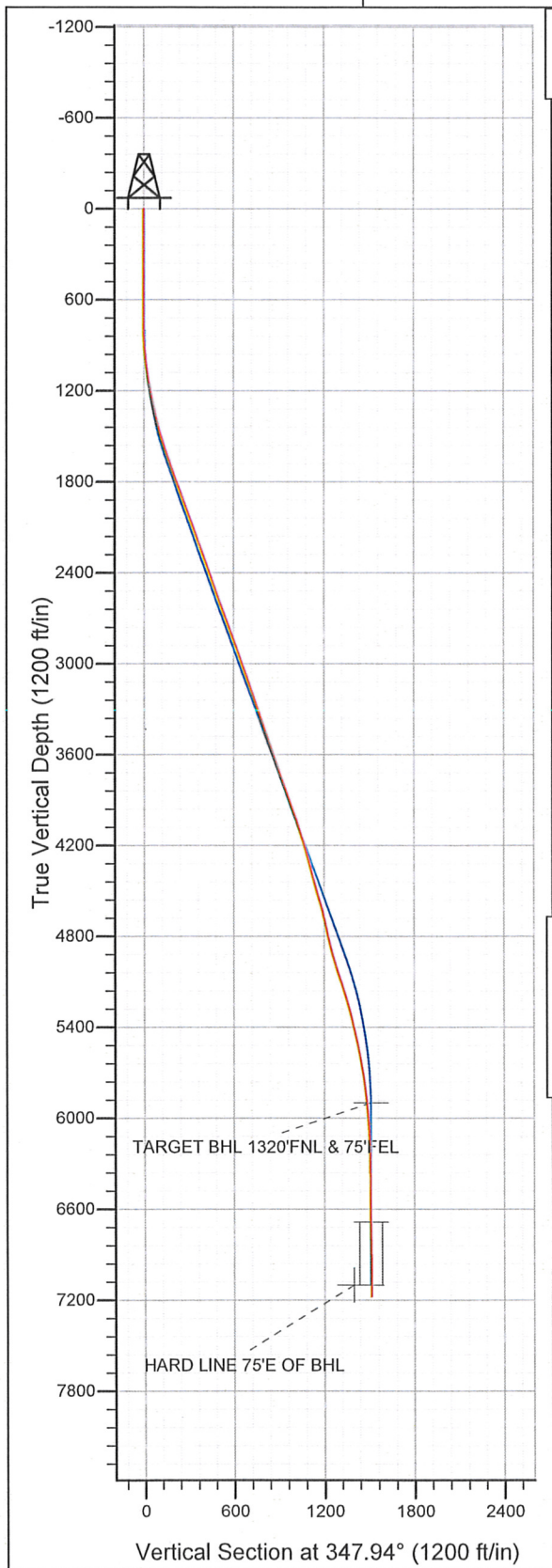
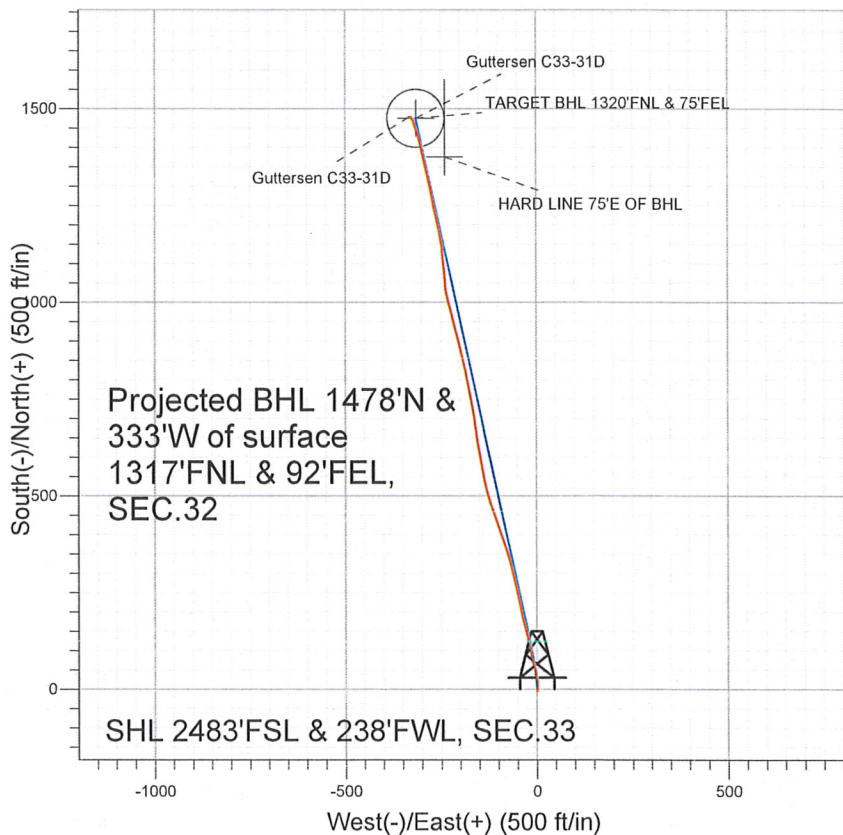


