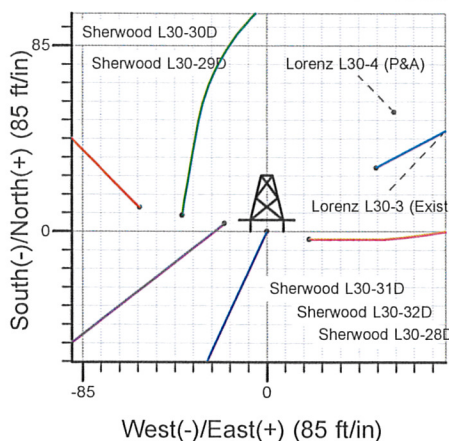
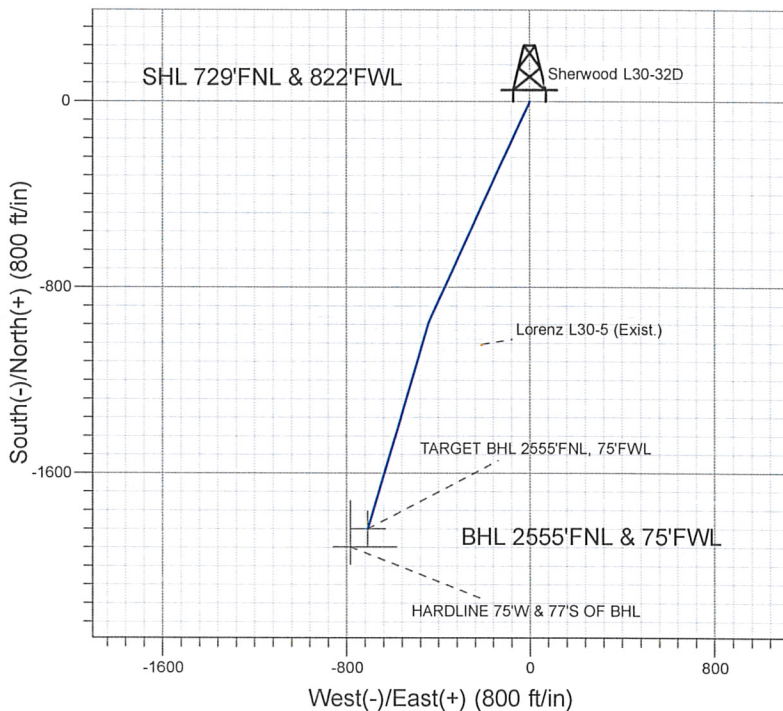
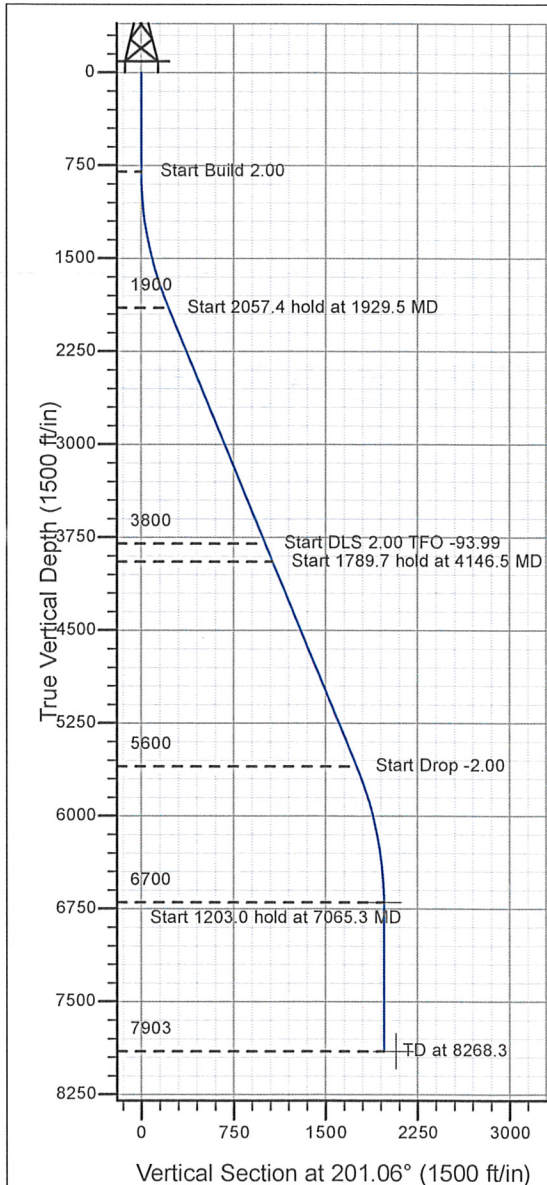


