

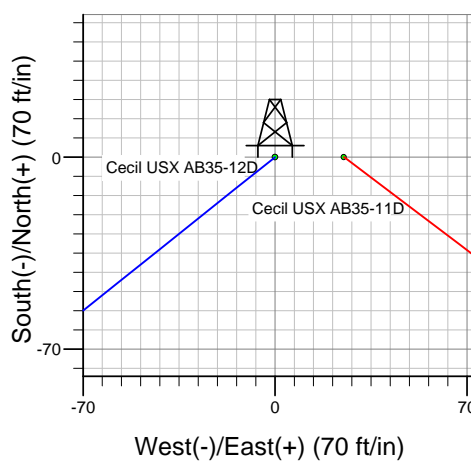
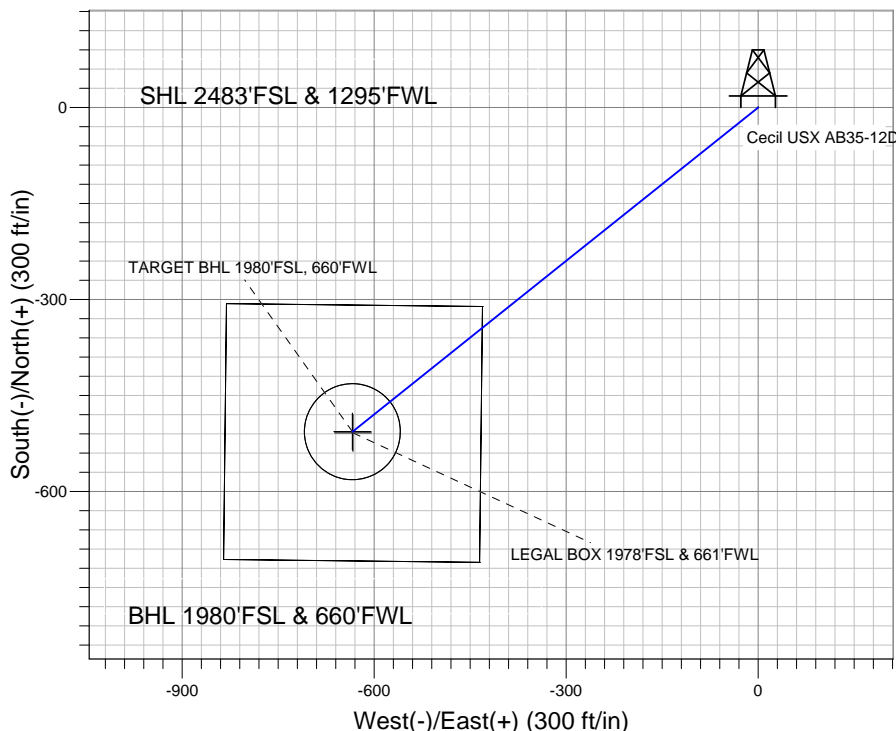
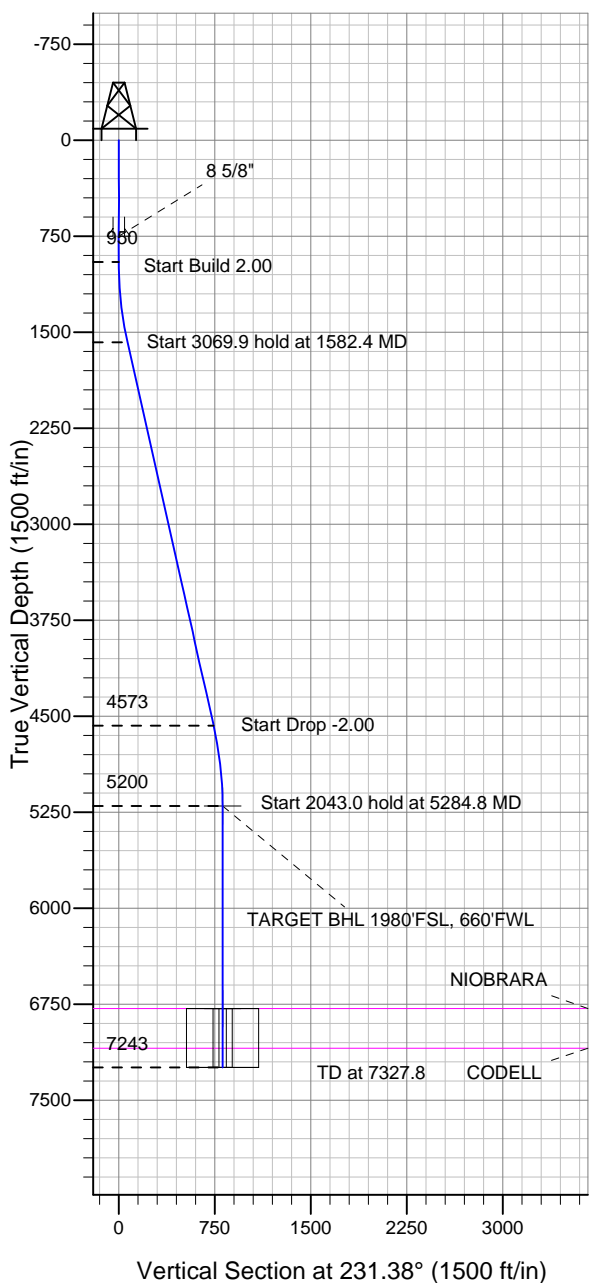
# ENSIGN