Well Name: **Guttersen C33-31D**
 Surface Location: Guttersen C33-33D Pad Sec.33-T4N-R64W
 North American Datum 1983 US State Plane 1983 Colorado Northern Zone
 Ground Elevation: 4748.0
 +N/-S +E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1342051.11 3261038.41 40.268550 -104.564530
 Original Well Elev WELL @ 4761.0ft (Original Well Elev)



NOBLE ENERGY INC WELD COUNTY CO



LEGEND

- Guttersen C33-31D, Wellbore #1, Noble Guttersen C33-31D Plan#1 (8-09-11) V0
- Wellbore #1
- Survey #1

Final Survey Plot

Projected Final Survey -
 7408'MD & 7177'TVD @ 1515'VS
 2.0 deg Inc 266.2 deg AZ

Project: SEC.33-T4N-R64W
 Site: Guttersen C33-33D Pad Sec.33-T4N-R64W
 Well: Guttersen C33-31D
 Plan: Wellbore #1



Directional

**NOBLE ENERGY INC WELD
COUNTY CO**

SEC.33-T4N-R64W

Guttersen C33-33D Pad Sec.33-T4N-R64W

Guttersen C33-31D

Wellbore #1

Survey: Survey #1

Standard Survey Report

03 November, 2011



Company: NOBLE ENERGY INC WELD COUNTY CO
Project: SEC.33-T4N-R64W
Site: Gutteresen C33-33D Pad Sec.33-T4N-R64W
Well: Gutteresen C33-31D
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Well Gutteresen C33-31D
TVD Reference: WELL @ 4761.0ft (Original Well Elev)
MD Reference: WELL @ 4761.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: Landmark

Project	SEC.33-T4N-R64W, Weld County, CO		
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 Gutteresen C33-33D Pad Sec.33-T4N-R64W

Site Position:		Northing:	1,342,051.37ft	Latitude:	40.268550
From:	Lat/Long	Easting:	3,261,060.74ft	Longitude:	-104.564450
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.60 °

Well	Gutteresen C33-31D				
Well Position	+N/-S	0.0 ft	Northing:	1,342,051.11 ft	Latitude: 40.268550
	+E/-W	0.0 ft	Easting:	3,261,038.41 ft	Longitude: -104.564530
Position Uncertainty	0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,748.0 ft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	8/9/2011	8.73	66.97	53,069

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	347.94

Survey Program Date 11/3/2011

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
675.0	7,408.0	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
675.0	0.60	147.00	675.0	-3.0	1.9	-3.3	0.09	0.09	0.00
769.0	0.80	6.10	769.0	-2.7	2.3	-3.1	1.41	0.21	-149.89
863.0	3.10	10.00	862.9	0.4	2.8	-0.2	2.45	2.45	4.15
956.0	5.50	2.10	955.7	7.4	3.4	6.5	2.65	2.58	-8.49
1,050.0	8.40	354.70	1,049.0	18.7	2.9	17.7	3.22	3.09	-7.87
1,143.0	9.60	348.20	1,140.8	33.1	0.7	32.2	1.69	1.29	-6.99
1,237.0	11.30	344.00	1,233.3	49.6	-3.5	49.2	1.98	1.81	-4.47
1,331.0	12.70	344.00	1,325.2	68.4	-8.8	68.7	1.49	1.49	0.00
1,424.0	14.40	349.40	1,415.6	89.6	-13.8	90.5	2.28	1.83	5.81
1,518.0	16.70	349.50	1,506.2	114.3	-18.4	115.7	2.45	2.45	0.11
1,612.0	18.50	345.50	1,595.8	142.1	-24.6	144.1	2.31	1.91	-4.26
1,705.0	20.10	345.80	1,683.5	171.8	-32.2	174.8	1.72	1.72	0.32