Well Name: Sherwood L30-32D

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 0.01316710.61 3187950.07 40° 12' 2.916 N104° 49' 37.668 W
 Original Well Elev WELL @ 4833.0ft (Original Well Elev)

NOBLE ENERGY INC WELD COUNTY CO



Sherwood Pad Sec.30-T3N-R66W
 Sherwood L30-32D
 Plan #2 (7-22-09)
 9:50, July 23 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 2555'FNL, 75'FWL	6700.0	-1841.3	-709.0	40° 11' 44.720 N	104° 49' 46.804 W	Point
HARDLINE 75'W & 77'S OF BHL	7903.0	-1918.3	-783.9	40° 11' 43.959 N	104° 49' 47.770 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	800.0	0.00	0.00	800.0	0.0	0.0	0.00	0.00	0.0	
3	1929.5	22.59	205.00	1900.5	-199.2	-92.9	2.00	205.00	219.3	
4	3986.9	22.59	205.00	3800.0	-915.5	-426.9	0.00	0.00	1007.7	
5	4146.5	22.58	196.68	3947.4	-972.6	-448.7	2.00	-93.99	1068.9	
6	5936.2	22.58	196.68	5599.9	-1631.0	-645.9	0.00	0.00	1754.1	
7	7065.3	0.00	0.00	6700.0	-1841.3	-709.0	2.00	180.00	1973.1	TARGET BHL 2555'FNL, 75'FWL
8	8268.3	0.00	0.00	7903.0	-1841.3	-709.0	0.00	0.00	1973.1	



Directional

NOBLE ENERGY INC WELD COUNTY CO

SEC.30-T3N-R66W

Sherwood Pad Sec.30-T3N-R66W

Sherwood L30-32D

Wellbore #1

Plan: Plan #2 (7-22-09)

Standard Planning Report

23 July, 2009



Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Sherwood L30-32D
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 L30-32D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (7-22-09)		

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
From:	Lat/Long	Easting:	3,187,930.49 ft
Position Uncertainty:	0.0 ft	Slot Radius:	"
		Latitude:	40° 12' 2.952 N
		Longitude:	104° 49' 37.920 W
		Grid Convergence:	0.43 °

Well	Sherwood L30-32D		
Well Position	+N/-S	-3.7 ft	Northing:
	+E/-W	19.6 ft	Easting:
Position Uncertainty	0.0 ft	Wellhead Elevation:	ft
		Latitude:	40° 12' 2.916 N
		Longitude:	104° 49' 37.668 W
		Ground Level:	4,820.0 ft

Wellbore	Wellbore #1		
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	6/30/2009	9.11	66.95	53,245

Design	Plan #2 (7-22-09)		
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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	201.06

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	
800.0	0.00	0.00	800.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,929.5	22.59	205.00	1,900.5	-199.2	-92.9	2.00	2.00	0.00	205.00	
3,986.9	22.59	205.00	3,800.0	-915.5	-426.9	0.00	0.00	0.00	0.00	
4,146.5	22.58	196.68	3,947.4	-972.6	-448.7	2.00	-0.01	-5.21	-93.99	
5,936.2	22.58	196.68	5,599.9	-1,631.0	-645.9	0.00	0.00	0.00	0.00	
7,065.3	0.00	0.00	6,700.0	-1,841.3	-709.0	2.00	-2.00	0.00	180.00	TARGET BHL 255°
8,268.3	0.00	0.00	7,903.0	-1,841.3	-709.0	0.00	0.00	0.00	0.00	

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Sherwood L30-32D
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 L30-32D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (7-22-09)		

