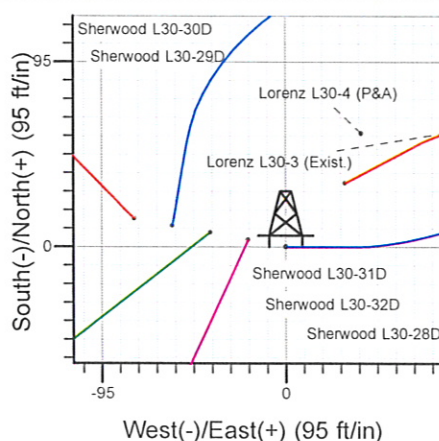
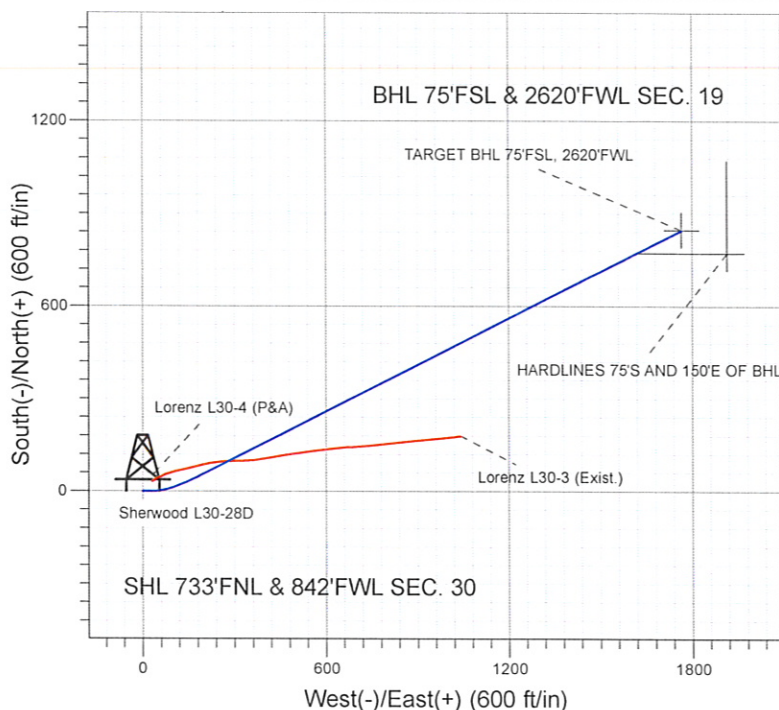
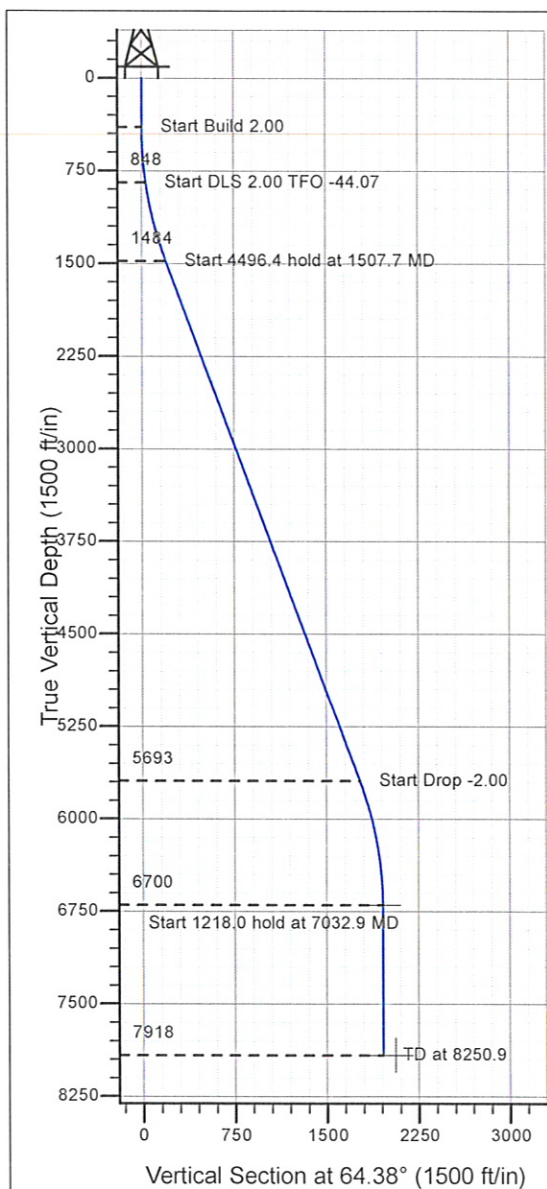


