

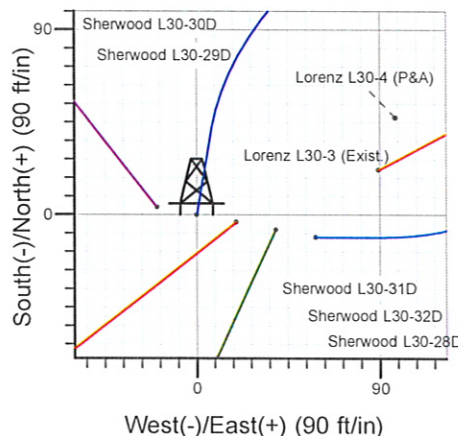
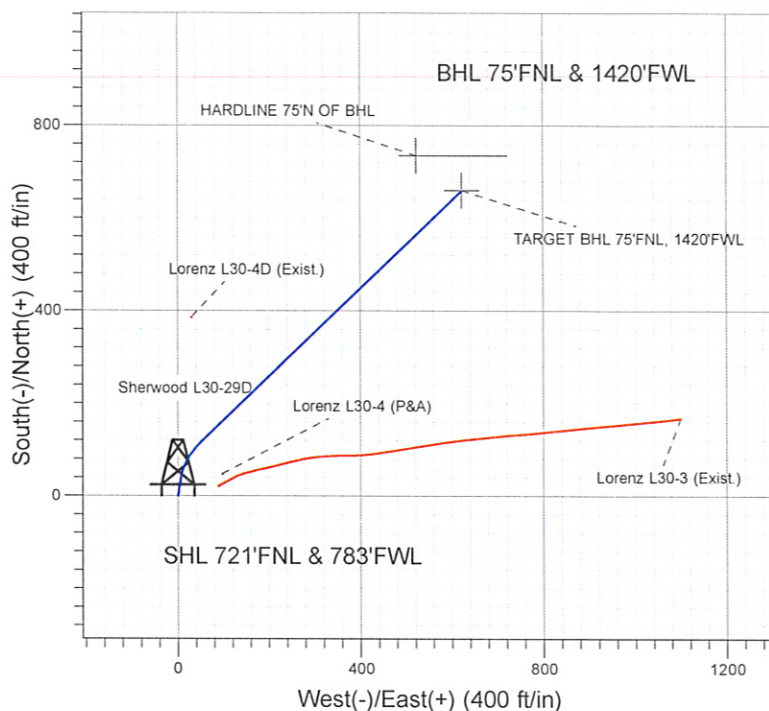
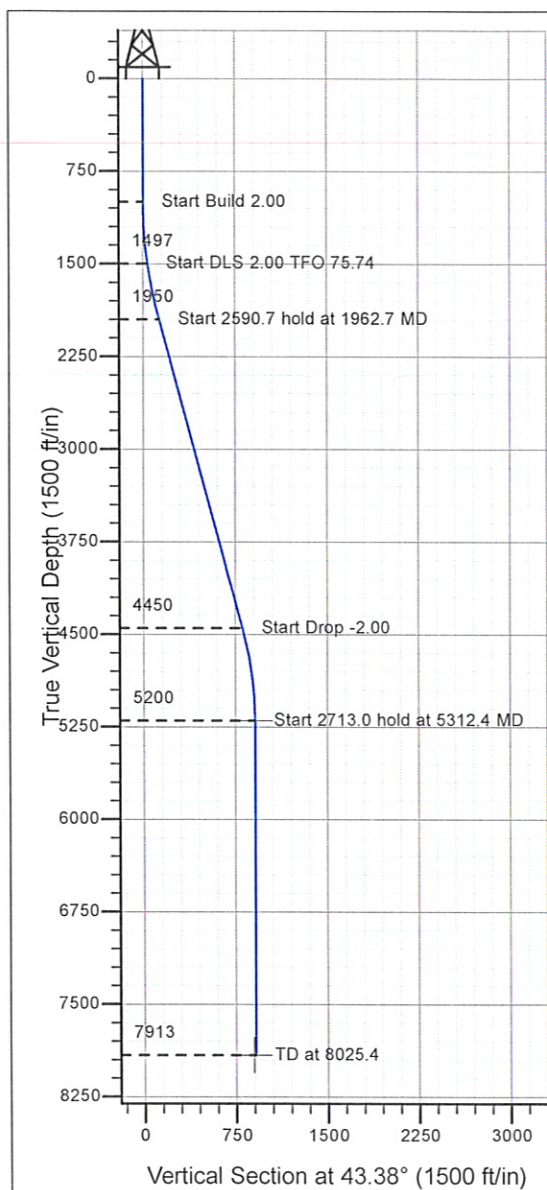
Well Name: Sherwood L30-29D

