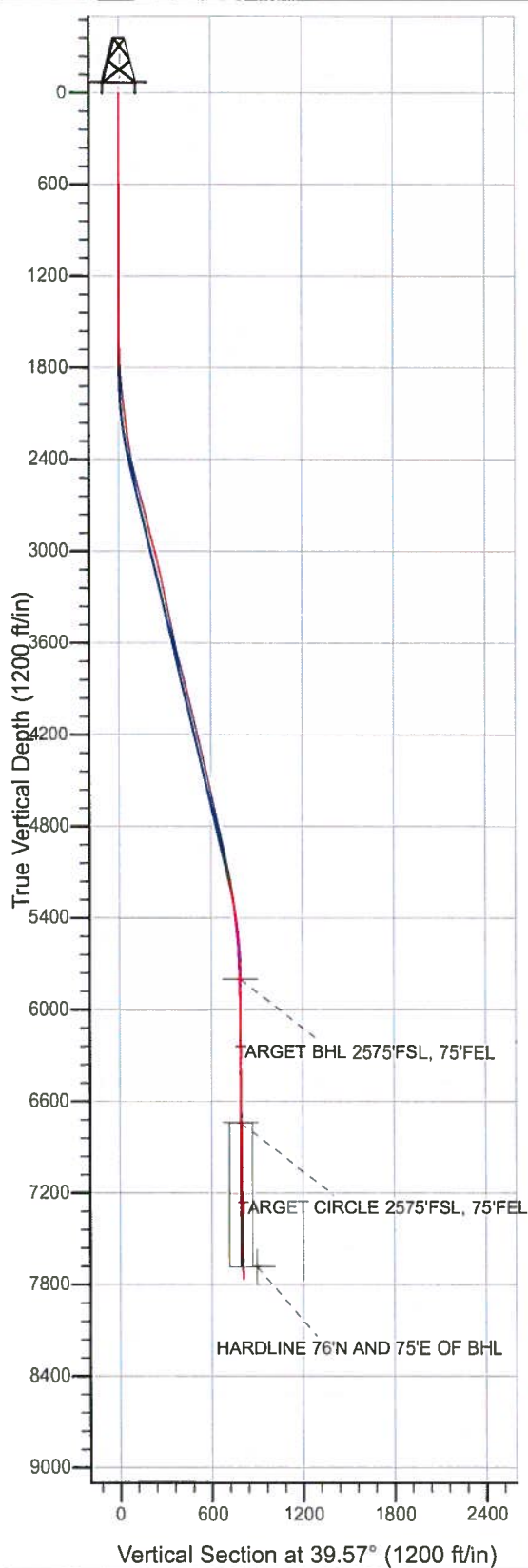
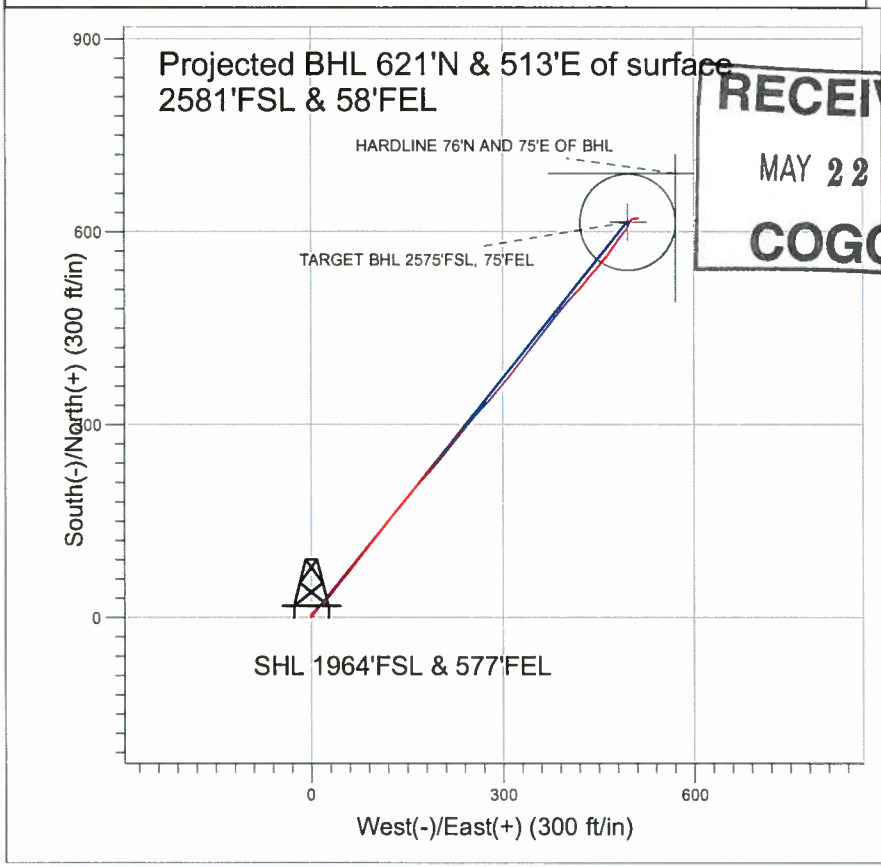


