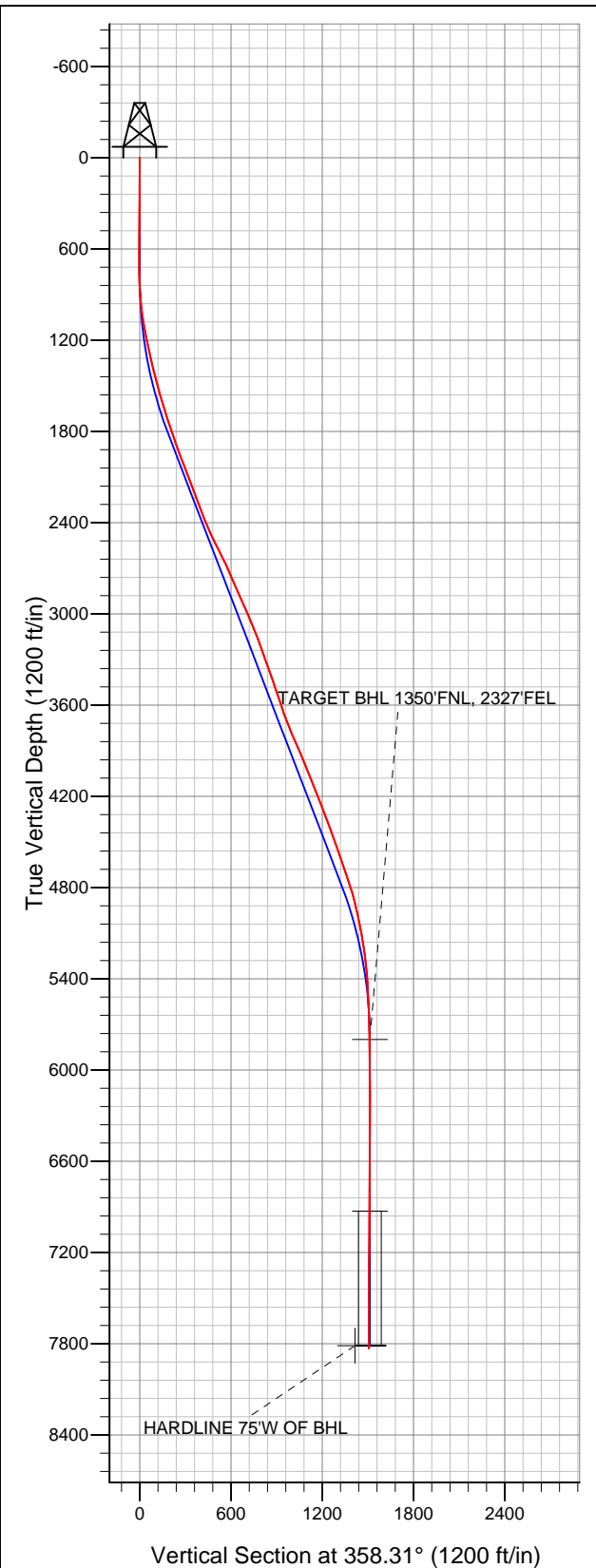




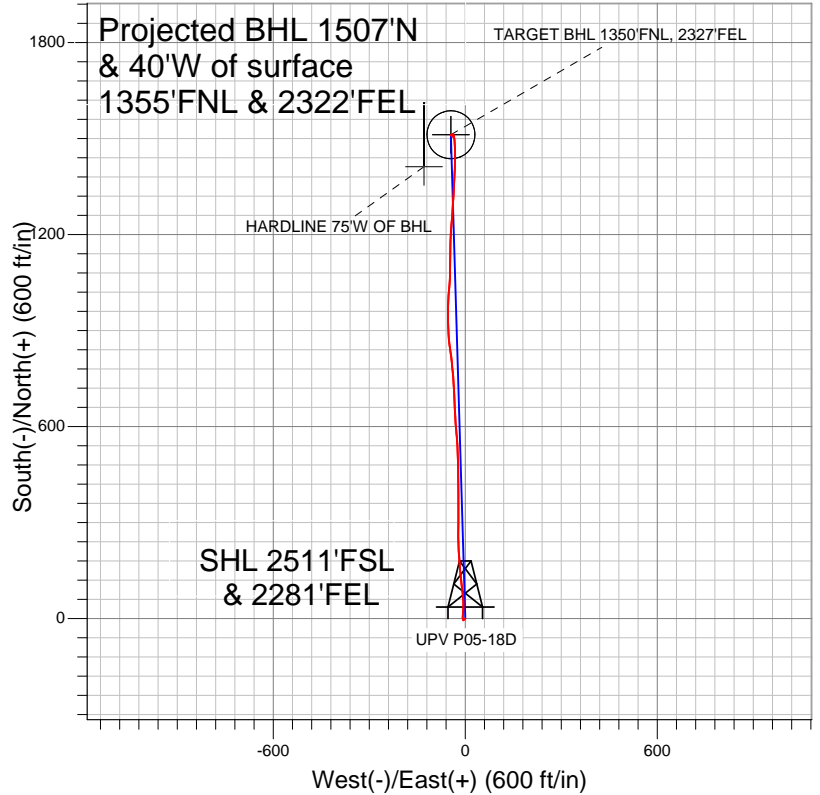
Well Name: UPV P05-18D

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	1336120.00	3163821.16	40.254560	-104.913050	
		Original Well Elev	WELL @ 4888.0ft (Original Well Elev)			



NOBLE ENERGY INC WELD COUNTY CO



LEGEND

- Survey #1
- UPV P05-18D, Wellbore #1, Noble UPV P05-18D Plan #3 (1-26-12) R V0
- Wellbore #1

Final Survey Plot

Projected Final Survey -
8095'MD & 7832'TVD @ 1508'VS
0.20 deg Inc 347.70 deg AZ

Project: SEC.5-T3N-R67W
Site: UPV P05-21D Pad Sec.5-T3N-R67W
Well: UPV P05-18D
Plan: Wellbore #1



NOBLE ENERGY INC WELD COUNTY CO

SEC.5-T3N-R67W

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

UPV P05-18D

Wellbore #1

Survey: Survey #1

Standard Survey Report

03 February, 2012



Company:	NOBLE ENERGY INC WELD COUNTY CO	Local Co-ordinate Reference:	Well UPV P05-18D
Project:	SEC.5-T3N-R67W	TVD Reference:	WELL @ 4888.0ft (Original Well Elev)
Site:	UPV P05-21D Pad Sec.5-T3N-R67W	MD Reference:	WELL @ 4888.0ft (Original Well Elev)
Well:	UPV P05-18D	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Project	SEC.5-T3N-R67W, Weld County, Colorado		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

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

Well	UPV P05-18D		
Well Position	+N/-S	0.0 ft	Northing: 1,336,120.00 ft
	+E/-W	0.0 ft	Easting: 3,163,821.16 ft
Position Uncertainty	0.0 ft	Wellhead Elevation:	ft
		Latitude:	40.254560
		Longitude:	-104.913050
		Ground Level:	4,875.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	1/26/2012	8.80	66.90	52,998

