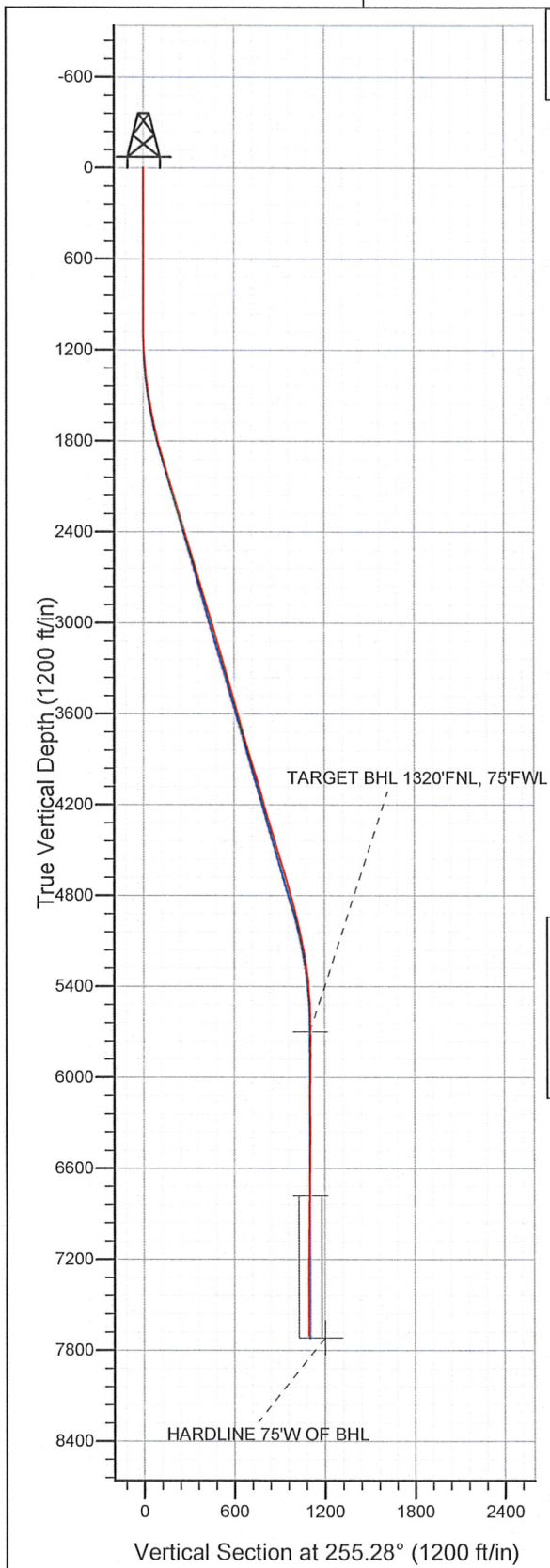
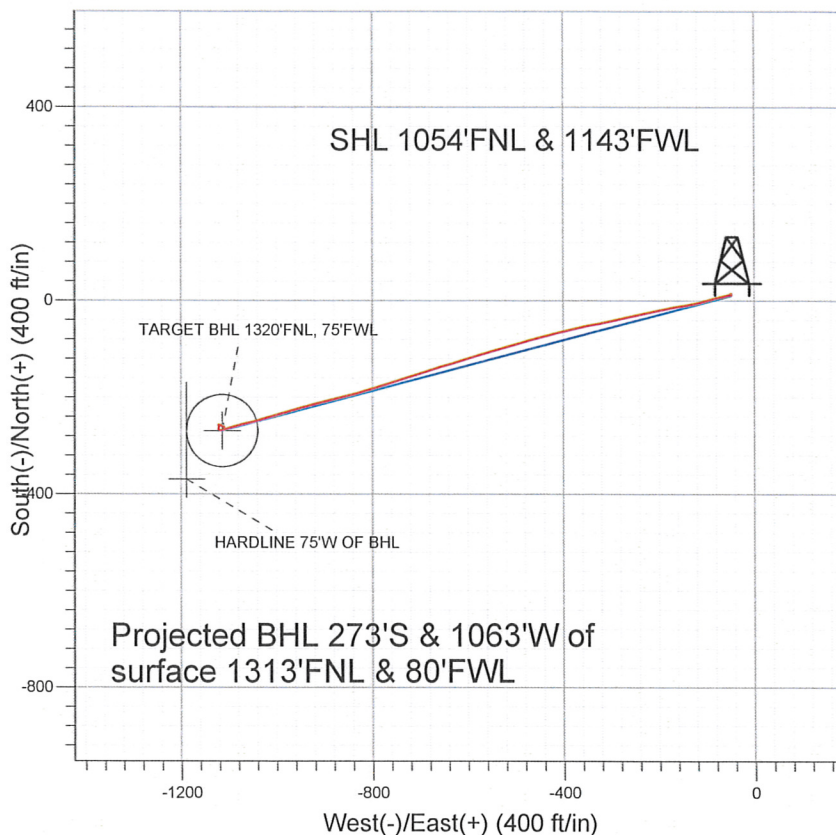