Surface Location: Strohauser Pad Sec. 32-T5N-R65W  
 North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone  
 Ground Elevation: 4668.0  
 +N/-S+E/-W Northing Easting Latitude Longitude Slot  
 0.0 0.0 1372812.28 3228550.14 40° 21' 13.932 N 104° 40' 47.748 W  
 Original Well Elev WELL @ 4681.0ft (Original Well Elev)

15



### NOBLE ENERGY INC WELD COUNTY CO



**RECEIVED**  
 MAY 22 2012  
**COGCC**

**LEGEND**

- Strohauser F33-32D, Strohauser F33-32D, Plan #1 (11-03-08) V0
- Strohauser F33-32D
- Survey #1

## Final Survey Plot

Projected Final Survey -  
 7844'MD & 7761'TVD @ 805' VS  
 1.1 deg Inc 85.4 deg AZ

Project: SEC.32-T5N-R65W  
 Site: Strohauser Pad Sec. 32-T5N-R65W  
 Well: Strohauser F33-32D  
 Plan: Strohauser F33-32D

<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>Local Co-ordinate Reference:</b>	Well Strohauer F33-32D
<b>Project:</b>	SEC.32-T5N-R65W	<b>TVD Reference:</b>	WELL @ 4681.0ft (Original Well Elev)
<b>Site:</b>	Strohauer Pad Sec. 32-T5N-R65W	<b>MD Reference:</b>	WELL @ 4681.0ft (Original Well Elev)
<b>Well:</b>	Strohauer F33-32D	<b>North Reference:</b>	True
<b>Wellbore:</b>	Strohauer F33-32D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Strohauer F33-32D	<b>Database:</b>	EDM den0-adp01 Server Data

<b>Project</b>	SEC.32-T5N-R65W, Weld County, Colorado		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		Using Well Reference Point
<b>Map Zone:</b>	Colorado Northern Zone		Using geodetic scale factor

<b>Site</b>	Strohauer Pad Sec. 32-T5N-R65W				
<b>Site Position:</b>		<b>Northing:</b>	1,372,812.29ft	<b>Latitude:</b>	40° 21' 13.932 N
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,228,550.14 ft	<b>Longitude:</b>	104° 40' 47.748 W
<b>Position Uncertainty:</b>	0.0 ft	<b>Slot Radius:</b>	"	<b>Grid Convergence:</b>	0.53 °

<b>Well</b>	Strohauer F33-32D					
<b>Well Position</b>	<b>+N/-S</b>	0.0 ft	<b>Northing:</b>	1,372,812.28 ft	<b>Latitude:</b>	40° 21' 13.932 N
	<b>+E/-W</b>	0.0 ft	<b>Easting:</b>	3,228,550.14 ft	<b>Longitude:</b>	104° 40' 47.748 W
<b>Position Uncertainty</b>		0.0 ft	<b>Wellhead Elevation:</b>	ft	<b>Ground Level:</b>	4,668.0 ft

<b>Wellbore</b>	Strohauer F33-32D				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF200510	10/8/2008	9.14	67.13	53,418
	IGRF200510	6/23/2009	9.05	67.10	53,344
	IGRF200510	12/31/2009	8.97	67.09	53,290