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	0.00	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	0.80	205.00	840.0	-0.3	-0.1	0.3	2.00	2.00	0.00
880.0	1.60	205.00	880.0	-1.0	-0.5	1.1	2.00	2.00	0.00
920.0	2.40	205.00	920.0	-2.3	-1.1	2.5	2.00	2.00	0.00
960.0	3.20	205.00	959.9	-4.0	-1.9	4.5	2.00	2.00	0.00
1,000.0	4.00	205.00	999.8	-6.3	-2.9	7.0	2.00	2.00	0.00
1,040.0	4.80	205.00	1,039.7	-9.1	-4.2	10.0	2.00	2.00	0.00
1,080.0	5.60	205.00	1,079.6	-12.4	-5.8	13.6	2.00	2.00	0.00
1,120.0	6.40	205.00	1,119.3	-16.2	-7.5	17.8	2.00	2.00	0.00
1,160.0	7.20	205.00	1,159.1	-20.5	-9.5	22.5	2.00	2.00	0.00
1,200.0	8.00	205.00	1,198.7	-25.3	-11.8	27.8	2.00	2.00	0.00
1,240.0	8.80	205.00	1,238.3	-30.6	-14.3	33.6	2.00	2.00	0.00
1,280.0	9.60	205.00	1,277.8	-36.4	-17.0	40.0	2.00	2.00	0.00
1,320.0	10.40	205.00	1,317.1	-42.7	-19.9	47.0	2.00	2.00	0.00
1,360.0	11.20	205.00	1,356.4	-49.4	-23.1	54.4	2.00	2.00	0.00
1,400.0	12.00	205.00	1,395.6	-56.7	-26.5	62.5	2.00	2.00	0.00
1,440.0	12.80	205.00	1,434.7	-64.5	-30.1	71.0	2.00	2.00	0.00
1,480.0	13.60	205.00	1,473.6	-72.8	-33.9	80.1	2.00	2.00	0.00
1,520.0	14.40	205.00	1,512.4	-81.6	-38.0	89.8	2.00	2.00	0.00
1,560.0	15.20	205.00	1,551.1	-90.8	-42.4	100.0	2.00	2.00	0.00
1,600.0	16.00	205.00	1,589.6	-100.6	-46.9	110.7	2.00	2.00	0.00
1,640.0	16.80	205.00	1,628.0	-110.8	-51.7	122.0	2.00	2.00	0.00
1,680.0	17.60	205.00	1,666.2	-121.5	-56.7	133.8	2.00	2.00	0.00
1,720.0	18.40	205.00	1,704.3	-132.7	-61.9	146.1	2.00	2.00	0.00
1,760.0	19.20	205.00	1,742.1	-144.4	-67.3	159.0	2.00	2.00	0.00
1,800.0	20.00	205.00	1,779.8	-156.6	-73.0	172.4	2.00	2.00	0.00
1,840.0	20.80	205.00	1,817.3	-169.2	-78.9	186.3	2.00	2.00	0.00
1,880.0	21.60	205.00	1,854.6	-182.3	-85.0	200.7	2.00	2.00	0.00
1,920.0	22.40	205.00	1,891.7	-195.9	-91.4	215.6	2.00	2.00	0.00
1,929.5	22.59	205.00	1,900.5	-199.2	-92.9	219.3	2.00	2.00	0.00
1,960.0	22.59	205.00	1,928.6	-209.8	-97.8	231.0	0.00	0.00	0.00
2,000.0	22.59	205.00	1,965.6	-223.7	-104.3	246.3	0.00	0.00	0.00
2,040.0	22.59	205.00	2,002.5	-237.7	-110.8	261.6	0.00	0.00	0.00
2,080.0	22.59	205.00	2,039.4	-251.6	-117.3	276.9	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 L30-32D
 Wellbore: Wellbore #1
 Design: Plan #2 (7-22-09)

