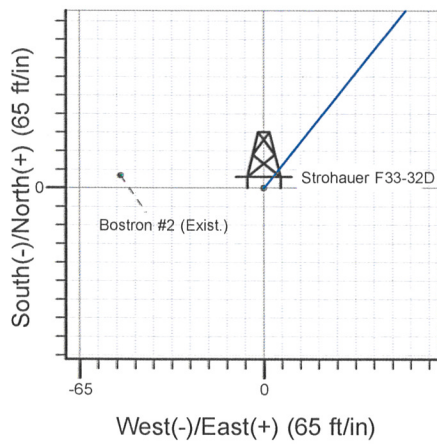
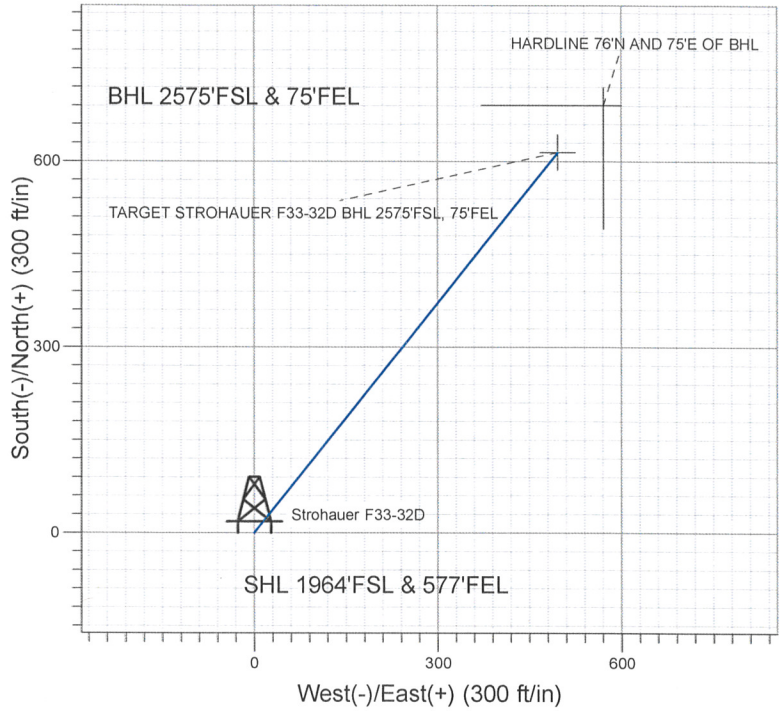
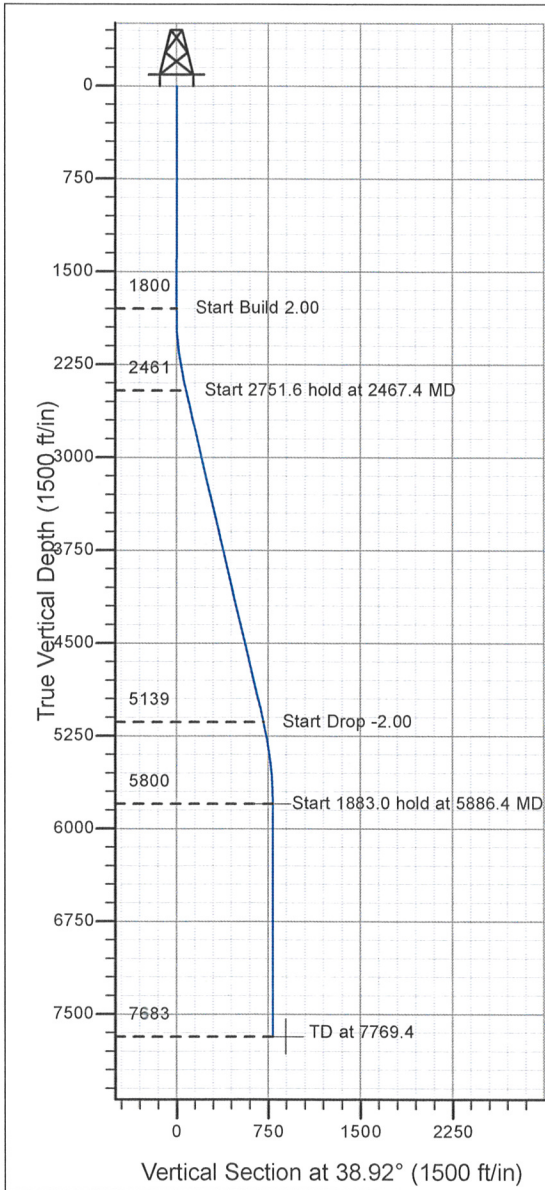