Company: NOBLE ENERGY INC WELD COUNTY CO
Project: SEC.33-T4N-R64W
Site: Guttersen C33-33D Pad Sec.33-T4N-R64W
Well: Guttersen C33-31D
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Well Guttersen C33-31D
TVD Reference: WELL @ 4761.0ft (Original Well Elev)
MD Reference: WELL @ 4761.0ft (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)
1,799.0	21.00	347.80	1,771.5	204.0	-39.7	207.8	1.21	0.96	2.13
1,892.0	20.20	347.20	1,858.6	235.9	-46.8	240.5	0.89	-0.86	-0.65
1,987.0	20.40	347.50	1,947.7	268.1	-54.0	273.4	0.24	0.21	0.32
2,081.0	20.20	346.00	2,035.9	299.8	-61.5	306.0	0.59	-0.21	-1.60
2,174.0	20.10	344.60	2,123.2	330.8	-69.6	338.0	0.53	-0.11	-1.51
2,268.0	20.50	343.20	2,211.3	362.1	-78.7	370.6	0.67	0.43	-1.49
2,361.0	20.30	342.40	2,298.5	393.1	-88.3	402.9	0.37	-0.22	-0.86
2,454.0	19.90	339.80	2,385.8	423.3	-98.6	434.6	1.05	-0.43	-2.80
2,548.0	19.50	338.20	2,474.3	452.9	-109.9	465.9	0.71	-0.43	-1.70
2,642.0	19.80	341.90	2,562.9	482.6	-120.7	497.2	1.36	0.32	3.94
2,735.0	20.40	346.70	2,650.2	513.4	-129.3	529.1	1.89	0.65	5.16
2,829.0	20.40	349.50	2,738.3	545.4	-136.1	561.8	1.04	0.00	2.98
2,922.0	20.80	349.50	2,825.4	577.6	-142.1	594.5	0.43	0.43	0.00
3,016.0	19.90	349.10	2,913.5	609.7	-148.1	627.2	0.97	-0.96	-0.43
3,109.0	19.50	351.30	3,001.1	640.6	-153.5	658.5	0.91	-0.43	2.37
3,203.0	20.10	352.10	3,089.5	672.1	-158.1	690.3	0.70	0.64	0.85
3,296.0	18.20	350.80	3,177.4	702.3	-162.6	720.7	2.09	-2.04	-1.40
3,390.0	18.40	349.40	3,266.6	731.3	-167.7	750.2	0.51	0.21	-1.49
3,484.0	19.00	349.60	3,355.6	761.0	-173.2	780.4	0.64	0.64	0.21
3,577.0	18.90	350.10	3,443.6	790.7	-178.5	810.5	0.21	-0.11	0.54
3,671.0	18.90	347.10	3,532.5	820.5	-184.5	841.0	1.03	0.00	-3.19
3,764.0	19.20	346.80	3,620.4	850.1	-191.3	871.3	0.34	0.32	-0.32
3,858.0	18.90	345.60	3,709.3	879.9	-198.7	902.0	0.52	-0.32	-1.28
3,952.0	20.00	345.80	3,797.9	910.2	-206.4	933.3	1.17	1.17	0.21
4,045.0	20.40	345.00	3,885.2	941.3	-214.5	965.3	0.52	0.43	-0.86
4,139.0	19.40	345.90	3,973.6	972.3	-222.5	997.3	1.11	-1.06	0.96
4,232.0	17.80	344.90	4,061.7	1,001.0	-230.0	1,026.9	1.75	-1.72	-1.08
4,326.0	17.80	351.10	4,151.2	1,029.0	-236.0	1,055.6	2.02	0.00	6.60
4,420.0	15.50	358.30	4,241.3	1,055.8	-238.6	1,082.3	3.28	-2.45	7.66
4,513.0	14.40	354.80	4,331.2	1,079.7	-240.0	1,106.1	1.53	-1.18	-3.76
4,607.0	15.00	351.80	4,422.1	1,103.4	-242.8	1,129.8	1.03	0.64	-3.19
4,700.0	17.10	355.40	4,511.4	1,129.0	-245.6	1,155.4	2.50	2.26	3.87
4,794.0	15.80	350.90	4,601.6	1,155.4	-248.7	1,181.8	1.94	-1.38	-4.79
4,888.0	13.10	348.00	4,692.6	1,178.4	-253.0	1,205.3	2.97	-2.87	-3.09
4,981.0	11.20	350.50	4,783.5	1,197.7	-256.6	1,224.8	2.12	-2.04	2.69
5,075.0	14.20	345.00	4,875.2	1,217.8	-261.1	1,245.5	3.44	3.19	-5.85
5,168.0	17.30	347.20	4,964.7	1,242.3	-267.1	1,270.7	3.39	3.33	2.37
5,262.0	18.20	350.20	5,054.3	1,270.4	-272.7	1,299.4	1.36	0.96	3.19
5,355.0	17.90	349.10	5,142.7	1,298.8	-277.9	1,328.2	0.49	-0.32	-1.18
5,449.0	16.20	346.20	5,232.5	1,325.7	-283.8	1,355.7	2.02	-1.81	-3.09
5,543.0	14.30	347.30	5,323.2	1,349.7	-289.5	1,380.4	2.04	-2.02	1.17
5,636.0	13.80	346.10	5,413.4	1,371.7	-294.6	1,403.0	0.62	-0.54	-1.29
5,730.0	12.60	347.10	5,505.0	1,392.6	-299.6	1,424.5	1.30	-1.28	1.06
5,823.0	10.80	350.00	5,596.0	1,411.1	-303.4	1,443.3	2.04	-1.94	3.12
5,917.0	8.90	343.20	5,688.6	1,426.7	-307.0	1,459.4	2.37	-2.02	-7.23
6,010.0	8.00	339.70	5,780.6	1,439.7	-311.4	1,472.9	1.11	-0.97	-3.76
6,104.0	6.20	340.20	5,873.9	1,450.6	-315.4	1,484.4	1.92	-1.91	0.53
6,132.2	5.75	340.18	5,902.0	1,453.3	-316.3	1,487.3	1.61	-1.61	-0.09
TARGET BHL 1320°FNL & 75°FEL									
6,197.0	4.70	340.10	5,966.5	1,458.9	-318.4	1,493.2	1.61	-1.61	-0.12
6,291.0	4.00	351.50	6,060.2	1,465.7	-320.1	1,500.3	1.18	-0.74	12.13
6,385.0	2.20	345.80	6,154.1	1,470.7	-321.1	1,505.4	1.94	-1.91	-6.06
6,478.0	0.80	297.40	6,247.0	1,472.8	-322.1	1,507.5	1.91	-1.51	-52.04
6,572.0	1.00	292.20	6,341.0	1,473.4	-323.4	1,508.4	0.23	0.21	-5.53

