

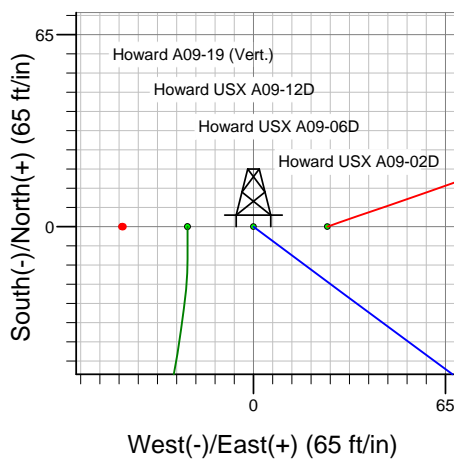
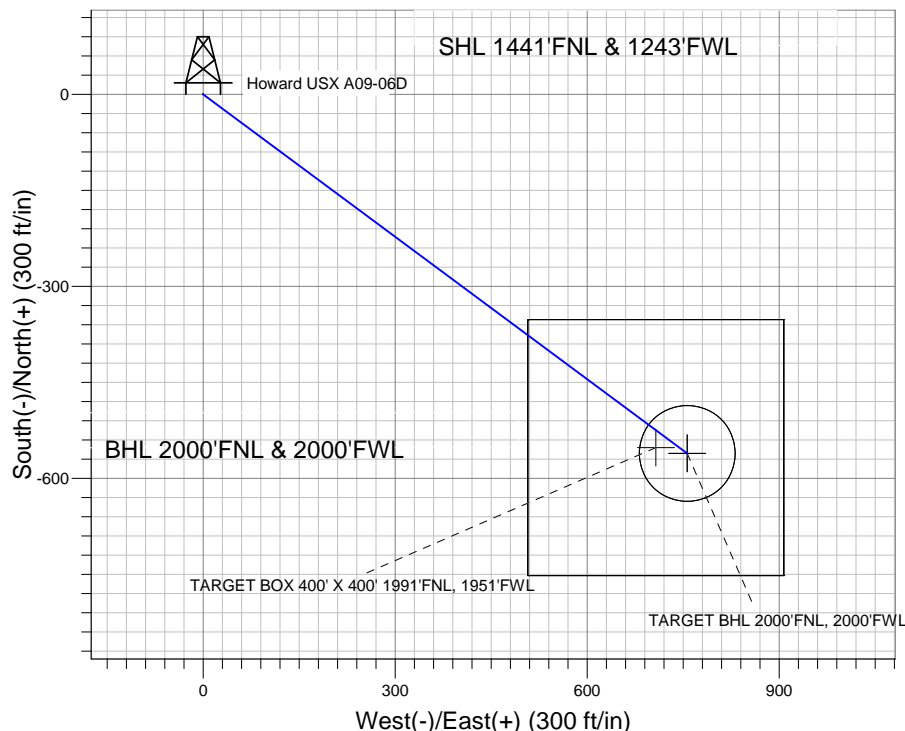
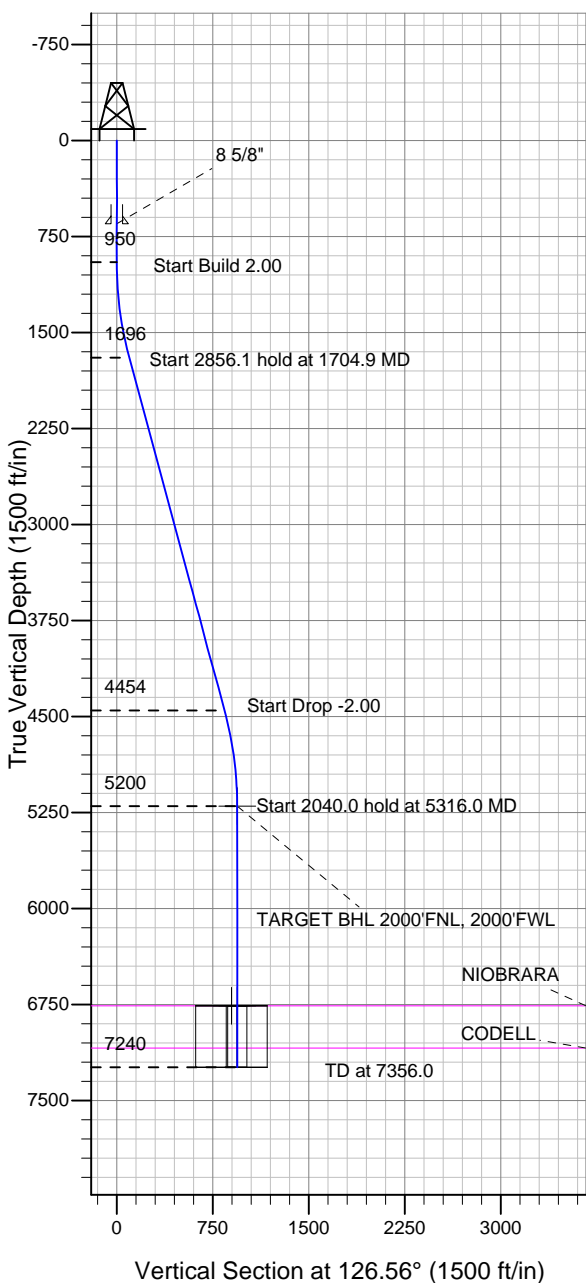
### Well Name: Howard USX A09-06D