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	358.31	

Survey Program	Date	2/3/2012			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
109.0	8,095.0	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	
109.0	0.60	210.60	109.0	-0.5	-0.3	-0.5	0.55	0.55	0.00	
172.0	0.50	218.20	172.0	-1.0	-0.6	-1.0	0.20	-0.16	12.06	
265.0	0.70	227.20	265.0	-1.7	-1.3	-1.7	0.24	0.22	9.68	
358.0	0.60	252.30	358.0	-2.2	-2.2	-2.2	0.32	-0.11	26.99	
450.0	0.80	230.50	450.0	-2.8	-3.1	-2.7	0.36	0.22	-23.70	
543.0	1.30	226.60	543.0	-3.9	-4.4	-3.8	0.54	0.54	-4.19	
698.0	0.40	260.90	697.9	-5.2	-6.2	-5.0	0.64	-0.58	22.13	
779.0	1.70	350.60	778.9	-4.1	-6.7	-3.9	2.15	1.60	110.74	
861.0	3.60	352.70	860.8	-0.3	-7.2	-0.1	2.32	2.32	2.56	
943.0	5.30	2.00	942.6	6.0	-7.4	6.2	2.25	2.07	11.34	
1,025.0	7.30	2.30	1,024.1	15.0	-7.1	15.2	2.44	2.44	0.37	
1,106.0	9.70	3.40	1,104.2	27.0	-6.5	27.1	2.97	2.96	1.36	

