	6,966.00	-934.95	-838.08	989.29	0.00	0.00	0.00
7,600.00	90.00	179.43	6,966.00	-1,034.94	-837.07	1,088.99	0.00	0.00	0.00
7,700.00	90.00	179.43	6,966.00	-1,134.94	-836.07	1,188.69	0.00	0.00	0.00
7,800.00	90.00	179.43	6,966.00	-1,234.93	-835.07	1,288.39	0.00	0.00	0.00
7,900.00	90.00	179.43	6,966.00	-1,334.93	-834.07	1,388.09	0.00	0.00	0.00
8,000.00	90.00	179.43	6,966.00	-1,434.92	-833.07	1,487.79	0.00	0.00	0.00
8,100.00	90.00	179.43	6,966.00	-1,534.92	-832.07	1,587.49	0.00	0.00	0.00
8,200.00	90.00	179.43	6,966.00	-1,634.91	-831.07	1,687.19	0.00	0.00	0.00
8,300.00	90.00	179.43	6,966.00	-1,734.91	-830.07	1,786.89	0.00	0.00	0.00
8,400.00	90.00	179.43	6,966.00	-1,834.90	-829.07	1,886.59	0.00	0.00	0.00
8,500.00	90.00	179.43	6,966.00	-1,934.90	-828.07	1,986.30	0.00	0.00	0.00
8,600.00	90.00	179.43	6,966.00	-2,034.89	-827.07	2,086.00	0.00	0.00	0.00
8,700.00	90.00	179.43	6,966.00	-2,134.89	-826.07	2,185.70	0.00	0.00	0.00
8,800.00	90.00	179.43	6,966.00	-2,234.88	-825.07	2,285.40	0.00	0.00	0.00
8,900.00	90.00	179.43	6,966.00	-2,334.88	-824.06	2,385.10	0.00	0.00	0.00
9,000.00	90.00	179.43	6,966.00	-2,434.87	-823.06	2,484.80	0.00	0.00	0.00
9,100.00	90.00	179.43	6,966.00	-2,534.87	-822.06	2,584.50	0.00	0.00	0.00
9,200.00	90.00	179.43	6,966.00	-2,634.86	-821.06	2,684.20	0.00	0.00	0.00
9,300.00	90.00	179.43	6,966.00	-2,734.86	-820.06	2,783.90	0.00	0.00	0.00
9,400.00	90.00	179.43	6,966.00	-2,834.85	-819.06	2,883.60	0.00	0.00	0.00
9,500.00	90.00	179.43	6,966.00	-2,934.85	-818.06	2,983.30	0.00	0.00	0.00
9,600.00	90.00	179.43	6,966.00	-3,034.84	-817.06	3,083.00	0.00	0.00	0.00
9,700.00	90.00	179.43	6,966.00	-3,134.84	-816.06	3,182.70	0.00	0.00	0.00
9,800.00	90.00	179.43	6,966.00	-3,234.83	-815.06	3,282.40	0.00	0.00	0.00
9,900.00	90.00	179.43	6,966.00	-3,334.83	-814.06	3,382.10	0.00	0.00	0.00
10,000.00	90.00	179.43	6,966.00	-3,434.82	-813.06	3,481.80	0.00	0.00	0.00
10,100.00	90.00	179.43	6,966.00	-3,534.82	-812.06	3,581.50	0.00	0.00	0.00
10,200.00	90.00	179.43	6,966.00	-3,634.81	-811.05	3,681.20	0.00	0.00	0.00
10,300.00	90.00	179.43	6,966.00	-3,734.81	-810.05	3,780.90	0.00	0.00	0.00
10,400.00	90.00	179.43	6,966.00	-3,834.80	-809.05	3,880.60	0.00	0.00	0.00
10,500.00	90.00	179.43	6,966.00	-3,934.80	-808.05	3,980.30	0.00	0.00	0.00
10,600.00	90.00	179.43	6,966.00	-4,034.79	-807.05	4,080.00	0.00	0.00	0.00
10,700.00	90.00	179.43	6,966.00	-4,134.79	-806.05	4,179.70	0.00	0.00	0.00
10,800.00	90.00	179.43	6,966.00	-4,234.78	-805.05	4,279.40	0.00	0.00	0.00
10,900.00	90.00	179.43	6,966.00	-4,334.78	-804.05	4,379.10	0.00	0.00	0.00
11,000.00	90.00	179.43	6,966.00	-4,434.77	-803.05	4,478.80	0.00	0.00	0.00
11,100.00	90.00	179.43	6,966.00	-4,534.77	-802.05	4,578.50	0.00	0.00	0.00
11,200.00	90.00	179.43	6,966.00	-4,634.76	-801.05	4,678.20	0.00	0.00	0.00
11,229.90	90.00	179.43	6,966.00	-4,664.66	-800.75	4,708.01	0.00	0.00	0.00
<b>Start DLS 1.50 TFO 24.38</b>									
11,270.69	90.56	179.68	6,965.80	-4,705.45	-800.43	4,748.69	1.50	1.37	0.62
<b>Start 4123.67 hold at 11270.69 MD</b>									
11,300.00	90.56	179.68	6,965.52	-4,734.76	-800.27	4,777.92	0.00	0.00	0.00

# Noble Energy

## Planning Report

<b>Database:</b>	EDMP	<b>Local Co-ordinate Reference:</b>	Well Johnson D06-766
<b>Company:</b>	Northern Region - DJ Basin	<b>TVD Reference:</b>	KB @ 4909.00ft
<b>Project:</b>	Bronco	<b>MD Reference:</b>	KB @ 4909.00ft
<b>Site:</b>	C Section 30	<b>North Reference:</b>	Grid
<b>Well:</b>	Johnson D06-766	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #2		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
11,400.00	90.56	179.68	6,964.54	-4,834.75	-799.71	4,877.65	0.00	0.00	0.00
11,500.00	90.56	179.68	6,963.57	-4,934.74	-799.15	4,977.38	0.00	0.00	0.00
11,600.00	90.56	179.68	6,962.60	-5,034.74	-798.59	5,077.10	0.00	0.00	0.00
11,700.00	90.56	179.68	6,961.63	-5,134.73	-798.03	5,176.83	0.00	0.00	0.00
11,800.00	90.56	179.68	6,960.65	-5,234.72	-797.47	5,276.56	0.00	0.00	0.00
11,900.00	90.56	179.68	6,959.68	-5,334.72	-796.91	5,376.29	0.00	0.00	0.00
12,000.00	90.56	179.68	6,958.71	-5,434.71	-796.35	5,476.02	0.00	0.00	0.00
12,100.00	90.56	179.68	6,957.74	-5,534.71	-795.79	5,575.75	0.00	0.00	0.00
12,200.00	90.56	179.68	6,956.76	-5,634.70	-795.23	5,675.48	0.00	0.00	0.00
12,300.00	90.56	179.68	6,955.79	-5,734.69	-794.67	5,775.21	0.00	0.00	0.00
12,400.00	90.56	179.68	6,954.82	-5,834.69	-794.11	5,874.93	0.00	0.00	0.00
12,500.00	90.56	179.68	6,953.85	-5,934.68	-793.55	5,974.66	0.00	0.00	0.00
12,600.00	90.56	179.68	6,952.87	-6,034.67	-792.99	6,074.39	0.00	0.00	0.00
12,700.00	90.56	179.68	6,951.90	-6,134.67	-792.43	6,174.12	0.00	0.00	0.00
12,800.00	90.56	179.68	6,950.93	-6,234.66	-791.87	6,273.85	0.00	0.00	0.00
12,900.00	90.56	179.68	6,949.95	-6,334.65	-791.31	6,373.58	0.00	0.00	0.00
13,000.00	90.56	179.68	6,948.98	-6,434.65	-790.75	6,473.31	0.00	0.00	0.00
13,100.00	90.56	179.68	6,948.01	-6,534.64	-790.19	6,573.03	0.00	0.00	0.00
13,200.00	90.56	179.68	6,947.04	-6,634.64	-789.63	6,672.76	0.00	0.00	0.00
13,300.00	90.56	179.68	6,946.06	-6,734.63	-789.07	6,772.49	0.00	0.00	0.00
13,400.00	90.56	179.68	6,945.09	-6,834.62	-788.51	6,872.22	0.00	0.00	0.00
13,500.00	90.56	179.68	6,944.12	-6,934.62	-787.95	6,971.95	0.00	0.00	0.00
13,600.00	90.56	179.68	6,943.15	-7,034.61	-787.39	7,071.68	0.00	0.00	0.00
13,700.00	90.56	179.68	6,942.17	-7,134.60	-786.83	7,171.41	0.00	0.00	0.00
13,800.00	90.56	179.68	6,941.20	-7,234.60	-786.27	7,271.14	0.00	0.00	0.00
13,900.00	90.56	179.68	6,940.23	-7,334.59	-785.71	7,370.86	0.00	0.00	0.00
14,000.00	90.56	179.68	6,939.26	-7,434.59	-785.15	7,470.59	0.00	0.00	0.00
14,100.00	90.56	179.68	6,938.28	-7,534.58	-784.59	7,570.32	0.00	0.00	0.00
14,200.00	90.56	179.68	6,937.31	-7,634.57	-784.03	7,670.05	0.00	0.00	0.00
14,300.00	90.56	179.68	6,936.34	-7,734.57	-783.47	7,769.78	0.00	0.00	0.00
14,400.00	90.56	179.68	6,935.37	-7,834.56	-782.91	7,869.51	0.00	0.00	0.00
14,500.00	90.56	179.68	6,934.39	-7,934.55	-782.35	7,969.24	0.00	0.00	0.00
14,600.00	90.56	179.68	6,933.42	-8,034.55	-781.79	8,068.97	0.00	0.00	0.00
14,700.00	90.56	179.68	6,932.45	-8,134.54	-781.23	8,168.69	0.00	0.00	0.00
14,800.00	90.56	179.68	6,931.48	-8,234.54	-780.67	8,268.42	0.00	0.00	0.00
14,900.00	90.56	179.68	6,930.50	-8,334.53	-780.11	8,368.15	0.00	0.00	0.00
15,000.00	90.56	179.68	6,929.53	-8,434.52	-779.55	8,467.88	0.00	0.00	0.00
15,100.00	90.56	179.68	6,928.56	-8,534.52	-778.99	8,567.61	0.00	0.00	0.00
15,200.00	90.56	179.68	6,927.58	-8,634.51	-778.43	8,667.34	0.00	0.00	0.00
15,300.00	90.56	179.68	6,926.61	-8,734.50	-777.87	8,767.07	0.00	0.00	0.00
15,394.36	90.56	179.68	6,925.69	-8,828.86	-777.34	8,861.17	0.00	0.00	0.00
Start DLS 1.50 TFO 105.07									
15,400.00	90.54	179.76	6,925.64	-8,834.50	-777.31	8,866.80	1.50	-0.39	1.45
15,500.00	90.15	181.21	6,925.05	-8,934.49	-778.16	8,966.62	1.50	-0.39	1.45
15,537.15	90.00	181.75	6,925.00	-8,971.63	-779.12	9,003.73	1.50	-0.39	1.45
Start 4679.79 hold at 15537.15 MD									
15,600.00	90.00	181.75	6,925.00	-9,034.45	-781.03	9,066.54	0.00	0.00	0.00
15,700.00	90.00	181.75	6,925.00	-9,134.40	-784.08	9,166.47	0.00	0.00	0.00
15,800.00	90.00	181.75	6,925.00	-9,234.35	-787.13	9,266.41	0.00	0.00	0.00
15,900.00	90.00	181.75	6,925.00	-9,334.31	-790.18	9,366.34	0.00	0.00	0.00
16,000.00	90.00	181.75	6,925.00	-9,434.26	-793.23	9,466.27	0.00	0.00	0.00
16,100.00	90.00	181.75	6,925.00	-9,534.21	-796.28	9,566.20	0.00	0.00	0.00
16,200.00	90.00	181.75	6,925.00	-9,634.17	-799.33	9,666.13	0.00	0.00	0.00
16,300.00	90.00	181.75	6,925.00	-9,734.12	-802.38	9,766.06	0.00	0.00	0.00

# Noble Energy

## Planning Report

<b>Database:</b>	EDMP	<b>Local Co-ordinate Reference:</b>	Well Johnson D06-766
<b>Company:</b>	Northern Region - DJ Basin	<b>TVD Reference:</b>	KB @ 4909.00ft
<b>Project:</b>	Bronco	<b>MD Reference:</b>	KB @ 4909.00ft
<b>Site:</b>	C Section 30	<b>North Reference:</b>	Grid
<b>Well:</b>	Johnson D06-766	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #2		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
16,400.00	90.00	181.75	6,925.00	-9,834.08	-805.43	9,866.00	0.00	0.00	0.00
16,500.00	90.00	181.75	6,925.00	-9,934.03	-808.47	9,965.93	0.00	0.00	0.00
16,600.00	90.00	181.75	6,925.00	-10,033.98	-811.52	10,065.86	0.00	0.00	0.00
16,700.00	90.00	181.75	6,925.00	-10,133.94	-814.57	10,165.79	0.00	0.00	0.00
16,800.00	90.00	181.75	6,925.00	-10,233.89	-817.62	10,265.72	0.00	0.00	0.00
16,900.00	90.00	181.75	6,925.00	-10,333.84	-820.67	10,365.66	0.00	0.00	0.00
17,000.00	90.00	181.75	6,925.00	-10,433.80	-823.72	10,465.59	0.00	0.00	0.00
17,100.00	90.00	181.75	6,925.00	-10,533.75	-826.77	10,565.52	0.00	0.00	0.00
17,200.00	90.00	181.75	6,925.00	-10,633.70	-829.82	10,665.45	0.00	0.00	0.00
17,300.00	90.00	181.75	6,925.00	-10,733.66	-832.87	10,765.38	0.00	0.00	0.00
17,400.00	90.00	181.75	6,925.00	-10,833.61	-835.92	10,865.31	0.00	0.00	0.00
17,500.00	90.00	181.75	6,925.00	-10,933.56	-838.97	10,965.25	0.00	0.00	0.00
17,600.00	90.00	181.75	6,925.00	-11,033.52	-842.01	11,065.18	0.00	0.00	0.00
17,700.00	90.00	181.75	6,925.00	-11,133.47	-845.06	11,165.11	0.00	0.00	0.00
17,800.00	90.00	181.75	6,925.00	-11,233.42	-848.11	11,265.04	0.00	0.00	0.00
17,900.00	90.00	181.75	6,925.00	-11,333.38	-851.16	11,364.97	0.00	0.00	0.00
18,000.00	90.00	181.75	6,925.00	-11,433.33	-854.21	11,464.90	0.00	0.00	0.00
18,100.00	90.00	181.75	6,925.00	-11,533.29	-857.26	11,564.84	0.00	0.00	0.00
18,200.00	90.00	181.75	6,925.00	-11,633.24	-860.31	11,664.77	0.00	0.00	0.00
18,300.00	90.00	181.75	6,925.00	-11,733.19	-863.36	11,764.70	0.00	0.00	0.00
18,400.00	90.00	181.75	6,925.00	-11,833.15	-866.41	11,864.63	0.00	0.00	0.00
18,500.00	90.00	181.75	6,925.00	-11,933.10	-869.46	11,964.56	0.00	0.00	0.00
18,600.00	90.00	181.75	6,925.00	-12,033.05	-872.51	12,064.50	0.00	0.00	0.00
18,700.00	90.00	181.75	6,925.00	-12,133.01	-875.55	12,164.43	0.00	0.00	0.00
18,800.00	90.00	181.75	6,925.00	-12,232.96	-878.60	12,264.36	0.00	0.00	0.00
18,900.00	90.00	181.75	6,925.00	-12,332.91	-881.65	12,364.29	0.00	0.00	0.00
19,000.00	90.00	181.75	6,925.00	-12,432.87	-884.70	12,464.22	0.00	0.00	0.00
19,100.00	90.00	181.75	6,925.00	-12,532.82	-887.75	12,564.15	0.00	0.00	0.00
19,200.00	90.00	181.75	6,925.00	-12,632.77	-890.80	12,664.09	0.00	0.00	0.00
19,300.00	90.00	181.75	6,925.00	-12,732.73	-893.85	12,764.02	0.00	0.00	0.00
19,400.00	90.00	181.75	6,925.00	-12,832.68	-896.90	12,863.95	0.00	0.00	0.00
19,500.00	90.00	181.75	6,925.00	-12,932.63	-899.95	12,963.88	0.00	0.00	0.00
19,600.00	90.00	181.75	6,925.00	-13,032.59	-903.00	13,063.81	0.00	0.00	0.00
19,700.00	90.00	181.75	6,925.00	-13,132.54	-906.05	13,163.75	0.00	0.00	0.00
19,800.00	90.00	181.75	6,925.00	-13,232.49	-909.10	13,263.68	0.00	0.00	0.00
19,900.00	90.00	181.75	6,925.00	-13,332.45	-912.14	13,363.61	0.00	0.00	0.00
20,000.00	90.00	181.75	6,925.00	-13,432.40	-915.19	13,463.54	0.00	0.00	0.00
20,100.00	90.00	181.75	6,925.00	-13,532.36	-918.24	13,563.47	0.00	0.00	0.00
20,200.00	90.00	181.75	6,925.00	-13,632.31	-921.29	13,663.40	0.00	0.00	0.00
20,216.94	90.00	181.75	6,925.00	-13,649.24	-921.81	13,680.34	0.00	0.00	0.00
TD at 20216.94									



# Noble Energy

## Planning Report

<b>Database:</b>	EDMP	<b>Local Co-ordinate Reference:</b>	Well Johnson D06-766
<b>Company:</b>	Northern Region - DJ Basin	<b>TVD Reference:</b>	KB @ 4909.00ft
<b>Project:</b>	Bronco	<b>MD Reference:</b>	KB @ 4909.00ft
<b>Site:</b>	C Section 30	<b>North Reference:</b>	Grid
<b>Well:</b>	Johnson D06-766	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #2		

