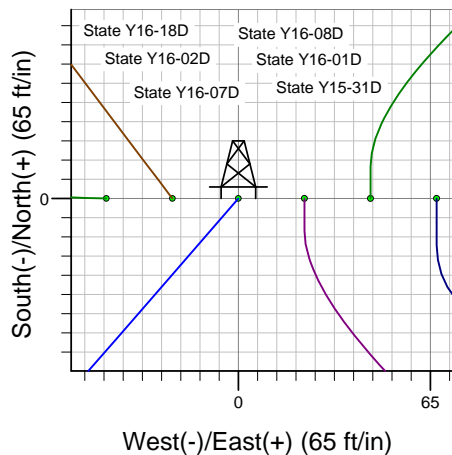
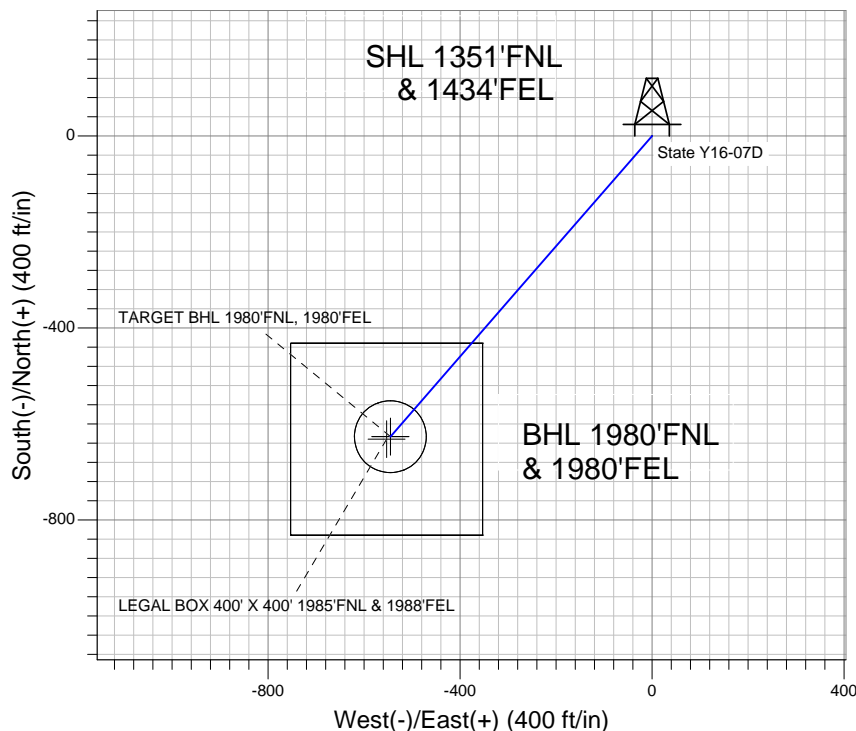
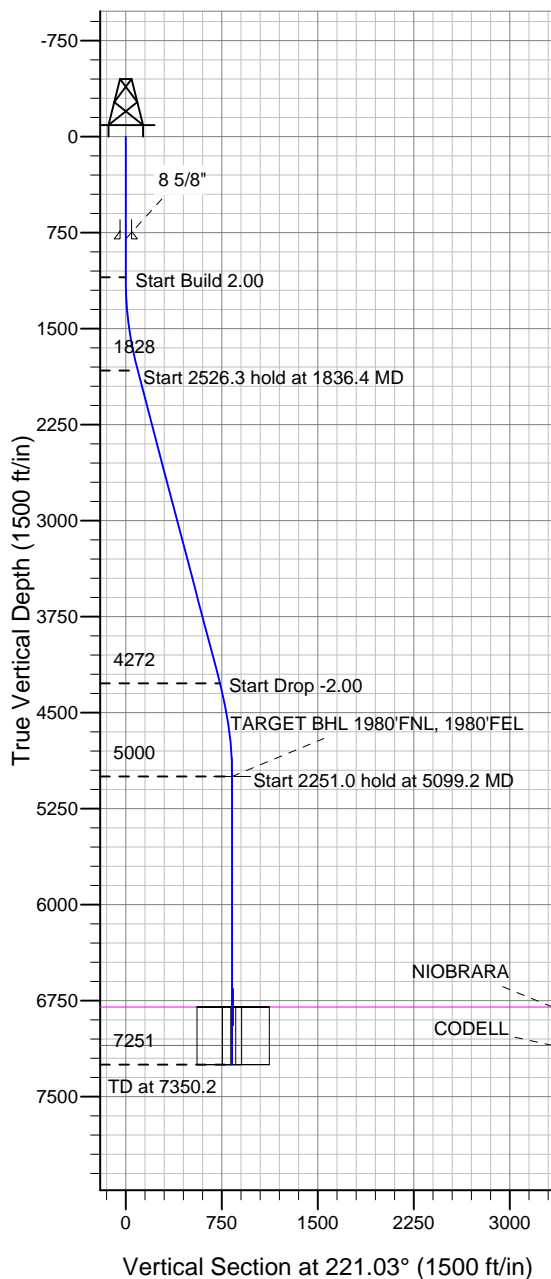


