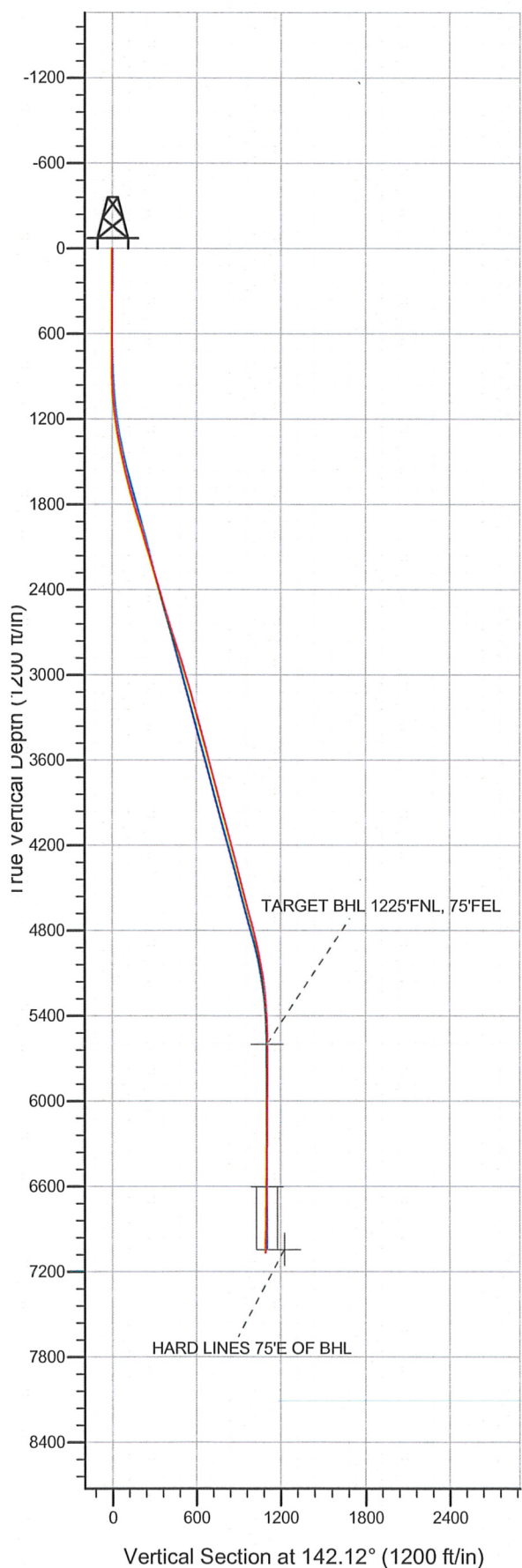


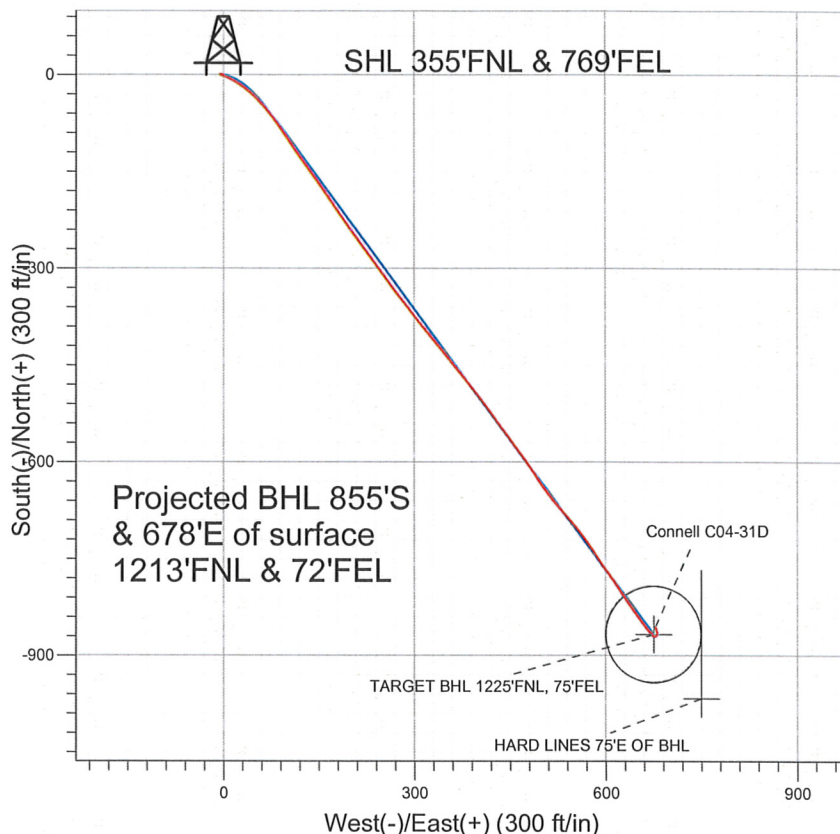
Well Name: **Connell C04-31D**
 Surface Location: Connell C04-31D Pad Sec.5-T4N-R64W
 North American Datum 1983 US State Plane 1983 Colorado Northern Zone
 Ground Elevation: 4703.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1370816.48	3259946.11	40.347540	-104.567360	