Surface Location: Howard USX A09-12D Pad Sec.9-T6N-R64W  
 North American Datum 1983 US State Plane 1983 Colorado Northern Zone

Ground Elevation: 4867.0

+N/-S +E/-W Northing Easting Latitude Longitude Slot  
 0.0 0.0 1427837.14 3261423.76 40.504010 -104.559890  
 Original Well Elev WELL @ 4880.0ft (Original Well Elev)

## NOBLE ENERGY INC WELD COUNTY CO



Howard USX A09-12D Pad Sec.9-T6N-R64W  
 Howard USX A09-06D  
 Noble Howard USX A09-06D Plan #1 (4-11-11)  
 12:54, April 12 2011



Azimuths to True North  
 Magnetic North: 8.79°

Magnetic Field  
 Strength: 53226.4snT  
 Dip Angle: 67.18°  
 Date: 4/11/2011  
 Model: IGRF2010

### WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 2000'FNL, 2000'FWL	5200.0	-561.0	756.4	40.502470	-104.557170	Point
TARGET BOX 400' X 400' 1991'FNL, 1951'FWL	6760.0	-552.0	707.4	40.502495	-104.557346	Rectangle (Sides: L400.0 W400.0)
TARGET CIRCLE 2000'FNL, 2000'FWL	6760.0	-561.0	756.4	40.502470	-104.557170	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	1704.9	15.10	126.56	1696.2	-58.9	79.4	2.00	126.56	98.9	
4	4561.1	15.10	126.56	4453.8	-502.1	677.0	0.00	0.00	842.9	
5	5316.0	0.00	0.00	5200.0	-561.0	756.4	2.00	180.00	941.8	TARGET BHL 2000'FNL, 2000'FWL
6	7356.0	0.00	0.00	7240.0	-561.0	756.4	0.00	0.00	941.8	



## **Directional**

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

**SEC.9-T6N-R64W**

**Howard USX A09-12D Pad Sec.9-T6N-R64W**

**Howard USX A09-06D**

**Wellbore #1**

**Plan: Noble Howard USX A09-06D Plan #1 (4-11-11)**

### **Standard Planning Report**

**12 April, 2011**



<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Howard USX A09-06D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4880.0ft (Original Well Elev)
<b>Project:</b>	SEC.9-T6N-R64W	<b>MD Reference:</b>	WELL @ 4880.0ft (Original Well Elev)
<b>Site:</b>	Howard USX A09-12D Pad Sec.9-T6N-R64W	<b>North Reference:</b>	True
<b>Well:</b>	Howard USX A09-06D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble Howard USX A09-06D Plan #1 (4-11-11)		