### Well Name: State Y16-07D

Surface Location: State Y16-18D Pad Sec.16-T2N-R64W  
 North American Datum 1983, US State Plane 1983 Colorado Northern Zone  
 Ground Elevation: 4928.0  
 +N/-S 0.0 +E/-W 0.0 Northing 1296005.01 Easting 3264993.85 Latitude 40.142040 Longitude -104.552120 Slot  
 Original Well EleWELL @ 4941.0ft (Original Well Elev)

## NOBLE ENERGY INC WELD COUNTY CO



State Y16-18D Pad Sec.16-T2N-R64W  
 State Y16-07D  
 Noble State Y16-07D Plan #1 (9-28-11)  
 11:29, September 30 2011



Azimuths to True North  
 Magnetic North: 8.69°  
 Magnetic Field  
 Strength: 52987.5nT  
 Dip Angle: 66.87°  
 Date: 9/28/2011  
 Model: IGRF2010

### WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 1980'FNL, 1980'FEL	5000.0	-626.6	-545.2	40.140320	-104.554070	Point
LEGAL BOX 400' X 400' 1985'FNL & 1988'FEL	6801.0	-631.6	-553.2	40.140306	-104.554099	Rectangle (Sides: L400.0 W400.0)
TARGET CIRCLE 1980'FNL & 1980'FEL	6801.0	-626.6	-545.2	40.140320	-104.554070	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	1100.0	0.00	0.00	1100.0	0.0	0.0	0.00	0.00	0.0	
3	1836.4	14.73	221.03	1828.3	-71.0	-61.8	2.00	221.03	94.1	
4	4362.7	14.73	221.03	4271.7	-555.6	-483.4	0.00	0.00	736.4	
5	5099.2	0.00	0.00	5000.0	-626.6	-545.2	2.00	180.00	830.6	TARGET BHL 1980'FNL, 1980'FEL
6	7350.2	0.00	0.00	7251.0	-626.6	-545.2	0.00	0.00	830.6	



**Directional**

# **NOBLE ENERGY INC WELD COUNTY CO**

**SEC.16-T2N-R64W**

**State Y16-18D Pad Sec.16-T2N-R64W**

**State Y16-07D**

**Wellbore #1**

**Plan: Noble State Y16-07D Plan #1 (9-28-11)**

## **Standard Planning Report**

**30 September, 2011**



<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well State Y16-07D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4941.0ft (Original Well Elev)
<b>Project:</b>	SEC.16-T2N-R64W	<b>MD Reference:</b>	WELL @ 4941.0ft (Original Well Elev)
<b>Site:</b>	State Y16-18D Pad Sec.16-T2N-R64W	<b>North Reference:</b>	True
<b>Well:</b>	State Y16-07D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble State Y16-07D Plan #1 (9-28-11)		

