

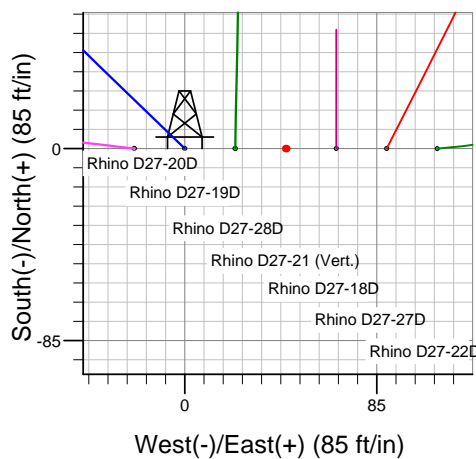
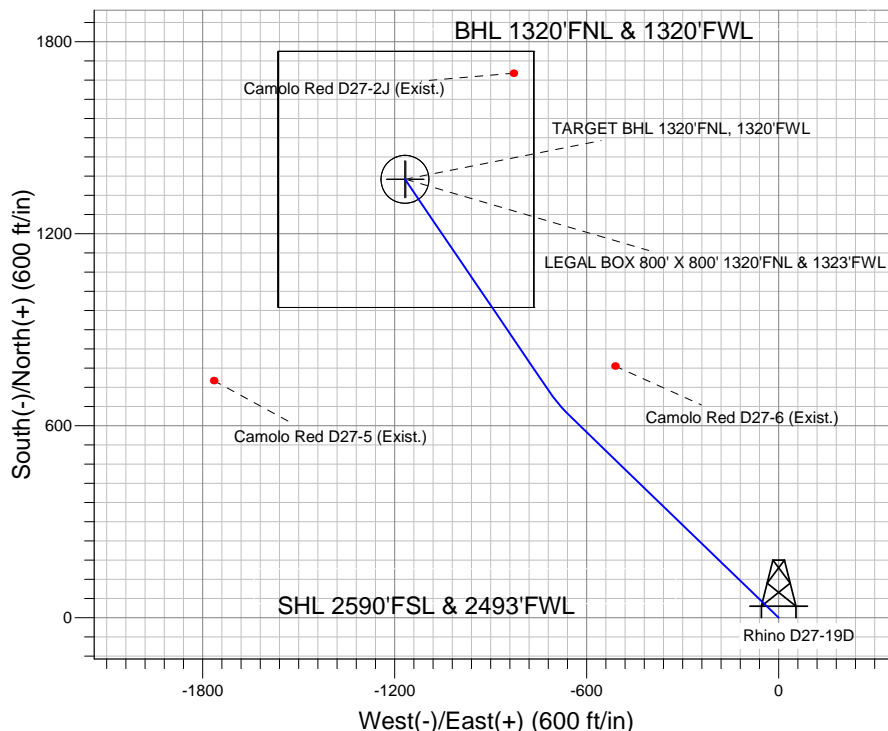
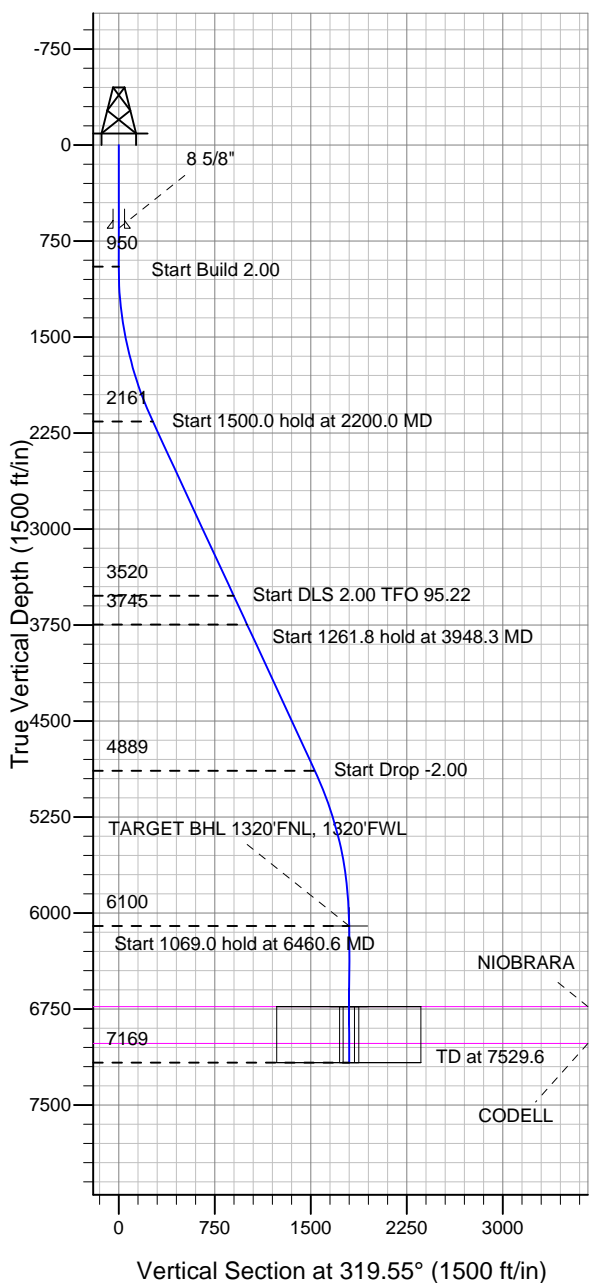
# ENSIGN

