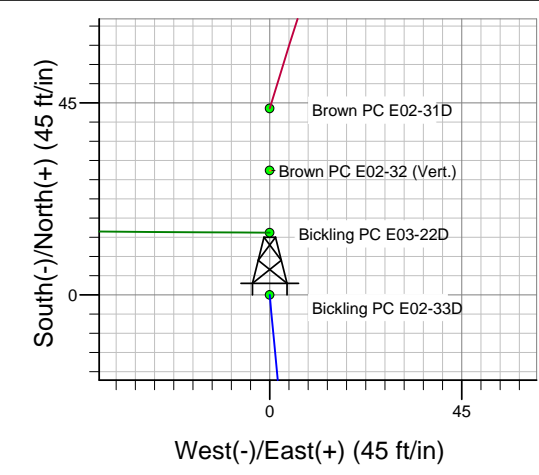
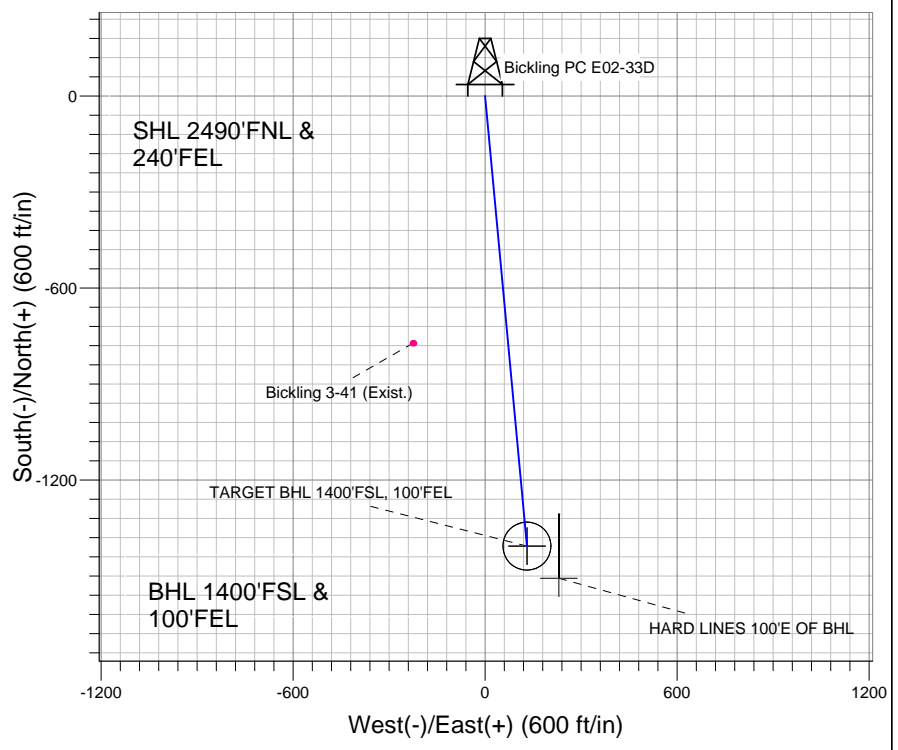
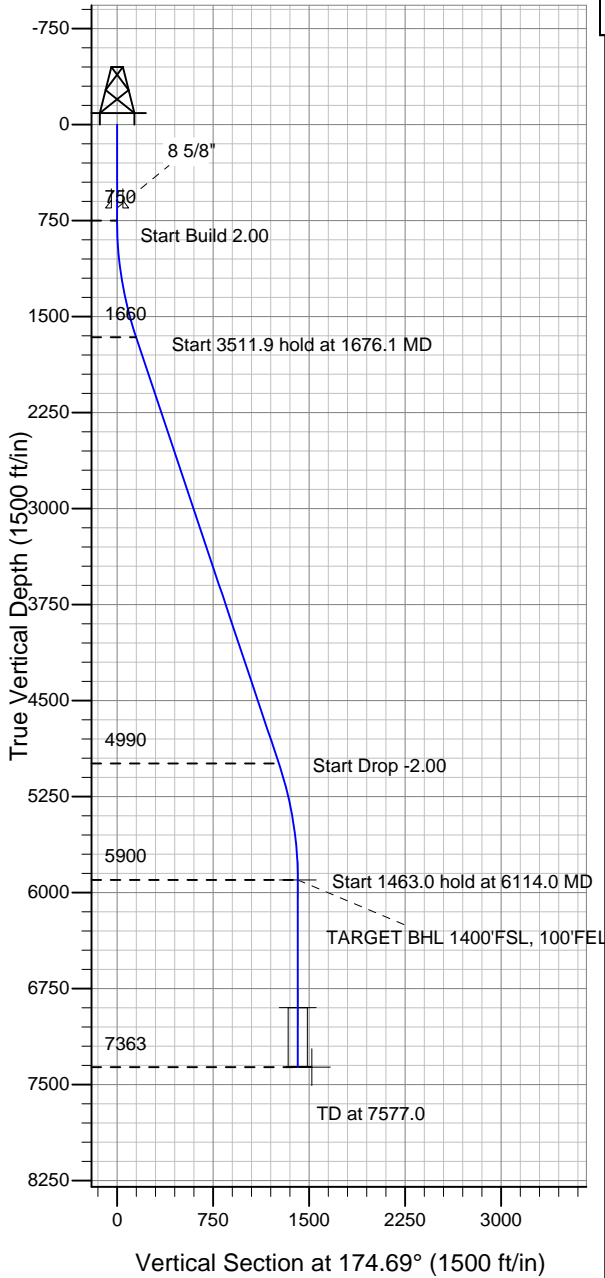


