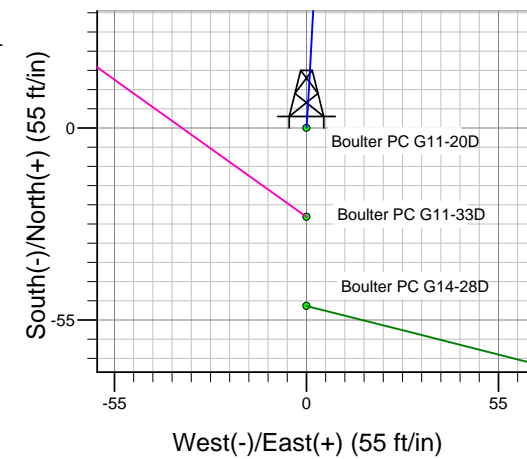
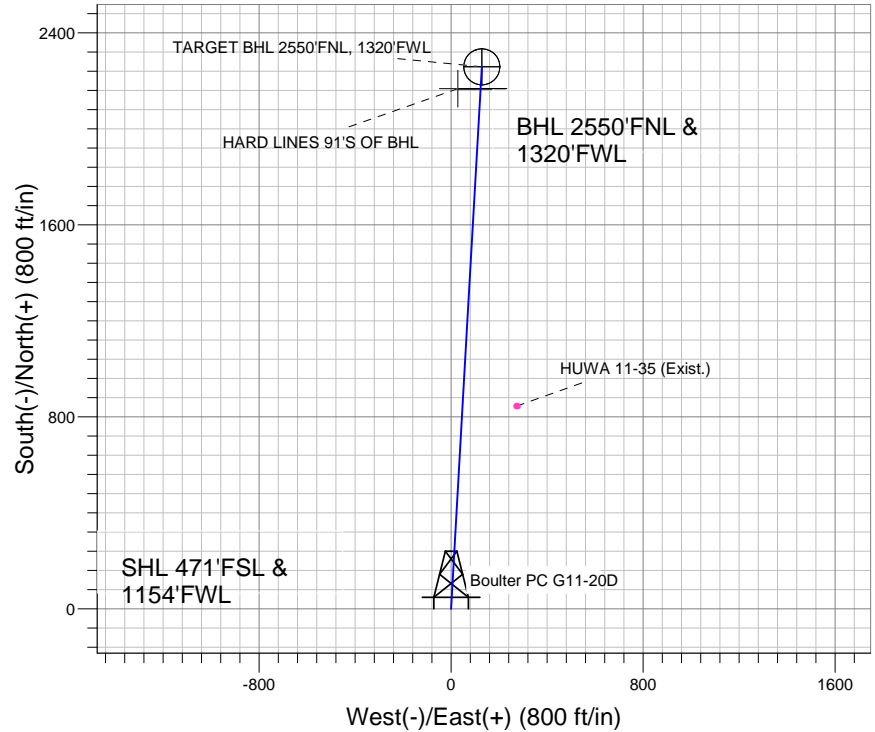
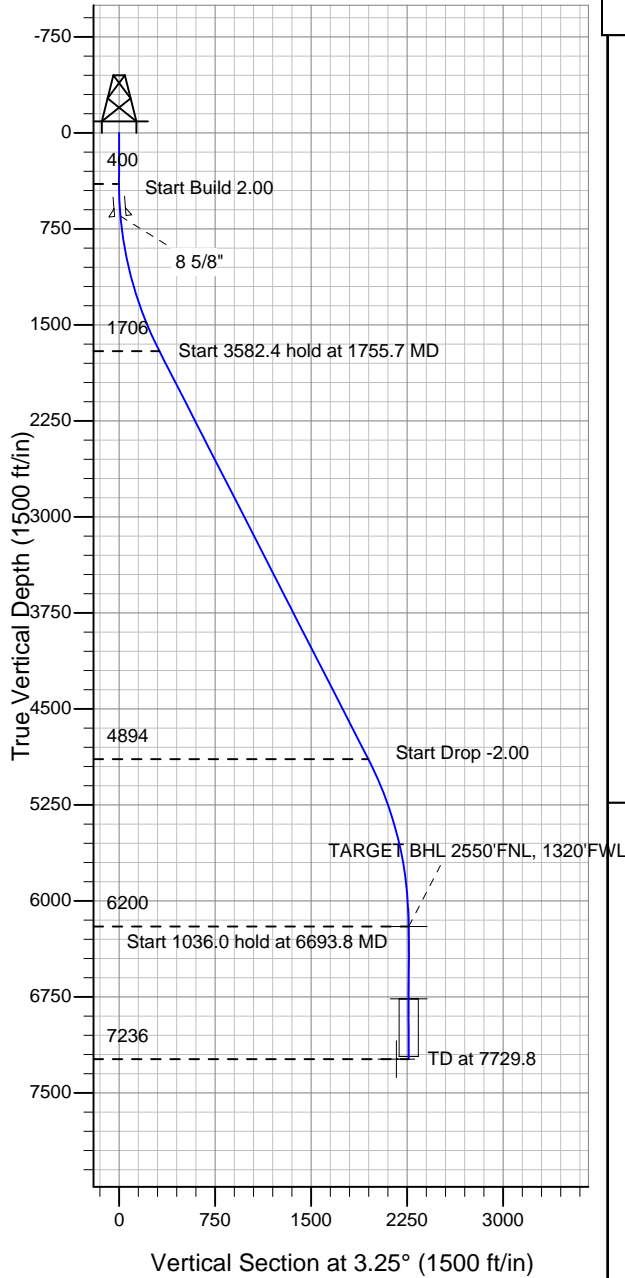