Well Name: Sherwood L30-28D

Surface Location: Sherwood Pad Sec.30-T3N-R66W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone
Ground Elevation: 4820.0
-S+E/-W Northing Easting Latitude Longitude S
0.0 1316707.12 3187969.65 40° 12' 2.880 N 104° 49' 37.416 W
Original Well Elev WELL @ 4833.0ft (Original Well Elev)

NOBLE ENERGY INC WELD COUNTY CO



Sherwood Pad Sec.30-T3N-R66W
Sherwood L30-28D
Plan #2 (08-03-09)
16:16, August 03 2009



Azimuths to True North
Magnetic North: 9.11°

Magnetic Field
Strength: 53244.8snT
Dip Angle: 66.95°
Date: 6/30/2009
Model: IGRF200510

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 75°FSL, 2620°FWL	6700.0	846.3	1764.8	40° 12' 11.243 N	104° 49' 14.671 W	Point
HARDLINES 75°S AND 150°E OF BHL	7918.0	771.3	1914.8	40° 12' 10.501 N	104° 49' 12.738 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	400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.0	
3	850.0	9.00	90.00	848.2	0.0	35.3	2.00	90.00	31.8	
4	1507.7	20.58	63.23	1483.6	52.3	190.6	2.00	-44.07	194.5	
5	6004.1	20.58	63.23	5693.1	764.0	1601.6	0.00	0.00	1774.5	
6	7032.9	0.00	0.00	6700.0	846.3	1764.8	2.00	180.00	1957.2	TARGET BHL 75'FSL, 2620'FWL
7	8250.9	0.00	0.00	7918.0	846.3	1764.8	0.00	0.00	1957.2	



Directional

**NOBLE ENERGY INC WELD
COUNTY CO**

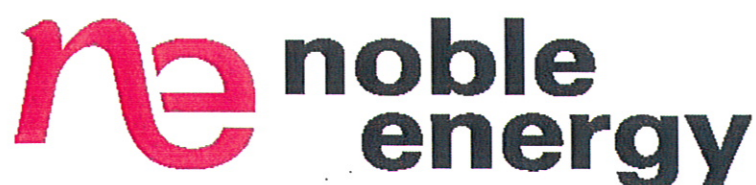
**SEC.30-T3N-R66W
Sherwood Pad Sec.30-T3N-R66W
Sherwood L30-28D**

Wellbore #1

Plan: Plan #2 (08-03-09)

Standard Planning Report

03 August, 2009



Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Sherwood L30-28D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4833.0ft (Original Well Elev)
Project:	SEC.30-T3N-R66W	MD Reference:	WELL @ 4833.0ft (Original Well Elev)
Site:	Sherwood Pad Sec.30-T3N-R66W	North Reference:	True
Well:	Sherwood L30-28D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (08-03-09)		

Project	SEC.30-T3N-R66W, 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	Sherwood Pad Sec.30-T3N-R66W				
Site Position:		Northing:	1,316,714.12 ft	Latitude:	40° 12' 2.952 N
From:	Lat/Long	Easting:	3,187,930.49 ft	Longitude:	104° 49' 37.920 W
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.43 °

Well	Sherwood L30-28D					
Well Position	+N/-S	-7.3 ft	Northing:	1,316,707.12 ft	Latitude:	40° 12' 2.880 N
	+E/-W	39.1 ft	Easting:	3,187,969.65 ft	Longitude:	104° 49' 37.416 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,820.0 ft

Wellbore	Wellbore #1
-----------------	-------------

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	6/30/2009	9.11	66.95	53,245

Design	Plan #2 (08-03-09)
---------------	--------------------

Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(ft)	(ft)	(ft)	(°)
	0.0	0.0	0.0	64.38

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	
400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.00	0.00	
850.0	9.00	90.00	848.2	0.0	35.3	2.00	2.00	0.00	90.00	
1,507.7	20.58	63.23	1,483.6	52.3	190.6	2.00	1.76	-4.07	-44.07	
6,004.1	20.58	63.23	5,693.1	764.0	1,601.6	0.00	0.00	0.00	0.00	
7,032.9	0.00	0.00	6,700.0	846.3	1,764.8	2.00	-2.00	0.00	180.00	TARGET BHL 75°F:
8,250.9	0.00	0.00	7,918.0	846.3	1,764.8	0.00	0.00	0.00	0.00	

