

# ENSIGN

## Directional

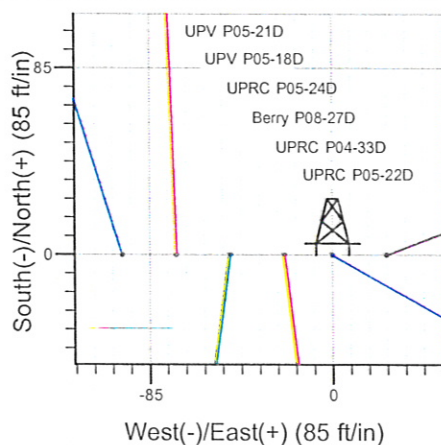
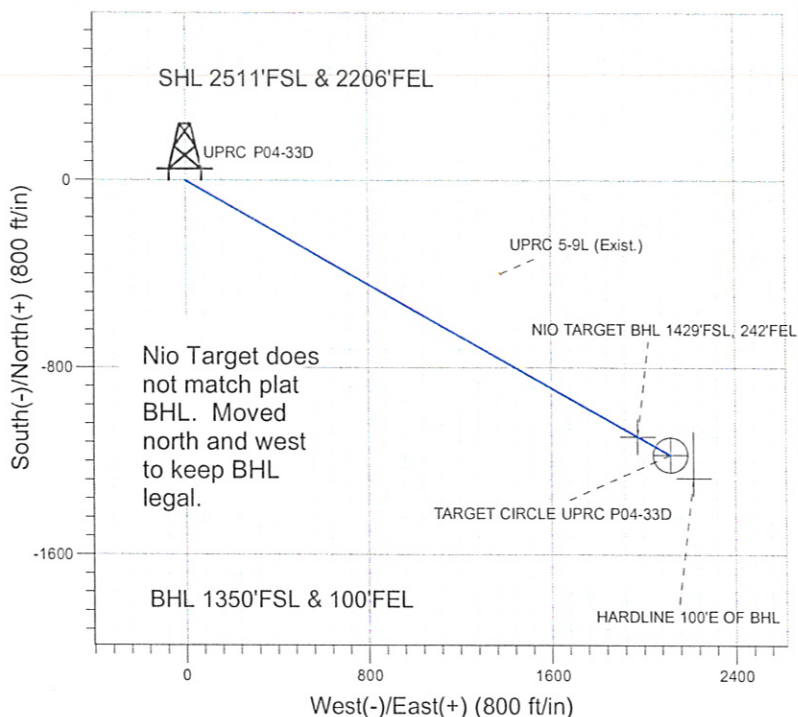
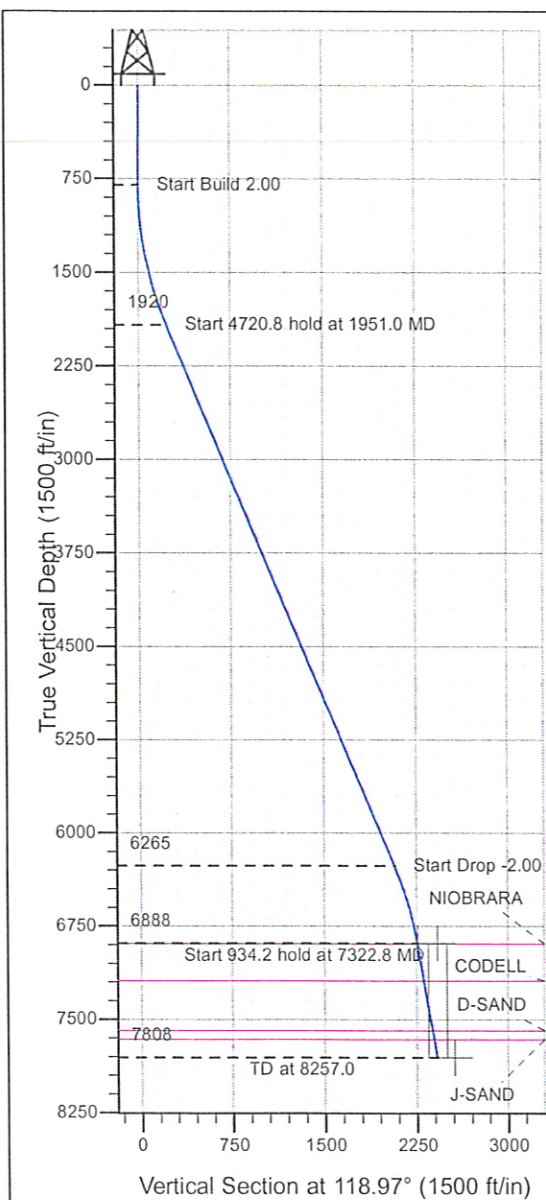
### Well Name: UPRC P04-33D