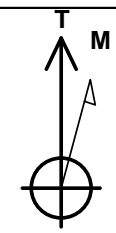
Well Name: Bickling PC E02-33D

Surface Location: Brown PC E02-32 Pad Sec.3-T6N-R65W
 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 1432046.37 3238929.49 40.516190 -104.640630
 Original Well Elev WELL @ 4848.0ft (Original Well Elev)

NOBLE ENERGY INC WELD COUNTY CO



Brown PC E02-32 Pad Sec.3-T6N-R65W
 Bickling PC E02-33D
 Noble Bickling PC E02-33D Plan #1 (2-07-11)
 16:05, February 11 2011



Azimuths to True North
 Magnetic North: 8.86°
 Magnetic Field
 Strength: 53242.6snT
 Dip Angle: 67.18°
 Date: 2/7/2011
 Model: IGRF2010

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 1400'FSL, 100'FEL	5900.0	-1406.3	130.7	40.512330	-104.640160	Point
TARGET CIRCLE 1400'FSL & 100'FEL	6898.0	-1406.3	130.7	40.512330	-104.640160	Circle (Radius: 75.0)
HARD LINES 100'E OF BHL	7363.0	-1506.3	230.7	40.512055	-104.639800	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	750.0	0.00	0.00	750.0	0.0	0.0	0.00	0.00	0.0	
3	1676.1	18.52	174.69	1660.0	-147.7	13.7	2.00	174.69	148.4	
4	5187.9	18.52	174.69	4990.0	-1258.5	117.0	0.00	0.00	1263.9	
5	6114.0	0.00	0.00	5900.0	-1406.3	130.7	2.00	180.00	1412.3	TARGET BHL 1400'FSL, 100'FEL
6	7577.0	0.00	0.00	7363.0	-1406.3	130.7	0.00	0.00	1412.3	



Directional

NOBLE ENERGY INC WELD COUNTY CO

SEC.3-T6N-R65W

Brown PC E02-32 Pad Sec.3-T6N-R65W

Bickling PC E02-33D

Wellbore #1

Plan: Noble Bickling PC E02-33D Plan #1 (2-07-11)

Standard Planning Report

11 February, 2011



Database:	Landmark	Local Co-ordinate Reference:	Well Bickling PC E02-33D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4848.0ft (Original Well Elev)
Project:	SEC.3-T6N-R65W	MD Reference:	WELL @ 4848.0ft (Original Well Elev)
Site:	Brown PC E02-32 Pad Sec.3-T6N-R65W	North Reference:	True
Well:	Bickling PC E02-33D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Bickling PC E02-33D Plan #1 (2-07-11)		