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
Johnson D06-766 SHL - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	1,347,981.37	3,253,475.83	40.2850440	-104.5914120
Johnson D06-766 KOP - plan hits target center - Point	0.00	0.00	6,369.34	-206.38	-737.81	1,347,774.99	3,252,738.02	40.2844982	-104.5940640
Johnson D06-766 BHL F - plan hits target center - Point	0.00	0.00	6,925.00	-13,649.24	-921.81	1,334,332.16	3,252,554.02	40.2476035	-104.5952152
Johnson D06-766 TPZ F - plan hits target center - Point	0.00	0.00	6,966.00	-843.32	-838.99	1,347,138.05	3,252,636.83	40.2827527	-104.5944500

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
602.00	602.00	Pierre				
744.00	744.00	Upper Pierre Aquifer Top				
1,386.00	1,386.00	Upper Pierre Aquifer Base				
3,879.94	3,854.00	Parkman				
4,448.60	4,413.00	Sussex				
5,036.58	4,991.00	Shannon				
6,202.37	6,137.00	Teepee Buttes				
6,963.26	6,819.00	Sharon Springs				
7,006.05	6,845.00	Top A Chalk				
7,038.13	6,863.00	Top A Marl				
7,068.87	6,879.00	Top B Chalk				
7,160.21	6,919.00	Top B Marl				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
2,000.00	2,000.00	0.00	0.00	Start Build 2.00	
2,528.68	2,525.68	-13.10	-46.85	Start 3910.05 hold at 2528.68 MD	
6,438.73	6,369.34	-206.38	-737.81	Start DLS 9.00 TFO -75.19	
7,408.37	6,966.00	-843.32	-838.99	TPZ/Landing Pt. at 7408.37 MD	
11,229.90	6,966.00	-4,664.66	-800.75	Start DLS 1.50 TFO 24.38	
11,270.69	6,965.80	-4,705.45	-800.43	Start 4123.67 hold at 11270.69 MD	
15,394.36	6,925.69	-8,828.86	-777.34	Start DLS 1.50 TFO 105.07	
15,537.15	6,925.00	-8,971.63	-779.12	Start 4679.79 hold at 15537.15 MD	
20,216.94	6,925.00	-13,649.24	-921.81	TD at 20216.94	

# **Northern Region - DJ Basin**

**Bronco**

**C Section 30**

**Johnson D06-766**

**Wellbore #1**

**Plan #2**

## **Anticollision Summary Report**

**19 April, 2021**

# Noble Energy

## Anticollision Summary Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Johnson D06-766
<b>Project:</b>	Bronco	<b>TVD Reference:</b>	KB @ 4909.00ft
<b>Reference Site:</b>	C Section 30	<b>MD Reference:</b>	KB @ 4909.00ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Johnson D06-766	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

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

<b>Survey Tool Program</b>	<b>Date</b>	4/19/2021		
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.00	20,216.94	Plan #2 (Wellbore #1)	09_MWD+IFR1	A005Mb: IFR declination correction only

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
C Section 29						
CPC-JOHNSON #29-1(SI) - Wellbore #1 - No Surveys	2,000.00	1,859.00	6,944.84	6,921.68	299.871	CC, ES
CPC-JOHNSON #29-1(SI) - Wellbore #1 - No Surveys	7,350.00	6,822.37	7,963.30	7,878.08	93.443	SF
JOHNSON #19-29(SI) - Wellbore #1 - No Surveys	2,000.00	1,897.00	3,811.83	3,788.34	162.267	CC, ES
JOHNSON #19-29(SI) - Wellbore #1 - No Surveys	9,600.00	6,863.00	4,304.25	4,205.85	43.743	SF
JOHNSON #20-29(SI) - Wellbore #1 - No Surveys	2,000.00	1,881.00	6,458.28	6,434.93	276.569	CC, ES
JOHNSON #20-29(SI) - Wellbore #1 - No Surveys	11,700.00	6,842.63	7,646.76	7,532.95	67.189	SF
JOHNSON #29-13(SI) - Wellbore #1 - No Surveys	2,000.00	1,882.00	5,313.11	5,289.75	227.443	CC, ES
JOHNSON #29-13(SI) - Wellbore #1 - No Surveys	9,100.00	6,848.00	6,684.89	6,591.61	71.666	SF
JOHNSON #29-15(SI) - Wellbore #1 - No Surveys	2,000.00	1,878.00	5,956.22	5,932.89	255.355	CC, ES
JOHNSON #29-15(SI) - Wellbore #1 - No Surveys	9,000.00	6,844.00	7,447.87	7,355.58	80.707	SF
JOHNSON C #29-18(SI) - Wellbore #1 - No Surveys	2,000.00	1,882.00	4,587.81	4,564.45	196.395	CC, ES
JOHNSON C #29-18(SI) - Wellbore #1 - No Surveys	7,250.00	6,828.71	5,549.45	5,464.36	65.220	SF
JOHNSON C #29-19(SI) - Wellbore #1 - Gyro Surveys	561.17	453.17	3,122.08	3,118.89	979.904	CC
JOHNSON C #29-19(SI) - Wellbore #1 - Gyro Surveys	800.00	662.39	3,123.19	3,118.42	654.293	ES
JOHNSON C #29-19(SI) - Wellbore #1 - Gyro Surveys	7,900.00	7,900.00	4,482.03	4,427.90	82.797	SF
JOHNSON C #29-29(SI) - Wellbore #1 - No Surveys	2,000.00	1,876.00	3,783.12	3,759.81	162.312	CC, ES
JOHNSON C #29-29(SI) - Wellbore #1 - No Surveys	6,950.00	6,686.50	4,700.81	4,617.88	56.686	SF
Johnson C32-715 - Wellbore #1 - Plan #1	2,000.00	1,905.00	4,841.28	4,827.74	357.757	CC, ES
Johnson C32-715 - Wellbore #1 - Plan #1	16,300.00	18,020.42	7,953.28	7,730.18	35.648	SF
Johnson C32-725 - Wellbore #1 - Plan #1	2,000.00	1,905.00	4,820.16	4,806.63	356.196	CC, ES
Johnson C32-725 - Wellbore #1 - Plan #1	16,000.00	17,766.93	7,247.10	7,026.66	32.876	SF
Johnson C32-730 - Wellbore #1 - Plan #1	2,000.00	1,904.00	4,799.06	4,785.53	354.731	CC, ES
Johnson C32-730 - Wellbore #1 - Plan #1	15,900.00	17,851.35	6,908.01	6,688.53	31.474	SF
Johnson C32-735 - Wellbore #1 - Plan #1	2,000.00	1,904.00	4,778.23	4,764.70	353.191	CC, ES
Johnson C32-735 - Wellbore #1 - Plan #1	15,700.00	17,659.08	6,546.96	6,328.77	30.006	SF
Johnson C32-745 - Wellbore #1 - Plan #1	2,000.00	1,905.00	4,757.16	4,743.63	351.541	CC, ES
Johnson C32-745 - Wellbore #1 - Plan #1	15,537.15	17,495.35	5,872.27	5,655.09	27.039	SF
Johnson C32-755 - Wellbore #1 - Plan #1	2,000.00	1,908.00	3,522.04	3,508.49	260.062	CC, ES
Johnson C32-755 - Wellbore #1 - Plan #1	15,500.00	17,697.43	5,219.05	5,002.88	24.143	SF
Johnson C32-765 - Wellbore #1 - Plan #1	2,000.00	1,908.00	3,501.68	3,488.14	258.559	CC, ES
Johnson C32-765 - Wellbore #1 - Plan #1	15,300.00	17,463.69	4,544.67	4,329.47	21.118	SF
Johnson C32-770 - Wellbore #1 - Plan #1	2,000.00	1,907.00	3,481.61	3,468.07	257.145	CC, ES
Johnson C32-770 - Wellbore #1 - Plan #1	15,200.00	17,631.86	4,214.04	3,999.14	19.610	SF
Johnson C32-775 - Wellbore #1 - Plan #1	2,000.00	1,907.00	3,461.30	3,447.76	255.645	CC, ES
Johnson C32-775 - Wellbore #1 - Plan #1	15,200.00	17,516.48	3,885.68	3,670.85	18.087	SF
Johnson C32-785 - Wellbore #1 - Plan #1	6,432.52	9,411.10	3,150.82	3,088.61	50.649	CC
Johnson C32-785 - Wellbore #1 - Plan #1	14,900.00	17,479.06	3,214.98	3,002.29	15.116	ES

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

# Noble Energy

## Anticollision Summary Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Johnson D06-766
<b>Project:</b>	Bronco	<b>TVD Reference:</b>	KB @ 4909.00ft
<b>Reference Site:</b>	C Section 30	<b>MD Reference:</b>	KB @ 4909.00ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Johnson D06-766	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
C Section 29						
Johnson C32-785 - Wellbore #1 - Plan #1	15,100.00	17,479.06	3,225.50	3,011.65	15.083	SF
JOHNSON PM C #29-8(SI) - Wellbore #1 - No Surveys	2,000.00	1,878.00	6,440.26	6,416.94	276.107	CC, ES
JOHNSON PM C #29-8(SI) - Wellbore #1 - No Surveys	10,400.00	6,844.00	8,278.79	8,177.36	81.627	SF
JOHNSON R C #29-2(SI) - Wellbore #1 - No Surveys	2,000.00	1,869.00	5,513.93	5,490.68	237.192	CC, ES
JOHNSON R C #29-2(SI) - Wellbore #1 - No Surveys	7,250.00	6,815.71	6,519.33	6,434.45	76.804	SF
UPRC #29-4H(SI) - Wellbore #1 - No Surveys	2,000.00	1,884.00	2,897.59	2,874.21	123.947	CC, ES
UPRC #29-4H(SI) - Wellbore #1 - No Surveys	6,900.00	6,660.63	3,793.43	3,710.87	45.945	SF
UPRC #29-6H(SI) - Wellbore #1 - No Surveys	2,000.00	1,892.00	3,882.34	3,858.89	165.576	CC, ES
UPRC #29-6H(SI) - Wellbore #1 - No Surveys	7,300.00	6,848.94	4,821.57	4,736.12	56.426	SF
VICTOR #C29-16(SI) - Wellbore #1 - No Surveys	2,000.00	1,870.00	7,244.19	7,220.93	311.506	CC, ES
VICTOR #C29-16(SI) - Wellbore #1 - No Surveys	12,600.00	6,822.87	8,295.44	8,173.64	68.105	SF
VICTOR C #29-10(SI) - Wellbore #1 - No Surveys	2,000.00	1,908.00	5,445.21	5,421.63	230.856	CC, ES
VICTOR C #29-10(SI) - Wellbore #1 - No Surveys	10,400.00	6,874.00	6,636.69	6,533.24	64.154	SF
VICTOR C #29-11(SI) - Wellbore #1 - No Surveys	2,000.00	1,915.00	4,144.98	4,121.33	175.277	CC, ES
VICTOR C #29-11(SI) - Wellbore #1 - No Surveys	9,400.00	6,881.00	5,024.07	4,927.50	52.027	SF
VICTOR C #29-12(SI) - Wellbore #1 - No Surveys	2,000.00	1,920.00	2,937.96	2,914.27	124.008	CC, ES
VICTOR C #29-12(SI) - Wellbore #1 - No Surveys	8,500.00	6,886.00	3,570.95	3,479.80	39.175	SF
VICTOR C #29-13(SI) - Wellbore #1 - No Surveys	9,330.01	6,860.00	3,522.12	3,424.16	35.955	CC, ES
VICTOR C #29-13(SI) - Wellbore #1 - No Surveys	10,100.00	6,860.00	3,605.30	3,502.24	34.983	SF
VICTOR C #29-14(SI) - Wellbore #1 - No Surveys	9,305.12	6,847.00	4,816.46	4,718.82	49.328	CC, ES
VICTOR C #29-14(SI) - Wellbore #1 - No Surveys	10,800.00	6,847.00	5,043.11	4,935.05	46.670	SF
VICTOR C #29-15(SI) - Wellbore #1 - No Surveys	2,000.00	1,897.00	5,872.24	5,848.75	249.978	CC, ES
VICTOR C #29-15(SI) - Wellbore #1 - No Surveys	11,400.00	6,861.54	6,556.77	6,444.15	58.221	SF
VICTOR C #29-3(PA) - Wellbore #1 - Gyro Surveys	1,880.84	1,761.86	3,994.36	3,981.87	319.900	CC
VICTOR C #29-3(PA) - Wellbore #1 - Gyro Surveys	2,000.28	1,881.69	3,994.39	3,981.06	299.592	ES
VICTOR C #29-3(PA) - Wellbore #1 - Gyro Surveys	7,050.00	6,740.45	4,924.56	4,876.31	102.069	SF
VICTOR C #29-4(PA) - Wellbore #1 - No Surveys	2,000.00	1,885.00	3,013.04	2,989.65	128.838	CC, ES
VICTOR C #29-4(PA) - Wellbore #1 - No Surveys	5,100.00	4,938.34	3,523.29	3,462.25	57.728	SF
VICTOR C #29-5(PA) - Wellbore #1 - Gyro Surveys	2,020.04	1,941.14	2,656.46	2,642.84	195.022	CC, ES
VICTOR C #29-5(PA) - Wellbore #1 - Gyro Surveys	7,200.00	6,764.89	3,564.77	3,515.98	73.064	SF
VICTOR C #29-6(PA) - Wellbore #1 - No Surveys	2,000.00	1,893.00	3,969.48	3,946.02	169.230	CC, ES
VICTOR C #29-6(PA) - Wellbore #1 - No Surveys	5,100.00	4,946.34	4,475.81	4,414.67	73.204	SF
VICTOR C #29-9(SI) - Wellbore #1 - No Surveys	2,000.00	1,866.00	6,887.72	6,864.50	296.622	CC, ES
VICTOR C #29-9(SI) - Wellbore #1 - No Surveys	11,600.00	6,828.60	8,532.29	8,420.54	76.350	SF

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

# Noble Energy

## Anticollision Summary Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Johnson D06-766
<b>Project:</b>	Bronco	<b>TVD Reference:</b>	KB @ 4909.00ft
<b>Reference Site:</b>	C Section 30	<b>MD Reference:</b>	KB @ 4909.00ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Johnson D06-766	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
C Section 30						
ANDERSON #1(PR) - Wellbore #1 - No Surveys	6,525.53	6,415.13	2,285.01	2,204.98	28.552	CC, ES
ANDERSON #1(PR) - Wellbore #1 - No Surveys	6,800.00	6,662.04	2,328.37	2,245.08	27.957	SF
ANDERSON #2(PA) - Wellbore #1 - Gyro Surveys	9,171.62	6,897.67	878.56	817.97	14.499	CC, ES
ANDERSON #2(PA) - Wellbore #1 - Gyro Surveys	9,200.00	6,898.05	879.02	818.33	14.484	SF
BROSNAHAN #1(SI) - Wellbore #1 - No Surveys	7,814.09	6,921.00	67.42	-20.89	0.763	Level 1, CC, ES, SF
Brosnahan 13-30 - Wellbore #1 - Wellbore #1 - As Drilled	7,846.35	7,280.01	1,542.07	1,469.86	21.355	CC
Brosnahan 13-30 - Wellbore #1 - Wellbore #1 - As Drilled	7,900.00	7,280.01	1,543.00	1,469.41	20.968	ES
Brosnahan 13-30 - Wellbore #1 - Wellbore #1 - As Drilled	9,600.00	9,600.00	2,326.89	2,076.58	9.296	SF
Brosnahan 14-30 (SI) - Wellbore #1 - Gyro Surveys	9,383.45	6,937.82	454.96	392.47	7.281	CC, ES
Brosnahan 14-30 (SI) - Wellbore #1 - Gyro Surveys	9,400.00	6,937.57	455.26	392.50	7.253	SF
JOHNSON #30-15(PR) - Wellbore #1 - No Surveys	2,000.00	1,944.00	979.90	956.00	40.998	CC, ES
JOHNSON #30-15(PR) - Wellbore #1 - No Surveys	6,550.00	6,421.71	1,709.26	1,629.88	21.534	SF
Johnson A-30 - Wellbore #1 - Wellbore #1 - As Drilled	9,205.99	6,892.02	1,593.65	1,532.58	26.094	CC, ES
Johnson A-30 - Wellbore #1 - Wellbore #1 - As Drilled	9,500.00	6,892.02	1,620.54	1,556.71	25.387	SF
Johnson C30-717 - Wellbore #1 - Plan #1	2,000.00	1,967.00	1,374.57	1,360.82	99.936	CC, ES
Johnson C30-717 - Wellbore #1 - Plan #1	6,850.00	7,388.37	2,347.14	2,295.89	45.794	SF
Johnson C30-725 - Wellbore #1 - Plan #1	2,000.00	1,968.00	1,352.35	1,338.60	98.295	CC, ES
Johnson C30-725 - Wellbore #1 - Plan #1	7,000.00	7,405.49	1,859.06	1,806.99	35.706	SF
Johnson C30-734 - Wellbore #1 - Plan #1	2,327.89	2,326.18	150.39	134.22	9.303	CC
Johnson C30-734 - Wellbore #1 - Plan #1	2,400.00	2,397.70	150.66	133.99	9.037	ES
Johnson C30-734 - Wellbore #1 - Plan #1	2,500.00	2,491.58	153.95	136.62	8.882	SF
Johnson C30-743 - Wellbore #1 - Plan #1	2,481.06	2,476.81	144.59	127.35	8.387	CC
Johnson C30-743 - Wellbore #1 - Plan #1	2,500.00	2,504.53	144.62	127.22	8.310	ES
Johnson C30-743 - Wellbore #1 - Plan #1	2,700.00	2,707.90	149.96	131.12	7.959	SF
Johnson C30-752 - Wellbore #1 - Plan #1	2,601.60	2,595.37	138.37	120.28	7.649	CC, ES
Johnson C30-752 - Wellbore #1 - Plan #1	7,423.42	7,207.49	344.28	291.32	6.501	SF
Johnson C30-760 - Wellbore #1 - Plan #1	7,211.46	7,309.86	16.66	-36.04	0.316	Level 1, CC, ES, SF
Johnson C30-766 - Wellbore #1 - Plan #1	2,538.26	2,519.47	151.88	134.41	8.695	CC, ES
Johnson C30-766 - Wellbore #1 - Plan #1	2,700.00	2,674.39	155.80	137.28	8.414	SF
Johnson C30-775 - Wellbore #1 - Plan #1	2,000.00	1,997.00	174.85	160.99	12.614	CC
Johnson C30-775 - Wellbore #1 - Plan #1	2,200.00	2,187.04	175.40	160.23	11.559	ES
Johnson C30-775 - Wellbore #1 - Plan #1	2,700.00	2,661.46	187.29	168.99	10.233	SF
Johnson D06-730 - Wellbore #1 - Plan #1	2,000.00	1,961.00	1,412.50	1,398.77	102.854	CC, ES
Johnson D06-730 - Wellbore #1 - Plan #1	20,216.94	20,077.64	2,742.77	2,443.48	9.164	SF
Johnson D06-734 - Wellbore #1 - Plan #1	2,000.00	1,962.00	1,390.18	1,376.44	101.202	CC, ES
Johnson D06-734 - Wellbore #1 - Plan #1	20,200.00	20,177.32	2,110.76	1,811.81	7.060	SF
Johnson D06-744 - Wellbore #1 - Plan #1	2,000.00	1,963.00	1,367.58	1,353.84	99.531	CC, ES
Johnson D06-744 - Wellbore #1 - Plan #1	20,200.00	20,293.64	1,801.97	1,503.26	6.033	SF
Johnson D06-756 - Wellbore #1 - Plan #1	6,478.96	6,692.11	1,210.60	1,163.06	25.464	CC
Johnson D06-756 - Wellbore #1 - Plan #1	15,400.00	15,353.17	1,270.53	1,074.16	6.470	ES
Johnson D06-756 - Wellbore #1 - Plan #1	20,200.00	20,148.74	1,476.12	1,177.91	4.950	SF
Johnson D06-761 - Wellbore #1 - Plan #1	2,000.00	2,002.00	22.60	8.72	1.628	CC, ES, SF
Johnson D06-777 - Wellbore #1 - Plan #2	2,127.73	2,125.77	22.58	7.84	1.532	CC
Johnson D06-777 - Wellbore #1 - Plan #2	2,528.68	2,523.67	22.95	5.68	1.329	Level 3, ES, SF
Johnson D06-785 - Wellbore #1 - Plan #2	2,237.96	2,232.38	44.83	29.39	2.903	CC
Johnson D06-785 - Wellbore #1 - Plan #2	2,528.68	2,518.71	45.10	27.85	2.614	ES
Johnson D06-785 - Wellbore #1 - Plan #2	2,600.00	2,588.95	46.11	28.43	2.608	SF
Loustalet #30-03(SI) - Wellbore #1 - No Surveys	2,000.00	1,894.00	1,936.50	1,913.03	82.528	CC, ES
Loustalet #30-03(SI) - Wellbore #1 - No Surveys	6,700.00	6,510.55	2,702.36	2,621.65	33.482	SF
LOUSTALET #30-1(PR) - Wellbore #1 - Gyro Surveys	2,000.00	1,954.00	1,359.60	1,335.61	56.677	CC
LOUSTALET #30-1(PR) - Wellbore #1 - Gyro Surveys	2,100.00	2,053.98	1,360.13	1,334.92	53.955	ES
LOUSTALET #30-1(PR) - Wellbore #1 - Gyro Surveys	6,550.00	6,431.71	1,774.67	1,694.76	22.208	SF
LOUSTALET #30-14(PR) - Wellbore #1 - No Surveys	2,000.00	1,933.00	1,250.93	1,227.12	52.548	CC, ES