Surface Location: UPV P05-21D Pad Sec.5-T3N-R67W  
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

Ground Elevation: 4875.0

+N/-S+E/-W Northing Easting Latitude Longitude Slot  
0.0 0.0 1336120.49 3163893.72 40° 15' 16.416 N 104° 54' 46.044 W  
Original Well Elev WELL @ 4888.0ft (Original Well Elev)

### NOBLE ENERGY INC WELD COUNTY CO



UPV P05-21D Pad Sec.5-T3N-R67W  
UPRC P04-33D  
Noble UPRC P04-33D Plan #2 (10-26-09)  
15:44, October 26 2009



Azimuths to True North  
Magnetic North: 9.12°

Magnetic Field  
Strength: 53231.9snT  
Dip Angle: 66.97°  
Date: 10/19/2009  
Model: IGRF200510

#### WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
NIO TARGET BHL 1429'FSL, 242'FEL	6888.0	-1094.1	1976.2	40° 15' 5.603 N	104° 54' 20.557 W	Point
TARGET CIRCLE UPRC P04-33D	6888.0	-1172.7	2118.1	40° 15' 4.826 N	104° 54' 18.727 W	Circle (Radius: 75.0)
HARDLINE 100'E OF BHL	7808.0	-1272.7	2218.5	40° 15' 3.838 N	104° 54' 17.432 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	800.0	0.00	0.00	800.0	0.0	0.0	0.00	0.00	0.0	
3	1951.0	23.02	118.97	1920.3	-110.5	199.6	2.00	118.97	228.1	
4	6671.8	23.02	118.97	6265.2	-1004.7	1814.7	0.00	0.00	2074.2	
5	7322.8	10.00	118.97	6888.0	-1094.1	1976.2	2.00	180.00	2258.9	NIO TARGET BHL 1429'FSL, 242'FEL
6	8257.0	10.00	118.97	7808.0	-1172.7	2118.1	0.00	0.00	2421.1	



## Directional

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

SEC.5-T3N-R67W

UPV P05-21D Pad Sec.5-T3N-R67W

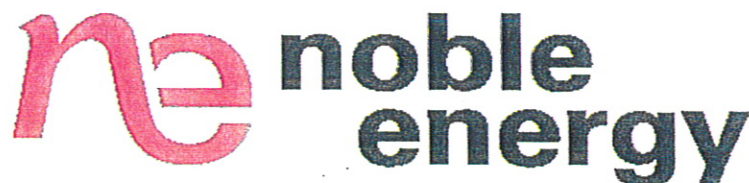
UPRC P04-33D

Wellbore #1

Plan: Noble UPRC P04-33D Plan #2 (10-26-09)

### **Standard Planning Report**

26 October, 2009





Database: EDM den0-adp01 Server Data  
 Company: NOBLE ENERGY INC WELD COUNTY CO  
 Project: SEC.5-T3N-R67W  
 Site: UPV P05-21D Pad Sec.5-T3N-R67W  
 Well: UPRC P04-33D  
 Wellbore: Wellbore #1  
 Design: Noble UPRC P04-33D Plan #2 (10-26-09)

Local Co-ordinate Reference: Well UPRC P04-33D  
 TVD Reference: WELL @ 4888.0ft (Original Well Elev)  
 MD Reference: WELL @ 4888.0ft (Original Well Elev)  
 North Reference: True  
 Survey Calculation Method: Minimum Curvature

Project	SEC.5-T3N-R67W, Weld County, Colorado		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site	UPV P05-21D Pad Sec.5-T3N-R67W				
Site Position:		Northing:	1,336,119.85ft	Latitude:	40° 15' 16.416 N
From:	Lat/Long	Easting:	3,163,796.04ft	Longitude:	104° 54' 47.304 W
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.38 °

Well	UPRC P04-33D					
Well Position	+N/-S	0.0 ft	Northing:	1,336,120.49 ft	Latitude:	40° 15' 16.416 N
	+E/-W	97.7 ft	Easting:	3,163,893.72 ft	Longitude:	104° 54' 46.044 W
Position Uncertainty	0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,875.0 ft	

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	10/19/2009	9.12	66.97	53,232

Design	Noble UPRC P04-33D Plan #2 (10-26-09)			
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	118.97

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	
800.0	0.00	0.00	800.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,951.0	23.02	118.97	1,920.3	-110.5	199.6	2.00	2.00	0.00	118.97	
6,671.8	23.02	118.97	6,265.2	-1,004.7	1,814.7	0.00	0.00	0.00	0.00	
7,322.8	10.00	118.97	6,888.0	-1,094.1	1,976.2	2.00	-2.00	0.00	180.00	NIO TARGET BHL
8,257.0	10.00	118.97	7,808.0	-1,172.7	2,118.1	0.00	0.00	0.00	0.00	

