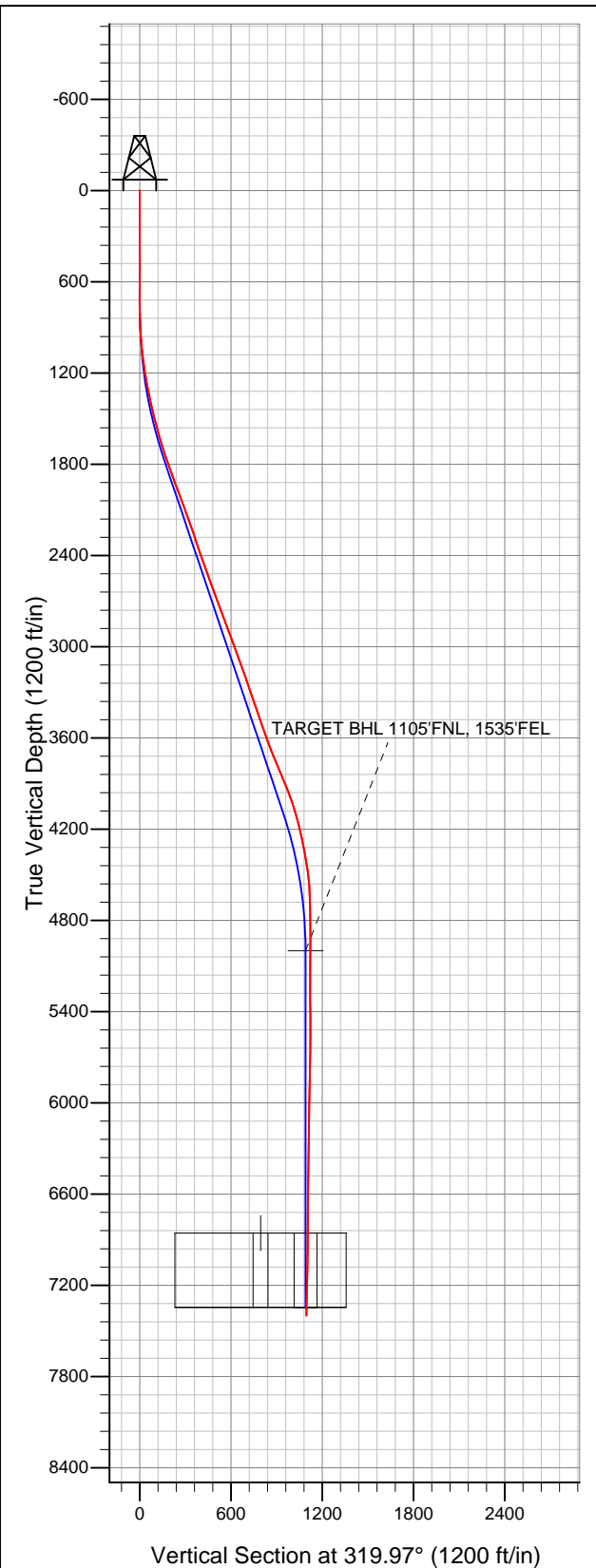


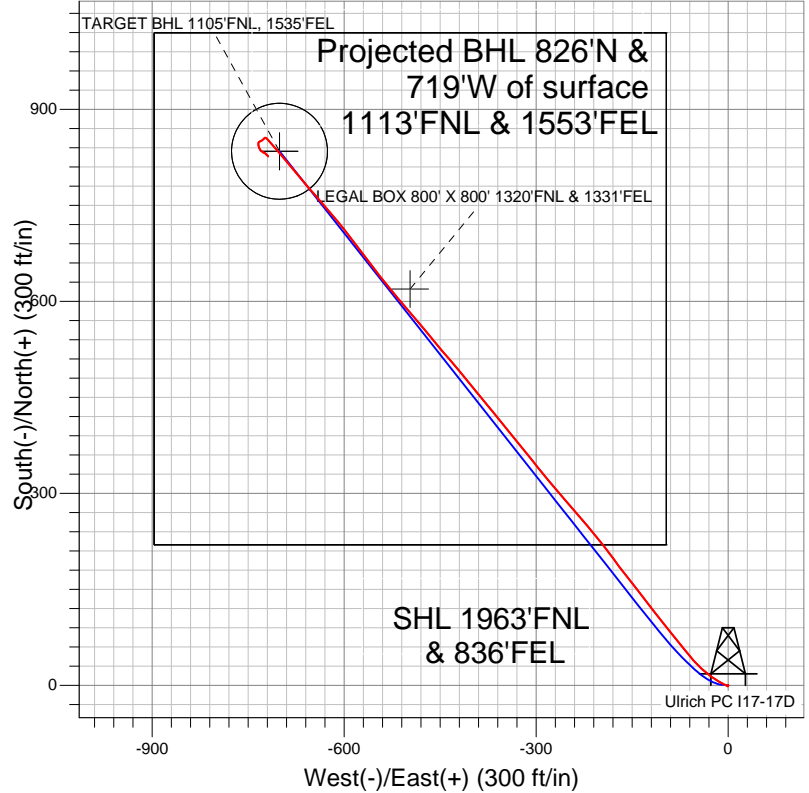
Well Name: Ulrich PC I17-17D

Surface Location: Ulrich PC I17-17D Pad Sec.17-T6N-R66W
North American Datum 1983 US State Plane 1983 Colorado Northern Zone
Ground Elevation: 4782.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1422104.20	3195978.77	40.489940	-104.795390	
		Original Well Elev	WELL @ 4795.0ft (Original Well Elev)			



NOBLE ENERGY INC WELD COUNTY CO



LEGEND

- Survey #1
- ◇ Ulrich PC I17-17D, Wellbore #1, Noble Ulrich PC I17-17D Plan #3 (11-15-11) V0
- Wellbore #1

Final Survey Plot

Projected Final Survey -
7580'MD & 7400'TVD @ 1095'VS
1.20 deg Inc 132.80 deg AZ

Project: SEC.17-T6N-R66W
Site: Ulrich PC I17-17D Pad Sec.17-T6N-R66W
Well: Ulrich PC I17-17D
Plan: Wellbore #1



NOBLE ENERGY INC WELD COUNTY CO

SEC.17-T6N-R66W

Ulrich PC I17-17D Pad Sec.17-T6N-R66W

Ulrich PC I17-17D

Wellbore #1

Survey: Survey #1

Standard Survey Report

06 February, 2012



Company:	NOBLE ENERGY INC WELD COUNTY CO	Local Co-ordinate Reference:	Well Ulrich PC I17-17D
Project:	SEC.17-T6N-R66W	TVD Reference:	WELL @ 4795.0ft (Original Well Elev)
Site:	Ulrich PC I17-17D Pad Sec.17-T6N-R66W	MD Reference:	WELL @ 4795.0ft (Original Well Elev)
Well:	Ulrich PC I17-17D	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Project	SEC.17-T6N-R66W		
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	Ulrich PC I17-17D Pad Sec.17-T6N-R66W				
Site Position:		Northing:	1,422,104.22 ft	Latitude:	40.489940
From:	Lat/Long	Easting:	3,195,978.77 ft	Longitude:	-104.795390
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.46 °

Well	Ulrich PC I17-17D					
Well Position	+N/-S	0.0 ft	Northing:	1,422,104.20 ft	Latitude:	40.489940
	+E/-W	0.0 ft	Easting:	3,195,978.77 ft	Longitude:	-104.795390
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,782.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	1/6/2012	8.81	67.10	53,116

