ENSIGN Directional

Well Name: **Badding USX W25-07D**

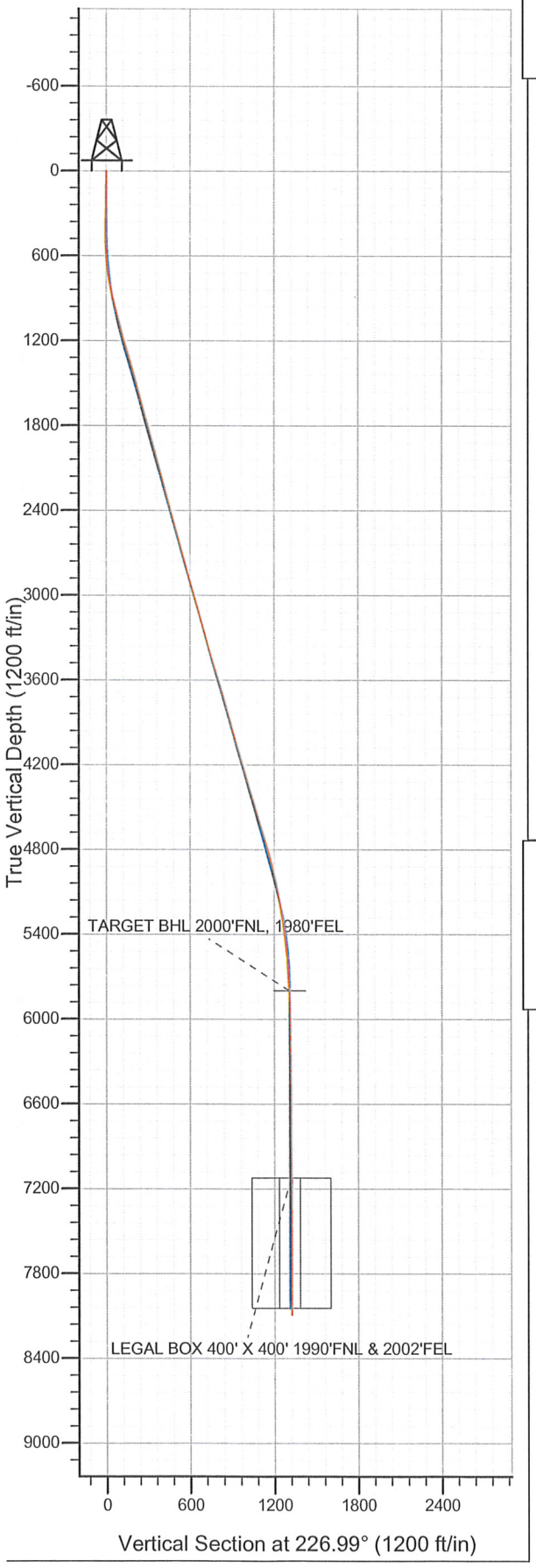
Surface Location: Badding USX W25-07D Pad Sec.25-T2N-R66W

