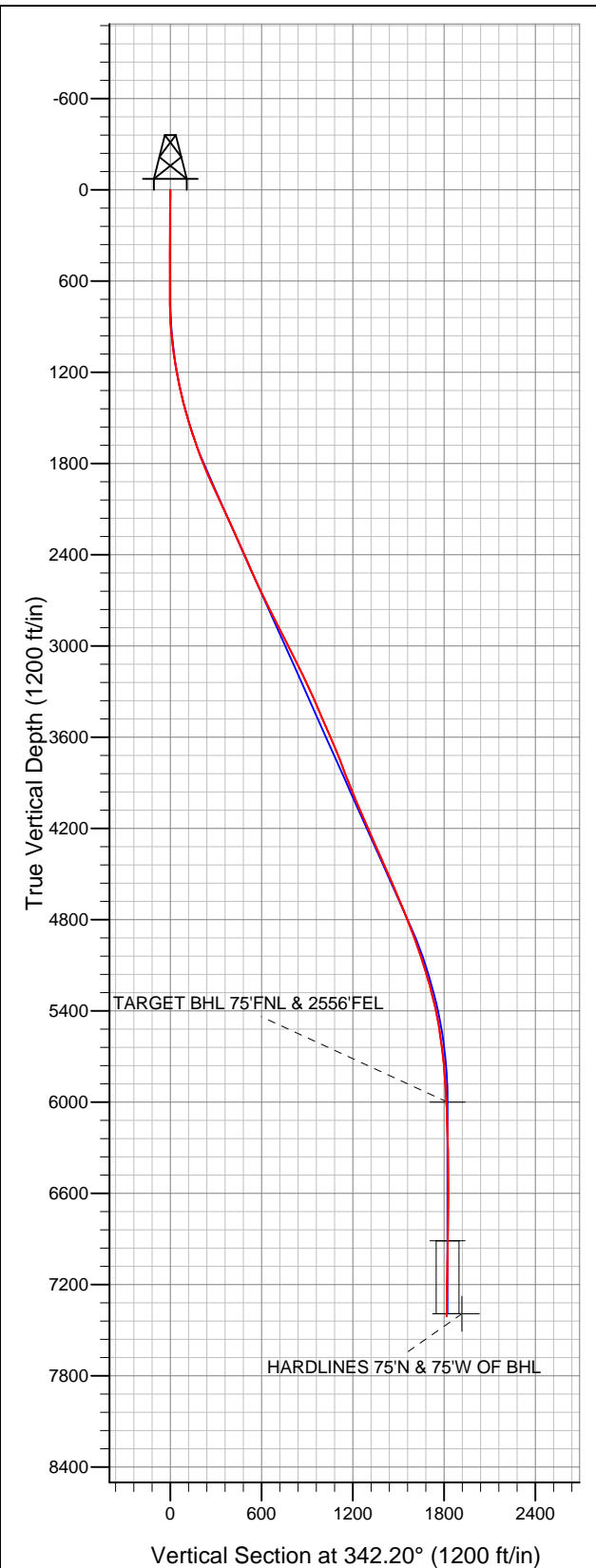


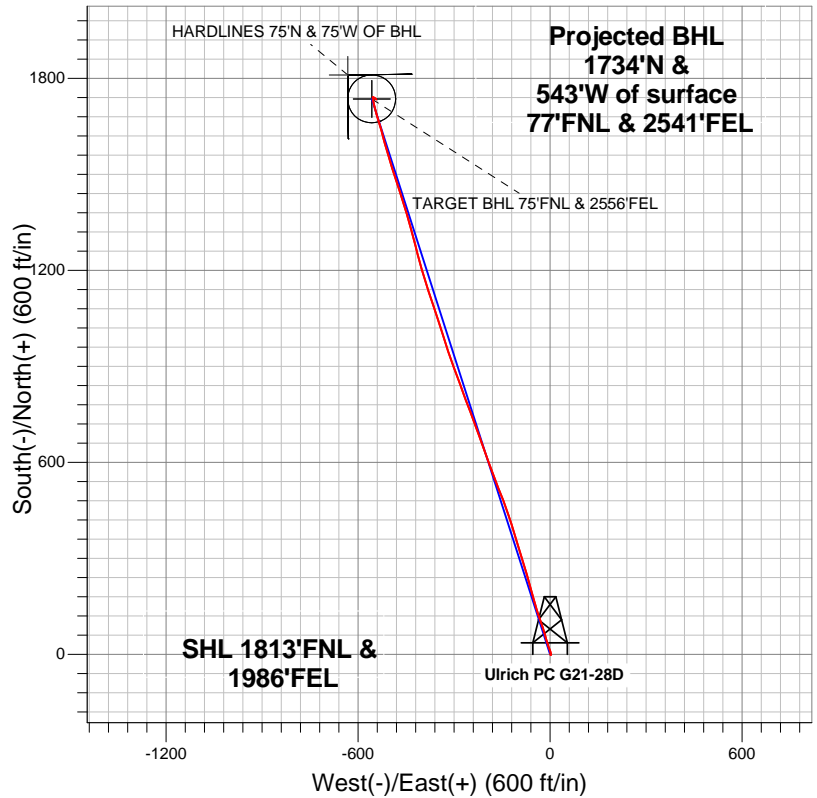
Well Name: Ulrich PC G21-28D

Surface Location: Ulrich PC G21-28D Pad Sec.21-T4N-R65W (Grid North)
 North American Datum 1983 US State Plane 1983Colorado Northern Zone
 Ground Elevation: 4859.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1353294.53	3232652.44	40.300190	-104.665870	
Original Well Elev			WELL @ 4872.0ft (Original Well Elev)			



NOBLE ENERGY INC WELD COUNTY CO



LEGEND

- Wellbore #1
- Ulrich PC G21-28D, Wellbore #1, Noble Ulrich PC G21-28D Plan #1 (8-21-12) R V0
- Survey #1

Final Survey Plot

Projected Final Survey -
 7760'MD & 7409'TVD @ 1817'VS
 0.80 deg Inc 127.80 deg AZ

Project: SEC.21-T4N-R65W
 Site: Ulrich PC G21-28D Pad Sec.21-T4N-R65W (Grid North)
 Well: Ulrich PC G21-28D
 Plan: Wellbore #1



NOBLE ENERGY INC WELD COUNTY CO

SEC.21-T4N-R65W

Ulrich PC G21-28D Pad Sec.21-T4N-R65W (Grid North)

Ulrich PC G21-28D

Wellbore #1

Survey: Survey #1

Standard Survey Report

28 August, 2012



Company:	NOBLE ENERGY INC WELD COUNTY CO	Local Co-ordinate Reference:	Well Ulrich PC G21-28D
Project:	SEC.21-T4N-R65W	TVD Reference:	WELL @ 4872.0ft (Original Well Elev)
Site:	Ulrich PC G21-28D Pad Sec.21-T4N-R65W (Grid North)	MD Reference:	WELL @ 4872.0ft (Original Well Elev)
Well:	Ulrich PC G21-28D	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Project	SEC.21-T4N-R65W, 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	Ulrich PC G21-28D Pad Sec.21-T4N-R65W (Grid North)				
