

# ENSIGN

## Directional

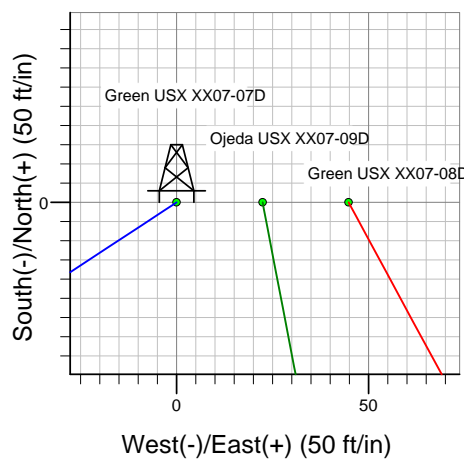
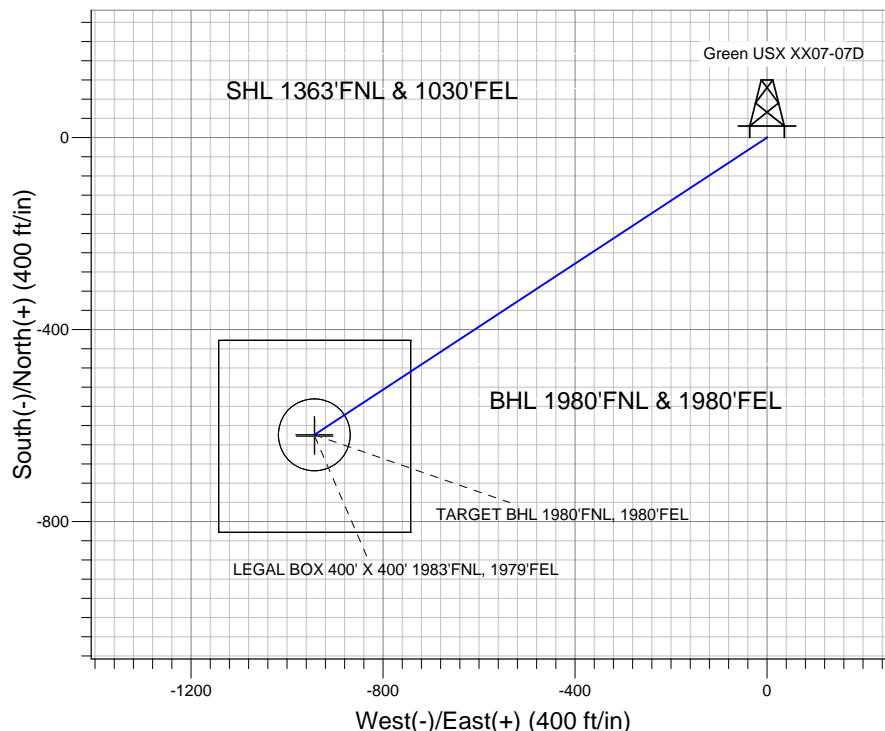
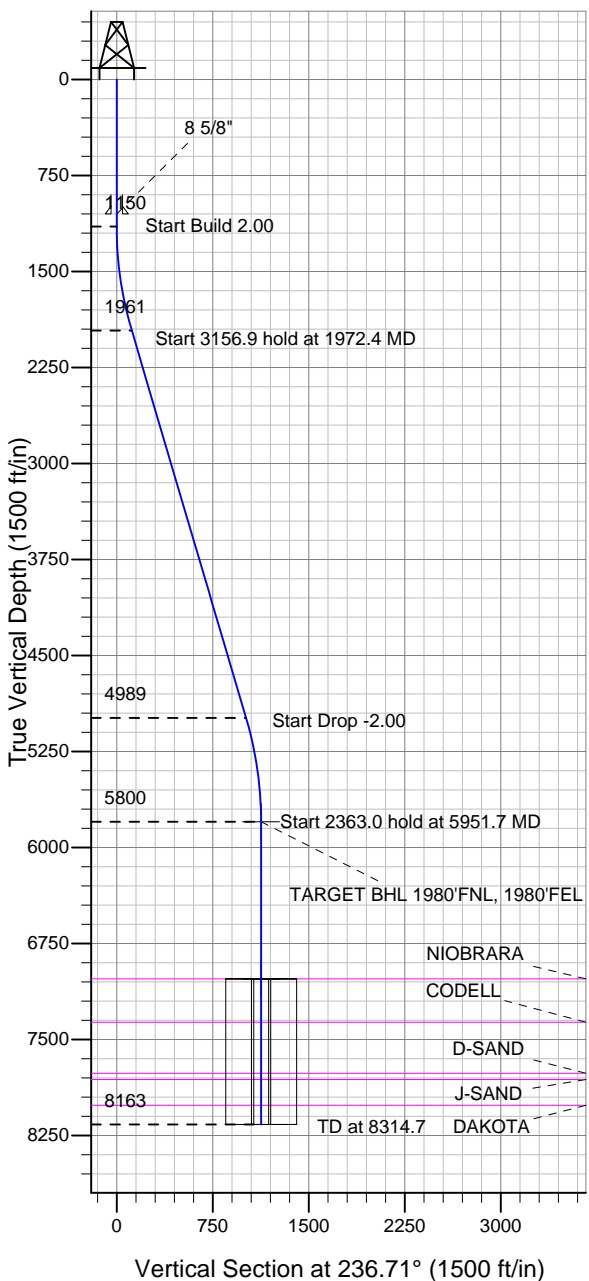
### Well Name: Green USX XX07-07D