Database: EDM den0-adp01 Server Data  
Company: NOBLE ENERGY INC WELD COUNTY CO  
Project: SEC.5-T3N-R67W  
Site: UPV P05-21D Pad Sec.5-T3N-R67W  
Well: UPRC P04-33D  
Wellbore: Wellbore #1  
Design: Noble UPRC P04-33D Plan #2 (10-26-09)

Local Co-ordinate Reference: Well UPRC P04-33D  
TVD Reference: WELL @ 4888.0ft (Original Well Elev)  
MD Reference: WELL @ 4888.0ft (Original Well Elev)  
North Reference: True  
Survey Calculation Method: Minimum Curvature

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	0.80	118.97	840.0	-0.1	0.2	0.3	2.00	2.00	0.00
880.0	1.60	118.97	880.0	-0.5	1.0	1.1	2.00	2.00	0.00
920.0	2.40	118.97	920.0	-1.2	2.2	2.5	2.00	2.00	0.00
960.0	3.20	118.97	959.9	-2.2	3.9	4.5	2.00	2.00	0.00
1,000.0	4.00	118.97	999.8	-3.4	6.1	7.0	2.00	2.00	0.00
1,040.0	4.80	118.97	1,039.7	-4.9	8.8	10.0	2.00	2.00	0.00
1,080.0	5.60	118.97	1,079.6	-6.6	12.0	13.7	2.00	2.00	0.00
1,120.0	6.40	118.97	1,119.3	-8.6	15.6	17.9	2.00	2.00	0.00
1,160.0	7.20	118.97	1,159.1	-10.9	19.8	22.6	2.00	2.00	0.00
1,200.0	8.00	118.97	1,198.7	-13.5	24.4	27.9	2.00	2.00	0.00
1,240.0	8.80	118.97	1,238.3	-16.3	29.5	33.7	2.00	2.00	0.00
1,280.0	9.60	118.97	1,277.8	-19.4	35.1	40.1	2.00	2.00	0.00
1,320.0	10.40	118.97	1,317.1	-22.8	41.2	47.1	2.00	2.00	0.00
1,360.0	11.20	118.97	1,356.4	-26.4	47.7	54.6	2.00	2.00	0.00
1,400.0	12.00	118.97	1,395.6	-30.3	54.8	62.6	2.00	2.00	0.00
1,440.0	12.80	118.97	1,434.7	-34.5	62.3	71.2	2.00	2.00	0.00
1,480.0	13.60	118.97	1,473.6	-38.9	70.3	80.3	2.00	2.00	0.00
1,520.0	14.40	118.97	1,512.4	-43.6	78.7	90.0	2.00	2.00	0.00
1,560.0	15.20	118.97	1,551.1	-48.5	87.7	100.2	2.00	2.00	0.00
1,600.0	16.00	118.97	1,589.6	-53.8	97.1	111.0	2.00	2.00	0.00
1,640.0	16.80	118.97	1,628.0	-59.2	107.0	122.3	2.00	2.00	0.00
1,680.0	17.60	118.97	1,666.2	-65.0	117.3	134.1	2.00	2.00	0.00
1,720.0	18.40	118.97	1,704.3	-70.9	128.1	146.5	2.00	2.00	0.00
1,760.0	19.20	118.97	1,742.1	-77.2	139.4	159.3	2.00	2.00	0.00
1,800.0	20.00	118.97	1,779.8	-83.7	151.1	172.8	2.00	2.00	0.00
1,840.0	20.80	118.97	1,817.3	-90.4	163.3	186.7	2.00	2.00	0.00
1,880.0	21.60	118.97	1,854.6	-97.4	176.0	201.2	2.00	2.00	0.00
1,920.0	22.40	118.97	1,891.7	-104.7	189.1	216.2	2.00	2.00	0.00
1,951.0	23.02	118.97	1,920.3	-110.5	199.6	228.1	2.00	2.00	0.00
1,960.0	23.02	118.97	1,928.6	-112.2	202.7	231.6	0.00	0.00	0.00
2,000.0	23.02	118.97	1,965.4	-119.8	216.3	247.3	0.00	0.00	0.00
2,040.0	23.02	118.97	2,002.2	-127.4	230.0	262.9	0.00	0.00	0.00
2,080.0	23.02	118.97	2,039.0	-134.9	243.7	278.6	0.00	0.00	0.00



Database: EDM den0-adp01 Server Data  
Company: NOBLE ENERGY INC WELD COUNTY CO  
Project: SEC.5-T3N-R67W  
Site: UPV P05-21D Pad Sec.5-T3N-R67W  
Well: UPRC P04-33D  
Wellbore: Wellbore #1  
Design: Noble UPRC P04-33D Plan #2 (10-26-09)

