

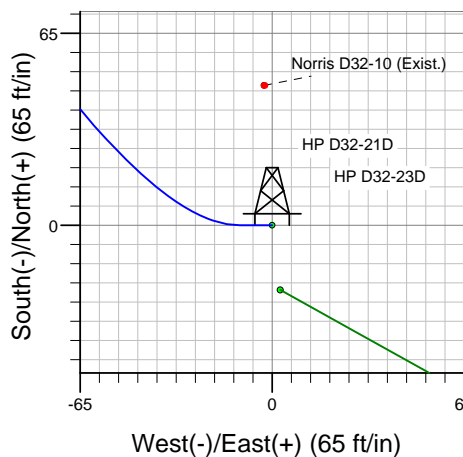
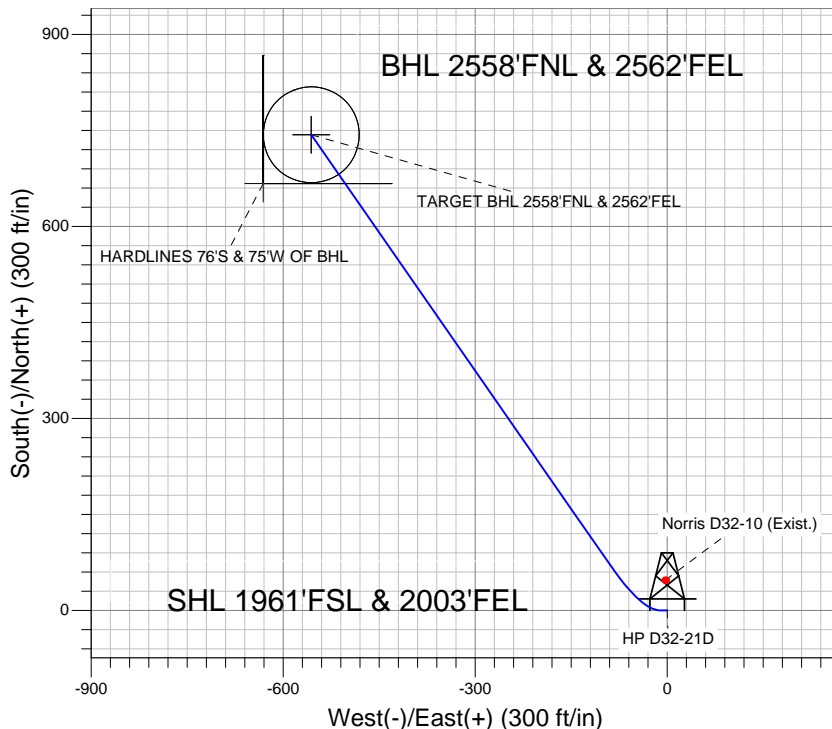
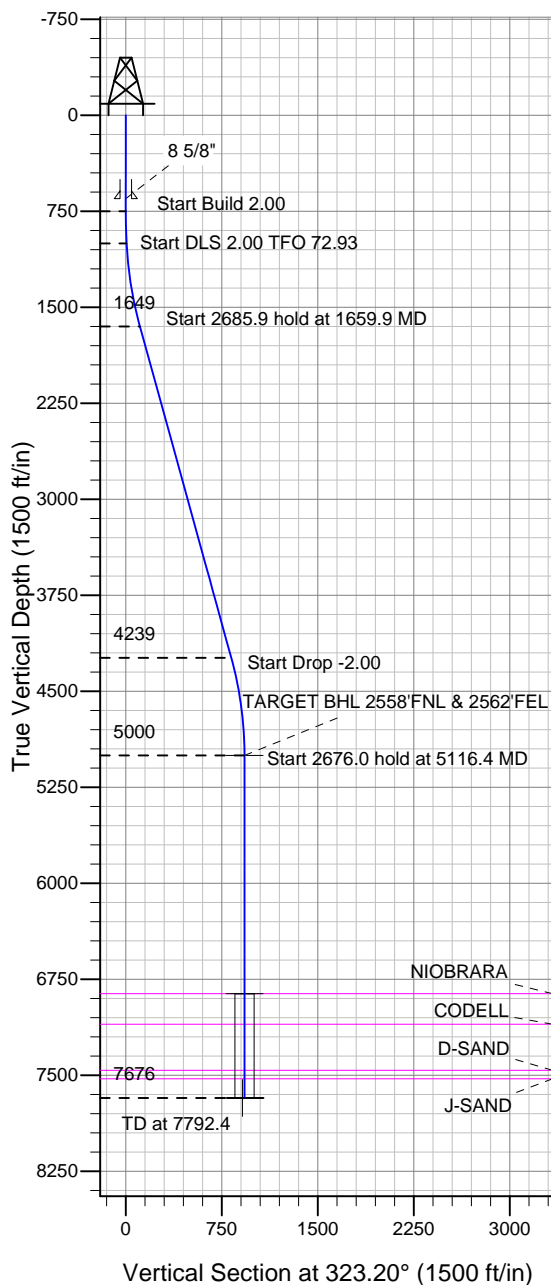
Well Name: HP D32-21D