## Directional

### Well Name: Rhino D27-19D

Surface Location: Rhino D27-20D Pad Sec.27-T3N-R64W  
 North American Datum 1983 US State Plane 1983 Colorado Northern Zone  
 Ground Elevation: 4866.0  
 +N/-S +E/-W Northing Easting Latitude Longitude Slot  
 0.0 0.0 1315786.58 3268710.24 40.196230 -104.538060  
 Original Well Elev WELL @ 4879.0ft (Original Well Elev)

## NOBLE ENERGY INC WELD COUNTY CO



Rhino D27-20D Pad Sec.27-T3N-R64W  
 Rhino D27-19D  
 Noble Rhino D27-19D Plan #1 (5-02-11)  
 7:46, May 02 2011



Azimuths to True North  
 Magnetic North: 8.74°

Magnetic Field  
 Strength: 53064.7snT  
 Dip Angle: 66.93°  
 Date: 4/20/2011  
 Model: IGRF2010

### WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 1320'FNL, 1320'FWL	6100.0	1369.8	-1167.7	40.199990	-104.542240	Point
LEGAL BOX 800' X 800' 1320'FNL & 1323'FWL	6730.0	1369.8	-1164.7	40.199990	-104.542229	Rectangle (Sides: L800.0 W800.0)
TARGET CIRCLE 1320'FNL & 1320'FWL	6730.0	1369.8	-1167.7	40.199990	-104.542240	Circle (Radius: 75.0)

### SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	950.0	0.00	0.00	950.0	0.0	0.0	0.00	0.00	0.0	
3	2200.0	25.00	314.00	2160.7	186.5	-193.1	2.00	314.00	267.1	
4	3700.0	25.00	314.00	3520.2	626.8	-649.1	0.00	0.00	898.1	
5	3948.3	25.01	325.76	3745.3	706.7	-716.4	2.00	95.22	1002.6	
6	5210.1	25.01	325.76	4888.8	1147.7	-1016.5	0.00	0.00	1532.9	
7	6460.6	0.00	0.00	6100.0	1369.8	-1167.7	2.00	180.00	1799.9	TARGET BHL 1320'FNL, 1320'FWL
8	7529.6	0.00	0.00	7169.0	1369.8	-1167.7	0.00	0.00	1799.9	



## **Directional**

### **NOBLE ENERGY INC WELD COUNTY CO**

**SEC.27-T3N-R64W**

**Rhino D27-20D Pad Sec.27-T3N-R64W**

**Rhino D27-19D**

**Wellbore #1**

**Plan: Noble Rhino D27-19D Plan #1 (5-02-11)**

### **Standard Planning Report**

**02 May, 2011**



<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Rhino D27-19D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4879.0ft (Original Well Elev)
<b>Project:</b>	SEC.27-T3N-R64W	<b>MD Reference:</b>	WELL @ 4879.0ft (Original Well Elev)
<b>Site:</b>	Rhino D27-20D Pad Sec.27-T3N-R64W	<b>North Reference:</b>	True
<b>Well:</b>	Rhino D27-19D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble Rhino D27-19D Plan #1 (5-02-11)		

<b>Project</b>	SEC.27-T3N-R64W, 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		Using Well Reference Point
<b>Map Zone:</b>	Colorado Northern Zone		Using geodetic scale factor

Site Rhino D27-20D Pad Sec.27-T3N-R64W					
Site Position:		Northing:	1,315,786.36ft	Latitude:	40.196230
From:	Lat/Long	Easting:	3,268,687.89ft	Longitude:	-104.538140
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.62 °