<b>Project</b>	SEC.16-T2N-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						State Y16-18D Pad Sec.16-T2N-R64W							
Site Position: From: Position Uncertainty:			Lat/Long  0.0 ft			Northing:		1,296,004.55 ft		Latitude:		40.142040	
						Easting:		3,264,949.12 ft		Longitude:		-104.552280	
						Slot Radius:		"		Grid Convergence:		0.61 °	

Well	State Y16-07D					
Well Position	+N/-S	0.0 ft	Northing:	1,296,005.01 ft	Latitude:	40.142040
	+E/-W	44.7 ft	Easting:	3,264,993.85 ft	Longitude:	-104.552120
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,928.0 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	9/28/2011	8.69	66.87	52,988

<b>Design</b>	Noble State Y16-07D Plan #1 (9-28-11)			
<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	221.03

<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	
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,836.4	14.73	221.03	1,828.3	-71.0	-61.8	2.00	2.00	0.00	221.03	
4,362.7	14.73	221.03	4,271.7	-555.6	-483.4	0.00	0.00	0.00	0.00	
5,099.2	0.00	0.00	5,000.0	-626.6	-545.2	2.00	-2.00	0.00	180.00	TARGET BHL 198C
7,350.2	0.00	0.00	7,251.0	-626.6	-545.2	0.00	0.00	0.00	0.00	

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well State Y16-07D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4941.0ft (Original Well Elev)
<b>Project:</b>	SEC.16-T2N-R64W	<b>MD Reference:</b>	WELL @ 4941.0ft (Original Well Elev)
<b>Site:</b>	State Y16-18D Pad Sec.16-T2N-R64W	<b>North Reference:</b>	True
<b>Well:</b>	State Y16-07D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble State Y16-07D Plan #1 (9-28-11)		

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
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
8 5/8"									
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
960.0	0.00	0.00	960.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,040.0	0.00	0.00	1,040.0	0.0	0.0	0.0	0.00	0.00	0.00
1,080.0	0.00	0.00	1,080.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,120.0	0.40	221.03	1,120.0	-0.1	0.0	0.1	2.00	2.00	0.00
1,160.0	1.20	221.03	1,160.0	-0.5	-0.4	0.6	2.00	2.00	0.00
1,200.0	2.00	221.03	1,200.0	-1.3	-1.1	1.7	2.00	2.00	0.00
1,240.0	2.80	221.03	1,239.9	-2.6	-2.2	3.4	2.00	2.00	0.00
1,280.0	3.60	221.03	1,279.9	-4.3	-3.7	5.7	2.00	2.00	0.00
1,320.0	4.40	221.03	1,319.8	-6.4	-5.5	8.4	2.00	2.00	0.00
1,360.0	5.20	221.03	1,359.6	-8.9	-7.7	11.8	2.00	2.00	0.00
1,400.0	6.00	221.03	1,399.5	-11.8	-10.3	15.7	2.00	2.00	0.00
1,440.0	6.80	221.03	1,439.2	-15.2	-13.2	20.2	2.00	2.00	0.00
1,480.0	7.60	221.03	1,478.9	-19.0	-16.5	25.2	2.00	2.00	0.00
1,520.0	8.40	221.03	1,518.5	-23.2	-20.2	30.7	2.00	2.00	0.00
1,560.0	9.20	221.03	1,558.0	-27.8	-24.2	36.9	2.00	2.00	0.00
1,600.0	10.00	221.03	1,597.5	-32.8	-28.6	43.5	2.00	2.00	0.00
1,640.0	10.80	221.03	1,636.8	-38.3	-33.3	50.7	2.00	2.00	0.00
1,680.0	11.60	221.03	1,676.0	-44.1	-38.4	58.5	2.00	2.00	0.00
1,720.0	12.40	221.03	1,715.2	-50.4	-43.9	66.8	2.00	2.00	0.00
1,760.0	13.20	221.03	1,754.2	-57.1	-49.7	75.7	2.00	2.00	0.00
1,800.0	14.00	221.03	1,793.1	-64.2	-55.9	85.1	2.00	2.00	0.00
1,836.4	14.73	221.03	1,828.3	-71.0	-61.8	94.1	2.00	2.00	0.00
1,840.0	14.73	221.03	1,831.8	-71.7	-62.4	95.0	0.00	0.00	0.00
1,880.0	14.73	221.03	1,870.5	-79.4	-69.1	105.2	0.00	0.00	0.00
1,920.0	14.73	221.03	1,909.2	-87.0	-75.7	115.4	0.00	0.00	0.00
1,960.0	14.73	221.03	1,947.9	-94.7	-82.4	125.6	0.00	0.00	0.00
2,000.0	14.73	221.03	1,986.5	-102.4	-89.1	135.7	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well State Y16-07D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4941.0ft (Original Well Elev)
<b>Project:</b>	SEC.16-T2N-R64W	<b>MD Reference:</b>	WELL @ 4941.0ft (Original Well Elev)
<b>Site:</b>	State Y16-18D Pad Sec.16-T2N-R64W	<b>North Reference:</b>	True
<b>Well:</b>	State Y16-07D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble State Y16-07D Plan #1 (9-28-11)		

