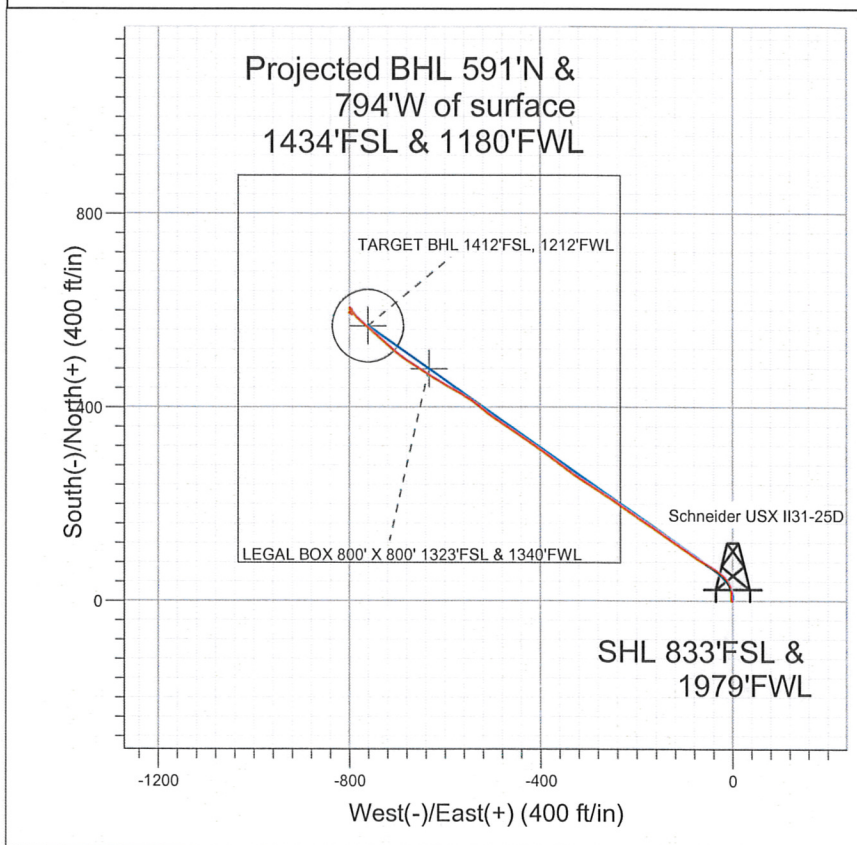


NOBLE ENERGY INC WELD COUNTY CO



LEGEND

- Schneider USX II31-25D, Wellbore #1, Noble Schneider USX II31-25D Plan #3 (12-15-11) R V
- Wellbore #1

Final Survey Plot

Projected Final Survey -
7654'MD & 7535'TVD @ 990'VS
1.0 deg Inc 130.0 deg AZ

Project: SEC.31-T7N-R66W
Site: Schneider USX II31-13D Pad Sec.31-T7N-R66W
Well: Schneider USX II31-25D
Plan: Wellbore #1



Directional

**NOBLE ENERGY INC WELD
COUNTY CO**

SEC.31-T7N-R66W

Schneider USX II31-13D Pad Sec.31-T7N-R66W

Schneider USX II31-25D

Wellbore #1

Design: Wellbore #1

Standard Survey Report

21 December, 2011



Company:	NOBLE ENERGY INC WELD COUNTY CO	Local Co-ordinate Reference:	Well Schneider USX II31-25D
Project:	SEC.31-T7N-R66W	TVD Reference:	WELL @ 4919.0ft (Original Well Elev)
Site:	Schneider USX II31-13D Pad Sec.31-T7N-R66W	MD Reference:	WELL @ 4919.0ft (Original Well Elev)
Well:	Schneider USX II31-25D	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Project	SEC.31-T7N-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	Schneider USX II31-13D Pad Sec.31-T7N-R66W				
Site Position:		Northing:	1,435,107.12 ft	Latitude:	40.525810
From:	Lat/Long	Easting:	3,187,602.10 ft	Longitude:	-104.825150
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.44 °