Company: NOBLE ENERGY INC WELD COUNTY CO
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6,666.0	0.80	32.90	6,435.0	1,474.2	-323.8	1,509.4	1.48	-0.21	107.13
6,759.0	0.60	299.60	6,528.0	1,475.0	-323.9	1,510.1	1.10	-0.22	-100.32
6,853.0	0.40	188.50	6,622.0	1,474.9	-324.4	1,510.2	0.89	-0.21	-118.19
6,916.9	0.73	327.83	6,686.0	1,475.1	-324.6	1,510.3	1.66	0.51	217.90
TARGET CIRCLE 1320'FNL & 75'FEL									
6,946.0	1.20	333.50	6,715.0	1,475.5	-324.9	1,510.8	1.66	1.63	19.50
7,040.0	1.20	342.40	6,809.0	1,477.3	-325.6	1,512.7	0.20	0.00	9.47
7,133.0	0.80	284.30	6,902.0	1,478.4	-326.5	1,514.0	1.11	-0.43	-62.47
7,227.0	0.90	274.90	6,996.0	1,478.6	-327.9	1,514.5	0.18	0.11	-10.00
7,320.0	1.30	265.70	7,088.9	1,478.6	-329.7	1,514.8	0.47	0.43	-9.89
7,329.7	1.46	265.85	7,098.6	1,478.6	-329.9	1,514.9	1.63	1.63	1.60
HARD LINE 75'E OF BHL									
7,363.0	2.00	266.20	7,131.9	1,478.5	-330.9	1,515.0	1.63	1.63	1.04
7,408.0	2.00	266.20	7,176.9	1,478.4	-332.5	1,515.2	0.00	0.00	0.00

Checked By: _____ Approved By: _____ Date: _____