<b>Design</b>	Strohauer F33-32D				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	0.0	0.0	0.0	39.57	

<b>Survey Program</b>	Date 2/12/2010				
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
601.0	7,844.0	Survey #1 (Strohauer F33-32D)	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
601.0	0.40	72.20	601.0	0.6	2.0	1.8	0.07	0.07	0.00
685.0	0.40	78.90	685.0	0.8	2.6	2.2	0.06	0.00	7.98
769.0	0.40	88.50	769.0	0.9	3.1	2.7	0.08	0.00	11.43
855.0	0.30	76.20	855.0	0.9	3.7	3.0	0.14	-0.12	-14.30
940.0	0.20	30.30	940.0	1.1	4.0	3.4	0.25	-0.12	-54.00
1,026.0	0.30	324.30	1,026.0	1.4	3.9	3.6	0.33	0.12	-76.74
1,111.0	0.30	278.60	1,111.0	1.6	3.5	3.5	0.27	0.00	-53.76
1,197.0	0.50	250.80	1,197.0	1.5	3.0	3.1	0.32	0.23	-32.33
1,282.0	0.50	262.80	1,282.0	1.4	2.3	2.5	0.12	0.00	14.12
1,368.0	0.40	294.20	1,368.0	1.4	1.6	2.1	0.30	-0.12	36.51

**Company:** NOBLE ENERGY INC WELD COUNTY CO  
**Project:** SEC.32-T5N-R65W  
**Site:** Strothauer Pad Sec. 32-T5N-R65W  
**Well:** Strothauer F33-32D  
**Wellbore:** Strothauer F33-32D  
**Design:** Strothauer F33-32D

**Local Co-ordinate Reference:** Well Strothauer F33-32D  
**TVD Reference:** WELL @ 4681.0ft (Original Well Elev)  
**MD Reference:** WELL @ 4681.0ft (Original Well Elev)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM den0-adp01 Server Data