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	14.73	221.03	2,025.2	-110.1	-95.8	145.9	0.00	0.00	0.00
2,080.0	14.73	221.03	2,063.9	-117.7	-102.4	156.1	0.00	0.00	0.00
2,120.0	14.73	221.03	2,102.6	-125.4	-109.1	166.2	0.00	0.00	0.00
2,160.0	14.73	221.03	2,141.3	-133.1	-115.8	176.4	0.00	0.00	0.00
2,200.0	14.73	221.03	2,180.0	-140.7	-122.5	186.6	0.00	0.00	0.00
2,240.0	14.73	221.03	2,218.7	-148.4	-129.1	196.7	0.00	0.00	0.00
2,280.0	14.73	221.03	2,257.3	-156.1	-135.8	206.9	0.00	0.00	0.00
2,320.0	14.73	221.03	2,296.0	-163.8	-142.5	217.1	0.00	0.00	0.00
2,360.0	14.73	221.03	2,334.7	-171.4	-149.2	227.2	0.00	0.00	0.00
2,400.0	14.73	221.03	2,373.4	-179.1	-155.8	237.4	0.00	0.00	0.00
2,440.0	14.73	221.03	2,412.1	-186.8	-162.5	247.6	0.00	0.00	0.00
2,480.0	14.73	221.03	2,450.8	-194.4	-169.2	257.8	0.00	0.00	0.00
2,520.0	14.73	221.03	2,489.5	-202.1	-175.9	267.9	0.00	0.00	0.00
2,560.0	14.73	221.03	2,528.1	-209.8	-182.5	278.1	0.00	0.00	0.00
2,600.0	14.73	221.03	2,566.8	-217.5	-189.2	288.3	0.00	0.00	0.00
2,640.0	14.73	221.03	2,605.5	-225.1	-195.9	298.4	0.00	0.00	0.00
2,680.0	14.73	221.03	2,644.2	-232.8	-202.6	308.6	0.00	0.00	0.00
2,720.0	14.73	221.03	2,682.9	-240.5	-209.3	318.8	0.00	0.00	0.00
2,760.0	14.73	221.03	2,721.6	-248.2	-215.9	328.9	0.00	0.00	0.00
2,800.0	14.73	221.03	2,760.3	-255.8	-222.6	339.1	0.00	0.00	0.00
2,840.0	14.73	221.03	2,798.9	-263.5	-229.3	349.3	0.00	0.00	0.00
2,880.0	14.73	221.03	2,837.6	-271.2	-236.0	359.5	0.00	0.00	0.00
2,920.0	14.73	221.03	2,876.3	-278.8	-242.6	369.6	0.00	0.00	0.00
2,960.0	14.73	221.03	2,915.0	-286.5	-249.3	379.8	0.00	0.00	0.00
3,000.0	14.73	221.03	2,953.7	-294.2	-256.0	390.0	0.00	0.00	0.00
3,040.0	14.73	221.03	2,992.4	-301.9	-262.7	400.1	0.00	0.00	0.00
3,080.0	14.73	221.03	3,031.1	-309.5	-269.3	410.3	0.00	0.00	0.00
3,120.0	14.73	221.03	3,069.7	-317.2	-276.0	420.5	0.00	0.00	0.00
3,160.0	14.73	221.03	3,108.4	-324.9	-282.7	430.6	0.00	0.00	0.00
3,200.0	14.73	221.03	3,147.1	-332.5	-289.4	440.8	0.00	0.00	0.00
3,240.0	14.73	221.03	3,185.8	-340.2	-296.0	451.0	0.00	0.00	0.00
3,280.0	14.73	221.03	3,224.5	-347.9	-302.7	461.1	0.00	0.00	0.00
3,320.0	14.73	221.03	3,263.2	-355.6	-309.4	471.3	0.00	0.00	0.00
3,360.0	14.73	221.03	3,301.9	-363.2	-316.1	481.5	0.00	0.00	0.00
3,400.0	14.73	221.03	3,340.5	-370.9	-322.7	491.7	0.00	0.00	0.00
3,440.0	14.73	221.03	3,379.2	-378.6	-329.4	501.8	0.00	0.00	0.00
3,480.0	14.73	221.03	3,417.9	-386.2	-336.1	512.0	0.00	0.00	0.00
3,520.0	14.73	221.03	3,456.6	-393.9	-342.8	522.2	0.00	0.00	0.00
3,560.0	14.73	221.03	3,495.3	-401.6	-349.4	532.3	0.00	0.00	0.00
3,600.0	14.73	221.03	3,534.0	-409.3	-356.1	542.5	0.00	0.00	0.00
3,640.0	14.73	221.03	3,572.7	-416.9	-362.8	552.7	0.00	0.00	0.00
3,680.0	14.73	221.03	3,611.3	-424.6	-369.5	562.8	0.00	0.00	0.00
3,720.0	14.73	221.03	3,650.0	-432.3	-376.1	573.0	0.00	0.00	0.00
3,760.0	14.73	221.03	3,688.7	-440.0	-382.8	583.2	0.00	0.00	0.00
3,800.0	14.73	221.03	3,727.4	-447.6	-389.5	593.4	0.00	0.00	0.00
3,840.0	14.73	221.03	3,766.1	-455.3	-396.2	603.5	0.00	0.00	0.00
3,880.0	14.73	221.03	3,804.8	-463.0	-402.8	613.7	0.00	0.00	0.00
3,920.0	14.73	221.03	3,843.5	-470.6	-409.5	623.9	0.00	0.00	0.00
3,960.0	14.73	221.03	3,882.1	-478.3	-416.2	634.0	0.00	0.00	0.00
4,000.0	14.73	221.03	3,920.8	-486.0	-422.9	644.2	0.00	0.00	0.00
4,040.0	14.73	221.03	3,959.5	-493.7	-429.5	654.4	0.00	0.00	0.00
4,080.0	14.73	221.03	3,998.2	-501.3	-436.2	664.5	0.00	0.00	0.00
4,120.0	14.73	221.03	4,036.9	-509.0	-442.9	674.7	0.00	0.00	0.00
4,160.0	14.73	221.03	4,075.6	-516.7	-449.6	684.9	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well State Y16-07D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4941.0ft (Original Well Elev)
<b>Project:</b>	SEC.16-T2N-R64W	<b>MD Reference:</b>	WELL @ 4941.0ft (Original Well Elev)
<b>Site:</b>	State Y16-18D Pad Sec.16-T2N-R64W	<b>North Reference:</b>	True
<b>Well:</b>	State Y16-07D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble State Y16-07D Plan #1 (9-28-11)		