<b>Project</b>	SEC.9-T6N-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						Howard USX A09-12D Pad Sec.9-T6N-R64W											
Site Position:						Northing:			1,427,836.92 ft			Latitude:			40.504010		
From:			Lat/Long			Easting:			3,261,401.52 ft			Longitude:			-104.559970		
Position Uncertainty:			0.0 ft			Slot Radius:			"			Grid Convergence:			0.61 °		

Well	Howard USX A09-06D					
Well Position	+N/-S	0.0 ft	Northing:	1,427,837.14 ft	Latitude:	40.504010
	+E/-W	22.2 ft	Easting:	3,261,423.76 ft	Longitude:	-104.559890
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,867.0 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	4/11/2011	8.79	67.18	53,226

<b>Design</b>	Noble Howard USX A09-06D Plan #1 (4-11-11)			
<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	126.56

<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	
1,704.9	15.10	126.56	1,696.2	-58.9	79.4	2.00	2.00	0.00	126.56	
4,561.1	15.10	126.56	4,453.8	-502.1	677.0	0.00	0.00	0.00	0.00	
5,316.0	0.00	0.00	5,200.0	-561.0	756.4	2.00	-2.00	0.00	180.00	TARGET BHL 200C
7,356.0	0.00	0.00	7,240.0	-561.0	756.4	0.00	0.00	0.00	0.00	

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Howard USX A09-06D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4880.0ft (Original Well Elev)
<b>Project:</b>	SEC.9-T6N-R64W	<b>MD Reference:</b>	WELL @ 4880.0ft (Original Well Elev)
<b>Site:</b>	Howard USX A09-12D Pad Sec.9-T6N-R64W	<b>North Reference:</b>	True
<b>Well:</b>	Howard USX A09-06D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble Howard USX A09-06D Plan #1 (4-11-11)		

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
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	126.56	960.0	0.0	0.0	0.0	2.00	2.00	0.00
1,000.0	1.00	126.56	1,000.0	-0.3	0.4	0.4	2.00	2.00	0.00
1,040.0	1.80	126.56	1,040.0	-0.8	1.1	1.4	2.00	2.00	0.00
1,080.0	2.60	126.56	1,080.0	-1.8	2.4	2.9	2.00	2.00	0.00
1,120.0	3.40	126.56	1,119.9	-3.0	4.1	5.0	2.00	2.00	0.00
1,160.0	4.20	126.56	1,159.8	-4.6	6.2	7.7	2.00	2.00	0.00
1,200.0	5.00	126.56	1,199.7	-6.5	8.8	10.9	2.00	2.00	0.00
1,240.0	5.80	126.56	1,239.5	-8.7	11.8	14.7	2.00	2.00	0.00
1,280.0	6.60	126.56	1,279.3	-11.3	15.2	19.0	2.00	2.00	0.00
1,320.0	7.40	126.56	1,319.0	-14.2	19.2	23.9	2.00	2.00	0.00
1,360.0	8.20	126.56	1,358.6	-17.4	23.5	29.3	2.00	2.00	0.00
1,400.0	9.00	126.56	1,398.2	-21.0	28.3	35.3	2.00	2.00	0.00
1,440.0	9.80	126.56	1,437.6	-24.9	33.6	41.8	2.00	2.00	0.00
1,480.0	10.60	126.56	1,477.0	-29.1	39.3	48.9	2.00	2.00	0.00
1,520.0	11.40	126.56	1,516.2	-33.7	45.4	56.5	2.00	2.00	0.00
1,560.0	12.20	126.56	1,555.4	-38.5	52.0	64.7	2.00	2.00	0.00
1,600.0	13.00	126.56	1,594.4	-43.7	59.0	73.4	2.00	2.00	0.00
1,640.0	13.80	126.56	1,633.3	-49.3	66.4	82.7	2.00	2.00	0.00
1,680.0	14.60	126.56	1,672.1	-55.1	74.3	92.5	2.00	2.00	0.00
1,704.9	15.10	126.56	1,696.2	-58.9	79.4	98.9	2.00	2.00	0.00
1,720.0	15.10	126.56	1,710.8	-61.3	82.6	102.8	0.00	0.00	0.00
1,760.0	15.10	126.56	1,749.4	-67.5	91.0	113.2	0.00	0.00	0.00
1,800.0	15.10	126.56	1,788.0	-73.7	99.3	123.7	0.00	0.00	0.00
1,840.0	15.10	126.56	1,826.6	-79.9	107.7	134.1	0.00	0.00	0.00
1,880.0	15.10	126.56	1,865.2	-86.1	116.1	144.5	0.00	0.00	0.00
1,920.0	15.10	126.56	1,903.9	-92.3	124.4	154.9	0.00	0.00	0.00
1,960.0	15.10	126.56	1,942.5	-98.5	132.8	165.3	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Howard USX A09-06D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4880.0ft (Original Well Elev)
<b>Project:</b>	SEC.9-T6N-R64W	<b>MD Reference:</b>	WELL @ 4880.0ft (Original Well Elev)
<b>Site:</b>	Howard USX A09-12D Pad Sec.9-T6N-R64W	<b>North Reference:</b>	True
<b>Well:</b>	Howard USX A09-06D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble Howard USX A09-06D Plan #1 (4-11-11)		