## Directional

### Well Name: Cecil USX AB35-12D

Surface Location: Cecil USX AB35-12D Pad Sec.35-T7N-R64W  
 North American Datum 1983 US State Plane 1983 Colorado Northern Zone  
 Ground Elevation: 4835.0  
 +N/-S +E/-W Northing Easting Latitude Longitude Slot  
 0.0 0.0 1437192.73 3271832.76 40° 31' 45.768 N 104° 31' 19.524 W  
 Original Well Elev WELL @ 4848.0ft (Original Well Elev)

## NOBLE ENERGY INC WELD COUNTY CO



Cecil USX AB35-12D Pad Sec.35-T7N-R64W  
 Cecil USX AB35-12D  
 Noble Cecil USX AB35-12D Plan #1 2-11-11  
 12:26, February 14 2011



Azimuths to True North  
 Magnetic North: 8.79°

Magnetic Field  
 Strength: 53260.2snT  
 Dip Angle: 67.21°  
 Date: 2/14/2011  
 Model: IGRF2010

### WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 1980'FSL, 660'FWL	5200.0	-506.4	-633.8	40° 31' 40.764 N	104° 31' 27.732 W	Point
LEGAL BOX 1978'FSL & 661'FWL	6783.0	-508.5	-632.8	40° 31' 40.744 N	104° 31' 27.719 W	Rectangle (Sides: L400.0 W400.0)
TARGET CIRCLE 1980'FSL & 660'FWL	6783.0	-506.4	-633.8	40° 31' 40.764 N	104° 31' 27.732 W	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	1582.4	12.65	231.38	1577.3	-43.4	-54.3	2.00	231.38	69.5	
4	4652.3	12.65	231.38	4572.7	-463.0	-579.5	0.00	0.00	741.7	
5	5284.8	0.00	0.00	5200.0	-506.4	-633.8	2.00	180.00	811.3	TARGET BHL 1980'FSL, 660'FWL
6	7327.8	0.00	0.00	7243.0	-506.4	-633.8	0.00	0.00	811.3	



## **Directional**

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

**SEC.35-T7N-R64W**

**Cecil USX AB35-12D Pad Sec.35-T7N-R64W**

**Cecil USX AB35-12D**

**Wellbore #1**

**Plan: Noble Cecil USX AB35-12D Plan #1 2-11-11**

### **Standard Planning Report**

**14 February, 2011**



<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Cecil USX AB35-12D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4848.0ft (Original Well Elev)
<b>Project:</b>	SEC.35-T7N-R64W	<b>MD Reference:</b>	WELL @ 4848.0ft (Original Well Elev)
<b>Site:</b>	Cecil USX AB35-12D Pad Sec.35-T7N-R64W	<b>North Reference:</b>	True
<b>Well:</b>	Cecil USX AB35-12D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble Cecil USX AB35-12D Plan #1 2-11-11		