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	319.97	

Survey Program	Date	2/6/2012			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
78.0	7,580.0	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	
78.0	0.40	130.50	78.0	-0.2	0.2	-0.3	0.51	0.51	0.00	
167.0	0.20	31.90	167.0	-0.2	0.5	-0.5	0.53	-0.22	-110.79	
258.0	0.10	242.30	258.0	-0.1	0.5	-0.5	0.32	-0.11	-164.40	
362.0	0.20	247.80	362.0	-0.3	0.3	-0.4	0.10	0.10	5.29	
489.0	0.30	252.30	489.0	-0.4	-0.2	-0.2	0.08	0.08	3.54	
617.0	0.40	138.80	617.0	-0.9	-0.3	-0.5	0.46	0.08	-88.67	
727.0	0.30	206.80	727.0	-1.4	-0.1	-1.0	0.36	-0.09	61.82	
856.0	2.10	298.90	856.0	-0.6	-2.4	1.1	1.65	1.40	71.40	
984.0	4.80	296.30	983.7	2.9	-9.2	8.2	2.11	2.11	-2.03	
1,112.0	7.70	303.80	1,110.9	10.1	-21.1	21.3	2.35	2.27	5.86	
1,241.0	9.80	309.30	1,238.4	21.8	-36.8	40.4	1.75	1.63	4.26	
1,369.0	12.10	319.30	1,364.1	38.9	-54.0	64.5	2.32	1.80	7.81	