Well Name: Strohauer F33-32D

Surface Location: Strohauer 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)					

NOBLE ENERGY INC WELD COUNTY CO



Azimuths to True North
 Magnetic North: 9.14°
 Magnetic Field
 Strength: 53417.6snT
 Dip Angle: 67.13°
 Date: 10/8/2008
 Model: IGRF200510

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET STROHAUER F33-32D BHL 2575'FSL, 75'FEL	5800.0	614.6	496.3	40° 21' 20.005 N 104° 40' 41.337 W		Point
HARDLINE 76°N AND 75°E OF BHL	7683.0	690.6	571.3	40° 21' 20.756 N 104° 40' 40.369 W		Polygon

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	1800.0	0.00	0.00	1800.0	0.0	0.0	0.00	0.00	0.0	
3	2467.4	13.35	38.92	2461.3	60.2	48.6	2.00	38.92	77.4	
4	5219.0	13.35	38.92	5138.7	554.4	447.7	0.00	0.00	712.6	
5	5886.4	0.00	0.00	5800.0	614.6	496.3	2.00	180.00	790.0	TARGET STROHAUER F33-32D BHL 2575'FSL, 75'FEL
6	7769.4	0.00	0.00	7683.0	614.6	496.3	0.00	0.00	790.0	



Directional

NOBLE ENERGY INC WELD COUNTY CO

SEC.32-T5N-R65W

Strohauer Pad Sec. 32-T5N-R65W

Strohauer F33-32D

Strohauer F33-32D

Plan: Strohauer F33-32D

Standard Planning Report

03 November, 2008



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

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

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

Wellbore	Strohauer F33-32D				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	10/8/2008	9.14	67.13	53,418

Design	Strohauer F33-32D			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	38.92

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,467.4	13.35	38.92	2,461.3	60.2	48.6	2.00	2.00	0.00	38.92	
5,219.0	13.35	38.92	5,138.7	554.4	447.7	0.00	0.00	0.00	0.00	
5,886.4	0.00	0.00	5,800.0	614.6	496.3	2.00	-2.00	0.00	180.00	TARGET STROHA
7,769.4	0.00	0.00	7,683.0	614.6	496.3	0.00	0.00	0.00	0.00	