<b>Project</b>	SEC.35-T7N-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						Cecil USX AB35-12D Pad Sec.35-T7N-R64W											
Site Position:						Northing:			1,437,192.74 ft			Latitude:			40° 31' 45.768 N		
From:			Lat/Long			Easting:			3,271,832.76 ft			Longitude:			104° 31' 19.524 W		
Position Uncertainty:			0.0 ft			Slot Radius:			"			Grid Convergence:			0.63 °		

Well	Cecil USX AB35-12D					
Well Position	+N-S	0.0 ft	Northing:	1,437,192.73 ft	Latitude:	40° 31' 45.768 N
	+E-W	0.0 ft	Easting:	3,271,832.76 ft	Longitude:	104° 31' 19.524 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,835.0 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	2/14/2011	8.79	67.21	53,260

<b>Design</b>	Noble Cecil USX AB35-12D Plan #1 2-11-11			
<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	231.38

<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	
1,582.4	12.65	231.38	1,577.3	-43.4	-54.3	2.00	2.00	0.00	231.38	
4,652.3	12.65	231.38	4,572.7	-463.0	-579.5	0.00	0.00	0.00	0.00	
5,284.8	0.00	0.00	5,200.0	-506.4	-633.8	2.00	-2.00	0.00	180.00	TARGET BHL 198C
7,327.8	0.00	0.00	7,243.0	-506.4	-633.8	0.00	0.00	0.00	0.00	

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Cecil USX AB35-12D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4848.0ft (Original Well Elev)
<b>Project:</b>	SEC.35-T7N-R64W	<b>MD Reference:</b>	WELL @ 4848.0ft (Original Well Elev)
<b>Site:</b>	Cecil USX AB35-12D Pad Sec.35-T7N-R64W	<b>North Reference:</b>	True
<b>Well:</b>	Cecil USX AB35-12D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble Cecil USX AB35-12D Plan #1 2-11-11		

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
750.0	0.00	0.00	750.0	0.0	0.0	0.0	0.00	0.00	0.00
8 5/8"									
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	231.38	960.0	0.0	0.0	0.0	2.00	2.00	0.00
1,000.0	1.00	231.38	1,000.0	-0.3	-0.3	0.4	2.00	2.00	0.00
1,040.0	1.80	231.38	1,040.0	-0.9	-1.1	1.4	2.00	2.00	0.00
1,080.0	2.60	231.38	1,080.0	-1.8	-2.3	2.9	2.00	2.00	0.00
1,120.0	3.40	231.38	1,119.9	-3.1	-3.9	5.0	2.00	2.00	0.00
1,160.0	4.20	231.38	1,159.8	-4.8	-6.0	7.7	2.00	2.00	0.00
1,200.0	5.00	231.38	1,199.7	-6.8	-8.5	10.9	2.00	2.00	0.00
1,240.0	5.80	231.38	1,239.5	-9.2	-11.5	14.7	2.00	2.00	0.00
1,280.0	6.60	231.38	1,279.3	-11.9	-14.8	19.0	2.00	2.00	0.00
1,320.0	7.40	231.38	1,319.0	-14.9	-18.6	23.9	2.00	2.00	0.00
1,360.0	8.20	231.38	1,358.6	-18.3	-22.9	29.3	2.00	2.00	0.00
1,400.0	9.00	231.38	1,398.2	-22.0	-27.6	35.3	2.00	2.00	0.00
1,440.0	9.80	231.38	1,437.6	-26.1	-32.7	41.8	2.00	2.00	0.00
1,480.0	10.60	231.38	1,477.0	-30.5	-38.2	48.9	2.00	2.00	0.00
1,520.0	11.40	231.38	1,516.2	-35.3	-44.2	56.5	2.00	2.00	0.00
1,560.0	12.20	231.38	1,555.4	-40.4	-50.5	64.7	2.00	2.00	0.00
1,582.4	12.65	231.38	1,577.3	-43.4	-54.3	69.5	2.00	2.00	0.00
1,600.0	12.65	231.38	1,594.4	-45.8	-57.3	73.4	0.00	0.00	0.00
1,640.0	12.65	231.38	1,633.5	-51.3	-64.2	82.1	0.00	0.00	0.00
1,680.0	12.65	231.38	1,672.5	-56.7	-71.0	90.9	0.00	0.00	0.00
1,720.0	12.65	231.38	1,711.5	-62.2	-77.9	99.6	0.00	0.00	0.00
1,760.0	12.65	231.38	1,750.6	-67.7	-84.7	108.4	0.00	0.00	0.00
1,800.0	12.65	231.38	1,789.6	-73.1	-91.5	117.2	0.00	0.00	0.00
1,840.0	12.65	231.38	1,828.6	-78.6	-98.4	125.9	0.00	0.00	0.00
1,880.0	12.65	231.38	1,867.7	-84.1	-105.2	134.7	0.00	0.00	0.00
1,920.0	12.65	231.38	1,906.7	-89.5	-112.1	143.4	0.00	0.00	0.00
1,960.0	12.65	231.38	1,945.7	-95.0	-118.9	152.2	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Cecil USX AB35-12D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4848.0ft (Original Well Elev)
<b>Project:</b>	SEC.35-T7N-R64W	<b>MD Reference:</b>	WELL @ 4848.0ft (Original Well Elev)
<b>Site:</b>	Cecil USX AB35-12D Pad Sec.35-T7N-R64W	<b>North Reference:</b>	True
<b>Well:</b>	Cecil USX AB35-12D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble Cecil USX AB35-12D Plan #1 2-11-11		