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	1309738.05	3259029.30	40.179910	-104.572940	

Original Well EleWELL @ 4867.0ft (Original Well Elev)

NOBLE ENERGY INC WELD COUNTY CO



HP D32-21D Pad Sec.32-T3N-R64W
 HP D32-21D
 Noble HP D32-21D Plan #1 (8-30-11)
 8:27, 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 2558'FNL & 2562'FEL	5000.0	743.2	-556.0	40.181950	-104.574930	Point
TARGET CIRCLE 2558'FNL & 2562'FEL	6862.0	743.2	-556.0	40.181950	-104.574930	Circle (Radius: 75.0)
HARDLINES 76'S & 75'W OF BHL	7676.0	667.2	-631.0	40.181741	-104.575198	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	1000.0	5.00	270.00	999.7	0.0	-10.9	2.00	270.00	6.5	
4	1659.9	15.41	325.21	1649.4	72.3	-90.0	2.00	72.93	111.9	
5	4345.8	15.41	325.21	4238.7	658.6	-497.3	0.00	0.00	825.2	
6	5116.4	0.00	0.00	5000.0	743.2	-556.0	2.00	180.00	928.2	TARGET BHL 2558'FNL & 2562'FEL
7	7792.4	0.00	0.00	7676.0	743.2	-556.0	0.00	0.00	928.2	



Directional

NOBLE ENERGY INC WELD COUNTY CO

SEC.32-T3N-R64W

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

HP D32-21D

Wellbore #1

Plan: Noble HP D32-21D Plan #1 (8-30-11)

Standard Planning Report

31 August, 2011



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

Project	SEC.32-T3N-R64W, 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						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 D32-21D					
Well Position	+N/-S	0.0 ft	Northing:	1,309,738.05 ft	Latitude:	40.179910
	+E/-W	0.0 ft	Easting:	3,259,029.30 ft	Longitude:	-104.572940
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,854.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	8/30/2011	8.71	66.90	53,014

Design	Noble HP D32-21D Plan #1 (8-30-11)			
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	323.20

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	
1,000.0	5.00	270.00	999.7	0.0	-10.9	2.00	2.00	0.00	270.00	
1,659.9	15.41	325.21	1,649.4	72.3	-90.0	2.00	1.58	8.37	72.93	
4,345.8	15.41	325.21	4,238.7	658.6	-497.3	0.00	0.00	0.00	0.00	
5,116.4	0.00	0.00	5,000.0	743.2	-556.0	2.00	-2.00	0.00	180.00	TARGET BHL 2558
7,792.4	0.00	0.00	7,676.0	743.2	-556.0	0.00	0.00	0.00	0.00	