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

Planned 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	0.00
40.0	0.00	0.00	40.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
80.0	0.00	0.00	80.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
120.0	0.00	0.00	120.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
160.0	0.00	0.00	160.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
240.0	0.00	0.00	240.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
280.0	0.00	0.00	280.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
320.0	0.00	0.00	320.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
360.0	0.00	0.00	360.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
440.0	0.00	0.00	440.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
480.0	0.00	0.00	480.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
520.0	0.00	0.00	520.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
560.0	0.00	0.00	560.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
640.0	0.00	0.00	640.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
680.0	0.00	0.00	680.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
720.0	0.00	0.00	720.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
760.0	0.00	0.00	760.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
840.0	0.00	0.00	840.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
880.0	0.00	0.00	880.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
920.0	0.00	0.00	920.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
960.0	0.00	0.00	960.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
1,040.0	0.00	0.00	1,040.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
1,080.0	0.00	0.00	1,080.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
1,120.0	0.00	0.00	1,120.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
1,160.0	0.00	0.00	1,160.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
1,240.0	0.00	0.00	1,240.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
1,280.0	0.00	0.00	1,280.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
1,320.0	0.00	0.00	1,320.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
1,360.0	0.00	0.00	1,360.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
1,440.0	0.00	0.00	1,440.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
1,480.0	0.00	0.00	1,480.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
1,520.0	0.00	0.00	1,520.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
1,560.0	0.00	0.00	1,560.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
1,640.0	0.00	0.00	1,640.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
1,680.0	0.00	0.00	1,680.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
1,720.0	0.00	0.00	1,720.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
1,760.0	0.00	0.00	1,760.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
1,840.0	0.80	38.92	1,840.0	0.2	0.2	0.3	2.00	2.00	2.00	0.00
1,880.0	1.60	38.92	1,880.0	0.9	0.7	1.1	2.00	2.00	2.00	0.00
1,920.0	2.40	38.92	1,920.0	2.0	1.6	2.5	2.00	2.00	2.00	0.00
1,960.0	3.20	38.92	1,959.9	3.5	2.8	4.5	2.00	2.00	2.00	0.00
2,000.0	4.00	38.92	1,999.8	5.4	4.4	7.0	2.00	2.00	2.00	0.00
2,040.0	4.80	38.92	2,039.7	7.8	6.3	10.0	2.00	2.00	2.00	0.00
2,080.0	5.60	38.92	2,079.6	10.6	8.6	13.7	2.00	2.00	2.00	0.00
2,120.0	6.40	38.92	2,119.3	13.9	11.2	17.9	2.00	2.00	2.00	0.00