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Sherwood L30-28D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4833.0ft (Original Well Elev)
Project:	SEC.30-T3N-R66W	MD Reference:	WELL @ 4833.0ft (Original Well Elev)
Site:	Sherwood Pad Sec.30-T3N-R66W	North Reference:	True
Well:	Sherwood L30-28D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (08-03-09)		

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
40.0	0.00	0.00	40.0	0.0	0.0	0.0	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
120.0	0.00	0.00	120.0	0.0	0.0	0.0	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
200.0	0.00	0.00	200.0	0.0	0.0	0.0	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
280.0	0.00	0.00	280.0	0.0	0.0	0.0	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
360.0	0.00	0.00	360.0	0.0	0.0	0.0	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
440.0	0.80	90.00	440.0	0.0	0.3	0.3	2.00	2.00	0.00
480.0	1.60	90.00	480.0	0.0	1.1	1.0	2.00	2.00	0.00
520.0	2.40	90.00	520.0	0.0	2.5	2.3	2.00	2.00	0.00
560.0	3.20	90.00	559.9	0.0	4.5	4.0	2.00	2.00	0.00
600.0	4.00	90.00	599.8	0.0	7.0	6.3	2.00	2.00	0.00
640.0	4.80	90.00	639.7	0.0	10.0	9.1	2.00	2.00	0.00
680.0	5.60	90.00	679.6	0.0	13.7	12.3	2.00	2.00	0.00
720.0	6.40	90.00	719.3	0.0	17.9	16.1	2.00	2.00	0.00
760.0	7.20	90.00	759.1	0.0	22.6	20.4	2.00	2.00	0.00
800.0	8.00	90.00	798.7	0.0	27.9	25.1	2.00	2.00	0.00
840.0	8.80	90.00	838.3	0.0	33.7	30.4	2.00	2.00	0.00
850.0	9.00	90.00	848.2	0.0	35.3	31.8	2.00	2.00	0.00
880.0	9.44	87.45	877.8	0.1	40.1	36.2	2.00	1.47	-8.48
920.0	10.05	84.41	917.2	0.6	46.8	42.5	2.00	1.53	-7.60
960.0	10.69	81.72	956.5	1.5	54.0	49.3	2.00	1.59	-6.72
1,000.0	11.35	79.34	995.8	2.7	61.5	56.6	2.00	1.64	-5.96
1,040.0	12.02	77.21	1,035.0	4.4	69.4	64.5	2.00	1.69	-5.31
1,080.0	12.71	75.31	1,074.0	6.4	77.8	72.9	2.00	1.72	-4.75
1,120.0	13.41	73.61	1,113.0	8.8	86.5	81.8	2.00	1.75	-4.26
1,160.0	14.12	72.07	1,151.9	11.7	95.6	91.2	2.00	1.78	-3.85
1,200.0	14.84	70.68	1,190.6	14.9	105.0	101.1	2.00	1.80	-3.48
1,240.0	15.57	69.41	1,229.2	18.4	114.9	111.6	2.00	1.82	-3.16
1,280.0	16.31	68.26	1,267.6	22.4	125.1	122.5	2.00	1.84	-2.89
1,320.0	17.05	67.20	1,306.0	26.8	135.8	134.0	2.00	1.85	-2.64
1,360.0	17.79	66.23	1,344.1	31.5	146.8	145.9	2.00	1.86	-2.43
1,400.0	18.54	65.33	1,382.1	36.6	158.1	158.4	2.00	1.87	-2.24
1,440.0	19.29	64.50	1,420.0	42.1	169.9	171.4	2.00	1.88	-2.07
1,480.0	20.05	63.73	1,457.6	48.0	182.0	184.8	2.00	1.89	-1.92
1,507.7	20.58	63.23	1,483.6	52.3	190.6	194.5	2.00	1.90	-1.81
1,520.0	20.58	63.23	1,495.1	54.2	194.5	198.8	0.00	0.00	0.00
1,560.0	20.58	63.23	1,532.6	60.6	207.0	212.8	0.00	0.00	0.00
1,600.0	20.58	63.23	1,570.0	66.9	219.6	226.9	0.00	0.00	0.00
1,640.0	20.58	63.23	1,607.5	73.2	232.1	241.0	0.00	0.00	0.00
1,680.0	20.58	63.23	1,644.9	79.6	244.7	255.0	0.00	0.00	0.00
1,720.0	20.58	63.23	1,682.4	85.9	257.2	269.1	0.00	0.00	0.00
1,760.0	20.58	63.23	1,719.8	92.2	269.8	283.1	0.00	0.00	0.00
1,800.0	20.58	63.23	1,757.3	98.6	282.3	297.2	0.00	0.00	0.00
1,840.0	20.58	63.23	1,794.7	104.9	294.9	311.2	0.00	0.00	0.00
1,880.0	20.58	63.23	1,832.2	111.2	307.4	325.3	0.00	0.00	0.00
1,920.0	20.58	63.23	1,869.6	117.5	320.0	339.3	0.00	0.00	0.00
1,960.0	20.58	63.23	1,907.1	123.9	332.5	353.4	0.00	0.00	0.00
2,000.0	20.58	63.23	1,944.5	130.2	345.1	367.5	0.00	0.00	0.00
2,040.0	20.58	63.23	1,982.0	136.5	357.6	381.5	0.00	0.00	0.00