Surface Location: Sherwood Pad Sec.30-T3N-R66W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

Ground Elevation: 4820.0

+N/-S+E/-W Northing Easting Latitude Longitude Slot
0.0 0.0 1316717.60 3187910.91 40° 12' 2.988 N 104° 49' 38.172 W
Original Well Elev WELL @ 4833.0ft (Original Well Elev)

NOBLE ENERGY INC WELD COUNTY CO



Sherwood Pad Sec.30-T3N-R66W
Sherwood L30-29D
Noble Sherwood L30-29D Plan #3 (10-15-09)
17:36, October 15 2009



Azimuths to True North
Magnetic North: 9.07°

Magnetic Field
Strength: 53214.5snT
Dip Angle: 66.94°
Date: 10/15/2009
Model: IGRF200510

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 75'FNL, 1420'FWL	5200.0	659.8	623.5	40° 12' 9.507 N	104° 49' 30.137 W	Point
HARDLINE 75'N OF BHL	7913.0	734.8	523.5	40° 12' 10.249 N	104° 49' 31.425 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	1000.0	0.00	0.00	1000.0	0.0	0.0	0.00	0.00	0.0	
3	1500.0	10.00	10.00	1497.5	42.9	7.6	2.00	10.00	36.3	
4	1962.7	15.18	46.53	1949.6	124.3	58.6	2.00	75.74	130.6	
5	4553.4	15.18	46.53	4449.9	591.0	550.9	0.00	0.00	807.9	
6	5312.4	0.00	0.00	5200.0	659.8	623.5	2.00	180.00	907.7	TARGET BHL 75'FNL, 1420'FWL
7	8025.4	0.00	0.00	7913.0	659.8	623.5	0.00	0.00	907.7	



Directional

NOBLE ENERGY INC WELD COUNTY CO

SEC.30-T3N-R66W

Sherwood Pad Sec.30-T3N-R66W

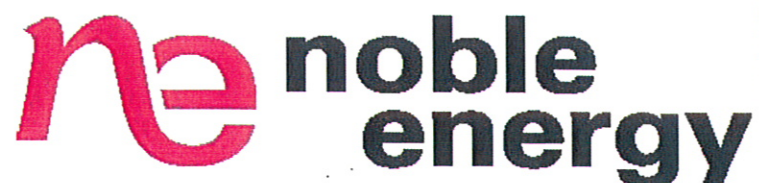
Sherwood L30-29D

Wellbore #1

Plan: Noble Sherwood L30-29D Plan #3 (10-15-09)

Standard Planning Report

15 October, 2009



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 L30-29D
 Wellbore: Wellbore #1
 Design: Noble Sherwood L30-29D Plan #3 (10-15-09)

Local Co-ordinate Reference: Well Sherwood L30-29D
 TVD Reference: WELL @ 4833.0ft (Original Well Elev)
 MD Reference: WELL @ 4833.0ft (Original Well Elev)
 North Reference: True
 Survey Calculation Method: Minimum Curvature

Project SEC.30-T3N-R66W, 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 Sherwood Pad Sec.30-T3N-R66W

Site Position:
From: Lat/Long
Position Uncertainty: 0.0 ft

Northing: 1,316,714.12 ft
Easting: 3,187,930.49 ft
Slot Radius: "