Project	SEC.3-T6N-R65W, Weld County, Colorado		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		Using Well Reference Point
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site	Brown PC E02-32 Pad Sec.3-T6N-R65W				
Site Position:		Northing:	1,432,075.53ft	Latitude:	40.516270
From:	Lat/Long	Easting:	3,238,929.21ft	Longitude:	-104.640630
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.56 °

Well	Bickling PC E02-33D					
Well Position	+N/-S	-29.2 ft	Northing:	1,432,046.37 ft	Latitude:	40.516190
	+E/-W	0.0 ft	Easting:	3,238,929.49 ft	Longitude:	-104.640630
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,835.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2/7/2011	8.86	67.18	53,243

Design	Noble Bickling PC E02-33D Plan #1 (2-07-11)			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	174.69

Plan Sections										
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	
750.0	0.00	0.00	750.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,676.1	18.52	174.69	1,660.0	-147.7	13.7	2.00	2.00	0.00	174.69	
5,187.9	18.52	174.69	4,990.0	-1,258.5	117.0	0.00	0.00	0.00	0.00	
6,114.0	0.00	0.00	5,900.0	-1,406.3	130.7	2.00	-2.00	0.00	180.00	TARGET BHL 140C
7,577.0	0.00	0.00	7,363.0	-1,406.3	130.7	0.00	0.00	0.00	0.00	

Database:	Landmark	Local Co-ordinate Reference:	Well Bickling PC E02-33D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4848.0ft (Original Well Elev)
Project:	SEC.3-T6N-R65W	MD Reference:	WELL @ 4848.0ft (Original Well Elev)
Site:	Brown PC E02-32 Pad Sec.3-T6N-R65W	North Reference:	True
Well:	Bickling PC E02-33D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Bickling PC E02-33D Plan #1 (2-07-11)		

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
750.0	0.00	0.00	750.0	0.0	0.0	0.0	0.00	0.00	0.00
760.0	0.20	174.69	760.0	0.0	0.0	0.0	2.00	2.00	0.00
800.0	1.00	174.69	800.0	-0.4	0.0	0.4	2.00	2.00	0.00
840.0	1.80	174.69	840.0	-1.4	0.1	1.4	2.00	2.00	0.00
880.0	2.60	174.69	880.0	-2.9	0.3	2.9	2.00	2.00	0.00
920.0	3.40	174.69	919.9	-5.0	0.5	5.0	2.00	2.00	0.00
960.0	4.20	174.69	959.8	-7.7	0.7	7.7	2.00	2.00	0.00
1,000.0	5.00	174.69	999.7	-10.9	1.0	10.9	2.00	2.00	0.00
1,040.0	5.80	174.69	1,039.5	-14.6	1.4	14.7	2.00	2.00	0.00
1,080.0	6.60	174.69	1,079.3	-18.9	1.8	19.0	2.00	2.00	0.00
1,120.0	7.40	174.69	1,119.0	-23.8	2.2	23.9	2.00	2.00	0.00
1,160.0	8.20	174.69	1,158.6	-29.2	2.7	29.3	2.00	2.00	0.00
1,200.0	9.00	174.69	1,198.2	-35.1	3.3	35.3	2.00	2.00	0.00
1,240.0	9.80	174.69	1,237.6	-41.6	3.9	41.8	2.00	2.00	0.00
1,280.0	10.60	174.69	1,277.0	-48.7	4.5	48.9	2.00	2.00	0.00
1,320.0	11.40	174.69	1,316.2	-56.3	5.2	56.5	2.00	2.00	0.00
1,360.0	12.20	174.69	1,355.4	-64.4	6.0	64.7	2.00	2.00	0.00
1,400.0	13.00	174.69	1,394.4	-73.1	6.8	73.4	2.00	2.00	0.00
1,440.0	13.80	174.69	1,433.3	-82.3	7.7	82.7	2.00	2.00	0.00
1,480.0	14.60	174.69	1,472.1	-92.1	8.6	92.5	2.00	2.00	0.00
1,520.0	15.40	174.69	1,510.8	-102.4	9.5	102.9	2.00	2.00	0.00
1,560.0	16.20	174.69	1,549.3	-113.3	10.5	113.7	2.00	2.00	0.00
1,600.0	17.00	174.69	1,587.6	-124.6	11.6	125.2	2.00	2.00	0.00
1,640.0	17.80	174.69	1,625.8	-136.6	12.7	137.1	2.00	2.00	0.00
1,676.1	18.52	174.69	1,660.0	-147.7	13.7	148.4	2.00	2.00	0.00
1,680.0	18.52	174.69	1,663.8	-149.0	13.8	149.6	0.00	0.00	0.00
1,720.0	18.52	174.69	1,701.7	-161.6	15.0	162.3	0.00	0.00	0.00
1,760.0	18.52	174.69	1,739.6	-174.3	16.2	175.0	0.00	0.00	0.00
1,800.0	18.52	174.69	1,777.5	-186.9	17.4	187.7	0.00	0.00	0.00
1,840.0	18.52	174.69	1,815.5	-199.6	18.5	200.5	0.00	0.00	0.00
1,880.0	18.52	174.69	1,853.4	-212.2	19.7	213.2	0.00	0.00	0.00
1,920.0	18.52	174.69	1,891.3	-224.9	20.9	225.9	0.00	0.00	0.00
1,960.0	18.52	174.69	1,929.2	-237.5	22.1	238.6	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Bickling PC E02-33D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4848.0ft (Original Well Elev)
Project:	SEC.3-T6N-R65W	MD Reference:	WELL @ 4848.0ft (Original Well Elev)
Site:	Brown PC E02-32 Pad Sec.3-T6N-R65W	North Reference:	True
Well:	Bickling PC E02-33D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Bickling PC E02-33D Plan #1 (2-07-11)		