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Sherwood L30-28D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4833.0ft (Original Well Elev)
Project:	SEC.30-T3N-R66W	MD Reference:	WELL @ 4833.0ft (Original Well Elev)
Site:	Sherwood Pad Sec.30-T3N-R66W	North Reference:	True
Well:	Sherwood L30-28D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (08-03-09)		

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)
2,080.0	20.58	63.23	2,019.4	142.9	370.2	395.6	0.00	0.00	0.00
2,120.0	20.58	63.23	2,056.8	149.2	382.7	409.6	0.00	0.00	0.00
2,160.0	20.58	63.23	2,094.3	155.5	395.3	423.7	0.00	0.00	0.00
2,200.0	20.58	63.23	2,131.7	161.9	407.8	437.7	0.00	0.00	0.00
2,240.0	20.58	63.23	2,169.2	168.2	420.4	451.8	0.00	0.00	0.00
2,280.0	20.58	63.23	2,206.6	174.5	433.0	465.9	0.00	0.00	0.00
2,320.0	20.58	63.23	2,244.1	180.9	445.5	479.9	0.00	0.00	0.00
2,360.0	20.58	63.23	2,281.5	187.2	458.1	494.0	0.00	0.00	0.00
2,400.0	20.58	63.23	2,319.0	193.5	470.6	508.0	0.00	0.00	0.00
2,440.0	20.58	63.23	2,356.4	199.9	483.2	522.1	0.00	0.00	0.00
2,480.0	20.58	63.23	2,393.9	206.2	495.7	536.1	0.00	0.00	0.00
2,520.0	20.58	63.23	2,431.3	212.5	508.3	550.2	0.00	0.00	0.00
2,560.0	20.58	63.23	2,468.8	218.9	520.8	564.2	0.00	0.00	0.00
2,600.0	20.58	63.23	2,506.2	225.2	533.4	578.3	0.00	0.00	0.00
2,640.0	20.58	63.23	2,543.7	231.5	545.9	592.4	0.00	0.00	0.00
2,680.0	20.58	63.23	2,581.1	237.8	558.5	606.4	0.00	0.00	0.00
2,720.0	20.58	63.23	2,618.6	244.2	571.0	620.5	0.00	0.00	0.00
2,760.0	20.58	63.23	2,656.0	250.5	583.6	634.5	0.00	0.00	0.00
2,800.0	20.58	63.23	2,693.5	256.8	596.1	648.6	0.00	0.00	0.00
2,840.0	20.58	63.23	2,730.9	263.2	608.7	662.6	0.00	0.00	0.00
2,880.0	20.58	63.23	2,768.4	269.5	621.2	676.7	0.00	0.00	0.00
2,920.0	20.58	63.23	2,805.8	275.8	633.8	690.7	0.00	0.00	0.00
2,960.0	20.58	63.23	2,843.3	282.2	646.3	704.8	0.00	0.00	0.00
3,000.0	20.58	63.23	2,880.7	288.5	658.9	718.9	0.00	0.00	0.00
3,040.0	20.58	63.23	2,918.2	294.8	671.4	732.9	0.00	0.00	0.00
3,080.0	20.58	63.23	2,955.6	301.2	684.0	747.0	0.00	0.00	0.00
3,120.0	20.58	63.23	2,993.0	307.5	696.6	761.0	0.00	0.00	0.00
3,160.0	20.58	63.23	3,030.5	313.8	709.1	775.1	0.00	0.00	0.00
3,200.0	20.58	63.23	3,067.9	320.2	721.7	789.1	0.00	0.00	0.00
3,240.0	20.58	63.23	3,105.4	326.5	734.2	803.2	0.00	0.00	0.00
3,280.0	20.58	63.23	3,142.8	332.8	746.8	817.3	0.00	0.00	0.00
3,320.0	20.58	63.23	3,180.3	339.1	759.3	831.3	0.00	0.00	0.00
3,360.0	20.58	63.23	3,217.7	345.5	771.9	845.4	0.00	0.00	0.00
3,400.0	20.58	63.23	3,255.2	351.8	784.4	859.4	0.00	0.00	0.00
3,440.0	20.58	63.23	3,292.6	358.1	797.0	873.5	0.00	0.00	0.00
3,480.0	20.58	63.23	3,330.1	364.5	809.5	887.5	0.00	0.00	0.00
3,520.0	20.58	63.23	3,367.5	370.8	822.1	901.6	0.00	0.00	0.00
3,560.0	20.58	63.23	3,405.0	377.1	834.6	915.6	0.00	0.00	0.00
3,600.0	20.58	63.23	3,442.4	383.5	847.2	929.7	0.00	0.00	0.00
3,640.0	20.58	63.23	3,479.9	389.8	859.7	943.8	0.00	0.00	0.00
3,680.0	20.58	63.23	3,517.3	396.1	872.3	957.8	0.00	0.00	0.00
3,720.0	20.58	63.23	3,554.8	402.5	884.8	971.9	0.00	0.00	0.00
3,760.0	20.58	63.23	3,592.2	408.8	897.4	985.9	0.00	0.00	0.00
3,800.0	20.58	63.23	3,629.7	415.1	909.9	1,000.0	0.00	0.00	0.00
3,840.0	20.58	63.23	3,667.1	421.5	922.5	1,014.0	0.00	0.00	0.00
3,880.0	20.58	63.23	3,704.6	427.8	935.1	1,028.1	0.00	0.00	0.00
3,920.0	20.58	63.23	3,742.0	434.1	947.6	1,042.2	0.00	0.00	0.00
3,960.0	20.58	63.23	3,779.5	440.5	960.2	1,056.2	0.00	0.00	0.00
4,000.0	20.58	63.23	3,816.9	446.8	972.7	1,070.3	0.00	0.00	0.00
4,040.0	20.58	63.23	3,854.3	453.1	985.3	1,084.3	0.00	0.00	0.00
4,080.0	20.58	63.23	3,891.8	459.4	997.8	1,098.4	0.00	0.00	0.00
4,120.0	20.58	63.23	3,929.2	465.8	1,010.4	1,112.4	0.00	0.00	0.00
4,160.0	20.58	63.23	3,966.7	472.1	1,022.9	1,126.5	0.00	0.00	0.00
4,200.0	20.58	63.23	4,004.1	478.4	1,035.5	1,140.5	0.00	0.00	0.00

