

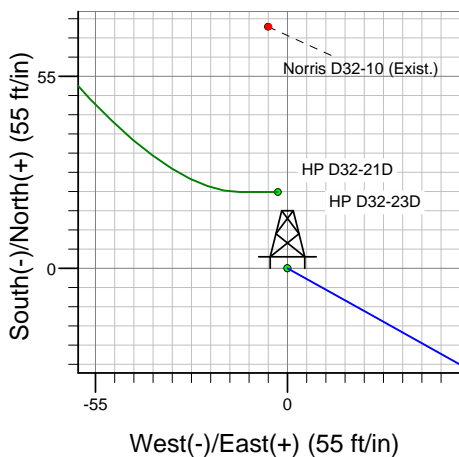
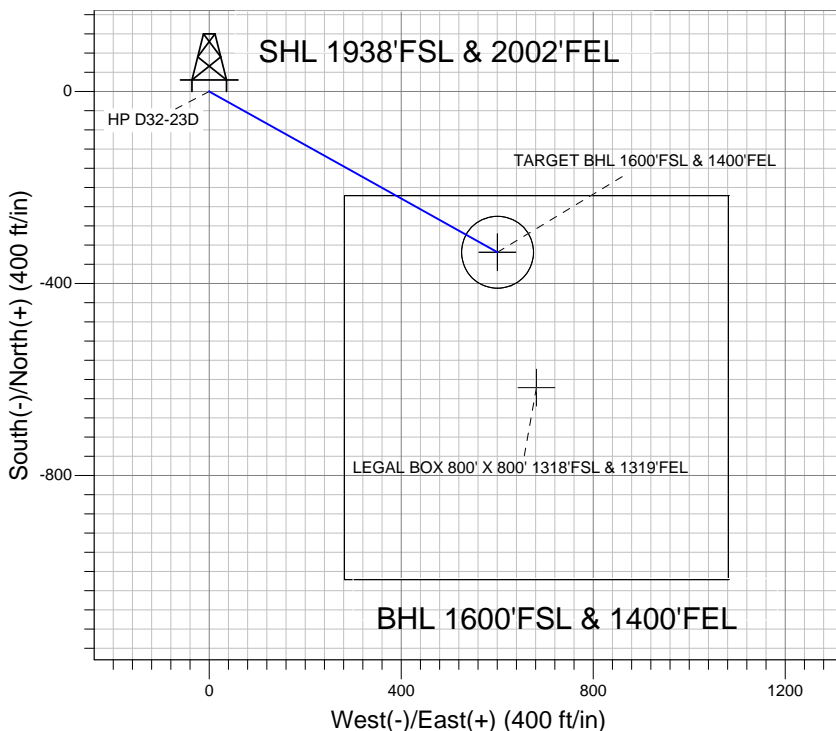
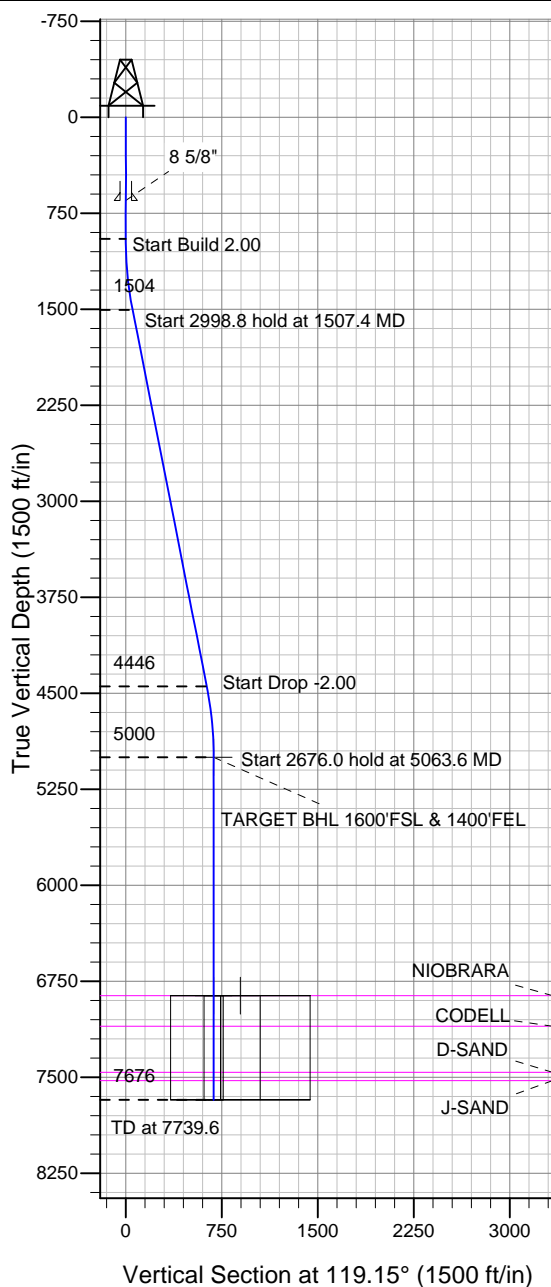
### Well Name: HP D32-23D