Site Position:		Northing:	1,353,294.54 ft	Latitude:	40.300190
From:	Lat/Long	Easting:	3,232,652.44 ft	Longitude:	-104.665870
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.54 °

Well	Ulrich PC G21-28D					
Well Position	+N-S	0.0 ft	Northing:	1,353,294.53 ft	Latitude:	40.300190
	+E-W	0.0 ft	Easting:	3,232,652.44 ft	Longitude:	-104.665870
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,859.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	8/21/2012	8.64	66.95	52,964

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	342.20	

Survey Program	Date	8/28/2012			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
47.0	7,760.0	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	
47.0	0.40	137.70	47.0	-0.1	0.1	-0.1	0.85	0.85	0.00	
165.0	0.40	94.40	165.0	-0.5	0.8	-0.7	0.25	0.00	-36.69	
269.0	0.40	126.60	269.0	-0.7	1.5	-1.1	0.21	0.00	30.96	
438.0	0.40	123.20	438.0	-1.4	2.4	-2.1	0.01	0.00	-2.01	
608.0	0.40	11.60	608.0	-1.1	3.0	-2.0	0.39	0.00	-65.65	
655.0	0.30	120.80	655.0	-1.0	3.2	-1.9	1.22	-0.21	232.34	
728.0	0.20	45.70	728.0	-1.0	3.4	-2.0	0.43	-0.14	-102.88	
857.0	3.20	346.30	856.9	2.6	2.7	1.7	2.41	2.33	-46.05	
985.0	6.00	340.90	984.5	12.4	-0.3	11.9	2.21	2.19	-4.22	
1,113.0	8.40	341.00	1,111.5	27.6	-5.5	28.0	1.88	1.88	0.08	
1,241.0	11.20	343.50	1,237.6	48.3	-12.1	49.7	2.21	2.19	1.95	