Well	Rhino D27-19D					
Well Position	+N-S	0.0 ft	Northing:	1,315,786.58 ft	Latitude:	40.196230
	+E-W	22.3 ft	Easting:	3,268,710.24 ft	Longitude:	-104.538060
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,866.0 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>
	IGRF2010	4/20/2011	8.75	66.93	53,065

<b>Design</b>	Noble Rhino D27-19D Plan #1 (5-02-11)			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	319.55

<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
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
950.0	0.00	0.00	950.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,200.0	25.00	314.00	2,160.7	186.5	-193.1	2.00	2.00	0.00	314.00	
3,700.0	25.00	314.00	3,520.2	626.8	-649.1	0.00	0.00	0.00	0.00	
3,948.3	25.01	325.76	3,745.3	706.7	-716.4	2.00	0.00	4.74	95.22	
5,210.1	25.01	325.76	4,888.8	1,147.7	-1,016.5	0.00	0.00	0.00	0.00	
6,460.6	0.00	0.00	6,100.0	1,369.8	-1,167.7	2.00	-2.00	0.00	180.00	TARGET BHL 132C
7,529.6	0.00	0.00	7,169.0	1,369.8	-1,167.7	0.00	0.00	0.00	0.00	

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Rhino D27-19D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4879.0ft (Original Well Elev)
<b>Project:</b>	SEC.27-T3N-R64W	<b>MD Reference:</b>	WELL @ 4879.0ft (Original Well Elev)
<b>Site:</b>	Rhino D27-20D Pad Sec.27-T3N-R64W	<b>North Reference:</b>	True
<b>Well:</b>	Rhino D27-19D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble Rhino D27-19D Plan #1 (5-02-11)		

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)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
40.0	0.00	0.00	40.0	0.0	0.0	0.0	0.00	0.00	0.00
80.0	0.00	0.00	80.0	0.0	0.0	0.0	0.00	0.00	0.00
120.0	0.00	0.00	120.0	0.0	0.0	0.0	0.00	0.00	0.00
160.0	0.00	0.00	160.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
240.0	0.00	0.00	240.0	0.0	0.0	0.0	0.00	0.00	0.00
280.0	0.00	0.00	280.0	0.0	0.0	0.0	0.00	0.00	0.00
320.0	0.00	0.00	320.0	0.0	0.0	0.0	0.00	0.00	0.00
360.0	0.00	0.00	360.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
440.0	0.00	0.00	440.0	0.0	0.0	0.0	0.00	0.00	0.00
480.0	0.00	0.00	480.0	0.0	0.0	0.0	0.00	0.00	0.00
520.0	0.00	0.00	520.0	0.0	0.0	0.0	0.00	0.00	0.00
560.0	0.00	0.00	560.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
640.0	0.00	0.00	640.0	0.0	0.0	0.0	0.00	0.00	0.00
650.0	0.00	0.00	650.0	0.0	0.0	0.0	0.00	0.00	0.00
8 5/8"									
680.0	0.00	0.00	680.0	0.0	0.0	0.0	0.00	0.00	0.00
720.0	0.00	0.00	720.0	0.0	0.0	0.0	0.00	0.00	0.00
760.0	0.00	0.00	760.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
840.0	0.00	0.00	840.0	0.0	0.0	0.0	0.00	0.00	0.00
880.0	0.00	0.00	880.0	0.0	0.0	0.0	0.00	0.00	0.00
920.0	0.00	0.00	920.0	0.0	0.0	0.0	0.00	0.00	0.00
950.0	0.00	0.00	950.0	0.0	0.0	0.0	0.00	0.00	0.00
960.0	0.20	314.00	960.0	0.0	0.0	0.0	2.00	2.00	0.00
1,000.0	1.00	314.00	1,000.0	0.3	-0.3	0.4	2.00	2.00	0.00
1,040.0	1.80	314.00	1,040.0	1.0	-1.0	1.4	2.00	2.00	0.00
1,080.0	2.60	314.00	1,080.0	2.0	-2.1	2.9	2.00	2.00	0.00
1,120.0	3.40	314.00	1,119.9	3.5	-3.6	5.0	2.00	2.00	0.00
1,160.0	4.20	314.00	1,159.8	5.3	-5.5	7.7	2.00	2.00	0.00
1,200.0	5.00	314.00	1,199.7	7.6	-7.8	10.9	2.00	2.00	0.00
1,240.0	5.80	314.00	1,239.5	10.2	-10.5	14.6	2.00	2.00	0.00
1,280.0	6.60	314.00	1,279.3	13.2	-13.7	18.9	2.00	2.00	0.00
1,320.0	7.40	314.00	1,319.0	16.6	-17.2	23.7	2.00	2.00	0.00
1,360.0	8.20	314.00	1,358.6	20.3	-21.1	29.2	2.00	2.00	0.00
1,400.0	9.00	314.00	1,398.2	24.5	-25.4	35.1	2.00	2.00	0.00
1,440.0	9.80	314.00	1,437.6	29.0	-30.1	41.6	2.00	2.00	0.00
1,480.0	10.60	314.00	1,477.0	34.0	-35.2	48.7	2.00	2.00	0.00
1,520.0	11.40	314.00	1,516.2	39.3	-40.7	56.3	2.00	2.00	0.00
1,560.0	12.20	314.00	1,555.4	44.9	-46.5	64.4	2.00	2.00	0.00
1,600.0	13.00	314.00	1,594.4	51.0	-52.8	73.1	2.00	2.00	0.00
1,640.0	13.80	314.00	1,633.3	57.4	-59.5	82.3	2.00	2.00	0.00
1,680.0	14.60	314.00	1,672.1	64.3	-66.5	92.1	2.00	2.00	0.00
1,720.0	15.40	314.00	1,710.8	71.5	-74.0	102.4	2.00	2.00	0.00
1,760.0	16.20	314.00	1,749.3	79.0	-81.8	113.2	2.00	2.00	0.00
1,800.0	17.00	314.00	1,787.6	87.0	-90.0	124.6	2.00	2.00	0.00
1,840.0	17.80	314.00	1,825.8	95.3	-98.6	136.5	2.00	2.00	0.00
1,880.0	18.60	314.00	1,863.8	103.9	-107.6	148.9	2.00	2.00	0.00
1,920.0	19.40	314.00	1,901.6	113.0	-117.0	161.9	2.00	2.00	0.00
1,960.0	20.20	314.00	1,939.2	122.4	-126.8	175.4	2.00	2.00	0.00
2,000.0	21.00	314.00	1,976.6	132.2	-136.9	189.4	2.00	2.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Rhino D27-19D
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<b>Project:</b>	SEC.27-T3N-R64W	<b>MD Reference:</b>	WELL @ 4879.0ft (Original Well Elev)
<b>Site:</b>	Rhino D27-20D Pad Sec.27-T3N-R64W	<b>North Reference:</b>	True
<b>Well:</b>	Rhino D27-19D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble Rhino D27-19D Plan #1 (5-02-11)		