Surface Location: HP D32-21D Pad Sec.32-T3N-R64W  
North American Datum 1983, US State Plane 1983 Colorado Northern Zone  
Ground Elevation: 4854.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1309716.22	3259032.33	40.179850	-104.572930	

Original Well EleWELL @ 4867.0ft (Original Well Elev)

## NOBLE ENERGY INC WELD COUNTY CO



HP D32-21D Pad Sec.32-T3N-R64W  
HP D32-23D  
Noble HP D32-23D Plan #1 (8-30-11)  
8:46, August 31 2011



Azimuths to True North  
Magnetic North: 8.71°  
Magnetic Field  
Strength: 53014.2snT  
Dip Angle: 66.90°  
Date: 8/30/2011  
Model: IGRF2010

### WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 1600'FSL & 1400'FEL	5000.0	-335.1	600.8	40.178930	-104.570780	Point
LEGAL BOX 800' X 800' 1318'FSL & 1319'FEL	6862.0	-617.1	681.8	40.178156	-104.570490	Rectangle (Sides: L800.0 W800.0)
TARGET CIRCLE 1600'FSL & 1400'FEL	6862.0	-335.1	600.8	40.178930	-104.570780	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	1507.4	11.15	119.15	1503.9	-26.3	47.2	2.00	119.15	54.1	
4	4506.2	11.15	119.15	4446.1	-308.8	553.6	0.00	0.00	633.9	
5	5063.6	0.00	0.00	5000.0	-335.1	600.8	2.00	180.00	687.9	TARGET BHL 1600'FSL & 1400'FEL
6	7739.6	0.00	0.00	7676.0	-335.1	600.8	0.00	0.00	687.9	



**Directional**

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

**SEC.32-T3N-R64W**

**HP D32-21D Pad Sec.32-T3N-R64W**

**HP D32-23D**

**Wellbore #1**

**Plan: Noble HP D32-23D Plan #1 (8-30-11)**

## **Standard Planning Report**

**31 August, 2011**



<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well HP D32-23D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4867.0ft (Original Well Elev)
<b>Project:</b>	SEC.32-T3N-R64W	<b>MD Reference:</b>	WELL @ 4867.0ft (Original Well Elev)
<b>Site:</b>	HP D32-21D Pad Sec.32-T3N-R64W	<b>North Reference:</b>	True
<b>Well:</b>	HP D32-23D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble HP D32-23D Plan #1 (8-30-11)		

<b>Project</b>	SEC.32-T3N-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		
<b>Map Zone:</b>	Colorado Northern Zone		Using geodetic scale factor

Site						HP D32-21D Pad Sec.32-T3N-R64W											
Site Position:						Northing:			1,309,738.06ft			Latitude:			40.179910		
From:			Lat/Long			Easting:			3,259,029.30ft			Longitude:			-104.572940		
Position Uncertainty:			0.0 ft			Slot Radius:			"			Grid Convergence:			0.60 °		