Latitude: 40° 12' 2.952 N
Longitude: 104° 49' 37.920 W
Grid Convergence: 0.43 °

Well Sherwood L30-29D

Well Position +N/-S 3.6 ft
 +E/-W -19.6 ft
Position Uncertainty 0.0 ft

Northing: 1,316,717.60 ft
Easting: 3,187,910.91 ft
Wellhead Elevation: ft

Latitude: 40° 12' 2.988 N
Longitude: 104° 49' 38.172 W
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
	IGRF200510	10/15/2009	9.07	66.94	53,215

Design Noble Sherwood L30-29D Plan #3 (10-15-09)

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	43.38

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	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,500.0	10.00	10.00	1,497.5	42.9	7.6	2.00	2.00	0.00	10.00	
1,962.7	15.18	46.53	1,949.6	124.3	58.6	2.00	1.12	7.89	75.74	
4,553.4	15.18	46.53	4,449.9	591.0	550.9	0.00	0.00	0.00	0.00	
5,312.4	0.00	0.00	5,200.0	659.8	623.5	2.00	-2.00	0.00	180.00	TARGET BHL 75'F
8,025.4	0.00	0.00	7,913.0	659.8	623.5	0.00	0.00	0.00	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 L30-29D
 Wellbore: Wellbore #1
 Design: Noble Sherwood L30-29D Plan #3 (10-15-09)

Local Co-ordinate Reference: Well Sherwood L30-29D
 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)
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	0.00	0.00	440.0	0.0	0.0	0.0	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
520.0	0.00	0.00	520.0	0.0	0.0	0.0	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
600.0	0.00	0.00	600.0	0.0	0.0	0.0	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
680.0	0.00	0.00	680.0	0.0	0.0	0.0	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
760.0	0.00	0.00	760.0	0.0	0.0	0.0	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
840.0	0.00	0.00	840.0	0.0	0.0	0.0	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
920.0	0.00	0.00	920.0	0.0	0.0	0.0	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
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,040.0	0.80	10.00	1,040.0	0.3	0.0	0.2	2.00	2.00	0.00
1,080.0	1.60	10.00	1,080.0	1.1	0.2	0.9	2.00	2.00	0.00
1,120.0	2.40	10.00	1,120.0	2.5	0.4	2.1	2.00	2.00	0.00
1,160.0	3.20	10.00	1,159.9	4.4	0.8	3.7	2.00	2.00	0.00
1,200.0	4.00	10.00	1,199.8	6.9	1.2	5.8	2.00	2.00	0.00
1,240.0	4.80	10.00	1,239.7	9.9	1.7	8.4	2.00	2.00	0.00
1,280.0	5.60	10.00	1,279.6	13.5	2.4	11.4	2.00	2.00	0.00
1,320.0	6.40	10.00	1,319.3	17.6	3.1	14.9	2.00	2.00	0.00
1,360.0	7.20	10.00	1,359.1	22.2	3.9	18.9	2.00	2.00	0.00
1,400.0	8.00	10.00	1,398.7	27.5	4.8	23.3	2.00	2.00	0.00
1,440.0	8.80	10.00	1,438.3	33.2	5.9	28.2	2.00	2.00	0.00
1,480.0	9.60	10.00	1,477.8	39.5	7.0	33.5	2.00	2.00	0.00
1,500.0	10.00	10.00	1,497.5	42.9	7.6	36.3	2.00	2.00	0.00
1,520.0	10.11	12.21	1,517.2	46.3	8.2	39.3	2.00	0.53	11.05
1,560.0	10.36	16.48	1,556.5	53.2	10.0	45.5	2.00	0.64	10.68
1,600.0	10.67	20.53	1,595.9	60.1	12.3	52.1	2.00	0.77	10.12
1,640.0	11.03	24.33	1,635.1	67.0	15.2	59.2	2.00	0.89	9.51
1,680.0	11.43	27.89	1,674.4	74.0	18.6	66.6	2.00	1.00	8.89
1,720.0	11.87	31.19	1,713.5	81.0	22.6	74.4	2.00	1.10	8.27
1,760.0	12.35	34.26	1,752.7	88.1	27.1	82.7	2.00	1.19	7.66
1,800.0	12.85	37.09	1,791.7	95.2	32.2	91.3	2.00	1.27	7.08
1,840.0	13.39	39.70	1,830.7	102.3	37.9	100.4	2.00	1.34	6.54
1,880.0	13.95	42.12	1,869.5	109.4	44.1	109.8	2.00	1.40	6.03
1,920.0	14.54	44.34	1,908.3	116.6	50.8	119.6	2.00	1.46	5.56
1,960.0	15.14	46.40	1,947.0	123.8	58.1	129.9	2.00	1.51	5.14
1,962.7	15.18	46.53	1,949.6	124.3	58.6	130.6	2.00	1.53	4.92
2,000.0	15.18	46.53	1,985.6	131.0	65.7	140.3	0.00	0.00	0.00
2,040.0	15.18	46.53	2,024.2	138.2	73.3	150.8	0.00	0.00	0.00