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	18.52	174.69	1,967.2	-250.2	23.3	251.3	0.00	0.00	0.00
2,040.0	18.52	174.69	2,005.1	-262.9	24.4	264.0	0.00	0.00	0.00
2,080.0	18.52	174.69	2,043.0	-275.5	25.6	276.7	0.00	0.00	0.00
2,120.0	18.52	174.69	2,081.0	-288.2	26.8	289.4	0.00	0.00	0.00
2,160.0	18.52	174.69	2,118.9	-300.8	28.0	302.1	0.00	0.00	0.00
2,200.0	18.52	174.69	2,156.8	-313.5	29.1	314.8	0.00	0.00	0.00
2,240.0	18.52	174.69	2,194.7	-326.1	30.3	327.5	0.00	0.00	0.00
2,280.0	18.52	174.69	2,232.7	-338.8	31.5	340.2	0.00	0.00	0.00
2,320.0	18.52	174.69	2,270.6	-351.4	32.7	352.9	0.00	0.00	0.00
2,360.0	18.52	174.69	2,308.5	-364.1	33.8	365.6	0.00	0.00	0.00
2,400.0	18.52	174.69	2,346.5	-376.7	35.0	378.3	0.00	0.00	0.00
2,440.0	18.52	174.69	2,384.4	-389.4	36.2	391.0	0.00	0.00	0.00
2,480.0	18.52	174.69	2,422.3	-402.0	37.4	403.8	0.00	0.00	0.00
2,520.0	18.52	174.69	2,460.2	-414.7	38.5	416.5	0.00	0.00	0.00
2,560.0	18.52	174.69	2,498.2	-427.3	39.7	429.2	0.00	0.00	0.00
2,600.0	18.52	174.69	2,536.1	-440.0	40.9	441.9	0.00	0.00	0.00
2,640.0	18.52	174.69	2,574.0	-452.6	42.1	454.6	0.00	0.00	0.00
2,680.0	18.52	174.69	2,612.0	-465.3	43.2	467.3	0.00	0.00	0.00
2,720.0	18.52	174.69	2,649.9	-477.9	44.4	480.0	0.00	0.00	0.00
2,760.0	18.52	174.69	2,687.8	-490.6	45.6	492.7	0.00	0.00	0.00
2,800.0	18.52	174.69	2,725.7	-503.2	46.8	505.4	0.00	0.00	0.00
2,840.0	18.52	174.69	2,763.7	-515.9	47.9	518.1	0.00	0.00	0.00
2,880.0	18.52	174.69	2,801.6	-528.5	49.1	530.8	0.00	0.00	0.00
2,920.0	18.52	174.69	2,839.5	-541.2	50.3	543.5	0.00	0.00	0.00
2,960.0	18.52	174.69	2,877.5	-553.8	51.5	556.2	0.00	0.00	0.00
3,000.0	18.52	174.69	2,915.4	-566.5	52.6	568.9	0.00	0.00	0.00
3,040.0	18.52	174.69	2,953.3	-579.1	53.8	581.6	0.00	0.00	0.00
3,080.0	18.52	174.69	2,991.2	-591.8	55.0	594.3	0.00	0.00	0.00
3,120.0	18.52	174.69	3,029.2	-604.4	56.2	607.1	0.00	0.00	0.00
3,160.0	18.52	174.69	3,067.1	-617.1	57.3	619.8	0.00	0.00	0.00
3,200.0	18.52	174.69	3,105.0	-629.8	58.5	632.5	0.00	0.00	0.00
3,240.0	18.52	174.69	3,143.0	-642.4	59.7	645.2	0.00	0.00	0.00
3,280.0	18.52	174.69	3,180.9	-655.1	60.9	657.9	0.00	0.00	0.00
3,320.0	18.52	174.69	3,218.8	-667.7	62.1	670.6	0.00	0.00	0.00
3,360.0	18.52	174.69	3,256.7	-680.4	63.2	683.3	0.00	0.00	0.00
3,400.0	18.52	174.69	3,294.7	-693.0	64.4	696.0	0.00	0.00	0.00
3,440.0	18.52	174.69	3,332.6	-705.7	65.6	708.7	0.00	0.00	0.00
3,480.0	18.52	174.69	3,370.5	-718.3	66.8	721.4	0.00	0.00	0.00
3,520.0	18.52	174.69	3,408.5	-731.0	67.9	734.1	0.00	0.00	0.00
3,560.0	18.52	174.69	3,446.4	-743.6	69.1	746.8	0.00	0.00	0.00
3,600.0	18.52	174.69	3,484.3	-756.3	70.3	759.5	0.00	0.00	0.00
3,640.0	18.52	174.69	3,522.2	-768.9	71.5	772.2	0.00	0.00	0.00
3,680.0	18.52	174.69	3,560.2	-781.6	72.6	784.9	0.00	0.00	0.00
3,720.0	18.52	174.69	3,598.1	-794.2	73.8	797.6	0.00	0.00	0.00
3,760.0	18.52	174.69	3,636.0	-806.9	75.0	810.4	0.00	0.00	0.00
3,800.0	18.52	174.69	3,673.9	-819.5	76.2	823.1	0.00	0.00	0.00
3,840.0	18.52	174.69	3,711.9	-832.2	77.3	835.8	0.00	0.00	0.00
3,880.0	18.52	174.69	3,749.8	-844.8	78.5	848.5	0.00	0.00	0.00
3,920.0	18.52	174.69	3,787.7	-857.5	79.7	861.2	0.00	0.00	0.00
3,960.0	18.52	174.69	3,825.7	-870.1	80.9	873.9	0.00	0.00	0.00
4,000.0	18.52	174.69	3,863.6	-882.8	82.0	886.6	0.00	0.00	0.00
4,040.0	18.52	174.69	3,901.5	-895.4	83.2	899.3	0.00	0.00	0.00
4,080.0	18.52	174.69	3,939.4	-908.1	84.4	912.0	0.00	0.00	0.00
4,120.0	18.52	174.69	3,977.4	-920.7	85.6	924.7	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Bickling PC E02-33D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4848.0ft (Original Well Elev)
Project:	SEC.3-T6N-R65W	MD Reference:	WELL @ 4848.0ft (Original Well Elev)
Site:	Brown PC E02-32 Pad Sec.3-T6N-R65W	North Reference:	True
Well:	Bickling PC E02-33D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Bickling PC E02-33D Plan #1 (2-07-11)		