Well	HP D32-23D					
Well Position	+N-S	-21.9 ft	Northing:	1,309,716.22 ft	Latitude:	40.179850
	+E-W	2.8 ft	Easting:	3,259,032.33 ft	Longitude:	-104.572930
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,854.0 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	8/30/2011	8.71	66.90	53,014

<b>Design</b>	Noble HP D32-23D Plan #1 (8-30-11)			
<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	119.15

<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	
1,507.4	11.15	119.15	1,503.9	-26.3	47.2	2.00	2.00	0.00	119.15	
4,506.2	11.15	119.15	4,446.1	-308.8	553.6	0.00	0.00	0.00	0.00	
5,063.6	0.00	0.00	5,000.0	-335.1	600.8	2.00	-2.00	0.00	180.00	TARGET BHL 160C
7,739.6	0.00	0.00	7,676.0	-335.1	600.8	0.00	0.00	0.00	0.00	

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well HP D32-23D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4867.0ft (Original Well Elev)
<b>Project:</b>	SEC.32-T3N-R64W	<b>MD Reference:</b>	WELL @ 4867.0ft (Original Well Elev)
<b>Site:</b>	HP D32-21D Pad Sec.32-T3N-R64W	<b>North Reference:</b>	True
<b>Well:</b>	HP D32-23D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble HP D32-23D Plan #1 (8-30-11)		

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	119.15	960.0	0.0	0.0	0.0	2.00	2.00	0.00
1,000.0	1.00	119.15	1,000.0	-0.2	0.4	0.4	2.00	2.00	0.00
1,040.0	1.80	119.15	1,040.0	-0.7	1.2	1.4	2.00	2.00	0.00
1,080.0	2.60	119.15	1,080.0	-1.4	2.6	2.9	2.00	2.00	0.00
1,120.0	3.40	119.15	1,119.9	-2.5	4.4	5.0	2.00	2.00	0.00
1,160.0	4.20	119.15	1,159.8	-3.7	6.7	7.7	2.00	2.00	0.00
1,200.0	5.00	119.15	1,199.7	-5.3	9.5	10.9	2.00	2.00	0.00
1,240.0	5.80	119.15	1,239.5	-7.1	12.8	14.7	2.00	2.00	0.00
1,280.0	6.60	119.15	1,279.3	-9.2	16.6	19.0	2.00	2.00	0.00
1,320.0	7.40	119.15	1,319.0	-11.6	20.8	23.9	2.00	2.00	0.00
1,360.0	8.20	119.15	1,358.6	-14.3	25.6	29.3	2.00	2.00	0.00
1,400.0	9.00	119.15	1,398.2	-17.2	30.8	35.3	2.00	2.00	0.00
1,440.0	9.80	119.15	1,437.6	-20.4	36.5	41.8	2.00	2.00	0.00
1,480.0	10.60	119.15	1,477.0	-23.8	42.7	48.9	2.00	2.00	0.00
1,507.4	11.15	119.15	1,503.9	-26.3	47.2	54.1	2.00	2.00	0.00
1,520.0	11.15	119.15	1,516.3	-27.5	49.3	56.5	0.00	0.00	0.00
1,560.0	11.15	119.15	1,555.5	-31.3	56.1	64.2	0.00	0.00	0.00
1,600.0	11.15	119.15	1,594.7	-35.1	62.8	72.0	0.00	0.00	0.00
1,640.0	11.15	119.15	1,634.0	-38.8	69.6	79.7	0.00	0.00	0.00
1,680.0	11.15	119.15	1,673.2	-42.6	76.4	87.4	0.00	0.00	0.00
1,720.0	11.15	119.15	1,712.5	-46.4	83.1	95.2	0.00	0.00	0.00
1,760.0	11.15	119.15	1,751.7	-50.1	89.9	102.9	0.00	0.00	0.00
1,800.0	11.15	119.15	1,791.0	-53.9	96.6	110.6	0.00	0.00	0.00
1,840.0	11.15	119.15	1,830.2	-57.7	103.4	118.4	0.00	0.00	0.00
1,880.0	11.15	119.15	1,869.5	-61.4	110.1	126.1	0.00	0.00	0.00
1,920.0	11.15	119.15	1,908.7	-65.2	116.9	133.8	0.00	0.00	0.00
1,960.0	11.15	119.15	1,947.9	-69.0	123.6	141.6	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well HP D32-23D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4867.0ft (Original Well Elev)
<b>Project:</b>	SEC.32-T3N-R64W	<b>MD Reference:</b>	WELL @ 4867.0ft (Original Well Elev)
<b>Site:</b>	HP D32-21D Pad Sec.32-T3N-R64W	<b>North Reference:</b>	True
<b>Well:</b>	HP D32-23D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble HP D32-23D Plan #1 (8-30-11)		