Local Co-ordinate Reference: Well Sherwood L30-32D
 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)
2,120.0	22.59	205.00	2,076.3	-265.5	-123.8	292.3	0.00	0.00	0.00
2,160.0	22.59	205.00	2,113.3	-279.4	-130.3	307.6	0.00	0.00	0.00
2,200.0	22.59	205.00	2,150.2	-293.4	-136.8	322.9	0.00	0.00	0.00
2,240.0	22.59	205.00	2,187.1	-307.3	-143.3	338.3	0.00	0.00	0.00
2,280.0	22.59	205.00	2,224.1	-321.2	-149.8	353.6	0.00	0.00	0.00
2,320.0	22.59	205.00	2,261.0	-335.2	-156.3	368.9	0.00	0.00	0.00
2,360.0	22.59	205.00	2,297.9	-349.1	-162.8	384.3	0.00	0.00	0.00
2,400.0	22.59	205.00	2,334.9	-363.0	-169.3	399.6	0.00	0.00	0.00
2,440.0	22.59	205.00	2,371.8	-376.9	-175.8	414.9	0.00	0.00	0.00
2,480.0	22.59	205.00	2,408.7	-390.9	-182.3	430.2	0.00	0.00	0.00
2,520.0	22.59	205.00	2,445.7	-404.8	-188.8	445.6	0.00	0.00	0.00
2,560.0	22.59	205.00	2,482.6	-418.7	-195.2	460.9	0.00	0.00	0.00
2,600.0	22.59	205.00	2,519.5	-432.6	-201.7	476.2	0.00	0.00	0.00
2,640.0	22.59	205.00	2,556.5	-446.6	-208.2	491.6	0.00	0.00	0.00
2,680.0	22.59	205.00	2,593.4	-460.5	-214.7	506.9	0.00	0.00	0.00
2,720.0	22.59	205.00	2,630.3	-474.4	-221.2	522.2	0.00	0.00	0.00
2,760.0	22.59	205.00	2,667.2	-488.3	-227.7	537.5	0.00	0.00	0.00
2,800.0	22.59	205.00	2,704.2	-502.3	-234.2	552.9	0.00	0.00	0.00
2,840.0	22.59	205.00	2,741.1	-516.2	-240.7	568.2	0.00	0.00	0.00
2,880.0	22.59	205.00	2,778.0	-530.1	-247.2	583.5	0.00	0.00	0.00
2,920.0	22.59	205.00	2,815.0	-544.0	-253.7	598.9	0.00	0.00	0.00
2,960.0	22.59	205.00	2,851.9	-558.0	-260.2	614.2	0.00	0.00	0.00
3,000.0	22.59	205.00	2,888.8	-571.9	-266.7	629.5	0.00	0.00	0.00
3,040.0	22.59	205.00	2,925.8	-585.8	-273.2	644.8	0.00	0.00	0.00
3,080.0	22.59	205.00	2,962.7	-599.7	-279.7	660.2	0.00	0.00	0.00
3,120.0	22.59	205.00	2,999.6	-613.7	-286.2	675.5	0.00	0.00	0.00
