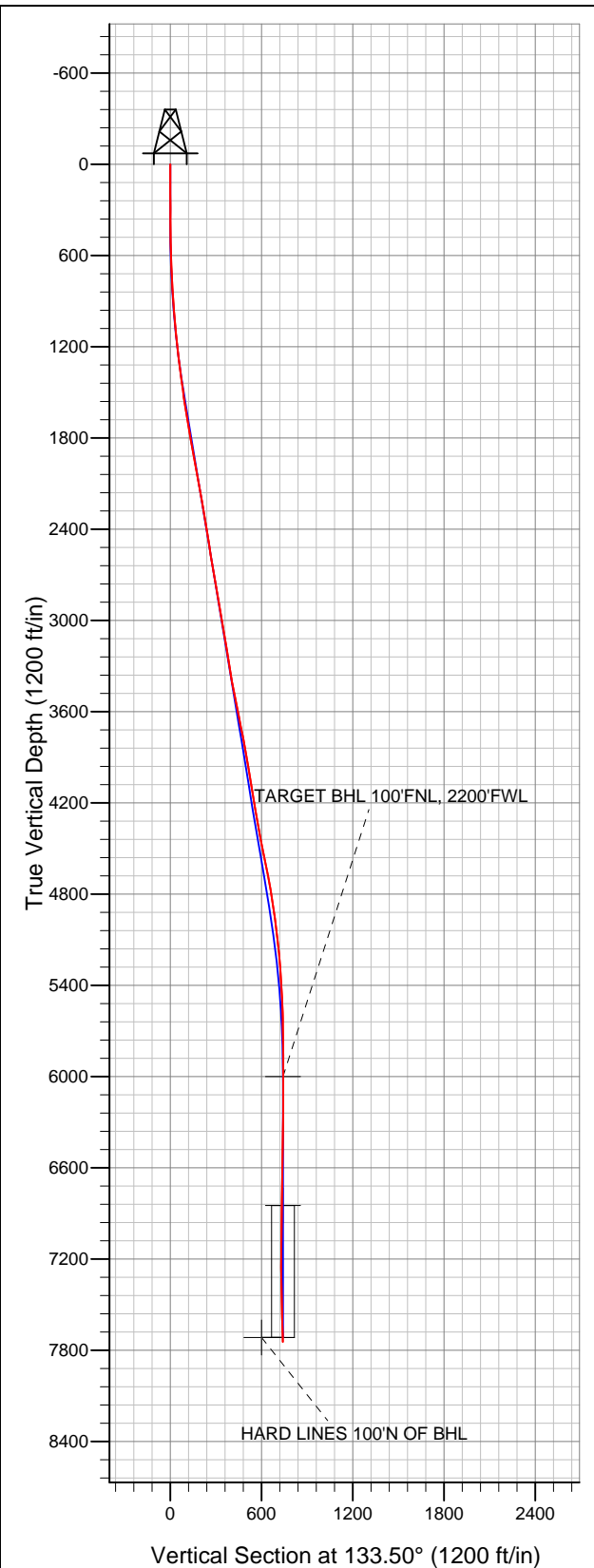


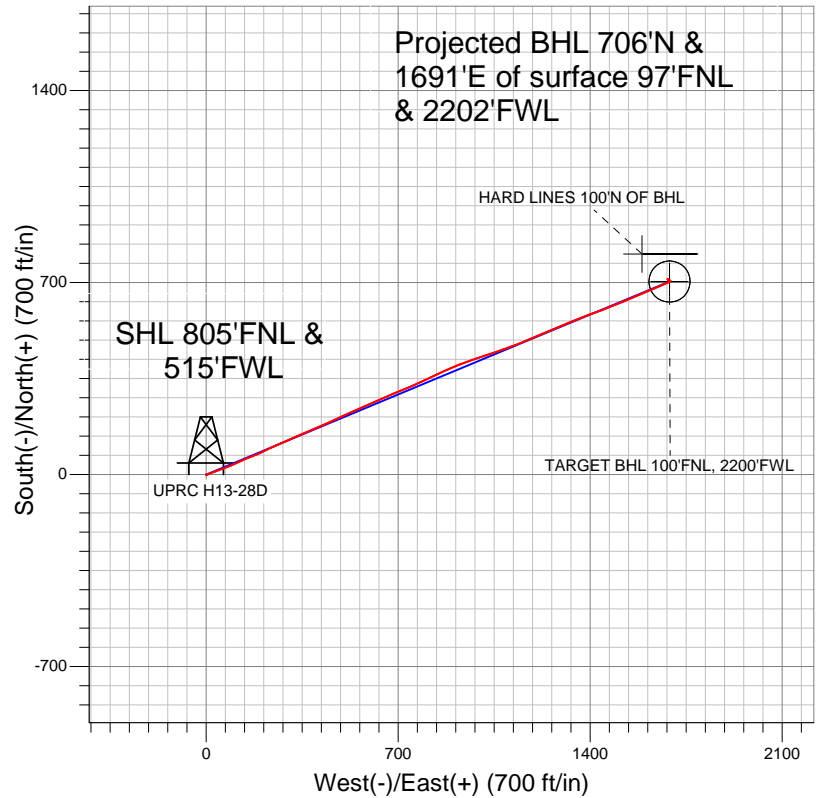
# Well Name: UPRC H13-28D

Surface Location: UPRC H13-30D Pad Sec.13-T3N-R65W  
 North American Datum 1983 US State Plane 1983Colorado Northern Zone  
 Ground Elevation: 4841.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1327936.52	3245961.27	40.230230	-104.619060	
Original Well Elev			WELL @ 4854.0ft (Original Well Elev)			



## NOBLE ENERGY INC WELD COUNTY CO



- LEGEND
- Wellbore #1
  - UPRC H13-28D, Wellbore #1, Noble UPRC H13-28D Plan #2 (4-27-12) R V0
  - Survey #1

## Final Survey Plot

Projected Final Survey -  
 8093'MD & 7745'TVD @ 1833'VS  
 1.80 deg Inc 120.60 deg AZ

Project: SEC.13-T3N-R65W  
 Site: UPRC H13-30D Pad Sec.13-T3N-R65W  
 Well: UPRC H13-28D  
 Plan: Wellbore #1



# **NOBLE ENERGY INC WELD COUNTY CO**

**SEC.13-T3N-R65W**

**UPRC H13-30D Pad Sec.13-T3N-R65W**

**UPRC H13-28D**

**Wellbore #1**

**Survey: Survey #1**

## **Standard Survey Report**

**04 May, 2012**



<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>Local Co-ordinate Reference:</b>	Well UPRC H13-28D