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)
2,040.0	21.80	314.00	2,013.9	142.3	-147.4	203.9	2.00	2.00	0.00
2,080.0	22.60	314.00	2,050.9	152.8	-158.2	219.0	2.00	2.00	0.00
2,120.0	23.40	314.00	2,087.7	163.7	-169.5	234.5	2.00	2.00	0.00
2,160.0	24.20	314.00	2,124.3	174.9	-181.1	250.6	2.00	2.00	0.00
2,200.0	25.00	314.00	2,160.7	186.5	-193.1	267.1	2.00	2.00	0.00
2,240.0	25.00	314.00	2,197.0	198.2	-205.2	284.0	0.00	0.00	0.00
2,280.0	25.00	314.00	2,233.2	209.9	-217.4	300.8	0.00	0.00	0.00
2,320.0	25.00	314.00	2,269.5	221.7	-229.6	317.6	0.00	0.00	0.00
2,360.0	25.00	314.00	2,305.7	233.4	-241.7	334.4	0.00	0.00	0.00
2,400.0	25.00	314.00	2,342.0	245.2	-253.9	351.3	0.00	0.00	0.00
2,440.0	25.00	314.00	2,378.2	256.9	-266.0	368.1	0.00	0.00	0.00
2,480.0	25.00	314.00	2,414.5	268.7	-278.2	384.9	0.00	0.00	0.00
2,520.0	25.00	314.00	2,450.7	280.4	-290.4	401.8	0.00	0.00	0.00
2,560.0	25.00	314.00	2,487.0	292.1	-302.5	418.6	0.00	0.00	0.00
2,600.0	25.00	314.00	2,523.2	303.9	-314.7	435.4	0.00	0.00	0.00
2,640.0	25.00	314.00	2,559.5	315.6	-326.8	452.2	0.00	0.00	0.00
2,680.0	25.00	314.00	2,595.7	327.4	-339.0	469.1	0.00	0.00	0.00
2,720.0	25.00	314.00	2,632.0	339.1	-351.2	485.9	0.00	0.00	0.00
2,760.0	25.00	314.00	2,668.2	350.9	-363.3	502.7	0.00	0.00	0.00
2,800.0	25.00	314.00	2,704.5	362.6	-375.5	519.5	0.00	0.00	0.00
2,840.0	25.00	314.00	2,740.7	374.3	-387.6	536.4	0.00	0.00	0.00
2,880.0	25.00	314.00	2,777.0	386.1	-399.8	553.2	0.00	0.00	0.00
2,920.0	25.00	314.00	2,813.3	397.8	-412.0	570.0	0.00	0.00	0.00
2,960.0	25.00	314.00	2,849.5	409.6	-424.1	586.8	0.00	0.00	0.00
3,000.0	25.00	314.00	2,885.8	421.3	-436.3	603.7	0.00	0.00	0.00
3,040.0	25.00	314.00	2,922.0	433.1	-448.4	620.5	0.00	0.00	0.00
3,080.0	25.00	314.00	2,958.3	444.8	-460.6	637.3	0.00	0.00	0.00
3,120.0	25.00	314.00	2,994.5	456.5	-472.8	654.1	0.00	0.00	0.00
3,160.0	25.00	314.00	3,030.8	468.3	-484.9	671.0	0.00	0.00	0.00
3,200.0	25.00	314.00	3,067.0	480.0	-497.1	687.8	0.00	0.00	0.00
3,240.0	25.00	314.00	3,103.3	491.8	-509.2	704.6	0.00	0.00	0.00
3,280.0	25.00	314.00	3,139.5	503.5	-521.4	721.4	0.00	0.00	0.00
3,320.0	25.00	314.00	3,175.8	515.3	-533.6	738.3	0.00	0.00	0.00
3,360.0	25.00	314.00	3,212.0	527.0	-545.7	755.1	0.00	0.00	0.00
3,400.0	25.00	314.00	3,248.3	538.7	-557.9	771.9	0.00	0.00	0.00
3,440.0	25.00	314.00	3,284.5	550.5	-570.0	788.7	0.00	0.00	0.00
3,480.0	25.00	314.00	3,320.8	562.2	-582.2	805.6	0.00	0.00	0.00
3,520.0	25.00	314.00	3,357.0	574.0	-594.4	822.4	0.00	0.00	0.00
3,560.0	25.00	314.00	3,393.3	585.7	-606.5	839.2	0.00	0.00	0.00
3,600.0	25.00	314.00	3,429.5	597.5	-618.7	856.0	0.00	0.00	0.00
3,640.0	25.00	314.00	3,465.8	609.2	-630.8	872.9	0.00	0.00	0.00
3,680.0	25.00	314.00	3,502.0	620.9	-643.0	889.7	0.00	0.00	0.00
3,700.0	25.00	314.00	3,520.2	626.8	-649.1	898.1	0.00	0.00	0.00
3,720.0	24.97	314.94	3,538.3	632.7	-655.1	906.5	2.00	-0.17	4.72
3,760.0	24.92	316.84	3,574.6	644.8	-666.9	923.3	2.00	-0.12	4.73
3,800.0	24.89	318.74	3,610.9	657.3	-678.2	940.2	2.00	-0.06	4.75
3,840.0	24.89	320.64	3,647.1	670.2	-689.1	957.0	2.00	0.00	4.75
3,880.0	24.92	322.54	3,683.4	683.3	-699.5	973.8	2.00	0.06	4.75
3,920.0	24.96	324.43	3,719.7	696.9	-709.6	990.7	2.00	0.12	4.74
3,948.3	25.01	325.76	3,745.3	706.7	-716.4	1,002.6	2.00	0.17	4.72
3,960.0	25.01	325.76	3,755.9	710.8	-719.2	1,007.5	0.00	0.00	0.00
4,000.0	25.01	325.76	3,792.2	724.8	-728.7	1,024.3	0.00	0.00	0.00
4,040.0	25.01	325.76	3,828.4	738.8	-738.2	1,041.1	0.00	0.00	0.00
4,080.0	25.01	325.76	3,864.7	752.7	-747.7	1,057.9	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Rhino D27-19D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4879.0ft (Original Well Elev)
<b>Project:</b>	SEC.27-T3N-R64W	<b>MD Reference:</b>	WELL @ 4879.0ft (Original Well Elev)
<b>Site:</b>	Rhino D27-20D Pad Sec.27-T3N-R64W	<b>North Reference:</b>	True
<b>Well:</b>	Rhino D27-19D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble Rhino D27-19D Plan #1 (5-02-11)		