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)
2,000.0	12.65	231.38	1,984.7	-100.5	-125.8	161.0	0.00	0.00	0.00
2,040.0	12.65	231.38	2,023.8	-105.9	-132.6	169.7	0.00	0.00	0.00
2,080.0	12.65	231.38	2,062.8	-111.4	-139.4	178.5	0.00	0.00	0.00
2,120.0	12.65	231.38	2,101.8	-116.9	-146.3	187.2	0.00	0.00	0.00
2,160.0	12.65	231.38	2,140.9	-122.3	-153.1	196.0	0.00	0.00	0.00
2,200.0	12.65	231.38	2,179.9	-127.8	-160.0	204.8	0.00	0.00	0.00
2,240.0	12.65	231.38	2,218.9	-133.3	-166.8	213.5	0.00	0.00	0.00
2,280.0	12.65	231.38	2,257.9	-138.7	-173.7	222.3	0.00	0.00	0.00
2,320.0	12.65	231.38	2,297.0	-144.2	-180.5	231.0	0.00	0.00	0.00
2,360.0	12.65	231.38	2,336.0	-149.7	-187.3	239.8	0.00	0.00	0.00
2,400.0	12.65	231.38	2,375.0	-155.1	-194.2	248.6	0.00	0.00	0.00
2,440.0	12.65	231.38	2,414.1	-160.6	-201.0	257.3	0.00	0.00	0.00
2,480.0	12.65	231.38	2,453.1	-166.1	-207.9	266.1	0.00	0.00	0.00
2,520.0	12.65	231.38	2,492.1	-171.5	-214.7	274.8	0.00	0.00	0.00
2,560.0	12.65	231.38	2,531.2	-177.0	-221.6	283.6	0.00	0.00	0.00
2,600.0	12.65	231.38	2,570.2	-182.5	-228.4	292.3	0.00	0.00	0.00
2,640.0	12.65	231.38	2,609.2	-187.9	-235.2	301.1	0.00	0.00	0.00
2,680.0	12.65	231.38	2,648.2	-193.4	-242.1	309.9	0.00	0.00	0.00
2,720.0	12.65	231.38	2,687.3	-198.9	-248.9	318.6	0.00	0.00	0.00
2,760.0	12.65	231.38	2,726.3	-204.3	-255.8	327.4	0.00	0.00	0.00
2,800.0	12.65	231.38	2,765.3	-209.8	-262.6	336.1	0.00	0.00	0.00
2,840.0	12.65	231.38	2,804.4	-215.3	-269.5	344.9	0.00	0.00	0.00
2,880.0	12.65	231.38	2,843.4	-220.8	-276.3	353.7	0.00	0.00	0.00
2,920.0	12.65	231.38	2,882.4	-226.2	-283.1	362.4	0.00	0.00	0.00
2,960.0	12.65	231.38	2,921.4	-231.7	-290.0	371.2	0.00	0.00	0.00
3,000.0	12.65	231.38	2,960.5	-237.2	-296.8	379.9	0.00	0.00	0.00
3,040.0	12.65	231.38	2,999.5	-242.6	-303.7	388.7	0.00	0.00	0.00
3,080.0	12.65	231.38	3,038.5	-248.1	-310.5	397.5	0.00	0.00	0.00
3,120.0	12.65	231.38	3,077.6	-253.6	-317.4	406.2	0.00	0.00	0.00
3,160.0	12.65	231.38	3,116.6	-259.0	-324.2	415.0	0.00	0.00	0.00
