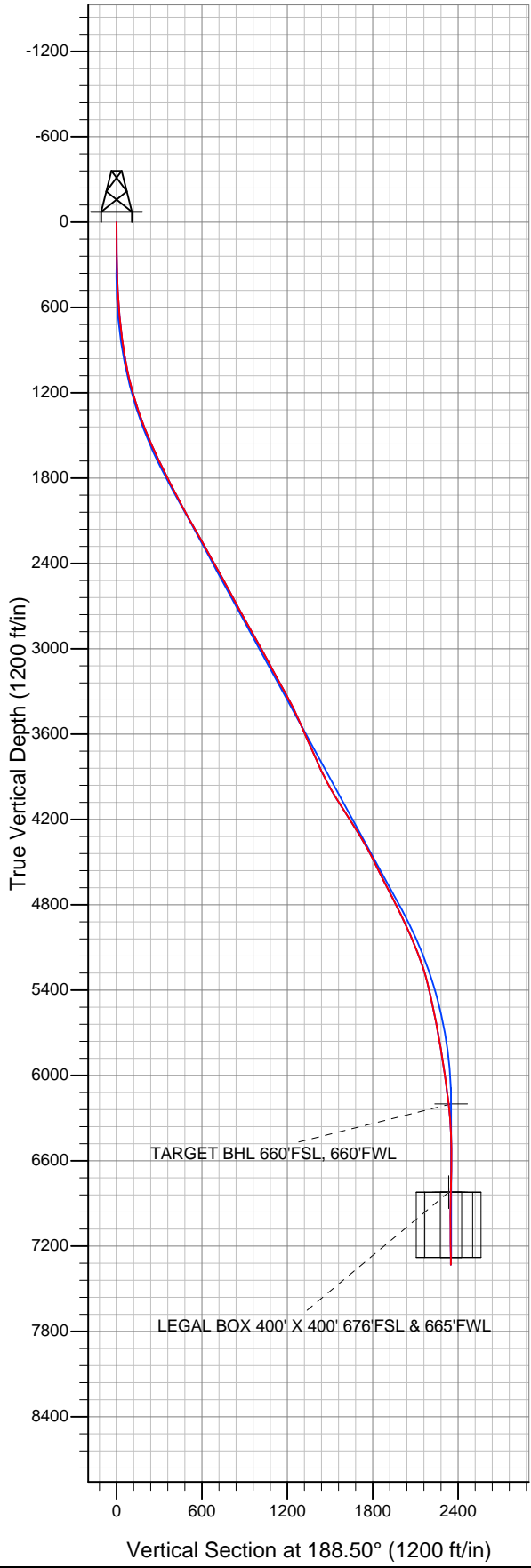
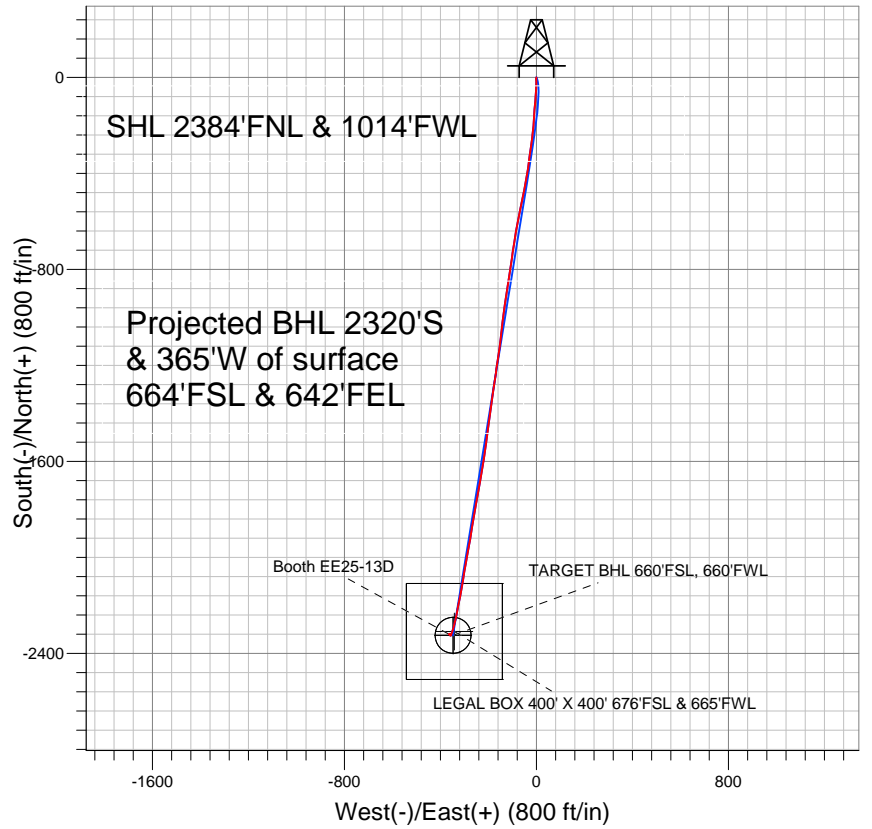