Local Co-ordinate Reference: Well UPRC P04-33D  
TVD Reference: WELL @ 4888.0ft (Original Well Elev)  
MD Reference: WELL @ 4888.0ft (Original Well Elev)  
North Reference: True  
Survey Calculation Method: Minimum Curvature

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)
2,120.0	23.02	118.97	2,075.8	-142.5	257.4	294.2	0.00	0.00	0.00
2,160.0	23.02	118.97	2,112.6	-150.1	271.1	309.9	0.00	0.00	0.00
2,200.0	23.02	118.97	2,149.5	-157.7	284.8	325.5	0.00	0.00	0.00
2,240.0	23.02	118.97	2,186.3	-165.2	298.5	341.1	0.00	0.00	0.00
2,280.0	23.02	118.97	2,223.1	-172.8	312.1	356.8	0.00	0.00	0.00
2,320.0	23.02	118.97	2,259.9	-180.4	325.8	372.4	0.00	0.00	0.00
2,360.0	23.02	118.97	2,296.7	-188.0	339.5	388.1	0.00	0.00	0.00
2,400.0	23.02	118.97	2,333.5	-195.5	353.2	403.7	0.00	0.00	0.00
2,440.0	23.02	118.97	2,370.3	-203.1	366.9	419.4	0.00	0.00	0.00
2,480.0	23.02	118.97	2,407.2	-210.7	380.6	435.0	0.00	0.00	0.00
2,520.0	23.02	118.97	2,444.0	-218.3	394.3	450.6	0.00	0.00	0.00
2,560.0	23.02	118.97	2,480.8	-225.8	407.9	466.3	0.00	0.00	0.00
2,600.0	23.02	118.97	2,517.6	-233.4	421.6	481.9	0.00	0.00	0.00
2,640.0	23.02	118.97	2,554.4	-241.0	435.3	497.6	0.00	0.00	0.00
2,680.0	23.02	118.97	2,591.2	-248.6	449.0	513.2	0.00	0.00	0.00
2,720.0	23.02	118.97	2,628.0	-256.2	462.7	528.9	0.00	0.00	0.00
2,760.0	23.02	118.97	2,664.9	-263.7	476.4	544.5	0.00	0.00	0.00
2,800.0	23.02	118.97	2,701.7	-271.3	490.0	560.1	0.00	0.00	0.00
2,840.0	23.02	118.97	2,738.5	-278.9	503.7	575.8	0.00	0.00	0.00
2,880.0	23.02	118.97	2,775.3	-286.5	517.4	591.4	0.00	0.00	0.00
2,920.0	23.02	118.97	2,812.1	-294.0	531.1	607.1	0.00	0.00	0.00
2,960.0	23.02	118.97	2,848.9	-301.6	544.8	622.7	0.00	0.00	0.00
3,000.0	23.02	118.97	2,885.7	-309.2	558.5	638.3	0.00	0.00	0.00
3,040.0	23.02	118.97	2,922.6	-316.8	572.2	654.0	0.00	0.00	0.00
3,080.0	23.02	118.97	2,959.4	-324.3	585.8	669.6	0.00	0.00	0.00
3,120.0	23.02	118.97	2,996.2	-331.9	599.5	685.3	0.00	0.00	0.00
3,160.0	23.02	118.97	3,033.0	-339.5	613.2	700.9	0.00	0.00	0.00
3,200.0	23.02	118.97	3,069.8	-347.1	626.9	716.6	0.00	0.00	0.00
3,240.0	23.02	118.97	3,106.6	-354.6	640.6	732.2	0.00	0.00	0.00
3,280.0	23.02	118.97	3,143.4	-362.2	654.3	747.8	0.00	0.00	0.00
3,320.0	23.02	118.97	3,180.3	-369.8	667.9	763.5	0.00	0.00	0.00
3,360.0	23.02	118.97	3,217.1	-377.4	681.6	779.1	0.00	0.00	0.00
3,400.0	23.02	118.97	3,253.9	-385.0	695.3	794.8	0.00	0.00	0.00
3,440.0	23.02	118.97	3,290.7	-392.5	709.0	810.4	0.00	0.00	0.00
3,480.0	23.02	118.97	3,327.5	-400.1	722.7	826.1	0.00	0.00	0.00
3,520.0	23.02	118.97	3,364.3	-407.7	736.4	841.7	0.00	0.00	0.00
3,560.0	23.02	118.97	3,401.2	-415.3	750.1	857.3	0.00	0.00	0.00
3,600.0	23.02	118.97	3,438.0	-422.8	763.7	873.0	0.00	0.00	0.00
3,640.0	23.02	118.97	3,474.8	-430.4	777.4	888.6	0.00	0.00	0.00
3,680.0	23.02	118.97	3,511.6	-438.0	791.1	904.3	0.00	0.00	0.00
3,720.0	23.02	118.97	3,548.4	-445.6	804.8	919.9	0.00	0.00	0.00
3,760.0	23.02	118.97	3,585.2	-453.1	818.5	935.6	0.00	0.00	0.00
3,800.0	23.02	118.97	3,622.0	-460.7	832.2	951.2	0.00	0.00	0.00
3,840.0	23.02	118.97	3,658.9	-468.3	845.9	966.8	0.00	0.00	0.00
3,880.0	23.02	118.97	3,695.7	-475.9	859.5	982.5	0.00	0.00	0.00
3,920.0	23.02	118.97	3,732.5	-483.5	873.2	998.1	0.00	0.00	0.00
3,960.0	23.02	118.97	3,769.3	-491.0	886.9	1,013.8	0.00	0.00	0.00
4,000.0	23.02	118.97	3,806.1	-498.6	900.6	1,029.4	0.00	0.00	0.00
4,040.0	23.02	118.97	3,842.9	-506.2	914.3	1,045.0	0.00	0.00	0.00
4,080.0	23.02	118.97	3,879.7	-513.8	928.0	1,060.7	0.00	0.00	0.00
4,120.0	23.02	118.97	3,916.6	-521.3	941.6	1,076.3	0.00	0.00	0.00
4,160.0	23.02	118.97	3,953.4	-528.9	955.3	1,092.0	0.00	0.00	0.00
4,200.0	23.02	118.97	3,990.2	-536.5	969.0	1,107.6	0.00	0.00	0.00
4,240.0	23.02	118.97	4,027.0	-544.1	982.7	1,123.3	0.00	0.00	0.00