Well	Schneider USX II31-25D					
Well Position	+N/-S	0.0 ft	Northing:	1,435,110.92 ft	Latitude:	40.525820
	+E/-W	0.0 ft	Easting:	3,187,624.31 ft	Longitude:	-104.825070
Position Uncertainty	0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,906.0 ft	

Wellbore	Wellbore #1			
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	12/15/2011	8.84	67.13	53,137

Design	Wellbore #1			
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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)	(°)	
	0.0	0.0	0.0	306.73	

Survey Program	Date 12/21/2011			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
169.0	7,654.0	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
169.0	0.40	306.40	169.0	0.4	-0.5	0.6	0.24	0.24	0.00
259.0	0.60	323.10	259.0	0.9	-1.0	1.4	0.27	0.22	18.56
377.0	0.60	296.90	377.0	1.7	-1.9	2.6	0.23	0.00	-22.20
462.0	0.10	13.70	462.0	2.0	-2.3	3.0	0.69	-0.59	90.35
547.0	1.10	22.60	547.0	2.8	-2.0	3.3	1.18	1.18	10.47
632.0	2.40	11.80	631.9	5.3	-1.3	4.2	1.57	1.53	-12.71
717.0	3.80	0.90	716.8	9.8	-0.9	6.6	1.78	1.65	-12.82
802.0	5.30	353.40	801.5	16.6	-1.3	10.9	1.89	1.76	-8.82
840.0	5.90	346.40	839.4	20.2	-2.0	13.7	2.39	1.58	-18.42
897.0	6.30	342.30	896.0	26.0	-3.6	18.5	1.04	0.70	-7.19
982.0	6.30	336.00	980.5	34.7	-6.9	26.3	0.81	0.00	-7.41

Company: NOBLE ENERGY INC WELD COUNTY CO
 Project: SEC.31-T7N-R66W
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 Sec.31-T7N-R66W
 Well: Schneider USX II31-25D
 Wellbore: Wellbore #1
 Design: Wellbore #1