Well Name: **Booth EE25-13D**
 Surface Location: Booth USX EE25-02D Pad Sec.25-T7N-R65W
 North American Datum 1983 US State Plane 1983 Colorado Northern Zone
 Ground Elevation: 4818.0
 +N/-S +E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1442806.78 3245423.16 40.545550 -104.616890
 Original Well Elev WELL @ 4831.0ft (Original Well Elev)



NOBLE ENERGY INC WELD COUNTY CO



LEGEND

- △ Booth EE25-13D, Wellbore #1, Noble Booth EE25-13D Plan #1 (7-22-11) V0
- Wellbore #1
- Survey #1

Final Survey Plot

Projected Final Survey -
 7853'MD & 7331'TVD @ 2348'VS
 0.4 deg Inc 201.1 deg AZ

Project: SEC.25-T7N-R65W
 Site: Booth USX EE25-02D Pad Sec.25-T7N-R65W
 Well: Booth EE25-13D
 Plan: Wellbore #1



Directional

NOBLE ENERGY INC WELD COUNTY CO

SEC.25-T7N-R65W

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

Booth EE25-13D

Wellbore #1

Survey: Survey #1

Standard Survey Report

31 October, 2011



Company:	NOBLE ENERGY INC WELD COUNTY CO	Local Co-ordinate Reference:	Well Booth EE25-13D
Project:	SEC.25-T7N-R65W	TVD Reference:	WELL @ 4831.0ft (Original Well Elev)
Site:	Booth USX EE25-02D Pad Sec.25-T7N-R65W	MD Reference:	WELL @ 4831.0ft (Original Well Elev)
Well:	Booth EE25-13D	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 EE25-13D					
Well Position	+N/-S	0.0 ft	Northing:	1,442,806.78 ft	Latitude:	40.545550
	+E/-W	0.0 ft	Easting:	3,245,423.16 ft	Longitude:	-104.616890
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,818.0 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	188.50	

Survey Program	Date	10/31/2011			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
220.0	7,853.0	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	
220.0	0.50	217.40	220.0	-0.8	-0.6	0.8	0.23	0.23	0.00	
312.0	1.10	192.50	312.0	-1.9	-1.0	2.1	0.74	0.65	-27.07	
403.0	2.10	182.60	403.0	-4.5	-1.3	4.6	1.14	1.10	-10.88	
494.0	3.10	174.20	493.9	-8.6	-1.1	8.6	1.17	1.10	-9.23	
586.0	4.40	178.80	585.7	-14.6	-0.8	14.5	1.45	1.41	5.00	
679.0	5.70	180.90	678.3	-22.8	-0.8	22.6	1.41	1.40	2.26	
773.0	6.60	180.90	771.8	-32.8	-0.9	32.6	0.96	0.96	0.00	
867.0	8.20	181.90	865.0	-44.9	-1.2	44.6	1.71	1.70	1.06	
961.0	10.00	184.20	957.8	-59.8	-2.1	59.4	1.95	1.91	2.45	
1,056.0	12.10	184.60	1,051.0	-77.9	-3.5	77.6	2.21	2.21	0.42	
1,149.0	14.20	184.20	1,141.6	-99.0	-5.1	98.7	2.26	2.26	-0.43	
1,243.0	16.20	185.60	1,232.3	-123.6	-7.2	123.3	2.16	2.13	1.49	

