

Well Name: **Booth N25-18D**

Surface Location: Booth N25-18D Pad Sec.25-T5N-R67W
North American Datum 1983 US State Plane 1983 Colorado Northern Zone

Ground Elevation: 5042.0

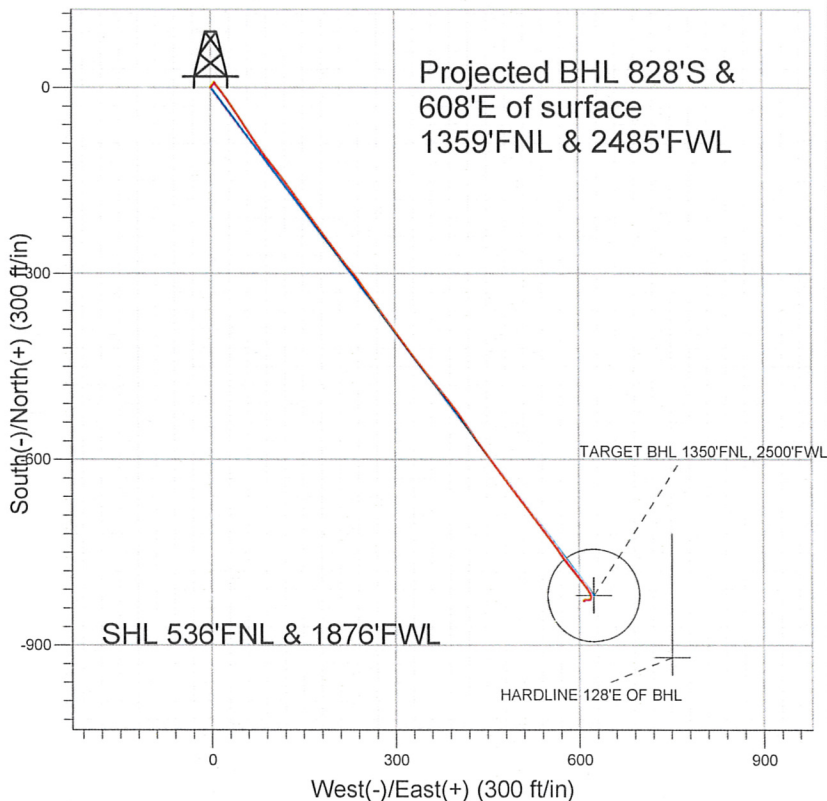
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	1380627.63	3182700.73	40° 22' 34.932 N	104° 50' 39.228 W

Original Well Elev WELL @ 5055.0ft (Original Well Elev)

