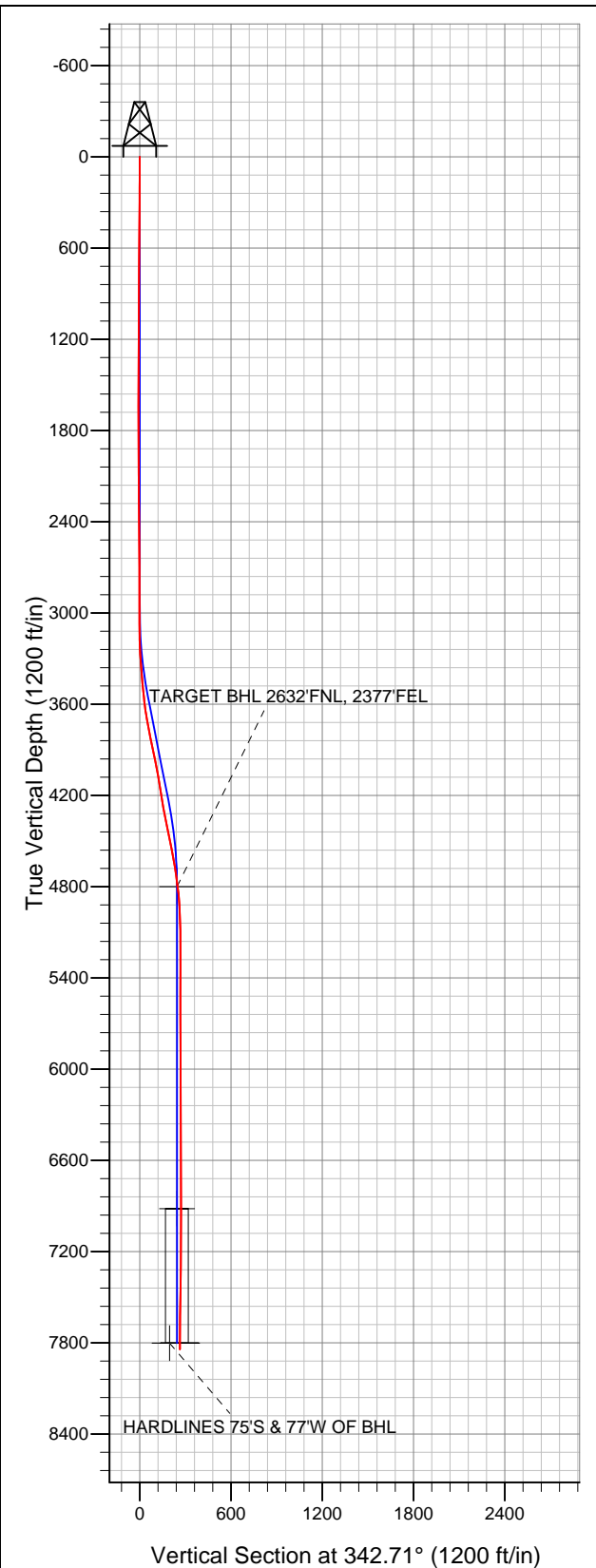


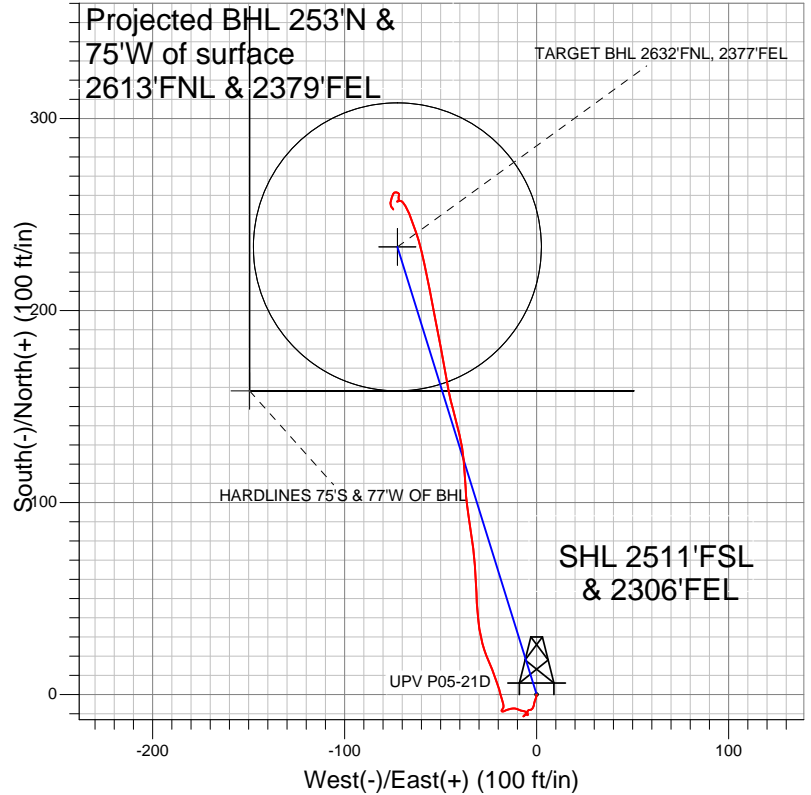
**Well Name: UPV P05-21D**

Surface Location: UPV P05-21D Pad Sec.5-T3N-R67W  
North American Datum 1983 US State Plane 1983 Colorado Northern Zone  
Ground Elevation: 4875.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1336119.84	3163796.04	40.254560	-104.913140	
		Original Well Elev	WELL @ 4888.0ft (Original Well Elev)			



**NOBLE ENERGY INC WELD COUNTY CO**



**LEGEND**

- Survey #1
- ◇ UPV P05-21D, Wellbore #1, Noble UPV P05-21D Plan #3 (12-2-11) V0
- Wellbore #1

**Final Survey Plot**

Projected Final Survey -  
7867'MD & 7844'TVD @ 263'VS  
0.60 deg Inc 141.60 deg AZ

Project: SEC.5-T3N-R67W  
Site: UPV P05-21D Pad Sec.5-T3N-R67W  
Well: UPV P05-21D  
Plan: Wellbore #1