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

# Noble Energy

## Anticollision Summary Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Johnson D06-766
<b>Project:</b>	Bronco	<b>TVD Reference:</b>	KB @ 4909.00ft
<b>Reference Site:</b>	C Section 30	<b>MD Reference:</b>	KB @ 4909.00ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Johnson D06-766	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
C Section 30						
LOUSTALET #30-14(PR) - Wellbore #1 - No Surveys	6,850.00	6,673.07	2,093.52	2,010.93	25.347	SF
LOUSTALET #30-2(PR) - Wellbore #1 - No Surveys	2,000.00	1,958.00	70.11	46.08	2.918	CC, ES
LOUSTALET #30-2(PR) - Wellbore #1 - No Surveys	2,100.00	2,057.98	71.80	46.56	2.844	SF
LOUSTALET #30-4(SI) - Wellbore #1 - No Surveys	2,000.00	1,946.00	1,792.73	1,768.81	74.951	CC
LOUSTALET #30-4(SI) - Wellbore #1 - No Surveys	2,100.00	2,045.98	1,793.68	1,768.54	71.353	ES
LOUSTALET #30-4(SI) - Wellbore #1 - No Surveys	8,000.00	6,912.00	2,191.38	2,102.53	24.661	SF
LOUSTALET #30-44(PR) - Wellbore #1 - No Surveys	9,135.54	6,895.00	2,179.45	2,082.75	22.539	CC, ES
LOUSTALET #30-44(PR) - Wellbore #1 - No Surveys	9,400.00	6,895.00	2,195.43	2,097.21	22.352	SF
STEWART #30-1(PR) - Wellbore #1 - Gyro Surveys	6,527.86	6,420.49	2,324.74	2,278.42	50.183	CC, ES
STEWART #30-1(PR) - Wellbore #1 - Gyro Surveys	6,800.00	6,686.38	2,366.27	2,317.93	48.957	SF
STEWART #30-2(PA) - Wellbore #1 - Gyro Surveys	6,451.09	6,340.66	1,658.67	1,612.73	36.103	CC, ES
STEWART #30-2(PA) - Wellbore #1 - Gyro Surveys	6,600.00	6,484.38	1,674.93	1,627.90	35.611	SF
STEWART #30-23(PA) - Wellbore #1 - Gyro Surveys	7,010.94	6,896.83	1,557.00	1,508.07	31.822	CC, ES
STEWART #30-23(PA) - Wellbore #1 - Gyro Surveys	7,200.00	6,970.27	1,574.31	1,524.30	31.478	SF
STEWART #30-25(SI) - Wellbore #1 - No Surveys	6,542.80	6,422.79	1,387.31	1,307.21	17.319	CC
STEWART #30-25(SI) - Wellbore #1 - No Surveys	6,550.00	6,429.71	1,387.34	1,307.15	17.300	ES
STEWART #30-25(SI) - Wellbore #1 - No Surveys	6,700.00	6,568.55	1,401.04	1,319.01	17.079	SF
STEWART R C #30-6(SI) - Wellbore #1 - No Surveys	6,582.93	6,461.12	447.19	366.72	5.557	CC
STEWART R C #30-6(SI) - Wellbore #1 - No Surveys	6,600.00	6,477.23	447.35	366.66	5.544	ES
STEWART R C #30-6(SI) - Wellbore #1 - No Surveys	6,650.00	6,523.60	449.80	368.46	5.530	SF

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



# Noble Energy

## Anticollision Summary Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Johnson D06-766
<b>Project:</b>	Bronco	<b>TVD Reference:</b>	KB @ 4909.00ft
<b>Reference Site:</b>	C Section 30	<b>MD Reference:</b>	KB @ 4909.00ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Johnson D06-766	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
C Section 31						
KILDOW C #31-01(SI) - Wellbore #1 - No Surveys	10,465.19	6,906.00	2,191.00	2,082.61	20.215	CC, ES
KILDOW C #31-01(SI) - Wellbore #1 - No Surveys	10,700.00	6,906.00	2,203.54	2,093.63	20.047	SF
KILDOW C #31-07(PA) - Wellbore #1 - No Surveys	11,804.79	6,927.61	887.37	765.81	7.300	CC, ES, SF
KILDOW C #31-7X(SI) - Wellbore #1 - No Surveys	11,969.14	6,920.01	1,033.79	910.66	8.396	CC, ES
KILDOW C #31-7X(SI) - Wellbore #1 - No Surveys	12,000.00	6,919.71	1,034.25	910.97	8.389	SF
KILDOW PM C #31-2(PR) - Wellbore #1 - No Surveys	10,618.53	6,929.00	952.15	842.13	8.654	CC, ES, SF
KILDOW PM C #31-8(PR) - Wellbore #1 - No Surveys	11,762.63	6,881.02	2,347.13	2,226.40	19.441	CC, ES
KILDOW PM C #31-8(PR) - Wellbore #1 - No Surveys	12,000.00	6,878.71	2,359.10	2,236.73	19.277	SF
OCOMA #31-19(PR) - Wellbore #1 - No Surveys	13,188.72	4,610.00	2,319.10	2,252.93	35.046	CC
OCOMA #31-19(PR) - Wellbore #1 - No Surveys	13,200.00	4,610.00	2,319.13	2,252.88	35.007	ES
OCOMA #31-19(PR) - Wellbore #1 - No Surveys	14,000.00	4,610.00	2,456.91	2,383.36	33.404	SF
OCOMA #31-20(SI) - Wellbore #1 - No Surveys	13,181.76	4,671.00	2,714.40	2,630.65	32.411	CC
OCOMA #31-20(SI) - Wellbore #1 - No Surveys	13,200.00	4,671.00	2,714.46	2,630.59	32.363	ES
OCOMA #31-20(SI) - Wellbore #1 - No Surveys	13,700.00	4,671.00	2,763.43	2,676.34	31.731	SF
OCOMA #31-26(PR) - Wellbore #1 - No Surveys	11,977.30	4,591.00	2,369.02	2,309.23	39.620	CC
OCOMA #31-26(PR) - Wellbore #1 - No Surveys	12,000.00	4,591.00	2,369.13	2,309.17	39.511	ES
OCOMA #31-26(PR) - Wellbore #1 - No Surveys	12,900.00	4,591.00	2,542.37	2,473.34	36.832	SF
OCOMA #31-27(PR) - Wellbore #1 - No Surveys	10,577.28	4,592.00	2,372.37	2,323.20	48.248	CC
OCOMA #31-27(PR) - Wellbore #1 - No Surveys	10,600.00	4,592.00	2,372.48	2,323.15	48.098	ES
OCOMA #31-27(PR) - Wellbore #1 - No Surveys	11,800.00	4,592.00	2,663.88	2,601.49	42.696	SF
Ocoma #C31-24D(PR) - Wellbore #1 - MWD Surveys	13,807.34	7,073.25	364.97	259.09	3.447	CC, ES, SF
Ocoma 31-17(PR) - Wellbore #1 - Wellbore #1 - As Drille	13,901.75	4,478.01	2,845.68	2,767.82	36.547	CC, ES
Ocoma 31-17(PR) - Wellbore #1 - Wellbore #1 - As Drille	14,500.00	4,478.01	2,907.89	2,825.69	35.377	SF
Ocoma 31-18(SI) - Wellbore #1 - Wellbore #1 - As Drilled	13,107.15	4,425.01	2,674.81	2,609.64	41.046	CC, ES
Ocoma 31-18(SI) - Wellbore #1 - Wellbore #1 - As Drilled	13,700.00	4,425.01	2,739.72	2,670.35	39.496	SF
OCOMA C #31-23(SI) - Wellbore #1 - No Surveys	13,660.14	6,879.56	1,686.31	1,546.26	12.041	CC, ES
OCOMA C #31-23(SI) - Wellbore #1 - No Surveys	13,800.00	6,878.20	1,692.09	1,551.23	12.012	SF
OCOMA C31-20D(PR) - Wellbore #1 - Wellbore #1	12,391.77	7,157.43	918.64	817.80	9.109	CC
OCOMA C31-20D(PR) - Wellbore #1 - Wellbore #1	12,400.00	7,157.43	918.68	817.72	9.100	ES
OCOMA C31-20D(PR) - Wellbore #1 - Wellbore #1	12,500.00	7,157.47	925.00	823.14	9.082	SF
Ocoma C31-20D(PR) - Wellbore #1 - Wellbore #1 - As Dr	12,409.46	7,139.05	925.20	823.91	9.134	CC, ES
Ocoma C31-20D(PR) - Wellbore #1 - Wellbore #1 - As Dr	12,500.00	7,138.96	929.62	827.42	9.096	SF
Ocoma C31-24D(PR) - Wellbore #1 - Wellbore #1 - As Dr	13,800.00	7,059.95	358.46	251.77	3.360	ES, SF
Ocoma C31-24D(PR) - Wellbore #1 - Wellbore #1 - As Dr	13,801.94	7,059.95	358.45	251.79	3.361	CC
Ocoma C31-25(SI) - Wellbore #1 - Wellbore #1 - As Drille	13,989.66	6,885.91	1,047.64	940.30	9.760	CC
Ocoma C31-25(SI) - Wellbore #1 - Wellbore #1 - As Drille	14,000.00	6,885.88	1,047.69	940.20	9.747	ES
Ocoma C31-25(SI) - Wellbore #1 - Wellbore #1 - As Drille	14,100.00	6,885.55	1,053.43	944.88	9.705	SF
OCOMA II #C31-10(SI) - Wellbore #1 - No Surveys	13,121.14	6,909.80	866.14	731.39	6.428	CC, ES, SF
OCOMA II #C31-9(SI) - Wellbore #1 - No Surveys	13,096.80	6,873.04	2,177.60	2,043.43	16.230	CC
OCOMA II #C31-9(SI) - Wellbore #1 - No Surveys	13,100.00	6,873.01	2,177.61	2,043.41	16.227	ES
OCOMA II #C31-9(SI) - Wellbore #1 - No Surveys	13,300.00	6,871.06	2,187.06	2,051.52	16.136	SF
OCOMA II C #31-15(SI) - Wellbore #1 - No Surveys	14,443.46	6,863.94	892.93	744.86	6.030	CC, ES, SF
Ocoma UPRR C31-12(SI) - Wellbore #1 - Wellbore #1 - A	13,080.62	6,903.56	1,583.90	1,485.87	16.157	CC
Ocoma UPRR C31-12(SI) - Wellbore #1 - Wellbore #1 - A	13,100.00	6,903.66	1,584.02	1,485.74	16.117	ES
Ocoma UPRR C31-12(SI) - Wellbore #1 - Wellbore #1 - A	13,300.00	6,904.74	1,599.02	1,498.74	15.946	SF
Ocoma UPRR C31-13(PR) - Wellbore #1 - Wellbore #1 -	14,724.17	6,877.27	1,512.56	1,397.59	13.156	CC, ES
Ocoma UPRR C31-13(PR) - Wellbore #1 - Wellbore #1 -	14,900.00	6,876.60	1,522.74	1,405.96	13.039	SF
Ocoma-UPRR C-31-11 (SI) - Wellbore #1 - No Surveys	13,144.66	6,908.62	280.69	60.03	1.272	Level 3, CC, ES, SF
Ocoma C31-14 (SI) - Wellbore #1 - No Surveys	14,597.75	6,869.47	209.82	-25.11	0.893	Level 1, CC
Ocoma C31-14 (SI) - Wellbore #1 - No Surveys	14,600.00	6,869.45	209.83	-25.17	0.893	Level 1, ES, SF
O'CONNEL C #31-21(SI) - Wellbore #1 - No Surveys	12,397.91	6,928.84	412.11	284.58	3.232	CC, ES, SF
O'CONNEL C #31-18(SI) - Wellbore #1 - No Surveys	11,263.80	6,937.86	399.05	282.74	3.431	CC, ES, SF
TIMKO C #31-17(PR) - Wellbore #1 - No Surveys	11,234.59	6,913.00	1,675.84	1,560.05	14.473	CC, ES

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

**Noble Energy**  
Anticollision Summary Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Johnson D06-766
<b>Project:</b>	Bronco	<b>TVD Reference:</b>	KB @ 4909.00ft
<b>Reference Site:</b>	C Section 30	<b>MD Reference:</b>	KB @ 4909.00ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Johnson D06-766	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
C Section 31						
TIMKO C #31-17(PR) - Wellbore #1 - No Surveys	11,400.00	6,911.54	1,684.56	1,567.82	14.430	SF
TIMKO C #31-22(PR) - Wellbore #1 - No Surveys	12,277.27	6,898.01	1,674.81	1,548.77	13.288	CC
TIMKO C #31-22(PR) - Wellbore #1 - No Surveys	12,300.00	6,897.79	1,674.97	1,548.76	13.272	ES
TIMKO C #31-22(PR) - Wellbore #1 - No Surveys	12,400.00	6,896.82	1,679.30	1,552.51	13.244	SF
UPRC #31-3H(PA) - Wellbore #1 - Gyro Surveys	10,476.79	6,931.50	372.61	300.33	5.155	CC, ES
UPRC #31-3H(PA) - Wellbore #1 - Gyro Surveys	10,500.00	6,931.03	373.34	300.63	5.135	SF
UPRC #31-6H(PA) - Wellbore #1 - Gyro Surveys	11,703.96	6,924.56	153.90	69.66	1.827	CC, ES, SF
UPRC 31-4H(PA) - Wellbore #1 - Wellbore #1 - As Drilled	10,838.11	6,940.51	1,513.77	1,438.08	20.002	CC, ES
UPRC 31-4H(PA) - Wellbore #1 - Wellbore #1 - As Drilled	11,100.00	6,940.87	1,536.25	1,457.89	19.603	SF
UPRC 31-5H(PA) - Wellbore #1 - Wellbore #1 - As Drilled	11,666.61	6,916.52	1,659.29	1,575.55	19.815	CC
UPRC 31-5H(PA) - Wellbore #1 - Wellbore #1 - As Drilled	11,700.00	6,915.92	1,659.62	1,575.48	19.723	ES
UPRC 31-5H(PA) - Wellbore #1 - Wellbore #1 - As Drilled	11,900.00	6,912.27	1,675.62	1,589.45	19.446	SF
UPRR OCOMA II #C31-16(SI) - Wellbore #1 - No Survey	14,423.16	6,871.14	2,195.00	2,047.08	14.839	CC, ES
UPRR OCOMA II #C31-16(SI) - Wellbore #1 - No Survey	14,600.00	6,869.42	2,202.11	2,052.98	14.766	SF
Walters C31-19(SI) - Wellbore #1 - Wellbore #1	11,334.44	6,908.16	977.27	896.77	12.140	CC, ES
Walters C31-19(SI) - Wellbore #1 - Wellbore #1	11,400.00	6,908.94	979.47	898.14	12.044	SF