<b>Project:</b>	SEC.13-T3N-R65W	<b>TVD Reference:</b>	WELL @ 4854.0ft (Original Well Elev)
<b>Site:</b>	UPRC H13-30D Pad Sec.13-T3N-R65W	<b>MD Reference:</b>	WELL @ 4854.0ft (Original Well Elev)
<b>Well:</b>	UPRC H13-28D	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	Landmark

<b>Project</b>	SEC.13-T3N-R65W, Weld County, Colorado		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		Using Well Reference Point
<b>Map Zone:</b>	Colorado Northern Zone		Using geodetic scale factor

<b>Site</b>	UPRC H13-30D Pad Sec.13-T3N-R65W		
<b>Site Position:</b>		<b>Northing:</b>	1,327,925.41 ft
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,245,941.84 ft
<b>Position Uncertainty:</b>	0.0 ft	<b>Slot Radius:</b>	"
		<b>Latitude:</b>	40.230200
		<b>Longitude:</b>	-104.619130
		<b>Grid Convergence:</b>	0.57 °

<b>Well</b>	UPRC H13-28D		
<b>Well Position</b>	<b>+N/-S</b>	0.0 ft	<b>Northing:</b>
	<b>+E/-W</b>	0.0 ft	<b>Easting:</b>
<b>Position Uncertainty</b>	0.0 ft	<b>Wellhead Elevation:</b>	ft
		<b>Latitude:</b>	40.230230
		<b>Longitude:</b>	-104.619060
		<b>Ground Level:</b>	4,841.0 ft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	4/27/2012	8.65	66.91	52,966