3,200.0	12.65	231.38	3,155.6	-264.5	-331.0	423.7	0.00	0.00	0.00
3,240.0	12.65	231.38	3,194.6	-270.0	-337.9	432.5	0.00	0.00	0.00
3,280.0	12.65	231.38	3,233.7	-275.4	-344.7	441.2	0.00	0.00	0.00
3,320.0	12.65	231.38	3,272.7	-280.9	-351.6	450.0	0.00	0.00	0.00
3,360.0	12.65	231.38	3,311.7	-286.4	-358.4	458.8	0.00	0.00	0.00
3,400.0	12.65	231.38	3,350.8	-291.8	-365.3	467.5	0.00	0.00	0.00
3,440.0	12.65	231.38	3,389.8	-297.3	-372.1	476.3	0.00	0.00	0.00
3,480.0	12.65	231.38	3,428.8	-302.8	-378.9	485.0	0.00	0.00	0.00
3,520.0	12.65	231.38	3,467.9	-308.2	-385.8	493.8	0.00	0.00	0.00
3,560.0	12.65	231.38	3,506.9	-313.7	-392.6	502.6	0.00	0.00	0.00
3,600.0	12.65	231.38	3,545.9	-319.2	-399.5	511.3	0.00	0.00	0.00
3,640.0	12.65	231.38	3,584.9	-324.6	-406.3	520.1	0.00	0.00	0.00
3,680.0	12.65	231.38	3,624.0	-330.1	-413.2	528.8	0.00	0.00	0.00
3,720.0	12.65	231.38	3,663.0	-335.6	-420.0	537.6	0.00	0.00	0.00
3,760.0	12.65	231.38	3,702.0	-341.0	-426.9	546.4	0.00	0.00	0.00
3,800.0	12.65	231.38	3,741.1	-346.5	-433.7	555.1	0.00	0.00	0.00
3,840.0	12.65	231.38	3,780.1	-352.0	-440.5	563.9	0.00	0.00	0.00
3,880.0	12.65	231.38	3,819.1	-357.4	-447.4	572.6	0.00	0.00	0.00
3,920.0	12.65	231.38	3,858.1	-362.9	-454.2	581.4	0.00	0.00	0.00
3,960.0	12.65	231.38	3,897.2	-368.4	-461.1	590.2	0.00	0.00	0.00
4,000.0	12.65	231.38	3,936.2	-373.8	-467.9	598.9	0.00	0.00	0.00
4,040.0	12.65	231.38	3,975.2	-379.3	-474.8	607.7	0.00	0.00	0.00
4,080.0	12.65	231.38	4,014.3	-384.8	-481.6	616.4	0.00	0.00	0.00
4,120.0	12.65	231.38	4,053.3	-390.2	-488.4	625.2	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Cecil USX AB35-12D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4848.0ft (Original Well Elev)
<b>Project:</b>	SEC.35-T7N-R64W	<b>MD Reference:</b>	WELL @ 4848.0ft (Original Well Elev)
<b>Site:</b>	Cecil USX AB35-12D Pad Sec.35-T7N-R64W	<b>North Reference:</b>	True
<b>Well:</b>	Cecil USX AB35-12D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble Cecil USX AB35-12D Plan #1 2-11-11		