Company:	NOBLE ENERGY INC WELD COUNTY CO	Local Co-ordinate Reference:	Well UPV P05-18D
Project:	SEC.5-T3N-R67W	TVD Reference:	WELL @ 4888.0ft (Original Well Elev)
Site:	UPV P05-21D Pad Sec.5-T3N-R67W	MD Reference:	WELL @ 4888.0ft (Original Well Elev)
Well:	UPV P05-18D	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)
1,188.0	11.40	1.60	1,184.8	42.0	-5.8	42.1	2.11	2.07	-2.20
1,270.0	12.70	356.20	1,265.0	59.1	-6.2	59.2	2.10	1.59	-6.59
1,351.0	13.20	353.90	1,343.9	77.1	-7.8	77.3	0.89	0.62	-2.84
1,433.0	14.10	351.10	1,423.6	96.3	-10.3	96.6	1.36	1.10	-3.41
1,515.0	15.70	354.30	1,502.9	117.2	-12.9	117.6	2.19	1.95	3.90
1,597.0	16.00	355.50	1,581.7	139.5	-14.9	139.9	0.54	0.37	1.46
1,678.0	17.10	356.00	1,659.4	162.5	-16.6	163.0	1.37	1.36	0.62
1,760.0	18.60	355.50	1,737.4	187.6	-18.5	188.1	1.84	1.83	-0.61
1,842.0	18.80	355.50	1,815.1	213.8	-20.6	214.3	0.24	0.24	0.00
1,923.0	19.30	359.20	1,891.7	240.2	-21.8	240.8	1.61	0.62	4.57
2,005.0	21.00	0.20	1,968.7	268.5	-21.9	269.0	2.12	2.07	1.22
2,087.0	21.20	0.80	2,045.2	298.0	-21.7	298.5	0.36	0.24	0.73
2,169.0	21.10	359.70	2,121.6	327.6	-21.5	328.1	0.50	-0.12	-1.34
2,250.0	19.80	0.80	2,197.5	355.9	-21.4	356.3	1.67	-1.60	1.36
2,332.0	20.50	359.50	2,274.5	384.1	-21.4	384.6	1.01	0.85	-1.59
2,414.0	21.10	359.40	2,351.2	413.2	-21.6	413.7	0.73	0.73	-0.12
2,495.0	24.30	359.30	2,425.9	444.5	-22.0	444.9	3.95	3.95	-0.12
2,577.0	25.60	359.20	2,500.2	479.1	-22.4	479.5	1.59	1.59	-0.12
2,659.0	26.80	358.30	2,573.8	515.3	-23.2	515.7	1.54	1.46	-1.10
2,741.0	26.30	355.70	2,647.2	551.8	-25.1	552.3	1.54	-0.61	-3.17
2,822.0	22.80	354.30	2,720.8	585.4	-28.1	585.9	4.38	-4.32	-1.73
2,904.0	23.70	357.40	2,796.2	617.6	-30.4	618.3	1.85	1.10	3.78
2,986.0	24.20	356.40	2,871.1	650.9	-32.2	651.5	0.79	0.61	-1.22
3,068.0	24.20	357.90	2,945.9	684.4	-33.9	685.1	0.75	0.00	1.83
3,149.0	23.00	357.80	3,020.1	716.9	-35.1	717.6	1.48	-1.48	-0.12
3,231.0	21.90	354.30	3,095.9	748.1	-37.2	748.9	2.11	-1.34	-4.27
3,313.0	20.80	356.20	3,172.3	777.8	-39.7	778.7	1.58	-1.34	2.32
3,394.0	18.90	353.20	3,248.5	805.2	-42.2	806.1	2.66	-2.35	-3.70
3,476.0	20.40	351.80	3,325.7	832.5	-45.8	833.5	1.92	1.83	-1.71
3,558.0	19.70	352.30	3,402.7	860.4	-49.7	861.5	0.88	-0.85	0.61
3,640.0	18.30	357.20	3,480.3	886.9	-52.2	888.1	2.59	-1.71	5.98
3,721.0	18.70	358.30	3,557.1	912.6	-53.2	913.8	0.66	0.49	1.36
3,803.0	19.00	358.10	3,634.7	939.1	-54.0	940.3	0.37	0.37	-0.24
3,885.0	21.30	1.30	3,711.7	967.3	-54.1	968.5	3.11	2.80	3.90
3,966.0	22.70	4.40	3,786.8	997.6	-52.6	998.7	2.25	1.73	3.83
4,048.0	24.40	4.40	3,861.9	1,030.3	-50.1	1,031.3	2.07	2.07	0.00
4,130.0	22.50	3.20	3,937.2	1,062.9	-47.9	1,063.8	2.39	-2.32	-1.46
4,212.0	21.80	359.70	4,013.1	1,093.7	-47.1	1,094.7	1.82	-0.85	-4.27
4,293.0	22.40	0.80	4,088.2	1,124.2	-47.0	1,125.1	0.90	0.74	1.36
4,375.0	21.60	0.20	4,164.2	1,154.9	-46.7	1,155.8	1.01	-0.98	-0.73
4,457.0	20.80	2.50	4,240.6	1,184.6	-46.0	1,185.4	1.41	-0.98	2.80
4,538.0	21.80	5.10	4,316.1	1,213.9	-44.0	1,214.7	1.70	1.23	3.21
4,620.0	20.80	4.10	4,392.5	1,243.6	-41.6	1,244.3	1.30	-1.22	-1.22
4,702.0	19.40	2.90	4,469.5	1,271.7	-39.9	1,272.4	1.78	-1.71	-1.46
4,784.0	19.30	4.60	4,546.9	1,298.8	-38.1	1,299.4	0.70	-0.12	2.07
4,865.0	18.60	3.40	4,623.5	1,325.1	-36.3	1,325.6	0.99	-0.86	-1.48
4,947.0	19.70	2.00	4,700.9	1,352.0	-35.0	1,352.4	1.45	1.34	-1.71
5,029.0	18.00	3.60	4,778.5	1,378.4	-33.8	1,378.8	2.17	-2.07	1.95
5,111.0	15.50	1.60	4,857.1	1,402.0	-32.7	1,402.4	3.13	-3.05	-2.44
5,192.0	13.50	2.20	4,935.5	1,422.3	-32.0	1,422.6	2.48	-2.47	0.74
5,274.0	11.30	0.60	5,015.6	1,439.9	-31.5	1,440.2	2.72	-2.68	-1.95
5,356.0	10.60	359.30	5,096.1	1,455.5	-31.6	1,455.8	0.91	-0.85	-1.59
5,437.0	8.90	356.90	5,175.9	1,469.2	-32.0	1,469.5	2.16	-2.10	-2.96
5,519.0	7.30	357.40	5,257.1	1,480.7	-32.6	1,481.0	1.95	-1.95	0.61