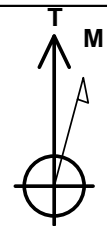
### Well Name: Boulder PC G11-20D

Surface Location: Boulder PC G11-20D Pad Sec.11-T4N-R65W  
 North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone  
 Ground Elevation: 4683.0  
 +N/-S +E/-W Northing Easting Latitude Longitude Slot  
 0.0 0.0 1360974.47 3241057.14 40° 19' 15.780 N 104° 38' 7.692 W  
 Original Well Elev WELL @ 4696.0ft (Original Well Elev)

### NOBLE ENERGY INC WELD COUNTY CO



Boulder PC G11-20D Pad Sec.11-T4N-R65W  
 Boulder PC G11-20D  
 Noble Boulder PC G11-20D Plan #1 (2-10-11)  
 12:38, February 20 2011



Azimuths to True North  
 Magnetic North: 8.79°  
 Magnetic Field  
 Strength: 53160.9nT  
 Dip Angle: 67.03°  
 Date: 2/16/2011  
 Model: IGRF200510

### WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 2550'FNL, 1320'FWL	6200.0	2258.7	128.3	40° 19' 38.100 N	104° 38' 6.036 W	Point
TARGET CIRCLE 2550'FNL & 1320'FWL	6766.0	2258.7	128.3	40° 19' 38.100 N	104° 38' 6.036 W	Circle (Radius: 75.0)
HARD LINES 91'S OF BHL	7236.0	2167.7	28.3	40° 19' 37.201 N	104° 38' 7.327 W	Polygon

### 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	400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.0	
3	1755.7	27.11	3.25	1705.7	314.3	17.8	2.00	3.25	314.8	
4	5338.1	27.11	3.25	4894.3	1944.4	110.4	0.00	0.00	1947.5	
5	6693.8	0.00	0.00	6200.0	2258.7	128.3	2.00	180.00	2262.4	TARGET BHL 2550'FNL, 1320'FWL
6	7729.8	0.00	0.00	7236.0	2258.7	128.3	0.00	0.00	2262.4	



# **NOBLE ENERGY INC WELD COUNTY CO**

**SEC.11-T4N-R65W**

**Boulter PC G11-20D Pad Sec.11-T4N-R65W**

**Boulter PC G11-20D**

**Wellbore #1**

**Plan: Noble Boulter PC G11-20D Plan #1 (2-10-11)**

## **Standard Planning Report**

**20 February, 2011**



<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Boulter PC G11-20D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4696.0ft (Original Well Elev)
<b>Project:</b>	SEC.11-T4N-R65W	<b>MD Reference:</b>	WELL @ 4696.0ft (Original Well Elev)
<b>Site:</b>	Boulter PC G11-20D Pad Sec.11-T4N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	Boulter PC G11-20D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble Boulter PC G11-20D Plan #1 (2-10-11)		

<b>Project</b>	SEC.11-T4N-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		
<b>Map Zone:</b>	Colorado Northern Zone		Using geodetic scale factor

Site						Boulter PC G11-20D Pad Sec.11-T4N-R65W											
Site Position:						Northing:			1,360,974.49ft			Latitude:			40° 19' 15.780 N		
From:			Lat/Long			Easting:			3,241,057.14ft			Longitude:			104° 38' 7.692 W		
Position Uncertainty:			0.0 ft			Slot Radius:			"			Grid Convergence:			0.56 °		