# Noble Energy

## Anticollision Summary Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Johnson D06-766
<b>Project:</b>	Bronco	<b>TVD Reference:</b>	KB @ 4909.00ft
<b>Reference Site:</b>	C Section 30	<b>MD Reference:</b>	KB @ 4909.00ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Johnson D06-766	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
C Section 32						
HENNINGTON C #32-10(PR) - Wellbore #1 - No Surveys	13,054.06	6,809.46	6,164.05	6,030.87	46.284	CC
HENNINGTON C #32-10(PR) - Wellbore #1 - No Surveys	13,100.00	6,809.01	6,164.22	6,030.61	46.135	ES
HENNINGTON C #32-10(PR) - Wellbore #1 - No Surveys	14,700.00	6,793.45	6,380.00	6,233.80	43.640	SF
HENNINGTON C #32-2(PR) - Wellbore #1 - No Surveys	10,312.55	6,828.00	6,126.05	6,019.76	57.637	CC
HENNINGTON C #32-2(PR) - Wellbore #1 - No Surveys	10,400.00	6,828.00	6,126.67	6,019.64	57.243	ES
HENNINGTON C #32-2(PR) - Wellbore #1 - No Surveys	12,400.00	6,816.82	6,476.71	6,354.63	53.056	SF
HENNINGTON C #32-7(PA) - Wellbore #1 - Gyro Survey	11,621.70	7,126.00	5,950.07	5,865.88	70.671	CC
HENNINGTON C #32-7(PA) - Wellbore #1 - Gyro Survey	11,700.00	7,126.00	5,950.59	5,865.68	70.081	ES
HENNINGTON C #32-7(PA) - Wellbore #1 - Gyro Survey	13,800.00	7,137.26	6,336.26	6,235.72	63.022	SF
HOWELL #1(SI) - Wellbore #1 - No Surveys	14,013.25	6,830.13	4,054.47	3,911.19	28.296	CC, ES
HOWELL #1(SI) - Wellbore #1 - No Surveys	14,700.00	6,823.45	4,112.22	3,963.73	27.693	SF
HOWELL #32-1(SI) - Wellbore #1 - No Surveys	11,996.34	6,833.74	4,811.39	4,688.74	39.228	CC
HOWELL #32-1(SI) - Wellbore #1 - No Surveys	12,000.00	6,833.71	4,811.39	4,688.70	39.218	ES
HOWELL #32-1(SI) - Wellbore #1 - No Surveys	13,100.00	6,823.01	4,936.33	4,805.19	37.640	SF
HOWELL #32-2(SI) - Wellbore #1 - No Surveys	10,623.82	6,835.00	4,870.28	4,761.03	44.579	CC
HOWELL #32-2(SI) - Wellbore #1 - No Surveys	10,700.00	6,835.00	4,870.87	4,760.98	44.323	ES
HOWELL #32-2(SI) - Wellbore #1 - No Surveys	11,900.00	6,828.68	5,037.46	4,918.64	42.394	SF
HOWELL #32-23(PR) - Wellbore #1 - No Surveys	11,705.53	6,863.57	3,634.93	3,514.92	30.288	CC, ES
HOWELL #32-23(PR) - Wellbore #1 - No Surveys	12,400.00	6,856.82	3,700.67	3,575.58	29.584	SF
HOWELL #C 32-12(SI) - Wellbore #1 - No Surveys	13,225.41	6,862.79	3,484.22	3,348.81	25.731	CC, ES
HOWELL #C 32-12(SI) - Wellbore #1 - No Surveys	13,800.00	6,857.20	3,531.27	3,391.67	25.295	SF
MCGUIRK-HOWELL C #32-11(SI) - Wellbore #1 - No Surveys	13,018.00	6,822.81	4,806.53	4,673.60	36.159	CC
MCGUIRK-HOWELL C #32-11(SI) - Wellbore #1 - No Surveys	13,100.00	6,822.01	4,807.23	4,673.55	35.962	ES
MCGUIRK-HOWELL C #32-11(SI) - Wellbore #1 - No Surveys	14,100.00	6,812.28	4,926.80	4,785.60	34.893	SF
MCGUIRK-HOWELL C #32-14(TA) - Wellbore #1 - No Surveys	14,391.59	6,815.45	4,700.66	4,553.56	31.954	CC
MCGUIRK-HOWELL C #32-14(TA) - Wellbore #1 - No Surveys	14,400.00	6,815.37	4,700.67	4,553.48	31.937	ES
MCGUIRK-HOWELL C #32-14(TA) - Wellbore #1 - No Surveys	15,300.00	6,806.61	4,787.63	4,633.53	31.070	SF
MCGUIRK-HOWELL C #32-4(SI) - Wellbore #1 - No Surveys	10,334.69	6,883.00	3,594.74	3,487.77	33.605	CC, ES
MCGUIRK-HOWELL C #32-4(SI) - Wellbore #1 - No Surveys	11,100.00	6,883.00	3,675.30	3,562.90	32.698	SF
NELSON #32-25(PR) - Wellbore #1 - No Surveys	11,127.55	6,872.00	4,150.01	4,035.62	36.278	CC, ES
NELSON #32-25(PR) - Wellbore #1 - No Surveys	12,000.00	6,864.71	4,243.95	4,123.06	35.105	SF
PLUSS #32-43(PA) - Wellbore #1 - Gyro Surveys	14,519.73	7,091.40	5,841.91	5,728.09	51.323	CC
PLUSS #32-43(PA) - Wellbore #1 - Gyro Surveys	14,600.00	7,088.45	5,842.47	5,727.88	50.987	ES
PLUSS #32-43(PA) - Wellbore #1 - Gyro Surveys	15,900.00	7,045.69	6,017.56	5,893.05	48.334	SF
PTF #C 32-1(SI) - Wellbore #1 - No Surveys	10,601.53	6,820.00	7,445.15	7,336.24	68.362	CC
PTF #C 32-1(SI) - Wellbore #1 - No Surveys	10,700.00	6,820.00	7,445.80	7,336.02	67.826	ES
PTF #C 32-1(SI) - Wellbore #1 - No Surveys	13,500.00	6,798.12	7,998.65	7,867.36	60.926	SF
PTF #C 32-16(SI) - Wellbore #1 - No Surveys	14,430.30	6,790.07	7,455.60	7,308.31	50.618	CC
PTF #C 32-16(SI) - Wellbore #1 - No Surveys	14,500.00	6,789.39	7,455.93	7,307.96	50.388	ES
PTF #C 32-16(SI) - Wellbore #1 - No Surveys	16,400.00	6,780.00	7,743.84	7,580.60	47.437	SF
PTF #C 32-8(SI) - Wellbore #1 - No Surveys	11,942.07	6,803.27	7,454.54	7,332.70	61.182	CC
PTF #C 32-8(SI) - Wellbore #1 - No Surveys	12,000.00	6,802.71	7,454.77	7,332.39	60.914	ES
PTF #C 32-8(SI) - Wellbore #1 - No Surveys	14,600.00	6,777.42	7,914.17	7,771.43	55.442	SF
PTF #C 32-9(SI) - Wellbore #1 - No Surveys	13,304.46	6,792.02	7,480.77	7,345.16	55.166	CC
PTF #C 32-9(SI) - Wellbore #1 - No Surveys	13,400.00	6,791.09	7,481.38	7,344.86	54.801	ES
PTF #C 32-9(SI) - Wellbore #1 - No Surveys	15,500.00	6,771.05	7,797.62	7,644.22	50.831	SF

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

# Noble Energy

## Anticollision Summary Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Johnson D06-766
<b>Project:</b>	Bronco	<b>TVD Reference:</b>	KB @ 4909.00ft
<b>Reference Site:</b>	C Section 30	<b>MD Reference:</b>	KB @ 4909.00ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Johnson D06-766	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
D Section 05						
Becker 05-01 (PA) - Wellbore #1 - Gyro Surveys	18,104.26	6,784.25	6,200.42	6,050.61	41.388	CC
Becker 05-01 (PA) - Wellbore #1 - Gyro Surveys	18,200.00	6,784.25	6,201.16	6,050.38	41.126	ES
Becker 05-01 (PA) - Wellbore #1 - Gyro Surveys	19,500.00	6,784.25	6,355.57	6,194.63	39.490	SF
Becker 05-02 (PA) - Wellbore #1 - Gyro Surveys	19,281.86	6,700.00	4,699.78	4,537.57	28.973	CC
Becker 05-02 (PA) - Wellbore #1 - Gyro Surveys	19,300.00	6,700.00	4,699.82	4,537.42	28.940	ES
Becker 05-02 (PA) - Wellbore #1 - Gyro Surveys	20,000.00	6,684.76	4,754.29	4,586.38	28.314	SF
Becker 05-03 (PA) - Wellbore #1 - Gyro Surveys	16,704.05	6,900.00	4,911.52	4,775.30	36.057	CC
Becker 05-03 (PA) - Wellbore #1 - Gyro Surveys	16,800.00	6,900.00	4,912.46	4,775.28	35.811	ES
Becker 05-03 (PA) - Wellbore #1 - Gyro Surveys	17,700.00	6,872.28	5,011.37	4,867.36	34.799	SF
Becker 05-04 (PA) - Wellbore #1 - Gyro Surveys	16,695.50	7,058.89	7,399.24	7,262.70	54.192	CC
Becker 05-04 (PA) - Wellbore #1 - Gyro Surveys	16,800.00	7,054.20	7,399.97	7,262.39	53.785	ES
Becker 05-04 (PA) - Wellbore #1 - Gyro Surveys	18,800.00	6,964.44	7,692.12	7,539.00	50.238	SF
Becker 05-05 (PA) - Wellbore #1 - Gyro Surveys	19,286.21	6,728.57	7,455.02	7,292.61	45.902	CC
Becker 05-05 (PA) - Wellbore #1 - Gyro Surveys	19,400.00	6,728.35	7,455.89	7,292.31	45.581	ES
Becker 05-05 (PA) - Wellbore #1 - Gyro Surveys	20,216.94	6,726.87	7,512.90	7,341.92	43.941	SF
Becker 05-08 (PA) - Wellbore #1 - Gyro Surveys	18,490.48	6,737.06	3,697.62	3,543.62	24.010	CC
Becker 05-08 (PA) - Wellbore #1 - Gyro Surveys	18,500.00	6,737.52	3,697.64	3,543.53	23.994	ES
Becker 05-08 (PA) - Wellbore #1 - Gyro Surveys	19,000.00	6,762.30	3,732.43	3,574.32	23.605	SF
Becker 05-12 (PA) - Wellbore #1 - Gyro Surveys	16,767.44	6,992.28	6,128.33	5,991.30	44.725	CC
Becker 05-12 (PA) - Wellbore #1 - Gyro Surveys	16,800.00	6,991.83	6,128.41	5,991.06	44.618	ES
Becker 05-12 (PA) - Wellbore #1 - Gyro Surveys	18,300.00	6,970.88	6,317.01	6,167.91	42.368	SF
Becker 05-13 (PA) - Wellbore #1 - Gyro Surveys	18,103.87	6,809.84	4,607.35	4,449.99	29.279	CC, ES
Becker 05-13 (PA) - Wellbore #1 - Gyro Surveys	18,900.00	6,809.84	4,675.63	4,511.75	28.531	SF
Becker 05-14 (PA) - Wellbore #1 - Gyro Surveys	19,425.47	6,885.77	3,719.98	3,555.43	22.607	CC, ES
Becker 05-14 (PA) - Wellbore #1 - Gyro Surveys	19,900.00	6,864.08	3,750.08	3,581.89	22.297	SF
Becker 05-15 (PA) - Wellbore #1 - Gyro Surveys	19,515.88	6,752.92	6,059.76	5,800.56	23.379	CC
Becker 05-15 (PA) - Wellbore #1 - Gyro Surveys	19,600.00	6,753.09	6,060.34	5,800.28	23.304	ES
Becker 05-15 (PA) - Wellbore #1 - Gyro Surveys	20,216.94	6,755.22	6,100.17	5,834.55	22.966	SF
Becker 05-16 (PA) - Wellbore #1 - Gyro Surveys	18,017.78	6,591.03	7,395.56	7,247.08	49.810	CC
Becker 05-16 (PA) - Wellbore #1 - Gyro Surveys	18,100.00	6,589.50	7,396.01	7,246.70	49.534	ES
Becker 05-16 (PA) - Wellbore #1 - Gyro Surveys	20,000.00	6,557.91	7,656.50	7,492.36	46.645	SF
Becker 06 (SI) - Wellbore #1 - Gyro Surveys	18,609.16	7,081.96	6,828.98	6,672.25	43.571	CC
Becker 06 (SI) - Wellbore #1 - Gyro Surveys	18,700.00	7,081.24	6,829.59	6,671.93	43.319	ES
Becker 06 (SI) - Wellbore #1 - Gyro Surveys	20,216.94	7,069.30	7,015.68	6,846.09	41.368	SF
Becker 07 (PA) - Wellbore #1 - Gyro Surveys	18,789.31	6,753.60	4,309.18	4,151.73	27.369	CC
Becker 07 (PA) - Wellbore #1 - Gyro Surveys	18,800.00	6,753.37	4,309.19	4,151.63	27.350	ES
Becker 07 (PA) - Wellbore #1 - Gyro Surveys	19,400.00	6,740.14	4,352.21	4,189.91	26.816	SF
Becker 08-121 (PR) - Wellbore #1 - Gyro Surveys	17,610.51	6,787.24	4,187.66	4,042.37	28.822	CC, ES
Becker 08-121 (PR) - Wellbore #1 - Gyro Surveys	18,300.00	6,787.24	4,244.05	4,093.32	28.158	SF
Becker 12-101 (PA) - Wellbore #1 - Gyro Surveys	17,216.62	7,143.13	6,736.65	6,594.36	47.344	CC
Becker 12-101 (PA) - Wellbore #1 - Gyro Surveys	17,300.00	7,143.90	6,737.17	6,594.02	47.065	ES
Becker 12-101 (PA) - Wellbore #1 - Gyro Surveys	19,000.00	7,159.57	6,968.69	6,812.16	44.519	SF
Becker 15-091 (PR) - Wellbore #1 - Gyro Surveys	18,745.71	6,762.04	5,581.58	5,425.00	35.648	CC
Becker 15-091 (PR) - Wellbore #1 - Gyro Surveys	18,800.00	6,762.12	5,581.84	5,424.71	35.524	ES
Becker 15-091 (PR) - Wellbore #1 - Gyro Surveys	19,800.00	6,763.79	5,680.28	5,515.20	34.409	SF
Becker D17-715 - Becker D17-715 OH - As-Drilled	19,108.24	5,269.60	7,707.45	7,557.43	51.376	CC
Becker D17-715 - Becker D17-715 OH - As-Drilled	19,400.00	19,400.00	7,712.10	7,498.13	36.043	ES, SF
Becker D17-725 - Becker D17-725 OH - As-Drilled	19,598.82	6,500.47	7,265.12	7,102.81	44.762	CC
Becker D17-725 - Becker D17-725 OH - As-Drilled	19,700.00	6,515.52	7,265.81	7,102.39	44.460	ES
Becker D17-725 - Becker D17-725 OH - As-Drilled	20,216.94	6,640.63	7,289.46	7,120.40	43.119	SF
Becker D17-735 - Becker D17-735 OH - As-Drilled	19,930.10	7,104.00	6,669.35	6,500.14	39.414	CC
Becker D17-735 - Becker D17-735 OH - As-Drilled	20,200.00	7,293.00	6,670.77	6,497.60	38.521	ES
Becker D17-735 - Becker D17-735 OH - As-Drilled	20,216.94	7,293.00	6,671.05	6,497.70	38.485	SF