Local Co-ordinate Reference: Well Schneider USX II31-25D
 TVD Reference: WELL @ 4919.0ft (Original Well Elev)
 MD Reference: WELL @ 4919.0ft (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)
1,068.0	6.80	326.80	1,066.0	43.3	-11.6	35.2	1.35	0.58	-10.70
1,153.0	7.50	313.40	1,150.3	51.3	-18.4	45.4	2.12	0.82	-15.76
1,239.0	8.80	302.80	1,235.4	58.7	-28.0	57.6	2.30	1.51	-12.33
1,324.0	10.70	302.00	1,319.2	66.4	-40.2	71.9	2.24	2.24	-0.94
1,410.0	12.60	302.80	1,403.4	75.8	-54.8	89.3	2.22	2.21	0.93
1,495.0	14.20	304.40	1,486.1	86.7	-71.2	108.9	1.93	1.88	1.88
1,581.0	14.70	303.30	1,569.4	98.6	-89.1	130.4	0.66	0.58	-1.28
1,666.0	14.90	303.50	1,651.6	110.6	-107.2	152.0	0.24	0.24	0.24
1,752.0	15.30	304.00	1,734.6	123.0	-125.8	174.4	0.49	0.47	0.58
1,837.0	15.50	305.80	1,816.6	135.9	-144.3	197.0	0.61	0.24	2.12
1,923.0	15.70	305.20	1,899.4	149.4	-163.1	220.1	0.30	0.23	-0.70
2,008.0	15.60	302.80	1,981.2	162.2	-182.2	243.0	0.77	-0.12	-2.82
2,094.0	15.50	303.20	2,064.1	174.7	-201.5	266.0	0.17	-0.12	0.47
2,179.0	15.30	304.90	2,146.0	187.4	-220.2	288.5	0.58	-0.24	2.00
2,265.0	16.00	306.40	2,228.9	200.9	-239.0	311.7	0.94	0.81	1.74
2,350.0	14.90	304.00	2,310.8	214.0	-257.5	334.4	1.50	-1.29	-2.82
2,436.0	14.30	303.10	2,394.0	226.0	-275.6	356.0	0.75	-0.70	-1.05
2,522.0	13.50	300.90	2,477.5	236.9	-293.1	376.6	1.11	-0.93	-2.56
2,607.0	14.10	303.20	2,560.0	247.7	-310.3	396.8	0.96	0.71	2.71
2,693.0	13.70	304.60	2,643.5	259.2	-327.4	417.4	0.61	-0.47	1.63
2,778.0	14.40	306.00	2,726.0	271.1	-344.3	438.1	0.92	0.82	1.65
2,864.0	15.40	307.90	2,809.1	284.4	-361.9	460.2	1.29	1.16	2.21
2,949.0	14.70	306.50	2,891.2	297.8	-379.5	482.2	0.93	-0.82	-1.65
3,035.0	14.50	305.60	2,974.4	310.5	-397.0	503.9	0.35	-0.23	-1.05
3,120.0	14.00	304.30	3,056.8	322.5	-414.2	524.8	0.70	-0.59	-1.53
3,206.0	14.60	304.00	3,140.1	334.4	-431.7	546.0	0.70	0.70	-0.35
3,291.0	14.50	304.70	3,222.4	346.5	-449.4	567.4	0.24	-0.12	0.82
3,377.0	14.20	303.50	3,305.7	358.4	-467.0	588.7	0.49	-0.35	-1.40
3,462.0	13.50	303.50	3,388.2	369.7	-484.0	609.0	0.82	-0.82	0.00
3,548.0	14.10	304.80	3,471.7	381.2	-501.0	629.5	0.79	0.70	1.51
3,633.0	13.60	309.00	3,554.3	393.4	-517.2	649.8	1.32	-0.59	4.94
3,719.0	13.30	309.80	3,637.9	406.1	-532.7	669.8	0.41	-0.35	0.93
3,804.0	12.40	301.60	3,720.8	417.1	-548.0	688.6	2.39	-1.06	-9.65
3,890.0	15.90	299.90	3,804.2	427.8	-566.1	709.5	4.10	4.07	-1.98
3,975.0	16.40	299.10	3,885.8	439.5	-586.6	733.0	0.64	0.59	-0.94
4,061.0	16.60	298.90	3,968.3	451.3	-608.0	757.2	0.24	0.23	-0.23
4,146.0	17.20	302.30	4,049.6	463.9	-629.3	781.8	1.36	0.71	4.00
4,232.0	15.40	303.50	4,132.1	477.0	-649.5	805.8	2.13	-2.09	1.40
4,317.0	13.90	303.70	4,214.4	488.9	-667.4	827.3	1.77	-1.76	0.24
4,403.0	13.20	304.80	4,298.0	500.2	-684.1	847.4	0.87	-0.81	1.28
4,488.0	13.10	308.20	4,380.8	511.7	-699.6	866.8	0.92	-0.12	4.00
4,574.0	12.30	313.70	4,464.7	524.1	-713.9	885.6	1.68	-0.93	6.40
4,660.0	13.60	310.70	4,548.5	537.0	-728.2	904.8	1.70	1.51	-3.49
4,745.0	12.70	309.90	4,631.2	549.5	-742.9	924.1	1.08	-1.06	-0.94
4,831.0	11.00	310.10	4,715.4	560.9	-756.5	941.7	1.98	-1.98	0.23
4,916.0	9.40	313.60	4,799.1	570.9	-767.7	956.7	2.02	-1.88	4.12
5,002.0	7.50	310.60	4,884.1	579.4	-777.1	969.3	2.27	-2.21	-3.49
5,087.0	6.40	314.70	4,968.5	586.3	-784.6	979.5	1.42	-1.29	4.82
5,173.0	4.90	325.10	5,054.1	592.7	-790.1	987.7	2.10	-1.74	12.09
5,216.2	4.07	320.43	5,097.1	595.4	-792.2	991.0	2.10	-1.93	-10.83
TARGET BHL 1412'FSL, 1212'FWL									
5,258.0	3.30	313.70	5,138.9	597.4	-794.0	993.6	2.10	-1.84	-16.08
5,344.0	1.50	312.10	5,224.8	599.8	-796.6	997.2	2.09	-2.09	-1.86