Surface Location: Green USX XX07-07D Pad Sec.7-T1N-R65W  
North American Datum 1983 US State Plane 1983 Colorado Northern Zone

Ground Elevation: 4986.0

+N/-S +E/-W Northing Easting Latitude Longitude Slot  
0.0 0.0 1269175.19 3223631.13 40.069510 -104.700930  
Original Well Elev WELL @ 4999.0ft (Original Well Elev)

### NOBLE ENERGY INC WELD COUNTY CO



Green USX XX07-07D Pad Sec.7-T1N-R65W  
Green USX XX07-07D  
Noble Green USX XX07-07D Plan #1 (6-20-11)  
11:57, June 21 2011



Azimuths to True North  
Magnetic North: 8.80°

Magnetic Field  
Strength: 52961.6snT  
Dip Angle: 66.79°  
Date: 6/20/2011  
Model: IGRF2010

### WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 1980'FNL, 1980'FEL	5800.0	-619.3	-943.2	40.067810	-104.704300	Point
LEGAL BOX 400' X 400' 1983'FNL, 1979'FEL	7026.0	-622.3	-942.2	40.067802	-104.704296	Rectangle (Sides: L400.0 W400.0)
TARGET CIRCLE 1980'FNL, 1980'FEL	7026.0	-619.3	-943.2	40.067810	-104.704300	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	1150.0	0.00	0.00	1150.0	0.0	0.0	0.00	0.00	0.0	
3	1972.4	16.45	236.71	1961.2	-64.3	-98.0	2.00	236.71	117.2	
4	5129.3	16.45	236.71	4988.8	-554.9	-845.2	0.00	0.00	1011.1	
5	5951.7	0.00	0.00	5800.0	-619.3	-943.2	2.00	180.00	1128.3	TARGET BHL 1980'FNL, 1980'FEL
6	8314.7	0.00	0.00	8163.0	-619.3	-943.2	0.00	0.00	1128.3	



## **Directional**

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

**SEC.7-T1N-R65W**

**Green USX XX07-07D Pad Sec.7-T1N-R65W**

**Green USX XX07-07D**

**Wellbore #1**

**Plan: Noble Green USX XX07-07D Plan #1 (6-20-11)**

### **Standard Planning Report**

**21 June, 2011**



<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Green USX XX07-07D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4999.0ft (Original Well Elev)
<b>Project:</b>	SEC.7-T1N-R65W	<b>MD Reference:</b>	WELL @ 4999.0ft (Original Well Elev)
<b>Site:</b>	Green USX XX07-07D Pad Sec.7-T1N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	Green USX XX07-07D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble Green USX XX07-07D Plan #1 (6-20-11)		

<b>Project</b>	SEC.7-T1N-R65W, 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						Green USX XX07-07D Pad Sec.7-T1N-R65W											
Site Position:						Northing:			1,269,175.20ft			Latitude:			40.069510		
From:			Lat/Long			Easting:			3,223,631.13ft			Longitude:			-104.700930		
Position Uncertainty:			0.0 ft			Slot Radius:			"			Grid Convergence:			0.52 °		

Well	Green USX XX07-07D					
Well Position	+N/-S	0.0 ft	Northing:	1,269,175.19 ft	Latitude:	40.069510
	+E/-W	0.0 ft	Easting:	3,223,631.13 ft	Longitude:	-104.700930
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,986.0 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	6/20/2011	8.80	66.79	52,962