 Original Well Elev WELL @ 4716.0ft (Original Well Elev)



NOBLE ENERGY INC WELD COUNTY CO



LEGEND

- ◆ Connell C04-31D, Wellbore #1, Noble Connell C04-31D Plan #1 (3-07-11) V0
- Wellbore #1
- Survey #1

Final Survey Plot

Projected Final Survey -
 7208'MD & 7064'TVD @ 1091'VS
 1.1 deg Inc 333.0 deg AZ

Project: SEC.5-T4N-R64W
 Site: Connell C04-31D Pad Sec.5-T4N-R64W
 Well: Connell C04-31D
 Plan: Wellbore #1



Directional

**NOBLE ENERGY INC WELD
COUNTY CO**

SEC.5-T4N-R64W

Connell C04-31D Pad Sec.5-T4N-R64W

Connell C04-31D

Wellbore #1

Survey: Survey #1

Standard Survey Report

12 September, 2011



Company: NOBLE ENERGY INC WELD COUNTY CO
 Project: SEC.5-T4N-R64W
 Site: Connell C04-31D Pad Sec.5-T4N-R64W
 Well: Connell C04-31D
 Wellbore: Wellbore #1
 Design: Wellbore #1

Local Co-ordinate Reference: Well Connell C04-31D
 TVD Reference: WELL @ 4716.0ft (Original Well Elev)
 MD Reference: WELL @ 4716.0ft (Original Well Elev)
 North Reference: True
 Survey Calculation Method: Minimum Curvature
 Database: Landmark

Project	SEC.5-T4N-R64W, 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 Connell C04-31D Pad Sec.5-T4N-R64W

Site Position:	Lat/Long	Northing:	1,370,816.49ft	Latitude:	40.347540
From:		Easting:	3,259,946.11ft	Longitude:	-104.567360
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.60 °

Well	Connell C04-31D					
Well Position	+N/-S	0.0 ft	Northing:	1,370,816.48 ft	Latitude:	40.347540
	+E/-W	0.0 ft	Easting:	3,259,946.11 ft	Longitude:	-104.567360
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,703.0 ft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	8/29/2011	8.73	67.03	53,104

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	142.12

Survey Program Date 9/12/2011

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
733.0	7,208.0	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
733.0	0.70	282.40	733.0	1.0	-4.4	-3.4	0.10	0.10	0.00
819.0	0.90	152.20	819.0	0.5	-4.6	-3.2	1.69	0.23	-151.40
904.0	2.20	116.30	903.9	-0.8	-2.8	-1.1	1.84	1.53	-42.24
990.0	3.80	105.10	989.8	-2.3	1.4	2.7	1.97	1.86	-13.02
1,075.0	5.30	113.90	1,074.6	-4.6	7.7	8.4	1.94	1.76	10.35
1,161.0	7.30	120.00	1,160.0	-9.0	16.1	17.0	2.45	2.33	7.09
1,246.0	8.90	124.70	1,244.2	-15.4	26.2	28.3	2.04	1.88	5.53
1,332.0	10.50	128.10	1,329.0	-24.0	37.8	42.2	1.98	1.86	3.95
1,417.0	11.90	133.10	1,412.3	-34.8	50.3	58.4	2.00	1.65	5.88
1,503.0	12.60	137.70	1,496.4	-47.8	63.1	76.5	1.40	0.81	5.35
1,588.0	13.50	141.70	1,579.2	-62.5	75.5	95.7	1.50	1.06	4.71
1,674.0	14.90	144.50	1,662.6	-79.3	88.1	116.7	1.81	1.63	3.26