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)
4,200.0	14.73	221.03	4,114.3	-524.3	-456.2	695.0	0.00	0.00	0.00
4,240.0	14.73	221.03	4,152.9	-532.0	-462.9	705.2	0.00	0.00	0.00
4,280.0	14.73	221.03	4,191.6	-539.7	-469.6	715.4	0.00	0.00	0.00
4,320.0	14.73	221.03	4,230.3	-547.4	-476.3	725.6	0.00	0.00	0.00
4,360.0	14.73	221.03	4,269.0	-555.0	-482.9	735.7	0.00	0.00	0.00
4,362.7	14.73	221.03	4,271.7	-555.6	-483.4	736.4	0.00	0.00	0.00
4,400.0	13.98	221.03	4,307.7	-562.5	-489.5	745.7	2.00	-2.00	0.00
4,440.0	13.18	221.03	4,346.6	-569.6	-495.6	755.1	2.00	-2.00	0.00
4,480.0	12.38	221.03	4,385.6	-576.3	-501.4	763.9	2.00	-2.00	0.00
4,520.0	11.58	221.03	4,424.8	-582.6	-506.9	772.2	2.00	-2.00	0.00
4,560.0	10.78	221.03	4,464.0	-588.4	-512.0	780.0	2.00	-2.00	0.00
4,600.0	9.98	221.03	4,503.3	-593.8	-516.7	787.2	2.00	-2.00	0.00
4,640.0	9.18	221.03	4,542.8	-598.9	-521.1	793.8	2.00	-2.00	0.00
4,680.0	8.38	221.03	4,582.3	-603.5	-525.1	799.9	2.00	-2.00	0.00
4,720.0	7.58	221.03	4,621.9	-607.7	-528.8	805.5	2.00	-2.00	0.00
4,760.0	6.78	221.03	4,661.6	-611.4	-532.0	810.5	2.00	-2.00	0.00
4,800.0	5.98	221.03	4,701.4	-614.8	-535.0	815.0	2.00	-2.00	0.00
4,840.0	5.18	221.03	4,741.2	-617.7	-537.5	818.8	2.00	-2.00	0.00
4,880.0	4.38	221.03	4,781.0	-620.2	-539.7	822.2	2.00	-2.00	0.00
4,920.0	3.58	221.03	4,820.9	-622.3	-541.5	825.0	2.00	-2.00	0.00
4,960.0	2.78	221.03	4,860.9	-624.0	-543.0	827.2	2.00	-2.00	0.00
5,000.0	1.98	221.03	4,900.8	-625.3	-544.1	828.8	2.00	-2.00	0.00
5,040.0	1.18	221.03	4,940.8	-626.1	-544.8	830.0	2.00	-2.00	0.00
5,080.0	0.38	221.03	4,980.8	-626.5	-545.2	830.5	2.00	-2.00	0.00
5,099.2	0.00	0.00	5,000.0	-626.6	-545.2	830.6	2.00	-2.00	0.00
TARGET BHL 1980'FNL, 1980'FEL									
5,120.0	0.00	0.00	5,020.8	-626.6	-545.2	830.6	0.00	0.00	0.00
5,160.0	0.00	0.00	5,060.8	-626.6	-545.2	830.6	0.00	0.00	0.00
5,200.0	0.00	0.00	5,100.8	-626.6	-545.2	830.6	0.00	0.00	0.00
5,240.0	0.00	0.00	5,140.8	-626.6	-545.2	830.6	0.00	0.00	0.00