Company:	NOBLE ENERGY INC WELD COUNTY CO	Local Co-ordinate Reference:	Well Ulrich PC G21-28D
Project:	SEC.21-T4N-R65W	TVD Reference:	WELL @ 4872.0ft (Original Well Elev)
Site:	Ulrich PC G21-28D Pad Sec.21-T4N-R65W (Grid North)	MD Reference:	WELL @ 4872.0ft (Original Well Elev)
Well:	Ulrich PC G21-28D	North Reference:	Grid
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)
1,370.0	13.70	343.00	1,363.6	75.0	-20.1	77.5	1.94	1.94	-0.39
1,498.0	16.20	340.90	1,487.2	106.3	-30.4	110.5	2.00	1.95	-1.64
1,626.0	18.00	342.40	1,609.5	142.1	-42.2	148.2	1.45	1.41	1.17
1,754.0	20.30	345.40	1,730.5	182.4	-53.8	190.1	1.95	1.80	2.34
1,883.0	23.20	344.00	1,850.3	228.5	-66.5	237.9	2.28	2.25	-1.09
2,011.0	24.60	343.00	1,967.3	278.2	-81.2	289.7	1.14	1.09	-0.78
2,139.0	25.00	342.60	2,083.5	329.5	-97.1	343.4	0.34	0.31	-0.31
2,267.0	24.80	343.70	2,199.6	381.1	-112.7	397.3	0.39	-0.16	0.86
2,396.0	24.10	341.20	2,317.0	432.0	-128.8	450.7	0.97	-0.54	-1.94
2,524.0	23.70	339.10	2,434.0	480.8	-146.4	502.5	0.73	-0.31	-1.64
2,652.0	24.40	337.90	2,550.9	529.3	-165.5	554.5	0.67	0.55	-0.94
2,780.0	25.40	340.70	2,667.0	579.7	-184.5	608.4	1.21	0.78	2.19
2,909.0	26.60	340.30	2,783.0	633.0	-203.4	664.9	0.94	0.93	-0.31
3,037.0	27.20	339.50	2,897.1	687.4	-223.3	722.7	0.55	0.47	-0.63
3,165.0	27.00	339.80	3,011.1	742.1	-243.6	781.0	0.19	-0.16	0.23
3,293.0	26.80	339.80	3,125.2	796.4	-263.6	838.9	0.16	-0.16	0.00
3,422.0	25.10	339.80	3,241.2	849.4	-283.1	895.3	1.32	-1.32	0.00
3,550.0	23.60	339.60	3,357.8	898.9	-301.4	948.0	1.17	-1.17	-0.16
3,678.0	23.60	341.00	3,475.1	947.1	-318.7	999.2	0.44	0.00	1.09
3,806.0	23.30	343.30	3,592.6	995.6	-334.3	1,050.1	0.75	-0.23	1.80
3,935.0	22.60	341.70	3,711.3	1,043.6	-349.4	1,100.4	0.73	-0.54	-1.24
4,063.0	20.50	341.60	3,830.4	1,088.2	-364.2	1,147.4	1.64	-1.64	-0.08
4,191.0	22.80	341.70	3,949.3	1,133.0	-379.1	1,194.6	1.80	1.80	0.08
4,319.0	22.30	342.40	4,067.6	1,179.7	-394.2	1,243.7	0.44	-0.39	0.55
4,448.0	23.00	346.10	4,186.6	1,227.5	-407.6	1,293.3	1.23	0.54	2.87
4,576.0	24.20	344.70	4,303.9	1,277.1	-420.6	1,344.5	1.03	0.94	-1.09
4,704.0	23.70	345.10	4,420.9	1,327.2	-434.1	1,396.4	0.41	-0.39	0.31
4,832.0	24.00	343.30	4,538.0	1,377.0	-448.2	1,448.1	0.61	0.23	-1.41
4,961.0	23.70	342.80	4,655.9	1,426.9	-463.4	1,500.3	0.28	-0.23	-0.39
