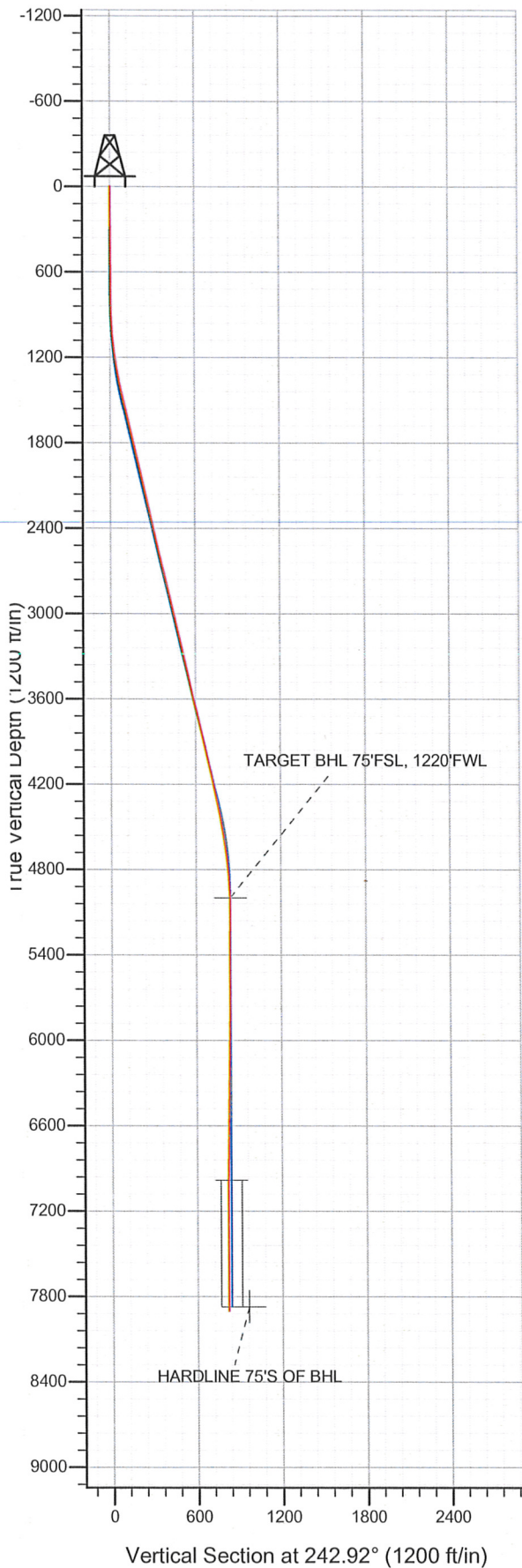


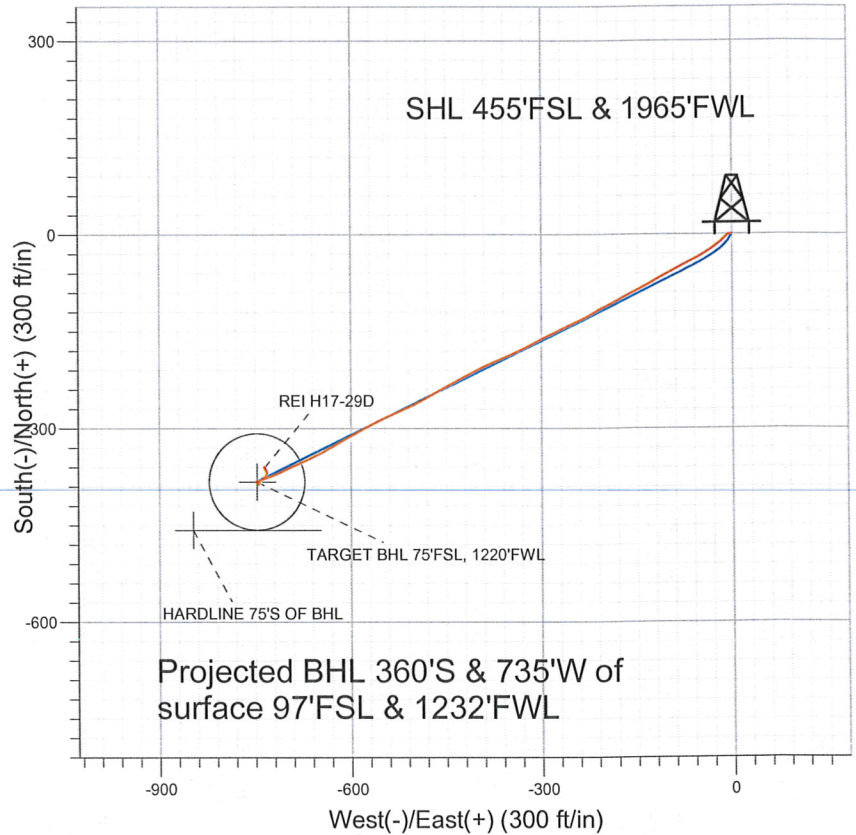
Well Name: **REI H17-29D**
 Surface Location: REI H17-29D Pad Sec.8-T3N-R65W
 North American Datum 1983 US State Plane 1983 Colorado Northern Zone
 Ground Elevation: 4899.0
 Slot