5,280.0	0.00	0.00	5,180.8	-626.6	-545.2	830.6	0.00	0.00	0.00
5,320.0	0.00	0.00	5,220.8	-626.6	-545.2	830.6	0.00	0.00	0.00
5,360.0	0.00	0.00	5,260.8	-626.6	-545.2	830.6	0.00	0.00	0.00
5,400.0	0.00	0.00	5,300.8	-626.6	-545.2	830.6	0.00	0.00	0.00
5,440.0	0.00	0.00	5,340.8	-626.6	-545.2	830.6	0.00	0.00	0.00
5,480.0	0.00	0.00	5,380.8	-626.6	-545.2	830.6	0.00	0.00	0.00
5,520.0	0.00	0.00	5,420.8	-626.6	-545.2	830.6	0.00	0.00	0.00
5,560.0	0.00	0.00	5,460.8	-626.6	-545.2	830.6	0.00	0.00	0.00
5,600.0	0.00	0.00	5,500.8	-626.6	-545.2	830.6	0.00	0.00	0.00
5,640.0	0.00	0.00	5,540.8	-626.6	-545.2	830.6	0.00	0.00	0.00
5,680.0	0.00	0.00	5,580.8	-626.6	-545.2	830.6	0.00	0.00	0.00
5,720.0	0.00	0.00	5,620.8	-626.6	-545.2	830.6	0.00	0.00	0.00
5,760.0	0.00	0.00	5,660.8	-626.6	-545.2	830.6	0.00	0.00	0.00
5,800.0	0.00	0.00	5,700.8	-626.6	-545.2	830.6	0.00	0.00	0.00
5,840.0	0.00	0.00	5,740.8	-626.6	-545.2	830.6	0.00	0.00	0.00
5,880.0	0.00	0.00	5,780.8	-626.6	-545.2	830.6	0.00	0.00	0.00
5,920.0	0.00	0.00	5,820.8	-626.6	-545.2	830.6	0.00	0.00	0.00
5,960.0	0.00	0.00	5,860.8	-626.6	-545.2	830.6	0.00	0.00	0.00
6,000.0	0.00	0.00	5,900.8	-626.6	-545.2	830.6	0.00	0.00	0.00
6,040.0	0.00	0.00	5,940.8	-626.6	-545.2	830.6	0.00	0.00	0.00
6,080.0	0.00	0.00	5,980.8	-626.6	-545.2	830.6	0.00	0.00	0.00
6,120.0	0.00	0.00	6,020.8	-626.6	-545.2	830.6	0.00	0.00	0.00
6,160.0	0.00	0.00	6,060.8	-626.6	-545.2	830.6	0.00	0.00	0.00
6,200.0	0.00	0.00	6,100.8	-626.6	-545.2	830.6	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well State Y16-07D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4941.0ft (Original Well Elev)
<b>Project:</b>	SEC.16-T2N-R64W	<b>MD Reference:</b>	WELL @ 4941.0ft (Original Well Elev)
<b>Site:</b>	State Y16-18D Pad Sec.16-T2N-R64W	<b>North Reference:</b>	True
<b>Well:</b>	State Y16-07D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble State Y16-07D Plan #1 (9-28-11)		