Database:	Landmark	Local Co-ordinate Reference:	Well HP D32-21D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4867.0ft (Original Well Elev)
Project:	SEC.32-T3N-R64W	MD Reference:	WELL @ 4867.0ft (Original Well Elev)
Site:	HP D32-21D Pad Sec.32-T3N-R64W	North Reference:	True
Well:	HP D32-21D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble HP D32-21D 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
750.0	0.00	0.00	750.0	0.0	0.0	0.0	0.00	0.00	0.00
760.0	0.20	270.00	760.0	0.0	0.0	0.0	2.00	2.00	0.00
800.0	1.00	270.00	800.0	0.0	-0.4	0.3	2.00	2.00	0.00
840.0	1.80	270.00	840.0	0.0	-1.4	0.8	2.00	2.00	0.00
880.0	2.60	270.00	880.0	0.0	-2.9	1.8	2.00	2.00	0.00
920.0	3.40	270.00	919.9	0.0	-5.0	3.0	2.00	2.00	0.00
960.0	4.20	270.00	959.8	0.0	-7.7	4.6	2.00	2.00	0.00
1,000.0	5.00	270.00	999.7	0.0	-10.9	6.5	2.00	2.00	0.00
1,040.0	5.29	278.32	1,039.5	0.3	-14.5	8.9	2.00	0.73	20.81
1,080.0	5.68	285.65	1,079.3	1.1	-18.2	11.8	2.00	0.97	18.31
1,120.0	6.15	291.95	1,119.1	2.4	-22.1	15.2	2.00	1.17	15.76
1,160.0	6.68	297.31	1,158.9	4.3	-26.1	19.1	2.00	1.33	13.40
1,200.0	7.26	301.85	1,198.6	6.7	-30.4	23.5	2.00	1.45	11.35
1,240.0	7.88	305.70	1,238.2	9.6	-34.7	28.5	2.00	1.55	9.63
1,280.0	8.53	308.98	1,277.8	13.1	-39.3	34.0	2.00	1.62	8.20
1,320.0	9.20	311.79	1,317.3	17.1	-44.0	40.0	2.00	1.68	7.03
1,360.0	9.89	314.22	1,356.8	21.6	-48.8	46.5	2.00	1.73	6.07
1,400.0	10.60	316.33	1,396.2	26.7	-53.8	53.6	2.00	1.77	5.27
1,440.0	11.32	318.18	1,435.4	32.2	-59.0	61.1	2.00	1.80	4.62
1,480.0	12.05	319.80	1,474.6	38.4	-64.3	69.2	2.00	1.82	4.07
1,520.0	12.78	321.25	1,513.7	45.0	-69.7	77.8	2.00	1.84	3.61
1,560.0	13.53	322.54	1,552.6	52.2	-75.4	86.9	2.00	1.86	3.22
1,600.0	14.28	323.69	1,591.4	59.8	-81.1	96.5	2.00	1.88	2.89
1,640.0	15.03	324.73	1,630.1	68.1	-87.0	106.6	2.00	1.89	2.60
1,659.9	15.41	325.21	1,649.4	72.3	-90.0	111.9	2.00	1.90	2.42
1,680.0	15.41	325.21	1,668.7	76.7	-93.1	117.2	0.00	0.00	0.00
1,720.0	15.41	325.21	1,707.3	85.5	-99.1	127.8	0.00	0.00	0.00
1,760.0	15.41	325.21	1,745.8	94.2	-105.2	138.4	0.00	0.00	0.00
1,800.0	15.41	325.21	1,784.4	102.9	-111.3	149.1	0.00	0.00	0.00
1,840.0	15.41	325.21	1,823.0	111.6	-117.3	159.7	0.00	0.00	0.00
1,880.0	15.41	325.21	1,861.5	120.4	-123.4	170.3	0.00	0.00	0.00
1,920.0	15.41	325.21	1,900.1	129.1	-129.5	180.9	0.00	0.00	0.00
1,960.0	15.41	325.21	1,938.6	137.8	-135.5	191.6	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well HP D32-21D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4867.0ft (Original Well Elev)
Project:	SEC.32-T3N-R64W	MD Reference:	WELL @ 4867.0ft (Original Well Elev)
Site:	HP D32-21D Pad Sec.32-T3N-R64W	North Reference:	True
Well:	HP D32-21D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble HP D32-21D 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	15.41	325.21	1,977.2	146.6	-141.6	202.2	0.00	0.00	0.00	
2,040.0	15.41	325.21	2,015.8	155.3	-147.7	212.8	0.00	0.00	0.00	
2,080.0	15.41	325.21	2,054.3	164.0	-153.7	223.4	0.00	0.00	0.00	
2,120.0	15.41	325.21	2,092.9	172.8	-159.8	234.1	0.00	0.00	0.00	
2,160.0	15.41	325.21	2,131.5	181.5	-165.9	244.7	0.00	0.00	0.00	
2,200.0	15.41	325.21	2,170.0	190.2	-171.9	255.3	0.00	0.00	0.00	