Company: NOBLE ENERGY INC WELD COUNTY CO
 Project: SEC.5-T4N-R64W
 Site: Connell C04-31D Pad Sec.5-T4N-R64W
 Well: Connell C04-31D
 Wellbore: Wellbore #1
 Design: Wellbore #1

Local Co-ordinate Reference: Well Connell C04-31D
 TVD Reference: WELL @ 4716.0ft (Original Well Elev)
 MD Reference: WELL @ 4716.0ft (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)
1,759.0	15.70	146.20	1,744.5	-97.8	100.9	139.1	1.08	0.94	2.00
1,845.0	16.60	144.80	1,827.1	-117.5	114.4	163.0	1.14	1.05	-1.63
1,930.0	16.90	145.20	1,908.5	-137.6	128.5	187.5	0.38	0.35	0.47
2,016.0	16.90	143.70	1,990.8	-157.9	143.0	212.4	0.51	0.00	-1.74
2,102.0	17.20	144.80	2,073.0	-178.4	157.8	237.6	0.51	0.35	1.28
2,187.0	17.10	145.80	2,154.3	-199.0	172.0	262.7	0.37	-0.12	1.18
2,273.0	16.50	145.10	2,236.6	-219.4	186.1	287.5	0.74	-0.70	-0.81
2,358.0	16.40	144.20	2,318.1	-239.1	200.0	311.5	0.32	-0.12	-1.06
2,444.0	16.50	144.70	2,400.6	-258.9	214.2	335.9	0.20	0.12	0.58
2,529.0	16.10	142.90	2,482.2	-278.1	228.3	359.7	0.76	-0.47	-2.12
2,615.0	16.20	143.60	2,564.8	-297.3	242.6	383.6	0.25	0.12	0.81
2,700.0	17.50	143.50	2,646.1	-317.1	257.2	408.3	1.53	1.53	-0.12
2,786.0	18.10	142.90	2,728.0	-338.2	273.0	434.5	0.73	0.70	-0.70
2,871.0	18.60	141.40	2,808.7	-359.3	289.4	461.3	0.81	0.59	-1.76
2,957.0	17.50	141.40	2,890.5	-380.1	306.0	487.9	1.28	-1.28	0.00
3,042.0	17.50	141.40	2,971.5	-400.1	322.0	513.5	0.00	0.00	0.00
3,128.0	17.00	140.70	3,053.7	-419.9	338.0	539.0	0.63	-0.58	-0.81
3,213.0	15.90	140.20	3,135.2	-438.5	353.3	563.1	1.30	-1.29	-0.59
3,299.0	15.00	140.30	3,218.1	-456.1	368.0	586.0	1.05	-1.05	0.12
3,384.0	15.20	142.20	3,300.1	-473.4	381.8	608.1	0.63	0.24	2.24
3,470.0	14.60	141.40	3,383.2	-490.8	395.5	630.2	0.74	-0.70	-0.93
3,555.0	14.30	143.60	3,465.6	-507.6	408.4	651.4	0.74	-0.35	2.59
3,641.0	14.50	143.30	3,548.9	-524.8	421.2	672.8	0.25	0.23	-0.35
3,726.0	14.80	144.30	3,631.1	-542.1	433.9	694.3	0.46	0.35	1.18
3,812.0	15.70	143.60	3,714.1	-560.4	447.2	716.9	1.07	1.05	-0.81
3,897.0	15.70	143.00	3,795.9	-578.8	460.9	739.9	0.19	0.00	-0.71
3,983.0	15.50	144.20	3,878.7	-597.4	474.6	763.0	0.44	-0.23	1.40
4,068.0	14.50	145.80	3,960.8	-615.5	487.3	785.0	1.27	-1.18	1.88
4,154.0	14.80	146.50	4,044.0	-633.5	499.4	806.7	0.41	0.35	0.81
4,240.0	15.20	143.00	4,127.1	-651.7	512.2	828.9	1.15	0.47	-4.07
4,325.0	14.90	138.30	4,209.2	-668.8	526.2	850.9	1.48	-0.35	-5.53
4,411.0	14.60	139.20	4,292.4	-685.2	540.6	872.8	0.44	-0.35	1.05
4,496.0	14.50	140.60	4,374.6	-701.5	554.4	894.1	0.43	-0.12	1.65
4,582.0	14.40	143.90	4,457.9	-718.5	567.5	915.6	0.96	-0.12	3.84
4,667.0	14.50	147.20	4,540.2	-736.0	579.5	936.7	0.98	0.12	3.88
4,753.0	14.50	145.10	4,623.5	-753.9	591.5	958.2	0.61	0.00	-2.44
4,838.0	15.90	144.00	4,705.5	-772.0	604.4	980.5	1.68	1.65	-1.29
4,924.0	14.70	147.20	4,788.5	-790.7	617.3	1,003.1	1.71	-1.40	3.72
5,009.0	13.40	146.80	4,870.9	-808.0	628.5	1,023.7	1.53	-1.53	-0.47
5,095.0	11.80	145.10	4,954.8	-823.6	639.0	1,042.4	1.91	-1.86	-1.98
5,180.0	10.10	142.90	5,038.3	-836.7	648.5	1,058.5	2.06	-2.00	-2.59
5,266.0	8.00	142.40	5,123.2	-847.4	656.7	1,072.1	2.44	-2.44	-0.58
5,351.0	6.30	143.80	5,207.6	-855.9	663.0	1,082.6	2.01	-2.00	1.65
5,437.0	4.80	138.80	5,293.1	-862.4	668.2	1,091.0	1.83	-1.74	-5.81
5,522.0	3.30	136.50	5,377.9	-866.8	672.2	1,096.9	1.77	-1.76	-2.71
5,608.0	2.50	136.00	5,463.8	-870.0	675.2	1,101.3	0.93	-0.93	-0.58
5,693.0	0.80	57.60	5,548.8	-871.0	677.0	1,103.2	2.90	-2.00	-92.24
5,744.2	0.80	58.91	5,600.0	-870.6	677.6	1,103.2	0.04	0.00	2.56
TARGET BHL 1225'FNL, 75'FEL									
5,779.0	0.80	59.80	5,634.8	-870.4	678.0	1,103.3	0.04	0.00	2.56
5,864.0	0.70	42.20	5,719.8	-869.7	678.9	1,103.3	0.29	-0.12	-20.71
5,950.0	0.70	47.90	5,805.8	-868.9	679.7	1,103.2	0.08	0.00	6.63
6,035.0	0.50	23.80	5,890.8	-868.3	680.2	1,103.0	0.37	-0.24	-28.35
6,121.0	0.50	27.80	5,976.8	-867.6	680.5	1,102.6	0.04	0.00	4.65