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

# Noble Energy

## Anticollision Summary Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Johnson D06-766
<b>Project:</b>	Bronco	<b>TVD Reference:</b>	KB @ 4909.00ft
<b>Reference Site:</b>	C Section 30	<b>MD Reference:</b>	KB @ 4909.00ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Johnson D06-766	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
D Section 05						
Becker D17-745 - Becker D17-745 OH - As-Drilled	20,107.55	7,336.26	6,018.92	5,846.08	34.824	CC
Becker D17-745 - Becker D17-745 OH - As-Drilled	20,200.00	7,349.84	6,019.54	5,845.69	34.627	ES
Becker D17-745 - Becker D17-745 OH - As-Drilled	20,216.94	7,389.00	6,020.49	5,846.23	34.548	SF
Becker D17-755 - Becker D17-755 OH - As-Drilled	19,247.23	5,146.41	4,935.18	4,788.19	33.577	CC
Becker D17-755 - Becker D17-755 OH - As-Drilled	19,900.00	19,900.00	4,974.55	4,750.90	22.242	ES, SF
Becker D17-765 - Becker D17-765 OH - As-Drilled	19,566.23	6,034.58	4,558.07	4,400.16	28.865	CC
Becker D17-765 - Becker D17-765 OH - As-Drilled	20,000.00	20,000.00	4,577.15	4,354.12	20.523	ES, SF
Becker D17-775 - Becker D17-775 OH - As-Drilled	19,792.45	19,792.45	4,048.67	3,830.58	18.564	CC
Becker D17-775 - Becker D17-775 OH - As-Drilled	19,900.00	19,900.00	4,049.65	3,828.71	18.330	ES, SF
Becker D17-785 - Becker D17-785 OH - As-Drilled	20,049.93	7,015.00	3,441.90	3,272.58	20.328	CC
Becker D17-785 - Becker D17-785 OH - As-Drilled	20,100.00	7,031.90	3,442.21	3,272.28	20.256	ES
Becker D17-785 - Becker D17-785 OH - As-Drilled	20,216.94	7,114.72	3,444.27	3,272.63	20.066	SF
Becker Ranch #5E-323 (PR) - Wellbore #1 - As Drilled	15,368.05	6,890.96	3,335.79	3,214.29	27.455	CC
Becker Ranch #5E-323 (PR) - Wellbore #1 - As Drilled	17,800.00	17,800.00	3,413.65	3,118.71	11.574	ES, SF
Becker Ranch #5E-403 (PR) - As Drilled - As Drilled	15,206.09	6,851.82	3,034.82	2,914.80	25.287	CC
Becker Ranch #5E-403 (PR) - As Drilled - As Drilled	16,600.00	16,600.00	3,082.18	2,834.61	12.450	ES, SF
Becker Ranch #5J-103 (PA) - Wellbore #1 - As Drilled	15,254.68	6,620.00	4,002.64	3,883.41	33.570	CC
Becker Ranch #5J-103 (PA) - Wellbore #1 - As Drilled	15,300.00	6,627.22	4,002.89	3,883.20	33.443	ES
Becker Ranch #5J-103 (PA) - Wellbore #1 - As Drilled	17,500.00	8,438.00	4,169.69	4,011.24	26.316	SF
Becker Ranch #5J-203 (PR) - Wellbore #1 - As-Drilled	15,316.59	6,941.72	4,292.02	4,170.02	35.179	CC
Becker Ranch #5J-203 (PR) - Wellbore #1 - As-Drilled	15,394.36	6,956.00	4,292.61	4,169.81	34.956	ES
Becker Ranch #5J-203 (PR) - Wellbore #1 - As-Drilled	20,100.00	11,523.00	4,541.06	4,308.37	19.515	SF
Becker Ranch #5J-303 (PR) - Wellbore #1 - As Drilled	15,255.45	6,780.00	3,860.62	3,740.70	32.193	CC
Becker Ranch #5J-303 (PR) - Wellbore #1 - As Drilled	15,300.00	6,795.84	3,860.80	3,740.39	32.063	ES
Becker Ranch #5J-303 (PR) - Wellbore #1 - As Drilled	18,300.00	18,300.00	4,077.28	3,752.36	12.549	SF
Becker Ranch #5J-323 (PA) - Wellbore #1 - As Drilled	15,415.95	7,002.00	4,608.07	4,485.22	37.510	CC
Becker Ranch #5J-323 (PA) - Wellbore #1 - As Drilled	18,900.00	18,900.00	4,805.23	4,460.79	13.951	ES, SF
Becker Ranch #5J-323R (PR) - Wellbore #1 - As-Drilled	15,483.99	7,116.06	4,728.95	4,604.78	38.085	CC
Becker Ranch #5J-323R (PR) - Wellbore #1 - As-Drilled	15,500.00	7,119.68	4,729.00	4,604.65	38.030	ES
Becker Ranch #5J-323R (PR) - Wellbore #1 - As-Drilled	20,216.94	11,390.00	4,973.93	4,740.62	21.319	SF
Becker Ranch #5J-343 (PR) - Wellbore #1 - As Drilled	15,400.50	7,070.34	3,617.11	3,494.43	29.485	CC
Becker Ranch #5J-343 (PR) - Wellbore #1 - As Drilled	16,400.00	16,400.00	3,702.22	3,471.04	16.014	ES
Becker Ranch #5J-343 (PR) - Wellbore #1 - As Drilled	18,200.00	18,200.00	3,793.22	3,472.79	11.838	SF
Becker Ranch #5M-203 (PR) - Wellbore #1 - As-Drilled	15,344.66	6,673.95	5,596.42	5,475.59	46.314	CC
Becker Ranch #5M-203 (PR) - Wellbore #1 - As-Drilled	17,700.00	17,700.00	5,707.85	5,400.81	18.590	ES, SF
Becker Ranch #5M-243 (PR) - Wellbore #1 - As-Drilled	15,102.48	6,377.00	4,994.88	4,878.23	42.820	CC
Becker Ranch #5M-243 (PR) - Wellbore #1 - As-Drilled	18,600.00	18,600.00	5,117.65	4,783.17	15.300	ES
Becker Ranch #5M-243 (PR) - Wellbore #1 - As-Drilled	19,700.00	19,700.00	5,189.38	4,820.35	14.062	SF
Becker Ranch #5M-303 (PR) - Wellbore #1 - As-Drilled	15,159.31	6,642.13	5,287.17	5,168.54	44.568	CC
Becker Ranch #5M-303 (PR) - Wellbore #1 - As-Drilled	15,200.00	6,646.77	5,287.32	5,168.28	44.418	ES
Becker Ranch #5M-303 (PR) - Wellbore #1 - As-Drilled	20,216.94	11,467.00	5,529.46	5,296.64	23.750	SF
Becker Ranch #5M-323 (PR) - Wellbore #1 - As-Drilled	15,400.86	6,878.00	6,018.75	5,896.76	49.338	CC
Becker Ranch #5M-323 (PR) - Wellbore #1 - As-Drilled	17,800.00	17,800.00	6,125.19	5,815.27	19.764	ES, SF
Becker Ranch #5M-423 (PR) - Wellbore #1 - As-Drilled	15,159.48	6,593.00	5,802.27	5,683.97	49.048	CC
Becker Ranch #5M-423 (PR) - Wellbore #1 - As-Drilled	18,600.00	18,600.00	5,961.03	5,625.46	17.764	ES, SF
Becker Ranch #5R-203 (PR) - Wellbore #1 - As-Drilled	15,409.41	6,847.69	6,964.73	6,842.56	57.007	CC
Becker Ranch #5R-203 (PR) - Wellbore #1 - As-Drilled	17,600.00	17,600.00	7,050.99	6,746.81	23.180	ES
Becker Ranch #5R-203 (PR) - Wellbore #1 - As-Drilled	19,400.00	19,400.00	7,127.14	6,763.94	19.623	SF
Becker Ranch #5R-243 (PR) - Wellbore #1 - As-Drilled	15,427.37	6,877.00	6,251.00	6,128.66	51.093	CC
Becker Ranch #5R-243 (PR) - Wellbore #1 - As-Drilled	17,400.00	17,400.00	6,346.14	6,048.46	21.319	ES
Becker Ranch #5R-243 (PR) - Wellbore #1 - As-Drilled	19,500.00	19,500.00	6,432.15	6,062.61	17.406	SF
Becker Ranch #5R-303 (PR) - Wellbore #1 - As-Drilled	15,408.39	6,888.23	6,749.46	6,627.09	55.158	CC
Becker Ranch #5R-303 (PR) - Wellbore #1 - As-Drilled	18,900.00	18,900.00	6,836.29	6,489.65	19.722	ES, SF

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

**Noble Energy**  
Anticollision Summary Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Johnson D06-766
<b>Project:</b>	Bronco	<b>TVD Reference:</b>	KB @ 4909.00ft
<b>Reference Site:</b>	C Section 30	<b>MD Reference:</b>	KB @ 4909.00ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Johnson D06-766	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
D Section 05						
Becker Ranch #5R-323 (PR) - Wellbore #1 - As-Drilled	15,329.24	6,775.67	7,169.31	7,048.40	59.296	CC
Becker Ranch #5R-323 (PR) - Wellbore #1 - As-Drilled	16,300.00	16,300.00	7,193.28	6,954.87	30.171	ES, SF
Becker Ranch #5R-443 (PR) - Wellbore #1 - As-Drilled	15,244.58	6,729.00	6,407.32	6,287.53	53.491	CC
Becker Ranch #5R-443 (PR) - Wellbore #1 - As-Drilled	17,200.00	17,200.00	6,485.20	6,202.36	22.929	ES, SF
Becker Ranch #5U-243 (PR) - Wellbore #1 - As-Drilled	15,336.50	6,708.00	7,531.99	7,411.32	62.420	CC
Becker Ranch #5U-243 (PR) - Wellbore #1 - As-Drilled	18,400.00	18,400.00	7,669.60	7,337.86	23.120	ES
Becker Ranch #5U-243 (PR) - Wellbore #1 - As-Drilled	19,700.00	19,700.00	7,718.15	7,345.36	20.704	SF
Becker Ranch #5U-303 (PR) - Wellbore #1 - As-Drilled	15,409.14	6,947.00	7,889.02	7,766.46	64.368	CC, ES
Becker Ranch #5U-303 (PR) - Wellbore #1 - As-Drilled	20,216.94	11,347.00	8,151.98	7,917.64	34.787	SF
Becker Ranch #5U-443 (PR) - Wellbore #1 - As-Drilled	15,309.34	6,842.00	7,745.78	7,624.76	64.000	CC
Becker Ranch #5U-443 (PR) - Wellbore #1 - As-Drilled	17,200.00	17,200.00	7,812.00	7,533.51	28.052	ES
Becker Ranch #5U-443 (PR) - Wellbore #1 - As-Drilled	19,000.00	19,000.00	7,898.40	7,550.37	22.694	SF
LDS D08-18D (SI) - Wellbore #1 - MWD Surveys	18,900.00	18,900.00	6,309.27	6,114.07	32.322	SF
LDS D08-18D (SI) - Wellbore #1 - MWD Surveys	20,216.94	7,237.98	5,937.99	5,758.39	33.063	CC, ES
LDS D08-28D (SI) - Wellbore #1 - MWD Surveys	19,955.76	6,966.30	5,464.34	5,293.18	31.925	CC
LDS D08-28D (SI) - Wellbore #1 - MWD Surveys	20,000.00	6,965.50	5,464.52	5,292.91	31.843	ES
LDS D08-28D (SI) - Wellbore #1 - MWD Surveys	20,216.94	6,961.54	5,470.58	5,296.88	31.495	SF
LDS D08-29 (SI) - Wellbore #1 - Gyro Surveys	20,023.79	6,782.17	4,339.18	4,168.72	25.456	CC
LDS D08-29 (SI) - Wellbore #1 - Gyro Surveys	20,100.00	6,781.93	4,339.85	4,168.63	25.347	ES
LDS D08-29 (SI) - Wellbore #1 - Gyro Surveys	20,216.94	6,781.56	4,343.47	4,171.18	25.209	SF
LDS D08-30D (SI) - Wellbore #1 - MWD Surveys	20,134.89	7,024.93	2,935.12	2,761.48	16.904	CC, ES
LDS D08-30D (SI) - Wellbore #1 - MWD Surveys	20,216.94	7,026.90	2,936.26	2,761.90	16.840	SF



# Noble Energy

## Anticollision Summary Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Johnson D06-766
<b>Project:</b>	Bronco	<b>TVD Reference:</b>	KB @ 4909.00ft
<b>Reference Site:</b>	C Section 30	<b>MD Reference:</b>	KB @ 4909.00ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Johnson D06-766	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
D Section 06						
AMEN PC D #06-18D(PR) - Wellbore #1 - MWD Surveys	16,397.99	7,083.83	435.34	292.72	3.053	CC, ES
AMEN PC D #06-18D(PR) - Wellbore #1 - MWD Surveys	16,400.00	7,083.85	435.34	292.72	3.052	SF
Amen PC D06-29 - Wellbore #1 - Wellbore #1 - As Drilled	15,436.64	6,855.29	1,019.83	897.39	8.329	CC, ES
Amen PC D06-29 - Wellbore #1 - Wellbore #1 - As Drilled	15,500.00	6,855.29	1,021.29	898.14	8.293	SF
FARAMIER FARMS #6-1(PA) - Wellbore #1 - Gyro Surve	19,869.92	6,849.15	1,365.82	1,196.78	8.080	CC, ES
FARAMIER FARMS #6-1(PA) - Wellbore #1 - Gyro Surve	19,900.00	6,849.10	1,366.15	1,196.80	8.067	SF
FARAMIR FARMS #6-2(PA) - Wellbore #1 - No Surveys	17,188.12	6,860.00	1,495.65	1,318.77	8.456	CC
FARAMIR FARMS #6-2(PA) - Wellbore #1 - No Surveys	17,200.00	6,860.00	1,495.70	1,318.69	8.450	ES
FARAMIR FARMS #6-2(PA) - Wellbore #1 - No Surveys	17,300.00	6,860.00	1,499.83	1,321.98	8.433	SF
FARAMIR FARMS #6-21(PR) - Wellbore #1 - No Surveys	15,904.94	6,845.00	272.46	109.13	1.668	CC, ES, SF
FARAMIR FARMS #6-22(PA) - Wellbore #1 - No Surveys	16,024.70	6,867.00	1,692.40	1,527.62	10.271	CC, ES
FARAMIR FARMS #6-22(PA) - Wellbore #1 - No Surveys	16,100.00	6,867.00	1,694.07	1,528.55	10.235	SF
FARAMIR FARMS #6-3(PA) - Wellbore #1 - Gyro Surveys	17,196.13	6,844.67	218.85	78.06	1.554	CC
FARAMIR FARMS #6-3(PA) - Wellbore #1 - Gyro Surveys	17,200.00	6,844.67	218.89	78.05	1.554	ES, SF
FARAMIR FARMS #6-32(PA) - Wellbore #1 - Gyro Surve	18,738.48	6,879.71	1,606.34	1,449.23	10.224	CC, ES
FARAMIR FARMS #6-32(PA) - Wellbore #1 - Gyro Surve	18,800.00	6,879.94	1,607.52	1,449.80	10.192	SF
FARAMIR FARMS #6-34(PR) - Wellbore #1 - No Surveys	19,759.39	6,835.00	263.86	60.11	1.295	Level 3, CC, ES, SF
FARAMIR FARMS #6-4(SI) - Wellbore #1 - No Surveys	18,451.27	6,837.00	300.35	110.40	1.581	CC, ES, SF
HILL #6-35(PA) - Wellbore #1 - Gyro Surveys	19,162.66	6,866.92	1,129.54	968.02	6.993	CC, ES
HILL #6-35(PA) - Wellbore #1 - Gyro Surveys	19,200.00	6,866.56	1,130.16	968.26	6.981	SF
HOFF #6-15(PR) - Wellbore #1 - No Surveys	16,326.20	6,819.00	1,655.83	1,488.33	9.886	CC, ES
HOFF #6-15(PR) - Wellbore #1 - No Surveys	16,400.00	6,819.00	1,657.48	1,489.37	9.859	SF
HOFF PC D #06-21(PR) - Wellbore #1 - No Surveys	17,884.23	6,838.00	257.31	73.31	1.398	Level 3, CC, ES, SF
Hoff PC D #06-27(SI) - Wellbore #1 - No Surveys	15,327.64	6,849.34	1,906.21	1,748.97	12.123	CC, ES
Hoff PC D #06-27(SI) - Wellbore #1 - No Surveys	15,400.00	6,848.64	1,907.59	1,749.83	12.092	SF
Hoff PC D06-28D - Wellbore #1 - Wellbore #1 - As Drilled	15,285.72	7,035.70	180.50	58.34	1.478	Level 3, CC, ES, SF
HORST #6-25(PA) - Wellbore #1 - No Surveys	16,390.25	6,857.00	810.79	642.29	4.812	CC
HORST #6-25(PA) - Wellbore #1 - No Surveys	16,400.00	6,857.00	810.85	642.24	4.809	ES, SF
MCKENNEY #5(SI) - Wellbore #1 - No Surveys	18,846.57	6,796.00	1,540.76	1,346.99	7.952	CC, ES
MCKENNEY #5(SI) - Wellbore #1 - No Surveys	18,900.00	6,796.00	1,541.68	1,347.48	7.938	SF
MCKENNEY #6-1(PA) - Wellbore #1 - Gyro Surveys	19,386.02	6,829.35	2,015.93	1,852.01	12.299	CC
MCKENNEY #6-1(PA) - Wellbore #1 - Gyro Surveys	19,400.00	6,829.23	2,015.97	1,851.93	12.289	ES
MCKENNEY #6-1(PA) - Wellbore #1 - Gyro Surveys	19,500.00	6,828.33	2,019.14	1,854.33	12.251	SF
MCKENNEY #6-12(SI) - Wellbore #1 - No Surveys	15,713.97	6,827.00	1,130.60	969.41	7.014	CC, ES
MCKENNEY #6-12(SI) - Wellbore #1 - No Surveys	15,800.00	6,827.00	1,133.87	972.15	7.012	SF
MCKENNEY #6-13(SI) - Wellbore #1 - No Surveys	17,013.68	6,812.00	979.96	805.33	5.612	CC, ES, SF
MCKENNEY #6-14(SI) - Wellbore #1 - No Surveys	16,995.83	6,809.00	2,293.22	2,118.80	13.148	CC
MCKENNEY #6-14(SI) - Wellbore #1 - No Surveys	17,000.00	6,809.00	2,293.22	2,118.76	13.145	ES
MCKENNEY #6-14(SI) - Wellbore #1 - No Surveys	17,200.00	6,809.00	2,302.29	2,126.28	13.081	SF
MCKENNEY #6-2(PA) - Wellbore #1 - Gyro Surveys	15,995.93	6,811.30	1,907.04	1,778.94	14.888	CC
MCKENNEY #6-2(PA) - Wellbore #1 - Gyro Surveys	16,000.00	6,811.27	1,907.04	1,778.91	14.883	ES
MCKENNEY #6-2(PA) - Wellbore #1 - Gyro Surveys	16,200.00	6,810.03	1,917.92	1,788.42	14.810	SF
MCKENNEY #6-42(PR) - Wellbore #1 - No Surveys	18,481.59	6,813.00	852.92	662.85	4.487	CC, ES
MCKENNEY #6-42(PR) - Wellbore #1 - No Surveys	18,500.00	6,813.00	853.11	662.91	4.485	SF
MCKENNEY #6-43(PR) - Wellbore #1 - No Surveys	19,803.61	6,811.00	1,129.73	925.72	5.538	CC, ES, SF
McKenney 06-01 - Wellbore #1 - Wellbore #1- As Drilled	19,382.70	6,830.63	2,114.95	1,951.07	12.905	CC
McKenney 06-01 - Wellbore #1 - Wellbore #1- As Drilled	19,400.00	6,830.47	2,115.03	1,950.98	12.893	ES
McKenney 06-01 - Wellbore #1 - Wellbore #1- As Drilled	19,500.00	6,829.59	2,118.20	1,953.37	12.851	SF
McKENNEY 6-3(PA) - Wellbore #1 - Gyro Surveys	18,205.79	6,821.36	2,233.66	2,082.28	14.755	CC, ES
McKENNEY 6-3(PA) - Wellbore #1 - Gyro Surveys	18,400.00	6,817.72	2,242.08	2,089.26	14.671	SF
Shelton PC D06-32D(PR) - Wellbore #1 - MWD Surveys	17,775.03	7,331.76	2,044.46	1,893.48	13.542	CC
Shelton PC D06-32D(PR) - Wellbore #1 - MWD Surveys	17,800.00	7,331.66	2,044.61	1,893.39	13.521	ES
Shelton PC D06-32D(PR) - Wellbore #1 - MWD Surveys	18,000.00	7,330.82	2,056.80	1,903.94	13.456	SF