2,240.0	15.41	325.21	2,208.6	199.0	-178.0	265.9	0.00	0.00	0.00	
2,280.0	15.41	325.21	2,247.1	207.7	-184.1	276.6	0.00	0.00	0.00	
2,320.0	15.41	325.21	2,285.7	216.4	-190.1	287.2	0.00	0.00	0.00	
2,360.0	15.41	325.21	2,324.3	225.1	-196.2	297.8	0.00	0.00	0.00	
2,400.0	15.41	325.21	2,362.8	233.9	-202.2	308.4	0.00	0.00	0.00	
2,440.0	15.41	325.21	2,401.4	242.6	-208.3	319.0	0.00	0.00	0.00	
2,480.0	15.41	325.21	2,439.9	251.3	-214.4	329.7	0.00	0.00	0.00	
2,520.0	15.41	325.21	2,478.5	260.1	-220.4	340.3	0.00	0.00	0.00	
2,560.0	15.41	325.21	2,517.1	268.8	-226.5	350.9	0.00	0.00	0.00	
2,600.0	15.41	325.21	2,555.6	277.5	-232.6	361.5	0.00	0.00	0.00	
2,640.0	15.41	325.21	2,594.2	286.3	-238.6	372.2	0.00	0.00	0.00	
2,680.0	15.41	325.21	2,632.8	295.0	-244.7	382.8	0.00	0.00	0.00	
2,720.0	15.41	325.21	2,671.3	303.7	-250.8	393.4	0.00	0.00	0.00	
2,760.0	15.41	325.21	2,709.9	312.4	-256.8	404.0	0.00	0.00	0.00	
2,800.0	15.41	325.21	2,748.4	321.2	-262.9	414.7	0.00	0.00	0.00	
2,840.0	15.41	325.21	2,787.0	329.9	-269.0	425.3	0.00	0.00	0.00	
2,880.0	15.41	325.21	2,825.6	338.6	-275.0	435.9	0.00	0.00	0.00	
2,920.0	15.41	325.21	2,864.1	347.4	-281.1	446.5	0.00	0.00	0.00	
2,960.0	15.41	325.21	2,902.7	356.1	-287.2	457.2	0.00	0.00	0.00	
3,000.0	15.41	325.21	2,941.2	364.8	-293.2	467.8	0.00	0.00	0.00	
3,040.0	15.41	325.21	2,979.8	373.6	-299.3	478.4	0.00	0.00	0.00	
3,080.0	15.41	325.21	3,018.4	382.3	-305.3	489.0	0.00	0.00	0.00	
3,120.0	15.41	325.21	3,056.9	391.0	-311.4	499.7	0.00	0.00	0.00	
3,160.0	15.41	325.21	3,095.5	399.8	-317.5	510.3	0.00	0.00	0.00	
3,200.0	15.41	325.21	3,134.1	408.5	-323.5	520.9	0.00	0.00	0.00	
3,240.0	15.41	325.21	3,172.6	417.2	-329.6	531.5	0.00	0.00	0.00	
3,280.0	15.41	325.21	3,211.2	425.9	-335.7	542.1	0.00	0.00	0.00	
3,320.0	15.41	325.21	3,249.7	434.7	-341.7	552.8	0.00	0.00	0.00	
3,360.0	15.41	325.21	3,288.3	443.4	-347.8	563.4	0.00	0.00	0.00	
3,400.0	15.41	325.21	3,326.9	452.1	-353.9	574.0	0.00	0.00	0.00	
3,440.0	15.41	325.21	3,365.4	460.9	-359.9	584.6	0.00	0.00	0.00	
3,480.0	15.41	325.21	3,404.0	469.6	-366.0	595.3	0.00	0.00	0.00	
3,520.0	15.41	325.21	3,442.5	478.3	-372.1	605.9	0.00	0.00	0.00	
3,560.0	15.41	325.21	3,481.1	487.1	-378.1	616.5	0.00	0.00	0.00	
3,600.0	15.41	325.21	3,519.7	495.8	-384.2	627.1	0.00	0.00	0.00	
3,640.0	15.41	325.21	3,558.2	504.5	-390.3	637.8	0.00	0.00	0.00	
3,680.0	15.41	325.21	3,596.8	513.3	-396.3	648.4	0.00	0.00	0.00	
3,720.0	15.41	325.21	3,635.4	522.0	-402.4	659.0	0.00	0.00	0.00	
3,760.0	15.41	325.21	3,673.9	530.7	-408.4	669.6	0.00	0.00	0.00	
3,800.0	15.41	325.21	3,712.5	539.4	-414.5	680.3	0.00	0.00	0.00	
3,840.0	15.41	325.21	3,751.0	548.2	-420.6	690.9	0.00	0.00	0.00	
3,880.0	15.41	325.21	3,789.6	556.9	-426.6	701.5	0.00	0.00	0.00	
3,920.0	15.41	325.21	3,828.2	565.6	-432.7	712.1	0.00	0.00	0.00	
3,960.0	15.41	325.21	3,866.7	574.4	-438.8	722.8	0.00	0.00	0.00	
4,000.0	15.41	325.21	3,905.3	583.1	-444.8	733.4	0.00	0.00	0.00	
4,040.0	15.41	325.21	3,943.8	591.8	-450.9	744.0	0.00	0.00	0.00	
4,080.0	15.41	325.21	3,982.4	600.6	-457.0	754.6	0.00	0.00	0.00	
4,120.0	15.41	325.21	4,021.0	609.3	-463.0	765.2	0.00	0.00	0.00	