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)
4,160.0	12.65	231.38	4,092.3	-395.7	-495.3	633.9	0.00	0.00	0.00
4,200.0	12.65	231.38	4,131.3	-401.2	-502.1	642.7	0.00	0.00	0.00
4,240.0	12.65	231.38	4,170.4	-406.6	-509.0	651.5	0.00	0.00	0.00
4,280.0	12.65	231.38	4,209.4	-412.1	-515.8	660.2	0.00	0.00	0.00
4,320.0	12.65	231.38	4,248.4	-417.6	-522.7	669.0	0.00	0.00	0.00
4,360.0	12.65	231.38	4,287.5	-423.0	-529.5	677.7	0.00	0.00	0.00
4,400.0	12.65	231.38	4,326.5	-428.5	-536.3	686.5	0.00	0.00	0.00
4,440.0	12.65	231.38	4,365.5	-434.0	-543.2	695.3	0.00	0.00	0.00
4,480.0	12.65	231.38	4,404.6	-439.4	-550.0	704.0	0.00	0.00	0.00
4,520.0	12.65	231.38	4,443.6	-444.9	-556.9	712.8	0.00	0.00	0.00
4,560.0	12.65	231.38	4,482.6	-450.4	-563.7	721.5	0.00	0.00	0.00
4,600.0	12.65	231.38	4,521.6	-455.8	-570.6	730.3	0.00	0.00	0.00
4,640.0	12.65	231.38	4,560.7	-461.3	-577.4	739.1	0.00	0.00	0.00
4,652.3	12.65	231.38	4,572.7	-463.0	-579.5	741.7	0.00	0.00	0.00
4,680.0	12.10	231.38	4,599.7	-466.7	-584.1	747.7	2.00	-2.00	0.00
4,720.0	11.30	231.38	4,638.9	-471.8	-590.5	755.8	2.00	-2.00	0.00
4,760.0	10.50	231.38	4,678.2	-476.5	-596.4	763.4	2.00	-2.00	0.00
4,800.0	9.70	231.38	4,717.6	-480.9	-601.9	770.4	2.00	-2.00	0.00
4,840.0	8.90	231.38	4,757.0	-484.9	-606.9	776.8	2.00	-2.00	0.00
4,880.0	8.10	231.38	4,796.6	-488.6	-611.5	782.7	2.00	-2.00	0.00
4,920.0	7.30	231.38	4,836.2	-491.9	-615.7	788.1	2.00	-2.00	0.00
4,960.0	6.50	231.38	4,875.9	-494.9	-619.5	792.9	2.00	-2.00	0.00
5,000.0	5.70	231.38	4,915.7	-497.6	-622.8	797.1	2.00	-2.00	0.00
5,040.0	4.90	231.38	4,955.5	-499.9	-625.7	800.8	2.00	-2.00	0.00
5,080.0	4.10	231.38	4,995.4	-501.8	-628.1	804.0	2.00	-2.00	0.00
5,120.0	3.30	231.38	5,035.3	-503.4	-630.1	806.5	2.00	-2.00	0.00
5,160.0	2.50	231.38	5,075.3	-504.7	-631.7	808.6	2.00	-2.00	0.00
5,200.0	1.70	231.38	5,115.3	-505.6	-632.8	810.0	2.00	-2.00	0.00
5,240.0	0.90	231.38	5,155.2	-506.2	-633.6	810.9	2.00	-2.00	0.00
5,280.0	0.10	231.38	5,195.2	-506.4	-633.8	811.3	2.00	-2.00	0.00
5,284.8	0.00	0.00	5,200.0	-506.4	-633.8	811.3	2.00	-2.00	0.00
TARGET BHL 1980'FSL, 660'FWL									
5,320.0	0.00	0.00	5,235.2	-506.4	-633.8	811.3	0.00	0.00	0.00
5,360.0	0.00	0.00	5,275.2	-506.4	-633.8	811.3	0.00	0.00	0.00
5,400.0	0.00	0.00	5,315.2	-506.4	-633.8	811.3	0.00	0.00	0.00
5,440.0	0.00	0.00	5,355.2	-506.4	-633.8	811.3	0.00	0.00	0.00
5,480.0	0.00	0.00	5,395.2	-506.4	-633.8	811.3	0.00	0.00	0.00
5,520.0	0.00	0.00	5,435.2	-506.4	-633.8	811.3	0.00	0.00	0.00
5,560.0	0.00	0.00	5,475.2	-506.4	-633.8	811.3	0.00	0.00	0.00
5,600.0	0.00	0.00	5,515.2	-506.4	-633.8	811.3	0.00	0.00	0.00
5,640.0	0.00	0.00	5,555.2	-506.4	-633.8	811.3	0.00	0.00	0.00
5,680.0	0.00	0.00	5,595.2	-506.4	-633.8	811.3	0.00	0.00	0.00
5,720.0	0.00	0.00	5,635.2	-506.4	-633.8	811.3	0.00	0.00	0.00
5,760.0	0.00	0.00	5,675.2	-506.4	-633.8	811.3	0.00	0.00	0.00
5,800.0	0.00	0.00	5,715.2	-506.4	-633.8	811.3	0.00	0.00	0.00
5,840.0	0.00	0.00	5,755.2	-506.4	-633.8	811.3	0.00	0.00	0.00
5,880.0	0.00	0.00	5,795.2	-506.4	-633.8	811.3	0.00	0.00	0.00
5,920.0	0.00	0.00	5,835.2	-506.4	-633.8	811.3	0.00	0.00	0.00
5,960.0	0.00	0.00	5,875.2	-506.4	-633.8	811.3	0.00	0.00	0.00
6,000.0	0.00	0.00	5,915.2	-506.4	-633.8	811.3	0.00	0.00	0.00
6,040.0	0.00	0.00	5,955.2	-506.4	-633.8	811.3	0.00	0.00	0.00
6,080.0	0.00	0.00	5,995.2	-506.4	-633.8	811.3	0.00	0.00	0.00
6,120.0	0.00	0.00	6,035.2	-506.4	-633.8	811.3	0.00	0.00	0.00
6,160.0	0.00	0.00	6,075.2	-506.4	-633.8	811.3	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Cecil USX AB35-12D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4848.0ft (Original Well Elev)
<b>Project:</b>	SEC.35-T7N-R64W	<b>MD Reference:</b>	WELL @ 4848.0ft (Original Well Elev)
<b>Site:</b>	Cecil USX AB35-12D Pad Sec.35-T7N-R64W	<b>North Reference:</b>	True
<b>Well:</b>	Cecil USX AB35-12D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble Cecil USX AB35-12D Plan #1 2-11-11		