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Sherwood L30-28D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4833.0ft (Original Well Elev)
Project:	SEC.30-T3N-R66W	MD Reference:	WELL @ 4833.0ft (Original Well Elev)
Site:	Sherwood Pad Sec.30-T3N-R66W	North Reference:	True
Well:	Sherwood L30-28D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (08-03-09)		

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)
4,240.0	20.58	63.23	4,041.6	484.8	1,048.0	1,154.6	0.00	0.00	0.00
4,280.0	20.58	63.23	4,079.0	491.1	1,060.6	1,168.7	0.00	0.00	0.00
4,320.0	20.58	63.23	4,116.5	497.4	1,073.1	1,182.7	0.00	0.00	0.00
4,360.0	20.58	63.23	4,153.9	503.8	1,085.7	1,196.8	0.00	0.00	0.00
4,400.0	20.58	63.23	4,191.4	510.1	1,098.2	1,210.8	0.00	0.00	0.00
4,440.0	20.58	63.23	4,228.8	516.4	1,110.8	1,224.9	0.00	0.00	0.00
4,480.0	20.58	63.23	4,266.3	522.8	1,123.3	1,238.9	0.00	0.00	0.00
4,520.0	20.58	63.23	4,303.7	529.1	1,135.9	1,253.0	0.00	0.00	0.00
4,560.0	20.58	63.23	4,341.2	535.4	1,148.4	1,267.0	0.00	0.00	0.00
4,600.0	20.58	63.23	4,378.6	541.8	1,161.0	1,281.1	0.00	0.00	0.00
4,640.0	20.58	63.23	4,416.1	548.1	1,173.5	1,295.2	0.00	0.00	0.00
4,680.0	20.58	63.23	4,453.5	554.4	1,186.1	1,309.2	0.00	0.00	0.00
4,720.0	20.58	63.23	4,491.0	560.8	1,198.7	1,323.3	0.00	0.00	0.00
4,760.0	20.58	63.23	4,528.4	567.1	1,211.2	1,337.3	0.00	0.00	0.00
4,800.0	20.58	63.23	4,565.9	573.4	1,223.8	1,351.4	0.00	0.00	0.00
4,840.0	20.58	63.23	4,603.3	579.7	1,236.3	1,365.4	0.00	0.00	0.00
4,880.0	20.58	63.23	4,640.8	586.1	1,248.9	1,379.5	0.00	0.00	0.00
4,920.0	20.58	63.23	4,678.2	592.4	1,261.4	1,393.6	0.00	0.00	0.00
4,960.0	20.58	63.23	4,715.7	598.7	1,274.0	1,407.6	0.00	0.00	0.00
5,000.0	20.58	63.23	4,753.1	605.1	1,286.5	1,421.7	0.00	0.00	0.00
5,040.0	20.58	63.23	4,790.5	611.4	1,299.1	1,435.7	0.00	0.00	0.00
5,080.0	20.58	63.23	4,828.0	617.7	1,311.6	1,449.8	0.00	0.00	0.00
5,120.0	20.58	63.23	4,865.4	624.1	1,324.2	1,463.8	0.00	0.00	0.00
5,160.0	20.58	63.23	4,902.9	630.4	1,336.7	1,477.9	0.00	0.00	0.00