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Sherwood L30-29D
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 L30-29D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Sherwood L30-29D Plan #3 (10-15-09)		

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	15.18	46.53	2,062.8	145.4	80.9	161.2	0.00	0.00	0.00
2,120.0	15.18	46.53	2,101.4	152.6	88.5	171.7	0.00	0.00	0.00
2,160.0	15.18	46.53	2,140.0	159.8	96.1	182.2	0.00	0.00	0.00
2,200.0	15.18	46.53	2,178.6	167.0	103.7	192.6	0.00	0.00	0.00
2,240.0	15.18	46.53	2,217.2	174.2	111.3	203.1	0.00	0.00	0.00
2,280.0	15.18	46.53	2,255.8	181.4	118.9	213.5	0.00	0.00	0.00
2,320.0	15.18	46.53	2,294.4	188.6	126.5	224.0	0.00	0.00	0.00
2,360.0	15.18	46.53	2,333.0	195.9	134.1	234.5	0.00	0.00	0.00
2,400.0	15.18	46.53	2,371.6	203.1	141.7	244.9	0.00	0.00	0.00
2,440.0	15.18	46.53	2,410.2	210.3	149.3	255.4	0.00	0.00	0.00
2,480.0	15.18	46.53	2,448.8	217.5	156.9	265.8	0.00	0.00	0.00
2,520.0	15.18	46.53	2,487.4	224.7	164.5	276.3	0.00	0.00	0.00
2,560.0	15.18	46.53	2,526.0	231.9	172.1	286.7	0.00	0.00	0.00
2,600.0	15.18	46.53	2,564.6	239.1	179.7	297.2	0.00	0.00	0.00
2,640.0	15.18	46.53	2,603.2	246.3	187.3	307.7	0.00	0.00	0.00
2,680.0	15.18	46.53	2,641.8	253.5	194.9	318.1	0.00	0.00	0.00
2,720.0	15.18	46.53	2,680.4	260.7	202.5	328.6	0.00	0.00	0.00
2,760.0	15.18	46.53	2,719.0	267.9	210.1	339.0	0.00	0.00	0.00
2,800.0	15.18	46.53	2,757.6	275.1	217.7	349.5	0.00	0.00	0.00
2,840.0	15.18	46.53	2,796.3	282.3	225.3	360.0	0.00	0.00	0.00
2,880.0	15.18	46.53	2,834.9	289.5	232.9	370.4	0.00	0.00	0.00
2,920.0	15.18	46.53	2,873.5	296.7	240.5	380.9	0.00	0.00	0.00
2,960.0	15.18	46.53	2,912.1	303.9	248.1	391.3	0.00	0.00	0.00
3,000.0	15.18	46.53	2,950.7	311.1	255.7	401.8	0.00	0.00	0.00
3,040.0	15.18	46.53	2,989.3	318.4	263.3	412.2	0.00	0.00	0.00
3,080.0	15.18	46.53	3,027.9	325.6	270.9	422.7	0.00	0.00	0.00