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)
4,120.0	25.01	325.76	3,900.9	766.7	-757.2	1,074.7	0.00	0.00	0.00
4,160.0	25.01	325.76	3,937.2	780.7	-766.8	1,091.5	0.00	0.00	0.00
4,200.0	25.01	325.76	3,973.4	794.7	-776.3	1,108.4	0.00	0.00	0.00
4,240.0	25.01	325.76	4,009.7	808.7	-785.8	1,125.2	0.00	0.00	0.00
4,280.0	25.01	325.76	4,045.9	822.6	-795.3	1,142.0	0.00	0.00	0.00
4,320.0	25.01	325.76	4,082.2	836.6	-804.8	1,158.8	0.00	0.00	0.00
4,360.0	25.01	325.76	4,118.4	850.6	-814.3	1,175.6	0.00	0.00	0.00
4,400.0	25.01	325.76	4,154.7	864.6	-823.8	1,192.4	0.00	0.00	0.00
4,440.0	25.01	325.76	4,190.9	878.6	-833.4	1,209.2	0.00	0.00	0.00
4,480.0	25.01	325.76	4,227.2	892.5	-842.9	1,226.0	0.00	0.00	0.00
4,520.0	25.01	325.76	4,263.4	906.5	-852.4	1,242.9	0.00	0.00	0.00
4,560.0	25.01	325.76	4,299.7	920.5	-861.9	1,259.7	0.00	0.00	0.00
4,600.0	25.01	325.76	4,335.9	934.5	-871.4	1,276.5	0.00	0.00	0.00
4,640.0	25.01	325.76	4,372.2	948.5	-880.9	1,293.3	0.00	0.00	0.00
4,680.0	25.01	325.76	4,408.4	962.5	-890.4	1,310.1	0.00	0.00	0.00
4,720.0	25.01	325.76	4,444.7	976.4	-900.0	1,326.9	0.00	0.00	0.00
4,760.0	25.01	325.76	4,480.9	990.4	-909.5	1,343.7	0.00	0.00	0.00
4,800.0	25.01	325.76	4,517.2	1,004.4	-919.0	1,360.5	0.00	0.00	0.00
4,840.0	25.01	325.76	4,553.4	1,018.4	-928.5	1,377.3	0.00	0.00	0.00
4,880.0	25.01	325.76	4,589.7	1,032.4	-938.0	1,394.2	0.00	0.00	0.00
4,920.0	25.01	325.76	4,625.9	1,046.3	-947.5	1,411.0	0.00	0.00	0.00
4,960.0	25.01	325.76	4,662.2	1,060.3	-957.0	1,427.8	0.00	0.00	0.00
5,000.0	25.01	325.76	4,698.4	1,074.3	-966.6	1,444.6	0.00	0.00	0.00
5,040.0	25.01	325.76	4,734.7	1,088.3	-976.1	1,461.4	0.00	0.00	0.00
5,080.0	25.01	325.76	4,770.9	1,102.3	-985.6	1,478.2	0.00	0.00	0.00
5,120.0	25.01	325.76	4,807.2	1,116.2	-995.1	1,495.0	0.00	0.00	0.00
5,160.0	25.01	325.76	4,843.4	1,130.2	-1,004.6	1,511.8	0.00	0.00	0.00
5,200.0	25.01	325.76	4,879.7	1,144.2	-1,014.1	1,528.7	0.00	0.00	0.00
5,210.1	25.01	325.76	4,888.8	1,147.7	-1,016.5	1,532.9	0.00	0.00	0.00
5,240.0	24.41	325.76	4,916.0	1,158.1	-1,023.6	1,545.3	2.00	-2.00	0.00
5,280.0	23.61	325.76	4,952.5	1,171.5	-1,032.7	1,561.5	2.00	-2.00	0.00
5,320.0	22.81	325.76	4,989.3	1,184.6	-1,041.6	1,577.2	2.00	-2.00	0.00
5,360.0	22.01	325.76	5,026.3	1,197.2	-1,050.2	1,592.3	2.00	-2.00	0.00