Well	Boulter PC G11-20D					
Well Position	+N/-S	0.0 ft	Northing:	1,360,974.47 ft	Latitude:	40° 19' 15.780 N
	+E/-W	0.0 ft	Easting:	3,241,057.14 ft	Longitude:	104° 38' 7.692 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,683.0 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>
	IGRF200510	2/16/2011	8.79	67.03	53,161

<b>Design</b>	Noble Boulter PC G11-20D Plan #1 (2-10-11)			
<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	3.25

<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	
400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,755.7	27.11	3.25	1,705.7	314.3	17.8	2.00	2.00	0.00	3.25	
5,338.1	27.11	3.25	4,894.3	1,944.4	110.4	0.00	0.00	0.00	0.00	
6,693.8	0.00	0.00	6,200.0	2,258.7	128.3	2.00	-2.00	0.00	180.00	TARGET BHL 255C
7,729.8	0.00	0.00	7,236.0	2,258.7	128.3	0.00	0.00	0.00	0.00	

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Boulter PC G11-20D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4696.0ft (Original Well Elev)
<b>Project:</b>	SEC.11-T4N-R65W	<b>MD Reference:</b>	WELL @ 4696.0ft (Original Well Elev)
<b>Site:</b>	Boulter PC G11-20D Pad Sec.11-T4N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	Boulter PC G11-20D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble Boulter PC G11-20D Plan #1 (2-10-11)		

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	0.80	3.25	440.0	0.3	0.0	0.3	2.00	2.00	0.00
480.0	1.60	3.25	480.0	1.1	0.1	1.1	2.00	2.00	0.00
520.0	2.40	3.25	520.0	2.5	0.1	2.5	2.00	2.00	0.00
560.0	3.20	3.25	559.9	4.5	0.3	4.5	2.00	2.00	0.00
600.0	4.00	3.25	599.8	7.0	0.4	7.0	2.00	2.00	0.00
640.0	4.80	3.25	639.7	10.0	0.6	10.0	2.00	2.00	0.00
650.3	5.01	3.25	650.0	10.9	0.6	10.9	2.00	2.00	0.00
8 5/8"									
680.0	5.60	3.25	679.6	13.7	0.8	13.7	2.00	2.00	0.00
720.0	6.40	3.25	719.3	17.8	1.0	17.9	2.00	2.00	0.00
760.0	7.20	3.25	759.1	22.6	1.3	22.6	2.00	2.00	0.00
800.0	8.00	3.25	798.7	27.8	1.6	27.9	2.00	2.00	0.00
840.0	8.80	3.25	838.3	33.7	1.9	33.7	2.00	2.00	0.00
880.0	9.60	3.25	877.8	40.1	2.3	40.1	2.00	2.00	0.00
920.0	10.40	3.25	917.1	47.0	2.7	47.1	2.00	2.00	0.00
960.0	11.20	3.25	956.4	54.5	3.1	54.6	2.00	2.00	0.00
1,000.0	12.00	3.25	995.6	62.5	3.5	62.6	2.00	2.00	0.00
1,040.0	12.80	3.25	1,034.7	71.1	4.0	71.2	2.00	2.00	0.00
1,080.0	13.60	3.25	1,073.6	80.2	4.6	80.3	2.00	2.00	0.00
1,120.0	14.40	3.25	1,112.4	89.9	5.1	90.0	2.00	2.00	0.00
1,160.0	15.20	3.25	1,151.1	100.1	5.7	100.2	2.00	2.00	0.00
1,200.0	16.00	3.25	1,189.6	110.8	6.3	111.0	2.00	2.00	0.00
1,240.0	16.80	3.25	1,228.0	122.1	6.9	122.3	2.00	2.00	0.00
1,280.0	17.60	3.25	1,266.2	133.9	7.6	134.1	2.00	2.00	0.00
1,320.0	18.40	3.25	1,304.3	146.2	8.3	146.5	2.00	2.00	0.00
1,360.0	19.20	3.25	1,342.1	159.1	9.0	159.3	2.00	2.00	0.00
1,400.0	20.00	3.25	1,379.8	172.5	9.8	172.8	2.00	2.00	0.00
1,440.0	20.80	3.25	1,417.3	186.4	10.6	186.7	2.00	2.00	0.00
1,480.0	21.60	3.25	1,454.6	200.9	11.4	201.2	2.00	2.00	0.00
1,520.0	22.40	3.25	1,491.7	215.8	12.3	216.2	2.00	2.00	0.00
1,560.0	23.20	3.25	1,528.6	231.3	13.1	231.7	2.00	2.00	0.00
1,600.0	24.00	3.25	1,565.2	247.3	14.0	247.7	2.00	2.00	0.00
1,640.0	24.80	3.25	1,601.6	263.8	15.0	264.2	2.00	2.00	0.00
1,680.0	25.60	3.25	1,637.8	280.8	15.9	281.2	2.00	2.00	0.00
1,720.0	26.40	3.25	1,673.8	298.3	16.9	298.8	2.00	2.00	0.00
1,755.7	27.11	3.25	1,705.7	314.3	17.8	314.8	2.00	2.00	0.00
1,760.0	27.11	3.25	1,709.5	316.3	18.0	316.8	0.00	0.00	0.00
1,800.0	27.11	3.25	1,745.1	334.5	19.0	335.0	0.00	0.00	0.00
1,840.0	27.11	3.25	1,780.7	352.7	20.0	353.3	0.00	0.00	0.00
1,880.0	27.11	3.25	1,816.3	370.9	21.1	371.5	0.00	0.00	0.00
1,920.0	27.11	3.25	1,851.9	389.1	22.1	389.7	0.00	0.00	0.00
1,960.0	27.11	3.25	1,887.5	407.3	23.1	407.9	0.00	0.00	0.00
2,000.0	27.11	3.25	1,923.1	425.5	24.2	426.2	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Boulter PC G11-20D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4696.0ft (Original Well Elev)
<b>Project:</b>	SEC.11-T4N-R65W	<b>MD Reference:</b>	WELL @ 4696.0ft (Original Well Elev)
<b>Site:</b>	Boulter PC G11-20D Pad Sec.11-T4N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	Boulter PC G11-20D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble Boulter PC G11-20D Plan #1 (2-10-11)		