3,120.0	15.18	46.53	3,066.5	332.8	278.5	433.2	0.00	0.00	0.00
3,160.0	15.18	46.53	3,105.1	340.0	286.1	443.6	0.00	0.00	0.00
3,200.0	15.18	46.53	3,143.7	347.2	293.7	454.1	0.00	0.00	0.00
3,240.0	15.18	46.53	3,182.3	354.4	301.3	464.5	0.00	0.00	0.00
3,280.0	15.18	46.53	3,220.9	361.6	308.9	475.0	0.00	0.00	0.00
3,320.0	15.18	46.53	3,259.5	368.8	316.5	485.5	0.00	0.00	0.00
3,360.0	15.18	46.53	3,298.1	376.0	324.1	495.9	0.00	0.00	0.00
3,400.0	15.18	46.53	3,336.7	383.2	331.7	506.4	0.00	0.00	0.00
3,440.0	15.18	46.53	3,375.3	390.4	339.3	516.8	0.00	0.00	0.00
3,480.0	15.18	46.53	3,413.9	397.6	346.9	527.3	0.00	0.00	0.00
3,520.0	15.18	46.53	3,452.5	404.8	354.5	537.7	0.00	0.00	0.00
3,560.0	15.18	46.53	3,491.1	412.0	362.1	548.2	0.00	0.00	0.00
3,600.0	15.18	46.53	3,529.7	419.2	369.7	558.7	0.00	0.00	0.00
3,640.0	15.18	46.53	3,568.3	426.4	377.3	569.1	0.00	0.00	0.00
3,680.0	15.18	46.53	3,606.9	433.6	384.9	579.6	0.00	0.00	0.00
3,720.0	15.18	46.53	3,645.5	440.9	392.5	590.0	0.00	0.00	0.00
3,760.0	15.18	46.53	3,684.2	448.1	400.2	600.5	0.00	0.00	0.00
3,800.0	15.18	46.53	3,722.8	455.3	407.8	610.9	0.00	0.00	0.00
3,840.0	15.18	46.53	3,761.4	462.5	415.4	621.4	0.00	0.00	0.00
3,880.0	15.18	46.53	3,800.0	469.7	423.0	631.9	0.00	0.00	0.00
3,920.0	15.18	46.53	3,838.6	476.9	430.6	642.3	0.00	0.00	0.00
3,960.0	15.18	46.53	3,877.2	484.1	438.2	652.8	0.00	0.00	0.00
4,000.0	15.18	46.53	3,915.8	491.3	445.8	663.2	0.00	0.00	0.00
4,040.0	15.18	46.53	3,954.4	498.5	453.4	673.7	0.00	0.00	0.00
4,080.0	15.18	46.53	3,993.0	505.7	461.0	684.2	0.00	0.00	0.00
4,120.0	15.18	46.53	4,031.6	512.9	468.6	694.6	0.00	0.00	0.00
4,160.0	15.18	46.53	4,070.2	520.1	476.2	705.1	0.00	0.00	0.00
4,200.0	15.18	46.53	4,108.8	527.3	483.8	715.5	0.00	0.00	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 L30-29D
Wellbore: Wellbore #1
Design: Noble Sherwood L30-29D Plan #3 (10-15-09)