Company:	NOBLE ENERGY INC WELD COUNTY CO	Local Co-ordinate Reference:	Well Ulrich PC I17-17D
Project:	SEC.17-T6N-R66W	TVD Reference:	WELL @ 4795.0ft (Original Well Elev)
Site:	Ulrich PC I17-17D Pad Sec.17-T6N-R66W	MD Reference:	WELL @ 4795.0ft (Original Well Elev)
Well:	Ulrich PC I17-17D	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)
1,498.0	14.20	321.10	1,489.7	61.5	-72.8	93.9	1.66	1.63	1.40
1,626.0	15.90	320.70	1,613.3	87.3	-93.7	127.1	1.33	1.33	-0.31
1,754.0	18.20	323.00	1,735.7	116.8	-116.9	164.6	1.87	1.80	1.80
1,883.0	20.50	321.20	1,857.4	150.5	-143.1	207.3	1.84	1.78	-1.40
2,011.0	20.40	323.20	1,977.3	185.8	-170.5	252.0	0.55	-0.08	1.56
2,140.0	19.70	321.90	2,098.5	220.9	-197.4	296.2	0.64	-0.54	-1.01
2,268.0	19.30	319.80	2,219.2	254.1	-224.4	338.9	0.63	-0.31	-1.64
2,396.0	18.60	319.00	2,340.2	285.6	-251.4	380.4	0.58	-0.55	-0.63
2,525.0	19.80	320.40	2,462.1	318.0	-278.9	422.9	1.00	0.93	1.09
2,653.0	19.80	321.10	2,582.5	351.6	-306.3	466.2	0.19	0.00	0.55
2,782.0	21.30	321.10	2,703.3	386.8	-334.7	511.5	1.16	1.16	0.00
2,910.0	20.40	320.50	2,822.9	422.1	-363.5	557.0	0.72	-0.70	-0.47
3,038.0	19.50	320.90	2,943.2	455.9	-391.2	600.7	0.71	-0.70	0.31
3,167.0	20.70	320.50	3,064.4	490.2	-419.3	645.0	0.94	0.93	-0.31
3,295.0	19.30	318.60	3,184.6	523.5	-447.7	688.8	1.21	-1.09	-1.48
3,424.0	19.00	321.20	3,306.5	555.9	-474.9	731.1	0.70	-0.23	2.02
3,552.0	18.60	319.00	3,427.7	587.5	-501.4	772.4	0.64	-0.31	-1.72
3,680.0	19.40	320.40	3,548.7	619.3	-528.3	814.0	0.72	0.63	1.09
3,809.0	21.00	322.80	3,669.8	654.3	-555.9	858.5	1.40	1.24	1.86
3,937.0	23.30	323.00	3,788.3	692.7	-585.0	906.7	1.80	1.80	0.16
4,066.0	22.70	319.80	3,907.1	732.1	-616.5	957.1	1.07	-0.47	-2.48
4,194.0	18.60	318.60	4,026.8	766.3	-645.9	1,002.2	3.22	-3.20	-0.94
4,322.0	14.40	320.90	4,149.5	794.0	-669.5	1,038.6	3.32	-3.28	1.80
4,451.0	12.00	319.50	4,275.1	816.6	-688.3	1,068.0	1.88	-1.86	-1.09
4,579.0	9.60	318.80	4,400.8	834.8	-704.0	1,092.0	1.88	-1.88	-0.55
4,708.0	6.10	320.90	4,528.6	848.2	-715.4	1,109.6	2.72	-2.71	1.63
4,836.0	2.10	303.80	4,656.2	854.8	-721.6	1,118.7	3.23	-3.13	-13.36
4,964.0	1.10	215.20	4,784.2	855.1	-724.3	1,120.6	1.83	-0.78	-69.22
5,093.0	1.30	231.90	4,913.2	853.2	-726.1	1,120.3	0.31	0.16	12.95
5,179.6	1.30	235.49	4,999.7	852.0	-727.7	1,120.5	0.09	0.00	4.14
TARGET BHL 1105'FNL, 1535'FEL									
5,221.0	1.30	237.20	5,041.1	851.5	-728.5	1,120.6	0.09	0.00	4.14
5,350.0	1.10	231.60	5,170.1	849.9	-730.7	1,120.8	0.18	-0.16	-4.34
5,478.0	0.50	264.50	5,298.1	849.1	-732.2	1,121.1	0.57	-0.47	25.70
5,606.0	0.40	239.50	5,426.1	848.8	-733.2	1,121.5	0.17	-0.08	-19.53
5,735.0	0.40	199.90	5,555.1	848.2	-733.7	1,121.4	0.21	0.00	-30.70
5,863.0	1.10	181.80	5,683.1	846.5	-733.9	1,120.2	0.57	0.55	-14.14
5,992.0	1.00	176.70	5,812.1	844.2	-733.9	1,118.4	0.11	-0.08	-3.95
6,120.0	1.30	163.00	5,940.0	841.7	-733.4	1,116.2	0.32	0.23	-10.70
6,248.0	1.10	154.10	6,068.0	839.2	-732.4	1,113.7	0.21	-0.16	-6.95
6,377.0	1.00	155.50	6,197.0	837.0	-731.4	1,111.4	0.08	-0.08	1.09
6,505.0	1.00	132.60	6,325.0	835.3	-730.1	1,109.2	0.31	0.00	-17.89
6,634.0	0.70	116.30	6,454.0	834.2	-728.6	1,107.4	0.30	-0.23	-12.64
6,762.0	0.60	138.40	6,581.9	833.3	-727.4	1,106.0	0.21	-0.08	17.27
6,890.0	0.40	118.40	6,709.9	832.6	-726.6	1,104.9	0.21	-0.16	-15.63
7,019.0	0.10	82.50	6,838.9	832.4	-726.1	1,104.4	0.25	-0.23	-27.83
7,037.3	0.23	92.77	6,857.2	832.4	-726.1	1,104.4	0.71	0.69	56.11
TARGET CIRCLE 1105'FNL, 1535'FEL									
7,039.8	0.24	93.34	6,859.7	832.4	-726.0	1,104.4	0.71	0.70	22.88
LEGAL BOX 800' X 800' 1320'FNL & 1331'FEL									
7,147.0	1.00	98.90	6,966.9	832.2	-724.9	1,103.5	0.71	0.71	5.19
7,276.0	1.30	135.80	7,095.9	831.0	-722.8	1,101.2	0.61	0.23	28.60
7,404.0	1.10	147.20	7,223.9	828.9	-721.1	1,098.5	0.24	-0.16	8.91
7,533.0	1.20	132.80	7,352.9	827.0	-719.4	1,096.0	0.24	0.08	-11.16

Company:	NOBLE ENERGY INC WELD COUNTY CO	Local Co-ordinate Reference:	Well Ulrich PC I17-17D
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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)
7,580.0	1.20	132.80	7,399.8	826.3	-718.7	1,095.0	0.00	0.00	0.00

Checked By: _____	Approved By: _____	Date: _____
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