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	27.11	3.25	1,958.7	443.7	25.2	444.4	0.00	0.00	0.00
2,080.0	27.11	3.25	1,994.3	461.9	26.2	462.6	0.00	0.00	0.00
2,120.0	27.11	3.25	2,029.9	480.1	27.3	480.9	0.00	0.00	0.00
2,160.0	27.11	3.25	2,065.5	498.3	28.3	499.1	0.00	0.00	0.00
2,200.0	27.11	3.25	2,101.1	516.5	29.3	517.3	0.00	0.00	0.00
2,240.0	27.11	3.25	2,136.7	534.7	30.4	535.6	0.00	0.00	0.00
2,280.0	27.11	3.25	2,172.3	552.9	31.4	553.8	0.00	0.00	0.00
2,320.0	27.11	3.25	2,207.9	571.1	32.4	572.0	0.00	0.00	0.00
2,360.0	27.11	3.25	2,243.6	589.3	33.5	590.2	0.00	0.00	0.00
2,400.0	27.11	3.25	2,279.2	607.5	34.5	608.5	0.00	0.00	0.00
2,440.0	27.11	3.25	2,314.8	625.7	35.5	626.7	0.00	0.00	0.00
2,480.0	27.11	3.25	2,350.4	643.9	36.6	644.9	0.00	0.00	0.00
2,520.0	27.11	3.25	2,386.0	662.1	37.6	663.2	0.00	0.00	0.00
2,560.0	27.11	3.25	2,421.6	680.3	38.6	681.4	0.00	0.00	0.00
2,600.0	27.11	3.25	2,457.2	698.5	39.7	699.6	0.00	0.00	0.00
2,640.0	27.11	3.25	2,492.8	716.7	40.7	717.9	0.00	0.00	0.00
2,680.0	27.11	3.25	2,528.4	734.9	41.7	736.1	0.00	0.00	0.00
2,720.0	27.11	3.25	2,564.0	753.1	42.8	754.3	0.00	0.00	0.00
2,760.0	27.11	3.25	2,599.6	771.3	43.8	772.6	0.00	0.00	0.00
2,800.0	27.11	3.25	2,635.2	789.5	44.8	790.8	0.00	0.00	0.00
2,840.0	27.11	3.25	2,670.8	807.7	45.9	809.0	0.00	0.00	0.00
2,880.0	27.11	3.25	2,706.4	825.9	46.9	827.2	0.00	0.00	0.00
2,920.0	27.11	3.25	2,742.0	844.1	47.9	845.5	0.00	0.00	0.00
2,960.0	27.11	3.25	2,777.6	862.3	49.0	863.7	0.00	0.00	0.00
3,000.0	27.11	3.25	2,813.2	880.5	50.0	881.9	0.00	0.00	0.00
3,040.0	27.11	3.25	2,848.8	898.7	51.0	900.2	0.00	0.00	0.00
3,080.0	27.11	3.25	2,884.4	916.9	52.1	918.4	0.00	0.00	0.00
3,120.0	27.11	3.25	2,920.0	935.1	53.1	936.6	0.00	0.00	0.00
3,160.0	27.11	3.25	2,955.6	953.3	54.1	954.9	0.00	0.00	0.00
3,200.0	27.11	3.25	2,991.2	971.5	55.2	973.1	0.00	0.00	0.00
3,240.0	27.11	3.25	3,026.8	989.7	56.2	991.3	0.00	0.00	0.00
3,280.0	27.11	3.25	3,062.4	1,007.9	57.2	1,009.5	0.00	0.00	0.00
3,320.0	27.11	3.25	3,098.1	1,026.1	58.3	1,027.8	0.00	0.00	0.00
3,360.0	27.11	3.25	3,133.7	1,044.3	59.3	1,046.0	0.00	0.00	0.00
3,400.0	27.11	3.25	3,169.3	1,062.5	60.3	1,064.2	0.00	0.00	0.00
3,440.0	27.11	3.25	3,204.9	1,080.7	61.4	1,082.5	0.00	0.00	0.00
3,480.0	27.11	3.25	3,240.5	1,098.9	62.4	1,100.7	0.00	0.00	0.00
3,520.0	27.11	3.25	3,276.1	1,117.1	63.4	1,118.9	0.00	0.00	0.00
3,560.0	27.11	3.25	3,311.7	1,135.3	64.5	1,137.2	0.00	0.00	0.00
3,600.0	27.11	3.25	3,347.3	1,153.5	65.5	1,155.4	0.00	0.00	0.00
3,640.0	27.11	3.25	3,382.9	1,171.7	66.5	1,173.6	0.00	0.00	0.00
3,680.0	27.11	3.25	3,418.5	1,189.9	67.6	1,191.8	0.00	0.00	0.00
3,720.0	27.11	3.25	3,454.1	1,208.1	68.6	1,210.1	0.00	0.00	0.00
3,760.0	27.11	3.25	3,489.7	1,226.3	69.6	1,228.3	0.00	0.00	0.00
3,800.0	27.11	3.25	3,525.3	1,244.5	70.7	1,246.5	0.00	0.00	0.00
3,840.0	27.11	3.25	3,560.9	1,262.7	71.7	1,264.8	0.00	0.00	0.00
3,880.0	27.11	3.25	3,596.5	1,280.9	72.7	1,283.0	0.00	0.00	0.00
3,920.0	27.11	3.25	3,632.1	1,299.1	73.8	1,301.2	0.00	0.00	0.00
3,960.0	27.11	3.25	3,667.7	1,317.3	74.8	1,319.5	0.00	0.00	0.00
4,000.0	27.11	3.25	3,703.3	1,335.5	75.8	1,337.7	0.00	0.00	0.00
4,040.0	27.11	3.25	3,738.9	1,353.7	76.9	1,355.9	0.00	0.00	0.00
4,080.0	27.11	3.25	3,774.5	1,371.9	77.9	1,374.2	0.00	0.00	0.00
4,120.0	27.11	3.25	3,810.1	1,390.1	78.9	1,392.4	0.00	0.00	0.00
4,160.0	27.11	3.25	3,845.7	1,408.3	80.0	1,410.6	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Boulter PC G11-20D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4696.0ft (Original Well Elev)
<b>Project:</b>	SEC.11-T4N-R65W	<b>MD Reference:</b>	WELL @ 4696.0ft (Original Well Elev)
<b>Site:</b>	Boulter PC G11-20D Pad Sec.11-T4N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	Boulter PC G11-20D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble Boulter PC G11-20D Plan #1 (2-10-11)		