Database:	Landmark	Local Co-ordinate Reference:	Well HP D32-21D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4867.0ft (Original Well Elev)
Project:	SEC.32-T3N-R64W	MD Reference:	WELL @ 4867.0ft (Original Well Elev)
Site:	HP D32-21D Pad Sec.32-T3N-R64W	North Reference:	True
Well:	HP D32-21D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble HP D32-21D 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	15.41	325.21	4,059.5	618.0	-469.1	775.9	0.00	0.00	0.00
4,200.0	15.41	325.21	4,098.1	626.8	-475.2	786.5	0.00	0.00	0.00
4,240.0	15.41	325.21	4,136.7	635.5	-481.2	797.1	0.00	0.00	0.00
4,280.0	15.41	325.21	4,175.2	644.2	-487.3	807.7	0.00	0.00	0.00
4,320.0	15.41	325.21	4,213.8	652.9	-493.4	818.4	0.00	0.00	0.00
4,345.8	15.41	325.21	4,238.7	658.6	-497.3	825.2	0.00	0.00	0.00
4,360.0	15.13	325.21	4,252.3	661.6	-499.4	829.0	2.00	-2.00	0.00
4,400.0	14.33	325.21	4,291.0	670.0	-505.2	839.1	2.00	-2.00	0.00
4,440.0	13.53	325.21	4,329.9	677.9	-510.7	848.7	2.00	-2.00	0.00
4,480.0	12.73	325.21	4,368.8	685.4	-515.9	857.8	2.00	-2.00	0.00
4,520.0	11.93	325.21	4,407.9	692.4	-520.8	866.4	2.00	-2.00	0.00
4,560.0	11.13	325.21	4,447.1	698.9	-525.3	874.3	2.00	-2.00	0.00
4,600.0	10.33	325.21	4,486.4	705.1	-529.6	881.8	2.00	-2.00	0.00
4,640.0	9.53	325.21	4,525.8	710.7	-533.5	888.7	2.00	-2.00	0.00
4,680.0	8.73	325.21	4,565.3	715.9	-537.1	895.0	2.00	-2.00	0.00
4,720.0	7.93	325.21	4,604.9	720.7	-540.4	900.8	2.00	-2.00	0.00
4,760.0	7.13	325.21	4,644.5	725.0	-543.4	906.0	2.00	-2.00	0.00
4,800.0	6.33	325.21	4,684.2	728.9	-546.1	910.7	2.00	-2.00	0.00
4,840.0	5.53	325.21	4,724.0	732.2	-548.4	914.9	2.00	-2.00	0.00
4,880.0	4.73	325.21	4,763.9	735.2	-550.5	918.4	2.00	-2.00	0.00
4,920.0	3.93	325.21	4,803.7	737.7	-552.2	921.5	2.00	-2.00	0.00
4,960.0	3.13	325.21	4,843.7	739.7	-553.6	923.9	2.00	-2.00	0.00
5,000.0	2.33	325.21	4,883.6	741.2	-554.7	925.8	2.00	-2.00	0.00
5,040.0	1.53	325.21	4,923.6	742.4	-555.5	927.2	2.00	-2.00	0.00
5,080.0	0.73	325.21	4,963.6	743.0	-555.9	927.9	2.00	-2.00	0.00
5,116.4	0.00	0.00	5,000.0	743.2	-556.0	928.2	2.00	-2.00	0.00
TARGET BHL 2558'FNL & 2562'FEL									
5,120.0	0.00	0.00	5,003.6	743.2	-556.0	928.2	0.00	0.00	0.00
5,160.0	0.00	0.00	5,043.6	743.2	-556.0	928.2	0.00	0.00	0.00
5,200.0	0.00	0.00	5,083.6	743.2	-556.0	928.2	0.00	0.00	0.00
5,240.0	0.00	0.00	5,123.6	743.2	-556.0	928.2	0.00	0.00	0.00