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	15.10	126.56	1,981.1	-104.7	141.2	175.8	0.00	0.00	0.00
2,040.0	15.10	126.56	2,019.7	-110.9	149.5	186.2	0.00	0.00	0.00
2,080.0	15.10	126.56	2,058.3	-117.1	157.9	196.6	0.00	0.00	0.00
2,120.0	15.10	126.56	2,097.0	-123.3	166.3	207.0	0.00	0.00	0.00
2,160.0	15.10	126.56	2,135.6	-129.5	174.6	217.4	0.00	0.00	0.00
2,200.0	15.10	126.56	2,174.2	-135.7	183.0	227.9	0.00	0.00	0.00
2,240.0	15.10	126.56	2,212.8	-141.9	191.4	238.3	0.00	0.00	0.00
2,280.0	15.10	126.56	2,251.4	-148.1	199.7	248.7	0.00	0.00	0.00
2,320.0	15.10	126.56	2,290.1	-154.4	208.1	259.1	0.00	0.00	0.00
2,360.0	15.10	126.56	2,328.7	-160.6	216.5	269.5	0.00	0.00	0.00
2,400.0	15.10	126.56	2,367.3	-166.8	224.9	280.0	0.00	0.00	0.00
2,440.0	15.10	126.56	2,405.9	-173.0	233.2	290.4	0.00	0.00	0.00
2,480.0	15.10	126.56	2,444.5	-179.2	241.6	300.8	0.00	0.00	0.00
2,520.0	15.10	126.56	2,483.2	-185.4	250.0	311.2	0.00	0.00	0.00
2,560.0	15.10	126.56	2,521.8	-191.6	258.3	321.6	0.00	0.00	0.00
2,600.0	15.10	126.56	2,560.4	-197.8	266.7	332.0	0.00	0.00	0.00
2,640.0	15.10	126.56	2,599.0	-204.0	275.1	342.5	0.00	0.00	0.00
2,680.0	15.10	126.56	2,637.6	-210.2	283.4	352.9	0.00	0.00	0.00
2,720.0	15.10	126.56	2,676.3	-216.4	291.8	363.3	0.00	0.00	0.00
2,760.0	15.10	126.56	2,714.9	-222.6	300.2	373.7	0.00	0.00	0.00
2,800.0	15.10	126.56	2,753.5	-228.8	308.5	384.1	0.00	0.00	0.00
2,840.0	15.10	126.56	2,792.1	-235.0	316.9	394.6	0.00	0.00	0.00
2,880.0	15.10	126.56	2,830.7	-241.3	325.3	405.0	0.00	0.00	0.00
2,920.0	15.10	126.56	2,869.3	-247.5	333.6	415.4	0.00	0.00	0.00
2,960.0	15.10	126.56	2,908.0	-253.7	342.0	425.8	0.00	0.00	0.00
3,000.0	15.10	126.56	2,946.6	-259.9	350.4	436.2	0.00	0.00	0.00
3,040.0	15.10	126.56	2,985.2	-266.1	358.8	446.7	0.00	0.00	0.00
3,080.0	15.10	126.56	3,023.8	-272.3	367.1	457.1	0.00	0.00	0.00
3,120.0	15.10	126.56	3,062.4	-278.5	375.5	467.5	0.00	0.00	0.00
3,160.0	15.10	126.56	3,101.1	-284.7	383.9	477.9	0.00	0.00	0.00