# **NOBLE ENERGY INC WELD COUNTY CO**

**SEC.5-T3N-R67W**

**UPV P05-21D Pad Sec.5-T3N-R67W**

**UPV P05-21D**

**Wellbore #1**

**Survey: Survey #1**

## **Standard Survey Report**

**27 January, 2012**



<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>Local Co-ordinate Reference:</b>	Well UPV P05-21D
<b>Project:</b>	SEC.5-T3N-R67W	<b>TVD Reference:</b>	WELL @ 4888.0ft (Original Well Elev)
<b>Site:</b>	UPV P05-21D Pad Sec.5-T3N-R67W	<b>MD Reference:</b>	WELL @ 4888.0ft (Original Well Elev)
<b>Well:</b>	UPV P05-21D	<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.5-T3N-R67W, 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		
<b>Map Zone:</b>	Colorado Northern Zone		Using geodetic scale factor

<b>Site</b>	UPV P05-21D Pad Sec.5-T3N-R67W		
<b>Site Position:</b>		<b>Northing:</b>	1,336,119.85 ft
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,163,796.04 ft
<b>Position Uncertainty:</b>	0.0 ft	<b>Slot Radius:</b>	"
		<b>Latitude:</b>	40.254560
		<b>Longitude:</b>	-104.913140
		<b>Grid Convergence:</b>	0.38 °