5,280.0	0.00	0.00	5,163.6	743.2	-556.0	928.2	0.00	0.00	0.00
5,320.0	0.00	0.00	5,203.6	743.2	-556.0	928.2	0.00	0.00	0.00
5,360.0	0.00	0.00	5,243.6	743.2	-556.0	928.2	0.00	0.00	0.00
5,400.0	0.00	0.00	5,283.6	743.2	-556.0	928.2	0.00	0.00	0.00
5,440.0	0.00	0.00	5,323.6	743.2	-556.0	928.2	0.00	0.00	0.00
5,480.0	0.00	0.00	5,363.6	743.2	-556.0	928.2	0.00	0.00	0.00
5,520.0	0.00	0.00	5,403.6	743.2	-556.0	928.2	0.00	0.00	0.00
5,560.0	0.00	0.00	5,443.6	743.2	-556.0	928.2	0.00	0.00	0.00
5,600.0	0.00	0.00	5,483.6	743.2	-556.0	928.2	0.00	0.00	0.00
5,640.0	0.00	0.00	5,523.6	743.2	-556.0	928.2	0.00	0.00	0.00
5,680.0	0.00	0.00	5,563.6	743.2	-556.0	928.2	0.00	0.00	0.00
5,720.0	0.00	0.00	5,603.6	743.2	-556.0	928.2	0.00	0.00	0.00
5,760.0	0.00	0.00	5,643.6	743.2	-556.0	928.2	0.00	0.00	0.00
5,800.0	0.00	0.00	5,683.6	743.2	-556.0	928.2	0.00	0.00	0.00
5,840.0	0.00	0.00	5,723.6	743.2	-556.0	928.2	0.00	0.00	0.00
5,880.0	0.00	0.00	5,763.6	743.2	-556.0	928.2	0.00	0.00	0.00
5,920.0	0.00	0.00	5,803.6	743.2	-556.0	928.2	0.00	0.00	0.00
5,960.0	0.00	0.00	5,843.6	743.2	-556.0	928.2	0.00	0.00	0.00
6,000.0	0.00	0.00	5,883.6	743.2	-556.0	928.2	0.00	0.00	0.00
6,040.0	0.00	0.00	5,923.6	743.2	-556.0	928.2	0.00	0.00	0.00
6,080.0	0.00	0.00	5,963.6	743.2	-556.0	928.2	0.00	0.00	0.00
6,120.0	0.00	0.00	6,003.6	743.2	-556.0	928.2	0.00	0.00	0.00
6,160.0	0.00	0.00	6,043.6	743.2	-556.0	928.2	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well HP D32-21D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4867.0ft (Original Well Elev)
Project:	SEC.32-T3N-R64W	MD Reference:	WELL @ 4867.0ft (Original Well Elev)
Site:	HP D32-21D Pad Sec.32-T3N-R64W	North Reference:	True
Well:	HP D32-21D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble HP D32-21D 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	6,083.6	743.2	-556.0	928.2	0.00	0.00	0.00
6,240.0	0.00	0.00	6,123.6	743.2	-556.0	928.2	0.00	0.00	0.00
6,280.0	0.00	0.00	6,163.6	743.2	-556.0	928.2	0.00	0.00	0.00
6,320.0	0.00	0.00	6,203.6	743.2	-556.0	928.2	0.00	0.00	0.00
6,360.0	0.00	0.00	6,243.6	743.2	-556.0	928.2	0.00	0.00	0.00
6,400.0	0.00	0.00	6,283.6	743.2	-556.0	928.2	0.00	0.00	0.00
6,440.0	0.00	0.00	6,323.6	743.2	-556.0	928.2	0.00	0.00	0.00
6,480.0	0.00	0.00	6,363.6	743.2	-556.0	928.2	0.00	0.00	0.00
6,520.0	0.00	0.00	6,403.6	743.2	-556.0	928.2	0.00	0.00	0.00