Database: EDM den0-adp01 Server Data  
Company: NOBLE ENERGY INC WELD COUNTY CO  
Project: SEC.5-T3N-R67W  
Site: UPV P05-21D Pad Sec.5-T3N-R67W  
Well: UPRC P04-33D  
Wellbore: Wellbore #1  
Design: Noble UPRC P04-33D Plan #2 (10-26-09)

Local Co-ordinate Reference: Well UPRC P04-33D  
TVD Reference: WELL @ 4888.0ft (Original Well Elev)  
MD Reference: WELL @ 4888.0ft (Original Well Elev)  
North Reference: True  
Survey Calculation Method: Minimum Curvature

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)
4,280.0	23.02	118.97	4,063.8	-551.6	996.4	1,138.9	0.00	0.00	0.00
4,320.0	23.02	118.97	4,100.6	-559.2	1,010.1	1,154.5	0.00	0.00	0.00
4,360.0	23.02	118.97	4,137.4	-566.8	1,023.8	1,170.2	0.00	0.00	0.00
4,400.0	23.02	118.97	4,174.3	-574.4	1,037.4	1,185.8	0.00	0.00	0.00
4,440.0	23.02	118.97	4,211.1	-581.9	1,051.1	1,201.5	0.00	0.00	0.00
4,480.0	23.02	118.97	4,247.9	-589.5	1,064.8	1,217.1	0.00	0.00	0.00
4,520.0	23.02	118.97	4,284.7	-597.1	1,078.5	1,232.8	0.00	0.00	0.00
4,560.0	23.02	118.97	4,321.5	-604.7	1,092.2	1,248.4	0.00	0.00	0.00
4,600.0	23.02	118.97	4,358.3	-612.3	1,105.9	1,264.0	0.00	0.00	0.00
4,640.0	23.02	118.97	4,395.1	-619.8	1,119.6	1,279.7	0.00	0.00	0.00
4,680.0	23.02	118.97	4,432.0	-627.4	1,133.2	1,295.3	0.00	0.00	0.00
4,720.0	23.02	118.97	4,468.8	-635.0	1,146.9	1,311.0	0.00	0.00	0.00
4,760.0	23.02	118.97	4,505.6	-642.6	1,160.6	1,326.6	0.00	0.00	0.00
4,800.0	23.02	118.97	4,542.4	-650.1	1,174.3	1,342.3	0.00	0.00	0.00
4,840.0	23.02	118.97	4,579.2	-657.7	1,188.0	1,357.9	0.00	0.00	0.00
4,880.0	23.02	118.97	4,616.0	-665.3	1,201.7	1,373.5	0.00	0.00	0.00
4,920.0	23.02	118.97	4,652.8	-672.9	1,215.3	1,389.2	0.00	0.00	0.00
4,960.0	23.02	118.97	4,689.7	-680.4	1,229.0	1,404.8	0.00	0.00	0.00
5,000.0	23.02	118.97	4,726.5	-688.0	1,242.7	1,420.5	0.00	0.00	0.00
5,040.0	23.02	118.97	4,763.3	-695.6	1,256.4	1,436.1	0.00	0.00	0.00
5,080.0	23.02	118.97	4,800.1	-703.2	1,270.1	1,451.7	0.00	0.00	0.00
5,120.0	23.02	118.97	4,836.9	-710.7	1,283.8	1,467.4	0.00	0.00	0.00
5,160.0	23.02	118.97	4,873.7	-718.3	1,297.5	1,483.0	0.00	0.00	0.00
5,200.0	23.02	118.97	4,910.6	-725.9	1,311.1	1,498.7	0.00	0.00	0.00
5,240.0	23.02	118.97	4,947.4	-733.5	1,324.8	1,514.3	0.00	0.00	0.00