Well Name: **Dechant State H36-31D**
 Surface Location: Dechant State H36-18D Pad Sec. 36-T3N-R65W
 North American Datum 1983 US State Plane 1983 Colorado Northern Zone
 Ground Elevation: 4816.0
 +N/-S +E/-W Northing Easting Latitude Longitude Slot
 10.9 -47.5 1311803.38 3246507.13 40° 11' 9.348 N 104° 37' 3.648 W
 Original Well Elev WELL @ 4829.0ft (Original Well Elev)



NOBLE ENERGY INC WELD COUNTY CO



LEGEND

- ✕ Dechant State H36-31D, Wellbore #1, Noble Dechant State H36-31D Plan #1 (8-27-10) V0
- Wellbore #1
- Survey #1

Final Survey Plot

Projected Final Survey -
 7854'MD & 7705'TVD @ 1097'VS
 0.2 deg Inc 182.1 deg AZ

Project: SEC.36-T3N-R65W
 Site: Dechant State H36-18D Pad Sec. 36-T3N-R65W
 Well: Dechant State H36-31D
 Plan: Wellbore #1

Company: NOBLE ENERGY INC WELD COUNTY CO
Project: SEC.36-T3N-R65W
Site: Dechant State H36-18D Pad Sec.
 36-T3N-R65W
Well: Dechant State H36-31D
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Site Dechant State H36-18D Pad Sec.
 36-T3N-R65W
TVD Reference: WELL @ 4829.0ft (Original Well Elev)
MD Reference: WELL @ 4829.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: Landmark

Project SEC.36-T3N-R65W, Weld County, Colorado

Map System: US State Plane 1983
Geo Datum: North American Datum 1983
Map Zone: Colorado Northern Zone

System Datum: Mean Sea Level
 Using Well Reference Point
 Using geodetic scale factor

Site Dechant State H36-18D Pad Sec. 36-T3N-R65W

Site Position: **From:** Lat/Long **Northing:** 1,311,792.94 ft **Latitude:** 40° 11' 9.240 N
Position Uncertainty: 0.0 ft **Easting:** 3,246,554.73 ft **Longitude:** 104° 37' 3.036 W
Slot Radius: " **Grid Convergence:** 0.57 °

Well Dechant State H36-31D

Well Position **+N/-S** 10.9 ft **Northing:** 1,311,803.38 ft **Latitude:** 40° 11' 9.348 N
+E/-W -47.5 ft **Easting:** 3,246,507.13 ft **Longitude:** 104° 37' 3.648 W
Position Uncertainty 0.0 ft **Wellhead Elevation:** ft **Ground Level:** 4,816.0 ft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	8/27/2010	8.87	66.93	53,119

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	10.9	-47.5	255.28

Survey Program Date 4/8/2011

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
784.0	7,854.0	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	10.9	-47.5	0.0	0.00	0.00	0.00
784.0	0.20	339.50	784.0	12.2	-48.0	0.1	0.03	0.03	0.00
877.0	0.30	19.50	877.0	12.6	-48.0	0.0	0.21	0.11	43.01
972.0	0.30	345.20	972.0	13.1	-47.9	-0.1	0.19	0.00	-36.11
1,065.0	0.30	303.90	1,065.0	13.4	-48.2	0.0	0.23	0.00	-44.41
1,158.0	2.20	236.10	1,158.0	12.6	-49.9	1.9	2.26	2.04	-72.90
1,252.0	4.50	253.40	1,251.8	10.5	-54.9	7.3	2.65	2.45	18.40
1,347.0	5.50	257.60	1,346.4	8.5	-62.9	15.6	1.12	1.05	4.42
1,441.0	7.50	257.20	1,439.8	6.1	-73.3	26.2	2.13	2.13	-0.43
1,534.0	9.20	256.10	1,531.8	3.0	-86.5	39.7	1.84	1.83	-1.18
1,629.0	10.70	254.00	1,625.4	-1.2	-102.3	56.1	1.62	1.58	-2.21

Company: NOBLE ENERGY INC WELD COUNTY CO
 Project: SEC.36-T3N-R65W
 Site: Dechant State H36-18D Pad Sec.
 36-T3N-R65W
 Well: Dechant State H36-31D
 Wellbore: Wellbore #1
 Design: Wellbore #1