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	1329081.46	3226204.41	40.233890	-104.689780

Original Well Elev WELL @ 4912.0ft (Original Well Elev)



NOBLE ENERGY INC WELD COUNTY CO



LEGEND

- REI H17-29D, Wellbore #1, Noble REI H17-29D Plan #2 (8-31-10) V0
- Wellbore #1
- Survey #1

Final Survey Plot

Projected Final Survey -
 7993'MD & 7903'TVD @ 818'VS
 0.3 deg Inc 355.1 deg AZ

Project: SEC.8-T3N-R65W
 Site: REI H17-29D Pad Sec.8-T3N-R65W
 Well: REI H17-29D
 Plan: Wellbore #1



Directional

NOBLE ENERGY INC WELD COUNTY CO

SEC.8-T3N-R65W

REI H17-29D Pad Sec.8-T3N-R65W

REI H17-29D

Wellbore #1

Survey: Survey #1

Standard Survey Report

23 August, 2011



Company: NOBLE ENERGY INC WELD COUNTY CO
Project: SEC.8-T3N-R65W
Site: REI H17-29D Pad Sec.8-T3N-R65W
Well: REI H17-29D
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Site REI H17-29D Pad Sec.8-T3N-R65W
TVD Reference: WELL @ 4912.0ft (Original Well Elev)
MD Reference: WELL @ 4912.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: Landmark

Project	SEC.8-T3N-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 REI H17-29D Pad Sec.8-T3N-R65W
Site Position: Northing: 1,329,081.47 ft Latitude: 40.233890
From: Lat/Long Easting: 3,226,204.41 ft Longitude: -104.689780
Position Uncertainty: 0.0 ft Slot Radius: " Grid Convergence: 0.52 °

Well REI H17-29D
Well Position +N/-S 0.0 ft Northing: 1,329,081.46 ft Latitude: 40.233890
 +E/-W 0.0 ft Easting: 3,226,204.41 ft Longitude: -104.689780
Position Uncertainty 0.0 ft Wellhead Elevation: ft Ground Level: 4,899.0 ft

Wellbore Wellbore #1
Magnetics

Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
IGRF2010	8/1/2011	8.79	66.92	53,038

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	242.92

Survey Program		Date	8/23/2011		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
831.0	7,993.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard	

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
831.0	0.80	262.70	831.0	-0.7	-5.8	5.5	0.10	0.10	0.00
955.0	3.10	218.50	954.9	-3.5	-8.7	9.3	2.09	1.85	-35.65
1,080.0	5.90	230.90	1,079.5	-10.2	-15.8	18.7	2.36	2.24	9.92
1,205.0	8.40	232.60	1,203.5	-19.8	-28.0	34.0	2.01	2.00	1.36
1,330.0	10.60	242.00	1,326.8	-30.7	-45.4	54.4	2.15	1.76	7.52
1,455.0	13.00	242.20	1,449.2	-42.7	-68.0	80.0	1.92	1.92	0.16
1,579.0	14.20	242.00	1,569.7	-56.3	-93.8	109.2	0.97	0.97	-0.16
1,704.0	13.20	240.60	1,691.1	-70.5	-119.8	138.7	0.84	-0.80	-1.12
1,829.0	14.10	243.70	1,812.6	-84.3	-145.9	168.2	0.93	0.72	2.48
1,954.0	12.70	242.10	1,934.2	-97.5	-171.6	197.2	1.16	-1.12	-1.28
2,078.0	13.30	243.50	2,055.0	-110.2	-196.5	225.1	0.55	0.48	1.13
2,203.0	12.10	239.80	2,176.9	-123.2	-220.7	252.5	1.16	-0.96	-2.96