5,280.0	23.02	118.97	4,984.2	-741.1	1,338.5	1,530.0	0.00	0.00	0.00
5,320.0	23.02	118.97	5,021.0	-748.6	1,352.2	1,545.6	0.00	0.00	0.00
5,360.0	23.02	118.97	5,057.8	-756.2	1,365.9	1,561.2	0.00	0.00	0.00
5,400.0	23.02	118.97	5,094.6	-763.8	1,379.6	1,576.9	0.00	0.00	0.00
5,440.0	23.02	118.97	5,131.4	-771.4	1,393.3	1,592.5	0.00	0.00	0.00
5,480.0	23.02	118.97	5,168.3	-778.9	1,406.9	1,608.2	0.00	0.00	0.00
5,520.0	23.02	118.97	5,205.1	-786.5	1,420.6	1,623.8	0.00	0.00	0.00
5,560.0	23.02	118.97	5,241.9	-794.1	1,434.3	1,639.5	0.00	0.00	0.00
5,600.0	23.02	118.97	5,278.7	-801.7	1,448.0	1,655.1	0.00	0.00	0.00
5,640.0	23.02	118.97	5,315.5	-809.2	1,461.7	1,670.7	0.00	0.00	0.00
5,680.0	23.02	118.97	5,352.3	-816.8	1,475.4	1,686.4	0.00	0.00	0.00
5,720.0	23.02	118.97	5,389.1	-824.4	1,489.0	1,702.0	0.00	0.00	0.00
5,760.0	23.02	118.97	5,426.0	-832.0	1,502.7	1,717.7	0.00	0.00	0.00
5,800.0	23.02	118.97	5,462.8	-839.5	1,516.4	1,733.3	0.00	0.00	0.00
5,840.0	23.02	118.97	5,499.6	-847.1	1,530.1	1,749.0	0.00	0.00	0.00
5,880.0	23.02	118.97	5,536.4	-854.7	1,543.8	1,764.6	0.00	0.00	0.00
5,920.0	23.02	118.97	5,573.2	-862.3	1,557.5	1,780.2	0.00	0.00	0.00
5,960.0	23.02	118.97	5,610.0	-869.9	1,571.2	1,795.9	0.00	0.00	0.00
6,000.0	23.02	118.97	5,646.8	-877.4	1,584.8	1,811.5	0.00	0.00	0.00
6,040.0	23.02	118.97	5,683.7	-885.0	1,598.5	1,827.2	0.00	0.00	0.00
6,080.0	23.02	118.97	5,720.5	-892.6	1,612.2	1,842.8	0.00	0.00	0.00
6,120.0	23.02	118.97	5,757.3	-900.2	1,625.9	1,858.4	0.00	0.00	0.00
6,160.0	23.02	118.97	5,794.1	-907.7	1,639.6	1,874.1	0.00	0.00	0.00
6,200.0	23.02	118.97	5,830.9	-915.3	1,653.3	1,889.7	0.00	0.00	0.00
6,240.0	23.02	118.97	5,867.7	-922.9	1,667.0	1,905.4	0.00	0.00	0.00
6,280.0	23.02	118.97	5,904.5	-930.5	1,680.6	1,921.0	0.00	0.00	0.00
6,320.0	23.02	118.97	5,941.4	-938.0	1,694.3	1,936.7	0.00	0.00	0.00
6,360.0	23.02	118.97	5,978.2	-945.6	1,708.0	1,952.3	0.00	0.00	0.00
6,400.0	23.02	118.97	6,015.0	-953.2	1,721.7	1,967.9	0.00	0.00	0.00



Database: EDM den0-adp01 Server Data  
Company: NOBLE ENERGY INC WELD COUNTY CO  
Project: SEC.5-T3N-R67W  
Site: UPV P05-21D Pad Sec.5-T3N-R67W  
Well: UPRC P04-33D  
Wellbore: Wellbore #1  
Design: Noble UPRC P04-33D Plan #2 (10-26-09)