**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	0.00	0.00	6,140.8	-626.6	-545.2	830.6	0.00	0.00	0.00
6,280.0	0.00	0.00	6,180.8	-626.6	-545.2	830.6	0.00	0.00	0.00
6,320.0	0.00	0.00	6,220.8	-626.6	-545.2	830.6	0.00	0.00	0.00
6,360.0	0.00	0.00	6,260.8	-626.6	-545.2	830.6	0.00	0.00	0.00
6,400.0	0.00	0.00	6,300.8	-626.6	-545.2	830.6	0.00	0.00	0.00
6,440.0	0.00	0.00	6,340.8	-626.6	-545.2	830.6	0.00	0.00	0.00
6,480.0	0.00	0.00	6,380.8	-626.6	-545.2	830.6	0.00	0.00	0.00
6,520.0	0.00	0.00	6,420.8	-626.6	-545.2	830.6	0.00	0.00	0.00
6,560.0	0.00	0.00	6,460.8	-626.6	-545.2	830.6	0.00	0.00	0.00
6,600.0	0.00	0.00	6,500.8	-626.6	-545.2	830.6	0.00	0.00	0.00
6,640.0	0.00	0.00	6,540.8	-626.6	-545.2	830.6	0.00	0.00	0.00
6,680.0	0.00	0.00	6,580.8	-626.6	-545.2	830.6	0.00	0.00	0.00
6,720.0	0.00	0.00	6,620.8	-626.6	-545.2	830.6	0.00	0.00	0.00
6,760.0	0.00	0.00	6,660.8	-626.6	-545.2	830.6	0.00	0.00	0.00
6,800.0	0.00	0.00	6,700.8	-626.6	-545.2	830.6	0.00	0.00	0.00
6,840.0	0.00	0.00	6,740.8	-626.6	-545.2	830.6	0.00	0.00	0.00
6,880.0	0.00	0.00	6,780.8	-626.6	-545.2	830.6	0.00	0.00	0.00
6,900.2	0.00	0.00	6,801.0	-626.6	-545.2	830.6	0.00	0.00	0.00
<b>NIORARA - LEGAL BOX 400' X 400' 1985'FNL &amp; 1988'FEL - TARGET CIRCLE 1980'FNL &amp; 1980'FEL</b>									
6,920.0	0.00	0.00	6,820.8	-626.6	-545.2	830.6	0.00	0.00	0.00
6,960.0	0.00	0.00	6,860.8	-626.6	-545.2	830.6	0.00	0.00	0.00
7,000.0	0.00	0.00	6,900.8	-626.6	-545.2	830.6	0.00	0.00	0.00
7,040.0	0.00	0.00	6,940.8	-626.6	-545.2	830.6	0.00	0.00	0.00
7,080.0	0.00	0.00	6,980.8	-626.6	-545.2	830.6	0.00	0.00	0.00
7,120.0	0.00	0.00	7,020.8	-626.6	-545.2	830.6	0.00	0.00	0.00
7,160.0	0.00	0.00	7,060.8	-626.6	-545.2	830.6	0.00	0.00	0.00
7,200.0	0.00	0.00	7,100.8	-626.6	-545.2	830.6	0.00	0.00	0.00
7,200.2	0.00	0.00	7,101.0	-626.6	-545.2	830.6	0.00	0.00	0.00
<b>CODELL</b>									
7,240.0	0.00	0.00	7,140.8	-626.6	-545.2	830.6	0.00	0.00	0.00
7,280.0	0.00	0.00	7,180.8	-626.6	-545.2	830.6	0.00	0.00	0.00
7,320.0	0.00	0.00	7,220.8	-626.6	-545.2	830.6	0.00	0.00	0.00
7,350.2	0.00	0.00	7,251.0	-626.6	-545.2	830.6	0.00	0.00	0.00