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5,429.0	0.80	311.20	5,309.8	601.0	-797.9	998.9	0.82	-0.82	-1.06
5,515.0	0.70	308.80	5,395.8	601.7	-798.7	1,000.0	0.12	-0.12	-2.79
5,600.0	0.50	12.90	5,480.8	602.4	-799.1	1,000.7	0.78	-0.24	75.41
5,686.0	0.90	349.20	5,566.7	603.4	-799.1	1,001.3	0.56	0.47	-27.56
5,771.0	0.90	2.80	5,651.7	604.7	-799.2	1,002.2	0.25	0.00	16.00
5,857.0	0.50	130.80	5,737.7	605.2	-798.9	1,002.2	1.48	-0.47	148.84
5,942.0	0.40	160.50	5,822.7	604.6	-798.5	1,001.6	0.29	-0.12	34.94
6,028.0	0.20	164.80	5,908.7	604.2	-798.4	1,001.2	0.23	-0.23	5.00
6,113.0	0.70	122.50	5,993.7	603.8	-797.9	1,000.6	0.67	0.59	-49.76
6,199.0	0.70	120.60	6,079.7	603.2	-797.0	999.5	0.03	0.00	-2.21
6,284.0	0.60	139.90	6,164.7	602.6	-796.3	998.6	0.28	-0.12	22.71
6,370.0	1.20	147.80	6,250.7	601.5	-795.5	997.3	0.71	0.70	9.19
6,455.0	0.50	140.80	6,335.7	600.5	-794.8	996.1	0.83	-0.82	-8.24
6,541.0	0.30	133.10	6,421.7	600.0	-794.4	995.5	0.24	-0.23	-8.95
6,626.0	0.20	37.20	6,506.7	600.0	-794.1	995.3	0.44	-0.12	-112.82
6,712.0	0.30	284.90	6,592.7	600.2	-794.3	995.5	0.49	0.12	-130.58
6,798.0	0.70	243.10	6,678.7	600.0	-794.9	995.9	0.60	0.47	-48.60
6,883.0	0.60	224.90	6,763.7	599.5	-795.7	996.2	0.27	-0.12	-21.41
6,969.0	1.00	219.20	6,849.7	598.6	-796.5	996.3	0.47	0.47	-6.63
7,054.0	1.20	205.50	6,934.7	597.2	-797.4	996.2	0.39	0.24	-16.12
7,140.0	1.20	251.80	7,020.6	596.1	-798.6	996.5	1.10	0.00	53.84
7,155.4	1.13	250.98	7,036.0	596.0	-798.9	996.7	0.49	-0.48	-5.34
LEGAL BOX 800' X 800' 1323'FSL & 1340'FWL									
7,156.9	1.12	250.89	7,037.6	596.0	-798.9	996.7	0.49	-0.47	-5.72
TARGET CIRCLE 1412'FSL & 1212'FWL									
7,225.0	0.80	245.40	7,105.6	595.6	-800.0	997.3	0.49	-0.47	-8.07
7,311.0	0.30	179.90	7,191.6	595.1	-800.5	997.5	0.85	-0.58	-76.16
7,396.0	1.20	115.20	7,276.6	594.5	-799.7	996.5	1.30	1.06	-76.12
7,482.0	2.10	118.40	7,362.6	593.3	-797.5	994.0	1.05	1.05	3.72
7,603.0	1.20	129.50	7,483.5	591.5	-794.6	990.6	0.79	-0.74	9.17
7,654.0	1.00	130.00	7,534.5	590.9	-793.9	989.6	0.39	-0.39	0.98

Checked By: _____ Approved By: _____ Date: _____