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	11.15	119.15	1,987.2	-72.7	130.4	149.3	0.00	0.00	0.00
2,040.0	11.15	119.15	2,026.4	-76.5	137.1	157.0	0.00	0.00	0.00
2,080.0	11.15	119.15	2,065.7	-80.3	143.9	164.8	0.00	0.00	0.00
2,120.0	11.15	119.15	2,104.9	-84.0	150.6	172.5	0.00	0.00	0.00
2,160.0	11.15	119.15	2,144.2	-87.8	157.4	180.2	0.00	0.00	0.00
2,200.0	11.15	119.15	2,183.4	-91.6	164.2	188.0	0.00	0.00	0.00
2,240.0	11.15	119.15	2,222.7	-95.3	170.9	195.7	0.00	0.00	0.00
2,280.0	11.15	119.15	2,261.9	-99.1	177.7	203.4	0.00	0.00	0.00
2,320.0	11.15	119.15	2,301.2	-102.9	184.4	211.2	0.00	0.00	0.00
2,360.0	11.15	119.15	2,340.4	-106.6	191.2	218.9	0.00	0.00	0.00
2,400.0	11.15	119.15	2,379.6	-110.4	197.9	226.6	0.00	0.00	0.00
2,440.0	11.15	119.15	2,418.9	-114.2	204.7	234.4	0.00	0.00	0.00
2,480.0	11.15	119.15	2,458.1	-117.9	211.4	242.1	0.00	0.00	0.00
2,520.0	11.15	119.15	2,497.4	-121.7	218.2	249.8	0.00	0.00	0.00
2,560.0	11.15	119.15	2,536.6	-125.5	224.9	257.6	0.00	0.00	0.00
2,600.0	11.15	119.15	2,575.9	-129.2	231.7	265.3	0.00	0.00	0.00
2,640.0	11.15	119.15	2,615.1	-133.0	238.5	273.0	0.00	0.00	0.00
2,680.0	11.15	119.15	2,654.4	-136.8	245.2	280.8	0.00	0.00	0.00
2,720.0	11.15	119.15	2,693.6	-140.6	252.0	288.5	0.00	0.00	0.00
2,760.0	11.15	119.15	2,732.9	-144.3	258.7	296.2	0.00	0.00	0.00
2,800.0	11.15	119.15	2,772.1	-148.1	265.5	304.0	0.00	0.00	0.00
2,840.0	11.15	119.15	2,811.3	-151.9	272.2	311.7	0.00	0.00	0.00
2,880.0	11.15	119.15	2,850.6	-155.6	279.0	319.4	0.00	0.00	0.00
2,920.0	11.15	119.15	2,889.8	-159.4	285.7	327.2	0.00	0.00	0.00
2,960.0	11.15	119.15	2,929.1	-163.2	292.5	334.9	0.00	0.00	0.00
3,000.0	11.15	119.15	2,968.3	-166.9	299.2	342.6	0.00	0.00	0.00
3,040.0	11.15	119.15	3,007.6	-170.7	306.0	350.4	0.00	0.00	0.00
3,080.0	11.15	119.15	3,046.8	-174.5	312.7	358.1	0.00	0.00	0.00
3,120.0	11.15	119.15	3,086.1	-178.2	319.5	365.9	0.00	0.00	0.00
3,160.0	11.15	119.15	3,125.3	-182.0	326.3	373.6	0.00	0.00	0.00
