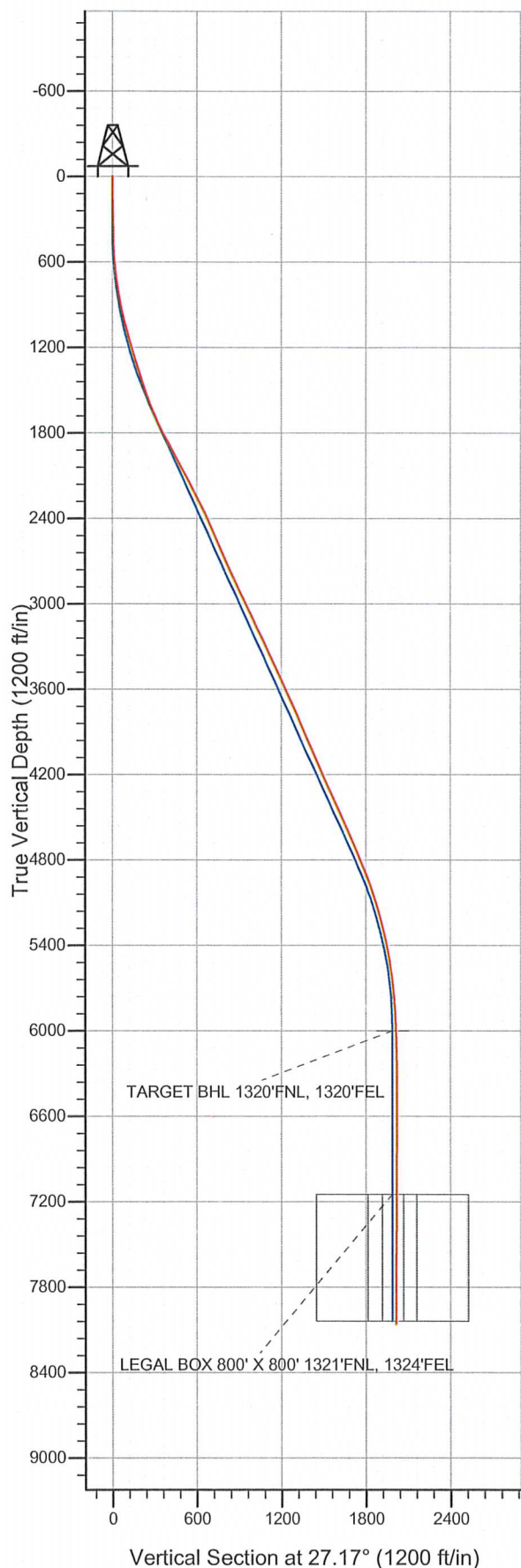
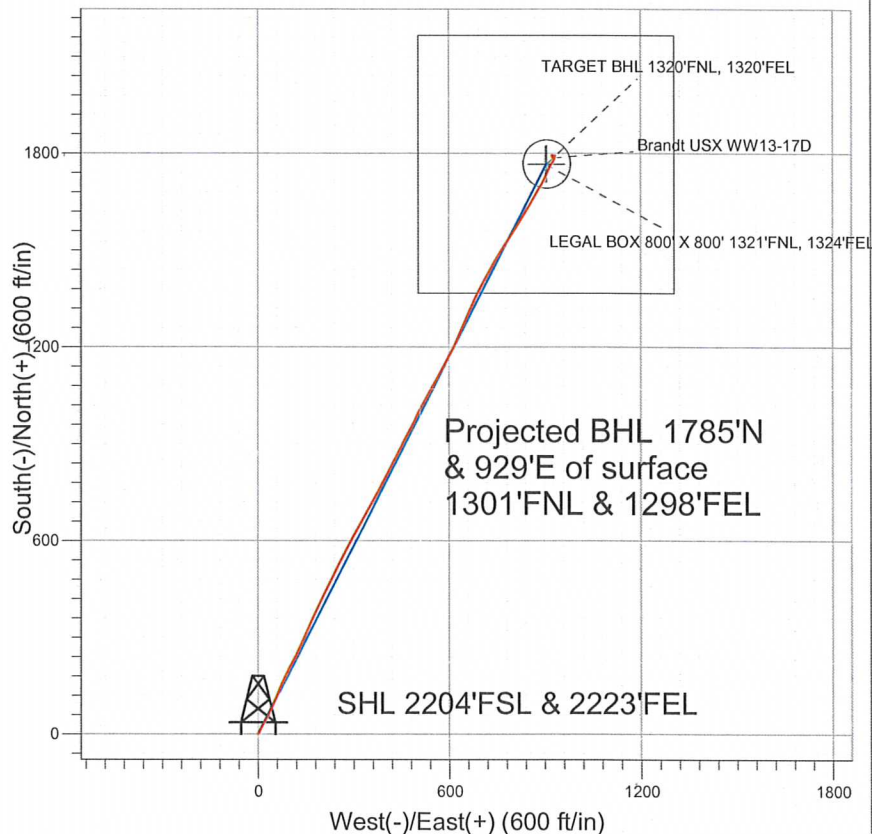