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

Planned 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)	
2,160.0	7.20	38.92	2,159.1	17.6	14.2	22.6	2.00	2.00	0.00	
2,200.0	8.00	38.92	2,198.7	21.7	17.5	27.9	2.00	2.00	0.00	
2,240.0	8.80	38.92	2,238.3	26.2	21.2	33.7	2.00	2.00	0.00	
2,280.0	9.60	38.92	2,277.8	31.2	25.2	40.1	2.00	2.00	0.00	
2,320.0	10.40	38.92	2,317.1	36.6	29.6	47.1	2.00	2.00	0.00	
2,360.0	11.20	38.92	2,356.4	42.4	34.3	54.6	2.00	2.00	0.00	
2,400.0	12.00	38.92	2,395.6	48.7	39.3	62.6	2.00	2.00	0.00	
2,440.0	12.80	38.92	2,434.7	55.4	44.7	71.2	2.00	2.00	0.00	
2,467.4	13.35	38.92	2,461.3	60.2	48.6	77.4	2.00	2.00	0.00	
2,480.0	13.35	38.92	2,473.6	62.5	50.4	80.3	0.00	0.00	0.00	
2,520.0	13.35	38.92	2,512.6	69.7	56.2	89.5	0.00	0.00	0.00	
2,537.9	13.35	38.92	2,530.0	72.9	58.8	93.7	0.00	0.00	0.00	
PIERRE SILT										
2,560.0	13.35	38.92	2,551.5	76.8	62.0	98.8	0.00	0.00	0.00	
2,600.0	13.35	38.92	2,590.4	84.0	67.9	108.0	0.00	0.00	0.00	
2,640.0	13.35	38.92	2,629.3	91.2	73.7	117.2	0.00	0.00	0.00	
2,680.0	13.35	38.92	2,668.2	98.4	79.5	126.5	0.00	0.00	0.00	
2,720.0	13.35	38.92	2,707.2	105.6	85.3	135.7	0.00	0.00	0.00	
2,760.0	13.35	38.92	2,746.1	112.8	91.1	144.9	0.00	0.00	0.00	
2,800.0	13.35	38.92	2,785.0	119.9	96.9	154.2	0.00	0.00	0.00	
2,840.0	13.35	38.92	2,823.9	127.1	102.7	163.4	0.00	0.00	0.00	
2,880.0	13.35	38.92	2,862.8	134.3	108.5	172.6	0.00	0.00	0.00	
2,920.0	13.35	38.92	2,901.8	141.5	114.3	181.9	0.00	0.00	0.00	
2,960.0	13.35	38.92	2,940.7	148.7	120.1	191.1	0.00	0.00	0.00	
3,000.0	13.35	38.92	2,979.6	155.9	125.9	200.3	0.00	0.00	0.00	
3,040.0	13.35	38.92	3,018.5	163.1	131.7	209.6	0.00	0.00	0.00	
3,080.0	13.35	38.92	3,057.4	170.2	137.5	218.8	0.00	0.00	0.00	
3,120.0	13.35	38.92	3,096.4	177.4	143.3	228.0	0.00	0.00	0.00	
3,160.0	13.35	38.92	3,135.3	184.6	149.1	237.3	0.00	0.00	0.00	
3,200.0	13.35	38.92	3,174.2	191.8	154.9	246.5	0.00	0.00	0.00	
3,240.0	13.35	38.92	3,213.1	199.0	160.7	255.7	0.00	0.00	0.00	
3,280.0	13.35	38.92	3,252.0	206.2	166.5	265.0	0.00	0.00	0.00	
3,320.0	13.35	38.92	3,290.9	213.3	172.3	274.2	0.00	0.00	0.00	
3,360.0	13.35	38.92	3,329.9	220.5	178.1	283.5	0.00	0.00	0.00	
3,400.0	13.35	38.92	3,368.8	227.7	183.9	292.7	0.00	0.00	0.00	
3,440.0	13.35	38.92	3,407.7	234.9	189.7	301.9	0.00	0.00	0.00	
3,480.0	13.35	38.92	3,446.6	242.1	195.5	311.2	0.00	0.00	0.00	
3,520.0	13.35	38.92	3,485.5	249.3	201.3	320.4	0.00	0.00	0.00	
3,560.0	13.35	38.92	3,524.5	256.5	207.1	329.6	0.00	0.00	0.00	
3,579.0	13.35	38.92	3,543.0	259.9	209.8	334.0	0.00	0.00	0.00	
PARKMAN										
3,600.0	13.35	38.92	3,563.4	263.6	212.9	338.9	0.00	0.00	0.00	
3,640.0	13.35	38.92	3,602.3	270.8	218.7	348.1	0.00	0.00	0.00	
3,680.0	13.35	38.92	3,641.2	278.0	224.5	357.3	0.00	0.00	0.00	
3,720.0	13.35	38.92	3,680.1	285.2	230.3	366.6	0.00	0.00	0.00	
3,760.0	13.35	38.92	3,719.1	292.4	236.1	375.8	0.00	0.00	0.00	
3,800.0	13.35	38.92	3,758.0	299.6	241.9	385.0	0.00	0.00	0.00	
3,840.0	13.35	38.92	3,796.9	306.7	247.7	394.3	0.00	0.00	0.00	
3,880.0	13.35	38.92	3,835.8	313.9	253.5	403.5	0.00	0.00	0.00	
3,920.0	13.35	38.92	3,874.7	321.1	259.3	412.7	0.00	0.00	0.00	
3,960.0	13.35	38.92	3,913.7	328.3	265.1	422.0	0.00	0.00	0.00	
4,000.0	13.35	38.92	3,952.6	335.5	270.9	431.2	0.00	0.00	0.00	
4,040.0	13.35	38.92	3,991.5	342.7	276.7	440.4	0.00	0.00	0.00	