Local Co-ordinate Reference: Well Sherwood L30-29D
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)
4,240.0	15.18	46.53	4,147.4	534.5	491.4	726.0	0.00	0.00	0.00
4,280.0	15.18	46.53	4,186.0	541.7	499.0	736.4	0.00	0.00	0.00
4,320.0	15.18	46.53	4,224.6	548.9	506.6	746.9	0.00	0.00	0.00
4,360.0	15.18	46.53	4,263.2	556.1	514.2	757.4	0.00	0.00	0.00
4,400.0	15.18	46.53	4,301.8	563.4	521.8	767.8	0.00	0.00	0.00
4,440.0	15.18	46.53	4,340.4	570.6	529.4	778.3	0.00	0.00	0.00
4,480.0	15.18	46.53	4,379.0	577.8	537.0	788.7	0.00	0.00	0.00
4,520.0	15.18	46.53	4,417.6	585.0	544.6	799.2	0.00	0.00	0.00
4,553.4	15.18	46.53	4,449.9	591.0	550.9	807.9	0.00	0.00	0.00
4,560.0	15.05	46.53	4,456.2	592.2	552.2	809.6	2.00	-2.00	0.00
4,600.0	14.25	46.53	4,494.9	599.1	559.5	819.7	2.00	-2.00	0.00
4,640.0	13.45	46.53	4,533.8	605.7	566.5	829.3	2.00	-2.00	0.00
4,680.0	12.65	46.53	4,572.7	611.9	573.0	838.3	2.00	-2.00	0.00
4,720.0	11.85	46.53	4,611.8	617.8	579.2	846.8	2.00	-2.00	0.00
4,760.0	11.05	46.53	4,651.0	623.2	584.9	854.7	2.00	-2.00	0.00
4,800.0	10.25	46.53	4,690.3	628.3	590.3	862.1	2.00	-2.00	0.00
4,840.0	9.45	46.53	4,729.8	633.0	595.3	868.9	2.00	-2.00	0.00
4,880.0	8.65	46.53	4,769.3	637.3	599.8	875.2	2.00	-2.00	0.00
4,920.0	7.85	46.53	4,808.8	641.3	604.0	880.9	2.00	-2.00	0.00
4,960.0	7.05	46.53	4,848.5	644.9	607.8	886.1	2.00	-2.00	0.00
5,000.0	6.25	46.53	4,888.2	648.0	611.1	890.7	2.00	-2.00	0.00
5,040.0	5.45	46.53	4,928.0	650.8	614.1	894.8	2.00	-2.00	0.00
5,080.0	4.65	46.53	4,967.9	653.3	616.6	898.3	2.00	-2.00	0.00
5,120.0	3.85	46.53	5,007.8	655.3	618.8	901.3	2.00	-2.00	0.00
5,160.0	3.05	46.53	5,047.7	657.0	620.5	903.7	2.00	-2.00	0.00
5,200.0	2.25	46.53	5,087.7	658.2	621.9	905.5	2.00	-2.00	0.00
5,240.0	1.45	46.53	5,127.6	659.1	622.8	906.8	2.00	-2.00	0.00
5,280.0	0.65	46.53	5,167.6	659.6	623.3	907.5	2.00	-2.00	0.00
5,312.4	0.00	0.00	5,200.0	659.8	623.5	907.7	2.00	-2.00	0.00
TARGET BHL 75'FNL, 1420'FWL									
5,320.0	0.00	0.00	5,207.6	659.8	623.5	907.7	0.00	0.00	0.00
5,360.0	0.00	0.00	5,247.6	659.8	623.5	907.7	0.00	0.00	0.00
5,400.0	0.00	0.00	5,287.6	659.8	623.5	907.7	0.00	0.00	0.00
5,440.0	0.00	0.00	5,327.6	659.8	623.5	907.7	0.00	0.00	0.00
5,480.0	0.00	0.00	5,367.6	659.8	623.5	907.7	0.00	0.00	0.00
5,520.0	0.00	0.00	5,407.6	659.8	623.5	907.7	0.00	0.00	0.00
5,560.0	0.00	0.00	5,447.6	659.8	623.5	907.7	0.00	0.00	0.00
5,600.0	0.00	0.00	5,487.6	659.8	623.5	907.7	0.00	0.00	0.00
5,640.0	0.00	0.00	5,527.6	659.8	623.5	907.7	0.00	0.00	0.00
5,680.0	0.00	0.00	5,567.6	659.8	623.5	907.7	0.00	0.00	0.00
5,720.0	0.00	0.00	5,607.6	659.8	623.5	907.7	0.00	0.00	0.00
5,760.0	0.00	0.00	5,647.6	659.8	623.5	907.7	0.00	0.00	0.00
5,800.0	0.00	0.00	5,687.6	659.8	623.5	907.7	0.00	0.00	0.00
5,840.0	0.00	0.00	5,727.6	659.8	623.5	907.7	0.00	0.00	0.00
5,880.0	0.00	0.00	5,767.6	659.8	623.5	907.7	0.00	0.00	0.00
5,920.0	0.00	0.00	5,807.6	659.8	623.5	907.7	0.00	0.00	0.00
5,960.0	0.00	0.00	5,847.6	659.8	623.5	907.7	0.00	0.00	0.00
6,000.0	0.00	0.00	5,887.6	659.8	623.5	907.7	0.00	0.00	0.00
6,040.0	0.00	0.00	5,927.6	659.8	623.5	907.7	0.00	0.00	0.00
6,080.0	0.00	0.00	5,967.6	659.8	623.5	907.7	0.00	0.00	0.00
6,120.0	0.00	0.00	6,007.6	659.8	623.5	907.7	0.00	0.00	0.00
6,160.0	0.00	0.00	6,047.6	659.8	623.5	907.7	0.00	0.00	0.00
6,200.0	0.00	0.00	6,087.6	659.8	623.5	907.7	0.00	0.00	0.00