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	27.11	3.25	3,881.3	1,426.5	81.0	1,428.8	0.00	0.00	0.00
4,240.0	27.11	3.25	3,916.9	1,444.7	82.0	1,447.1	0.00	0.00	0.00
4,280.0	27.11	3.25	3,952.6	1,462.9	83.1	1,465.3	0.00	0.00	0.00
4,320.0	27.11	3.25	3,988.2	1,481.1	84.1	1,483.5	0.00	0.00	0.00
4,360.0	27.11	3.25	4,023.8	1,499.3	85.1	1,501.8	0.00	0.00	0.00
4,400.0	27.11	3.25	4,059.4	1,517.5	86.2	1,520.0	0.00	0.00	0.00
4,440.0	27.11	3.25	4,095.0	1,535.8	87.2	1,538.2	0.00	0.00	0.00
4,480.0	27.11	3.25	4,130.6	1,554.0	88.2	1,556.5	0.00	0.00	0.00
4,520.0	27.11	3.25	4,166.2	1,572.2	89.3	1,574.7	0.00	0.00	0.00
4,560.0	27.11	3.25	4,201.8	1,590.4	90.3	1,592.9	0.00	0.00	0.00
4,600.0	27.11	3.25	4,237.4	1,608.6	91.3	1,611.1	0.00	0.00	0.00
4,640.0	27.11	3.25	4,273.0	1,626.8	92.4	1,629.4	0.00	0.00	0.00
4,680.0	27.11	3.25	4,308.6	1,645.0	93.4	1,647.6	0.00	0.00	0.00
4,720.0	27.11	3.25	4,344.2	1,663.2	94.4	1,665.8	0.00	0.00	0.00
4,760.0	27.11	3.25	4,379.8	1,681.4	95.5	1,684.1	0.00	0.00	0.00
4,800.0	27.11	3.25	4,415.4	1,699.6	96.5	1,702.3	0.00	0.00	0.00
4,840.0	27.11	3.25	4,451.0	1,717.8	97.5	1,720.5	0.00	0.00	0.00
4,880.0	27.11	3.25	4,486.6	1,736.0	98.6	1,738.8	0.00	0.00	0.00
4,920.0	27.11	3.25	4,522.2	1,754.2	99.6	1,757.0	0.00	0.00	0.00
4,960.0	27.11	3.25	4,557.8	1,772.4	100.6	1,775.2	0.00	0.00	0.00
5,000.0	27.11	3.25	4,593.4	1,790.6	101.7	1,793.4	0.00	0.00	0.00
5,040.0	27.11	3.25	4,629.0	1,808.8	102.7	1,811.7	0.00	0.00	0.00
5,080.0	27.11	3.25	4,664.6	1,827.0	103.7	1,829.9	0.00	0.00	0.00
5,120.0	27.11	3.25	4,700.2	1,845.2	104.8	1,848.1	0.00	0.00	0.00
5,160.0	27.11	3.25	4,735.8	1,863.4	105.8	1,866.4	0.00	0.00	0.00
5,200.0	27.11	3.25	4,771.4	1,881.6	106.8	1,884.6	0.00	0.00	0.00
5,240.0	27.11	3.25	4,807.1	1,899.8	107.9	1,902.8	0.00	0.00	0.00
5,280.0	27.11	3.25	4,842.7	1,918.0	108.9	1,921.1	0.00	0.00	0.00
5,320.0	27.11	3.25	4,878.3	1,936.2	109.9	1,939.3	0.00	0.00	0.00
5,338.1	27.11	3.25	4,894.3	1,944.4	110.4	1,947.5	0.00	0.00	0.00