<b>Design</b>	Wellbore #1				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	0.0	0.0	0.0	133.50	

<b>Survey Program</b>	<b>Date</b>	5/4/2012			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
103.0	8,093.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard	

<b>Survey</b>										
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Vertical Section (ft)</b>	<b>Dogleg Rate (°/100ft)</b>	<b>Build Rate (°/100ft)</b>	<b>Turn Rate (°/100ft)</b>	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
103.0	0.40	210.80	103.0	-0.3	-0.2	0.1	0.39	0.39	0.00	
194.0	0.40	179.20	194.0	-0.9	-0.3	0.4	0.24	0.00	-34.73	
287.0	0.60	191.70	287.0	-1.7	-0.4	0.9	0.24	0.22	13.44	
378.0	0.60	102.20	378.0	-2.3	-0.1	1.5	0.93	0.00	-98.35	
471.0	1.90	64.60	471.0	-1.7	1.8	2.5	1.58	1.40	-40.43	
564.0	3.70	63.50	563.9	0.3	5.9	4.1	1.94	1.94	-1.18	
656.0	4.80	67.70	655.6	3.1	12.1	6.7	1.24	1.20	4.57	
748.0	7.50	70.70	747.1	6.5	21.3	11.0	2.95	2.93	3.26	
798.0	8.50	68.30	796.6	9.0	27.8	14.0	2.11	2.00	-4.80	
902.0	8.40	69.50	899.4	14.5	42.1	20.6	0.19	-0.10	1.15	
984.0	10.30	72.30	980.4	18.8	54.7	26.7	2.38	2.32	3.41	
1,066.0	11.70	70.20	1,060.8	23.8	69.5	34.0	1.78	1.71	-2.56	