5,200.0	20.58	63.23	4,940.3	636.7	1,349.3	1,491.9	0.00	0.00	0.00
5,240.0	20.58	63.23	4,977.8	643.1	1,361.8	1,506.0	0.00	0.00	0.00
5,280.0	20.58	63.23	5,015.2	649.4	1,374.4	1,520.1	0.00	0.00	0.00
5,320.0	20.58	63.23	5,052.7	655.7	1,386.9	1,534.1	0.00	0.00	0.00
5,360.0	20.58	63.23	5,090.1	662.1	1,399.5	1,548.2	0.00	0.00	0.00
5,400.0	20.58	63.23	5,127.6	668.4	1,412.0	1,562.2	0.00	0.00	0.00
5,440.0	20.58	63.23	5,165.0	674.7	1,424.6	1,576.3	0.00	0.00	0.00
5,480.0	20.58	63.23	5,202.5	681.1	1,437.2	1,590.3	0.00	0.00	0.00
5,520.0	20.58	63.23	5,239.9	687.4	1,449.7	1,604.4	0.00	0.00	0.00
5,560.0	20.58	63.23	5,277.4	693.7	1,462.3	1,618.5	0.00	0.00	0.00
5,600.0	20.58	63.23	5,314.8	700.0	1,474.8	1,632.5	0.00	0.00	0.00
5,640.0	20.58	63.23	5,352.3	706.4	1,487.4	1,646.6	0.00	0.00	0.00
5,680.0	20.58	63.23	5,389.7	712.7	1,499.9	1,660.6	0.00	0.00	0.00
5,720.0	20.58	63.23	5,427.2	719.0	1,512.5	1,674.7	0.00	0.00	0.00
5,760.0	20.58	63.23	5,464.6	725.4	1,525.0	1,688.7	0.00	0.00	0.00
5,800.0	20.58	63.23	5,502.1	731.7	1,537.6	1,702.8	0.00	0.00	0.00
5,840.0	20.58	63.23	5,539.5	738.0	1,550.1	1,716.8	0.00	0.00	0.00
5,880.0	20.58	63.23	5,577.0	744.4	1,562.7	1,730.9	0.00	0.00	0.00
5,920.0	20.58	63.23	5,614.4	750.7	1,575.2	1,745.0	0.00	0.00	0.00
5,960.0	20.58	63.23	5,651.8	757.0	1,587.8	1,759.0	0.00	0.00	0.00
6,000.0	20.58	63.23	5,689.3	763.4	1,600.3	1,773.1	0.00	0.00	0.00
6,004.1	20.58	63.23	5,693.1	764.0	1,601.6	1,774.5	0.00	0.00	0.00
6,040.0	19.86	63.23	5,726.8	769.6	1,612.7	1,786.9	2.00	-2.00	0.00
6,080.0	19.06	63.23	5,764.5	775.6	1,624.6	1,800.2	2.00	-2.00	0.00
6,120.0	18.26	63.23	5,802.4	781.4	1,636.0	1,813.0	2.00	-2.00	0.00
6,160.0	17.46	63.23	5,840.5	786.9	1,647.0	1,825.3	2.00	-2.00	0.00
6,200.0	16.66	63.23	5,878.7	792.2	1,657.4	1,837.0	2.00	-2.00	0.00
6,240.0	15.86	63.23	5,917.1	797.2	1,667.4	1,848.2	2.00	-2.00	0.00
6,280.0	15.06	63.23	5,955.7	802.0	1,677.0	1,858.9	2.00	-2.00	0.00
6,320.0	14.26	63.23	5,994.4	806.6	1,686.0	1,869.0	2.00	-2.00	0.00