5,400.0	21.21	325.76	5,063.5	1,209.3	-1,058.5	1,607.0	2.00	-2.00	0.00
5,440.0	20.41	325.76	5,100.8	1,221.1	-1,066.5	1,621.1	2.00	-2.00	0.00
5,480.0	19.61	325.76	5,138.4	1,232.4	-1,074.2	1,634.7	2.00	-2.00	0.00
5,520.0	18.81	325.76	5,176.2	1,243.3	-1,081.6	1,647.8	2.00	-2.00	0.00
5,560.0	18.01	325.76	5,214.2	1,253.7	-1,088.7	1,660.4	2.00	-2.00	0.00
5,600.0	17.21	325.76	5,252.3	1,263.7	-1,095.5	1,672.4	2.00	-2.00	0.00
5,640.0	16.41	325.76	5,290.6	1,273.3	-1,102.0	1,683.9	2.00	-2.00	0.00
5,680.0	15.61	325.76	5,329.0	1,282.4	-1,108.2	1,694.9	2.00	-2.00	0.00
5,720.0	14.81	325.76	5,367.6	1,291.1	-1,114.1	1,705.3	2.00	-2.00	0.00
5,760.0	14.01	325.76	5,406.4	1,299.3	-1,119.7	1,715.2	2.00	-2.00	0.00
5,800.0	13.21	325.76	5,445.2	1,307.1	-1,125.0	1,724.6	2.00	-2.00	0.00
5,840.0	12.41	325.76	5,484.2	1,314.5	-1,130.0	1,733.4	2.00	-2.00	0.00
5,880.0	11.61	325.76	5,523.4	1,321.3	-1,134.7	1,741.7	2.00	-2.00	0.00
5,920.0	10.81	325.76	5,562.6	1,327.8	-1,139.0	1,749.4	2.00	-2.00	0.00
5,960.0	10.01	325.76	5,601.9	1,333.7	-1,143.1	1,756.6	2.00	-2.00	0.00
6,000.0	9.21	325.76	5,641.4	1,339.3	-1,146.9	1,763.2	2.00	-2.00	0.00
6,040.0	8.41	325.76	5,680.9	1,344.3	-1,150.3	1,769.3	2.00	-2.00	0.00
6,080.0	7.61	325.76	5,720.5	1,348.9	-1,153.5	1,774.9	2.00	-2.00	0.00
6,120.0	6.81	325.76	5,760.2	1,353.1	-1,156.3	1,779.8	2.00	-2.00	0.00
6,160.0	6.01	325.76	5,799.9	1,356.8	-1,158.8	1,784.3	2.00	-2.00	0.00
6,200.0	5.21	325.76	5,839.7	1,360.0	-1,161.0	1,788.2	2.00	-2.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Rhino D27-19D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4879.0ft (Original Well Elev)
<b>Project:</b>	SEC.27-T3N-R64W	<b>MD Reference:</b>	WELL @ 4879.0ft (Original Well Elev)
<b>Site:</b>	Rhino D27-20D Pad Sec.27-T3N-R64W	<b>North Reference:</b>	True
<b>Well:</b>	Rhino D27-19D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble Rhino D27-19D Plan #1 (5-02-11)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
6,240.0	4.41	325.76	5,879.6	1,362.8	-1,162.9	1,791.5	2.00	-2.00	0.00
6,280.0	3.61	325.76	5,919.5	1,365.1	-1,164.5	1,794.3	2.00	-2.00	0.00
6,320.0	2.81	325.76	5,959.4	1,367.0	-1,165.7	1,796.5	2.00	-2.00	0.00
6,360.0	2.01	325.76	5,999.4	1,368.4	-1,166.7	1,798.2	2.00	-2.00	0.00
6,400.0	1.21	325.76	6,039.4	1,369.3	-1,167.3	1,799.3	2.00	-2.00	0.00