3,200.0	15.10	126.56	3,139.7	-290.9	392.2	488.3	0.00	0.00	0.00
3,240.0	15.10	126.56	3,178.3	-297.1	400.6	498.8	0.00	0.00	0.00
3,280.0	15.10	126.56	3,216.9	-303.3	409.0	509.2	0.00	0.00	0.00
3,320.0	15.10	126.56	3,255.5	-309.5	417.3	519.6	0.00	0.00	0.00
3,360.0	15.10	126.56	3,294.2	-315.7	425.7	530.0	0.00	0.00	0.00
3,400.0	15.10	126.56	3,332.8	-321.9	434.1	540.4	0.00	0.00	0.00
3,440.0	15.10	126.56	3,371.4	-328.2	442.4	550.9	0.00	0.00	0.00
3,480.0	15.10	126.56	3,410.0	-334.4	450.8	561.3	0.00	0.00	0.00
3,520.0	15.10	126.56	3,448.6	-340.6	459.2	571.7	0.00	0.00	0.00
3,560.0	15.10	126.56	3,487.3	-346.8	467.6	582.1	0.00	0.00	0.00
3,600.0	15.10	126.56	3,525.9	-353.0	475.9	592.5	0.00	0.00	0.00
3,640.0	15.10	126.56	3,564.5	-359.2	484.3	603.0	0.00	0.00	0.00
3,680.0	15.10	126.56	3,603.1	-365.4	492.7	613.4	0.00	0.00	0.00
3,720.0	15.10	126.56	3,641.7	-371.6	501.0	623.8	0.00	0.00	0.00
3,760.0	15.10	126.56	3,680.3	-377.8	509.4	634.2	0.00	0.00	0.00
3,800.0	15.10	126.56	3,719.0	-384.0	517.8	644.6	0.00	0.00	0.00
3,840.0	15.10	126.56	3,757.6	-390.2	526.1	655.0	0.00	0.00	0.00
3,880.0	15.10	126.56	3,796.2	-396.4	534.5	665.5	0.00	0.00	0.00
3,920.0	15.10	126.56	3,834.8	-402.6	542.9	675.9	0.00	0.00	0.00
3,960.0	15.10	126.56	3,873.4	-408.8	551.2	686.3	0.00	0.00	0.00
4,000.0	15.10	126.56	3,912.1	-415.1	559.6	696.7	0.00	0.00	0.00
4,040.0	15.10	126.56	3,950.7	-421.3	568.0	707.1	0.00	0.00	0.00
4,080.0	15.10	126.56	3,989.3	-427.5	576.3	717.6	0.00	0.00	0.00
4,120.0	15.10	126.56	4,027.9	-433.7	584.7	728.0	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Howard USX A09-06D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4880.0ft (Original Well Elev)
<b>Project:</b>	SEC.9-T6N-R64W	<b>MD Reference:</b>	WELL @ 4880.0ft (Original Well Elev)
<b>Site:</b>	Howard USX A09-12D Pad Sec.9-T6N-R64W	<b>North Reference:</b>	True
<b>Well:</b>	Howard USX A09-06D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble Howard USX A09-06D Plan #1 (4-11-11)		