<b>Well</b>	UPV P05-21D		
<b>Well Position</b>	<b>+N/-S</b>	0.0 ft	<b>Northing:</b> 1,336,119.84 ft
	<b>+E/-W</b>	0.0 ft	<b>Easting:</b> 3,163,796.04 ft
<b>Position Uncertainty</b>	0.0 ft	<b>Wellhead Elevation:</b>	ft
		<b>Latitude:</b>	40.254560
		<b>Longitude:</b>	-104.913140
		<b>Ground Level:</b>	4,875.0 ft

<b>Wellbore</b>	Wellbore #1		
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>
	IGRF200510	12/2/2011	8.83
			<b>Dip Angle (°)</b> 66.90
			<b>Field Strength (nT)</b> 53,013

<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>
	0.0	0.0	0.0
			<b>Direction (°)</b> 342.71

<b>Survey Program</b>	<b>Date</b>	1/26/2012		
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
109.0	7,867.0	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	
109.0	0.80	190.80	109.0	-0.7	-0.1	-0.7	0.73	0.73	0.00	
203.0	0.40	186.40	203.0	-1.7	-0.3	-1.6	0.43	-0.43	-4.68	
296.0	0.30	216.40	296.0	-2.2	-0.5	-2.0	0.22	-0.11	32.26	
389.0	0.60	201.00	389.0	-2.9	-0.8	-2.5	0.34	0.32	-16.56	
481.0	0.40	188.30	481.0	-3.7	-1.0	-3.2	0.25	-0.22	-13.80	
562.0	0.40	208.50	562.0	-4.2	-1.2	-3.6	0.17	0.00	24.94	
629.0	0.60	186.00	629.0	-4.7	-1.3	-4.1	0.41	0.30	-33.58	
701.0	0.60	186.70	701.0	-5.5	-1.4	-4.8	0.01	0.00	0.97	
782.0	0.60	206.90	782.0	-6.3	-1.7	-5.5	0.26	0.00	24.94	
864.0	0.90	202.90	864.0	-7.3	-2.1	-6.3	0.37	0.37	-4.88	
946.0	0.80	261.40	946.0	-7.9	-2.9	-6.7	1.02	-0.12	71.34	
1,027.0	0.90	260.20	1,026.9	-8.1	-4.1	-6.5	0.13	0.12	-1.48	