Database: EDM den0-adp01 Server Data
 Company: NOBLE ENERGY INC WELD COUNTY CO
 Project: SEC.30-T3N-R66W
 Site: Sherwood Pad Sec.30-T3N-R66W
 Well: Sherwood L30-28D
 Wellbore: Wellbore #1
 Design: Plan #2 (08-03-09)

Local Co-ordinate Reference: Well Sherwood L30-28D
 TVD Reference: WELL @ 4833.0ft (Original Well Elev)
 MD Reference: WELL @ 4833.0ft (Original Well Elev)
 North Reference: True
 Survey Calculation Method: Minimum Curvature

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)
6,360.0	13.46	63.23	6,033.2	810.9	1,694.6	1,878.6	2.00	-2.00	0.00
6,400.0	12.66	63.23	6,072.2	815.0	1,702.6	1,887.6	2.00	-2.00	0.00
6,440.0	11.86	63.23	6,111.3	818.8	1,710.2	1,896.1	2.00	-2.00	0.00
6,480.0	11.06	63.23	6,150.5	822.4	1,717.3	1,904.1	2.00	-2.00	0.00
6,520.0	10.26	63.23	6,189.8	825.7	1,723.9	1,911.5	2.00	-2.00	0.00
6,560.0	9.46	63.23	6,229.2	828.8	1,730.0	1,918.3	2.00	-2.00	0.00
6,600.0	8.66	63.23	6,268.7	831.6	1,735.7	1,924.6	2.00	-2.00	0.00
6,640.0	7.86	63.23	6,308.3	834.2	1,740.8	1,930.3	2.00	-2.00	0.00
6,680.0	7.06	63.23	6,348.0	836.5	1,745.4	1,935.5	2.00	-2.00	0.00
6,720.0	6.26	63.23	6,387.7	838.6	1,749.6	1,940.2	2.00	-2.00	0.00
6,760.0	5.46	63.23	6,427.5	840.5	1,753.2	1,944.3	2.00	-2.00	0.00
6,800.0	4.66	63.23	6,467.3	842.1	1,756.4	1,947.8	2.00	-2.00	0.00
6,840.0	3.86	63.23	6,507.2	843.4	1,759.0	1,950.7	2.00	-2.00	0.00
6,880.0	3.06	63.23	6,547.1	844.5	1,761.2	1,953.2	2.00	-2.00	0.00
6,920.0	2.26	63.23	6,587.1	845.3	1,762.8	1,955.0	2.00	-2.00	0.00
6,960.0	1.46	63.23	6,627.1	845.9	1,764.0	1,956.3	2.00	-2.00	0.00
7,000.0	0.66	63.23	6,667.1	846.2	1,764.6	1,957.1	2.00	-2.00	0.00
7,032.9	0.00	0.00	6,700.0	846.3	1,764.8	1,957.2	2.00	-2.00	0.00
TARGET BHL 75'FSL, 2620'FWL									
7,040.0	0.00	0.00	6,707.1	846.3	1,764.8	1,957.2	0.00	0.00	0.00
7,080.0	0.00	0.00	6,747.1	846.3	1,764.8	1,957.2	0.00	0.00	0.00
7,120.0	0.00	0.00	6,787.1	846.3	1,764.8	1,957.2	0.00	0.00	0.00
7,160.0	0.00	0.00	6,827.1	846.3	1,764.8	1,957.2	0.00	0.00	0.00
7,200.0	0.00	0.00	6,867.1	846.3	1,764.8	1,957.2	0.00	0.00	0.00
7,240.0	0.00	0.00	6,907.1	846.3	1,764.8	1,957.2	0.00	0.00	0.00
7,280.0	0.00	0.00	6,947.1	846.3	1,764.8	1,957.2	0.00	0.00	0.00
7,320.0	0.00	0.00	6,987.1	846.3	1,764.8	1,957.2	0.00	0.00	0.00
7,360.0	0.00	0.00	7,027.1	846.3	1,764.8	1,957.2	0.00	0.00	0.00
7,365.9	0.00	0.00	7,033.0	846.3	1,764.8	1,957.2	0.00	0.00	0.00
NIOBRARA									
7,400.0	0.00	0.00	7,067.1	846.3	1,764.8	1,957.2	0.00	0.00	0.00
7,440.0	0.00	0.00	7,107.1	846.3	1,764.8	1,957.2	0.00	0.00	0.00
7,480.0	0.00	0.00	7,147.1	846.3	1,764.8	1,957.2	0.00	0.00	0.00
7,520.0	0.00	0.00	7,187.1	846.3	1,764.8	1,957.2	0.00	0.00	0.00
7,560.0	0.00	0.00	7,227.1	846.3	1,764.8	1,957.2	0.00	0.00	0.00
7,600.0	0.00	0.00	7,267.1	846.3	1,764.8	1,957.2	0.00	0.00	0.00
7,640.0	0.00	0.00	7,307.1	846.3	1,764.8	1,957.2	0.00	0.00	0.00
7,655.9	0.00	0.00	7,323.0	846.3	1,764.8	1,957.2	0.00	0.00	0.00
CODELL									
7,680.0	0.00	0.00	7,347.1	846.3	1,764.8	1,957.2	0.00	0.00	0.00
7,720.0	0.00	0.00	7,387.1	846.3	1,764.8	1,957.2	0.00	0.00	0.00
7,760.0	0.00	0.00	7,427.1	846.3	1,764.8	1,957.2	0.00	0.00	0.00
7,800.0	0.00	0.00	7,467.1	846.3	1,764.8	1,957.2	0.00	0.00	0.00
7,840.0	0.00	0.00	7,507.1	846.3	1,764.8	1,957.2	0.00	0.00	0.00
7,880.0	0.00	0.00	7,547.1	846.3	1,764.8	1,957.2	0.00	0.00	0.00
7,920.0	0.00	0.00	7,587.1	846.3	1,764.8	1,957.2	0.00	0.00	0.00
7,960.0	0.00	0.00	7,627.1	846.3	1,764.8	1,957.2	0.00	0.00	0.00
8,000.0	0.00	0.00	7,667.1	846.3	1,764.8	1,957.2	0.00	0.00	0.00
8,040.0	0.00	0.00	7,707.1	846.3	1,764.8	1,957.2	0.00	0.00	0.00
8,080.0	0.00	0.00	7,747.1	846.3	1,764.8	1,957.2	0.00	0.00	0.00
8,100.9	0.00	0.00	7,768.0	846.3	1,764.8	1,957.2	0.00	0.00	0.00
J-SAND									
8,120.0	0.00	0.00	7,787.1	846.3	1,764.8	1,957.2	0.00	0.00	0.00

