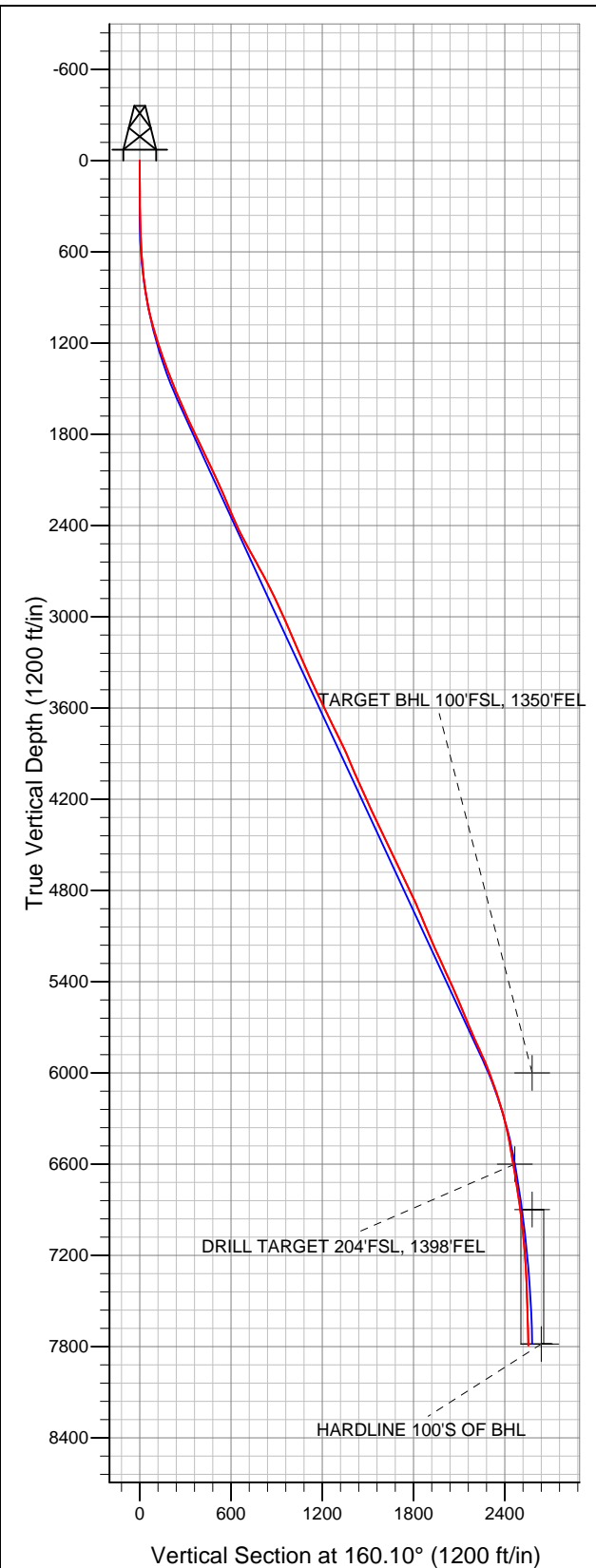


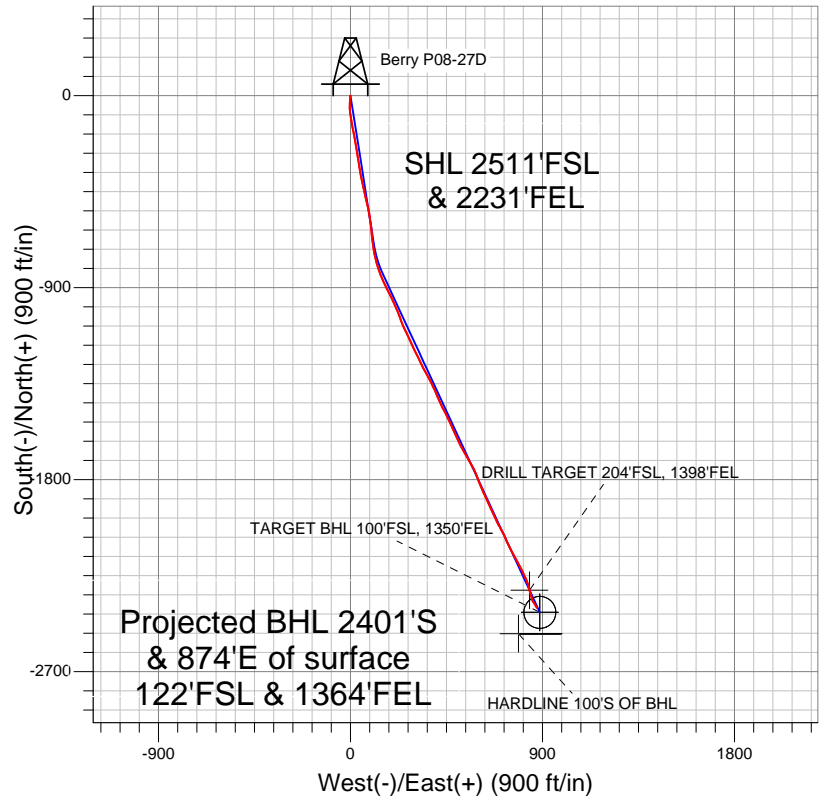
Well Name: Berry P08-27D

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	1336120.34	3163871.39	40.254560	-104.912870	
		Original Well Elev WELL @ 4888.0ft (Original Well Elev)				



NOBLE ENERGY INC WELD COUNTY CO



LEGEND

- Survey #1
- △ Berry P08-27D, Wellbore #1, Noble Berry P08-27D Plan #4 (2-6-12) R V0
- Wellbore #1

Final Survey Plot

Projected Final Survey -
8315'MD & 7793'TVD @ 2555'VS
1.60 deg Inc 150.20 deg AZ

Project: SEC.5-T3N-R67W
Site: UPV P05-21D Pad Sec.5-T3N-R67W
Well: Berry P08-27D
Plan: Wellbore #1



NOBLE ENERGY INC WELD COUNTY CO

SEC.5-T3N-R67W

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

Berry P08-27D

Wellbore #1

Survey: Survey #1

Standard Survey Report

14 February, 2012



Company:	NOBLE ENERGY INC WELD COUNTY CO	Local Co-ordinate Reference:	Well Berry P08-27D
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:	Berry P08-27D	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	Berry P08-27D		
Well Position	+N/-S	0.0 ft	Northing:
	+E/-W	0.0 ft	Easting:
Position Uncertainty		0.0 ft	Wellhead Elevation:
			Latitude:
			Longitude:
			Ground Level:

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	2/6/2012	8.80	66.90	52,995

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	160.10	

Survey Program	Date	2/14/2012			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
115.0	8,315.0	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	
115.0	0.40	192.90	115.0	-0.4	-0.1	0.3	0.35	0.35	0.00	
203.0	0.50	204.00	203.0	-1.0	-0.3	0.9	0.15	0.11	12.61	
296.0	0.50	201.00	296.0	-1.8	-0.6	1.5	0.03	0.00	-3.23	
388.0	1.00	169.70	388.0	-3.0	-0.6	2.6	0.68	0.54	-34.02	
480.0	2.00	177.10	480.0	-5.3	-0.4	4.9	1.10	1.09	8.04	
557.0	3.60	184.30	556.9	-9.1	-0.5	8.4	2.12	2.08	9.35	
705.0	5.20	185.70	704.4	-20.4	-1.5	18.7	1.08	1.08	0.95	
786.0	7.90	185.60	784.9	-29.6	-2.4	27.0	3.33	3.33	-0.12	
868.0	9.40	182.90	865.9	-41.9	-3.3	38.3	1.89	1.83	-3.29	
950.0	11.60	177.40	946.6	-56.8	-3.3	52.3	2.95	2.68	-6.71	
1,032.0	13.80	174.10	1,026.6	-74.8	-1.9	69.7	2.82	2.68	-4.02	
1,113.0	16.30	171.30	1,104.8	-95.6	0.8	90.2	3.21	3.09	-3.46	