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	18.52	174.69	4,015.3	-933.4	86.7	937.4	0.00	0.00	0.00
4,200.0	18.52	174.69	4,053.2	-946.0	87.9	950.1	0.00	0.00	0.00
4,240.0	18.52	174.69	4,091.2	-958.7	89.1	962.8	0.00	0.00	0.00
4,280.0	18.52	174.69	4,129.1	-971.3	90.3	975.5	0.00	0.00	0.00
4,320.0	18.52	174.69	4,167.0	-984.0	91.4	988.2	0.00	0.00	0.00
4,360.0	18.52	174.69	4,204.9	-996.7	92.6	1,000.9	0.00	0.00	0.00
4,400.0	18.52	174.69	4,242.9	-1,009.3	93.8	1,013.7	0.00	0.00	0.00
4,440.0	18.52	174.69	4,280.8	-1,022.0	95.0	1,026.4	0.00	0.00	0.00
4,480.0	18.52	174.69	4,318.7	-1,034.6	96.1	1,039.1	0.00	0.00	0.00
4,520.0	18.52	174.69	4,356.7	-1,047.3	97.3	1,051.8	0.00	0.00	0.00
4,560.0	18.52	174.69	4,394.6	-1,059.9	98.5	1,064.5	0.00	0.00	0.00
4,600.0	18.52	174.69	4,432.5	-1,072.6	99.7	1,077.2	0.00	0.00	0.00
4,640.0	18.52	174.69	4,470.4	-1,085.2	100.9	1,089.9	0.00	0.00	0.00
4,680.0	18.52	174.69	4,508.4	-1,097.9	102.0	1,102.6	0.00	0.00	0.00
4,720.0	18.52	174.69	4,546.3	-1,110.5	103.2	1,115.3	0.00	0.00	0.00
4,760.0	18.52	174.69	4,584.2	-1,123.2	104.4	1,128.0	0.00	0.00	0.00
4,800.0	18.52	174.69	4,622.2	-1,135.8	105.6	1,140.7	0.00	0.00	0.00
4,840.0	18.52	174.69	4,660.1	-1,148.5	106.7	1,153.4	0.00	0.00	0.00
4,880.0	18.52	174.69	4,698.0	-1,161.1	107.9	1,166.1	0.00	0.00	0.00
4,920.0	18.52	174.69	4,735.9	-1,173.8	109.1	1,178.8	0.00	0.00	0.00
4,960.0	18.52	174.69	4,773.9	-1,186.4	110.3	1,191.5	0.00	0.00	0.00
5,000.0	18.52	174.69	4,811.8	-1,199.1	111.4	1,204.2	0.00	0.00	0.00
5,040.0	18.52	174.69	4,849.7	-1,211.7	112.6	1,217.0	0.00	0.00	0.00
5,080.0	18.52	174.69	4,887.7	-1,224.4	113.8	1,229.7	0.00	0.00	0.00
5,120.0	18.52	174.69	4,925.6	-1,237.0	115.0	1,242.4	0.00	0.00	0.00
5,160.0	18.52	174.69	4,963.5	-1,249.7	116.1	1,255.1	0.00	0.00	0.00
5,187.9	18.52	174.69	4,990.0	-1,258.5	117.0	1,263.9	0.00	0.00	0.00
5,200.0	18.28	174.69	5,001.4	-1,262.3	117.3	1,267.8	2.00	-2.00	0.00
5,240.0	17.48	174.69	5,039.5	-1,274.5	118.4	1,280.0	2.00	-2.00	0.00
5,280.0	16.68	174.69	5,077.7	-1,286.2	119.5	1,291.8	2.00	-2.00	0.00