<b>Design</b>	Noble Green USX XX07-07D Plan #1 (6-20-11)			
<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	236.71

<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	
1,150.0	0.00	0.00	1,150.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,972.4	16.45	236.71	1,961.2	-64.3	-98.0	2.00	2.00	0.00	236.71	
5,129.3	16.45	236.71	4,988.8	-554.9	-845.2	0.00	0.00	0.00	0.00	
5,951.7	0.00	0.00	5,800.0	-619.3	-943.2	2.00	-2.00	0.00	180.00	TARGET BHL 198C
8,314.7	0.00	0.00	8,163.0	-619.3	-943.2	0.00	0.00	0.00	0.00	

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Green USX XX07-07D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4999.0ft (Original Well Elev)
<b>Project:</b>	SEC.7-T1N-R65W	<b>MD Reference:</b>	WELL @ 4999.0ft (Original Well Elev)
<b>Site:</b>	Green USX XX07-07D Pad Sec.7-T1N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	Green USX XX07-07D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble Green USX XX07-07D Plan #1 (6-20-11)		

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
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
1,050.0	0.00	0.00	1,050.0	0.0	0.0	0.0	0.00	0.00	0.00
8 5/8"									
1,080.0	0.00	0.00	1,080.0	0.0	0.0	0.0	0.00	0.00	0.00
1,120.0	0.00	0.00	1,120.0	0.0	0.0	0.0	0.00	0.00	0.00
1,150.0	0.00	0.00	1,150.0	0.0	0.0	0.0	0.00	0.00	0.00
1,160.0	0.20	236.71	1,160.0	0.0	0.0	0.0	2.00	2.00	0.00
1,200.0	1.00	236.71	1,200.0	-0.2	-0.4	0.4	2.00	2.00	0.00
1,240.0	1.80	236.71	1,240.0	-0.8	-1.2	1.4	2.00	2.00	0.00
1,280.0	2.60	236.71	1,280.0	-1.6	-2.5	2.9	2.00	2.00	0.00
1,320.0	3.40	236.71	1,319.9	-2.8	-4.2	5.0	2.00	2.00	0.00
1,360.0	4.20	236.71	1,359.8	-4.2	-6.4	7.7	2.00	2.00	0.00
1,400.0	5.00	236.71	1,399.7	-6.0	-9.1	10.9	2.00	2.00	0.00
1,440.0	5.80	236.71	1,439.5	-8.0	-12.3	14.7	2.00	2.00	0.00
1,480.0	6.60	236.71	1,479.3	-10.4	-15.9	19.0	2.00	2.00	0.00
1,520.0	7.40	236.71	1,519.0	-13.1	-19.9	23.9	2.00	2.00	0.00
1,560.0	8.20	236.71	1,558.6	-16.1	-24.5	29.3	2.00	2.00	0.00
1,600.0	9.00	236.71	1,598.2	-19.4	-29.5	35.3	2.00	2.00	0.00
1,640.0	9.80	236.71	1,637.6	-22.9	-34.9	41.8	2.00	2.00	0.00
1,680.0	10.60	236.71	1,677.0	-26.8	-40.9	48.9	2.00	2.00	0.00
1,720.0	11.40	236.71	1,716.2	-31.0	-47.2	56.5	2.00	2.00	0.00
1,760.0	12.20	236.71	1,755.4	-35.5	-54.1	64.7	2.00	2.00	0.00
1,800.0	13.00	236.71	1,794.4	-40.3	-61.4	73.4	2.00	2.00	0.00
1,840.0	13.80	236.71	1,833.3	-45.4	-69.1	82.7	2.00	2.00	0.00
1,880.0	14.60	236.71	1,872.1	-50.8	-77.3	92.5	2.00	2.00	0.00
1,920.0	15.40	236.71	1,910.8	-56.5	-86.0	102.9	2.00	2.00	0.00
1,960.0	16.20	236.71	1,949.3	-62.4	-95.1	113.7	2.00	2.00	0.00
1,972.4	16.45	236.71	1,961.2	-64.3	-98.0	117.2	2.00	2.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Green USX XX07-07D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4999.0ft (Original Well Elev)
<b>Project:</b>	SEC.7-T1N-R65W	<b>MD Reference:</b>	WELL @ 4999.0ft (Original Well Elev)
<b>Site:</b>	Green USX XX07-07D Pad Sec.7-T1N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	Green USX XX07-07D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble Green USX XX07-07D Plan #1 (6-20-11)		