Company:	NOBLE ENERGY INC WELD COUNTY CO	Local Co-ordinate Reference:	Well Booth EE25-13D
Project:	SEC.25-T7N-R65W	TVD Reference:	WELL @ 4831.0ft (Original Well Elev)
Site:	Booth USX EE25-02D Pad Sec.25-T7N-R65W	MD Reference:	WELL @ 4831.0ft (Original Well Elev)
Well:	Booth EE25-13D	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	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)	
1,337.0	18.40	182.80	1,322.0	-151.4	-9.2	151.1	2.50	2.34	-2.98	
1,430.0	20.60	183.70	1,409.7	-182.4	-11.0	182.1	2.39	2.37	0.97	
1,524.0	22.60	185.80	1,497.1	-216.9	-13.9	216.6	2.28	2.13	2.23	
1,618.0	24.10	187.20	1,583.4	-253.9	-18.1	253.8	1.70	1.60	1.49	
1,711.0	25.70	188.30	1,667.7	-292.7	-23.4	293.0	1.79	1.72	1.18	
1,805.0	26.20	188.40	1,752.3	-333.4	-29.4	334.1	0.53	0.53	0.11	
1,898.0	27.10	188.40	1,835.4	-374.7	-35.5	375.8	0.97	0.97	0.00	
1,991.0	27.30	188.40	1,918.1	-416.7	-41.7	418.3	0.22	0.22	0.00	
2,086.0	28.10	191.20	2,002.2	-460.2	-49.2	462.5	1.61	0.84	2.95	
2,181.0	29.40	191.40	2,085.5	-505.0	-58.2	508.1	1.37	1.37	0.21	
2,274.0	30.20	192.50	2,166.2	-550.3	-67.7	554.2	1.04	0.86	1.18	
2,367.0	29.30	190.90	2,246.9	-595.4	-77.1	600.3	1.29	-0.97	-1.72	
2,460.0	28.80	189.00	2,328.2	-639.9	-84.9	645.4	1.13	-0.54	-2.04	
2,554.0	29.70	188.80	2,410.3	-685.3	-92.0	691.4	0.96	0.96	-0.21	
2,647.0	29.20	189.10	2,491.2	-730.5	-99.1	737.1	0.56	-0.54	0.32	
2,740.0	27.40	188.10	2,573.1	-774.0	-105.7	781.2	2.00	-1.94	-1.08	
2,834.0	28.40	189.00	2,656.2	-817.5	-112.3	825.2	1.15	1.06	0.96	
2,927.0	29.40	187.90	2,737.6	-862.0	-118.9	870.1	1.22	1.08	-1.18	
3,021.0	29.00	187.90	2,819.7	-907.4	-125.2	916.0	0.43	-0.43	0.00	
3,114.0	29.20	190.00	2,900.9	-952.1	-132.2	961.2	1.12	0.22	2.26	
3,207.0	28.60	187.40	2,982.3	-996.5	-139.0	1,006.1	1.50	-0.65	-2.80	
3,300.0	29.50	185.30	3,063.6	-1,041.4	-144.0	1,051.2	1.46	0.97	-2.26	
3,394.0	27.20	187.30	3,146.4	-1,085.7	-148.9	1,095.8	2.65	-2.45	2.13	
3,487.0	28.50	187.90	3,228.6	-1,128.8	-154.6	1,139.3	1.43	1.40	0.65	
3,580.0	29.00	188.40	3,310.1	-1,173.1	-161.0	1,184.0	0.60	0.54	0.54	
3,674.0	27.10	187.50	3,393.1	-1,216.9	-167.1	1,228.2	2.07	-2.02	-0.96	
3,768.0	24.70	189.10	3,477.6	-1,257.5	-173.0	1,269.2	2.66	-2.55	1.70	
3,862.0	23.80	187.70	3,563.3	-1,295.7	-178.6	1,307.9	1.14	-0.96	-1.49	
3,956.0	23.50	189.50	3,649.5	-1,333.0	-184.3	1,345.6	0.83	-0.32	1.91	
4,050.0	23.70	187.40	3,735.6	-1,370.2	-189.8	1,383.2	0.92	0.21	-2.23	
4,143.0	24.80	187.20	3,820.4	-1,408.1	-194.7	1,421.4	1.19	1.18	-0.22	
4,237.0	26.50	187.50	3,905.1	-1,448.4	-199.9	1,462.0	1.81	1.81	0.32	
4,331.0	29.00	187.20	3,988.3	-1,491.8	-205.5	1,505.8	2.66	2.66	-0.32	
4,424.0	32.10	188.80	4,068.4	-1,538.6	-212.1	1,553.1	3.45	3.33	1.72	
4,517.0	33.80	188.60	4,146.4	-1,588.6	-219.7	1,603.6	1.83	1.83	-0.22	
4,610.0	32.40	188.30	4,224.3	-1,638.9	-227.2	1,654.4	1.52	-1.51	-0.32	
4,704.0	30.90	189.70	4,304.3	-1,687.6	-234.9	1,703.8	1.78	-1.60	1.49	
4,798.0	28.30	190.40	4,386.1	-1,733.3	-243.0	1,750.2	2.79	-2.77	0.74	
4,891.0	27.80	191.80	4,468.1	-1,776.2	-251.4	1,793.8	0.89	-0.54	1.51	
4,985.0	26.40	190.20	4,551.8	-1,818.2	-259.6	1,836.6	1.68	-1.49	-1.70	
5,079.0	26.80	188.80	4,635.9	-1,859.7	-266.5	1,878.7	0.79	0.43	-1.49	
5,172.0	28.00	188.40	4,718.4	-1,902.1	-272.9	1,921.5	1.31	1.29	-0.43	
5,265.0	26.90	190.20	4,801.0	-1,944.4	-279.8	1,964.4	1.48	-1.18	1.94	
5,358.0	25.30	190.20	4,884.5	-1,984.6	-287.1	2,005.3	1.72	-1.72	0.00	
5,451.0	24.50	190.40	4,968.8	-2,023.1	-294.1	2,044.4	0.86	-0.86	0.22	
5,545.0	22.00	189.70	5,055.2	-2,059.7	-300.6	2,081.5	2.68	-2.66	-0.74	
5,639.0	21.60	189.00	5,142.5	-2,094.1	-306.2	2,116.4	0.51	-0.43	-0.74	
5,733.0	19.00	189.00	5,230.6	-2,126.3	-311.3	2,149.0	2.77	-2.77	0.00	
5,827.0	15.20	190.90	5,320.5	-2,153.6	-316.1	2,176.6	4.09	-4.04	2.02	
5,920.0	12.80	193.70	5,410.7	-2,175.5	-320.8	2,199.1	2.68	-2.58	3.01	
6,013.0	11.30	190.00	5,501.6	-2,194.5	-324.8	2,218.4	1.81	-1.61	-3.98	
6,108.0	11.30	190.70	5,594.8	-2,212.8	-328.2	2,237.0	0.14	0.00	0.74	
6,201.0	11.30	191.10	5,686.0	-2,230.7	-331.6	2,255.2	0.08	0.00	0.43	
6,295.0	10.20	191.80	5,778.3	-2,247.9	-335.1	2,272.7	1.18	-1.17	0.74	