Local Co-ordinate Reference: Site Dechant State H36-18D Pad Sec.
 36-T3N-R65W
 TVD Reference: WELL @ 4829.0ft (Original Well Elev)
 MD Reference: WELL @ 4829.0ft (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)
1,722.0	12.70	255.80	1,716.5	-6.1	-120.5	75.0	2.19	2.15	1.94
1,816.0	15.00	262.20	1,807.7	-10.3	-142.6	97.4	2.94	2.45	6.81
1,909.0	16.30	259.00	1,897.3	-14.4	-167.3	122.3	1.68	1.40	-3.44
2,003.0	17.10	258.60	1,987.3	-19.7	-193.8	149.3	0.86	0.85	-0.43
2,096.0	16.50	255.60	2,076.4	-25.7	-220.0	176.2	1.13	-0.65	-3.23
2,190.0	16.70	259.50	2,166.4	-31.5	-246.2	203.0	1.20	0.21	4.15
2,284.0	16.70	257.10	2,256.5	-36.9	-272.7	229.9	0.73	0.00	-2.55
2,378.0	16.40	257.30	2,346.6	-42.9	-298.8	256.7	0.32	-0.32	0.21
2,471.0	16.50	260.40	2,435.8	-48.0	-324.6	283.0	0.95	0.11	3.33
2,566.0	16.50	257.00	2,526.9	-53.2	-351.1	309.9	1.02	0.00	-3.58
2,659.0	17.10	258.40	2,615.9	-59.0	-377.3	336.8	0.78	0.65	1.51
2,752.0	17.10	255.90	2,704.8	-65.0	-404.0	364.1	0.79	0.00	-2.69
2,845.0	17.10	255.20	2,793.7	-71.9	-430.5	391.4	0.22	0.00	-0.75
2,940.0	16.90	254.30	2,884.5	-79.2	-457.3	419.2	0.35	-0.21	-0.95
3,033.0	16.10	254.60	2,973.7	-86.3	-482.7	445.6	0.87	-0.86	0.32
3,126.0	16.70	254.10	3,062.9	-93.3	-508.0	471.9	0.66	0.65	-0.54
3,220.0	15.40	253.80	3,153.3	-100.5	-533.0	497.8	1.39	-1.38	-0.32
3,313.0	16.10	253.60	3,242.8	-107.6	-557.2	523.1	0.75	0.75	-0.22
3,407.0	15.30	253.80	3,333.3	-114.7	-581.6	548.5	0.85	-0.85	0.21
3,498.0	16.80	253.20	3,420.7	-121.9	-605.7	573.6	1.66	1.65	-0.66
3,593.0	16.00	252.00	3,511.8	-129.9	-631.3	600.4	0.91	-0.84	-1.26
3,686.0	16.00	254.00	3,601.2	-137.4	-655.8	626.1	0.59	0.00	2.15
3,779.0	16.00	251.60	3,690.6	-145.0	-680.3	651.7	0.71	0.00	-2.58
3,872.0	16.50	252.30	3,779.9	-153.0	-705.1	677.6	0.58	0.54	0.75
3,966.0	16.60	253.10	3,870.0	-161.0	-730.6	704.4	0.26	0.11	0.85
4,060.0	16.60	252.10	3,960.1	-169.0	-756.2	731.2	0.30	0.00	-1.06
4,153.0	16.70	252.00	4,049.2	-177.3	-781.6	757.8	0.11	0.11	-0.11
4,246.0	15.90	253.40	4,138.5	-185.0	-806.5	783.9	0.96	-0.86	1.51
4,340.0	17.00	254.80	4,228.6	-192.3	-832.1	810.5	1.24	1.17	1.49
4,434.0	16.70	256.50	4,318.6	-199.1	-858.5	837.7	0.61	-0.32	1.81
4,528.0	16.70	255.90	4,408.6	-205.5	-884.7	864.8	0.18	0.00	-0.64
4,621.0	16.50	256.20	4,497.7	-211.9	-910.5	891.3	0.23	-0.22	0.32
4,714.0	16.60	254.90	4,586.9	-218.5	-936.2	917.8	0.41	0.11	-1.40
4,807.0	15.70	253.80	4,676.2	-225.5	-961.1	943.7	1.02	-0.97	-1.18
4,902.0	16.00	252.30	4,767.6	-233.1	-985.9	969.6	0.53	0.32	-1.58
4,998.0	15.60	254.00	4,860.0	-240.6	-1,010.9	995.7	0.64	-0.42	1.77
5,091.0	13.40	254.70	4,950.0	-246.9	-1,033.3	1,019.0	2.37	-2.37	0.75
5,185.0	12.50	257.20	5,041.6	-252.1	-1,053.8	1,040.1	1.13	-0.96	2.66
5,279.0	11.30	256.00	5,133.6	-256.5	-1,072.6	1,059.4	1.30	-1.28	-1.28
5,373.0	8.70	252.80	5,226.2	-260.9	-1,088.3	1,075.7	2.83	-2.77	-3.40
5,467.0	6.80	253.30	5,319.3	-264.6	-1,100.5	1,088.4	2.02	-2.02	0.53
5,561.0	5.00	255.80	5,412.8	-267.2	-1,109.8	1,098.1	1.93	-1.91	2.66
5,654.0	3.30	261.60	5,505.6	-268.6	-1,116.3	1,104.8	1.88	-1.83	6.24
5,747.0	1.40	260.30	5,598.5	-269.1	-1,120.1	1,108.6	2.04	-2.04	-1.40
5,841.0	1.10	355.40	5,692.5	-268.4	-1,121.3	1,109.6	1.97	-0.32	101.17
5,848.5	1.12	355.36	5,700.0	-268.3	-1,121.3	1,109.5	0.32	0.32	-0.53
TARGET BHL 1320°FNL, 75°FNL									
5,935.0	1.40	355.00	5,786.4	-266.4	-1,121.5	1,109.2	0.32	0.32	-0.42
6,029.0	1.00	18.10	5,880.4	-264.5	-1,121.3	1,108.6	0.66	-0.43	24.57
6,122.0	0.90	14.10	5,973.4	-263.0	-1,120.9	1,107.8	0.13	-0.11	-4.30
6,216.0	1.10	15.60	6,067.4	-261.4	-1,120.5	1,107.0	0.21	0.21	1.60
6,309.0	1.40	349.60	6,160.4	-259.4	-1,120.4	1,106.4	0.68	0.32	-27.96