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	16.45	236.71	1,987.6	-68.6	-104.5	125.1	0.00	0.00	0.00
2,040.0	16.45	236.71	2,026.0	-74.8	-114.0	136.4	0.00	0.00	0.00
2,080.0	16.45	236.71	2,064.3	-81.1	-123.5	147.7	0.00	0.00	0.00
2,120.0	16.45	236.71	2,102.7	-87.3	-132.9	159.0	0.00	0.00	0.00
2,160.0	16.45	236.71	2,141.1	-93.5	-142.4	170.4	0.00	0.00	0.00
2,200.0	16.45	236.71	2,179.4	-99.7	-151.9	181.7	0.00	0.00	0.00
2,240.0	16.45	236.71	2,217.8	-105.9	-161.3	193.0	0.00	0.00	0.00
2,280.0	16.45	236.71	2,256.2	-112.1	-170.8	204.3	0.00	0.00	0.00
2,320.0	16.45	236.71	2,294.5	-118.4	-180.3	215.7	0.00	0.00	0.00
2,360.0	16.45	236.71	2,332.9	-124.6	-189.7	227.0	0.00	0.00	0.00
2,400.0	16.45	236.71	2,371.3	-130.8	-199.2	238.3	0.00	0.00	0.00
2,440.0	16.45	236.71	2,409.6	-137.0	-208.7	249.6	0.00	0.00	0.00
2,480.0	16.45	236.71	2,448.0	-143.2	-218.1	261.0	0.00	0.00	0.00
2,520.0	16.45	236.71	2,486.3	-149.4	-227.6	272.3	0.00	0.00	0.00
2,560.0	16.45	236.71	2,524.7	-155.7	-237.1	283.6	0.00	0.00	0.00
2,600.0	16.45	236.71	2,563.1	-161.9	-246.5	294.9	0.00	0.00	0.00
2,640.0	16.45	236.71	2,601.4	-168.1	-256.0	306.3	0.00	0.00	0.00
2,680.0	16.45	236.71	2,639.8	-174.3	-265.5	317.6	0.00	0.00	0.00
2,720.0	16.45	236.71	2,678.2	-180.5	-275.0	328.9	0.00	0.00	0.00
2,760.0	16.45	236.71	2,716.5	-186.7	-284.4	340.2	0.00	0.00	0.00
2,800.0	16.45	236.71	2,754.9	-193.0	-293.9	351.6	0.00	0.00	0.00
2,840.0	16.45	236.71	2,793.2	-199.2	-303.4	362.9	0.00	0.00	0.00
2,880.0	16.45	236.71	2,831.6	-205.4	-312.8	374.2	0.00	0.00	0.00
2,920.0	16.45	236.71	2,870.0	-211.6	-322.3	385.5	0.00	0.00	0.00
2,960.0	16.45	236.71	2,908.3	-217.8	-331.8	396.9	0.00	0.00	0.00
3,000.0	16.45	236.71	2,946.7	-224.0	-341.2	408.2	0.00	0.00	0.00
3,040.0	16.45	236.71	2,985.1	-230.2	-350.7	419.5	0.00	0.00	0.00
3,080.0	16.45	236.71	3,023.4	-236.5	-360.2	430.9	0.00	0.00	0.00
3,120.0	16.45	236.71	3,061.8	-242.7	-369.6	442.2	0.00	0.00	0.00
3,160.0	16.45	236.71	3,100.1	-248.9	-379.1	453.5	0.00	0.00	0.00
3,200.0	16.45	236.71	3,138.5	-255.1	-388.6	464.8	0.00	0.00	0.00
3,240.0	16.45	236.71	3,176.9	-261.3	-398.0	476.2	0.00	0.00	0.00
3,280.0	16.45	236.71	3,215.2	-267.5	-407.5	487.5	0.00	0.00	0.00
3,320.0	16.45	236.71	3,253.6	-273.8	-417.0	498.8	0.00	0.00	0.00
3,360.0	16.45	236.71	3,292.0	-280.0	-426.4	510.1	0.00	0.00	0.00
3,400.0	16.45	236.71	3,330.3	-286.2	-435.9	521.5	0.00	0.00	0.00
3,440.0	16.45	236.71	3,368.7	-292.4	-445.4	532.8	0.00	0.00	0.00
3,480.0	16.45	236.71	3,407.1	-298.6	-454.8	544.1	0.00	0.00	0.00
3,520.0	16.45	236.71	3,445.4	-304.8	-464.3	555.4	0.00	0.00	0.00
3,560.0	16.45	236.71	3,483.8	-311.1	-473.8	566.8	0.00	0.00	0.00
3,600.0	16.45	236.71	3,522.1	-317.3	-483.2	578.1	0.00	0.00	0.00
3,640.0	16.45	236.71	3,560.5	-323.5	-492.7	589.4	0.00	0.00	0.00
3,680.0	16.45	236.71	3,598.9	-329.7	-502.2	600.7	0.00	0.00	0.00
3,720.0	16.45	236.71	3,637.2	-335.9	-511.6	612.1	0.00	0.00	0.00
3,760.0	16.45	236.71	3,675.6	-342.1	-521.1	623.4	0.00	0.00	0.00
3,800.0	16.45	236.71	3,714.0	-348.4	-530.6	634.7	0.00	0.00	0.00
3,840.0	16.45	236.71	3,752.3	-354.6	-540.0	646.0	0.00	0.00	0.00
3,880.0	16.45	236.71	3,790.7	-360.8	-549.5	657.4	0.00	0.00	0.00
3,920.0	16.45	236.71	3,829.0	-367.0	-559.0	668.7	0.00	0.00	0.00
3,960.0	16.45	236.71	3,867.4	-373.2	-568.5	680.0	0.00	0.00	0.00
4,000.0	16.45	236.71	3,905.8	-379.4	-577.9	691.3	0.00	0.00	0.00
4,040.0	16.45	236.71	3,944.1	-385.6	-587.4	702.7	0.00	0.00	0.00
4,080.0	16.45	236.71	3,982.5	-391.9	-596.9	714.0	0.00	0.00	0.00
4,120.0	16.45	236.71	4,020.9	-398.1	-606.3	725.3	0.00	0.00	0.00