Company:	NOBLE ENERGY INC WELD COUNTY CO	Local Co-ordinate Reference:	Well Booth EE25-13D
Project:	SEC.25-T7N-R65W	TVD Reference:	WELL @ 4831.0ft (Original Well Elev)
Site:	Booth USX EE25-02D Pad Sec.25-T7N-R65W	MD Reference:	WELL @ 4831.0ft (Original Well Elev)
Well:	Booth EE25-13D	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	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)	
6,388.0	7.80	193.50	5,870.2	-2,262.1	-338.2	2,287.3	2.60	-2.58	1.83	
6,482.0	7.60	191.10	5,963.3	-2,274.4	-340.9	2,299.8	0.40	-0.21	-2.55	
6,576.0	9.10	196.70	6,056.3	-2,287.6	-344.3	2,313.4	1.81	1.60	5.96	
6,669.0	7.00	199.20	6,148.4	-2,300.0	-348.2	2,326.2	2.29	-2.26	2.69	
6,722.8	6.31	199.09	6,201.8	-2,305.9	-350.3	2,332.4	1.28	-1.28	-0.20	
TARGET BHL 660'FSL, 660'FWL										
6,763.0	5.80	199.00	6,241.8	-2,309.9	-351.7	2,336.5	1.28	-1.28	-0.24	
6,856.0	4.40	197.40	6,334.5	-2,317.8	-354.3	2,344.7	1.51	-1.51	-1.72	
6,951.0	2.90	198.40	6,429.3	-2,323.5	-356.1	2,350.7	1.58	-1.58	1.05	
7,045.0	1.10	275.30	6,523.2	-2,325.7	-357.8	2,353.0	3.04	-1.91	81.81	
7,138.0	2.10	313.50	6,616.2	-2,324.5	-359.9	2,352.1	1.52	1.08	41.08	
7,232.0	1.80	320.10	6,710.1	-2,322.1	-362.1	2,350.2	0.40	-0.32	7.02	
7,325.0	1.70	33.40	6,803.1	-2,319.9	-362.3	2,347.9	2.25	-0.11	78.82	
7,343.0	1.41	30.62	6,821.1	-2,319.5	-362.0	2,347.5	1.67	-1.62	-15.44	
TARGET CIRCLE 660'FSL & 660'FWL										
7,343.2	1.41	30.58	6,821.3	-2,319.4	-362.0	2,347.5	1.67	-1.60	-18.66	
LEGAL BOX 400' X 400' 676'FSL & 665'FWL										
7,418.0	0.40	331.50	6,896.1	-2,318.4	-361.7	2,346.4	1.67	-1.34	-78.99	
7,512.0	1.10	269.60	6,990.1	-2,318.1	-362.7	2,346.3	1.04	0.74	-65.85	
7,605.0	0.40	211.80	7,083.1	-2,318.4	-363.8	2,346.7	1.02	-0.75	-62.15	
7,698.0	0.60	238.70	7,176.1	-2,319.0	-364.4	2,347.3	0.33	0.22	28.92	
7,801.0	0.40	201.10	7,279.1	-2,319.6	-365.0	2,348.0	0.36	-0.19	-36.50	
7,853.0	0.40	201.10	7,331.1	-2,319.9	-365.1	2,348.4	0.00	0.00	0.00	

Checked By: _____ Approved By: _____ Date: _____