Slot

NOBLE ENERGY INC WELD COUNTY CO

Projected BHL 828'S &
608'E of surface
1359'FNL & 2485'FWL



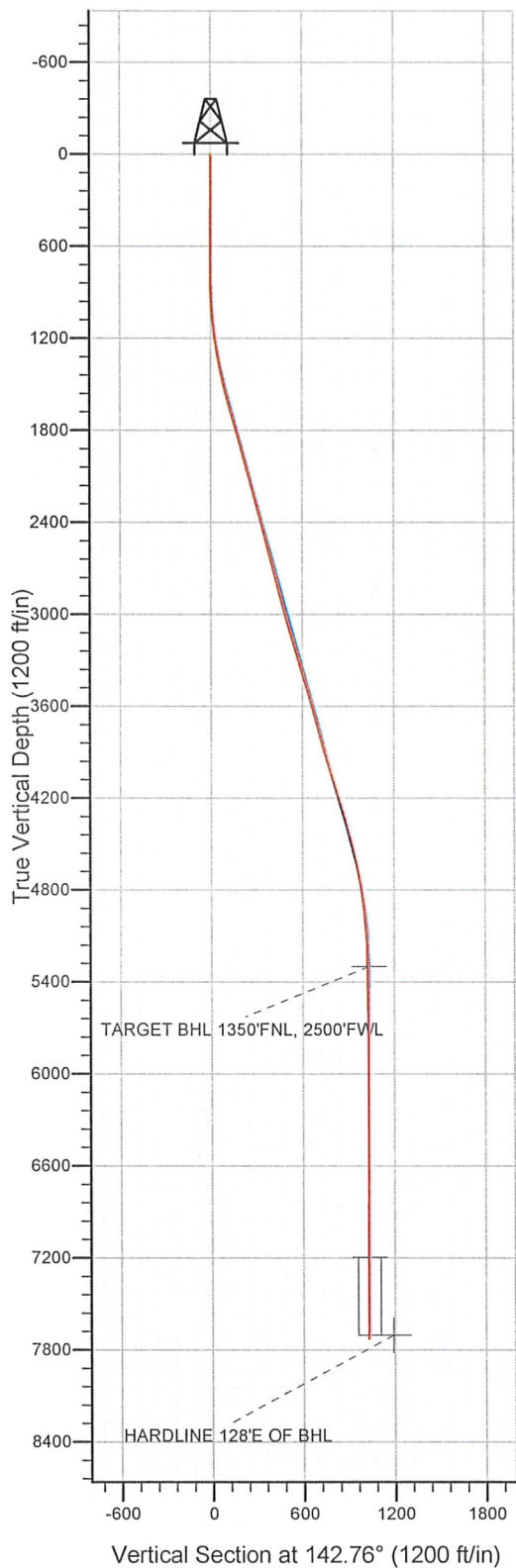
LEGEND

- Booth N25-18D, Wellbore #1, Noble Booth N25-18D Plan #2 (01-14-11) V0
- Wellbore #1
- Survey #1

Final Survey Plot

Projected Final Survey -
7856'MD & 7725'TVD @ 1027' VS
0.4 deg Inc 223.3 deg AZ

Project: SEC.25-T5N-R67W
Site: Booth N25-18D Pad Sec.25-T5N-R67W
Well: Booth N25-18D
Plan: Wellbore #1



Company: NOBLE ENERGY INC WELD COUNTY CO
Project: SEC.25-T5N-R67W
Site: Booth N25-18D Pad Sec.25-T5N-R67W
Well: Booth N25-18D
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Well Booth N25-18D
TVD Reference: WELL @ 5055.0ft (Original Well Elev)
MD Reference: WELL @ 5055.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: Landmark

Project	SEC.25-T5N-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 Booth N25-18D Pad Sec.25-T5N-R67W
Site Position:
From: Lat/Long **Northing:** 1,380,627.64 ft **Latitude:** 40° 22' 34.932 N
Position Uncertainty: 0.0 ft **Easting:** 3,182,700.73 ft **Longitude:** 104° 50' 39.228 W
Slot Radius: " **Grid Convergence:** 0.42 °

Well Booth N25-18D
Well Position **+N/-S** 0.0 ft **Northing:** 1,380,627.63 ft **Latitude:** 40° 22' 34.932 N
+E/-W 0.0 ft **Easting:** 3,182,700.73 ft **Longitude:** 104° 50' 39.228 W
Position Uncertainty 0.0 ft **Wellhead Elevation:** ft **Ground Level:** 5,042.0 ft

Wellbore Wellbore #1
Magnetics **Model Name** **Sample Date** **Declination** **Dip Angle** **Field Strength**
 (°) (°) (nT)
 IGRF200510 1/14/2011 8.92 67.04 53,174

Design Wellbore #1
Audit Notes:
Version: 1.0 **Phase:** ACTUAL **Tie On Depth:** 0.0
Vertical Section: **Depth From (TVD)** **+N/-S** **+E/-W** **Direction**
 (ft) (ft) (ft) (°)
 5,300.0 0.0 0.0 142.76

Survey Program **Date** 1/26/2011
From **To**
 (ft) (ft)
 697.0 7,856.0 **Survey (Wellbore)** **Tool Name** **Description**
 Survey #1 (Wellbore #1) MWD MWD - Standard

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
697.0	1.50	36.50	696.9	7.3	5.4	-2.6	0.22	0.22	0.00
791.0	0.40	358.60	790.9	8.7	6.2	-3.2	1.29	-1.17	-40.32
884.0	1.60	161.10	883.9	7.7	6.6	-2.2	2.13	1.29	174.73
978.0	3.60	137.20	977.8	4.3	9.0	2.0	2.38	2.13	-25.43
1,072.0	5.30	140.50	1,071.5	-1.2	13.8	9.3	1.83	1.81	3.51
1,165.0	7.30	144.70	1,163.9	-9.3	19.9	19.5	2.21	2.15	4.52
1,259.0	9.30	145.20	1,257.0	-20.4	27.7	33.0	2.13	2.13	0.53
1,352.0	11.00	146.20	1,348.5	-34.0	36.9	49.4	1.84	1.83	1.08
1,446.0	12.00	145.90	1,440.6	-49.5	47.4	68.1	1.07	1.06	-0.32
1,540.0	13.90	145.60	1,532.2	-66.9	59.2	89.1	2.02	2.02	-0.32
1,633.0	15.70	146.80	1,622.1	-86.7	72.4	112.8	1.96	1.94	1.29
1,727.0	15.90	143.20	1,712.6	-107.6	87.1	138.4	1.06	0.21	-3.83