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

# Noble Energy

## Anticollision Summary Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Johnson D06-766
<b>Project:</b>	Bronco	<b>TVD Reference:</b>	KB @ 4909.00ft
<b>Reference Site:</b>	C Section 30	<b>MD Reference:</b>	KB @ 4909.00ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Johnson D06-766	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
D Section 06						
SMITH PC D #06-20D(PR) - Wellbore #1 - No Surveys	17,886.99	6,839.00	207.42	23.39	1.127	Level 2, CC, ES, SF
D Section 07						
Dechant 07-01-17 (PR) - Dechant 07-01-17 - Dechant 07	20,216.94	6,824.20	1,668.75	1,498.68	9.812	CC, ES, SF
Dechant 07-11 (PA) - Dechant 07-11 - Dechant 07-11 - As	20,216.94	6,805.96	2,438.02	2,271.16	14.611	CC, ES, SF
Dechant 07-13 (SI) - Dechant 07-13 - Dechant 07-13 - As	20,216.94	6,850.90	2,379.85	2,277.45	23.241	CC, ES, SF
Dechant 07-14 (SI) - Dechant 07-14 - Dechant 07-14 - As	20,216.94	6,801.81	3,286.27	3,148.08	23.781	CC, ES, SF
Dechant 07-15 (PR) - Dechant 07-15 - Dechant 07-15 - A	20,216.94	6,964.61	2,161.74	2,025.73	15.894	CC, ES, SF
Dechant 18-07 (PR) - Dechant 18-07 - Dechant 18-07 - A	20,216.94	6,835.26	1,613.40	1,518.68	17.032	CC, ES, SF
Dechant D07-09 (TA) - Dechant D07-09 - Dechant D07-0	20,216.94	6,768.87	4,187.04	4,070.21	35.838	CC, ES, SF
Dechant D07-10 (TA) - Dechant D07-10 - Dechant D07-1	20,216.94	6,998.76	3,800.87	3,713.49	43.498	CC, ES, SF
Dechant D07-11 (PR) - Dechant D07-11 - Dechant D07-1	20,216.94	6,968.18	3,477.05	3,419.07	59.967	CC, ES, SF
Dechant D07-12 (PR) - Dechant D07-12 - Dechant D07-1	20,216.94	6,846.96	3,897.61	3,812.39	45.736	CC, ES, SF
Dechant D07-13 (PR) - Dechant D07-13 - Dechant D07-1	20,216.94	6,905.92	4,938.58	4,868.20	70.174	CC, ES, SF
Dechant D07-14 (PA) - Dechant D07-14 - Dechant D07-1	20,216.94	7,024.49	4,769.25	4,711.67	82.829	CC, ES, SF
Dechant D07-15 (SI) - Dechant D07-15 - Dechant D07-15	20,216.94	6,906.09	5,033.22	4,962.72	71.392	CC, ES, SF
Dechant D07-16 (TA) - Dechant D07-16 - Dechant D07-1	20,216.94	6,774.23	5,403.76	5,300.17	52.166	CC, ES, SF
Dechant D07-20 (SI) - Dechant D07-20 - Dechant D07-20	20,216.94	6,884.60	3,100.38	3,028.56	43.165	CC, ES, SF
Dechant D07-21 (SI) - Dechant D07-21 - Dechant D07-21	20,216.94	6,832.18	3,085.48	3,017.68	45.504	CC, ES, SF
Dechant D07-22 (SI) - Dechant D07-22 - Dechant D07-22	20,216.94	7,055.35	3,380.40	3,270.22	30.682	CC, ES, SF
Dechant D07-23 (TA) - Dechant D07-23 - Dechant D07-2	20,216.94	6,863.32	4,715.44	4,624.04	51.594	CC, ES, SF
Dechant D07-24 (PR) - Dechant D07-24 - Dechant D07-2	20,216.94	7,011.67	4,176.18	4,112.40	65.477	CC, ES, SF
Dechant D07-25 (SI) - Dechant D07-25 - Dechant D07-25	20,216.94	6,846.58	4,183.26	4,120.36	66.501	CC, ES, SF
Dechant D07-32 (SI) - Dechant D07-32 - Dechant D07-32	20,216.94	6,880.31	3,537.30	3,432.92	33.888	CC, ES, SF
Dechant D07-33 (SI) - Dechant D07-33 - Dechant D07-33	20,216.94	6,945.56	4,625.23	4,533.71	50.536	CC, ES, SF
Dechant D18-27D (PR) - Dechant D18-27D OH - As-Drill	20,216.94	7,357.32	5,757.04	5,662.39	60.825	CC, ES, SF
Dechant D18-27D (PR) - Gyros - Gyro Surveys	20,216.94	7,349.15	5,762.72	5,628.13	42.818	CC, ES, SF
Dechant D18-30D (SI) - Dechant D18-30D OH - As-Drille	20,216.94	7,396.27	5,822.42	5,729.50	62.658	CC, ES, SF
Dechant D18-30D (SI) - Gyros - Gyro Surveys	20,216.94	7,299.07	5,836.96	5,707.32	45.025	CC, ES, SF
HSR Barbour 04-07 (SI) - HSR Barbour 04-07 - HSR Bar	20,216.94	6,864.87	1,582.87	1,425.32	10.047	CC, ES, SF
HSR Parkman 06-07 (PR) - HSR Parkman 06-07 - HSR P	20,216.94	6,803.99	2,394.43	2,333.17	39.084	CC, ES, SF
HSR Petrie 03-07 (SI) - HSR Petrie 03-07 - As-Drilled	20,216.94	6,839.92	817.45	720.49	8.431	CC, ES, SF
HSR Safran 05-07 (SI) - HSR Safran 05-07 - HSR Safran	20,216.94	6,902.22	2,828.25	2,717.36	25.505	CC, ES, SF
Two E Ranch 07-01 (SI) - Two E Ranch 07-01 - Two E Ra	20,216.94	6,853.52	1,394.16	1,249.91	9.665	CC, ES, SF
Two E Ranches 1 (PA) - Two E Ranches 1 - No Surveys	20,216.94	4,625.00	3,301.49	3,150.48	21.863	CC, ES, SF

# Noble Energy

## Anticollision Summary Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Johnson D06-766
<b>Project:</b>	Bronco	<b>TVD Reference:</b>	KB @ 4909.00ft
<b>Reference Site:</b>	C Section 30	<b>MD Reference:</b>	KB @ 4909.00ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Johnson D06-766	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
D Section 08						
HSR-Alvin Dechant 12-08 (SI) - Wellbore #1 - Gyro Surve	20,216.94	6,779.44	5,071.21	4,929.70	35.837	CC, ES, SF
HSR-Alvin Dechant 13-08 (SI) - Wellbore #1 - Gyro Surve	20,216.94	6,642.05	6,142.92	6,021.96	50.787	CC, ES, SF
HSR-LDS #14-8(SI) - Wellbore #1 - Gyro Surveys	20,216.94	6,759.26	6,530.36	6,390.01	46.529	CC, ES, SF
HSR-LDS #15-8(SI) - Wellbore #1 - Gyro Surveys	20,216.94	6,755.87	7,834.80	7,686.92	52.978	CC, ES, SF
HSR-LDS #16-8(SI) - Wellbore #1 - Gyro Surveys	20,216.94	6,754.76	8,998.63	8,835.17	55.048	CC, ES, SF
HSR-LDS #3-8(SI) - Wellbore #1 - Gyro Surveys	20,216.94	6,900.00	4,855.72	4,683.76	28.239	CC, ES, SF
HSR-LDS #4-8(SI) - Wellbore 1 - Gyro Surveys	20,216.94	6,863.73	3,861.69	3,692.45	22.818	CC, ES, SF
HSR-LDS #5-8(SI) - Wellbore #1 - Gyro Surveys	20,216.94	6,774.81	4,187.00	4,032.27	27.060	CC, ES, SF
HSR-LDS #6-8(SI) - Wellbore #1 - Gyro Surveys	20,216.94	6,840.05	5,313.46	5,149.70	32.447	CC, ES, SF
HSR-LDS #9-8(SI) - Wellbore #1 - Gyro Surveys	20,216.94	6,630.10	8,297.54	8,134.50	50.892	CC, ES, SF
HSR-LDS A #10-8(SI) - Wellbore #1 - Gyro Surveys	20,216.94	6,754.50	7,263.65	7,106.37	46.184	CC, ES, SF
HSR-LDS A #11-8(SI) - Wellbore #1 - Gyro Surveys	20,216.94	6,756.19	5,990.19	5,838.99	39.619	CC, ES, SF
LDS #18-8(SI) - Wellbore #1 - Gyro Surveys	20,216.94	6,815.22	4,566.77	4,400.70	27.499	CC, ES, SF
LDS #20-8(SI) - Wellbore #1 - No Surveys	20,216.94	6,751.75	8,115.21	7,840.01	29.488	CC, ES, SF
LDS D #09-30(SI) - Wellbore #1 - As-Drilled	20,216.94	6,756.30	8,136.55	7,870.88	30.626	CC, ES, SF
LDS D #09-31D(SI) - Wellbore #1 - Gyro Surveys	20,216.94	6,917.43	8,334.19	8,136.97	42.257	CC, ES, SF
RUBY RED #D #8-1D(PA) - Wellbore #1 - Gyro Surveys	20,216.94	6,785.43	7,365.14	7,193.43	42.893	CC, ES, SF
RUBY RED #D 8-7(PR) - Wellbore #1 - Gyro Surveys	20,216.94	6,752.06	6,555.84	6,389.43	39.396	CC, ES, SF
RUBY RED #D 8-8(PR) - Wellbore #1 - Gyro Surveys	20,216.94	6,714.60	8,129.86	7,961.23	48.209	CC, ES, SF
RUBY RED D8-2(PA) - Wellbore #1 - Gyro Surveys	20,216.94	6,751.75	6,135.18	5,963.04	35.641	CC, ES, SF
TWO E RANCHES #1(PA) - Wellbore #1 - Gyro Surveys	20,216.94	6,682.69	5,538.40	5,399.77	39.950	CC, ES, SF

# Noble Energy

## Anticollision Summary Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Johnson D06-766
<b>Project:</b>	Bronco	<b>TVD Reference:</b>	KB @ 4909.00ft
<b>Reference Site:</b>	C Section 30	<b>MD Reference:</b>	KB @ 4909.00ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Johnson D06-766	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
D Section 19						
Butterball 13-19 - Butterball 13-19 - Butterball 13-19 - As						Out of range
Butterball 14-19 - Butterball 14-19 - Butterball 14-19 - As						Out of range
Butterball 23-19 - Butterball 23-19 - Butterball 23-19 - As						Out of range
Butterball B04-19 - Butterball B04-19 - Butterball B04-19						Out of range
Butterball D18-75HN - Original Drilling - Original Drilling -	20,216.94	12,107.00	5,361.07	5,294.28	80.264	CC, ES, SF
Butterball D19-17D (TA) - Butterball D19-17D OH - As-Dr						Out of range
Butterball D19-17D (TA) - Gyros - Gyro Surveys						Out of range
Butterball D19-18D (TA) - Butterball D19-18D OH - As-Dr						Out of range
Butterball D19-18D (TA) - Gyros - Gyro Surveys						Out of range
Butterball D19-19D (TA) - Butterball D19-19D - Butterball						Out of range
Butterball D19-20D (TA) - Butterball D19-20D OH - Butter						Out of range
Butterball D19-20D (TA) - Gyros - Gyro Surveys						Out of range
Butterball D19-22D (TA) - Gyros - Gyro Surveys						Out of range
Butterball D19-75HN - Original Drilling - Original Drilling -						Out of range
Butterball D24-19 - Butterball D24-19 - Butterball D24-19						Out of range
Butterball H24-69HN - Original Drilling - Original Drilling -						Out of range
Champlin 366 Amoco F 1 - Wellbore #1 - Wellbore #1 - A						Out of range
Dechant D19-32D (TA) - Dechant D19-32D OH - As-Drille						Out of range
Dechant D19-32D (TA) - Gyros - Gyro Surveys						Out of range
Graznak 01-19 - Graznak 01-19 - Graznak 01-19 - As Dri						Out of range
Higgins D19-720 - Original Drilling - Original Drilling - As						Out of range
Higgins D19-720 - Sidetrack Curve/Horizontal - ST01 - A						Out of range
Independence D18-717 - Independence D18-717 OH - A	20,216.94	17,553.00	2,754.75	2,515.42	11.511	CC, ES, SF
Independence D18-725 - Independence D18-725 OH - A	20,216.94	17,478.00	2,015.66	1,778.09	8.485	CC, ES, SF
Independence D18-732 - Independence D18-732 OH - A	20,216.94	17,489.00	1,336.84	1,104.87	5.763	CC, ES, SF
Independence D18-739 - Independence D18-739 OH - A	20,216.94	17,546.00	649.60	457.13	3.375	CC, ES, SF
Independence D18-744 - Independence D18-744 OH - A	20,216.94	17,673.00	459.76	327.67	3.481	CC, ES, SF
Independence D18-759 - Independence D18-759 - As-Dr	20,216.94	17,458.00	1,039.60	817.89	4.689	CC, ES, SF
Independence D18-767 - Independence D18-767 - As-Dr	20,216.94	17,428.03	1,753.02	1,518.60	7.478	CC, ES, SF
Independence D30-711 - Independence D30-711 OH - As						Out of range
Independence D30-718 - Independence D30-718 OH - A						Out of range
Independence D30-724 - Independence D30-724 OH - A						Out of range
Independence D30-731 - Independence D30-731 OH - A						Out of range
Independence D30-737 - Independence D30-737 OH - A						Out of range
Independence D30-743 - Independence D30-743 OH - A						Out of range
Independence D30-758 - Independence D30-758 OH - A						Out of range
Independence D30-765 - Independence D30-765 OH - A						Out of range
Independence D30-770 - Independence D30-770 OH - A						Out of range
Independence D30-777 - Independence D30-777 - As-Dr						Out of range
Independence State D30-784 - Independence State D30-						Out of range
LDS White D19-10 - LDS White D19-10 - LDS White D19						Out of range
LDS White D19-15 - LDS White D19-15 - LDS White D19						Out of range
LDS White D19-16 - Wellbore #1 - Wellbore #1 - As Drille						Out of range
Mile High 02-19 - Wellbore #1 - Wellbore #1 - As Drilled						Out of range
Sean D19-09 - Wellbore #1 - Wellbore #1 - As Drilled						Out of range
Turk Blue D19-02J - Turk Blue D19-02J - Turk Blue D19-						Out of range
Turk Blue D19-04 - Turk Blue D19-04 - Turk Blue D19-04						Out of range
Turk Blue D19-05 - Turk Blue D19-05 - Turk Blue D19-05						Out of range
Turk Blue D19-06 - Turk Blue D19-06 - Turk Blue D19-06						Out of range
Turk White D19-01 - Wellbore #1 - Wellbore #1 - As Drille						Out of range
Turk White D19-02 - Wellbore #1 - Wellbore #1 - As Drille						Out of range
Turk White D19-08 - Wellbore #1 - Wellbore #1 - As Drille						Out of range