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)
6,200.0	0.00	0.00	6,115.2	-506.4	-633.8	811.3	0.00	0.00	0.00
6,240.0	0.00	0.00	6,155.2	-506.4	-633.8	811.3	0.00	0.00	0.00
6,280.0	0.00	0.00	6,195.2	-506.4	-633.8	811.3	0.00	0.00	0.00
6,320.0	0.00	0.00	6,235.2	-506.4	-633.8	811.3	0.00	0.00	0.00
6,360.0	0.00	0.00	6,275.2	-506.4	-633.8	811.3	0.00	0.00	0.00
6,400.0	0.00	0.00	6,315.2	-506.4	-633.8	811.3	0.00	0.00	0.00
6,440.0	0.00	0.00	6,355.2	-506.4	-633.8	811.3	0.00	0.00	0.00
6,480.0	0.00	0.00	6,395.2	-506.4	-633.8	811.3	0.00	0.00	0.00
6,520.0	0.00	0.00	6,435.2	-506.4	-633.8	811.3	0.00	0.00	0.00
6,560.0	0.00	0.00	6,475.2	-506.4	-633.8	811.3	0.00	0.00	0.00
6,600.0	0.00	0.00	6,515.2	-506.4	-633.8	811.3	0.00	0.00	0.00
6,640.0	0.00	0.00	6,555.2	-506.4	-633.8	811.3	0.00	0.00	0.00
6,680.0	0.00	0.00	6,595.2	-506.4	-633.8	811.3	0.00	0.00	0.00
6,720.0	0.00	0.00	6,635.2	-506.4	-633.8	811.3	0.00	0.00	0.00
6,760.0	0.00	0.00	6,675.2	-506.4	-633.8	811.3	0.00	0.00	0.00
6,800.0	0.00	0.00	6,715.2	-506.4	-633.8	811.3	0.00	0.00	0.00
6,840.0	0.00	0.00	6,755.2	-506.4	-633.8	811.3	0.00	0.00	0.00
6,867.8	0.00	0.00	6,783.0	-506.4	-633.8	811.3	0.00	0.00	0.00
<b>NIORARA - LEGAL BOX 1978'FSL &amp; 661'FWL - TARGET CIRCLE 1980'FSL &amp; 660'FWL</b>									
6,880.0	0.00	0.00	6,795.2	-506.4	-633.8	811.3	0.00	0.00	0.00
6,920.0	0.00	0.00	6,835.2	-506.4	-633.8	811.3	0.00	0.00	0.00
6,960.0	0.00	0.00	6,875.2	-506.4	-633.8	811.3	0.00	0.00	0.00
7,000.0	0.00	0.00	6,915.2	-506.4	-633.8	811.3	0.00	0.00	0.00
7,040.0	0.00	0.00	6,955.2	-506.4	-633.8	811.3	0.00	0.00	0.00
7,080.0	0.00	0.00	6,995.2	-506.4	-633.8	811.3	0.00	0.00	0.00
7,120.0	0.00	0.00	7,035.2	-506.4	-633.8	811.3	0.00	0.00	0.00
7,160.0	0.00	0.00	7,075.2	-506.4	-633.8	811.3	0.00	0.00	0.00
7,177.8	0.00	0.00	7,093.0	-506.4	-633.8	811.3	0.00	0.00	0.00
<b>CODELL</b>									
7,200.0	0.00	0.00	7,115.2	-506.4	-633.8	811.3	0.00	0.00	0.00
7,240.0	0.00	0.00	7,155.2	-506.4	-633.8	811.3	0.00	0.00	0.00
7,280.0	0.00	0.00	7,195.2	-506.4	-633.8	811.3	0.00	0.00	0.00
7,320.0	0.00	0.00	7,235.2	-506.4	-633.8	811.3	0.00	0.00	0.00
7,327.8	0.00	0.00	7,243.0	-506.4	-633.8	811.3	0.00	0.00	0.00