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	15.10	126.56	4,066.5	-439.9	593.1	738.4	0.00	0.00	0.00
4,200.0	15.10	126.56	4,105.2	-446.1	601.5	748.8	0.00	0.00	0.00
4,240.0	15.10	126.56	4,143.8	-452.3	609.8	759.2	0.00	0.00	0.00
4,280.0	15.10	126.56	4,182.4	-458.5	618.2	769.7	0.00	0.00	0.00
4,320.0	15.10	126.56	4,221.0	-464.7	626.6	780.1	0.00	0.00	0.00
4,360.0	15.10	126.56	4,259.6	-470.9	634.9	790.5	0.00	0.00	0.00
4,400.0	15.10	126.56	4,298.3	-477.1	643.3	800.9	0.00	0.00	0.00
4,440.0	15.10	126.56	4,336.9	-483.3	651.7	811.3	0.00	0.00	0.00
4,480.0	15.10	126.56	4,375.5	-489.5	660.0	821.8	0.00	0.00	0.00
4,520.0	15.10	126.56	4,414.1	-495.7	668.4	832.2	0.00	0.00	0.00
4,560.0	15.10	126.56	4,452.7	-501.9	676.8	842.6	0.00	0.00	0.00
4,561.1	15.10	126.56	4,453.8	-502.1	677.0	842.9	0.00	0.00	0.00
4,600.0	14.32	126.56	4,491.4	-508.0	684.9	852.8	2.00	-2.00	0.00
4,640.0	13.52	126.56	4,530.2	-513.7	692.7	862.4	2.00	-2.00	0.00
4,680.0	12.72	126.56	4,569.2	-519.1	700.0	871.5	2.00	-2.00	0.00
4,720.0	11.92	126.56	4,608.3	-524.2	706.8	880.0	2.00	-2.00	0.00
4,760.0	11.12	126.56	4,647.5	-529.0	713.2	888.0	2.00	-2.00	0.00
4,800.0	10.32	126.56	4,686.8	-533.4	719.2	895.4	2.00	-2.00	0.00
4,840.0	9.52	126.56	4,726.2	-537.5	724.7	902.3	2.00	-2.00	0.00
4,880.0	8.72	126.56	4,765.7	-541.3	729.8	908.7	2.00	-2.00	0.00
4,920.0	7.92	126.56	4,805.2	-544.8	734.5	914.4	2.00	-2.00	0.00
4,960.0	7.12	126.56	4,844.9	-547.9	738.7	919.7	2.00	-2.00	0.00
5,000.0	6.32	126.56	4,884.6	-550.7	742.4	924.4	2.00	-2.00	0.00
5,040.0	5.52	126.56	4,924.4	-553.1	745.8	928.5	2.00	-2.00	0.00
5,080.0	4.72	126.56	4,964.3	-555.2	748.6	932.1	2.00	-2.00	0.00
5,120.0	3.92	126.56	5,004.1	-557.0	751.0	935.1	2.00	-2.00	0.00
5,160.0	3.12	126.56	5,044.1	-558.5	753.0	937.5	2.00	-2.00	0.00
5,200.0	2.32	126.56	5,084.0	-559.6	754.5	939.4	2.00	-2.00	0.00
5,240.0	1.52	126.56	5,124.0	-560.4	755.6	940.8	2.00	-2.00	0.00