North American Datum 1983 US State Plane 1983 Colorado Northern Zone

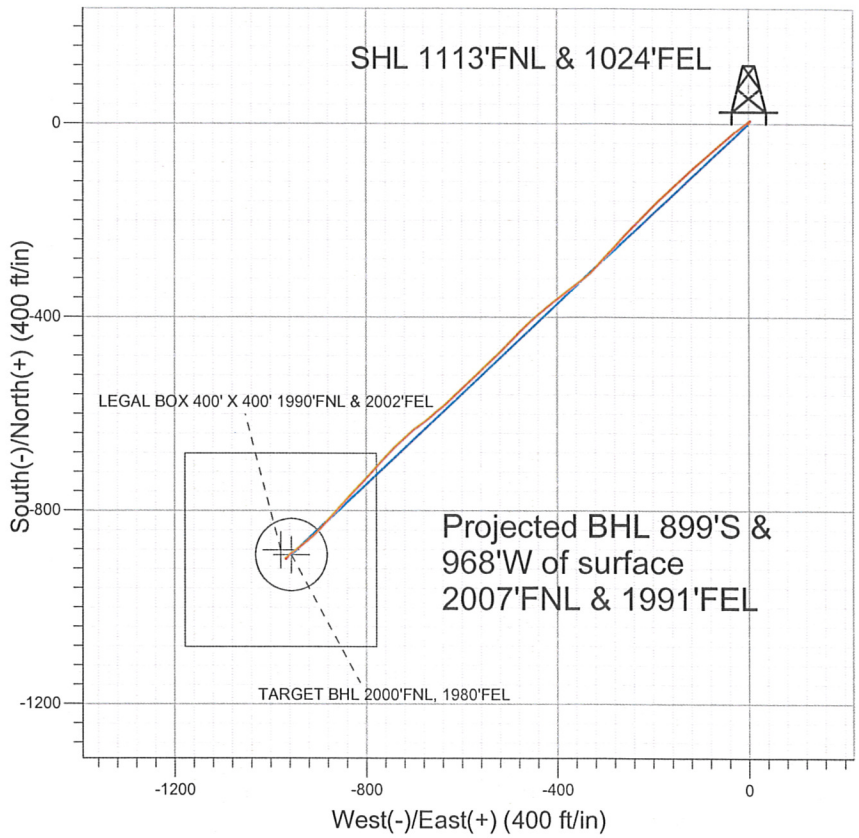
Ground Elevation: 5025.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1285160.12	3218290.28	40.113520	-104.719510	

Original Well Elev WELL @ 5038.0ft (Original Well Elev)



NOBLE ENERGY INC WELD COUNTY CO



LEGEND

- Badding USX W25-07D, Wellbore #1, Noble Badding USX W25-07D Plan #2 (6-30-11) V(
- Wellbore #1
- Survey #1

Final Survey Plot

Projected Final Survey -
8262'MD & 8088'TVD @ 1321'VS
0.2 deg Inc 282.9 deg AZ

Project: SEC.25-T2N-R66W
Site: Badding USX W25-07D Pad Sec.25-T2N-R66W
Well: Badding USX W25-07D
Plan: Wellbore #1

ENSIGN
Directional

NOBLE ENERGY INC WELD COUNTY CO

SEC.25-T2N-R66W
Badding USX W25-07D Pad Sec.25-T2N-R66W
Badding USX W25-07D

Wellbore #1

Survey: Survey #1

Standard Survey Report

11 July, 2011

noble energy

Company:	NOBLE ENERGY INC WELD COUNTY CO	**Local Co-ordinate Reference:**	Well Badding USX W25-07D
Project:	SEC.25-T2N-R66W	**TVD Reference:**	WELL @ 5038.0ft (Original Well Elev)
Site:	Badding USX W25-07D Pad Sec.25-T2N-R66W	**MD Reference:**	WELL @ 5038.0ft (Original Well Elev)
Well:	Badding USX W25-07D	**North Reference:**	True
Wellbore:	Wellbore #1	**Survey Calculation Method:**	Minimum Curvature
Design:	Wellbore #1	**Database:**	Landmark

Project SEC.25-T2N-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 Badding USX W25-07D Pad Sec.25-T2N-R66W

Site Position:		**Northing:**	1,285,160.13 ft	**Latitude:**	40.113520
From:	Lat/Long	**Easting:**	3,218,290.28 ft	**Longitude:**	-104.719510
Position Uncertainty:	0.0 ft	**Slot Radius:**	"	**Grid Convergence:**	0.50 °

Well Badding USX W25-07D

Well Position	**+N/-S**	0.0 ft	**Northing:**	1,285,160.12 ft	**Latitude:**	40.113520
	+E/-W	0.0 ft	**Easting:**	3,218,290.28 ft	**Longitude:**	-104.719510
Position Uncertainty		0.0 ft	**Wellhead Elevation:**	ft	**Ground Level:**	5,025.0 ft

Wellbore Wellbore #1

Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2010	5/2/2011	8.83	66.83	52,997

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 (°)**
	5,800.0	0.0	0.0	226.99