**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)
1,454.0	0.60	293.90	1,454.0	1.7	0.9	1.9	0.23	0.23	-0.35
1,539.0	0.80	329.60	1,539.0	2.4	0.2	2.0	0.55	0.24	42.00
1,625.0	0.70	13.80	1,625.0	3.5	0.0	2.7	0.66	-0.12	51.40
1,711.0	2.20	49.70	1,710.9	5.0	1.4	4.8	1.96	1.74	41.74
1,796.0	3.60	39.10	1,795.8	8.2	4.3	9.1	1.76	1.65	-12.47
1,882.0	4.60	44.20	1,881.6	12.7	8.5	15.2	1.24	1.16	5.93
1,967.0	5.60	51.10	1,966.3	17.8	14.1	22.7	1.38	1.18	8.12
2,053.0	6.90	48.00	2,051.8	23.9	21.2	31.9	1.56	1.51	-3.60
2,138.0	7.20	35.50	2,136.1	31.6	28.1	42.3	1.84	0.35	-14.71
2,224.0	7.60	38.00	2,221.4	40.5	34.7	53.3	0.60	0.47	2.91
2,309.0	8.90	39.70	2,305.5	50.0	42.3	65.5	1.56	1.53	2.00
2,395.0	11.30	38.40	2,390.2	61.7	51.8	80.6	2.80	2.79	-1.51
2,481.0	12.90	38.30	2,474.3	75.8	63.0	98.6	1.86	1.86	-0.12
2,566.0	15.00	38.50	2,556.8	91.9	75.7	119.1	2.47	2.47	0.24
2,652.0	15.50	37.50	2,639.7	109.7	89.7	141.7	0.66	0.58	-1.16
2,737.0	15.80	37.40	2,721.6	127.9	103.6	164.6	0.35	0.35	-0.12
2,823.0	13.30	37.70	2,804.8	145.1	116.8	186.2	2.91	-2.91	0.35
2,909.0	14.30	39.90	2,888.3	161.0	129.6	206.7	1.31	1.16	2.56
2,994.0	14.30	38.90	2,970.7	177.3	143.0	227.7	0.29	0.00	-1.18
3,080.0	13.50	39.60	3,054.2	193.3	156.0	248.4	0.95	-0.93	0.81
3,166.0	12.10	41.40	3,138.0	207.8	168.4	267.4	1.69	-1.63	2.09
3,251.0	12.00	43.60	3,221.2	220.8	180.4	285.1	0.55	-0.12	2.59
3,337.0	11.40	40.60	3,305.4	233.8	192.1	302.6	0.99	-0.70	-3.49
3,423.0	12.60	39.00	3,389.5	247.5	203.5	320.4	1.45	1.40	-1.86
3,508.0	11.50	39.80	3,472.6	261.2	214.8	338.2	1.31	-1.29	0.94
3,594.0	11.90	37.10	3,556.8	274.9	225.6	355.6	0.79	0.47	-3.14
3,679.0	12.80	39.90	3,639.9	289.1	236.9	373.8	1.27	1.06	3.29
3,765.0	14.60	40.60	3,723.4	304.6	250.1	394.1	2.10	2.09	0.81
3,851.0	14.70	41.60	3,806.6	321.0	264.4	415.9	0.32	0.12	1.16
3,936.0	14.30	40.80	3,888.9	337.0	278.4	437.2	0.53	-0.47	-0.94
4,022.0	13.40	40.20	3,972.4	352.7	291.8	457.7	1.06	-1.05	-0.70
4,107.0	12.30	39.20	4,055.3	367.2	303.9	476.6	1.32	-1.29	-1.18
4,193.0	13.90	39.00	4,139.0	382.4	316.2	496.1	1.86	1.86	-0.23
4,278.0	13.10	37.80	4,221.7	397.9	328.5	516.0	1.00	-0.94	-1.41
4,364.0	13.30	36.70	4,305.4	413.5	340.4	535.6	0.37	0.23	-1.28
4,450.0	12.70	38.80	4,389.2	428.8	352.2	554.9	0.89	-0.70	2.44
4,535.0	13.80	41.00	4,472.0	443.8	364.7	574.4	1.42	1.29	2.59
4,621.0	12.80	35.90	4,555.6	459.2	377.0	594.2	1.79	-1.16	-5.93
4,706.0	12.40	38.60	4,638.6	474.0	388.2	612.7	0.84	-0.47	3.18
4,792.0	12.90	41.70	4,722.5	488.4	400.4	631.5	0.98	0.58	3.60
4,877.0	12.30	44.10	4,805.5	502.0	413.0	650.0	0.94	-0.71	2.82
4,963.0	12.90	40.00	4,889.4	515.9	425.5	668.8	1.25	0.70	-4.77
5,048.0	13.20	40.00	4,972.2	530.6	437.9	687.9	0.35	0.35	0.00
5,134.0	11.00	39.50	5,056.3	544.4	449.4	706.0	2.56	-2.56	-0.58
5,219.0	9.50	41.40	5,139.9	556.0	459.2	721.1	1.81	-1.76	2.24
5,305.0	9.10	35.50	5,224.8	566.8	467.9	735.0	1.20	-0.47	-6.86
5,391.0	8.00	33.70	5,309.8	577.3	475.1	747.7	1.32	-1.28	-2.09
5,476.0	6.20	36.00	5,394.2	586.0	481.1	758.2	2.14	-2.12	2.71
5,562.0	5.60	36.80	5,479.7	593.1	486.3	767.0	0.70	-0.70	0.93
5,647.0	4.40	38.90	5,564.4	599.0	490.9	774.4	1.43	-1.41	2.47
5,733.0	3.20	32.20	5,650.2	603.6	494.2	780.1	1.49	-1.40	-7.79
5,819.0	2.00	33.90	5,736.1	606.8	496.3	784.0	1.40	-1.40	1.98
5,883.0	1.00	20.67	5,800.1	608.3	497.2	785.6	1.65	-1.57	-20.66

TARGET BHL 2575'FSL, 75'FEL

<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>Local Co-ordinate Reference:</b>	Well Strohauser F33-32D
<b>Project:</b>	SEC.32-T5N-R65W	<b>TVD Reference:</b>	WELL @ 4681.0ft (Original Well Elev)
<b>Site:</b>	Strohauser Pad Sec. 32-T5N-R65W	<b>MD Reference:</b>	WELL @ 4681.0ft (Original Well Elev)
<b>Well:</b>	Strohauser F33-32D	<b>North Reference:</b>	True
<b>Wellbore:</b>	Strohauser F33-32D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Strohauser F33-32D	<b>Database:</b>	EDM den0-adp01 Server Data