3,200.0	11.15	119.15	3,164.6	-185.8	333.0	381.3	0.00	0.00	0.00
3,240.0	11.15	119.15	3,203.8	-189.5	339.8	389.1	0.00	0.00	0.00
3,280.0	11.15	119.15	3,243.0	-193.3	346.5	396.8	0.00	0.00	0.00
3,320.0	11.15	119.15	3,282.3	-197.1	353.3	404.5	0.00	0.00	0.00
3,360.0	11.15	119.15	3,321.5	-200.8	360.0	412.3	0.00	0.00	0.00
3,400.0	11.15	119.15	3,360.8	-204.6	366.8	420.0	0.00	0.00	0.00
3,440.0	11.15	119.15	3,400.0	-208.4	373.5	427.7	0.00	0.00	0.00
3,480.0	11.15	119.15	3,439.3	-212.1	380.3	435.5	0.00	0.00	0.00
3,520.0	11.15	119.15	3,478.5	-215.9	387.0	443.2	0.00	0.00	0.00
3,560.0	11.15	119.15	3,517.8	-219.7	393.8	450.9	0.00	0.00	0.00
3,600.0	11.15	119.15	3,557.0	-223.4	400.6	458.7	0.00	0.00	0.00
3,640.0	11.15	119.15	3,596.2	-227.2	407.3	466.4	0.00	0.00	0.00
3,680.0	11.15	119.15	3,635.5	-231.0	414.1	474.1	0.00	0.00	0.00
3,720.0	11.15	119.15	3,674.7	-234.7	420.8	481.9	0.00	0.00	0.00
3,760.0	11.15	119.15	3,714.0	-238.5	427.6	489.6	0.00	0.00	0.00
3,800.0	11.15	119.15	3,753.2	-242.3	434.3	497.3	0.00	0.00	0.00
3,840.0	11.15	119.15	3,792.5	-246.0	441.1	505.1	0.00	0.00	0.00
3,880.0	11.15	119.15	3,831.7	-249.8	447.8	512.8	0.00	0.00	0.00
3,920.0	11.15	119.15	3,871.0	-253.6	454.6	520.5	0.00	0.00	0.00
3,960.0	11.15	119.15	3,910.2	-257.4	461.3	528.3	0.00	0.00	0.00
4,000.0	11.15	119.15	3,949.5	-261.1	468.1	536.0	0.00	0.00	0.00
4,040.0	11.15	119.15	3,988.7	-264.9	474.8	543.7	0.00	0.00	0.00
4,080.0	11.15	119.15	4,027.9	-268.7	481.6	551.5	0.00	0.00	0.00
4,120.0	11.15	119.15	4,067.2	-272.4	488.4	559.2	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well HP D32-23D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4867.0ft (Original Well Elev)
<b>Project:</b>	SEC.32-T3N-R64W	<b>MD Reference:</b>	WELL @ 4867.0ft (Original Well Elev)
<b>Site:</b>	HP D32-21D Pad Sec.32-T3N-R64W	<b>North Reference:</b>	True
<b>Well:</b>	HP D32-23D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble HP D32-23D Plan #1 (8-30-11)		