6,440.0	0.41	325.76	6,079.4	1,369.8	-1,167.6	1,799.9	2.00	-2.00	0.00
6,460.6	0.00	0.00	6,100.0	1,369.8	-1,167.7	1,799.9	2.00	-2.00	0.00
TARGET BHL 1320'FNL, 1320'FWL									
6,480.0	0.00	0.00	6,119.4	1,369.8	-1,167.7	1,799.9	0.00	0.00	0.00
6,520.0	0.00	0.00	6,159.4	1,369.8	-1,167.7	1,799.9	0.00	0.00	0.00
6,560.0	0.00	0.00	6,199.4	1,369.8	-1,167.7	1,799.9	0.00	0.00	0.00
6,600.0	0.00	0.00	6,239.4	1,369.8	-1,167.7	1,799.9	0.00	0.00	0.00
6,640.0	0.00	0.00	6,279.4	1,369.8	-1,167.7	1,799.9	0.00	0.00	0.00
6,680.0	0.00	0.00	6,319.4	1,369.8	-1,167.7	1,799.9	0.00	0.00	0.00
6,720.0	0.00	0.00	6,359.4	1,369.8	-1,167.7	1,799.9	0.00	0.00	0.00
6,760.0	0.00	0.00	6,399.4	1,369.8	-1,167.7	1,799.9	0.00	0.00	0.00
6,800.0	0.00	0.00	6,439.4	1,369.8	-1,167.7	1,799.9	0.00	0.00	0.00
6,840.0	0.00	0.00	6,479.4	1,369.8	-1,167.7	1,799.9	0.00	0.00	0.00
6,880.0	0.00	0.00	6,519.4	1,369.8	-1,167.7	1,799.9	0.00	0.00	0.00
6,920.0	0.00	0.00	6,559.4	1,369.8	-1,167.7	1,799.9	0.00	0.00	0.00
6,960.0	0.00	0.00	6,599.4	1,369.8	-1,167.7	1,799.9	0.00	0.00	0.00
7,000.0	0.00	0.00	6,639.4	1,369.8	-1,167.7	1,799.9	0.00	0.00	0.00
7,040.0	0.00	0.00	6,679.4	1,369.8	-1,167.7	1,799.9	0.00	0.00	0.00
7,080.0	0.00	0.00	6,719.4	1,369.8	-1,167.7	1,799.9	0.00	0.00	0.00
7,090.6	0.00	0.00	6,730.0	1,369.8	-1,167.7	1,799.9	0.00	0.00	0.00
NIOBRARA - TARGET CIRCLE 1320'FNL & 1320'FWL - LEGAL BOX 800' X 800' 1320'FNL & 1323'FWL									
7,120.0	0.00	0.00	6,759.4	1,369.8	-1,167.7	1,799.9	0.00	0.00	0.00
7,160.0	0.00	0.00	6,799.4	1,369.8	-1,167.7	1,799.9	0.00	0.00	0.00
7,200.0	0.00	0.00	6,839.4	1,369.8	-1,167.7	1,799.9	0.00	0.00	0.00
7,240.0	0.00	0.00	6,879.4	1,369.8	-1,167.7	1,799.9	0.00	0.00	0.00
7,280.0	0.00	0.00	6,919.4	1,369.8	-1,167.7	1,799.9	0.00	0.00	0.00
7,320.0	0.00	0.00	6,959.4	1,369.8	-1,167.7	1,799.9	0.00	0.00	0.00
7,360.0	0.00	0.00	6,999.4	1,369.8	-1,167.7	1,799.9	0.00	0.00	0.00
7,379.6	0.00	0.00	7,019.0	1,369.8	-1,167.7	1,799.9	0.00	0.00	0.00
CODELL									
7,400.0	0.00	0.00	7,039.4	1,369.8	-1,167.7	1,799.9	0.00	0.00	0.00
7,440.0	0.00	0.00	7,079.4	1,369.8	-1,167.7	1,799.9	0.00	0.00	0.00
7,480.0	0.00	0.00	7,119.4	1,369.8	-1,167.7	1,799.9	0.00	0.00	0.00
7,520.0	0.00	0.00	7,159.4	1,369.8	-1,167.7	1,799.9	0.00	0.00	0.00
7,529.6	0.00	0.00	7,169.0	1,369.8	-1,167.7	1,799.9	0.00	0.00	0.00