Company:	NOBLE ENERGY INC WELD COUNTY CO	Local Co-ordinate Reference:	Well Berry P08-27D
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:	Berry P08-27D	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)	
1,195.0	18.60	171.20	1,183.0	-119.9	4.5	114.3	2.81	2.80	-0.12	
1,277.0	19.50	169.30	1,260.5	-146.3	9.1	140.7	1.33	1.10	-2.32	
1,358.0	20.50	168.60	1,336.6	-173.5	14.4	168.0	1.27	1.23	-0.86	
1,440.0	20.90	168.60	1,413.3	-201.9	20.1	196.7	0.49	0.49	0.00	
1,522.0	22.20	171.50	1,489.6	-231.6	25.3	226.4	2.05	1.59	3.54	
1,604.0	23.40	170.90	1,565.2	-263.0	30.2	257.5	1.49	1.46	-0.73	
1,685.0	24.10	171.80	1,639.3	-295.2	35.1	289.5	0.97	0.86	1.11	
1,767.0	25.50	170.00	1,713.8	-329.2	40.5	323.3	1.94	1.71	-2.20	
1,849.0	26.10	169.90	1,787.6	-364.3	46.8	358.5	0.73	0.73	-0.12	
1,930.0	25.60	169.00	1,860.5	-399.0	53.2	393.3	0.78	-0.62	-1.11	
2,012.0	25.60	167.40	1,934.4	-433.7	60.5	428.4	0.84	0.00	-1.95	
2,094.0	26.00	165.60	2,008.3	-468.4	68.8	463.9	1.07	0.49	-2.20	
2,176.0	25.10	166.90	2,082.2	-502.8	77.2	499.0	1.29	-1.10	1.59	
2,257.0	24.00	167.90	2,155.9	-535.6	84.6	532.4	1.45	-1.36	1.23	
2,339.0	23.10	171.80	2,231.1	-567.8	90.4	564.7	2.19	-1.10	4.76	
2,421.0	23.70	173.00	2,306.4	-600.1	94.7	596.5	0.93	0.73	1.46	
2,503.0	24.80	175.70	2,381.1	-633.6	98.0	629.1	1.90	1.34	3.29	
2,584.0	27.30	173.20	2,453.9	-669.0	101.4	663.6	3.37	3.09	-3.09	
2,666.0	29.30	170.20	2,526.1	-707.5	107.1	701.7	2.99	2.44	-3.66	
2,748.0	29.60	169.70	2,597.5	-747.2	114.1	741.4	0.47	0.37	-0.61	
2,829.0	28.30	165.10	2,668.4	-785.4	122.6	780.2	3.18	-1.60	-5.68	
2,911.0	26.80	160.00	2,741.1	-821.6	133.9	818.1	3.41	-1.83	-6.22	
2,993.0	26.60	155.00	2,814.4	-855.6	148.0	854.9	2.75	-0.24	-6.10	
3,075.0	26.60	155.80	2,887.7	-889.0	163.3	891.5	0.44	0.00	0.98	
3,156.0	25.30	153.70	2,960.5	-921.0	178.4	926.8	1.97	-1.60	-2.59	
3,238.0	24.10	152.50	3,035.0	-951.6	193.9	960.8	1.59	-1.46	-1.46	