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 Project: SEC.25-T5N-R67W
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 Well: Booth N25-18D
 Wellbore: Wellbore #1
 Design: Wellbore #1

Local Co-ordinate Reference: Well Booth N25-18D
 TVD Reference: WELL @ 5055.0ft (Original Well Elev)
 MD Reference: WELL @ 5055.0ft (Original Well Elev)
 North Reference: True
 Survey Calculation Method: Minimum Curvature
 Database: Landmark

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)
1,820.0	15.70	142.30	1,802.1	-127.8	102.5	163.7	0.34	-0.22	-0.97
1,914.0	15.60	142.80	1,892.6	-147.9	117.9	189.1	0.18	-0.11	0.53
2,007.0	15.80	143.70	1,982.1	-168.1	132.9	214.2	0.34	0.22	0.97
2,101.0	15.90	144.10	2,072.5	-188.8	148.1	239.9	0.16	0.11	0.43
2,195.0	15.60	142.70	2,163.0	-209.3	163.3	265.4	0.52	-0.32	-1.49
2,288.0	15.10	143.20	2,252.7	-229.0	178.1	290.0	0.56	-0.54	0.54
2,382.0	15.60	143.80	2,343.3	-249.0	192.9	314.9	0.56	0.53	0.64
2,475.0	15.00	143.40	2,433.0	-268.7	207.5	339.5	0.66	-0.65	-0.43
2,569.0	13.70	141.30	2,524.1	-287.2	221.7	362.8	1.49	-1.38	-2.23
2,663.0	14.30	140.30	2,615.3	-304.8	236.0	385.5	0.69	0.64	-1.06
2,756.0	14.10	144.80	2,705.5	-322.9	249.9	408.3	1.21	-0.22	4.84
2,850.0	14.50	145.40	2,796.6	-341.9	263.2	431.5	0.45	0.43	0.64
2,944.0	15.20	143.90	2,887.4	-361.6	277.1	455.6	0.85	0.74	-1.60
3,037.0	15.30	143.50	2,977.1	-381.3	291.6	480.0	0.16	0.11	-0.43
3,131.0	16.00	144.30	3,067.7	-401.8	306.6	505.4	0.78	0.74	0.85
3,224.0	16.10	143.00	3,157.0	-422.5	321.8	531.1	0.40	0.11	-1.40
3,318.0	16.40	141.00	3,247.3	-443.2	338.0	557.4	0.68	0.32	-2.13
3,411.0	15.90	141.90	3,336.6	-463.4	354.1	583.2	0.60	-0.54	0.97
3,505.0	16.60	139.90	3,426.9	-483.8	370.7	609.5	0.95	0.74	-2.13
3,599.0	16.60	141.60	3,516.9	-504.6	387.7	636.4	0.52	0.00	1.81
3,692.0	15.70	144.00	3,606.3	-525.2	403.3	662.2	1.20	-0.97	2.58
3,786.0	15.40	146.40	3,696.8	-545.9	417.7	687.4	0.76	-0.32	2.55
3,879.0	15.60	143.60	3,786.4	-566.2	432.0	712.2	0.83	0.22	-3.01
3,973.0	15.80	144.30	3,876.9	-586.8	447.0	737.6	0.29	0.21	0.74
4,067.0	16.20	143.70	3,967.3	-607.8	462.2	763.5	0.46	0.43	-0.64
4,160.0	17.40	143.10	4,056.3	-629.4	478.2	790.4	1.30	1.29	-0.65
4,254.0	17.30	142.90	4,146.0	-651.7	495.1	818.5	0.12	-0.11	-0.21
4,347.0	17.00	142.60	4,234.9	-673.6	511.7	845.9	0.34	-0.32	-0.32
4,441.0	15.60	143.40	4,325.1	-694.6	527.6	872.3	1.51	-1.49	0.85
4,535.0	15.50	143.70	4,415.7	-714.9	542.5	897.5	0.14	-0.11	0.32
4,628.0	14.90	143.30	4,505.4	-734.5	557.0	921.8	0.65	-0.65	-0.43
4,721.0	13.50	145.00	4,595.6	-753.0	570.4	944.6	1.57	-1.51	1.83
4,816.0	10.90	141.40	4,688.4	-769.1	582.4	964.7	2.85	-2.74	-3.79
4,909.0	8.80	141.80	4,780.1	-781.6	592.3	980.6	2.26	-2.26	0.43
5,003.0	7.40	139.70	4,873.1	-791.8	600.6	993.8	1.52	-1.49	-2.23
5,096.0	6.40	143.00	4,965.5	-800.5	607.6	1,005.0	1.16	-1.08	3.55
5,190.0	4.60	149.70	5,059.0	-808.0	612.7	1,014.0	2.03	-1.91	7.13
5,284.0	3.00	145.60	5,152.8	-813.3	616.0	1,020.2	1.73	-1.70	-4.36
5,377.0	0.80	146.60	5,245.8	-815.8	617.7	1,023.3	2.37	-2.37	1.08
5,431.3	0.74	147.74	5,300.1	-816.4	618.1	1,024.0	0.11	-0.11	2.11
TARGET BHL 1350'FNL, 2500'FWL									
5,471.0	0.70	148.70	5,339.7	-816.8	618.4	1,024.5	0.11	-0.11	2.41
5,596.0	0.60	165.50	5,464.7	-818.1	618.9	1,025.9	0.17	-0.08	13.44
5,721.0	0.70	174.30	5,589.7	-819.5	619.2	1,027.1	0.11	0.08	7.04
5,845.0	0.70	173.40	5,713.7	-821.0	619.3	1,028.4	0.01	0.00	-0.73
5,970.0	1.40	187.30	5,838.7	-823.3	619.2	1,030.2	0.59	0.56	11.12
6,095.0	0.30	187.40	5,963.7	-825.1	619.0	1,031.5	0.88	-0.88	0.08
6,220.0	0.40	238.40	6,088.7	-825.7	618.6	1,031.7	0.25	0.08	40.80
6,345.0	0.30	248.10	6,213.7	-826.0	617.9	1,031.5	0.09	-0.08	7.76
6,469.0	0.50	262.60	6,337.7	-826.2	617.0	1,031.2	0.18	0.16	11.69
6,594.0	0.40	252.70	6,462.7	-826.4	616.1	1,030.8	0.10	-0.08	-7.92
6,719.0	0.20	250.40	6,587.7	-826.6	615.5	1,030.5	0.16	-0.16	-1.84
6,844.0	0.20	274.90	6,712.7	-826.7	615.0	1,030.3	0.07	0.00	19.60
7,000.0	0.40	301.00	6,868.7	-826.4	614.3	1,029.6	0.15	0.13	16.73