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

Planned 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)
4,080.0	13.35	38.92	4,030.4	349.9	282.5	449.7	0.00	0.00	0.00
4,120.0	13.35	38.92	4,069.3	357.0	288.3	458.9	0.00	0.00	0.00
4,160.0	13.35	38.92	4,108.3	364.2	294.1	468.1	0.00	0.00	0.00
4,200.0	13.35	38.92	4,147.2	371.4	299.9	477.4	0.00	0.00	0.00
4,240.0	13.35	38.92	4,186.1	378.6	305.7	486.6	0.00	0.00	0.00
4,280.0	13.35	38.92	4,225.0	385.8	311.5	495.8	0.00	0.00	0.00
4,320.0	13.35	38.92	4,263.9	393.0	317.3	505.1	0.00	0.00	0.00
4,327.3	13.35	38.92	4,271.0	394.3	318.4	506.7	0.00	0.00	0.00
SUSSEX									
4,360.0	13.35	38.92	4,302.9	400.1	323.1	514.3	0.00	0.00	0.00
4,400.0	13.35	38.92	4,341.8	407.3	328.9	523.5	0.00	0.00	0.00
4,440.0	13.35	38.92	4,380.7	414.5	334.7	532.8	0.00	0.00	0.00
4,480.0	13.35	38.92	4,419.6	421.7	340.5	542.0	0.00	0.00	0.00
4,520.0	13.35	38.92	4,458.5	428.9	346.3	551.2	0.00	0.00	0.00
4,560.0	13.35	38.92	4,497.5	436.1	352.1	560.5	0.00	0.00	0.00
4,600.0	13.35	38.92	4,536.4	443.2	357.9	569.7	0.00	0.00	0.00
4,640.0	13.35	38.92	4,575.3	450.4	363.7	578.9	0.00	0.00	0.00
4,680.0	13.35	38.92	4,614.2	457.6	369.5	588.2	0.00	0.00	0.00
4,720.0	13.35	38.92	4,653.1	464.8	375.3	597.4	0.00	0.00	0.00
4,760.0	13.35	38.92	4,692.1	472.0	381.1	606.6	0.00	0.00	0.00
4,800.0	13.35	38.92	4,731.0	479.2	386.9	615.9	0.00	0.00	0.00
4,840.0	13.35	38.92	4,769.9	486.4	392.7	625.1	0.00	0.00	0.00
4,880.0	13.35	38.92	4,808.8	493.5	398.5	634.3	0.00	0.00	0.00
4,920.0	13.35	38.92	4,847.7	500.7	404.3	643.6	0.00	0.00	0.00
4,948.0	13.35	38.92	4,875.0	505.8	408.4	650.1	0.00	0.00	0.00
SHANNON									
4,960.0	13.35	38.92	4,886.7	507.9	410.1	652.8	0.00	0.00	0.00
5,000.0	13.35	38.92	4,925.6	515.1	415.9	662.1	0.00	0.00	0.00
5,040.0	13.35	38.92	4,964.5	522.3	421.7	671.3	0.00	0.00	0.00
5,080.0	13.35	38.92	5,003.4	529.5	427.5	680.5	0.00	0.00	0.00
5,120.0	13.35	38.92	5,042.3	536.6	433.3	689.8	0.00	0.00	0.00
5,160.0	13.35	38.92	5,081.2	543.8	439.1	699.0	0.00	0.00	0.00
5,200.0	13.35	38.92	5,120.2	551.0	444.9	708.2	0.00	0.00	0.00
5,219.0	13.35	38.92	5,138.7	554.4	447.7	712.6	0.00	0.00	0.00
5,240.0	12.93	38.92	5,159.1	558.1	450.7	717.4	2.00	-2.00	0.00
5,280.0	12.13	38.92	5,198.2	564.9	456.1	726.1	2.00	-2.00	0.00
5,320.0	11.33	38.92	5,237.3	571.2	461.2	734.2	2.00	-2.00	0.00
5,360.0	10.53	38.92	5,276.6	577.1	466.0	741.8	2.00	-2.00	0.00
5,400.0	9.73	38.92	5,316.0	582.6	470.4	748.8	2.00	-2.00	0.00
5,440.0	8.93	38.92	5,355.4	587.6	474.5	755.3	2.00	-2.00	0.00
5,480.0	8.13	38.92	5,395.0	592.2	478.2	761.2	2.00	-2.00	0.00
5,520.0	7.33	38.92	5,434.6	596.4	481.6	766.6	2.00	-2.00	0.00
5,560.0	6.53	38.92	5,474.3	600.2	484.6	771.4	2.00	-2.00	0.00
5,600.0	5.73	38.92	5,514.1	603.5	487.3	775.7	2.00	-2.00	0.00
5,640.0	4.93	38.92	5,553.9	606.4	489.6	779.4	2.00	-2.00	0.00
5,680.0	4.13	38.92	5,593.8	608.9	491.6	782.6	2.00	-2.00	0.00
5,720.0	3.33	38.92	5,633.7	610.9	493.3	785.2	2.00	-2.00	0.00
5,760.0	2.53	38.92	5,673.7	612.5	494.5	787.2	2.00	-2.00	0.00
5,800.0	1.73	38.92	5,713.6	613.6	495.5	788.7	2.00	-2.00	0.00
5,840.0	0.93	38.92	5,753.6	614.3	496.1	789.6	2.00	-2.00	0.00
5,880.0	0.13	38.92	5,793.6	614.6	496.3	790.0	2.00	-2.00	0.00
5,886.4	0.00	0.00	5,800.0	614.6	496.3	790.0	2.00	-2.00	0.00

