

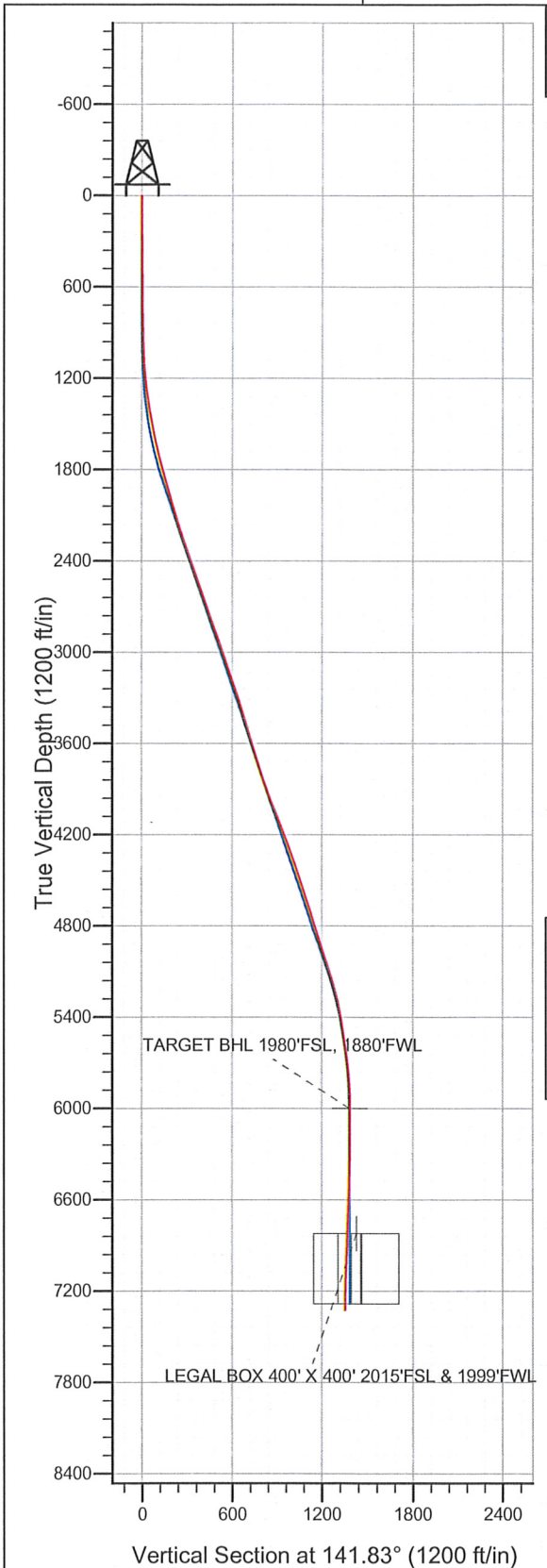
Well Name: **Booth USX EE25-11D**

Surface Location: Booth USX EE25-02D Pad Sec.25-T7N-R65W
 North American Datum 1983 US State Plane 1983 Colorado Northern Zone

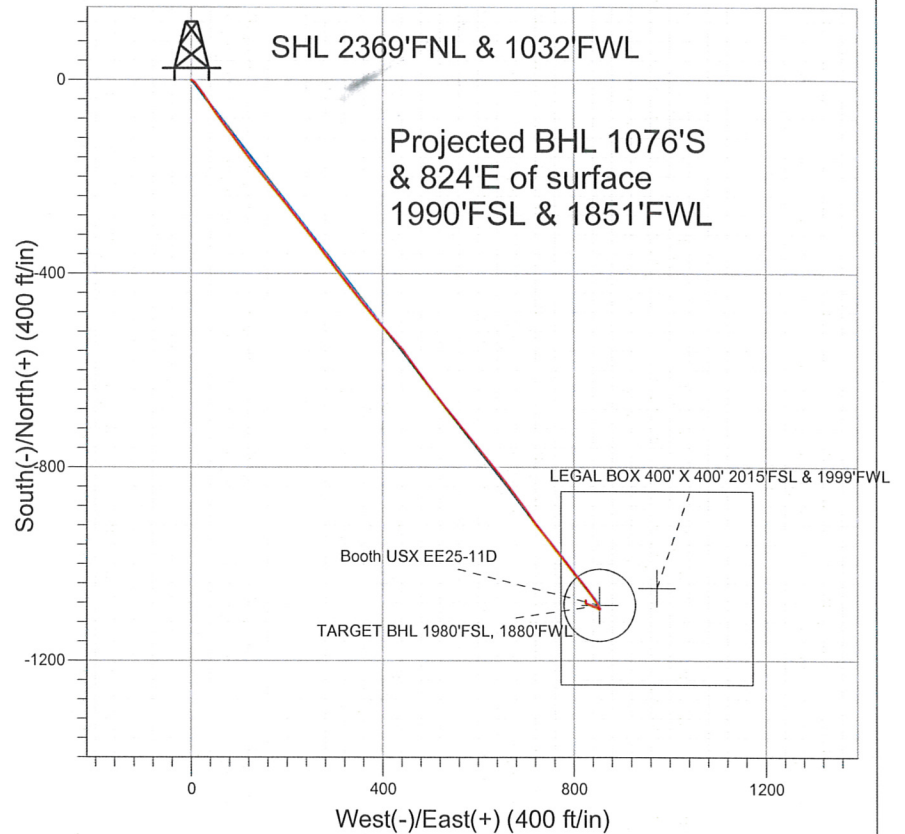
Ground Elevation: 4819.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1442817.88	3245439.72	40.545580	-104.616830	