3,160.0	22.59	205.00	3,036.6	-627.6	-292.7	690.8	0.00	0.00	0.00
3,200.0	22.59	205.00	3,073.5	-641.5	-299.1	706.2	0.00	0.00	0.00
3,240.0	22.59	205.00	3,110.4	-655.4	-305.6	721.5	0.00	0.00	0.00
3,280.0	22.59	205.00	3,147.3	-669.4	-312.1	736.8	0.00	0.00	0.00
3,320.0	22.59	205.00	3,184.3	-683.3	-318.6	752.1	0.00	0.00	0.00
3,360.0	22.59	205.00	3,221.2	-697.2	-325.1	767.5	0.00	0.00	0.00
3,400.0	22.59	205.00	3,258.1	-711.1	-331.6	782.8	0.00	0.00	0.00
3,440.0	22.59	205.00	3,295.1	-725.1	-338.1	798.1	0.00	0.00	0.00
3,480.0	22.59	205.00	3,332.0	-739.0	-344.6	813.5	0.00	0.00	0.00
3,520.0	22.59	205.00	3,368.9	-752.9	-351.1	828.8	0.00	0.00	0.00
3,560.0	22.59	205.00	3,405.9	-766.8	-357.6	844.1	0.00	0.00	0.00
3,600.0	22.59	205.00	3,442.8	-780.8	-364.1	859.5	0.00	0.00	0.00
3,640.0	22.59	205.00	3,479.7	-794.7	-370.6	874.8	0.00	0.00	0.00
3,680.0	22.59	205.00	3,516.7	-808.6	-377.1	890.1	0.00	0.00	0.00
3,720.0	22.59	205.00	3,553.6	-822.6	-383.6	905.4	0.00	0.00	0.00
3,760.0	22.59	205.00	3,590.5	-836.5	-390.1	920.8	0.00	0.00	0.00
3,800.0	22.59	205.00	3,627.5	-850.4	-396.5	936.1	0.00	0.00	0.00
3,840.0	22.59	205.00	3,664.4	-864.3	-403.0	951.4	0.00	0.00	0.00
3,880.0	22.59	205.00	3,701.3	-878.3	-409.5	966.8	0.00	0.00	0.00
3,920.0	22.59	205.00	3,738.2	-892.2	-416.0	982.1	0.00	0.00	0.00
3,960.0	22.59	205.00	3,775.2	-906.1	-422.5	997.4	0.00	0.00	0.00
3,986.9	22.59	205.00	3,800.0	-915.5	-426.9	1,007.7	0.00	0.00	0.00
4,000.0	22.57	204.32	3,812.1	-920.0	-429.0	1,012.7	2.00	-0.13	-5.20
4,040.0	22.54	202.23	3,849.1	-934.1	-435.1	1,028.1	2.00	-0.08	-5.21
4,080.0	22.53	200.15	3,886.0	-948.4	-440.6	1,043.4	2.00	-0.02	-5.22
4,120.0	22.55	198.06	3,922.9	-962.9	-445.6	1,058.7	2.00	0.05	-5.22
4,146.5	22.58	196.68	3,947.4	-972.6	-448.7	1,068.9	2.00	0.11	-5.20
4,160.0	22.58	196.68	3,959.9	-977.6	-450.1	1,074.0	0.00	0.00	0.00