Survey Program **Date** 7/11/2011

From (ft)	**To (ft)**	**Survey (Wellbore)**	**Tool Name**	**Description**
93.0	8,262.0	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
93.0	1.10	19.20	93.0	0.8	0.3	-0.8	1.18	1.18	0.00
181.0	1.50	39.10	181.0	2.5	1.3	-2.7	0.68	0.45	22.61
269.0	0.70	15.30	269.0	3.9	2.2	-4.3	1.03	-0.91	-27.05
363.0	1.30	28.00	362.9	5.4	2.8	-5.8	0.68	0.64	13.51
455.0	0.40	236.70	454.9	6.2	3.0	-6.4	1.81	-0.98	-164.46
547.0	3.00	242.90	546.9	4.9	0.6	-3.8	2.83	2.83	6.74
639.0	5.20	228.60	638.6	1.1	-4.6	2.7	2.62	2.39	-15.54
732.0	8.10	230.70	731.0	-5.9	-12.9	13.4	3.13	3.12	2.26
826.0	11.00	237.10	823.7	-14.9	-25.5	28.9	3.28	3.09	6.81
920.0	13.80	230.00	915.5	-27.0	-41.7	48.9	3.39	2.98	-7.55
982.0	15.10	226.40	975.5	-37.3	-53.2	64.4	2.55	2.10	-5.81
1,085.0	15.90	228.60	1,074.8	-55.9	-73.5	91.9	0.96	0.78	2.14