Well Name: **Brandt USX WW13-17D**
 Surface Location: Brandt USX WW13-07D Pad Sec.13-T1N-R66W
 North American Datum 1983 US State Plane 1983 Colorado Northern Zone
 Ground Elevation: 5047.0
 +N/-S +E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1262047.62 3217247.90 40.050100 -104.723960
 Original Well Elev WELL @ 5060.0ft (Original Well Elev)



NOBLE ENERGY INC WELD COUNTY CO



LEGEND

- Brandt USX WW13-17D, Wellbore #1, Noble Brandt USX WW13-17D Plan #2 (11-29-11) R
- Wellbore #1
- Survey #1

Final Survey Plot

Projected Final Survey -
 8465'MD & 8062'TVD @ 2012'VS
 0.8 deg Inc 122.0 deg AZ

Project: SEC.13-T1N-R66W
 Site: Brandt USX WW13-07D Pad Sec.13-T1N-R66W
 Well: Brandt USX WW13-17D
 Plan: Wellbore #1



Directional

NOBLE ENERGY INC WELD COUNTY CO

SEC.13-T1N-R66W

Brandt USX WW13-07D Pad Sec.13-T1N-R66W

Brandt USX WW13-17D

Wellbore #1

Survey: Survey #1

Standard Survey Report

08 December, 2011



Company: NOBLE ENERGY INC WELD COUNTY CO
Project: SEC.13-T1N-R66W
Site: Brandt USX WW13-07D Pad Sec.13-T1N-R66W
Well: Brandt USX WW13-17D
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Well Brandt USX WW13-17D
TVD Reference: WELL @ 5060.0ft (Original Well Elev)
MD Reference: WELL @ 5060.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: Landmark

Project	SEC.13-T1N-R66W, 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 Brandt USX WW13-07D Pad Sec.13-T1N-R66W

Site Position:		Northing:	1,262,058.41 ft	Latitude:	40.050130
From:	Lat/Long	Easting:	3,217,231.01 ft	Longitude:	-104.724020
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.50 °

Well	Brandt USX WW13-17D				
Well Position	+N/-S	0.0 ft	Northing:	1,262,047.62 ft	Latitude: 40.050100
	+E/-W	0.0 ft	Easting:	3,217,247.90 ft	Longitude: -104.723960
Position Uncertainty	0.0 ft		Wellhead Elevation:	ft	Ground Level: 5,047.0 ft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	11/29/2011	8.80	66.77	52,942

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	27.17

Survey Program Date 12/8/2011

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
167.0	8,465.0	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
167.0	1.00	50.00	167.0	0.9	1.1	1.3	0.60	0.60	0.00
259.0	1.00	55.20	259.0	1.9	2.4	2.8	0.10	0.00	5.65
352.0	0.90	51.00	352.0	2.8	3.6	4.2	0.13	-0.11	-4.52
444.0	1.40	13.50	443.9	4.4	4.4	5.9	0.95	0.54	-40.76
536.0	3.30	19.00	535.9	8.0	5.6	9.6	2.08	2.07	5.98
628.0	5.60	29.50	627.6	14.4	8.6	16.7	2.64	2.50	11.41
721.0	7.70	28.30	720.0	23.8	13.8	27.5	2.26	2.26	-1.29
823.0	9.50	28.30	820.8	37.3	21.1	42.8	1.76	1.76	0.00
905.0	11.00	28.70	901.5	50.1	28.0	57.4	1.83	1.83	0.49
986.0	12.70	27.30	980.8	64.8	35.8	74.0	2.13	2.10	-1.73
1,068.0	14.90	25.50	1,060.4	82.3	44.5	93.5	2.73	2.68	-2.20
1,150.0	16.40	22.50	1,139.3	102.5	53.5	115.6	2.08	1.83	-3.66