<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>Local Co-ordinate Reference:</b>	Well UPRC H13-28D
<b>Project:</b>	SEC.13-T3N-R65W	<b>TVD Reference:</b>	WELL @ 4854.0ft (Original Well Elev)
<b>Site:</b>	UPRC H13-30D Pad Sec.13-T3N-R65W	<b>MD Reference:</b>	WELL @ 4854.0ft (Original Well Elev)
<b>Well:</b>	UPRC H13-28D	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	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)	
1,148.0	13.50	65.40	1,140.9	30.6	86.0	41.3	2.54	2.20	-5.85	
1,229.0	15.00	64.70	1,219.4	39.1	104.1	48.6	1.86	1.85	-0.86	
1,311.0	16.80	66.90	1,298.2	48.2	124.6	57.2	2.31	2.20	2.68	
1,393.0	18.40	68.40	1,376.4	57.7	147.5	67.3	2.03	1.95	1.83	
1,474.0	20.00	68.10	1,452.9	67.5	172.3	78.5	1.98	1.98	-0.37	
1,556.0	21.10	64.30	1,529.7	79.2	198.6	89.5	2.11	1.34	-4.63	
1,638.0	23.00	64.20	1,605.7	92.5	226.3	100.4	2.32	2.32	-0.12	
1,720.0	23.70	67.20	1,681.0	105.9	255.9	112.7	1.68	0.85	3.66	
1,801.0	23.80	66.70	1,755.1	118.7	285.9	125.7	0.28	0.12	-0.62	
1,883.0	24.40	64.70	1,829.9	132.5	316.5	138.4	1.24	0.73	-2.44	
1,965.0	24.90	66.20	1,904.5	146.7	347.6	151.1	0.98	0.61	1.83	
2,046.0	25.00	68.30	1,977.9	159.9	379.1	164.9	1.10	0.12	2.59	
2,128.0	25.40	67.90	2,052.1	172.9	411.5	179.4	0.53	0.49	-0.49	
2,210.0	25.00	64.20	2,126.3	187.0	443.4	192.8	1.98	-0.49	-4.51	
2,292.0	24.70	65.60	2,200.7	201.7	474.6	205.4	0.81	-0.37	1.71	
2,373.0	25.00	65.60	2,274.2	215.7	505.6	218.2	0.37	0.37	0.00	
2,455.0	24.20	65.80	2,348.8	229.8	536.7	231.1	0.98	-0.98	0.24	
2,537.0	23.00	65.80	2,423.9	243.2	566.6	243.5	1.46	-1.46	0.00	
2,618.0	22.20	65.40	2,498.7	256.1	595.0	255.3	1.01	-0.99	-0.49	
2,700.0	21.90	65.60	2,574.7	268.9	623.0	266.8	0.38	-0.37	0.24	
2,782.0	22.60	66.70	2,650.6	281.4	651.4	278.7	0.99	0.85	1.34	
2,864.0	23.70	69.30	2,726.0	293.5	681.3	292.1	1.83	1.34	3.17	
2,945.0	24.30	67.20	2,800.0	305.7	711.9	305.9	1.29	0.74	-2.59	
3,027.0	23.90	66.00	2,874.8	319.0	742.6	319.0	0.77	-0.49	-1.46	
3,109.0	24.30	65.60	2,949.7	332.7	773.1	331.7	0.53	0.49	-0.49	
3,191.0	24.40	64.40	3,024.4	347.0	803.8	344.1	0.62	0.12	-1.46	
3,272.0	23.70	65.30	3,098.4	361.0	833.6	356.1	0.98	-0.86	1.11	
3,354.0	23.20	65.40	3,173.6	374.6	863.3	368.3	0.61	-0.61	0.12	
3,436.0	22.20	66.90	3,249.2	387.4	892.2	380.5	1.41	-1.22	1.83	
3,517.0	22.00	67.60	3,324.3	399.2	920.3	392.7	0.41	-0.25	0.86	
3,599.0	22.40	70.70	3,400.2	410.2	949.3	406.1	1.51	0.49	3.78	
3,681.0	22.50	71.80	3,476.0	420.3	978.9	420.7	0.53	0.12	1.34	
3,763.0	23.20	70.40	3,551.6	430.6	1,009.1	435.5	1.08	0.85	-1.71	
3,844.0	23.00	71.60	3,626.1	441.0	1,039.1	450.1	0.63	-0.25	1.48	
3,926.0	23.40	70.90	3,701.4	451.4	1,069.7	465.2	0.59	0.49	-0.85	
4,008.0	21.90	71.10	3,777.1	461.6	1,099.5	479.8	1.83	-1.83	0.24	
4,089.0	23.00	69.80	3,852.0	472.0	1,128.7	493.8	1.49	1.36	-1.60	
4,171.0	23.20	66.90	3,927.4	483.9	1,158.6	507.3	1.41	0.24	-3.54	
4,253.0	23.20	66.50	4,002.8	496.6	1,188.3	520.0	0.19	0.00	-0.49	
4,335.0	22.20	67.90	4,078.4	508.9	1,217.4	532.7	1.39	-1.22	1.71	
4,416.0	22.20	65.80	4,153.4	520.9	1,245.6	544.8	0.98	0.00	-2.59	
4,498.0	22.50	67.40	4,229.3	533.3	1,274.2	557.1	0.83	0.37	1.95	
4,580.0	23.00	67.90	4,304.9	545.4	1,303.5	570.0	0.65	0.61	0.61	
4,661.0	23.20	68.60	4,379.4	557.1	1,333.0	583.3	0.42	0.25	0.86	
4,743.0	24.80	68.30	4,454.3	569.4	1,364.0	597.4	1.96	1.95	-0.37	
4,825.0	25.20	69.70	4,528.6	581.8	1,396.4	612.3	0.87	0.49	1.71	
4,907.0	25.40	70.40	4,602.7	593.8	1,429.3	628.0	0.44	0.24	0.85	
4,988.0	25.20	67.20	4,676.0	606.3	1,461.6	642.8	1.71	-0.25	-3.95	
5,070.0	23.00	68.10	4,750.8	619.0	1,492.5	656.5	2.72	-2.68	1.10	
5,152.0	20.90	67.00	4,826.9	630.7	1,520.9	669.0	2.61	-2.56	-1.34	
5,234.0	19.40	68.80	4,903.9	641.4	1,547.0	680.6	1.98	-1.83	2.20	
5,315.0	17.50	66.30	4,980.7	651.1	1,570.7	691.1	2.54	-2.35	-3.09	
5,397.0	16.50	67.90	5,059.1	660.5	1,592.8	700.7	1.35	-1.22	1.95	
5,479.0	15.50	66.30	5,137.9	669.2	1,613.6	709.7	1.33	-1.22	-1.95	