5,320.0	15.88	174.69	5,116.1	-1,297.4	120.6	1,303.0	2.00	-2.00	0.00
5,360.0	15.08	174.69	5,154.7	-1,308.0	121.6	1,313.7	2.00	-2.00	0.00
5,400.0	14.28	174.69	5,193.4	-1,318.1	122.5	1,323.8	2.00	-2.00	0.00
5,440.0	13.48	174.69	5,232.2	-1,327.7	123.4	1,333.4	2.00	-2.00	0.00
5,480.0	12.68	174.69	5,271.2	-1,336.7	124.2	1,342.5	2.00	-2.00	0.00
5,520.0	11.88	174.69	5,310.3	-1,345.2	125.0	1,351.0	2.00	-2.00	0.00
5,560.0	11.08	174.69	5,349.5	-1,353.1	125.7	1,358.9	2.00	-2.00	0.00
5,600.0	10.28	174.69	5,388.8	-1,360.5	126.4	1,366.3	2.00	-2.00	0.00
5,640.0	9.48	174.69	5,428.2	-1,367.3	127.1	1,373.2	2.00	-2.00	0.00
5,680.0	8.68	174.69	5,467.7	-1,373.6	127.7	1,379.5	2.00	-2.00	0.00
5,720.0	7.88	174.69	5,507.3	-1,379.3	128.2	1,385.3	2.00	-2.00	0.00
5,760.0	7.08	174.69	5,546.9	-1,384.5	128.7	1,390.5	2.00	-2.00	0.00
5,800.0	6.28	174.69	5,586.6	-1,389.1	129.1	1,395.1	2.00	-2.00	0.00
5,840.0	5.48	174.69	5,626.4	-1,393.2	129.5	1,399.2	2.00	-2.00	0.00
5,880.0	4.68	174.69	5,666.3	-1,396.8	129.8	1,402.8	2.00	-2.00	0.00
5,920.0	3.88	174.69	5,706.2	-1,399.7	130.1	1,405.8	2.00	-2.00	0.00
5,960.0	3.08	174.69	5,746.1	-1,402.1	130.3	1,408.2	2.00	-2.00	0.00
6,000.0	2.28	174.69	5,786.0	-1,404.0	130.5	1,410.1	2.00	-2.00	0.00
6,040.0	1.48	174.69	5,826.0	-1,405.3	130.6	1,411.4	2.00	-2.00	0.00
6,080.0	0.68	174.69	5,866.0	-1,406.1	130.7	1,412.1	2.00	-2.00	0.00
6,114.0	0.00	0.00	5,900.0	-1,406.3	130.7	1,412.3	2.00	-2.00	0.00
TARGET BHL 1400'FSL, 100'FEL									
6,120.0	0.00	0.00	5,906.0	-1,406.3	130.7	1,412.3	0.00	0.00	0.00
6,160.0	0.00	0.00	5,946.0	-1,406.3	130.7	1,412.3	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Bickling PC E02-33D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4848.0ft (Original Well Elev)
Project:	SEC.3-T6N-R65W	MD Reference:	WELL @ 4848.0ft (Original Well Elev)
Site:	Brown PC E02-32 Pad Sec.3-T6N-R65W	North Reference:	True
Well:	Bickling PC E02-33D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Bickling PC E02-33D Plan #1 (2-07-11)		