Original Well Elev WELL @ 4832.0ft (Original Well Elev)



NOBLE ENERGY INC WELD COUNTY CO



LEGEND

- Booth USX EE25-11D, Wellbore #1, Noble Booth USX EE25-11D Plan #1 (7-22-11) V0
- Wellbore #1
- Survey #1

Final Survey Plot

Projected Final Survey -
 7534'MD & 7324'TVD @ 1355'VS
 1.4 deg Inc 6.3 deg AZ

Project: SEC.25-T7N-R65W
 Site: Booth USX EE25-02D Pad Sec.25-T7N-R65W
 Well: Booth USX EE25-11D
 Plan: Wellbore #1



Directional

**NOBLE ENERGY INC WELD
COUNTY CO**

SEC.25-T7N-R65W

Booth USX EE25-02D Pad Sec.25-T7N-R65W

Booth USX EE25-11D

Wellbore #1

Survey: Survey #1

Standard Survey Report

02 November, 2011



Company:	NOBLE ENERGY INC WELD COUNTY CO	Local Co-ordinate Reference:	Well Booth USX EE25-11D
Project:	SEC.25-T7N-R65W	TVD Reference:	WELL @ 4832.0ft (Original Well Elev)
Site:	Booth USX EE25-02D Pad Sec.25-T7N-R65W	MD Reference:	WELL @ 4832.0ft (Original Well Elev)
Well:	Booth USX EE25-11D	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Project	SEC.25-T7N-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	Booth USX EE25-02D Pad Sec.25-T7N-R65W				
Site Position:		Northing:	1,442,876.90ft	Latitude:	40.545740
From:	Lat/Long	Easting:	3,245,511.39ft	Longitude:	-104.616570
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.57 °

Well	Booth USX EE25-11D					
Well Position	+N-S	0.0 ft	Northing:	1,442,817.88 ft	Latitude:	40.545580
	+E-W	0.0 ft	Easting:	3,245,439.72 ft	Longitude:	-104.616830
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,819.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	7/22/2011	8.78	67.19	53,213

Design	Wellbore #1				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.0	0.0	0.0	141.83	

Survey Program	Date 11/2/2011				
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
773.0	7,534.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard	

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
773.0	0.90	125.30	773.0	-3.5	5.0	5.8	0.12	0.12	0.00
867.0	0.90	130.90	867.0	-4.4	6.1	7.3	0.09	0.00	5.96
961.0	1.10	137.10	960.9	-5.6	7.3	8.9	0.24	0.21	6.60
1,056.0	3.20	145.00	1,055.9	-8.4	9.4	12.4	2.23	2.21	8.32
1,149.0	4.70	139.00	1,148.6	-13.4	13.4	18.8	1.67	1.61	-6.45
1,243.0	6.30	144.80	1,242.2	-20.5	18.9	27.8	1.80	1.70	6.17
1,337.0	8.40	145.70	1,335.4	-30.4	25.8	39.8	2.24	2.23	0.96
1,430.0	9.80	146.40	1,427.3	-42.6	34.0	54.5	1.51	1.51	0.75
1,524.0	11.80	145.50	1,519.6	-57.2	43.8	72.1	2.14	2.13	-0.96
1,618.0	13.30	144.50	1,611.3	-73.9	55.6	92.5	1.61	1.60	-1.06
1,711.0	14.20	143.60	1,701.7	-91.8	68.5	114.5	0.99	0.97	-0.97
1,805.0	14.60	141.30	1,792.7	-110.3	82.8	137.9	0.74	0.43	-2.45