<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>Local Co-ordinate Reference:</b>	Well UPRC H13-28D
<b>Project:</b>	SEC.13-T3N-R65W	<b>TVD Reference:</b>	WELL @ 4854.0ft (Original Well Elev)
<b>Site:</b>	UPRC H13-30D Pad Sec.13-T3N-R65W	<b>MD Reference:</b>	WELL @ 4854.0ft (Original Well Elev)
<b>Well:</b>	UPRC H13-28D	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	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)	
5,560.0	13.20	66.00	5,216.4	677.4	1,632.0	717.5	2.84	-2.84	-0.37	
5,642.0	10.90	66.50	5,296.6	684.3	1,647.7	724.1	2.81	-2.80	0.61	
5,724.0	8.60	66.90	5,377.4	689.7	1,660.4	729.5	2.81	-2.80	0.49	
5,806.0	6.90	68.10	5,458.6	694.0	1,670.6	734.0	2.08	-2.07	1.46	
5,887.0	5.80	65.40	5,539.2	697.5	1,678.9	737.6	1.41	-1.36	-3.33	
5,969.0	3.80	65.40	5,620.9	700.4	1,685.1	740.1	2.44	-2.44	0.00	
6,051.0	2.00	79.70	5,702.8	701.8	1,689.0	742.0	2.35	-2.20	17.44	
6,132.0	0.50	102.50	5,783.7	701.9	1,690.7	743.1	1.92	-1.85	28.15	
6,296.0	0.20	14.30	5,947.7	702.1	1,691.5	743.6	0.32	-0.18	-53.78	
6,348.3	0.26	3.28	6,000.0	702.3	1,691.5	743.5	0.14	0.11	-21.08	
TARGET BHL 100'FNL, 2200'FWL										
6,459.0	0.40	351.60	6,110.7	702.9	1,691.5	743.0	0.14	0.13	-10.55	
6,623.0	0.50	325.80	6,274.7	704.1	1,691.0	741.9	0.14	0.06	-15.73	
6,786.0	0.80	288.70	6,437.7	705.0	1,689.5	740.1	0.31	0.18	-22.76	
6,950.0	0.90	302.00	6,601.7	706.1	1,687.3	737.8	0.13	0.06	8.11	
7,113.0	0.90	316.00	6,764.7	707.7	1,685.4	735.3	0.13	0.00	8.59	
7,196.2	0.89	306.86	6,847.9	708.5	1,684.4	734.0	0.17	-0.01	-10.98	
TARGET CIRCLE 100'FNL & 2200'FWL										
7,277.0	0.90	298.00	6,928.7	709.2	1,683.3	732.8	0.17	0.01	-10.97	
7,440.0	0.30	355.30	7,091.6	710.2	1,682.2	731.2	0.48	-0.37	35.15	
7,603.0	0.60	2.50	7,254.6	711.5	1,682.2	730.4	0.19	0.18	4.42	
7,767.0	1.40	111.90	7,418.6	711.6	1,684.1	731.7	1.03	0.49	66.71	
7,930.0	1.70	123.50	7,581.6	709.5	1,687.9	735.9	0.27	0.18	7.12	
8,043.0	1.80	120.60	7,694.5	707.7	1,690.8	739.3	0.12	0.09	-2.57	
HARD LINES 100'N OF BHL										
8,093.0	1.80	120.60	7,744.5	706.9	1,692.2	740.8	0.00	0.00	0.00	

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_