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<b>Project:</b>	SEC.7-T1N-R65W	<b>MD Reference:</b>	WELL @ 4999.0ft (Original Well Elev)
<b>Site:</b>	Green USX XX07-07D Pad Sec.7-T1N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	Green USX XX07-07D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble Green USX XX07-07D Plan #1 (6-20-11)		

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	16.45	236.71	4,059.2	-404.3	-615.8	736.7	0.00	0.00	0.00
4,200.0	16.45	236.71	4,097.6	-410.5	-625.3	748.0	0.00	0.00	0.00
4,240.0	16.45	236.71	4,136.0	-416.7	-634.7	759.3	0.00	0.00	0.00
4,280.0	16.45	236.71	4,174.3	-422.9	-644.2	770.6	0.00	0.00	0.00
4,320.0	16.45	236.71	4,212.7	-429.2	-653.7	782.0	0.00	0.00	0.00
4,360.0	16.45	236.71	4,251.0	-435.4	-663.1	793.3	0.00	0.00	0.00
4,400.0	16.45	236.71	4,289.4	-441.6	-672.6	804.6	0.00	0.00	0.00
4,440.0	16.45	236.71	4,327.8	-447.8	-682.1	815.9	0.00	0.00	0.00
4,480.0	16.45	236.71	4,366.1	-454.0	-691.5	827.3	0.00	0.00	0.00
4,520.0	16.45	236.71	4,404.5	-460.2	-701.0	838.6	0.00	0.00	0.00
4,560.0	16.45	236.71	4,442.9	-466.5	-710.5	849.9	0.00	0.00	0.00
4,600.0	16.45	236.71	4,481.2	-472.7	-719.9	861.2	0.00	0.00	0.00
4,640.0	16.45	236.71	4,519.6	-478.9	-729.4	872.6	0.00	0.00	0.00
4,680.0	16.45	236.71	4,557.9	-485.1	-738.9	883.9	0.00	0.00	0.00
4,720.0	16.45	236.71	4,596.3	-491.3	-748.3	895.2	0.00	0.00	0.00
4,760.0	16.45	236.71	4,634.7	-497.5	-757.8	906.5	0.00	0.00	0.00
4,800.0	16.45	236.71	4,673.0	-503.8	-767.3	917.9	0.00	0.00	0.00
4,840.0	16.45	236.71	4,711.4	-510.0	-776.7	929.2	0.00	0.00	0.00
4,880.0	16.45	236.71	4,749.8	-516.2	-786.2	940.5	0.00	0.00	0.00
4,920.0	16.45	236.71	4,788.1	-522.4	-795.7	951.8	0.00	0.00	0.00
4,960.0	16.45	236.71	4,826.5	-528.6	-805.1	963.2	0.00	0.00	0.00
5,000.0	16.45	236.71	4,864.8	-534.8	-814.6	974.5	0.00	0.00	0.00
5,040.0	16.45	236.71	4,903.2	-541.1	-824.1	985.8	0.00	0.00	0.00
5,080.0	16.45	236.71	4,941.6	-547.3	-833.5	997.1	0.00	0.00	0.00
5,120.0	16.45	236.71	4,979.9	-553.5	-843.0	1,008.5	0.00	0.00	0.00
5,129.3	16.45	236.71	4,988.8	-554.9	-845.2	1,011.1	0.00	0.00	0.00
5,160.0	15.83	236.71	5,018.3	-559.6	-852.4	1,019.6	2.00	-2.00	0.00