**Targets**

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
TARGET BHL 1980'F - plan hits target center - Point	0.00	0.00	5,000.0	-626.6	-545.2	1,295,372.68	3,264,455.40	40.140320	-104.554070
LEGAL BOX 400' X 400' - plan misses target center by 9.5ft at 6900.2ft MD (6801.0 TVD, -626.6 N, -545.2 E) - Rectangle (sides W400.0 H400.0 D450.0)	0.00	0.00	6,801.0	-631.6	-553.2	1,295,367.56	3,264,447.46	40.140306	-104.554099
TARGET CIRCLE 1980'F - plan hits target center - Circle (radius 75.0)	0.00	0.00	6,801.0	-626.6	-545.2	1,295,372.68	3,264,455.40	40.140320	-104.554070

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well State Y16-07D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4941.0ft (Original Well Elev)
<b>Project:</b>	SEC.16-T2N-R64W	<b>MD Reference:</b>	WELL @ 4941.0ft (Original Well Elev)
<b>Site:</b>	State Y16-18D Pad Sec.16-T2N-R64W	<b>North Reference:</b>	True
<b>Well:</b>	State Y16-07D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble State Y16-07D Plan #1 (9-28-11)		

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
800.0	800.0	8 5/8"	8-5/8	12-1/4	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
6,900.2	6,801.0	NIOBRARA		0.00	
7,200.2	7,101.0	CODELL		0.00	