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)	
5,904.0	0.70	8.30	5,821.1	608.6	497.2	785.9	1.65	-1.41	-58.96	
5,990.0	0.50	338.10	5,907.1	609.4	497.2	786.5	0.43	-0.23	-35.12	
6,076.0	0.50	15.50	5,993.1	610.2	497.1	787.0	0.37	0.00	43.49	
6,161.0	0.40	23.80	6,078.1	610.8	497.4	787.7	0.14	-0.12	9.76	
6,247.0	0.50	49.70	6,164.1	611.3	497.8	788.3	0.26	0.12	30.12	
6,333.0	0.60	43.30	6,250.1	611.9	498.4	789.1	0.14	0.12	-7.44	
6,418.0	0.60	30.10	6,335.1	612.6	498.9	790.0	0.16	0.00	-15.53	
6,590.0	0.50	34.30	6,507.1	614.0	499.8	791.6	0.06	-0.06	2.44	
6,761.0	0.60	23.10	6,678.1	615.4	500.5	793.2	0.09	0.06	-6.55	
6,821.9	0.56	26.69	6,739.0	616.0	500.8	793.8	0.09	-0.06	5.90	
<b>TARGET CIRCLE 2575'FSL, 75'FEL</b>										
6,932.0	0.50	34.50	6,849.1	616.9	501.3	794.9	0.09	-0.06	7.09	
7,103.0	0.50	44.90	7,020.1	618.0	502.3	796.3	0.05	0.00	6.08	
7,275.0	0.60	60.10	7,192.0	619.0	503.6	797.9	0.10	0.06	8.84	
7,446.0	0.80	79.90	7,363.0	619.6	505.5	799.7	0.18	0.12	11.58	
7,617.0	1.20	80.10	7,534.0	620.2	508.5	801.9	0.23	0.23	0.12	
7,767.4	1.12	84.49	7,684.4	620.6	511.5	804.2	0.08	-0.06	2.92	
<b>HARDLINE 76'N AND 75'E OF BHL</b>										
7,796.0	1.10	85.40	7,713.0	620.6	512.0	804.6	0.08	-0.05	3.18	
7,844.0	1.10	85.40	7,761.0	620.7	512.9	805.2	0.00	0.00	0.00	

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
TARGET BHL 2575'F - hit/miss target - Shape	0.00	0.00	5,800.0	614.6	496.3	1,373,431.45	3,229,040.72	40° 21' 20.005 N	104° 40' 41.337 W
- survey misses target center by 6.4ft at 5883.0ft MD (5800.1 TVD, 608.3 N, 497.2 E)									
- Point									
TARGET CIRCLE 257 - survey misses target center by 4.7ft at 6821.9ft MD (6739.0 TVD, 616.0 N, 500.8 E)	0.00	0.00	6,739.0	614.6	496.3	1,373,431.42	3,229,040.72	40° 21' 20.005 N	104° 40' 41.337 W
- Circle (radius 75.0)									
HARDLINE 76'N AND - survey misses target center by 92.1ft at 7767.4ft MD (7684.4 TVD, 620.6 N, 511.5 E)	0.00	0.00	7,683.0	690.6	571.3	1,373,508.10	3,229,115.01	40° 21' 20.756 N	104° 40' 40.369 W
- Polygon									
Point 1			7,683.0	0.0	0.0	1,373,508.10	3,229,115.01		
Point 2			7,683.0	0.0	-200.0	1,373,506.25	3,228,915.02		
Point 3			7,683.0	0.0	0.0	1,373,508.10	3,229,115.01		
Point 4			7,683.0	-200.0	0.0	1,373,308.12	3,229,116.86		

Checked By: _____	Approved By: _____	Date: _____
-------------------	--------------------	-------------



# **NOBLE ENERGY INC WELD COUNTY CO**

**SEC.32-T5N-R65W  
Strohauer Pad Sec. 32-T5N-R65W  
Strohauer F33-32D**

**Strohauer F33-32D**

**Survey: Survey #1**

## **Standard Survey Report**

**15 February, 2010**