TARGET STROHAUER F33-32D BHL 2575'FSL, 75'FEL

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

Planned 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)
5,920.0	0.00	0.00	5,833.6	614.6	496.3	790.0	0.00	0.00	0.00
5,960.0	0.00	0.00	5,873.6	614.6	496.3	790.0	0.00	0.00	0.00
6,000.0	0.00	0.00	5,913.6	614.6	496.3	790.0	0.00	0.00	0.00
6,040.0	0.00	0.00	5,953.6	614.6	496.3	790.0	0.00	0.00	0.00
6,080.0	0.00	0.00	5,993.6	614.6	496.3	790.0	0.00	0.00	0.00
6,120.0	0.00	0.00	6,033.6	614.6	496.3	790.0	0.00	0.00	0.00
6,160.0	0.00	0.00	6,073.6	614.6	496.3	790.0	0.00	0.00	0.00
6,175.4	0.00	0.00	6,089.0	614.6	496.3	790.0	0.00	0.00	0.00
TEEPEE BUTTES									
6,200.0	0.00	0.00	6,113.6	614.6	496.3	790.0	0.00	0.00	0.00
6,240.0	0.00	0.00	6,153.6	614.6	496.3	790.0	0.00	0.00	0.00
6,280.0	0.00	0.00	6,193.6	614.6	496.3	790.0	0.00	0.00	0.00
6,320.0	0.00	0.00	6,233.6	614.6	496.3	790.0	0.00	0.00	0.00
6,360.0	0.00	0.00	6,273.6	614.6	496.3	790.0	0.00	0.00	0.00
6,400.0	0.00	0.00	6,313.6	614.6	496.3	790.0	0.00	0.00	0.00
6,440.0	0.00	0.00	6,353.6	614.6	496.3	790.0	0.00	0.00	0.00
6,480.0	0.00	0.00	6,393.6	614.6	496.3	790.0	0.00	0.00	0.00
6,520.0	0.00	0.00	6,433.6	614.6	496.3	790.0	0.00	0.00	0.00
6,560.0	0.00	0.00	6,473.6	614.6	496.3	790.0	0.00	0.00	0.00
6,600.0	0.00	0.00	6,513.6	614.6	496.3	790.0	0.00	0.00	0.00
6,640.0	0.00	0.00	6,553.6	614.6	496.3	790.0	0.00	0.00	0.00
6,680.0	0.00	0.00	6,593.6	614.6	496.3	790.0	0.00	0.00	0.00
6,720.0	0.00	0.00	6,633.6	614.6	496.3	790.0	0.00	0.00	0.00
6,760.0	0.00	0.00	6,673.6	614.6	496.3	790.0	0.00	0.00	0.00
6,800.0	0.00	0.00	6,713.6	614.6	496.3	790.0	0.00	0.00	0.00
6,825.4	0.00	0.00	6,739.0	614.6	496.3	790.0	0.00	0.00	0.00
NIOBRARA									
6,840.0	0.00	0.00	6,753.6	614.6	496.3	790.0	0.00	0.00	0.00
6,880.0	0.00	0.00	6,793.6	614.6	496.3	790.0	0.00	0.00	0.00
6,920.0	0.00	0.00	6,833.6	614.6	496.3	790.0	0.00	0.00	0.00
6,960.0	0.00	0.00	6,873.6	614.6	496.3	790.0	0.00	0.00	0.00