5,200.0	15.03	236.71	5,056.9	-565.5	-861.3	1,030.3	2.00	-2.00	0.00
5,240.0	14.23	236.71	5,095.6	-571.0	-869.7	1,040.4	2.00	-2.00	0.00
5,280.0	13.43	236.71	5,134.4	-576.2	-877.7	1,050.0	2.00	-2.00	0.00
5,320.0	12.63	236.71	5,173.4	-581.2	-885.2	1,059.0	2.00	-2.00	0.00
5,360.0	11.83	236.71	5,212.5	-585.9	-892.3	1,067.5	2.00	-2.00	0.00
5,400.0	11.03	236.71	5,251.7	-590.2	-898.9	1,075.4	2.00	-2.00	0.00
5,440.0	10.23	236.71	5,291.0	-594.3	-905.1	1,082.8	2.00	-2.00	0.00
5,480.0	9.43	236.71	5,330.4	-598.0	-910.8	1,089.6	2.00	-2.00	0.00
5,520.0	8.63	236.71	5,369.9	-601.5	-916.1	1,095.9	2.00	-2.00	0.00
5,560.0	7.83	236.71	5,409.5	-604.6	-920.9	1,101.6	2.00	-2.00	0.00
5,600.0	7.03	236.71	5,449.2	-607.4	-925.2	1,106.8	2.00	-2.00	0.00
5,640.0	6.23	236.71	5,488.9	-610.0	-929.1	1,111.4	2.00	-2.00	0.00
5,680.0	5.43	236.71	5,528.7	-612.2	-932.5	1,115.5	2.00	-2.00	0.00
5,720.0	4.63	236.71	5,568.6	-614.1	-935.4	1,119.0	2.00	-2.00	0.00
5,760.0	3.83	236.71	5,608.5	-615.8	-937.9	1,121.9	2.00	-2.00	0.00
5,800.0	3.03	236.71	5,648.4	-617.1	-939.9	1,124.3	2.00	-2.00	0.00
5,840.0	2.23	236.71	5,688.3	-618.1	-941.4	1,126.2	2.00	-2.00	0.00
5,880.0	1.43	236.71	5,728.3	-618.8	-942.5	1,127.4	2.00	-2.00	0.00
5,920.0	0.63	236.71	5,768.3	-619.2	-943.1	1,128.2	2.00	-2.00	0.00
5,951.7	0.00	0.00	5,800.0	-619.3	-943.2	1,128.3	2.00	-2.00	389.03
TARGET BHL 1980'FNL, 1980'FEL									
5,960.0	0.00	0.00	5,808.3	-619.3	-943.2	1,128.3	0.00	0.00	0.00
6,000.0	0.00	0.00	5,848.3	-619.3	-943.2	1,128.3	0.00	0.00	0.00
6,040.0	0.00	0.00	5,888.3	-619.3	-943.2	1,128.3	0.00	0.00	0.00
6,080.0	0.00	0.00	5,928.3	-619.3	-943.2	1,128.3	0.00	0.00	0.00
6,120.0	0.00	0.00	5,968.3	-619.3	-943.2	1,128.3	0.00	0.00	0.00
6,160.0	0.00	0.00	6,008.3	-619.3	-943.2	1,128.3	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Green USX XX07-07D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4999.0ft (Original Well Elev)
<b>Project:</b>	SEC.7-T1N-R65W	<b>MD Reference:</b>	WELL @ 4999.0ft (Original Well Elev)
<b>Site:</b>	Green USX XX07-07D Pad Sec.7-T1N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	Green USX XX07-07D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble Green USX XX07-07D Plan #1 (6-20-11)		