3,320.0	23.80	155.80	3,109.9	-981.5	208.4	993.9	1.67	-0.37	4.02	
3,401.0	22.30	159.00	3,184.5	-1,010.8	220.6	1,025.5	2.41	-1.85	3.95	
3,483.0	22.60	160.00	3,260.3	-1,040.1	231.6	1,056.8	0.59	0.37	1.22	
3,565.0	23.90	158.60	3,335.6	-1,070.4	243.0	1,089.2	1.72	1.59	-1.71	
3,647.0	24.90	153.20	3,410.3	-1,101.3	256.9	1,122.9	2.98	1.22	-6.59	
3,728.0	25.80	154.60	3,483.5	-1,132.4	272.1	1,157.4	1.33	1.11	1.73	
3,810.0	25.60	155.60	3,557.4	-1,164.7	287.1	1,192.8	0.58	-0.24	1.22	
3,892.0	25.90	154.40	3,631.2	-1,197.0	302.2	1,228.3	0.73	0.37	-1.46	
3,973.0	26.60	154.00	3,703.9	-1,229.2	317.8	1,264.0	0.89	0.86	-0.49	
4,055.0	25.70	153.90	3,777.5	-1,261.7	333.6	1,299.9	1.10	-1.10	-0.12	
4,137.0	26.10	150.90	3,851.3	-1,293.4	350.2	1,335.4	1.67	0.49	-3.66	
4,218.0	23.30	151.20	3,924.8	-1,323.0	366.6	1,368.8	3.46	-3.46	0.37	
4,298.0	24.10	154.20	3,998.1	-1,351.6	381.3	1,400.7	1.81	1.00	3.75	
4,378.0	23.40	156.00	4,071.3	-1,380.8	394.9	1,432.8	1.26	-0.88	2.25	
4,460.0	24.30	157.20	4,146.3	-1,411.2	408.1	1,465.9	1.25	1.10	1.46	
4,541.0	24.40	155.10	4,220.1	-1,441.8	421.6	1,499.2	1.08	0.12	-2.59	
4,623.0	24.60	152.30	4,294.7	-1,472.3	436.6	1,533.0	1.44	0.24	-3.41	
4,705.0	25.30	154.70	4,369.1	-1,503.2	452.1	1,567.3	1.50	0.85	2.93	
4,787.0	26.10	154.20	4,443.0	-1,535.3	467.4	1,602.7	1.01	0.98	-0.61	
4,868.0	26.20	156.50	4,515.7	-1,567.7	482.3	1,638.3	1.26	0.12	2.84	
4,950.0	25.60	155.90	4,589.4	-1,600.5	496.7	1,674.0	0.80	-0.73	-0.73	
5,032.0	26.10	151.80	4,663.2	-1,632.6	512.5	1,709.5	2.26	0.61	-5.00	
5,113.0	26.50	151.90	4,735.9	-1,664.2	529.4	1,745.0	0.50	0.49	0.12	
5,195.0	24.70	149.80	4,809.8	-1,695.2	546.7	1,780.0	2.46	-2.20	-2.56	
5,277.0	24.70	150.20	4,884.3	-1,724.8	563.8	1,813.7	0.20	0.00	0.49	
5,359.0	23.00	153.70	4,959.3	-1,754.1	579.4	1,846.5	2.70	-2.07	4.27	
5,440.0	22.00	159.00	5,034.1	-1,782.4	591.9	1,877.4	2.79	-1.23	6.54	
5,522.0	23.20	158.40	5,109.8	-1,811.8	603.3	1,908.9	1.49	1.46	-0.73	