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Sherwood L30-29D
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 L30-29D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Sherwood L30-29D Plan #3 (10-15-09)		

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)
6,240.0	0.00	0.00	6,127.6	659.8	623.5	907.7	0.00	0.00	0.00
6,280.0	0.00	0.00	6,167.6	659.8	623.5	907.7	0.00	0.00	0.00
6,320.0	0.00	0.00	6,207.6	659.8	623.5	907.7	0.00	0.00	0.00
6,360.0	0.00	0.00	6,247.6	659.8	623.5	907.7	0.00	0.00	0.00
6,400.0	0.00	0.00	6,287.6	659.8	623.5	907.7	0.00	0.00	0.00
6,440.0	0.00	0.00	6,327.6	659.8	623.5	907.7	0.00	0.00	0.00
6,480.0	0.00	0.00	6,367.6	659.8	623.5	907.7	0.00	0.00	0.00
6,520.0	0.00	0.00	6,407.6	659.8	623.5	907.7	0.00	0.00	0.00
6,560.0	0.00	0.00	6,447.6	659.8	623.5	907.7	0.00	0.00	0.00
6,600.0	0.00	0.00	6,487.6	659.8	623.5	907.7	0.00	0.00	0.00
6,640.0	0.00	0.00	6,527.6	659.8	623.5	907.7	0.00	0.00	0.00
6,680.0	0.00	0.00	6,567.6	659.8	623.5	907.7	0.00	0.00	0.00
6,720.0	0.00	0.00	6,607.6	659.8	623.5	907.7	0.00	0.00	0.00
6,760.0	0.00	0.00	6,647.6	659.8	623.5	907.7	0.00	0.00	0.00
6,800.0	0.00	0.00	6,687.6	659.8	623.5	907.7	0.00	0.00	0.00
6,840.0	0.00	0.00	6,727.6	659.8	623.5	907.7	0.00	0.00	0.00
6,880.0	0.00	0.00	6,767.6	659.8	623.5	907.7	0.00	0.00	0.00
6,920.0	0.00	0.00	6,807.6	659.8	623.5	907.7	0.00	0.00	0.00
6,960.0	0.00	0.00	6,847.6	659.8	623.5	907.7	0.00	0.00	0.00
7,000.0	0.00	0.00	6,887.6	659.8	623.5	907.7	0.00	0.00	0.00
7,040.0	0.00	0.00	6,927.6	659.8	623.5	907.7	0.00	0.00	0.00
7,080.0	0.00	0.00	6,967.6	659.8	623.5	907.7	0.00	0.00	0.00
7,120.0	0.00	0.00	7,007.6	659.8	623.5	907.7	0.00	0.00	0.00
7,140.4	0.00	0.00	7,028.0	659.8	623.5	907.7	0.00	0.00	0.00
NIOBRARA									
7,160.0	0.00	0.00	7,047.6	659.8	623.5	907.7	0.00	0.00	0.00
7,200.0	0.00	0.00	7,087.6	659.8	623.5	907.7	0.00	0.00	0.00
7,240.0	0.00	0.00	7,127.6	659.8	623.5	907.7	0.00	0.00	0.00
7,280.0	0.00	0.00	7,167.6	659.8	623.5	907.7	0.00	0.00	0.00
7,320.0	0.00	0.00	7,207.6	659.8	623.5	907.7	0.00	0.00	0.00
7,360.0	0.00	0.00	7,247.6	659.8	623.5	907.7	0.00	0.00	0.00