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									
LEGAL BOX 1978'FS	0.00	0.63	6,783.0	-508.5	-632.8	1,436,677.35	3,271,205.58	40° 31' 40.744 N	104° 31' 27.719 W
- plan misses target center by 2.3ft at 6867.8ft MD (6783.0 TVD, -506.4 N, -633.8 E)									
- Rectangle (sides W400.0 H400.0 D460.0)									
TARGET CIRCLE 1980'FSL	0.00	0.63	6,783.0	-506.4	-633.8	1,436,679.40	3,271,204.58	40° 31' 40.764 N	104° 31' 27.732 W
- plan hits target center									
- Circle (radius 75.0)									
TARGET BHL 1980'FSL	0.00	0.63	5,200.0	-506.4	-633.8	1,436,679.40	3,271,204.58	40° 31' 40.764 N	104° 31' 27.732 W
- plan hits target center									
- Point									



<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Cecil USX AB35-12D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4848.0ft (Original Well Elev)
<b>Project:</b>	SEC.35-T7N-R64W	<b>MD Reference:</b>	WELL @ 4848.0ft (Original Well Elev)
<b>Site:</b>	Cecil USX AB35-12D Pad Sec.35-T7N-R64W	<b>North Reference:</b>	True
<b>Well:</b>	Cecil USX AB35-12D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble Cecil USX AB35-12D Plan #1 2-11-11		

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
750.0	750.0	8 5/8"	8-5/8	12-1/4	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
6,867.8	6,783.0	NIOBRARA		0.00		
7,177.8	7,093.0	CODELL		0.00		