<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>Local Co-ordinate Reference:</b>	Well UPV P05-21D
<b>Project:</b>	SEC.5-T3N-R67W	<b>TVD Reference:</b>	WELL @ 4888.0ft (Original Well Elev)
<b>Site:</b>	UPV P05-21D Pad Sec.5-T3N-R67W	<b>MD Reference:</b>	WELL @ 4888.0ft (Original Well Elev)
<b>Well:</b>	UPV P05-21D	<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)
1,109.0	0.70	186.40	1,108.9	-8.7	-4.8	-6.9	1.19	-0.24	-90.00
1,191.0	0.60	170.90	1,190.9	-9.7	-4.8	-7.8	0.25	-0.12	-18.90
1,273.0	0.40	172.00	1,272.9	-10.4	-4.7	-8.5	0.24	-0.24	1.34
1,354.0	0.10	179.20	1,353.9	-10.7	-4.6	-8.9	0.37	-0.37	8.89
1,436.0	0.00	101.10	1,435.9	-10.8	-4.6	-8.9	0.12	-0.12	0.00
1,518.0	0.30	343.00	1,517.9	-10.6	-4.7	-8.7	0.37	0.37	0.00
1,600.0	0.30	274.30	1,599.9	-10.4	-5.0	-8.4	0.41	0.00	-83.78
1,681.0	0.50	251.10	1,680.9	-10.5	-5.5	-8.3	0.31	0.25	-28.64
1,763.0	0.80	239.60	1,762.9	-10.9	-6.4	-8.5	0.40	0.37	-14.02
1,845.0	0.30	203.10	1,844.9	-11.4	-6.9	-8.8	0.72	-0.61	-44.51
1,926.0	1.00	48.60	1,925.9	-11.1	-6.5	-8.7	1.58	0.86	-190.74
2,008.0	0.80	27.30	2,007.9	-10.1	-5.7	-8.0	0.47	-0.24	-25.98
2,090.0	0.40	339.70	2,089.9	-9.3	-5.5	-7.3	0.74	-0.49	-58.05
2,172.0	0.60	293.10	2,171.9	-8.9	-6.0	-6.7	0.53	0.24	-56.83
2,253.0	0.90	279.40	2,252.9	-8.6	-7.0	-6.1	0.43	0.37	-16.91
2,335.0	0.80	291.00	2,334.9	-8.3	-8.2	-5.5	0.24	-0.12	14.15
2,417.0	0.80	288.70	2,416.9	-7.9	-9.3	-4.8	0.04	0.00	-2.80
2,498.0	0.80	287.60	2,497.9	-7.6	-10.4	-4.1	0.02	0.00	-1.36
2,580.0	0.60	287.10	2,579.9	-7.3	-11.3	-3.6	0.24	-0.24	-0.61
2,662.0	0.90	263.70	2,661.9	-7.2	-12.4	-3.2	0.52	0.37	-28.54
2,744.0	0.80	255.50	2,743.8	-7.4	-13.6	-3.1	0.19	-0.12	-10.00
2,825.0	0.80	251.40	2,824.8	-7.7	-14.6	-3.0	0.07	0.00	-5.06
2,907.0	0.90	250.40	2,906.8	-8.1	-15.8	-3.1	0.12	0.12	-1.22
2,989.0	1.10	243.30	2,988.8	-8.7	-17.1	-3.2	0.29	0.24	-8.66
3,070.0	0.70	315.60	3,069.8	-8.7	-18.1	-2.9	1.37	-0.49	89.26
3,152.0	1.60	43.10	3,151.8	-7.5	-17.7	-1.9	2.10	1.10	106.71
3,234.0	2.70	343.20	3,233.7	-4.8	-17.5	0.6	2.86	1.34	-73.05
3,316.0	3.90	346.30	3,315.6	-0.3	-18.7	5.3	1.48	1.46	3.78
3,397.0	5.50	341.40	3,396.3	6.1	-20.6	11.9	2.03	1.98	-6.05
3,479.0	4.90	337.90	3,478.0	13.0	-23.2	19.3	0.83	-0.73	-4.27
3,561.0	6.20	337.20	3,559.6	20.4	-26.2	27.2	1.59	1.59	-0.85
3,643.0	8.20	348.40	3,641.0	30.2	-29.1	37.5	2.97	2.44	13.66
3,724.0	10.00	355.70	3,720.9	42.9	-30.8	50.1	2.64	2.22	9.01
3,806.0	12.10	358.00	3,801.4	58.6	-31.6	65.3	2.62	2.56	2.80
3,888.0	12.30	352.80	3,881.6	75.8	-33.0	82.2	1.36	0.24	-6.34
3,969.0	12.00	351.10	3,960.8	92.7	-35.4	99.0	0.58	-0.37	-2.10
4,051.0	9.90	357.10	4,041.3	108.2	-37.1	114.3	2.91	-2.56	7.32
4,133.0	9.50	355.00	4,122.1	121.9	-38.0	127.7	0.65	-0.49	-2.56
4,215.0	9.40	346.90	4,203.0	135.2	-40.1	141.0	1.63	-0.12	-9.88
4,296.0	9.90	344.20	4,282.8	148.3	-43.5	154.6	0.83	0.62	-3.33
4,378.0	12.30	350.70	4,363.3	163.7	-46.9	170.3	3.30	2.93	7.93
4,460.0	12.00	348.60	4,443.5	180.7	-50.0	187.4	0.65	-0.37	-2.56
4,541.0	11.00	349.50	4,522.8	196.6	-53.0	203.4	1.25	-1.23	1.11
4,623.0	9.70	349.20	4,603.5	211.1	-55.7	218.1	1.59	-1.59	-0.37
4,705.0	9.40	347.40	4,684.4	224.4	-58.5	231.6	0.52	-0.37	-2.20
4,787.0	7.90	344.20	4,765.4	236.3	-61.5	243.9	1.92	-1.83	-3.90
4,821.4	7.09	342.19	4,799.5	240.6	-62.8	248.4	2.49	-2.37	-5.85
TARGET BHL 2632'FNL, 2377'FEL									
4,868.0	6.00	338.60	4,845.8	245.6	-64.6	253.7	2.49	-2.33	-7.70
4,950.0	3.70	336.80	4,927.5	252.1	-67.2	260.6	2.81	-2.80	-2.20
5,032.0	1.80	324.00	5,009.4	255.5	-69.0	264.5	2.42	-2.32	-15.61
5,113.0	1.00	294.00	5,090.4	256.8	-70.4	266.1	1.31	-0.99	-37.04
5,195.0	0.40	266.20	5,172.4	257.1	-71.3	266.7	0.82	-0.73	-33.90
5,359.0	0.40	261.80	5,336.4	257.0	-72.4	266.9	0.02	0.00	-2.68