5,280.0	0.72	126.56	5,164.0	-560.9	756.2	941.5	2.00	-2.00	0.00
5,316.0	0.00	0.00	5,200.0	-561.0	756.4	941.8	2.00	-2.00	-351.42
TARGET BHL 2000'FNL, 2000'FWL									
5,320.0	0.00	0.00	5,204.0	-561.0	756.4	941.8	0.00	0.00	0.00
5,360.0	0.00	0.00	5,244.0	-561.0	756.4	941.8	0.00	0.00	0.00
5,400.0	0.00	0.00	5,284.0	-561.0	756.4	941.8	0.00	0.00	0.00
5,440.0	0.00	0.00	5,324.0	-561.0	756.4	941.8	0.00	0.00	0.00
5,480.0	0.00	0.00	5,364.0	-561.0	756.4	941.8	0.00	0.00	0.00
5,520.0	0.00	0.00	5,404.0	-561.0	756.4	941.8	0.00	0.00	0.00
5,560.0	0.00	0.00	5,444.0	-561.0	756.4	941.8	0.00	0.00	0.00
5,600.0	0.00	0.00	5,484.0	-561.0	756.4	941.8	0.00	0.00	0.00
5,640.0	0.00	0.00	5,524.0	-561.0	756.4	941.8	0.00	0.00	0.00
5,680.0	0.00	0.00	5,564.0	-561.0	756.4	941.8	0.00	0.00	0.00
5,720.0	0.00	0.00	5,604.0	-561.0	756.4	941.8	0.00	0.00	0.00
5,760.0	0.00	0.00	5,644.0	-561.0	756.4	941.8	0.00	0.00	0.00
5,800.0	0.00	0.00	5,684.0	-561.0	756.4	941.8	0.00	0.00	0.00
5,840.0	0.00	0.00	5,724.0	-561.0	756.4	941.8	0.00	0.00	0.00
5,880.0	0.00	0.00	5,764.0	-561.0	756.4	941.8	0.00	0.00	0.00
5,920.0	0.00	0.00	5,804.0	-561.0	756.4	941.8	0.00	0.00	0.00
5,960.0	0.00	0.00	5,844.0	-561.0	756.4	941.8	0.00	0.00	0.00
6,000.0	0.00	0.00	5,884.0	-561.0	756.4	941.8	0.00	0.00	0.00
6,040.0	0.00	0.00	5,924.0	-561.0	756.4	941.8	0.00	0.00	0.00
6,080.0	0.00	0.00	5,964.0	-561.0	756.4	941.8	0.00	0.00	0.00
6,120.0	0.00	0.00	6,004.0	-561.0	756.4	941.8	0.00	0.00	0.00
6,160.0	0.00	0.00	6,044.0	-561.0	756.4	941.8	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Howard USX A09-06D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4880.0ft (Original Well Elev)
<b>Project:</b>	SEC.9-T6N-R64W	<b>MD Reference:</b>	WELL @ 4880.0ft (Original Well Elev)
<b>Site:</b>	Howard USX A09-12D Pad Sec.9-T6N-R64W	<b>North Reference:</b>	True
<b>Well:</b>	Howard USX A09-06D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble Howard USX A09-06D Plan #1 (4-11-11)		