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	5,986.0	-1,406.3	130.7	1,412.3	0.00	0.00	0.00
6,240.0	0.00	0.00	6,026.0	-1,406.3	130.7	1,412.3	0.00	0.00	0.00
6,280.0	0.00	0.00	6,066.0	-1,406.3	130.7	1,412.3	0.00	0.00	0.00
6,320.0	0.00	0.00	6,106.0	-1,406.3	130.7	1,412.3	0.00	0.00	0.00
6,360.0	0.00	0.00	6,146.0	-1,406.3	130.7	1,412.3	0.00	0.00	0.00
6,400.0	0.00	0.00	6,186.0	-1,406.3	130.7	1,412.3	0.00	0.00	0.00
6,440.0	0.00	0.00	6,226.0	-1,406.3	130.7	1,412.3	0.00	0.00	0.00
6,480.0	0.00	0.00	6,266.0	-1,406.3	130.7	1,412.3	0.00	0.00	0.00
6,520.0	0.00	0.00	6,306.0	-1,406.3	130.7	1,412.3	0.00	0.00	0.00
6,560.0	0.00	0.00	6,346.0	-1,406.3	130.7	1,412.3	0.00	0.00	0.00
6,600.0	0.00	0.00	6,386.0	-1,406.3	130.7	1,412.3	0.00	0.00	0.00
6,640.0	0.00	0.00	6,426.0	-1,406.3	130.7	1,412.3	0.00	0.00	0.00
6,680.0	0.00	0.00	6,466.0	-1,406.3	130.7	1,412.3	0.00	0.00	0.00
6,720.0	0.00	0.00	6,506.0	-1,406.3	130.7	1,412.3	0.00	0.00	0.00
6,760.0	0.00	0.00	6,546.0	-1,406.3	130.7	1,412.3	0.00	0.00	0.00
6,800.0	0.00	0.00	6,586.0	-1,406.3	130.7	1,412.3	0.00	0.00	0.00
6,840.0	0.00	0.00	6,626.0	-1,406.3	130.7	1,412.3	0.00	0.00	0.00
6,880.0	0.00	0.00	6,666.0	-1,406.3	130.7	1,412.3	0.00	0.00	0.00
6,920.0	0.00	0.00	6,706.0	-1,406.3	130.7	1,412.3	0.00	0.00	0.00
6,960.0	0.00	0.00	6,746.0	-1,406.3	130.7	1,412.3	0.00	0.00	0.00
7,000.0	0.00	0.00	6,786.0	-1,406.3	130.7	1,412.3	0.00	0.00	0.00
7,040.0	0.00	0.00	6,826.0	-1,406.3	130.7	1,412.3	0.00	0.00	0.00
7,080.0	0.00	0.00	6,866.0	-1,406.3	130.7	1,412.3	0.00	0.00	0.00
7,112.0	0.00	0.00	6,898.0	-1,406.3	130.7	1,412.3	0.00	0.00	0.00
NIOBRARA - TARGET CIRCLE 1400'FSL & 100'FEL									
7,120.0	0.00	0.00	6,906.0	-1,406.3	130.7	1,412.3	0.00	0.00	0.00
7,160.0	0.00	0.00	6,946.0	-1,406.3	130.7	1,412.3	0.00	0.00	0.00
7,200.0	0.00	0.00	6,986.0	-1,406.3	130.7	1,412.3	0.00	0.00	0.00
7,240.0	0.00	0.00	7,026.0	-1,406.3	130.7	1,412.3	0.00	0.00	0.00
7,280.0	0.00	0.00	7,066.0	-1,406.3	130.7	1,412.3	0.00	0.00	0.00
7,320.0	0.00	0.00	7,106.0	-1,406.3	130.7	1,412.3	0.00	0.00	0.00
7,360.0	0.00	0.00	7,146.0	-1,406.3	130.7	1,412.3	0.00	0.00	0.00
7,400.0	0.00	0.00	7,186.0	-1,406.3	130.7	1,412.3	0.00	0.00	0.00
7,427.0	0.00	0.00	7,213.0	-1,406.3	130.7	1,412.3	0.00	0.00	0.00
CODELL									
7,440.0	0.00	0.00	7,226.0	-1,406.3	130.7	1,412.3	0.00	0.00	0.00
7,480.0	0.00	0.00	7,266.0	-1,406.3	130.7	1,412.3	0.00	0.00	0.00
7,520.0	0.00	0.00	7,306.0	-1,406.3	130.7	1,412.3	0.00	0.00	0.00
7,560.0	0.00	0.00	7,346.0	-1,406.3	130.7	1,412.3	0.00	0.00	0.00
7,577.0	0.00	0.00	7,363.0	-1,406.3	130.7	1,412.3	0.00	0.00	0.00
HARD LINES 100'E OF BHL									