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



# Noble Energy

## Anticollision Summary Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Johnson D06-766
<b>Project:</b>	Bronco	<b>TVD Reference:</b>	KB @ 4909.00ft
<b>Reference Site:</b>	C Section 30	<b>MD Reference:</b>	KB @ 4909.00ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Johnson D06-766	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
G Section 25						
CPC Pluss 25-01 - Wellbore #1 - Wellbore #1 - As Drilled	5,012.27	4,400.01	3,494.85	3,461.83	105.818	CC, ES
CPC Pluss 25-01 - Wellbore #1 - Wellbore #1 - As Drilled	5,600.00	4,400.01	3,543.93	3,509.45	102.804	SF
Heartland C30-79-1HN - Original Drilling - Original Drilling	8,118.25	8,177.53	1,907.27	1,850.44	33.562	CC, ES
Heartland C30-79-1HN - Original Drilling - Original Drilling	9,900.00	6,806.85	2,017.20	1,951.81	30.848	SF
Heartland C30-79HN - Original Drilling - Original Drilling	7,458.90	8,834.00	2,250.34	2,193.76	39.771	CC, ES
Heartland C30-79HN - Original Drilling - Original Drilling	10,000.00	6,729.00	2,360.50	2,295.06	36.072	SF
Heartland C31-78-1HN - Original Drilling - Original Drilling	14,544.46	11,467.39	1,354.66	1,174.82	7.532	CC
Heartland C31-78-1HN - Original Drilling - Original Drilling	15,100.00	11,987.00	1,365.54	1,171.35	7.032	ES, SF
Heartland G25-72-1HN - Original Drilling - Original Drilling	7,350.00	8,976.03	2,544.24	2,474.11	36.277	ES
Heartland G25-72-1HN - Original Drilling - Original Drilling	7,350.89	8,975.48	2,544.24	2,474.11	36.280	CC
Heartland G25-72-1HN - Original Drilling - Original Drilling	8,800.00	8,800.00	2,563.32	2,490.11	35.010	SF
Heartland State C31-79-1HN - Original Drilling - Original	15,085.06	11,911.00	1,770.98	1,580.20	9.282	CC
Heartland State C31-79-1HN - Original Drilling - Original	15,100.00	11,911.00	1,771.05	1,580.16	9.278	ES, SF
Heartland State G36-75-1HN - Original Drilling - Original	9,616.75	6,034.81	4,341.94	4,280.36	70.509	CC, ES
Heartland State G36-75-1HN - Original Drilling - Original	16,000.00	12,323.00	4,575.61	4,372.73	22.553	SF
Heartland State H01-73-1HN - Original Drilling - Original	20,216.94	17,367.77	3,028.87	2,787.22	12.534	CC, ES, SF
Heartland State H01-74-1HN - Original Drilling - Original	12,633.06	9,779.17	3,833.94	3,727.58	36.045	CC
Heartland State H01-74-1HN - Original Drilling - Original	12,700.00	9,791.18	3,834.42	3,727.12	35.735	ES
Heartland State H01-74-1HN - Original Drilling - Original	13,800.00	13,800.00	3,895.53	3,750.40	26.841	SF
Heartland State H01-74-1HN - Original Drilling - ST01 - S	19,300.00	19,300.00	3,708.89	3,462.82	15.072	SF
Heartland State H01-74-1HN - Original Drilling - ST01 - S	20,084.76	17,110.00	3,673.11	3,435.83	15.480	CC
Heartland State H01-74-1HN - Original Drilling - ST01 - S	20,216.94	17,200.00	3,673.52	3,434.05	15.341	ES
Ocoma G25-09 - Wellbore #1 - Wellbore #1 - As Drilled	7,890.17	6,893.91	2,720.38	2,668.19	52.124	CC
Ocoma G25-09 - Wellbore #1 - Wellbore #1 - As Drilled	7,900.00	6,893.89	2,720.40	2,668.15	52.068	ES
Ocoma G25-09 - Wellbore #1 - Wellbore #1 - As Drilled	8,800.00	6,891.98	2,868.49	2,810.27	49.264	SF
Ocoma G25-16 - Wellbore #1 - Wellbore #1 - As Drilled	9,124.27	6,904.64	2,723.39	2,663.00	45.101	CC, ES
Ocoma G25-16 - Wellbore #1 - Wellbore #1 - As Drilled	10,000.00	6,883.43	2,860.64	2,792.95	42.265	SF
Ocoma G25-23 - Wellbore #1 - Wellbore #1 - As Drilled	8,504.64	6,879.34	3,505.96	3,450.21	62.886	CC, ES
Ocoma G25-23 - Wellbore #1 - Wellbore #1 - As Drilled	9,900.00	6,886.96	3,773.43	3,706.98	56.786	SF
Pluss G25-08 - Wellbore #1 - Wellbore #1 - As Drilled	6,931.07	6,678.19	2,835.06	2,786.92	58.893	CC
Pluss G25-08 - Wellbore #1 - Wellbore #1 - As Drilled	6,950.00	6,690.37	2,835.16	2,786.90	58.754	ES
Pluss G25-08 - Wellbore #1 - Wellbore #1 - As Drilled	7,350.00	6,872.94	2,888.08	2,837.66	57.288	SF
Shelton G25-22 - Wellbore #1 - Wellbore #1 - As Drilled	7,165.54	6,773.19	3,531.15	3,481.97	71.801	CC, ES
Shelton G25-22 - Wellbore #1 - Wellbore #1 - As Drilled	8,500.00	6,820.20	3,844.67	3,788.74	68.741	SF
Shelton G25-75HN - Original Drilling - Original Drilling - A	7,325.48	8,915.36	4,745.55	4,675.10	67.353	CC
Shelton G25-75HN - Original Drilling - Original Drilling - A	8,900.00	10,540.00	4,767.24	4,662.17	45.370	ES
Shelton G25-75HN - Original Drilling - Original Drilling - A	10,500.00	11,061.00	4,926.89	4,800.74	39.056	SF
Shelton PC G24-74-1HN - Original Drilling - Original Drilling	6,577.64	6,404.38	4,518.88	4,471.58	95.550	CC, ES
Shelton PC G24-74-1HN - Original Drilling - Original Drilling	6,950.00	6,483.00	4,588.54	4,539.40	93.382	SF
Shelton PC G24-75HN - Original Drilling - Original Drilling	6,604.97	6,341.00	5,313.98	5,269.95	120.701	CC, ES
Shelton PC G24-75HN - Original Drilling - Original Drilling	7,150.00	6,436.00	5,433.99	5,387.54	116.982	SF
Shelton PC G25-74-1HN - Original Drilling - Original Drilling	7,387.56	9,453.87	3,835.40	3,761.19	51.680	CC
Shelton PC G25-74-1HN - Original Drilling - Original Drilling	9,343.95	11,438.02	3,838.32	3,719.62	32.337	ES
Shelton PC G25-74-1HN - Original Drilling - Original Drilling	9,900.00	11,438.02	3,878.39	3,756.63	31.852	SF

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

# Noble Energy

## Anticollision Summary Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Johnson D06-766
<b>Project:</b>	Bronco	<b>TVD Reference:</b>	KB @ 4909.00ft
<b>Reference Site:</b>	C Section 30	<b>MD Reference:</b>	KB @ 4909.00ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Johnson D06-766	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
G Section 36						
Gerrity State G36-01 - Wellbore #1 - Wellbore #1 - As Dri	10,506.01	7,000.01	2,838.95	2,766.39	39.129	CC, ES
Gerrity State G36-01 - Wellbore #1 - Wellbore #1 - As Dri	11,300.00	7,000.01	2,947.69	2,867.91	36.946	SF
Gerrity State G36-02 - Wellbore #1 - Wellbore #1 - As Dri	10,535.18	6,896.06	4,179.59	4,106.94	57.529	CC
Gerrity State G36-02 - Wellbore #1 - Wellbore #1 - As Dri	10,600.00	6,896.55	4,180.09	4,106.77	57.008	ES
Gerrity State G36-02 - Wellbore #1 - Wellbore #1 - As Dri	12,100.00	6,897.35	4,459.42	4,373.22	51.731	SF
Gerrity State G36-02 - Wellbore #1 - Wellbore #1 - As Dri	11,971.45	6,866.61	4,278.35	4,191.72	49.389	CC
Gerrity State G36-07 - Wellbore #1 - Wellbore #1 - As Dri	12,000.00	6,865.87	4,278.44	4,191.51	49.213	ES
Gerrity State G36-07 - Wellbore #1 - Wellbore #1 - As Dri	13,300.00	6,826.51	4,479.75	4,381.36	45.531	SF
Gerrity State G36-08 - Wellbore #1 - Wellbore #1 - As Dri	11,931.86	7,000.01	2,864.01	2,777.56	33.127	CC, ES
Gerrity State G36-08 - Wellbore #1 - Wellbore #1 - As Dri	12,600.00	7,000.01	2,940.92	2,848.21	31.724	SF
Gerrity State G36-09 - Wellbore #1 - Wellbore #1 - As Dri	13,266.92	6,881.70	2,931.68	2,831.84	29.363	CC
Gerrity State G36-09 - Wellbore #1 - Wellbore #1 - As Dri	13,300.00	6,881.73	2,931.87	2,831.64	29.252	ES
Gerrity State G36-09 - Wellbore #1 - Wellbore #1 - As Dri	13,900.00	6,882.25	2,999.26	2,893.55	28.374	SF
Gerrity State G36-10 - Wellbore #1 - Wellbore #1 - As Dri	13,233.65	6,878.47	4,170.89	4,071.44	41.941	CC
Gerrity State G36-10 - Wellbore #1 - Wellbore #1 - As Dri	13,300.00	6,877.87	4,171.42	4,071.23	41.634	ES
Gerrity State G36-10 - Wellbore #1 - Wellbore #1 - As Dri	14,300.00	6,868.60	4,305.04	4,195.83	39.422	SF
Gerrity State G36-15 - Wellbore #1 - Wellbore #1 - As Dri	14,518.29	6,775.11	4,204.30	4,091.76	37.358	CC
Gerrity State G36-15 - Wellbore #1 - Wellbore #1 - As Dri	14,600.00	6,774.48	4,205.09	4,091.63	37.060	ES
Gerrity State G36-15 - Wellbore #1 - Wellbore #1 - As Dri	15,600.00	6,767.07	4,336.53	4,214.42	35.511	SF
Gerrity State G36-16 - Wellbore #1 - Wellbore #1 - As Dri	14,509.59	6,912.18	2,849.48	2,736.69	25.263	CC, ES
Gerrity State G36-16 - Wellbore #1 - Wellbore #1 - As Dri	15,000.00	6,907.63	2,891.37	2,773.90	24.613	SF
Gerrity State G36-17 - Wellbore #1 - Wellbore #1 - As Dri	11,195.00	6,752.17	3,657.49	3,578.80	46.480	CC
Gerrity State G36-17 - Wellbore #1 - Wellbore #1 - As Dri	11,229.90	6,751.65	3,657.66	3,578.59	46.260	ES
Gerrity State G36-17 - Wellbore #1 - Wellbore #1 - As Dri	12,300.00	6,728.03	3,815.86	3,727.32	43.099	SF
Gerrity State G36-23 - Wellbore #1 - Wellbore #1 - As Dri	13,809.43	6,809.58	3,488.68	3,383.42	33.143	CC, ES
Gerrity State G36-23 - Wellbore #1 - Wellbore #1 - As Dri	14,600.00	6,800.01	3,577.10	3,464.62	31.800	SF
Mark State PC G36-79HN - Original Drilling - Original Dri	10,549.25	7,244.45	7,301.99	7,228.46	99.306	CC
Mark State PC G36-79HN - Original Drilling - Original Dri	14,700.00	11,313.02	7,336.48	7,164.67	42.701	ES
Mark State PC G36-79HN - Original Drilling - Original Dri	16,600.00	11,313.02	7,552.77	7,364.67	40.151	SF
Otis State G36-19 - Wellbore #1 - Wellbore #1 - As Drilled	10,939.02	6,916.24	6,308.27	6,231.71	82.397	CC
Otis State G36-19 - Wellbore #1 - Wellbore #1 - As Drilled	11,000.00	6,917.85	6,308.56	6,231.37	81.727	ES
Otis State G36-19 - Wellbore #1 - Wellbore #1 - As Drilled	17,000.00	17,000.00	8,688.14	8,540.12	58.694	SF
Pedro State C31-79HN - Wellbore #1 - Original Drilling	14,655.06	11,119.02	2,354.55	2,179.91	13.482	CC
Pedro State C31-79HN - Wellbore #1 - Original Drilling	14,700.00	11,119.02	2,354.98	2,179.85	13.447	ES
Pedro State C31-79HN - Wellbore #1 - Original Drilling	14,800.00	11,119.02	2,359.01	2,183.00	13.403	SF
Pedro State G36-18 - Wellbore #1 - Wellbore #1 - As Dril	11,204.09	6,910.53	4,740.65	4,661.51	59.897	CC
Pedro State G36-18 - Wellbore #1 - Wellbore #1 - As Dril	11,270.69	6,910.34	4,741.03	4,661.18	59.372	ES
Pedro State G36-18 - Wellbore #1 - Wellbore #1 - As Dril	12,900.00	6,893.51	5,028.07	4,934.00	53.450	SF
Pedro State G36-20 - Wellbore #1 - Wellbore #1 - As Dril	12,474.63	6,985.42	6,170.92	6,078.97	67.113	CC
Pedro State G36-20 - Wellbore #1 - Wellbore #1 - As Dril	12,500.00	6,985.60	6,170.97	6,078.75	66.913	ES
Pedro State G36-20 - Wellbore #1 - Wellbore #1 - As Dril	14,900.00	7,000.01	6,630.41	6,517.44	58.689	SF
Pedro State G36-21 - Wellbore #1 - Wellbore #1 - As Dril	12,485.03	6,941.75	4,787.12	4,695.20	52.078	CC
Pedro State G36-21 - Wellbore #1 - Wellbore #1 - As Dril	12,500.00	6,941.79	4,787.15	4,695.06	51.985	ES
Pedro State G36-21 - Wellbore #1 - Wellbore #1 - As Dril	14,000.00	6,945.54	5,021.12	4,915.66	47.613	SF
Pedro State G36-22 - Wellbore #1 - Wellbore #1 - As Dril	12,662.45	6,811.92	3,528.51	3,435.04	37.752	CC
Pedro State G36-22 - Wellbore #1 - Wellbore #1 - As Dril	12,700.00	6,811.05	3,528.71	3,434.82	37.584	ES
Pedro State G36-22 - Wellbore #1 - Wellbore #1 - As Dril	13,500.00	6,793.81	3,626.50	3,525.31	35.837	SF
Pedro State G36-24 - Wellbore #1 - Wellbore #1 - As Dril	13,871.74	6,954.03	4,763.23	4,657.03	44.849	CC
Pedro State G36-24 - Wellbore #1 - Wellbore #1 - As Dril	13,900.00	6,953.77	4,763.32	4,656.79	44.716	ES
Pedro State G36-24 - Wellbore #1 - Wellbore #1 - As Dril	15,200.00	6,943.30	4,944.95	4,826.82	41.863	SF
Pedro State H01-30D - Wellbore #1 - Wellbore #1 - As Dr	15,076.04	6,895.33	7,251.43	7,129.28	59.365	CC
Pedro State H01-30D - Wellbore #1 - Wellbore #1 - As Dr	15,200.00	6,895.07	7,252.49	7,128.84	58.653	ES
Pedro State H01-30D - Wellbore #1 - Wellbore #1 - As Dr	17,800.00	6,929.80	7,666.96	7,519.17	51.878	SF

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

# Noble Energy

## Anticollision Summary Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Johnson D06-766
<b>Project:</b>	Bronco	<b>TVD Reference:</b>	KB @ 4909.00ft
<b>Reference Site:</b>	C Section 30	<b>MD Reference:</b>	KB @ 4909.00ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Johnson D06-766	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
G Section 36						
Shelton G36-27 - Wellbore #1 - Wellbore #1 - As Drilled	9,523.46	6,882.34	3,249.18	3,185.60	51.104	CC, ES
Shelton G36-27 - Wellbore #1 - Wellbore #1 - As Drilled	10,600.00	6,885.14	3,422.87	3,350.04	46.998	SF
State 04 - Wellbore #1 - Wellbore #1 - As Drilled	13,838.36	6,923.66	6,089.40	5,983.61	57.562	CC
State 04 - Wellbore #1 - Wellbore #1 - As Drilled	13,900.00	6,921.60	6,089.71	5,983.25	57.199	ES
State 04 - Wellbore #1 - Wellbore #1 - As Drilled	16,000.00	6,873.35	6,443.13	6,318.79	51.820	SF
State R G36-03 - Wellbore #1 - Wellbore #1 - As Drilled	10,453.47	6,887.29	5,390.95	5,319.08	75.003	CC
State R G36-03 - Wellbore #1 - Wellbore #1 - As Drilled	10,500.00	6,887.85	5,391.15	5,318.81	74.518	ES
State R G36-03 - Wellbore #1 - Wellbore #1 - As Drilled	15,900.00	15,900.00	7,637.70	7,503.38	56.864	SF
State R G36-04 - Wellbore #1 - Wellbore #1 - As Drilled	10,504.83	6,796.40	6,853.71	6,781.58	95.026	CC
State R G36-04 - Wellbore #1 - Wellbore #1 - As Drilled	10,600.00	6,797.20	6,854.37	6,781.29	93.797	ES
State R G36-04 - Wellbore #1 - Wellbore #1 - As Drilled	14,000.00	6,800.54	7,682.49	7,581.20	75.846	SF
State R G36-05 - Wellbore #1 - Wellbore #1 - As Drilled	12,005.16	7,134.08	6,708.60	6,621.03	76.607	CC
State R G36-05 - Wellbore #1 - Wellbore #1 - As Drilled	12,100.00	7,135.76	6,709.27	6,620.69	75.739	ES
State R G36-05 - Wellbore #1 - Wellbore #1 - As Drilled	14,900.00	7,185.21	7,306.36	7,193.81	64.919	SF
State R G36-06 - Wellbore #1 - Wellbore #1 - As Drilled	11,801.08	6,853.37	5,483.72	5,398.84	64.602	CC
State R G36-06 - Wellbore #1 - Wellbore #1 - As Drilled	11,900.00	6,852.62	5,484.61	5,398.68	63.819	ES
State R G36-06 - Wellbore #1 - Wellbore #1 - As Drilled	13,900.00	6,835.64	5,871.65	5,768.58	56.966	SF
State R G36-11 - Wellbore #1 - Wellbore #1 - As Drilled	13,290.33	6,945.95	5,385.06	5,284.88	53.752	CC
State R G36-11 - Wellbore #1 - Wellbore #1 - As Drilled	13,300.00	6,945.84	5,385.07	5,284.78	53.695	ES
State R G36-11 - Wellbore #1 - Wellbore #1 - As Drilled	15,000.00	6,927.50	5,649.91	5,534.55	48.972	SF
State R G36-12 - Wellbore #1 - Wellbore #1 - As Drilled	13,184.72	7,012.88	6,707.08	6,607.77	67.542	CC
State R G36-12 - Wellbore #1 - Wellbore #1 - As Drilled	13,300.00	7,010.10	6,708.07	6,607.52	66.717	ES
State R G36-12 - Wellbore #1 - Wellbore #1 - As Drilled	15,900.00	7,056.35	7,220.82	7,098.23	58.902	SF
State R G36-13 - Wellbore #1 - Wellbore #1 - As Drilled	14,523.22	6,953.61	6,639.57	6,526.53	58.740	CC
State R G36-13 - Wellbore #1 - Wellbore #1 - As Drilled	14,600.00	6,954.73	6,640.01	6,526.12	58.303	ES
State R G36-13 - Wellbore #1 - Wellbore #1 - As Drilled	16,900.00	7,001.37	7,002.76	6,869.22	52.440	SF
State R G36-14 - Wellbore #1 - Wellbore #1 - As Drilled	14,477.74	6,800.01	5,461.91	5,349.75	48.694	CC
State R G36-14 - Wellbore #1 - Wellbore #1 - As Drilled	14,500.00	6,800.01	5,461.96	5,349.54	48.586	ES
State R G36-14 - Wellbore #1 - Wellbore #1 - As Drilled	16,200.00	6,781.75	5,701.62	5,574.60	44.886	SF