Local Co-ordinate Reference: Well UPRC P04-33D  
TVD Reference: WELL @ 4888.0ft (Original Well Elev)  
MD Reference: WELL @ 4888.0ft (Original Well Elev)  
North Reference: True  
Survey Calculation Method: Minimum Curvature

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)
6,440.0	23.02	118.97	6,051.8	-960.8	1,735.4	1,983.6	0.00	0.00	0.00
6,480.0	23.02	118.97	6,088.6	-968.3	1,749.1	1,999.2	0.00	0.00	0.00
6,520.0	23.02	118.97	6,125.4	-975.9	1,762.7	2,014.9	0.00	0.00	0.00
6,560.0	23.02	118.97	6,162.2	-983.5	1,776.4	2,030.5	0.00	0.00	0.00
6,600.0	23.02	118.97	6,199.1	-991.1	1,790.1	2,046.2	0.00	0.00	0.00
6,640.0	23.02	118.97	6,235.9	-998.7	1,803.8	2,061.8	0.00	0.00	0.00
6,671.8	23.02	118.97	6,265.2	-1,004.7	1,814.7	2,074.2	0.00	0.00	0.00
6,680.0	22.86	118.97	6,272.7	-1,006.2	1,817.5	2,077.4	2.00	-2.00	0.00
6,720.0	22.06	118.97	6,309.7	-1,013.6	1,830.8	2,092.7	2.00	-2.00	0.00
6,760.0	21.26	118.97	6,346.8	-1,020.8	1,843.8	2,107.5	2.00	-2.00	0.00
6,800.0	20.46	118.97	6,384.2	-1,027.7	1,856.2	2,121.7	2.00	-2.00	0.00
6,840.0	19.66	118.97	6,421.8	-1,034.3	1,868.2	2,135.4	2.00	-2.00	0.00
6,880.0	18.86	118.97	6,459.6	-1,040.7	1,879.8	2,148.6	2.00	-2.00	0.00
6,920.0	18.06	118.97	6,497.5	-1,046.8	1,890.8	2,161.3	2.00	-2.00	0.00
6,960.0	17.26	118.97	6,535.6	-1,052.7	1,901.5	2,173.4	2.00	-2.00	0.00
7,000.0	16.46	118.97	6,573.9	-1,058.3	1,911.6	2,185.0	2.00	-2.00	0.00
7,040.0	15.66	118.97	6,612.3	-1,063.7	1,921.3	2,196.1	2.00	-2.00	0.00
7,080.0	14.86	118.97	6,650.9	-1,068.8	1,930.5	2,206.6	2.00	-2.00	0.00
7,120.0	14.06	118.97	6,689.7	-1,073.6	1,939.2	2,216.6	2.00	-2.00	0.00
7,160.0	13.26	118.97	6,728.5	-1,078.2	1,947.5	2,226.0	2.00	-2.00	0.00
7,200.0	12.46	118.97	6,767.5	-1,082.5	1,955.3	2,234.9	2.00	-2.00	0.00
7,240.0	11.66	118.97	6,806.6	-1,086.6	1,962.6	2,243.3	2.00	-2.00	0.00
7,280.0	10.86	118.97	6,845.9	-1,090.3	1,969.4	2,251.1	2.00	-2.00	0.00
7,320.0	10.06	118.97	6,885.2	-1,093.9	1,975.8	2,258.4	2.00	-2.00	0.00
7,322.8	10.00	118.97	6,888.0	-1,094.1	1,976.2	2,258.9	2.00	-2.00	0.00
NIOBRARA - NIO TARGET BHL 1429'FSL, 242'FEL									
7,351.0	10.00	118.97	6,915.7	-1,096.5	1,980.5	2,263.7	0.00	0.00	0.00
TARGET CIRCLE UPRC P04-33D									
7,360.0	10.00	118.97	6,924.6	-1,097.2	1,981.8	2,265.3	0.00	0.00	0.00
7,400.0	10.00	118.97	6,964.0	-1,100.6	1,987.9	2,272.3	0.00	0.00	0.00
7,440.0	10.00	118.97	7,003.4	-1,104.0	1,994.0	2,279.2	0.00	0.00	0.00
7,480.0	10.00	118.97	7,042.8	-1,107.3	2,000.1	2,286.1	0.00	0.00	0.00
7,520.0	10.00	118.97	7,082.2	-1,110.7	2,006.2	2,293.1	0.00	0.00	0.00
7,560.0	10.00	118.97	7,121.6	-1,114.0	2,012.2	2,300.0	0.00	0.00	0.00
7,600.0	10.00	118.97	7,161.0	-1,117.4	2,018.3	2,307.0	0.00	0.00	0.00
7,627.5	10.00	118.97	7,188.0	-1,119.7	2,022.5	2,311.8	0.00	0.00	0.00
CODELL									
7,640.0	10.00	118.97	7,200.3	-1,120.8	2,024.4	2,313.9	0.00	0.00	0.00
7,680.0	10.00	118.97	7,239.7	-1,124.1	2,030.5	2,320.9	0.00	0.00	0.00
7,720.0	10.00	118.97	7,279.1	-1,127.5	2,036.5	2,327.8	0.00	0.00	0.00
7,760.0	10.00	118.97	7,318.5	-1,130.9	2,042.6	2,334.8	0.00	0.00	0.00
7,800.0	10.00	118.97	7,357.9	-1,134.2	2,048.7	2,341.7	0.00	0.00	0.00
7,840.0	10.00	118.97	7,397.3	-1,137.6	2,054.8	2,348.7	0.00	0.00	0.00
7,880.0	10.00	118.97	7,436.7	-1,141.0	2,060.8	2,355.6	0.00	0.00	0.00
7,920.0	10.00	118.97	7,476.1	-1,144.3	2,066.9	2,362.5	0.00	0.00	0.00
7,960.0	10.00	118.97	7,515.5	-1,147.7	2,073.0	2,369.5	0.00	0.00	0.00
8,000.0	10.00	118.97	7,554.9	-1,151.1	2,079.1	2,376.4	0.00	0.00	0.00
8,033.6	10.00	118.97	7,588.0	-1,153.9	2,084.2	2,382.3	0.00	0.00	0.00
D-SAND									
8,040.0	10.00	118.97	7,594.3	-1,154.4	2,085.2	2,383.4	0.00	0.00	0.00
8,080.0	10.00	118.97	7,633.7	-1,157.8	2,091.2	2,390.3	0.00	0.00	0.00
8,104.7	10.00	118.97	7,658.0	-1,159.9	2,095.0	2,394.6	0.00	0.00	0.00
J-SAND									