Company: NOBLE ENERGY INC WELD COUNTY CO
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Site: REI H17-29D Pad Sec.8-T3N-R65W
Well: REI H17-29D
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Site REI H17-29D Pad Sec.8-T3N-R65W
TVD Reference: WELL @ 4912.0ft (Original Well Elev)
MD Reference: WELL @ 4912.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
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)
2,328.0	13.80	245.00	2,298.8	-136.1	-245.5	280.5	1.65	1.36	4.16
2,453.0	12.20	245.60	2,420.6	-147.9	-271.0	308.6	1.28	-1.28	0.48
2,577.0	13.30	243.00	2,541.5	-159.7	-295.7	336.0	1.00	0.89	-2.10
2,702.0	13.40	242.10	2,663.1	-173.0	-321.3	364.8	0.18	0.08	-0.72
2,827.0	14.60	245.50	2,784.4	-186.4	-348.4	395.1	1.16	0.96	2.72
2,951.0	13.70	247.70	2,904.6	-198.4	-376.2	425.3	0.85	-0.73	1.77
3,076.0	13.60	242.00	3,026.1	-210.9	-402.9	454.8	1.08	-0.08	-4.56
3,201.0	12.10	241.70	3,148.0	-224.0	-427.4	482.5	1.20	-1.20	-0.24
3,326.0	13.10	241.80	3,270.0	-236.9	-451.4	509.8	0.80	0.80	0.08
3,451.0	12.30	240.60	3,391.9	-250.2	-475.5	537.3	0.67	-0.64	-0.96
3,575.0	13.10	243.80	3,512.9	-262.9	-499.6	564.5	0.86	0.65	2.58
3,700.0	14.40	247.90	3,634.3	-275.0	-526.7	594.2	1.30	1.04	3.28
3,825.0	13.00	242.50	3,755.7	-287.3	-553.6	623.7	1.52	-1.12	-4.32
3,950.0	12.20	242.30	3,877.7	-299.9	-577.8	651.0	0.64	-0.64	-0.16
4,074.0	13.40	241.40	3,998.7	-312.9	-602.0	678.5	0.98	0.97	-0.73
4,199.0	13.90	239.80	4,120.1	-327.4	-627.7	707.9	0.50	0.40	-1.28
4,324.0	11.20	241.70	4,242.1	-340.7	-651.4	735.1	2.18	-2.16	1.52
4,449.0	11.80	247.40	4,364.6	-351.4	-673.9	759.9	1.03	0.48	4.56
4,574.0	10.00	244.20	4,487.4	-361.0	-695.4	783.5	1.52	-1.44	-2.56
4,699.0	8.30	245.60	4,610.8	-369.5	-713.4	803.4	1.37	-1.36	1.12
4,824.0	7.00	253.30	4,734.7	-375.4	-728.9	819.9	1.32	-1.04	6.16
4,948.0	4.30	248.40	4,858.0	-379.3	-740.5	832.0	2.21	-2.18	-3.95
5,073.0	1.60	226.50	4,982.9	-382.2	-746.1	838.3	2.30	-2.16	-17.52
5,090.1	1.30	231.36	5,000.0	-382.5	-746.4	838.7	1.87	-1.73	28.37
TARGET BHL 75'FSL, 1220'FWL									
5,198.0	1.00	352.80	5,107.8	-382.3	-747.5	839.6	1.87	-0.28	112.59
5,323.0	0.40	166.80	5,232.8	-381.7	-747.6	839.3	1.12	-0.48	139.20
5,447.0	1.10	166.50	5,356.8	-383.2	-747.2	839.7	0.56	0.56	-0.24
5,573.0	1.00	132.40	5,482.8	-385.1	-746.1	839.6	0.49	-0.08	-27.06
5,696.0	0.80	132.40	5,605.8	-386.4	-744.7	838.9	0.16	-0.16	0.00
5,821.0	0.60	4.50	5,730.8	-386.4	-744.0	838.3	1.01	-0.16	-102.32
5,946.0	0.90	23.50	5,855.8	-384.8	-743.5	837.2	0.31	0.24	15.20
6,071.0	0.70	10.40	5,980.8	-383.2	-743.0	836.0	0.22	-0.16	-10.48
6,195.0	0.90	40.00	6,104.8	-381.7	-742.2	834.6	0.36	0.16	23.87
6,320.0	1.10	57.30	6,229.7	-380.3	-740.6	832.5	0.29	0.16	13.84
6,445.0	1.20	48.60	6,354.7	-378.8	-738.6	830.1	0.16	0.08	-6.96
6,570.0	1.00	53.90	6,479.7	-377.3	-736.7	827.7	0.18	-0.16	4.24
6,695.0	1.10	38.90	6,604.7	-375.7	-735.1	825.5	0.23	0.08	-12.00
6,819.0	1.20	47.90	6,728.6	-373.9	-733.4	823.2	0.17	0.08	7.26
6,944.0	1.40	26.70	6,853.6	-371.7	-731.7	820.7	0.41	0.16	-16.96
7,069.0	0.90	351.70	6,978.6	-369.3	-731.2	819.2	0.67	-0.40	-28.00
7,072.3	0.89	351.62	6,981.9	-369.3	-731.2	819.1	0.17	-0.16	-2.56
TARGET CIRCLE 75'FSL, 1220'FWL									
7,194.0	0.70	347.60	7,103.6	-367.6	-731.5	818.6	0.17	-0.16	-3.30
7,319.0	1.00	334.60	7,228.6	-365.9	-732.1	818.4	0.28	0.24	-10.40
7,443.0	1.00	325.00	7,352.5	-364.0	-733.2	818.5	0.13	0.00	-7.74
7,568.0	0.40	345.10	7,477.5	-362.7	-733.9	818.6	0.51	-0.48	16.08
7,693.0	0.80	321.20	7,602.5	-361.6	-734.6	818.7	0.37	0.32	-19.12
7,818.0	0.30	348.80	7,727.5	-360.6	-735.2	818.8	0.44	-0.40	22.08
7,947.0	0.30	355.10	7,856.5	-359.9	-735.3	818.5	0.03	0.00	4.88
HARDLINE 75'S OF BHL									
7,993.0	0.30	355.10	7,902.5	-359.7	-735.3	818.5	0.00	0.00	0.00

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Checked By: _____ Approved By: _____ Date: _____