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	11.15	119.15	4,106.4	-276.2	495.1	566.9	0.00	0.00	0.00
4,200.0	11.15	119.15	4,145.7	-280.0	501.9	574.7	0.00	0.00	0.00
4,240.0	11.15	119.15	4,184.9	-283.7	508.6	582.4	0.00	0.00	0.00
4,280.0	11.15	119.15	4,224.2	-287.5	515.4	590.1	0.00	0.00	0.00
4,320.0	11.15	119.15	4,263.4	-291.3	522.1	597.9	0.00	0.00	0.00
4,360.0	11.15	119.15	4,302.7	-295.0	528.9	605.6	0.00	0.00	0.00
4,400.0	11.15	119.15	4,341.9	-298.8	535.6	613.3	0.00	0.00	0.00
4,440.0	11.15	119.15	4,381.2	-302.6	542.4	621.1	0.00	0.00	0.00
4,480.0	11.15	119.15	4,420.4	-306.3	549.1	628.8	0.00	0.00	0.00
4,506.2	11.15	119.15	4,446.1	-308.8	553.6	633.9	0.00	0.00	0.00
4,520.0	10.87	119.15	4,459.6	-310.1	555.9	636.5	2.00	-2.00	0.00
4,560.0	10.07	119.15	4,499.0	-313.6	562.2	643.8	2.00	-2.00	0.00
4,600.0	9.27	119.15	4,538.4	-316.9	568.1	650.5	2.00	-2.00	0.00
4,640.0	8.47	119.15	4,577.9	-319.9	573.5	656.7	2.00	-2.00	0.00
4,680.0	7.67	119.15	4,617.5	-322.6	578.4	662.3	2.00	-2.00	0.00
4,720.0	6.87	119.15	4,657.2	-325.1	582.8	667.3	2.00	-2.00	0.00
4,760.0	6.07	119.15	4,697.0	-327.3	586.7	671.9	2.00	-2.00	0.00
4,800.0	5.27	119.15	4,736.8	-329.2	590.2	675.8	2.00	-2.00	0.00
4,840.0	4.47	119.15	4,776.6	-330.9	593.2	679.2	2.00	-2.00	0.00
4,880.0	3.67	119.15	4,816.5	-332.3	595.6	682.0	2.00	-2.00	0.00
4,920.0	2.87	119.15	4,856.5	-333.4	597.6	684.3	2.00	-2.00	0.00
4,960.0	2.07	119.15	4,896.4	-334.2	599.1	686.1	2.00	-2.00	0.00
5,000.0	1.27	119.15	4,936.4	-334.8	600.2	687.2	2.00	-2.00	0.00
5,040.0	0.47	119.15	4,976.4	-335.1	600.7	687.8	2.00	-2.00	0.00
5,063.6	0.00	0.00	5,000.0	-335.1	600.8	687.9	2.00	-2.00	0.00
TARGET BHL 1600'FSL & 1400'FEL									
5,080.0	0.00	0.00	5,016.4	-335.1	600.8	687.9	0.00	0.00	0.00
5,120.0	0.00	0.00	5,056.4	-335.1	600.8	687.9	0.00	0.00	0.00
5,160.0	0.00	0.00	5,096.4	-335.1	600.8	687.9	0.00	0.00	0.00
5,200.0	0.00	0.00	5,136.4	-335.1	600.8	687.9	0.00	0.00	0.00
5,240.0	0.00	0.00	5,176.4	-335.1	600.8	687.9	0.00	0.00	0.00
5,280.0	0.00	0.00	5,216.4	-335.1	600.8	687.9	0.00	0.00	0.00
5,320.0	0.00	0.00	5,256.4	-335.1	600.8	687.9	0.00	0.00	0.00
5,360.0	0.00	0.00	5,296.4	-335.1	600.8	687.9	0.00	0.00	0.00
5,400.0	0.00	0.00	5,336.4	-335.1	600.8	687.9	0.00	0.00	0.00
5,440.0	0.00	0.00	5,376.4	-335.1	600.8	687.9	0.00	0.00	0.00
5,480.0	0.00	0.00	5,416.4	-335.1	600.8	687.9	0.00	0.00	0.00
5,520.0	0.00	0.00	5,456.4	-335.1	600.8	687.9	0.00	0.00	0.00
5,560.0	0.00	0.00	5,496.4	-335.1	600.8	687.9	0.00	0.00	0.00
5,600.0	0.00	0.00	5,536.4	-335.1	600.8	687.9	0.00	0.00	0.00
5,640.0	0.00	0.00	5,576.4	-335.1	600.8	687.9	0.00	0.00	0.00
5,680.0	0.00	0.00	5,616.4	-335.1	600.8	687.9	0.00	0.00	0.00
5,720.0	0.00	0.00	5,656.4	-335.1	600.8	687.9	0.00	0.00	0.00
5,760.0	0.00	0.00	5,696.4	-335.1	600.8	687.9	0.00	0.00	0.00
5,800.0	0.00	0.00	5,736.4	-335.1	600.8	687.9	0.00	0.00	0.00
5,840.0	0.00	0.00	5,776.4	-335.1	600.8	687.9	0.00	0.00	0.00
5,880.0	0.00	0.00	5,816.4	-335.1	600.8	687.9	0.00	0.00	0.00
5,920.0	0.00	0.00	5,856.4	-335.1	600.8	687.9	0.00	0.00	0.00
5,960.0	0.00	0.00	5,896.4	-335.1	600.8	687.9	0.00	0.00	0.00
6,000.0	0.00	0.00	5,936.4	-335.1	600.8	687.9	0.00	0.00	0.00
6,040.0	0.00	0.00	5,976.4	-335.1	600.8	687.9	0.00	0.00	0.00
6,080.0	0.00	0.00	6,016.4	-335.1	600.8	687.9	0.00	0.00	0.00
6,120.0	0.00	0.00	6,056.4	-335.1	600.8	687.9	0.00	0.00	0.00
6,160.0	0.00	0.00	6,096.4	-335.1	600.8	687.9	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well HP D32-23D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4867.0ft (Original Well Elev)
<b>Project:</b>	SEC.32-T3N-R64W	<b>MD Reference:</b>	WELL @ 4867.0ft (Original Well Elev)
<b>Site:</b>	HP D32-21D Pad Sec.32-T3N-R64W	<b>North Reference:</b>	True
<b>Well:</b>	HP D32-23D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble HP D32-23D Plan #1 (8-30-11)		