Company: NOBLE ENERGY INC WELD COUNTY CO
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Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Well Brandt USX WW13-17D
TVD Reference: WELL @ 5060.0ft (Original Well Elev)
MD Reference: WELL @ 5060.0ft (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)
1,213.0	17.40	22.50	1,199.6	119.4	60.5	133.9	1.59	1.59	0.00
1,274.0	18.00	22.70	1,257.7	136.5	67.6	152.4	0.99	0.98	0.33
1,355.0	16.80	22.30	1,335.0	158.9	76.9	176.5	1.49	-1.48	-0.49
1,437.0	17.90	25.90	1,413.3	181.2	86.9	200.9	1.87	1.34	4.39
1,519.0	20.10	28.70	1,490.8	204.9	99.2	227.6	2.90	2.68	3.41
1,600.0	20.50	27.80	1,566.8	229.7	112.5	255.7	0.63	0.49	-1.11
1,682.0	22.20	25.10	1,643.2	256.4	125.7	285.5	2.39	2.07	-3.29
1,764.0	24.90	24.60	1,718.3	286.1	139.5	318.3	3.30	3.29	-0.61
1,846.0	27.00	23.70	1,792.1	318.9	154.1	354.1	2.61	2.56	-1.10
1,927.0	28.30	25.30	1,863.8	353.1	169.7	391.6	1.85	1.60	1.98
2,009.0	28.30	24.40	1,936.0	388.4	186.1	430.5	0.52	0.00	-1.10
2,091.0	28.70	26.70	2,008.1	423.6	203.0	469.6	1.42	0.49	2.80
2,173.0	28.80	27.10	2,080.0	458.8	220.8	509.0	0.26	0.12	0.49
2,254.0	27.50	26.00	2,151.4	493.0	237.9	547.2	1.73	-1.60	-1.36
2,336.0	27.30	26.00	2,224.2	526.9	254.4	585.0	0.24	-0.24	0.00
2,418.0	26.60	27.60	2,297.3	560.1	271.2	622.1	1.23	-0.85	1.95
2,499.0	26.10	28.50	2,369.9	591.8	288.1	658.1	0.79	-0.62	1.11
2,581.0	25.10	29.40	2,443.8	622.8	305.2	693.5	1.31	-1.22	1.10
2,663.0	24.10	28.70	2,518.4	652.7	321.8	727.6	1.27	-1.22	-0.85
2,745.0	22.40	28.70	2,593.7	681.1	337.4	759.9	2.07	-2.07	0.00
2,826.0	23.50	29.40	2,668.3	708.7	352.7	791.5	1.40	1.36	0.86
2,908.0	24.20	29.70	2,743.3	737.5	369.0	824.6	0.87	0.85	0.37
2,990.0	24.40	29.00	2,818.0	766.9	385.6	858.4	0.43	0.24	-0.85
3,071.0	25.80	27.30	2,891.4	797.2	401.8	892.7	1.94	1.73	-2.10
3,153.0	26.10	26.60	2,965.1	829.2	418.0	928.6	0.52	0.37	-0.85
3,235.0	26.30	27.30	3,038.7	861.5	434.5	964.8	0.45	0.24	0.85
3,317.0	24.90	26.70	3,112.6	893.0	450.5	1,000.2	1.74	-1.71	-0.73
3,398.0	26.10	29.20	3,185.7	923.8	466.9	1,035.1	1.99	1.48	3.09
3,480.0	25.10	26.70	3,259.7	955.1	483.5	1,070.5	1.79	-1.22	-3.05
3,562.0	24.60	26.70	3,334.1	985.9	499.0	1,105.0	0.61	-0.61	0.00
3,643.0	24.60	27.30	3,407.8	1,015.9	514.3	1,138.7	0.31	0.00	0.74
3,725.0	25.10	29.50	3,482.2	1,046.2	530.7	1,173.1	1.28	0.61	2.68
3,807.0	24.80	31.10	3,556.5	1,076.1	548.1	1,207.7	0.90	-0.37	1.95
3,889.0	24.80	28.00	3,631.0	1,106.0	565.1	1,242.0	1.59	0.00	-3.78
3,970.0	24.90	27.80	3,704.5	1,136.1	581.0	1,276.1	0.16	0.12	-0.25
4,052.0	24.00	30.10	3,779.1	1,165.8	597.4	1,310.0	1.60	-1.10	2.80
4,134.0	22.80	28.00	3,854.4	1,194.3	613.3	1,342.5	1.78	-1.46	-2.56
4,216.0	22.80	23.40	3,930.0	1,222.9	627.0	1,374.3	2.17	0.00	-5.61
4,297.0	23.00	20.40	4,004.6	1,252.1	638.8	1,405.6	1.46	0.25	-3.70
4,379.0	23.90	24.10	4,079.8	1,282.3	651.2	1,438.1	2.10	1.10	4.51
4,461.0	24.10	25.90	4,154.7	1,312.5	665.2	1,471.5	0.93	0.24	2.20
4,542.0	24.20	25.10	4,228.6	1,342.4	679.5	1,504.6	0.42	0.12	-0.99
4,624.0	25.00	27.80	4,303.2	1,373.0	694.7	1,538.7	1.68	0.98	3.29
4,706.0	24.40	28.10	4,377.7	1,403.2	710.8	1,573.0	0.75	-0.73	0.37
4,788.0	23.90	28.10	4,452.5	1,432.8	726.6	1,606.5	0.61	-0.61	0.00
4,869.0	24.00	29.00	4,526.5	1,461.7	742.3	1,639.4	0.47	0.12	1.11
4,951.0	25.30	32.00	4,601.1	1,491.2	759.7	1,673.5	2.20	1.59	3.66
5,033.0	24.40	33.60	4,675.5	1,520.1	778.3	1,707.8	1.37	-1.10	1.95
5,114.0	23.20	33.20	4,749.6	1,547.4	796.3	1,740.3	1.49	-1.48	-0.49
5,196.0	21.70	32.50	4,825.4	1,573.7	813.3	1,771.5	1.86	-1.83	-0.85
5,278.0	20.90	32.20	4,901.8	1,598.9	829.3	1,801.1	0.98	-0.98	-0.37
5,360.0	20.00	31.80	4,978.6	1,623.2	844.4	1,829.7	1.11	-1.10	-0.49
5,441.0	18.30	30.60	5,055.1	1,645.9	858.2	1,856.2	2.15	-2.10	-1.48
5,523.0	16.80	29.40	5,133.3	1,667.3	870.6	1,880.9	1.88	-1.83	-1.46