Company: NOBLE ENERGY INC WELD COUNTY CO
Project: SEC.5-T4N-R64W
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6,206.0	0.80	12.20	6,061.8	-866.7	680.8	1,102.1	0.41	0.35	-18.35
6,292.0	0.40	339.80	6,147.8	-865.8	680.8	1,101.4	0.59	-0.47	-37.67
6,378.0	0.40	347.40	6,233.7	-865.2	680.7	1,100.9	0.06	0.00	8.84
6,463.0	0.40	348.50	6,318.7	-864.6	680.5	1,100.3	0.01	0.00	1.29
6,549.0	0.50	348.40	6,404.7	-864.0	680.4	1,099.7	0.12	0.12	-0.12
6,634.0	0.50	334.10	6,489.7	-863.3	680.2	1,099.0	0.15	0.00	-16.82
6,720.0	0.60	339.00	6,575.7	-862.5	679.8	1,098.2	0.13	0.12	5.70
6,746.2	0.57	341.17	6,602.0	-862.3	679.8	1,098.0	0.15	-0.12	8.26
TARGET CIRCLE 1225°FNL & 75°FEL									
6,805.0	0.50	347.00	6,660.7	-861.7	679.6	1,097.5	0.15	-0.12	9.93
6,891.0	0.80	343.30	6,746.7	-860.8	679.3	1,096.6	0.35	0.35	-4.30
6,976.0	0.90	347.80	6,831.7	-859.6	679.0	1,095.4	0.14	0.12	5.29
7,062.0	1.20	343.90	6,917.7	-858.1	678.6	1,094.0	0.36	0.35	-4.53
7,165.0	1.10	333.00	7,020.7	-856.1	677.9	1,092.0	0.23	-0.10	-10.58
HARD LINES 75°E OF BHL									
7,208.0	1.10	333.00	7,063.7	-855.4	677.5	1,091.2	0.00	0.00	0.00

Checked By: _____ Approved By: _____ Date: _____