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Project: SEC.25-T5N-R67W
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Wellbore: Wellbore #1
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7,093.0	0.60	294.10	6,961.7	-826.0	613.6	1,028.9	0.22	0.22	-7.42
7,218.0	0.60	227.30	7,086.7	-826.2	612.5	1,028.4	0.53	0.00	-53.44
7,326.2	0.58	266.75	7,194.9	-826.6	611.5	1,028.2	0.37	-0.02	36.45
TARGET CIRCLE 1350'FNL, 2500'FWL									
7,343.0	0.60	272.40	7,211.6	-826.6	611.4	1,028.0	0.37	0.12	33.69
7,468.0	0.40	260.20	7,336.6	-826.7	610.3	1,027.4	0.18	-0.16	-9.76
7,593.0	0.50	236.60	7,461.6	-827.0	609.4	1,027.2	0.17	0.08	-18.88
7,717.0	0.50	229.20	7,585.6	-827.7	608.5	1,027.2	0.05	0.00	-5.97
7,811.0	0.40	223.30	7,679.6	-828.2	608.0	1,027.3	0.12	-0.11	-6.28
7,836.1	0.40	223.30	7,704.8	-828.3	607.9	1,027.3	0.00	0.00	0.00
HARDLINE 128'E OF BHL									
7,856.0	0.40	223.30	7,724.6	-828.4	607.8	1,027.3	0.00	0.00	0.00

Checked By: _____ Approved By: _____ Date: _____