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	6,084.0	-561.0	756.4	941.8	0.00	0.00	0.00
6,240.0	0.00	0.00	6,124.0	-561.0	756.4	941.8	0.00	0.00	0.00
6,280.0	0.00	0.00	6,164.0	-561.0	756.4	941.8	0.00	0.00	0.00
6,320.0	0.00	0.00	6,204.0	-561.0	756.4	941.8	0.00	0.00	0.00
6,360.0	0.00	0.00	6,244.0	-561.0	756.4	941.8	0.00	0.00	0.00
6,400.0	0.00	0.00	6,284.0	-561.0	756.4	941.8	0.00	0.00	0.00
6,440.0	0.00	0.00	6,324.0	-561.0	756.4	941.8	0.00	0.00	0.00
6,480.0	0.00	0.00	6,364.0	-561.0	756.4	941.8	0.00	0.00	0.00
6,520.0	0.00	0.00	6,404.0	-561.0	756.4	941.8	0.00	0.00	0.00
6,560.0	0.00	0.00	6,444.0	-561.0	756.4	941.8	0.00	0.00	0.00
6,600.0	0.00	0.00	6,484.0	-561.0	756.4	941.8	0.00	0.00	0.00
6,640.0	0.00	0.00	6,524.0	-561.0	756.4	941.8	0.00	0.00	0.00
6,680.0	0.00	0.00	6,564.0	-561.0	756.4	941.8	0.00	0.00	0.00
6,720.0	0.00	0.00	6,604.0	-561.0	756.4	941.8	0.00	0.00	0.00
6,760.0	0.00	0.00	6,644.0	-561.0	756.4	941.8	0.00	0.00	0.00
6,800.0	0.00	0.00	6,684.0	-561.0	756.4	941.8	0.00	0.00	0.00
6,840.0	0.00	0.00	6,724.0	-561.0	756.4	941.8	0.00	0.00	0.00
6,876.0	0.00	0.00	6,760.0	-561.0	756.4	941.8	0.00	0.00	0.00
<b>NIORARA - TARGET BOX 400' X 400' 1991'FNL, 1951'FWL - TARGET CIRCLE 2000'FNL, 2000'FWL</b>									
6,880.0	0.00	0.00	6,764.0	-561.0	756.4	941.8	0.00	0.00	0.00
6,920.0	0.00	0.00	6,804.0	-561.0	756.4	941.8	0.00	0.00	0.00
6,960.0	0.00	0.00	6,844.0	-561.0	756.4	941.8	0.00	0.00	0.00
7,000.0	0.00	0.00	6,884.0	-561.0	756.4	941.8	0.00	0.00	0.00
7,040.0	0.00	0.00	6,924.0	-561.0	756.4	941.8	0.00	0.00	0.00
7,080.0	0.00	0.00	6,964.0	-561.0	756.4	941.8	0.00	0.00	0.00
7,120.0	0.00	0.00	7,004.0	-561.0	756.4	941.8	0.00	0.00	0.00
7,160.0	0.00	0.00	7,044.0	-561.0	756.4	941.8	0.00	0.00	0.00
7,200.0	0.00	0.00	7,084.0	-561.0	756.4	941.8	0.00	0.00	0.00
7,206.0	0.00	0.00	7,090.0	-561.0	756.4	941.8	0.00	0.00	0.00
<b>CODELL</b>									
7,240.0	0.00	0.00	7,124.0	-561.0	756.4	941.8	0.00	0.00	0.00
7,280.0	0.00	0.00	7,164.0	-561.0	756.4	941.8	0.00	0.00	0.00
7,320.0	0.00	0.00	7,204.0	-561.0	756.4	941.8	0.00	0.00	0.00
7,356.0	0.00	0.00	7,240.0	-561.0	756.4	941.8	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									
TARGET BOX 400' X	0.00	0.00	6,760.0	-552.0	707.4	1,427,292.69	3,262,136.95	40.502495	-104.557346
- plan misses target center by 49.9ft at 6876.0ft MD (6760.0 TVD, -561.0 N, 756.4 E)									
- Rectangle (sides W400.0 H400.0 D480.0)									
TARGET BHL 2000'F	0.00	0.00	5,200.0	-561.0	756.4	1,427,284.18	3,262,186.07	40.502470	-104.557170
- plan hits target center									
- Point									
TARGET CIRCLE 2000'F	0.00	0.00	6,760.0	-561.0	756.4	1,427,284.18	3,262,186.07	40.502470	-104.557170
- plan hits target center									
- Circle (radius 75.0)									

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Howard USX A09-06D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4880.0ft (Original Well Elev)
<b>Project:</b>	SEC.9-T6N-R64W	<b>MD Reference:</b>	WELL @ 4880.0ft (Original Well Elev)
<b>Site:</b>	Howard USX A09-12D Pad Sec.9-T6N-R64W	<b>North Reference:</b>	True
<b>Well:</b>	Howard USX A09-06D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble Howard USX A09-06D Plan #1 (4-11-11)		

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 (°)	
6,876.0	6,760.0	NIOBRARA		0.00		
7,206.0	7,090.0	CODELL		0.00		