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	6,136.4	-335.1	600.8	687.9	0.00	0.00	0.00
6,240.0	0.00	0.00	6,176.4	-335.1	600.8	687.9	0.00	0.00	0.00
6,280.0	0.00	0.00	6,216.4	-335.1	600.8	687.9	0.00	0.00	0.00
6,320.0	0.00	0.00	6,256.4	-335.1	600.8	687.9	0.00	0.00	0.00
6,360.0	0.00	0.00	6,296.4	-335.1	600.8	687.9	0.00	0.00	0.00
6,400.0	0.00	0.00	6,336.4	-335.1	600.8	687.9	0.00	0.00	0.00
6,440.0	0.00	0.00	6,376.4	-335.1	600.8	687.9	0.00	0.00	0.00
6,480.0	0.00	0.00	6,416.4	-335.1	600.8	687.9	0.00	0.00	0.00
6,520.0	0.00	0.00	6,456.4	-335.1	600.8	687.9	0.00	0.00	0.00
6,560.0	0.00	0.00	6,496.4	-335.1	600.8	687.9	0.00	0.00	0.00
6,600.0	0.00	0.00	6,536.4	-335.1	600.8	687.9	0.00	0.00	0.00
6,640.0	0.00	0.00	6,576.4	-335.1	600.8	687.9	0.00	0.00	0.00
6,680.0	0.00	0.00	6,616.4	-335.1	600.8	687.9	0.00	0.00	0.00
6,720.0	0.00	0.00	6,656.4	-335.1	600.8	687.9	0.00	0.00	0.00
6,760.0	0.00	0.00	6,696.4	-335.1	600.8	687.9	0.00	0.00	0.00
6,800.0	0.00	0.00	6,736.4	-335.1	600.8	687.9	0.00	0.00	0.00
6,840.0	0.00	0.00	6,776.4	-335.1	600.8	687.9	0.00	0.00	0.00
6,880.0	0.00	0.00	6,816.4	-335.1	600.8	687.9	0.00	0.00	0.00
6,920.0	0.00	0.00	6,856.4	-335.1	600.8	687.9	0.00	0.00	0.00
6,925.6	0.00	0.00	6,862.0	-335.1	600.8	687.9	0.00	0.00	0.00
<b>NIOBRARA - LEGAL BOX 800' X 800' 1318'FSL &amp; 1319'FEL - TARGET CIRCLE 1600'FSL &amp; 1400'FEL</b>									
6,960.0	0.00	0.00	6,896.4	-335.1	600.8	687.9	0.00	0.00	0.00
7,000.0	0.00	0.00	6,936.4	-335.1	600.8	687.9	0.00	0.00	0.00
7,040.0	0.00	0.00	6,976.4	-335.1	600.8	687.9	0.00	0.00	0.00
7,080.0	0.00	0.00	7,016.4	-335.1	600.8	687.9	0.00	0.00	0.00
7,120.0	0.00	0.00	7,056.4	-335.1	600.8	687.9	0.00	0.00	0.00
7,160.0	0.00	0.00	7,096.4	-335.1	600.8	687.9	0.00	0.00	0.00
7,164.6	0.00	0.00	7,101.0	-335.1	600.8	687.9	0.00	0.00	0.00
<b>CODELL</b>									
7,200.0	0.00	0.00	7,136.4	-335.1	600.8	687.9	0.00	0.00	0.00
7,240.0	0.00	0.00	7,176.4	-335.1	600.8	687.9	0.00	0.00	0.00
7,280.0	0.00	0.00	7,216.4	-335.1	600.8	687.9	0.00	0.00	0.00
7,320.0	0.00	0.00	7,256.4	-335.1	600.8	687.9	0.00	0.00	0.00
7,360.0	0.00	0.00	7,296.4	-335.1	600.8	687.9	0.00	0.00	0.00
7,400.0	0.00	0.00	7,336.4	-335.1	600.8	687.9	0.00	0.00	0.00
7,440.0	0.00	0.00	7,376.4	-335.1	600.8	687.9	0.00	0.00	0.00
7,480.0	0.00	0.00	7,416.4	-335.1	600.8	687.9	0.00	0.00	0.00
7,520.0	0.00	0.00	7,456.4	-335.1	600.8	687.9	0.00	0.00	0.00
7,524.6	0.00	0.00	7,461.0	-335.1	600.8	687.9	0.00	0.00	0.00
<b>D-SAND</b>									
7,560.0	0.00	0.00	7,496.4	-335.1	600.8	687.9	0.00	0.00	0.00
7,589.6	0.00	0.00	7,526.0	-335.1	600.8	687.9	0.00	0.00	0.00
<b>J-SAND</b>									
7,600.0	0.00	0.00	7,536.4	-335.1	600.8	687.9	0.00	0.00	0.00
7,640.0	0.00	0.00	7,576.4	-335.1	600.8	687.9	0.00	0.00	0.00
7,680.0	0.00	0.00	7,616.4	-335.1	600.8	687.9	0.00	0.00	0.00
7,720.0	0.00	0.00	7,656.4	-335.1	600.8	687.9	0.00	0.00	0.00
7,739.6	0.00	0.00	7,676.0	-335.1	600.8	687.9	0.00	0.00	0.00