Database:	Landmark	Local Co-ordinate Reference:	Well Bickling PC E02-33D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4848.0ft (Original Well Elev)
Project:	SEC.3-T6N-R65W	MD Reference:	WELL @ 4848.0ft (Original Well Elev)
Site:	Brown PC E02-32 Pad Sec.3-T6N-R65W	North Reference:	True
Well:	Bickling PC E02-33D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Bickling PC E02-33D Plan #1 (2-07-11)		

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
TARGET BHL 1400'F: - plan hits target center - Point	0.00	0.00	5,900.0	-1,406.3	130.7	1,430,641.49	3,239,073.80	40.512330	-104.640160
HARD LINES 100'E C - plan misses target center by 141.5ft at 7577.0ft MD (7363.0 TVD, -1406.3 N, 130.7 E) - Polygon	0.00	0.00	7,363.0	-1,506.3	230.7	1,430,542.44	3,239,174.77	40.512055	-104.639800
Point 1			7,363.0	0.0	0.0	1,430,542.44	3,239,174.77		
Point 2			7,363.0	200.0	0.0	1,430,742.42	3,239,172.83		
TARGET CIRCLE 14C - plan hits target center - Circle (radius 75.0)	0.00	0.00	6,898.0	-1,406.3	130.7	1,430,641.49	3,239,073.80	40.512330	-104.640160

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 (°)	
7,112.0	6,898.0	NIOBRARA		0.00		
7,427.0	7,213.0	CODELL		0.00		