7,000.0	0.00	0.00	6,913.6	614.6	496.3	790.0	0.00	0.00	0.00
7,040.0	0.00	0.00	6,953.6	614.6	496.3	790.0	0.00	0.00	0.00
7,080.0	0.00	0.00	6,993.6	614.6	496.3	790.0	0.00	0.00	0.00
7,120.0	0.00	0.00	7,033.6	614.6	496.3	790.0	0.00	0.00	0.00
7,127.4	0.00	0.00	7,041.0	614.6	496.3	790.0	0.00	0.00	0.00
FT HAYS									
7,147.4	0.00	0.00	7,061.0	614.6	496.3	790.0	0.00	0.00	0.00
CODELL									
7,160.0	0.00	0.00	7,073.6	614.6	496.3	790.0	0.00	0.00	0.00
7,200.0	0.00	0.00	7,113.6	614.6	496.3	790.0	0.00	0.00	0.00
7,240.0	0.00	0.00	7,153.6	614.6	496.3	790.0	0.00	0.00	0.00
7,280.0	0.00	0.00	7,193.6	614.6	496.3	790.0	0.00	0.00	0.00
7,320.0	0.00	0.00	7,233.6	614.6	496.3	790.0	0.00	0.00	0.00
7,360.0	0.00	0.00	7,273.6	614.6	496.3	790.0	0.00	0.00	0.00
7,400.0	0.00	0.00	7,313.6	614.6	496.3	790.0	0.00	0.00	0.00
7,440.0	0.00	0.00	7,353.6	614.6	496.3	790.0	0.00	0.00	0.00
7,480.0	0.00	0.00	7,393.6	614.6	496.3	790.0	0.00	0.00	0.00
7,520.0	0.00	0.00	7,433.6	614.6	496.3	790.0	0.00	0.00	0.00
7,560.0	0.00	0.00	7,473.6	614.6	496.3	790.0	0.00	0.00	0.00
7,600.0	0.00	0.00	7,513.6	614.6	496.3	790.0	0.00	0.00	0.00
7,619.4	0.00	0.00	7,533.0	614.6	496.3	790.0	0.00	0.00	0.00
J SAND									
7,640.0	0.00	0.00	7,553.6	614.6	496.3	790.0	0.00	0.00	0.00

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

Planned 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)
7,680.0	0.00	0.00	7,593.6	614.6	496.3	790.0	0.00	0.00	0.00
7,720.0	0.00	0.00	7,633.6	614.6	496.3	790.0	0.00	0.00	0.00
7,760.0	0.00	0.00	7,673.6	614.6	496.3	790.0	0.00	0.00	0.00
7,769.4	0.00	0.00	7,683.0	614.6	496.3	790.0	0.00	0.00	0.00

HARDLINE 76'N AND 75'E OF BHL

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
2,537.9	2,530.0	PIERRE SILT		0.00	
3,579.0	3,543.0	PARKMAN		0.00	
4,327.3	4,271.0	SUSSEX		0.00	
4,948.0	4,875.0	SHANNON		0.00	
6,175.4	6,089.0	TEEPEE BUTTES		0.00	
6,825.4	6,739.0	NIOBRARA		0.00	
7,127.4	7,041.0	FT HAYS		0.00	
7,147.4	7,061.0	CODELL		0.00	
7,619.4	7,533.0	J SAND		0.00	