<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>Local Co-ordinate Reference:</b>	Well UPV P05-21D
<b>Project:</b>	SEC.5-T3N-R67W	<b>TVD Reference:</b>	WELL @ 4888.0ft (Original Well Elev)
<b>Site:</b>	UPV P05-21D Pad Sec.5-T3N-R67W	<b>MD Reference:</b>	WELL @ 4888.0ft (Original Well Elev)
<b>Well:</b>	UPV P05-21D	<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)	
5,522.0	0.30	114.70	5,499.4	256.7	-72.6	266.7	0.41	-0.06	-90.25	
5,686.0	0.20	28.20	5,663.4	256.8	-72.1	266.6	0.21	-0.06	-52.74	
5,849.0	0.20	25.70	5,826.4	257.3	-71.8	267.0	0.01	0.00	-1.53	
6,012.0	0.40	344.20	5,989.4	258.1	-71.9	267.8	0.17	0.12	-25.46	
6,176.0	0.20	7.10	6,153.4	259.0	-72.0	268.6	0.14	-0.12	13.96	
6,339.0	0.40	15.90	6,316.4	259.8	-71.8	269.4	0.13	0.12	5.40	
6,503.0	0.20	349.70	6,480.4	260.6	-71.7	270.1	0.14	-0.12	-15.98	
6,666.0	0.40	308.90	6,643.4	261.3	-72.2	270.9	0.17	0.12	-25.03	
6,830.0	0.40	260.40	6,807.4	261.5	-73.2	271.5	0.20	0.00	-29.57	
6,941.7	0.33	257.36	6,919.0	261.4	-73.9	271.5	0.06	-0.06	-2.72	
TARGET CIRCLE 2632'FNL, 2377'FEL										
6,993.0	0.30	255.50	6,970.4	261.3	-74.2	271.5	0.06	-0.06	-3.63	
7,156.0	0.40	194.30	7,133.4	260.7	-74.7	271.1	0.22	0.06	-37.55	
7,320.0	1.10	204.30	7,297.4	258.7	-75.5	269.4	0.43	0.43	6.10	
7,483.0	0.90	181.60	7,460.3	256.0	-76.2	267.0	0.27	-0.12	-13.93	
7,647.0	0.40	143.10	7,624.3	254.2	-75.9	265.3	0.39	-0.30	-23.48	
7,817.0	0.60	141.60	7,794.3	253.0	-75.0	263.9	0.12	0.12	-0.88	
HARDLINES 75'S & 77'W OF BHL										
7,867.0	0.60	141.60	7,844.3	252.6	-74.6	263.4	0.00	0.00	0.00	

Checked By: _____	Approved By: _____	Date: _____
-------------------	--------------------	-------------