5,360.0	26.68	3.25	4,913.9	1,954.3	111.0	1,957.4	2.00	-2.00	0.00
5,400.0	25.88	3.25	4,949.8	1,972.0	112.0	1,975.2	2.00	-2.00	0.00
5,440.0	25.08	3.25	4,985.9	1,989.2	113.0	1,992.4	2.00	-2.00	0.00
5,480.0	24.28	3.25	5,022.2	2,005.8	113.9	2,009.1	2.00	-2.00	0.00
5,520.0	23.48	3.25	5,058.8	2,022.0	114.8	2,025.2	2.00	-2.00	0.00
5,560.0	22.68	3.25	5,095.6	2,037.6	115.7	2,040.9	2.00	-2.00	0.00
5,600.0	21.88	3.25	5,132.6	2,052.8	116.6	2,056.1	2.00	-2.00	0.00
5,640.0	21.08	3.25	5,169.8	2,067.4	117.4	2,070.7	2.00	-2.00	0.00
5,680.0	20.28	3.25	5,207.3	2,081.5	118.2	2,084.9	2.00	-2.00	0.00
5,720.0	19.48	3.25	5,244.9	2,095.1	119.0	2,098.5	2.00	-2.00	0.00
5,760.0	18.68	3.25	5,282.7	2,108.1	119.7	2,111.5	2.00	-2.00	0.00
5,800.0	17.88	3.25	5,320.7	2,120.7	120.4	2,124.1	2.00	-2.00	0.00
5,840.0	17.08	3.25	5,358.8	2,132.6	121.1	2,136.1	2.00	-2.00	0.00
5,880.0	16.28	3.25	5,397.1	2,144.1	121.7	2,147.6	2.00	-2.00	0.00
5,920.0	15.48	3.25	5,435.6	2,155.0	122.4	2,158.5	2.00	-2.00	0.00
5,960.0	14.68	3.25	5,474.2	2,165.4	123.0	2,168.9	2.00	-2.00	0.00
6,000.0	13.88	3.25	5,513.0	2,175.3	123.5	2,178.8	2.00	-2.00	0.00
6,040.0	13.08	3.25	5,551.9	2,184.6	124.0	2,188.1	2.00	-2.00	0.00
6,080.0	12.28	3.25	5,590.9	2,193.3	124.5	2,196.9	2.00	-2.00	0.00
6,120.0	11.48	3.25	5,630.1	2,201.5	125.0	2,205.1	2.00	-2.00	0.00
6,160.0	10.68	3.25	5,669.3	2,209.2	125.4	2,212.8	2.00	-2.00	0.00
6,200.0	9.88	3.25	5,708.7	2,216.3	125.9	2,219.9	2.00	-2.00	0.00
6,240.0	9.08	3.25	5,748.1	2,222.9	126.2	2,226.5	2.00	-2.00	0.00
6,280.0	8.28	3.25	5,787.7	2,228.9	126.6	2,232.5	2.00	-2.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Boulter PC G11-20D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4696.0ft (Original Well Elev)
<b>Project:</b>	SEC.11-T4N-R65W	<b>MD Reference:</b>	WELL @ 4696.0ft (Original Well Elev)
<b>Site:</b>	Boulter PC G11-20D Pad Sec.11-T4N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	Boulter PC G11-20D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble Boulter PC G11-20D Plan #1 (2-10-11)		