Company:	NOBLE ENERGY INC WELD COUNTY CO	**Local Co-ordinate Reference:**	Well Badding USX W25-07D
Project:	SEC.25-T2N-R66W	**TVD Reference:**	WELL @ 5038.0ft (Original Well Elev)
Site:	Badding USX W25-07D Pad Sec.25-T2N-R66W	**MD Reference:**	WELL @ 5038.0ft (Original Well Elev)
Well:	Badding USX W25-07D	**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)
1,179.0	15.20	229.50	1,165.4	-72.5	-92.5	117.1	0.79	-0.74	0.96
1,273.0	16.30	228.90	1,255.8	-89.1	-111.8	142.6	1.18	1.17	-0.64
1,367.0	15.80	226.40	1,346.2	-106.6	-131.0	168.5	0.91	-0.53	-2.66
1,461.0	16.00	228.50	1,436.6	-124.0	-150.0	194.3	0.65	0.21	2.23
1,554.0	15.80	225.80	1,526.0	-141.4	-168.7	219.8	0.82	-0.22	-2.90
1,648.0	15.30	225.70	1,616.6	-158.9	-186.7	244.9	0.53	-0.53	-0.11
1,742.0	15.70	226.20	1,707.2	-176.4	-204.8	270.1	0.45	0.43	0.53
1,836.0	15.90	223.30	1,797.6	-194.6	-222.8	295.6	0.87	0.21	-3.09
1,930.0	15.60	224.00	1,888.1	-213.0	-240.4	321.1	0.38	-0.32	0.74
2,024.0	15.70	223.90	1,978.6	-231.3	-258.0	346.4	0.11	0.11	-0.11
2,118.0	14.80	220.20	2,069.3	-249.6	-274.6	371.0	1.41	-0.96	-3.94
2,212.0	15.70	222.70	2,160.0	-268.1	-290.9	395.7	1.19	0.96	2.66
2,306.0	15.10	222.30	2,250.6	-286.5	-307.8	420.5	0.65	-0.64	-0.43
2,399.0	14.50	222.70	2,340.5	-304.1	-323.8	444.2	0.65	-0.65	0.43
2,493.0	15.20	233.70	2,431.4	-320.0	-341.8	468.2	3.09	0.74	11.70
2,587.0	16.00	232.70	2,521.9	-335.2	-362.0	493.3	0.90	0.85	-1.06
2,681.0	15.80	233.70	2,612.3	-350.6	-382.6	518.9	0.36	-0.21	1.06
2,775.0	15.30	232.60	2,702.9	-365.7	-402.8	544.0	0.62	-0.53	-1.17
2,869.0	15.80	230.50	2,793.4	-381.4	-422.5	569.1	0.80	0.53	-2.23
2,963.0	15.00	229.60	2,884.1	-397.4	-441.7	594.0	0.89	-0.85	-0.96
3,057.0	15.50	225.70	2,974.8	-414.0	-459.9	618.7	1.21	0.53	-4.15
3,151.0	16.80	225.50	3,065.0	-432.3	-478.6	644.9	1.38	1.38	-0.21
3,245.0	16.00	224.20	3,155.2	-451.2	-497.3	671.4	0.94	-0.85	-1.38
3,339.0	16.40	225.30	3,245.5	-469.8	-515.8	697.6	0.54	0.43	1.17
3,433.0	16.30	227.40	3,335.7	-488.0	-534.9	724.0	0.64	-0.11	2.23
3,527.0	15.80	225.50	3,426.0	-505.9	-553.8	750.0	0.77	-0.53	-2.02
3,621.0	17.20	227.90	3,516.2	-524.2	-573.2	776.7	1.66	1.49	2.55
3,715.0	16.30	227.30	3,606.2	-542.5	-593.2	803.8	0.97	-0.96	-0.64
3,809.0	16.00	226.40	3,696.5	-560.4	-612.3	830.0	0.42	-0.32	-0.96
3,903.0	15.00	226.60	3,787.0	-577.7	-630.5	855.1	1.07	-1.06	0.21
3,997.0	16.10	231.40	3,877.6	-594.2	-649.5	880.2	1.80	1.17	5.11
4,091.0	15.60	228.40	3,968.0	-610.7	-669.2	905.9	1.02	-0.53	-3.19
4,184.0	15.60	236.20	4,057.6	-625.9	-688.9	930.7	2.25	0.00	8.39
4,278.0	16.30	228.90	4,148.0	-641.6	-709.3	956.4	2.26	0.74	-7.77
4,372.0	17.20	226.80	4,238.0	-659.8	-729.4	983.5	1.15	0.96	-2.23
4,466.0	16.50	224.20	4,328.0	-678.9	-748.9	1,010.7	1.09	-0.74	-2.77
4,560.0	16.90	222.80	4,418.0	-698.5	-767.5	1,037.7	0.60	0.43	-1.49
4,654.0	16.10	222.10	4,508.1	-718.2	-785.5	1,064.3	0.88	-0.85	-0.74
4,748.0	17.70	224.20	4,598.1	-738.1	-804.2	1,091.5	1.82	1.70	2.23
4,842.0	17.50	222.80	4,687.7	-758.7	-823.7	1,119.9	0.50	-0.21	-1.49
4,936.0	16.50	221.90	4,777.6	-779.0	-842.3	1,147.3	1.10	-1.06	-0.96
5,030.0	15.50	222.60	4,867.9	-798.2	-859.7	1,173.1	1.08	-1.06	0.74
5,124.0	13.10	221.00	4,959.0	-815.5	-875.2	1,196.2	2.59	-2.55	-1.70
5,218.0	11.80	221.60	5,050.8	-830.7	-888.5	1,216.4	1.39	-1.38	0.64
5,312.0	10.30	226.10	5,143.1	-843.8	-901.0	1,234.4	1.84	-1.60	4.79
5,405.0	9.30	227.20	5,234.7	-854.6	-912.5	1,250.2	1.09	-1.08	1.18
5,499.0	8.60	233.30	5,327.6	-864.0	-923.7	1,264.8	1.25	-0.74	6.49
5,593.0	6.80	229.20	5,420.7	-871.8	-933.5	1,277.3	2.00	-1.91	-4.36
5,687.0	5.80	235.50	5,514.1	-878.1	-941.7	1,287.6	1.29	-1.06	6.70
5,781.0	4.70	231.30	5,607.7	-883.2	-948.6	1,296.1	1.24	-1.17	-4.47
5,875.0	3.40	233.20	5,701.5	-887.3	-953.8	1,302.7	1.39	-1.38	2.02
5,969.0	2.60	239.30	5,795.4	-890.1	-957.9	1,307.6	0.92	-0.85	6.49
5,973.6	2.51	238.99	5,800.0	-890.2	-958.1	1,307.8	1.99	-1.97	-6.68