6,560.0	0.00	0.00	6,443.6	743.2	-556.0	928.2	0.00	0.00	0.00
6,600.0	0.00	0.00	6,483.6	743.2	-556.0	928.2	0.00	0.00	0.00
6,640.0	0.00	0.00	6,523.6	743.2	-556.0	928.2	0.00	0.00	0.00
6,680.0	0.00	0.00	6,563.6	743.2	-556.0	928.2	0.00	0.00	0.00
6,720.0	0.00	0.00	6,603.6	743.2	-556.0	928.2	0.00	0.00	0.00
6,760.0	0.00	0.00	6,643.6	743.2	-556.0	928.2	0.00	0.00	0.00
6,800.0	0.00	0.00	6,683.6	743.2	-556.0	928.2	0.00	0.00	0.00
6,840.0	0.00	0.00	6,723.6	743.2	-556.0	928.2	0.00	0.00	0.00
6,880.0	0.00	0.00	6,763.6	743.2	-556.0	928.2	0.00	0.00	0.00
6,920.0	0.00	0.00	6,803.6	743.2	-556.0	928.2	0.00	0.00	0.00
6,960.0	0.00	0.00	6,843.6	743.2	-556.0	928.2	0.00	0.00	0.00
6,978.4	0.00	0.00	6,862.0	743.2	-556.0	928.2	0.00	0.00	0.00
NIOBRARA - TARGET CIRCLE 2558'FNL & 2562'FEL									
7,000.0	0.00	0.00	6,883.6	743.2	-556.0	928.2	0.00	0.00	0.00
7,040.0	0.00	0.00	6,923.6	743.2	-556.0	928.2	0.00	0.00	0.00
7,080.0	0.00	0.00	6,963.6	743.2	-556.0	928.2	0.00	0.00	0.00
7,120.0	0.00	0.00	7,003.6	743.2	-556.0	928.2	0.00	0.00	0.00
7,160.0	0.00	0.00	7,043.6	743.2	-556.0	928.2	0.00	0.00	0.00
7,200.0	0.00	0.00	7,083.6	743.2	-556.0	928.2	0.00	0.00	0.00
7,217.4	0.00	0.00	7,101.0	743.2	-556.0	928.2	0.00	0.00	0.00
CODELL									
7,240.0	0.00	0.00	7,123.6	743.2	-556.0	928.2	0.00	0.00	0.00
7,280.0	0.00	0.00	7,163.6	743.2	-556.0	928.2	0.00	0.00	0.00
7,320.0	0.00	0.00	7,203.6	743.2	-556.0	928.2	0.00	0.00	0.00
7,360.0	0.00	0.00	7,243.6	743.2	-556.0	928.2	0.00	0.00	0.00
7,400.0	0.00	0.00	7,283.6	743.2	-556.0	928.2	0.00	0.00	0.00
7,440.0	0.00	0.00	7,323.6	743.2	-556.0	928.2	0.00	0.00	0.00
7,480.0	0.00	0.00	7,363.6	743.2	-556.0	928.2	0.00	0.00	0.00
7,520.0	0.00	0.00	7,403.6	743.2	-556.0	928.2	0.00	0.00	0.00
7,560.0	0.00	0.00	7,443.6	743.2	-556.0	928.2	0.00	0.00	0.00
7,577.4	0.00	0.00	7,461.0	743.2	-556.0	928.2	0.00	0.00	0.00
D-SAND									
7,600.0	0.00	0.00	7,483.6	743.2	-556.0	928.2	0.00	0.00	0.00
7,640.0	0.00	0.00	7,523.6	743.2	-556.0	928.2	0.00	0.00	0.00
7,642.4	0.00	0.00	7,526.0	743.2	-556.0	928.2	0.00	0.00	0.00
J-SAND									
7,680.0	0.00	0.00	7,563.6	743.2	-556.0	928.2	0.00	0.00	0.00
7,720.0	0.00	0.00	7,603.6	743.2	-556.0	928.2	0.00	0.00	0.00
7,760.0	0.00	0.00	7,643.6	743.2	-556.0	928.2	0.00	0.00	0.00
7,792.4	0.00	0.00	7,676.0	743.2	-556.0	928.2	0.00	0.00	0.00
HARDLINES 76'S & 75'W OF BHL									