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	6,048.3	-619.3	-943.2	1,128.3	0.00	0.00	0.00
6,240.0	0.00	0.00	6,088.3	-619.3	-943.2	1,128.3	0.00	0.00	0.00
6,280.0	0.00	0.00	6,128.3	-619.3	-943.2	1,128.3	0.00	0.00	0.00
6,320.0	0.00	0.00	6,168.3	-619.3	-943.2	1,128.3	0.00	0.00	0.00
6,360.0	0.00	0.00	6,208.3	-619.3	-943.2	1,128.3	0.00	0.00	0.00
6,400.0	0.00	0.00	6,248.3	-619.3	-943.2	1,128.3	0.00	0.00	0.00
6,440.0	0.00	0.00	6,288.3	-619.3	-943.2	1,128.3	0.00	0.00	0.00
6,480.0	0.00	0.00	6,328.3	-619.3	-943.2	1,128.3	0.00	0.00	0.00
6,520.0	0.00	0.00	6,368.3	-619.3	-943.2	1,128.3	0.00	0.00	0.00
6,560.0	0.00	0.00	6,408.3	-619.3	-943.2	1,128.3	0.00	0.00	0.00
6,600.0	0.00	0.00	6,448.3	-619.3	-943.2	1,128.3	0.00	0.00	0.00
6,640.0	0.00	0.00	6,488.3	-619.3	-943.2	1,128.3	0.00	0.00	0.00
6,680.0	0.00	0.00	6,528.3	-619.3	-943.2	1,128.3	0.00	0.00	0.00
6,720.0	0.00	0.00	6,568.3	-619.3	-943.2	1,128.3	0.00	0.00	0.00
6,760.0	0.00	0.00	6,608.3	-619.3	-943.2	1,128.3	0.00	0.00	0.00
6,800.0	0.00	0.00	6,648.3	-619.3	-943.2	1,128.3	0.00	0.00	0.00
6,840.0	0.00	0.00	6,688.3	-619.3	-943.2	1,128.3	0.00	0.00	0.00
6,880.0	0.00	0.00	6,728.3	-619.3	-943.2	1,128.3	0.00	0.00	0.00
6,920.0	0.00	0.00	6,768.3	-619.3	-943.2	1,128.3	0.00	0.00	0.00
6,960.0	0.00	0.00	6,808.3	-619.3	-943.2	1,128.3	0.00	0.00	0.00
7,000.0	0.00	0.00	6,848.3	-619.3	-943.2	1,128.3	0.00	0.00	0.00
7,040.0	0.00	0.00	6,888.3	-619.3	-943.2	1,128.3	0.00	0.00	0.00
7,080.0	0.00	0.00	6,928.3	-619.3	-943.2	1,128.3	0.00	0.00	0.00
7,120.0	0.00	0.00	6,968.3	-619.3	-943.2	1,128.3	0.00	0.00	0.00
7,160.0	0.00	0.00	7,008.3	-619.3	-943.2	1,128.3	0.00	0.00	0.00
7,177.7	0.00	0.00	7,026.0	-619.3	-943.2	1,128.3	0.00	0.00	0.00
<b>NIORARA - TARGET CIRCLE 1980'FNL, 1980'FEL - LEGAL BOX 400' X 400' 1983'FNL, 1979'FEL</b>									
7,200.0	0.00	0.00	7,048.3	-619.3	-943.2	1,128.3	0.00	0.00	0.00
7,240.0	0.00	0.00	7,088.3	-619.3	-943.2	1,128.3	0.00	0.00	0.00
7,280.0	0.00	0.00	7,128.3	-619.3	-943.2	1,128.3	0.00	0.00	0.00
7,320.0	0.00	0.00	7,168.3	-619.3	-943.2	1,128.3	0.00	0.00	0.00
7,360.0	0.00	0.00	7,208.3	-619.3	-943.2	1,128.3	0.00	0.00	0.00
7,400.0	0.00	0.00	7,248.3	-619.3	-943.2	1,128.3	0.00	0.00	0.00
7,440.0	0.00	0.00	7,288.3	-619.3	-943.2	1,128.3	0.00	0.00	0.00
7,480.0	0.00	0.00	7,328.3	-619.3	-943.2	1,128.3	0.00	0.00	0.00
7,516.7	0.00	0.00	7,365.0	-619.3	-943.2	1,128.3	0.00	0.00	0.00
<b>CODELL</b>									
7,520.0	0.00	0.00	7,368.3	-619.3	-943.2	1,128.3	0.00	0.00	0.00
7,560.0	0.00	0.00	7,408.3	-619.3	-943.2	1,128.3	0.00	0.00	0.00
7,600.0	0.00	0.00	7,448.3	-619.3	-943.2	1,128.3	0.00	0.00	0.00
7,640.0	0.00	0.00	7,488.3	-619.3	-943.2	1,128.3	0.00	0.00	0.00
7,680.0	0.00	0.00	7,528.3	-619.3	-943.2	1,128.3	0.00	0.00	0.00
7,720.0	0.00	0.00	7,568.3	-619.3	-943.2	1,128.3	0.00	0.00	0.00
7,760.0	0.00	0.00	7,608.3	-619.3	-943.2	1,128.3	0.00	0.00	0.00
7,800.0	0.00	0.00	7,648.3	-619.3	-943.2	1,128.3	0.00	0.00	0.00
7,840.0	0.00	0.00	7,688.3	-619.3	-943.2	1,128.3	0.00	0.00	0.00
7,880.0	0.00	0.00	7,728.3	-619.3	-943.2	1,128.3	0.00	0.00	0.00
7,916.7	0.00	0.00	7,765.0	-619.3	-943.2	1,128.3	0.00	0.00	0.00
<b>D-SAND</b>									
7,920.0	0.00	0.00	7,768.3	-619.3	-943.2	1,128.3	0.00	0.00	0.00
7,960.0	0.00	0.00	7,808.3	-619.3	-943.2	1,128.3	0.00	0.00	0.00
7,963.7	0.00	0.00	7,812.0	-619.3	-943.2	1,128.3	0.00	0.00	0.00
<b>J-SAND</b>									