Company:	NOBLE ENERGY INC WELD COUNTY CO	Local Co-ordinate Reference:	Well UPV P05-18D
Project:	SEC.5-T3N-R67W	TVD Reference:	WELL @ 4888.0ft (Original Well Elev)
Site:	UPV P05-21D Pad Sec.5-T3N-R67W	MD Reference:	WELL @ 4888.0ft (Original Well Elev)
Well:	UPV P05-18D	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)	
5,601.0	5.50	354.80	5,338.6	1,489.8	-33.2	1,490.1	2.22	-2.20	-3.17	
5,683.0	3.70	352.00	5,420.3	1,496.4	-33.9	1,496.7	2.21	-2.20	-3.41	
5,764.0	3.00	352.80	5,501.1	1,501.0	-34.5	1,501.4	0.87	-0.86	0.99	
5,846.0	2.30	355.50	5,583.1	1,504.8	-34.9	1,505.2	0.87	-0.85	3.29	
5,928.0	1.80	348.60	5,665.0	1,507.7	-35.3	1,508.1	0.68	-0.61	-8.41	
6,009.0	1.40	334.40	5,746.0	1,509.9	-36.0	1,510.3	0.69	-0.49	-17.53	
6,063.1	1.19	325.87	5,800.1	1,510.9	-36.6	1,511.3	0.52	-0.38	-15.75	
TARGET BHL 1350'FNL, 2327'FEL										
6,091.0	1.10	320.30	5,828.0	1,511.4	-36.9	1,511.8	0.52	-0.33	-20.00	
6,173.0	0.90	307.80	5,909.9	1,512.4	-37.9	1,512.8	0.36	-0.24	-15.24	
6,255.0	0.50	298.00	5,991.9	1,512.9	-38.7	1,513.4	0.51	-0.49	-11.95	
6,336.0	0.50	264.10	6,072.9	1,513.1	-39.4	1,513.6	0.36	0.00	-41.85	
6,418.0	0.40	248.80	6,154.9	1,512.9	-40.0	1,513.4	0.19	-0.12	-18.66	
6,500.0	0.50	241.10	6,236.9	1,512.6	-40.6	1,513.2	0.14	0.12	-9.39	
6,581.0	0.40	256.70	6,317.9	1,512.4	-41.2	1,513.0	0.19	-0.12	19.26	
6,745.0	0.60	257.90	6,481.9	1,512.1	-42.6	1,512.7	0.12	0.12	0.73	
6,908.0	0.40	258.10	6,644.9	1,511.8	-44.0	1,512.4	0.12	-0.12	0.12	
7,072.0	0.60	162.10	6,808.9	1,510.9	-44.3	1,511.5	0.46	0.12	-58.54	
7,192.1	0.96	142.38	6,929.0	1,509.5	-43.5	1,510.1	0.37	0.30	-16.43	
TARGET CIRCLE 1350'FNL, 2327'FEL										
7,235.0	1.10	138.60	6,971.9	1,508.9	-43.0	1,509.5	0.37	0.33	-8.79	
7,399.0	0.70	106.90	7,135.9	1,507.4	-41.0	1,508.0	0.38	-0.24	-19.33	
7,562.0	0.30	98.30	7,298.9	1,507.1	-39.6	1,507.6	0.25	-0.25	-5.28	
7,726.0	0.20	221.50	7,462.9	1,506.8	-39.4	1,507.3	0.27	-0.06	75.12	
8,045.0	0.20	347.70	7,781.9	1,506.9	-39.9	1,507.4	0.11	0.00	39.56	
8,075.9	0.20	347.70	7,812.7	1,507.0	-39.9	1,507.5	0.00	0.00	0.00	
HARDLINE 75'W OF BHL										
8,095.0	0.20	347.70	7,831.9	1,507.1	-39.9	1,507.6	0.00	0.00	0.00	

Checked By: _____	Approved By: _____	Date: _____
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