5,089.0	21.70	341.20	4,774.0	1,473.9	-478.6	1,549.7	1.64	-1.56	-1.25
5,217.0	20.20	342.80	4,893.6	1,517.4	-492.8	1,595.4	1.25	-1.17	1.25
5,345.0	18.60	343.50	5,014.3	1,558.1	-505.1	1,637.9	1.26	-1.25	0.55
5,474.0	17.50	343.90	5,136.9	1,596.5	-516.4	1,677.9	0.86	-0.85	0.31
5,602.0	14.50	345.40	5,260.0	1,630.5	-525.7	1,713.1	2.37	-2.34	1.17
5,730.0	13.00	344.70	5,384.3	1,659.9	-533.6	1,743.5	1.18	-1.17	-0.55
5,858.0	9.10	341.60	5,509.9	1,683.4	-540.6	1,768.0	3.08	-3.05	-2.42
5,987.0	7.00	344.40	5,637.6	1,700.6	-545.9	1,786.1	1.66	-1.63	2.17
6,115.0	5.40	346.00	5,764.9	1,714.0	-549.5	1,799.9	1.26	-1.25	1.25
6,243.0	3.80	351.20	5,892.5	1,724.0	-551.6	1,810.1	1.29	-1.25	4.06
6,351.1	2.79	351.75	6,000.4	1,730.2	-552.5	1,816.2	0.94	-0.94	0.51
TARGET BHL 75°FNL & 2556°FEL									
6,371.0	2.60	351.90	6,020.3	1,731.1	-552.6	1,817.2	0.94	-0.94	0.75
6,500.0	1.70	343.90	6,149.2	1,735.8	-553.6	1,822.0	0.73	-0.70	-6.20
6,628.0	1.20	359.50	6,277.1	1,739.0	-554.1	1,825.1	0.49	-0.39	12.19
6,756.0	0.70	355.80	6,405.1	1,741.1	-554.2	1,827.2	0.39	-0.39	-2.89
6,884.0	0.30	54.70	6,533.1	1,742.1	-554.0	1,828.0	0.47	-0.31	46.02
7,013.0	0.40	112.90	6,662.1	1,742.1	-553.3	1,827.8	0.27	0.08	45.12
7,141.0	0.80	123.20	6,790.1	1,741.4	-552.1	1,826.9	0.32	0.31	8.05
7,262.9	1.09	126.96	6,911.9	1,740.3	-550.5	1,825.2	0.24	0.23	3.09
TARGET CIRCLE 75°FNL & 2556°FEL									
7,269.0	1.10	127.10	6,918.1	1,740.2	-550.4	1,825.2	0.24	0.24	2.24
7,397.0	1.20	126.20	7,046.0	1,738.7	-548.3	1,823.1	0.08	0.08	-0.70
7,526.0	1.40	129.00	7,175.0	1,736.9	-546.0	1,820.7	0.16	0.16	2.17

Company:	NOBLE ENERGY INC WELD COUNTY CO	Local Co-ordinate Reference:	Well Ulrich PC G21-28D
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Site:	Ulrich PC G21-28D Pad Sec.21-T4N-R65W (Grid North)	MD Reference:	WELL @ 4872.0ft (Original Well Elev)
Well:	Ulrich PC G21-28D	North Reference:	Grid
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)
7,654.0	1.00	125.20	7,303.0	1,735.3	-543.9	1,818.5	0.32	-0.31	-2.97
7,715.0	0.80	127.80	7,364.0	1,734.7	-543.1	1,817.7	0.33	-0.33	4.26
7,741.4	0.80	127.80	7,390.4	1,734.5	-542.8	1,817.4	0.00	0.00	0.00
HARDLINES 75'N & 75'W OF BHL									
7,760.0	0.80	127.80	7,409.0	1,734.3	-542.6	1,817.2	0.00	0.00	0.00

Checked By: _____	Approved By: _____	Date: _____
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