Database: EDM den0-adp01 Server Data  
 Company: NOBLE ENERGY INC WELD COUNTY CO  
 Project: SEC.5-T3N-R67W  
 Site: UPV P05-21D Pad Sec.5-T3N-R67W  
 Well: UPRC P04-33D  
 Wellbore: Wellbore #1  
 Design: Noble UPRC P04-33D Plan #2 (10-26-09)

Local Co-ordinate Reference: Well UPRC P04-33D  
 TVD Reference: WELL @ 4888.0ft (Original Well Elev)  
 MD Reference: WELL @ 4888.0ft (Original Well Elev)  
 North Reference: True  
 Survey Calculation Method: Minimum Curvature

**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)
8,120.0	10.00	118.97	7,673.1	-1,161.1	2,097.3	2,397.3	0.00	0.00	0.00
8,160.0	10.00	118.97	7,712.4	-1,164.5	2,103.4	2,404.2	0.00	0.00	0.00
8,200.0	10.00	118.97	7,751.8	-1,167.9	2,109.5	2,411.2	0.00	0.00	0.00
8,240.0	10.00	118.97	7,791.2	-1,171.2	2,115.5	2,418.1	0.00	0.00	0.00
8,257.0	10.00	118.97	7,808.0	-1,172.7	2,118.1	2,421.1	0.00	0.00	0.00

HARDLINE 100'E OF BHL

**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									
NIO TARGET BHL 14	0.00	0.00	6,888.0	-1,094.1	1,976.2	1,335,039.55	3,165,877.03	40° 15' 5.603 N	104° 54' 20.557 W
- plan hits target center									
- Point									
HARDLINE 100'E OF	0.00	0.00	7,808.0	-1,272.7	2,218.5	1,334,862.56	3,166,120.50	40° 15' 3.838 N	104° 54' 17.432 W
- plan misses target center by 141.7ft at 8257.0ft MD (7808.0 TVD, -1172.7 N, 2118.1 E)									
- Polygon									
Point 1			7,808.0	0.0	0.0	1,334,862.56	3,166,120.50		
Point 2			7,808.0	200.0	0.0	1,335,062.55	3,166,119.18		
TARGET CIRCLE UP	0.00	0.00	6,888.0	-1,172.7	2,118.1	1,334,961.89	3,166,019.45	40° 15' 4.826 N	104° 54' 18.727 W
- plan misses target center by 159.8ft at 7351.0ft MD (6915.7 TVD, -1096.5 N, 1980.5 E)									
- Circle (radius 75.0)									

**Formations**

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
7,322.8	6,888.0	NIOBRARA		0.00	
7,627.5	7,188.0	CODELL		0.00	
8,033.6	7,588.0	D-SAND		0.00	
8,104.7	7,658.0	J-SAND		0.00	