Company: NOBLE ENERGY INC WELD COUNTY CO
Project: SEC.25-T7N-R65W
Site: Booth USX EE25-02D Pad Sec.25-T7N-R65W
Well: Booth USX EE25-11D
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Well Booth USX EE25-11D
TVD Reference: WELL @ 4832.0ft (Original Well Elev)
MD Reference: WELL @ 4832.0ft (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)
1,898.0	15.50	142.40	1,882.5	-129.3	97.7	162.1	1.02	0.97	1.18
1,991.0	15.60	142.70	1,972.1	-149.1	112.9	187.0	0.14	0.11	0.32
2,086.0	16.70	142.70	2,063.4	-170.2	128.9	213.4	1.16	1.16	0.00
2,181.0	17.90	141.30	2,154.1	-192.4	146.3	241.7	1.34	1.26	-1.47
2,274.0	18.30	139.90	2,242.5	-214.7	164.6	270.5	0.64	0.43	-1.51
2,367.0	19.20	139.90	2,330.5	-237.6	183.9	300.4	0.97	0.97	0.00
2,460.0	19.90	142.00	2,418.2	-261.8	203.5	331.5	1.07	0.75	2.26
2,554.0	19.50	142.50	2,506.7	-286.8	222.9	363.2	0.46	-0.43	0.53
2,647.0	18.60	140.60	2,594.6	-310.6	241.7	393.6	1.18	-0.97	-2.04
2,740.0	19.40	141.80	2,682.5	-334.2	260.7	423.8	0.96	0.86	1.29
2,834.0	19.50	143.40	2,771.2	-359.1	279.7	455.1	0.58	0.11	1.70
2,927.0	19.10	143.30	2,858.9	-383.7	298.1	485.9	0.43	-0.43	-0.11
3,021.0	19.30	142.50	2,947.7	-408.4	316.7	516.8	0.35	0.21	-0.85
3,114.0	19.80	141.30	3,035.3	-432.9	335.9	547.9	0.69	0.54	-1.29
3,207.0	18.30	140.40	3,123.2	-456.4	355.1	578.2	1.64	-1.61	-0.97
3,300.0	18.60	140.30	3,211.5	-479.1	373.8	607.7	0.32	0.32	-0.11
3,394.0	19.20	138.70	3,300.4	-502.2	393.6	638.1	0.84	0.64	-1.70
3,487.0	17.80	139.40	3,388.6	-524.5	413.0	667.6	1.52	-1.51	0.75
3,580.0	16.40	136.20	3,477.5	-544.8	431.3	694.8	1.81	-1.51	-3.44
3,674.0	17.80	144.80	3,567.3	-566.1	448.8	722.4	3.07	1.49	9.15
3,768.0	16.50	144.70	3,657.2	-588.7	464.8	750.1	1.38	-1.38	-0.11
3,862.0	17.40	142.90	3,747.1	-610.8	481.0	777.5	1.11	0.96	-1.91
3,956.0	19.30	142.40	3,836.3	-634.3	498.9	807.0	2.03	2.02	-0.53
4,050.0	20.60	142.00	3,924.6	-659.7	518.6	839.1	1.39	1.38	-0.43
4,143.0	21.90	141.10	4,011.3	-686.1	539.5	872.8	1.44	1.40	-0.97
4,237.0	22.90	138.90	4,098.2	-713.5	562.6	908.6	1.39	1.06	-2.34
4,331.0	21.60	141.10	4,185.2	-740.8	585.5	944.2	1.64	-1.38	2.34
4,424.0	19.50	141.50	4,272.3	-766.2	605.9	976.8	2.26	-2.26	0.43
4,517.0	19.10	142.00	4,360.1	-790.4	624.9	1,007.6	0.47	-0.43	0.54
4,610.0	18.60	141.70	4,448.1	-814.0	643.5	1,037.6	0.55	-0.54	-0.32
4,704.0	18.20	140.80	4,537.3	-837.1	662.0	1,067.3	0.52	-0.43	-0.96
4,798.0	18.50	143.10	4,626.5	-860.4	680.3	1,096.9	0.83	0.32	2.45
4,891.0	18.40	144.50	4,714.7	-884.2	697.7	1,126.3	0.49	-0.11	1.51
4,985.0	17.40	145.40	4,804.2	-907.8	714.3	1,155.1	1.10	-1.06	0.96
5,078.0	17.70	141.30	4,892.8	-930.3	731.0	1,183.1	1.37	0.32	-4.41
5,171.0	18.30	142.00	4,981.3	-952.8	748.8	1,211.9	0.69	0.65	0.75
5,264.0	16.80	142.70	5,070.0	-975.0	766.0	1,239.9	1.63	-1.61	0.75
5,357.0	17.70	141.10	5,158.8	-996.7	783.0	1,267.5	1.09	0.97	-1.72
5,450.0	14.20	141.70	5,248.2	-1,016.7	798.9	1,293.0	3.77	-3.76	0.65
5,544.0	11.10	140.40	5,339.9	-1,032.7	811.8	1,313.6	3.31	-3.30	-1.38
5,638.0	9.60	141.10	5,432.4	-1,045.8	822.5	1,330.5	1.60	-1.60	0.74
5,732.0	8.60	143.60	5,525.2	-1,057.6	831.6	1,345.4	1.14	-1.06	2.66
5,826.0	8.40	145.40	5,618.1	-1,068.9	839.7	1,359.3	0.35	-0.21	1.91
5,919.0	6.20	145.00	5,710.4	-1,078.6	846.4	1,371.0	2.37	-2.37	-0.43
6,012.0	4.00	151.50	5,803.0	-1,085.5	850.9	1,379.3	2.44	-2.37	6.99
6,107.0	2.40	155.70	5,897.9	-1,090.3	853.3	1,384.5	1.70	-1.68	4.42
6,200.0	0.80	149.10	5,990.8	-1,092.6	854.4	1,387.0	1.73	-1.72	-7.10
6,209.1	0.72	151.41	5,999.9	-1,092.7	854.5	1,387.1	0.91	-0.84	25.29
TARGET BHL 1980'FSL, 1880'FWL									
6,294.0	0.30	238.50	6,084.8	-1,093.3	854.5	1,387.6	0.91	-0.50	102.61
6,387.0	0.60	276.10	6,177.8	-1,093.4	853.8	1,387.2	0.44	0.32	40.43
6,481.0	0.90	289.70	6,271.8	-1,093.1	852.7	1,386.3	0.37	0.32	14.47
6,575.0	1.50	299.00	6,365.8	-1,092.2	850.9	1,384.5	0.67	0.64	9.89
6,669.0	1.50	300.80	6,459.8	-1,091.0	848.7	1,382.2	0.05	0.00	1.91