Company:	NOBLE ENERGY INC WELD COUNTY CO	Local Co-ordinate Reference:	Well Berry P08-27D
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:	Berry P08-27D	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)	
5,604.0	24.40	158.30	5,184.9	-1,842.5	615.5	1,942.0	1.46	1.46	-0.12	
5,686.0	24.40	154.90	5,259.6	-1,873.6	629.0	1,975.8	1.71	0.00	-4.15	
5,767.0	25.40	153.70	5,333.0	-1,904.3	643.8	2,009.7	1.38	1.23	-1.48	
5,849.0	24.30	156.30	5,407.4	-1,935.6	658.3	2,044.1	1.89	-1.34	3.17	
5,930.0	23.30	155.40	5,481.5	-1,965.4	671.7	2,076.7	1.31	-1.23	-1.11	
6,012.0	22.90	155.10	5,557.0	-1,994.6	685.2	2,108.7	0.51	-0.49	-0.37	
6,092.0	22.60	149.80	5,630.7	-2,022.0	699.5	2,139.3	2.59	-0.38	-6.63	
6,173.0	23.20	152.10	5,705.4	-2,049.6	714.8	2,170.5	1.33	0.74	2.84	
6,255.0	24.10	156.00	5,780.5	-2,079.1	729.1	2,203.2	2.20	1.10	4.76	
6,336.0	25.10	156.10	5,854.1	-2,109.9	742.8	2,236.8	1.24	1.23	0.12	
6,418.0	22.40	151.60	5,929.2	-2,139.6	757.3	2,269.6	3.96	-3.29	-5.49	
6,500.0	21.90	151.60	6,005.1	-2,166.8	772.0	2,300.2	0.61	-0.61	0.00	
6,581.0	19.30	150.00	6,080.9	-2,191.7	785.9	2,328.3	3.28	-3.21	-1.98	
6,584.9	19.24	150.09	6,084.6	-2,192.8	786.5	2,329.6	1.68	-1.48	2.41	
TARGET BHL 100'FSL, 1350'FEL										
6,663.0	18.10	152.10	6,158.6	-2,214.7	798.6	2,354.3	1.68	-1.46	2.57	
6,745.0	16.60	154.90	6,236.9	-2,236.5	809.6	2,378.5	2.09	-1.83	3.41	
6,827.0	14.20	156.10	6,315.9	-2,256.3	818.6	2,400.2	2.95	-2.93	1.46	
6,908.0	11.00	156.40	6,395.0	-2,272.5	825.7	2,417.9	3.95	-3.95	0.37	
6,990.0	11.10	163.50	6,475.5	-2,287.2	831.1	2,433.6	1.66	0.12	8.66	
7,072.0	9.20	167.20	6,556.2	-2,301.2	834.8	2,447.9	2.45	-2.32	4.51	
7,118.2	9.47	164.67	6,601.7	-2,308.5	836.6	2,455.4	1.07	0.60	-5.49	
DRILL TARGET 204'FSL, 1398'FEL										
7,154.0	9.70	162.80	6,637.1	-2,314.2	838.3	2,461.3	1.07	0.63	-5.21	
7,235.0	9.20	165.30	6,717.0	-2,327.0	841.9	2,474.6	0.80	-0.62	3.09	
7,317.0	8.20	165.30	6,798.0	-2,339.0	845.1	2,487.0	1.22	-1.22	0.00	
7,399.0	8.40	164.90	6,879.2	-2,350.4	848.1	2,498.8	0.25	0.24	-0.49	
7,428.8	7.59	165.02	6,908.7	-2,354.4	849.2	2,502.9	2.72	-2.72	0.40	
TARGET CIRCLE 100'FSL, 1350'FEL										
7,480.0	6.20	165.30	6,959.5	-2,360.4	850.8	2,509.0	2.72	-2.72	0.55	
7,562.0	6.90	148.60	7,041.0	-2,368.9	854.5	2,518.2	2.46	0.85	-20.37	
7,644.0	5.00	148.40	7,122.5	-2,376.1	858.9	2,526.6	2.32	-2.32	-0.24	
7,726.0	3.90	146.30	7,204.3	-2,381.5	862.3	2,532.8	1.36	-1.34	-2.56	
7,807.0	3.10	145.80	7,285.1	-2,385.6	865.1	2,537.6	0.99	-0.99	-0.62	
7,888.0	2.50	150.30	7,366.0	-2,388.9	867.2	2,541.4	0.79	-0.74	5.56	
7,970.0	1.90	152.80	7,448.0	-2,391.7	868.7	2,544.6	0.74	-0.73	3.05	
8,051.0	1.90	148.90	7,528.9	-2,394.0	870.0	2,547.2	0.16	0.00	-4.81	
8,133.0	1.80	145.90	7,610.9	-2,396.2	871.4	2,549.8	0.17	-0.12	-3.66	
8,214.0	1.70	153.50	7,691.8	-2,398.4	872.7	2,552.2	0.31	-0.12	9.38	
8,307.1	1.61	150.47	7,784.9	-2,400.8	873.9	2,554.9	0.14	-0.10	-3.25	
HARDLINE 100'S OF BHL										
8,315.0	1.60	150.20	7,792.8	-2,400.9	874.1	2,555.1	0.14	-0.10	-3.45	

Checked By: _____ Approved By: _____ Date: _____