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)
6,320.0	7.48	3.25	5,827.3	2,234.4	126.9	2,238.0	2.00	-2.00	0.00
6,360.0	6.68	3.25	5,867.0	2,239.3	127.2	2,242.9	2.00	-2.00	0.00
6,400.0	5.88	3.25	5,906.8	2,243.7	127.4	2,247.3	2.00	-2.00	0.00
6,440.0	5.08	3.25	5,946.6	2,247.5	127.6	2,251.1	2.00	-2.00	0.00
6,480.0	4.28	3.25	5,986.4	2,250.8	127.8	2,254.4	2.00	-2.00	0.00
6,520.0	3.48	3.25	6,026.3	2,253.5	128.0	2,257.1	2.00	-2.00	0.00
6,560.0	2.68	3.25	6,066.3	2,255.6	128.1	2,259.2	2.00	-2.00	0.00
6,600.0	1.88	3.25	6,106.3	2,257.2	128.2	2,260.8	2.00	-2.00	0.00
6,640.0	1.08	3.25	6,146.2	2,258.2	128.2	2,261.9	2.00	-2.00	0.00
6,680.0	0.28	3.25	6,186.2	2,258.7	128.3	2,262.3	2.00	-2.00	0.00
6,693.8	0.00	0.00	6,200.0	2,258.7	128.3	2,262.4	2.00	-2.00	-23.62
TARGET BHL 2550'FNL, 1320'FWL									
6,720.0	0.00	0.00	6,226.2	2,258.7	128.3	2,262.4	0.00	0.00	0.00
6,760.0	0.00	0.00	6,266.2	2,258.7	128.3	2,262.4	0.00	0.00	0.00
6,800.0	0.00	0.00	6,306.2	2,258.7	128.3	2,262.4	0.00	0.00	0.00
6,840.0	0.00	0.00	6,346.2	2,258.7	128.3	2,262.4	0.00	0.00	0.00
6,880.0	0.00	0.00	6,386.2	2,258.7	128.3	2,262.4	0.00	0.00	0.00
6,920.0	0.00	0.00	6,426.2	2,258.7	128.3	2,262.4	0.00	0.00	0.00
6,960.0	0.00	0.00	6,466.2	2,258.7	128.3	2,262.4	0.00	0.00	0.00
7,000.0	0.00	0.00	6,506.2	2,258.7	128.3	2,262.4	0.00	0.00	0.00
7,040.0	0.00	0.00	6,546.2	2,258.7	128.3	2,262.4	0.00	0.00	0.00
7,080.0	0.00	0.00	6,586.2	2,258.7	128.3	2,262.4	0.00	0.00	0.00
7,120.0	0.00	0.00	6,626.2	2,258.7	128.3	2,262.4	0.00	0.00	0.00
7,160.0	0.00	0.00	6,666.2	2,258.7	128.3	2,262.4	0.00	0.00	0.00
7,200.0	0.00	0.00	6,706.2	2,258.7	128.3	2,262.4	0.00	0.00	0.00
7,240.0	0.00	0.00	6,746.2	2,258.7	128.3	2,262.4	0.00	0.00	0.00
7,259.8	0.00	0.00	6,766.0	2,258.7	128.3	2,262.4	0.00	0.00	0.00
NIOBRARA - TARGET CIRCLE 2550'FNL & 1320'FWL									
7,280.0	0.00	0.00	6,786.2	2,258.7	128.3	2,262.4	0.00	0.00	0.00
7,320.0	0.00	0.00	6,826.2	2,258.7	128.3	2,262.4	0.00	0.00	0.00
7,360.0	0.00	0.00	6,866.2	2,258.7	128.3	2,262.4	0.00	0.00	0.00
7,400.0	0.00	0.00	6,906.2	2,258.7	128.3	2,262.4	0.00	0.00	0.00
7,440.0	0.00	0.00	6,946.2	2,258.7	128.3	2,262.4	0.00	0.00	0.00
7,480.0	0.00	0.00	6,986.2	2,258.7	128.3	2,262.4	0.00	0.00	0.00
7,520.0	0.00	0.00	7,026.2	2,258.7	128.3	2,262.4	0.00	0.00	0.00
7,560.0	0.00	0.00	7,066.2	2,258.7	128.3	2,262.4	0.00	0.00	0.00
7,579.8	0.00	0.00	7,086.0	2,258.7	128.3	2,262.4	0.00	0.00	0.00
CODELL									
7,600.0	0.00	0.00	7,106.2	2,258.7	128.3	2,262.4	0.00	0.00	0.00
7,640.0	0.00	0.00	7,146.2	2,258.7	128.3	2,262.4	0.00	0.00	0.00
7,680.0	0.00	0.00	7,186.2	2,258.7	128.3	2,262.4	0.00	0.00	0.00
7,720.0	0.00	0.00	7,226.2	2,258.7	128.3	2,262.4	0.00	0.00	0.00
7,729.8	0.00	0.00	7,236.0	2,258.7	128.3	2,262.4	0.00	0.00	0.00
HARD LINES 91'S OF BHL									