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6,762.0	2.00	296.20	6,552.7	-1,089.6	846.2	1,379.6	0.56	0.54	-4.95
6,856.0	2.00	291.30	6,646.7	-1,088.3	843.2	1,376.7	0.18	0.00	-5.21
6,950.0	2.10	287.70	6,740.6	-1,087.2	840.1	1,373.9	0.17	0.11	-3.83
7,026.8	2.51	291.93	6,817.3	-1,086.2	837.2	1,371.3	0.57	0.53	5.51
LEGAL BOX 400' X 400' 2015'FSL & 1999'FWL									
7,030.8	2.53	292.12	6,821.3	-1,086.1	837.0	1,371.1	0.57	0.54	4.58
TARGET CIRCLE 1980'FSL & 1880'FWL									
7,044.0	2.60	292.70	6,834.5	-1,085.9	836.5	1,370.6	0.57	0.54	4.41
7,138.0	2.60	289.70	6,928.4	-1,084.3	832.5	1,367.0	0.14	0.00	-3.19
7,231.0	2.80	289.90	7,021.3	-1,082.8	828.4	1,363.2	0.22	0.22	0.22
7,324.0	1.90	322.40	7,114.2	-1,080.8	825.3	1,359.8	1.69	-0.97	34.95
7,418.0	1.50	352.30	7,208.2	-1,078.4	824.2	1,357.2	1.02	-0.43	31.81
7,482.0	1.40	6.30	7,272.2	-1,076.8	824.2	1,355.9	0.57	-0.16	21.88
7,534.0	1.40	6.30	7,324.2	-1,075.5	824.3	1,355.0	0.00	0.00	0.00

Checked By: _____ Approved By: _____ Date: _____