Database:	Landmark	Local Co-ordinate Reference:	Well HP D32-21D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4867.0ft (Original Well Elev)
Project:	SEC.32-T3N-R64W	MD Reference:	WELL @ 4867.0ft (Original Well Elev)
Site:	HP D32-21D Pad Sec.32-T3N-R64W	North Reference:	True
Well:	HP D32-21D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble HP D32-21D 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)		
HARDLINES 76'S & 7	0.00	0.00	7,676.0	667.2	-631.0	1,310,398.59	3,258,391.39	40.181741	-104.575198
- plan misses target center by 106.7ft at 7792.4ft MD (7676.0 TVD, 743.2 N, -556.0 E)									
- Polygon									
Point 1			7,676.0	0.0	0.0	1,310,398.59	3,258,391.39		
Point 2			7,676.0	200.0	0.0	1,310,598.57	3,258,389.30		
Point 3			7,676.0	0.0	0.0	1,310,398.59	3,258,391.39		
Point 4			7,676.0	0.0	200.0	1,310,400.68	3,258,591.37		
TARGET CIRCLE 25'	0.00	0.00	6,862.0	743.2	-556.0	1,310,475.35	3,258,465.55	40.181950	-104.574930
- plan hits target center									
- Circle (radius 75.0)									
TARGET BHL 2558'F	0.00	0.00	5,000.0	743.2	-556.0	1,310,475.35	3,258,465.55	40.181950	-104.574930
- plan hits target center									
- Point									

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

Formations						
	Measured Depth	Vertical Depth			Dip	Dip Direction
	(ft)	(ft)	Name	Lithology	(°)	(°)
	6,978.4	6,862.0	NIOBRARA		0.00	
	7,217.4	7,101.0	CODELL		0.00	
	7,577.4	7,461.0	D-SAND		0.00	
	7,642.4	7,526.0	J-SAND		0.00	