<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Boulter PC G11-20D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4696.0ft (Original Well Elev)
<b>Project:</b>	SEC.11-T4N-R65W	<b>MD Reference:</b>	WELL @ 4696.0ft (Original Well Elev)
<b>Site:</b>	Boulter PC G11-20D Pad Sec.11-T4N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	Boulter PC G11-20D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble Boulter PC G11-20D Plan #1 (2-10-11)		

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 BHL 2550'F	0.00	0.00	6,200.0	2,258.7	128.3	1,363,234.24	3,241,163.37	40° 19' 38.100 N	104° 38' 6.036 W
- plan hits target center									
- Point									
HARD LINES 91'S OF	0.00	0.00	7,236.0	2,167.7	28.3	1,363,142.26	3,241,064.31	40° 19' 37.201 N	104° 38' 7.327 W
- plan misses target center by 135.2ft at 7729.8ft MD (7236.0 TVD, 2258.7 N, 128.3 E)									
- Polygon									
Point 1			7,236.0	0.0	0.0	1,363,142.26	3,241,064.31		
Point 2			7,236.0	0.0	200.0	1,363,144.21	3,241,264.29		
TARGET CIRCLE 25'	0.00	0.00	6,766.0	2,258.7	128.3	1,363,234.24	3,241,163.37	40° 19' 38.100 N	104° 38' 6.036 W
- plan hits target center									
- Circle (radius 75.0)									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
650.3	650.0	8 5/8"	8-5/8	12-1/4	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
7,259.8	6,766.0	NIOBRARA		0.00	
7,579.8	7,086.0	CODELL		0.00	