# Noble Energy

## Anticollision Summary Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Johnson D06-766
<b>Project:</b>	Bronco	<b>TVD Reference:</b>	KB @ 4909.00ft
<b>Reference Site:</b>	C Section 30	<b>MD Reference:</b>	KB @ 4909.00ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Johnson D06-766	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
H Section 01						
Collins 1-1 - Wellbore #1 - Wellbore #1 - As Drilled	15,853.04	6,918.17	2,882.50	2,755.52	22.701	CC
Collins 1-1 - Wellbore #1 - Wellbore #1 - As Drilled	15,900.00	6,918.43	2,882.88	2,755.40	22.615	ES
Collins 1-1 - Wellbore #1 - Wellbore #1 - As Drilled	16,300.00	6,920.71	2,916.95	2,786.27	22.321	SF
Houndskeeper 1-13 - Wellbore #1 - Wellbore #1 - As Drill	17,327.10	6,864.38	4,063.13	3,920.83	28.554	CC
Houndskeeper 1-13 - Wellbore #1 - Wellbore #1 - As Drill	17,400.00	6,863.48	4,063.79	3,920.72	28.405	ES
Houndskeeper 1-13 - Wellbore #1 - Wellbore #1 - As Drill	18,000.00	6,856.16	4,118.47	3,970.47	27.828	SF
Houndskeeper H01-17 - Wellbore #1 - Wellbore #1 - As D	16,694.57	6,850.91	3,273.50	3,137.80	24.122	CC
Houndskeeper H01-17 - Wellbore #1 - Wellbore #1 - As D	16,700.00	6,850.88	3,273.51	3,137.74	24.111	ES
Houndskeeper H01-17 - Wellbore #1 - Wellbore #1 - As D	17,200.00	6,848.59	3,312.29	3,172.37	23.672	SF
Houndskeeper H01-22 - Wellbore #1 - Wellbore #1 - As D	17,839.18	6,935.72	3,361.16	3,213.33	22.737	CC
Houndskeeper H01-22 - Wellbore #1 - Wellbore #1 - As D	17,900.00	6,936.02	3,361.71	3,213.24	22.642	ES
Houndskeeper H01-22 - Wellbore #1 - Wellbore #1 - As D	18,300.00	6,937.99	3,392.60	3,240.84	22.356	SF
Houndskeeper H01-27 - Wellbore #1 - Wellbore #1 - As D	15,243.00	6,937.54	3,636.10	3,511.74	29.239	CC
Houndskeeper H01-27 - Wellbore #1 - Wellbore #1 - As D	15,300.00	6,936.66	3,636.54	3,511.43	29.065	ES
Houndskeeper H01-27 - Wellbore #1 - Wellbore #1 - As D	16,100.00	6,931.32	3,713.42	3,580.22	27.880	SF
Houndskeeper H01-28 - Wellbore #1 - Wellbore #1 - As D	15,257.93	6,835.79	4,719.92	4,596.89	38.365	CC
Houndskeeper H01-28 - Wellbore #1 - Wellbore #1 - As D	15,300.00	6,835.47	4,720.11	4,596.62	38.224	ES
Houndskeeper H01-28 - Wellbore #1 - Wellbore #1 - As D	16,400.00	6,832.77	4,823.44	4,690.85	36.378	SF
Houndskeeper PC H01-21D - Wellbore #1 - Wellbore #1	18,018.08	7,057.82	4,573.81	4,421.39	30.008	CC
Houndskeeper PC H01-21D - Wellbore #1 - Wellbore #1	18,100.00	7,057.86	4,574.54	4,421.02	29.797	ES
Houndskeeper PC H01-21D - Wellbore #1 - Wellbore #1	19,100.00	7,058.39	4,700.03	4,535.47	28.562	SF
HSR-HARTMAN #4-1(PR) - Wellbore #1 - Gyro Surveys	15,903.43	6,883.05	6,889.01	6,761.59	54.067	CC
HSR-HARTMAN #4-1(PR) - Wellbore #1 - Gyro Surveys	16,000.00	6,883.34	6,889.68	6,761.25	53.644	ES
HSR-HARTMAN #4-1(PR) - Wellbore #1 - Gyro Surveys	18,000.00	6,889.57	7,200.97	7,056.24	49.755	SF
HSR-KOSKELA #5-1(PR) - Wellbore #1 - No Surveys	17,510.59	6,834.00	6,497.15	6,317.11	36.088	CC
HSR-KOSKELA #5-1(PR) - Wellbore #1 - No Surveys	17,600.00	6,834.00	6,497.76	6,316.78	35.902	ES
HSR-KOSKELA #5-1(PR) - Wellbore #1 - No Surveys	19,000.00	6,834.00	6,665.68	6,472.88	34.574	SF
HSR-LAURICE #6-1(PR) - Wellbore #1 - No Surveys	17,430.89	6,834.00	5,248.96	5,069.77	29.291	CC
HSR-LAURICE #6-1(PR) - Wellbore #1 - No Surveys	17,500.00	6,834.00	5,249.42	5,069.49	29.174	ES
HSR-LAURICE #6-1(PR) - Wellbore #1 - No Surveys	18,400.00	6,834.00	5,337.68	5,150.06	28.449	SF
LJS R H01-02 - Wellbore #1 - Wellbore #1 - As Drilled	16,085.72	6,839.62	4,264.49	4,135.26	33.001	CC
LJS R H01-02 - Wellbore #1 - Wellbore #1 - As Drilled	16,100.00	6,839.74	4,264.51	4,135.13	32.962	ES
LJS R H01-02 - Wellbore #1 - Wellbore #1 - As Drilled	16,900.00	6,846.30	4,341.53	4,205.40	31.893	SF
LJS R H01-08 - Wellbore #1 - Wellbore #1 - As Drilled	17,232.66	6,896.29	2,744.92	2,603.57	19.419	CC, ES
LJS R H01-08 - Wellbore #1 - Wellbore #1 - As Drilled	17,600.00	6,898.68	2,769.39	2,624.99	19.179	SF
Shelton 22-1(PR) - Wellbore #1 - Wellbore #1	17,939.95	6,923.39	5,869.40	5,719.93	39.267	CC
Shelton 22-1(PR) - Wellbore #1 - Wellbore #1	18,000.00	6,923.33	5,869.71	5,719.59	39.100	ES
Shelton 22-1(PR) - Wellbore #1 - Wellbore #1	19,300.00	6,922.26	6,024.92	5,863.72	37.376	SF
Shelton 31-01(PR) - Wellbore #1 - Gyro Surveys	16,822.44	6,958.01	7,218.32	7,076.85	51.023	CC
Shelton 31-01(PR) - Wellbore #1 - Gyro Surveys	16,900.00	6,957.44	7,218.74	7,076.42	50.721	ES
Shelton 31-01(PR) - Wellbore #1 - Gyro Surveys	18,900.00	6,942.60	7,511.34	7,352.07	47.163	SF
Shelton D07-30 - Wellbore #1 - Wellbore #1 - As Drilled	20,216.94	6,874.90	2,134.98	1,962.81	12.400	CC, ES, SF
Shelton H #12-29(PR) - Wellbore #1 - No Surveys	20,216.94	6,857.00	5,874.39	5,665.79	28.161	CC, ES, SF
Shelton H 1-12X(PR) - Wellbore #1 - No Surveys	18,628.33	6,850.00	6,576.23	6,384.29	34.262	CC
Shelton H 1-12X(PR) - Wellbore #1 - No Surveys	18,700.00	6,850.00	6,576.62	6,383.91	34.128	ES
Shelton H 1-12X(PR) - Wellbore #1 - No Surveys	20,000.00	6,850.00	6,717.76	6,513.96	32.963	SF
Shelton H01-23 - Wellbore #1 - Wellbore #1 - As Drilled	19,314.99	6,950.38	3,313.90	3,150.49	20.280	CC, ES
Shelton H01-23 - Wellbore #1 - Wellbore #1 - As Drilled	19,700.00	6,949.91	3,336.19	3,169.45	20.009	SF
Shelton H01-24 - Wellbore #1 - Wellbore #1 - As Drilled	19,234.81	6,965.26	4,601.29	4,438.66	28.293	CC
Shelton H01-24 - Wellbore #1 - Wellbore #1 - As Drilled	19,300.00	6,964.66	4,601.75	4,438.43	28.175	ES
Shelton H01-24 - Wellbore #1 - Wellbore #1 - As Drilled	20,000.00	6,958.07	4,664.48	4,495.42	27.591	SF
Shelton H01-759 - Wellbore #1 - Plan #1	20,100.00	7,588.75	5,043.20	4,870.42	29.190	SF
Shelton H01-759 - Wellbore #1 - Plan #1	20,216.94	6,344.97	5,028.15	4,858.53	29.643	CC, ES

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

# Noble Energy

## Anticollision Summary Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Johnson D06-766
<b>Project:</b>	Bronco	<b>TVD Reference:</b>	KB @ 4909.00ft
<b>Reference Site:</b>	C Section 30	<b>MD Reference:</b>	KB @ 4909.00ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Johnson D06-766	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
H Section 01						
Shelton H01-766 - Wellbore #1 - Plan #1	20,216.94	5,850.46	5,409.91	5,241.93	32.205	CC, ES, SF
Shelton H01-780 - Wellbore #1 - Plan #1	20,216.94	7,432.87	6,144.27	5,970.29	35.315	CC, ES, SF
Shelton H01-783 - Wellbore #1 - Plan #1	19,629.04	8,275.81	6,606.82	6,437.41	39.000	CC
Shelton H01-783 - Wellbore #1 - Plan #1	19,700.00	8,242.85	6,607.02	6,436.95	38.850	ES
Shelton H01-783 - Wellbore #1 - Plan #1	20,216.94	7,954.65	6,620.49	6,445.74	37.886	SF
Shelton H13-715 - Shelton H13-715 - Plan #1	20,216.94	6,926.10	2,370.99	2,198.35	13.734	CC, ES, SF
Shelton H13-724 - Shelton H13-724 - Plan #1	20,138.38	6,621.46	2,925.46	2,753.88	17.050	CC
Shelton H13-724 - Shelton H13-724 - Plan #1	20,200.00	6,645.48	2,926.03	2,753.69	16.978	ES
Shelton H13-724 - Shelton H13-724 - Plan #1	20,216.94	6,653.11	2,926.38	2,753.84	16.960	SF
Shelton H13-730 - Shelton H13-730 - Plan #1	20,119.83	6,412.79	3,182.47	3,012.03	18.671	CC, ES
Shelton H13-730 - Shelton H13-730 - Plan #1	20,216.94	6,410.89	3,183.95	3,012.53	18.573	SF
Shelton H13-734 - Shelton H13-734 - Plan #1	20,129.54	6,160.75	3,462.65	3,293.64	20.488	CC
Shelton H13-734 - Shelton H13-734 - Plan #1	20,200.00	6,159.42	3,463.36	3,293.63	20.405	ES
Shelton H13-734 - Shelton H13-734 - Plan #1	20,216.94	6,159.09	3,463.75	3,293.85	20.388	SF
Shelton H13-744 - Shelton H13-744 - Plan #1	20,216.94	7,129.62	4,214.05	4,041.03	24.355	CC, ES, SF
Shelton H13-753 - Shelton H13-753 - Plan #1	20,161.57	6,371.54	4,783.26	4,612.62	28.031	CC
Shelton H13-753 - Shelton H13-753 - Plan #1	20,216.94	6,373.18	4,783.58	4,612.34	27.935	ES, SF
Shelton H13-763 - Shelton H13-763 - Plan #1	20,174.42	5,985.00	5,334.71	5,165.37	31.502	CC
Shelton H13-763 - Shelton H13-763 - Plan #1	20,216.94	5,985.71	5,334.88	5,165.08	31.418	ES, SF
Shelton H13-768 - Shelton H13-768 - Plan #1	20,216.94	7,350.00	5,776.87	5,602.77	33.180	CC, ES, SF
Shelton H13-773 - Shelton H13-773 - Plan #1	20,216.94	7,122.36	6,083.03	5,909.75	35.105	CC, ES, SF
Shelton H13-782 - Shelton H13-782 - Plan #1	20,216.94	6,710.45	6,655.96	6,483.35	38.562	CC, ES, SF
Shelton H3-615 - Wellbore #1 - Plan #1	20,216.94	6,450.00	6,685.34	6,513.67	38.943	CC, ES, SF
Shelton H3-625 - Wellbore #1 - Plan #1	19,745.43	6,500.00	6,712.32	6,545.16	40.156	CC
Shelton H3-625 - Wellbore #1 - Plan #1	19,800.00	6,500.00	6,712.54	6,544.80	40.018	ES
Shelton H3-625 - Wellbore #1 - Plan #1	20,216.94	6,500.00	6,728.86	6,556.97	39.145	SF
Shelton H3-635 - Wellbore #1 - Plan #1	18,803.13	6,001.19	6,724.47	6,568.99	43.250	CC
Shelton H3-635 - Wellbore #1 - Plan #1	18,900.00	6,018.93	6,725.15	6,568.56	42.948	ES
Shelton H3-635 - Wellbore #1 - Plan #1	20,216.94	6,260.15	6,866.61	6,697.58	40.623	SF
Shelton H3-645 - Wellbore #1 - Plan #1	18,326.39	6,002.27	6,760.59	6,610.33	44.992	CC
Shelton H3-645 - Wellbore #1 - Plan #1	18,400.00	6,005.32	6,760.99	6,609.94	44.758	ES
Shelton H3-645 - Wellbore #1 - Plan #1	20,100.00	6,075.77	6,988.99	6,823.95	42.349	SF
Shelton H3-655 - Wellbore #1 - Plan #1	17,826.51	6,009.81	6,789.77	6,644.59	46.768	CC
Shelton H3-655 - Wellbore #1 - Plan #1	17,900.00	5,983.46	6,790.16	6,644.31	46.555	ES
Shelton H3-655 - Wellbore #1 - Plan #1	19,500.00	5,836.85	6,991.28	6,832.84	44.124	SF
Shelton H3-665 - Wellbore #1 - Plan #1	16,917.50	6,600.00	6,857.34	6,718.74	49.475	CC
Shelton H3-665 - Wellbore #1 - Plan #1	17,000.00	6,600.00	6,857.84	6,718.37	49.170	ES
Shelton H3-665 - Wellbore #1 - Plan #1	18,800.00	6,650.00	7,109.82	6,955.46	46.059	SF
Shelton H3-675 - Wellbore #1 - Plan #1	16,374.73	6,472.46	6,894.80	6,763.33	52.444	CC
Shelton H3-675 - Wellbore #1 - Plan #1	16,400.00	6,472.77	6,894.96	6,763.23	52.339	ES
Shelton H3-675 - Wellbore #1 - Plan #1	18,300.00	6,500.00	7,166.25	7,018.77	48.591	SF
Shelton H3-683 - Wellbore #1 - Plan #1	15,819.51	6,427.50	6,926.78	6,801.43	55.257	CC
Shelton H3-683 - Wellbore #1 - Plan #1	15,900.00	6,450.00	6,927.46	6,801.19	54.860	ES
Shelton H3-683 - Wellbore #1 - Plan #1	17,900.00	6,450.00	7,227.49	7,084.79	50.646	SF
UPRC #1-12J(PA) - Wellbore #1 - No Surveys	18,542.49	6,850.00	6,563.22	6,420.01	45.829	CC
UPRC #1-12J(PA) - Wellbore #1 - No Surveys	18,600.00	6,850.00	6,563.47	6,419.64	45.635	ES
UPRC #1-12J(PA) - Wellbore #1 - No Surveys	20,200.00	6,850.00	6,769.28	6,612.50	43.176	SF
UPRC #1-13J(SI) - Wellbore #1 - No Surveys	19,861.87	6,848.00	6,670.19	6,465.24	32.545	CC
UPRC #1-13J(SI) - Wellbore #1 - No Surveys	19,900.00	6,848.00	6,670.30	6,464.94	32.481	ES
UPRC #1-13J(SI) - Wellbore #1 - No Surveys	20,216.94	6,848.00	6,679.63	6,471.05	32.024	SF
UPRC 1-09J - Wellbore #1 - Wellbore #1 - As Drilled	18,464.55	6,903.90	2,695.68	2,541.29	17.461	CC
UPRC 1-09J - Wellbore #1 - Wellbore #1 - As Drilled	18,500.00	6,903.92	2,695.91	2,541.14	17.419	ES
UPRC 1-09J - Wellbore #1 - Wellbore #1 - As Drilled	18,800.00	6,904.00	2,716.47	2,559.34	17.288	SF

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



**Noble Energy**  
Anticollision Summary Report

<b>Company:</b>	Northern Region - DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Johnson D06-766
<b>Project:</b>	Bronco	<b>TVD Reference:</b>	KB @ 4909.00ft
<b>Reference Site:</b>	C Section 30	<b>MD Reference:</b>	KB @ 4909.00ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Johnson D06-766	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDMP
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
H Section 01						
UPRC 1-10J - Wellbore #1 - Wellbore #1 - As Drilled	18,588.16	6,904.20	4,120.99	3,965.32	26.472	CC
UPRC 1-10J - Wellbore #1 - Wellbore #1 - As Drilled	18,600.00	6,904.23	4,121.01	3,965.21	26.451	ES
UPRC 1-10J - Wellbore #1 - Wellbore #1 - As Drilled	19,200.00	6,905.63	4,166.16	4,005.24	25.889	SF
UPRC 1-15J - Wellbore #1 - Wellbore #1 - As Drilled	20,193.33	6,896.25	4,122.31	3,949.70	23.883	CC
UPRC 1-15J - Wellbore #1 - Wellbore #1 - As Drilled	20,216.94	6,896.27	4,122.37	3,949.51	23.848	ES, SF
UPRC 1-16J - Wellbore #1 - Wellbore #1 - As Drilled	19,904.68	6,889.71	2,660.35	2,490.84	15.694	CC, ES
UPRC 1-16J - Wellbore #1 - Wellbore #1 - As Drilled	20,200.00	6,888.98	2,676.69	2,504.76	15.569	SF
UPRR 39 PAN AM G #1(PR) - Wellbore #1 - No Surveys	19,353.73	6,856.00	6,095.72	5,896.07	30.532	CC
UPRR 39 PAN AM G #1(PR) - Wellbore #1 - No Surveys	19,400.00	6,856.00	6,095.90	5,895.75	30.458	ES
UPRR 39 PAN AM G #1(PR) - Wellbore #1 - No Surveys	20,216.94	6,856.00	6,156.54	5,948.95	29.658	SF