<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Rhino D27-19D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4879.0ft (Original Well Elev)
<b>Project:</b>	SEC.27-T3N-R64W	<b>MD Reference:</b>	WELL @ 4879.0ft (Original Well Elev)
<b>Site:</b>	Rhino D27-20D Pad Sec.27-T3N-R64W	<b>North Reference:</b>	True
<b>Well:</b>	Rhino D27-19D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble Rhino D27-19D Plan #1 (5-02-11)		

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
TARGET CIRCLE 132'	0.00	0.00	6,730.0	1,369.8	-1,167.7	1,317,143.59	3,267,527.84	40.199990	-104.542240
- plan hits target center									
- Circle (radius 75.0)									
TARGET BHL 1320'F	0.00	0.00	6,100.0	1,369.8	-1,167.7	1,317,143.59	3,267,527.84	40.199990	-104.542240
- plan hits target center									
- Point									
LEGAL BOX 800' X 800'	0.00	0.00	6,730.0	1,369.8	-1,164.7	1,317,143.61	3,267,530.80	40.199990	-104.542229
- plan misses target center by 3.0ft at 7090.6ft MD (6730.0 TVD, 1369.8 N, -1167.7 E)									
- Rectangle (sides W800.0 H800.0 D439.0)									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
650.0	650.0	8 5/8"	8-5/8	12-1/4	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
7,090.6	6,730.0	NIOBRARA		0.00	
7,379.6	7,019.0	CODELL		0.00	