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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)
5,605.0	14.70	29.90	5,212.2	1,686.6	881.6	1,903.1	2.57	-2.56	0.61
5,686.0	14.20	30.60	5,290.6	1,704.1	891.8	1,923.3	0.65	-0.62	0.86
5,768.0	11.60	26.00	5,370.6	1,720.2	900.5	1,941.6	3.41	-3.17	-5.61
5,850.0	10.50	25.10	5,451.1	1,734.4	907.3	1,957.3	1.36	-1.34	-1.10
5,932.0	9.00	23.60	5,531.9	1,747.0	913.0	1,971.1	1.86	-1.83	-1.83
6,013.0	8.00	24.40	5,612.0	1,757.9	917.9	1,983.1	1.24	-1.23	0.99
6,095.0	5.80	33.50	5,693.4	1,766.6	922.5	1,992.9	2.99	-2.68	11.10
6,177.0	5.20	34.50	5,775.0	1,773.1	926.9	2,000.7	0.74	-0.73	1.22
6,259.0	3.90	34.10	5,856.7	1,778.5	930.6	2,007.2	1.59	-1.59	-0.49
6,340.0	2.80	18.60	5,937.6	1,782.6	932.8	2,011.9	1.75	-1.36	-19.14
6,401.5	2.47	4.47	5,999.0	1,785.4	933.4	2,014.6	1.18	-0.54	-23.00
TARGET BHL 1320'FNL, 1320'FEL									
6,422.0	2.40	359.00	6,019.5	1,786.3	933.4	2,015.4	1.18	-0.34	-26.60
6,504.0	1.20	21.50	6,101.5	1,788.8	933.7	2,017.7	1.67	-1.46	27.44
6,585.0	0.80	6.50	6,182.5	1,790.1	934.0	2,019.1	0.59	-0.49	-18.52
6,667.0	0.30	358.10	6,264.5	1,790.9	934.1	2,019.8	0.62	-0.61	-10.24
6,831.0	0.40	309.00	6,428.5	1,791.7	933.6	2,020.3	0.19	0.06	-29.94
6,994.0	0.60	255.90	6,591.5	1,791.8	932.4	2,019.9	0.30	0.12	-32.58
7,157.0	0.70	267.00	6,754.4	1,791.6	930.5	2,018.8	0.10	0.06	6.81
7,321.0	0.90	292.90	6,918.4	1,792.0	928.4	2,018.2	0.25	0.12	15.79
7,484.0	1.00	282.00	7,081.4	1,792.8	925.8	2,017.7	0.13	0.06	-6.69
7,550.7	0.64	288.46	7,148.1	1,793.1	924.9	2,017.5	0.56	-0.55	9.69
TARGET CIRCLE 1320'FNL, 1320'FEL - LEGAL BOX 800' X 800' 1321'FNL, 1324'FEL									
7,648.0	0.20	343.70	7,245.4	1,793.4	924.3	2,017.6	0.56	-0.45	56.75
7,811.0	0.90	152.20	7,408.4	1,792.5	924.8	2,017.0	0.67	0.43	103.37
7,975.0	1.10	169.80	7,572.4	1,789.8	925.7	2,015.1	0.22	0.12	10.73
8,138.0	0.70	160.30	7,735.3	1,787.4	926.3	2,013.1	0.26	-0.25	-5.83
8,302.0	0.40	116.00	7,899.3	1,786.2	927.2	2,012.5	0.30	-0.18	-27.01
8,465.0	0.80	122.00	8,062.3	1,785.3	928.6	2,012.4	0.25	0.25	3.68

Checked By: _____ Approved By: _____ Date: _____