Company: NOBLE ENERGY INC WELD COUNTY CO
 Project: SEC.36-T3N-R65W
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 36-T3N-R65W
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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)
6,402.0	0.90	267.30	6,253.4	-258.3	-1,121.4	1,107.1	1.68	-0.54	-88.49
6,495.0	0.60	56.50	6,346.3	-258.1	-1,121.7	1,107.3	1.56	-0.32	160.43
6,589.0	0.90	77.20	6,440.3	-257.7	-1,120.6	1,106.1	0.43	0.32	22.02
6,682.0	0.90	94.10	6,533.3	-257.6	-1,119.1	1,104.7	0.28	0.00	18.17
6,775.0	0.90	113.70	6,626.3	-257.9	-1,117.7	1,103.4	0.33	0.00	21.08
6,870.0	0.90	123.50	6,721.3	-258.6	-1,116.4	1,102.3	0.16	0.00	10.32
6,927.8	0.90	126.82	6,779.1	-259.1	-1,115.7	1,101.8	0.09	0.00	5.75
TARGET CIRCLE 1320'FNL, 75'FWL									
6,964.0	0.90	128.90	6,815.3	-259.5	-1,115.2	1,101.4	0.09	0.00	5.74
7,058.0	0.80	128.10	6,909.3	-260.4	-1,114.2	1,100.6	0.11	-0.11	-0.85
7,151.0	0.70	124.10	7,002.3	-261.1	-1,113.2	1,099.8	0.12	-0.11	-4.30
7,245.0	0.60	106.30	7,096.3	-261.5	-1,112.2	1,099.0	0.24	-0.11	-18.94
7,338.0	0.50	97.80	7,189.3	-261.7	-1,111.4	1,098.2	0.14	-0.11	-9.14
7,432.0	0.30	91.50	7,283.3	-261.8	-1,110.7	1,097.6	0.22	-0.21	-6.70
7,526.0	0.20	46.90	7,377.3	-261.7	-1,110.3	1,097.2	0.22	-0.11	-47.45
7,620.0	0.10	42.00	7,471.3	-261.5	-1,110.2	1,097.0	0.11	-0.11	-5.21
7,713.0	0.20	182.30	7,564.3	-261.6	-1,110.1	1,097.0	0.31	0.11	150.86
7,812.0	0.20	182.10	7,663.3	-262.0	-1,110.1	1,097.1	0.00	0.00	-0.20
7,854.0	0.20	182.10	7,705.3	-262.1	-1,110.1	1,097.1	0.00	0.00	0.00
HARDLINE 75'W OF BHL									

Checked By: _____ Approved By: _____ Date: _____