7,400.0	0.00	0.00	7,287.6	659.8	623.5	907.7	0.00	0.00	0.00
7,430.4	0.00	0.00	7,318.0	659.8	623.5	907.7	0.00	0.00	0.00
CODELL									
7,440.0	0.00	0.00	7,327.6	659.8	623.5	907.7	0.00	0.00	0.00
7,480.0	0.00	0.00	7,367.6	659.8	623.5	907.7	0.00	0.00	0.00
7,520.0	0.00	0.00	7,407.6	659.8	623.5	907.7	0.00	0.00	0.00
7,560.0	0.00	0.00	7,447.6	659.8	623.5	907.7	0.00	0.00	0.00
7,600.0	0.00	0.00	7,487.6	659.8	623.5	907.7	0.00	0.00	0.00
7,640.0	0.00	0.00	7,527.6	659.8	623.5	907.7	0.00	0.00	0.00
7,680.0	0.00	0.00	7,567.6	659.8	623.5	907.7	0.00	0.00	0.00
7,720.0	0.00	0.00	7,607.6	659.8	623.5	907.7	0.00	0.00	0.00
7,760.0	0.00	0.00	7,647.6	659.8	623.5	907.7	0.00	0.00	0.00
7,800.0	0.00	0.00	7,687.6	659.8	623.5	907.7	0.00	0.00	0.00
7,840.0	0.00	0.00	7,727.6	659.8	623.5	907.7	0.00	0.00	0.00
7,875.4	0.00	0.00	7,763.0	659.8	623.5	907.7	0.00	0.00	0.00
J-SAND									
7,880.0	0.00	0.00	7,767.6	659.8	623.5	907.7	0.00	0.00	0.00
7,920.0	0.00	0.00	7,807.6	659.8	623.5	907.7	0.00	0.00	0.00
7,960.0	0.00	0.00	7,847.6	659.8	623.5	907.7	0.00	0.00	0.00
8,000.0	0.00	0.00	7,887.6	659.8	623.5	907.7	0.00	0.00	0.00
8,025.4	0.00	0.00	7,913.0	659.8	623.5	907.7	0.00	0.00	0.00
HARDLINE 75°N OF BHL									

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Sherwood L30-29D
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 L30-29D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Sherwood L30-29D Plan #3 (10-15-09)		

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'FNL	0.00	0.00	5,200.0	659.8	623.5	1,317,382.03	3,188,529.32	40° 12' 9.507 N	104° 49' 30.137 W
- plan hits target center									
- Point									
HARDLINE 75'N OF E	0.00	0.00	7,913.0	734.8	523.5	1,317,456.32	3,188,428.80	40° 12' 10.249 N	104° 49' 31.425 W
- plan misses target center by 125.0ft at 8025.4ft MD (7913.0 TVD, 659.8 N, 623.5 E)									
- Polygon									
Point 1			7,913.0	0.0	0.0	1,317,456.32	3,188,428.80		
Point 2			7,913.0	0.0	200.0	1,317,457.84	3,188,628.78		

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
7,140.4	7,028.0	NIOBRARA		0.00	
7,430.4	7,318.0	CODELL		0.00	
7,875.4	7,763.0	J-SAND		0.00	