TARGET BHL 2000'FNL, 1980'FEL

Company:	NOBLE ENERGY INC WELD COUNTY CO	**Local Co-ordinate Reference:**	Well Badding USX W25-07D
Project:	SEC.25-T2N-R66W	**TVD Reference:**	WELL @ 5038.0ft (Original Well Elev)
Site:	Badding USX W25-07D Pad Sec.25-T2N-R66W	**MD Reference:**	WELL @ 5038.0ft (Original Well Elev)
Well:	Badding USX W25-07D	**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)
6,063.0	0.80	219.20	5,889.3	-891.7	-960.1	1,310.3	1.99	-1.91	-22.15
6,157.0	1.00	211.90	5,983.3	-892.9	-961.0	1,311.8	0.24	0.21	-7.77
6,251.0	0.80	206.00	6,077.3	-894.2	-961.7	1,313.2	0.23	-0.21	-6.28
6,345.0	0.70	206.00	6,171.3	-895.3	-962.2	1,314.3	0.11	-0.11	0.00
6,439.0	0.20	241.10	6,265.3	-895.9	-962.6	1,315.0	0.58	-0.53	37.34
6,533.0	0.70	210.90	6,359.3	-896.4	-963.1	1,315.7	0.57	0.53	-32.13
6,627.0	0.20	271.20	6,453.3	-896.9	-963.5	1,316.4	0.67	-0.53	64.15
6,721.0	0.60	220.00	6,547.3	-897.3	-964.0	1,317.0	0.53	0.43	-54.47
6,815.0	0.50	218.40	6,641.3	-898.0	-964.6	1,317.9	0.11	-0.11	-1.70
6,909.0	0.20	251.60	6,735.3	-898.4	-965.0	1,318.4	0.37	-0.32	35.32
7,003.0	0.50	246.00	6,829.3	-898.6	-965.5	1,319.0	0.32	0.32	-5.96
7,097.0	0.20	339.50	6,923.3	-898.6	-966.0	1,319.3	0.58	-0.32	99.47
7,191.0	0.60	236.50	7,017.3	-898.7	-966.4	1,319.7	0.72	0.43	-109.57
7,285.0	0.50	215.30	7,111.3	-899.3	-967.1	1,320.6	0.24	-0.11	-22.55
7,296.7	0.47	212.22	7,122.9	-899.4	-967.1	1,320.7	0.37	-0.29	-26.41
TARGET CIRCLE 2000'FNL & 1980'FEL - LEGAL BOX 400' X 400' 1990'FNL & 2002'FEL									
7,379.0	0.30	173.00	7,205.3	-899.9	-967.3	1,321.2	0.37	-0.20	-47.63
7,473.0	0.30	163.40	7,299.3	-900.4	-967.2	1,321.4	0.05	0.00	-10.21
7,567.0	0.30	202.90	7,393.3	-900.9	-967.2	1,321.8	0.22	0.00	42.02
7,661.0	0.20	84.40	7,487.3	-901.1	-967.1	1,321.8	0.46	-0.11	-126.06
7,755.0	0.40	341.70	7,581.3	-900.7	-967.1	1,321.6	0.52	0.21	-109.26
7,848.0	0.60	28.30	7,674.3	-900.0	-967.0	1,321.0	0.47	0.22	50.11
7,942.0	0.10	46.00	7,768.3	-899.5	-966.7	1,320.4	0.54	-0.53	18.83
8,036.0	0.30	254.00	7,862.3	-899.5	-966.8	1,320.6	0.42	0.21	-161.70
8,130.0	0.40	284.90	7,956.3	-899.5	-967.4	1,321.0	0.22	0.11	32.87
8,218.0	0.20	282.90	8,044.3	-899.4	-967.8	1,321.2	0.23	-0.23	-2.27
8,262.0	0.20	282.90	8,088.3	-899.4	-968.0	1,321.3	0.00	0.00	0.00

Checked By: _____ Approved By: _____ Date: _____