<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well HP D32-23D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4867.0ft (Original Well Elev)
<b>Project:</b>	SEC.32-T3N-R64W	<b>MD Reference:</b>	WELL @ 4867.0ft (Original Well Elev)
<b>Site:</b>	HP D32-21D Pad Sec.32-T3N-R64W	<b>North Reference:</b>	True
<b>Well:</b>	HP D32-23D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble HP D32-23D Plan #1 (8-30-11)		

Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N-S	+E-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
LEGAL BOX 800' X 800'	0.00	0.00	6,862.0	-617.1	681.8	1,309,106.31	3,259,720.51	40.178156	-104.570490
- plan misses target center by 293.4ft at 6925.6ft MD (6862.0 TVD, -335.1 N, 600.8 E)									
- Rectangle (sides W800.0 H800.0 D814.0)									
TARGET BHL 1600'F	0.00	0.00	5,000.0	-335.1	600.8	1,309,387.40	3,259,636.55	40.178930	-104.570780
- plan hits target center									
- Point									
TARGET CIRCLE 160'	0.00	0.00	6,862.0	-335.1	600.8	1,309,387.40	3,259,636.55	40.178930	-104.570780
- plan hits target center									
- Circle (radius 75.0)									

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 (°)
6,925.6	6,862.0	NIOBRARA		0.00	
7,164.6	7,101.0	CODELL		0.00	
7,524.6	7,461.0	D-SAND		0.00	
7,589.6	7,526.0	J-SAND		0.00	