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Sherwood L30-28D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4833.0ft (Original Well Elev)
Project:	SEC.30-T3N-R66W	MD Reference:	WELL @ 4833.0ft (Original Well Elev)
Site:	Sherwood Pad Sec.30-T3N-R66W	North Reference:	True
Well:	Sherwood L30-28D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (08-03-09)		

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)
8,160.0	0.00	0.00	7,827.1	846.3	1,764.8	1,957.2	0.00	0.00	0.00
8,200.0	0.00	0.00	7,867.1	846.3	1,764.8	1,957.2	0.00	0.00	0.00
8,240.0	0.00	0.00	7,907.1	846.3	1,764.8	1,957.2	0.00	0.00	0.00
8,250.9	0.00	0.00	7,918.0	846.3	1,764.8	1,957.2	0.00	0.00	0.00

HARDLINES 75'S AND 150'E OF BHL

Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
TARGET BHL 75'FSL	0.00	0.00	6,700.0	846.3	1,764.8	1,317,566.77	3,189,727.90	40° 12' 11.243 N	104° 49' 14.671 W
- plan hits target center									
- Point									
HARDLINES 75'S AN	0.00	0.00	7,918.0	771.3	1,914.8	1,317,492.89	3,189,878.46	40° 12' 10.501 N	104° 49' 12.738 W
- plan misses target center by 167.7ft at 8250.9ft MD (7918.0 TVD, 846.3 N, 1764.8 E)									
- Polygon									
Point 1			7,918.0	0.0	0.0	1,317,492.89	3,189,878.46		
Point 2			7,918.0	0.0	-300.0	1,317,490.62	3,189,578.48		
Point 3			7,918.0	0.0	0.0	1,317,492.89	3,189,878.46		
Point 4			7,918.0	300.0	0.0	1,317,792.87	3,189,876.18		

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
7,365.9	7,033.0	NIOBRARA		0.00	
7,655.9	7,323.0	CODELL		0.00	
8,100.9	7,768.0	J-SAND		0.00	