<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Green USX XX07-07D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4999.0ft (Original Well Elev)
<b>Project:</b>	SEC.7-T1N-R65W	<b>MD Reference:</b>	WELL @ 4999.0ft (Original Well Elev)
<b>Site:</b>	Green USX XX07-07D Pad Sec.7-T1N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	Green USX XX07-07D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble Green USX XX07-07D Plan #1 (6-20-11)		

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)
8,000.0	0.00	0.00	7,848.3	-619.3	-943.2	1,128.3	0.00	0.00	0.00
8,040.0	0.00	0.00	7,888.3	-619.3	-943.2	1,128.3	0.00	0.00	0.00
8,080.0	0.00	0.00	7,928.3	-619.3	-943.2	1,128.3	0.00	0.00	0.00
8,120.0	0.00	0.00	7,968.3	-619.3	-943.2	1,128.3	0.00	0.00	0.00
8,160.0	0.00	0.00	8,008.3	-619.3	-943.2	1,128.3	0.00	0.00	0.00
8,164.7	0.00	0.00	8,013.0	-619.3	-943.2	1,128.3	0.00	0.00	0.00
<b>DAKOTA</b>									
8,200.0	0.00	0.00	8,048.3	-619.3	-943.2	1,128.3	0.00	0.00	0.00
8,240.0	0.00	0.00	8,088.3	-619.3	-943.2	1,128.3	0.00	0.00	0.00
8,280.0	0.00	0.00	8,128.3	-619.3	-943.2	1,128.3	0.00	0.00	0.00
8,314.7	0.00	0.00	8,163.0	-619.3	-943.2	1,128.3	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									
TARGET CIRCLE 198	0.00	0.00	7,026.0	-619.3	-943.2	1,268,547.45	3,222,693.59	40.067810	-104.704300
- plan hits target center									
- Circle (radius 75.0)									
LEGAL BOX 400' X 400'	0.00	0.00	7,026.0	-622.3	-942.2	1,268,544.45	3,222,694.62	40.067802	-104.704296
- plan misses target center by 3.2ft at 7177.7ft MD (7026.0 TVD, -619.3 N, -943.2 E)									
- Rectangle (sides W400.0 H400.0 D1,137.0)									
TARGET BHL 1980'F	0.00	0.00	5,800.0	-619.3	-943.2	1,268,547.48	3,222,693.57	40.067810	-104.704300
- plan hits target center									
- Point									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
1,050.0	1,050.0	8 5/8"	8-5/8	12-1/4	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
7,177.7	7,026.0	NIOBRARA		0.00		
7,516.7	7,365.0	CODELL		0.00		
7,916.7	7,765.0	D-SAND		0.00		
7,963.7	7,812.0	J-SAND		0.00		
8,164.7	8,013.0	DAKOTA		0.00		