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Sherwood L30-32D
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 L30-32D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (7-22-09)		

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)
4,200.0	22.58	196.68	3,996.8	-992.3	-454.5	1,089.4	0.00	0.00	0.00
4,240.0	22.58	196.68	4,033.7	-1,007.0	-459.0	1,104.7	0.00	0.00	0.00
4,280.0	22.58	196.68	4,070.7	-1,021.7	-463.4	1,120.0	0.00	0.00	0.00
4,320.0	22.58	196.68	4,107.6	-1,036.4	-467.8	1,135.3	0.00	0.00	0.00
4,360.0	22.58	196.68	4,144.5	-1,051.2	-472.2	1,150.6	0.00	0.00	0.00
4,400.0	22.58	196.68	4,181.5	-1,065.9	-476.6	1,165.9	0.00	0.00	0.00
4,440.0	22.58	196.68	4,218.4	-1,080.6	-481.0	1,181.2	0.00	0.00	0.00
4,480.0	22.58	196.68	4,255.3	-1,095.3	-485.4	1,196.6	0.00	0.00	0.00
4,520.0	22.58	196.68	4,292.3	-1,110.0	-489.8	1,211.9	0.00	0.00	0.00
4,560.0	22.58	196.68	4,329.2	-1,124.7	-494.2	1,227.2	0.00	0.00	0.00
4,600.0	22.58	196.68	4,366.1	-1,139.4	-498.6	1,242.5	0.00	0.00	0.00
4,640.0	22.58	196.68	4,403.1	-1,154.2	-503.0	1,257.8	0.00	0.00	0.00
4,680.0	22.58	196.68	4,440.0	-1,168.9	-507.5	1,273.1	0.00	0.00	0.00
4,720.0	22.58	196.68	4,476.9	-1,183.6	-511.9	1,288.5	0.00	0.00	0.00
4,760.0	22.58	196.68	4,513.9	-1,198.3	-516.3	1,303.8	0.00	0.00	0.00
4,800.0	22.58	196.68	4,550.8	-1,213.0	-520.7	1,319.1	0.00	0.00	0.00
4,840.0	22.58	196.68	4,587.7	-1,227.7	-525.1	1,334.4	0.00	0.00	0.00
4,880.0	22.58	196.68	4,624.7	-1,242.4	-529.5	1,349.7	0.00	0.00	0.00
4,920.0	22.58	196.68	4,661.6	-1,257.1	-533.9	1,365.0	0.00	0.00	0.00
4,960.0	22.58	196.68	4,698.5	-1,271.9	-538.3	1,380.3	0.00	0.00	0.00
5,000.0	22.58	196.68	4,735.5	-1,286.6	-542.7	1,395.7	0.00	0.00	0.00
5,040.0	22.58	196.68	4,772.4	-1,301.3	-547.1	1,411.0	0.00	0.00	0.00
5,080.0	22.58	196.68	4,809.3	-1,316.0	-551.5	1,426.3	0.00	0.00	0.00
5,120.0	22.58	196.68	4,846.3	-1,330.7	-556.0	1,441.6	0.00	0.00	0.00
5,160.0	22.58	196.68	4,883.2	-1,345.4	-560.4	1,456.9	0.00	0.00	0.00
5,200.0	22.58	196.68	4,920.1	-1,360.1	-564.8	1,472.2	0.00	0.00	0.00
5,240.0	22.58	196.68	4,957.1	-1,374.9	-569.2	1,487.6	0.00	0.00	0.00
5,280.0	22.58	196.68	4,994.0	-1,389.6	-573.6	1,502.9	0.00	0.00	0.00
5,320.0	22.58	196.68	5,030.9	-1,404.3	-578.0	1,518.2	0.00	0.00	0.00
5,360.0	22.58	196.68	5,067.9	-1,419.0	-582.4	1,533.5	0.00	0.00	0.00
5,400.0	22.58	196.68	5,104.8	-1,433.7	-586.8	1,548.8	0.00	0.00	0.00
5,440.0	22.58	196.68	5,141.7	-1,448.4	-591.2	1,564.1	0.00	0.00	0.00
5,480.0	22.58	196.68	5,178.7	-1,463.1	-595.6	1,579.4	0.00	0.00	0.00
5,520.0	22.58	196.68	5,215.6	-1,477.9	-600.0	1,594.8	0.00	0.00	0.00
5,560.0	22.58	196.68	5,252.5	-1,492.6	-604.4	1,610.1	0.00	0.00	0.00
5,600.0	22.58	196.68	5,289.5	-1,507.3	-608.9	1,625.4	0.00	0.00	0.00
5,640.0	22.58	196.68	5,326.4	-1,522.0	-613.3	1,640.7	0.00	0.00	0.00
5,680.0	22.58	196.68	5,363.3	-1,536.7	-617.7	1,656.0	0.00	0.00	0.00
5,720.0	22.58	196.68	5,400.3	-1,551.4	-622.1	1,671.3	0.00	0.00	0.00
5,760.0	22.58	196.68	5,437.2	-1,566.1	-626.5	1,686.7	0.00	0.00	0.00
5,800.0	22.58	196.68	5,474.1	-1,580.8	-630.9	1,702.0	0.00	0.00	0.00
5,840.0	22.58	196.68	5,511.1	-1,595.6	-635.3	1,717.3	0.00	0.00	0.00
5,880.0	22.58	196.68	5,548.0	-1,610.3	-639.7	1,732.6	0.00	0.00	0.00
5,920.0	22.58	196.68	5,584.9	-1,625.0	-644.1	1,747.9	0.00	0.00	0.00
5,936.2	22.58	196.68	5,599.9	-1,631.0	-645.9	1,754.1	0.00	0.00	0.00
5,960.0	22.11	196.68	5,621.9	-1,639.6	-648.5	1,763.1	2.00	-2.00	0.00
6,000.0	21.31	196.68	5,659.1	-1,653.8	-652.8	1,777.9	2.00	-2.00	0.00
6,040.0	20.51	196.68	5,696.4	-1,667.5	-656.9	1,792.1	2.00	-2.00	0.00
6,080.0	19.71	196.68	5,734.0	-1,680.6	-660.8	1,805.8	2.00	-2.00	0.00
6,120.0	18.91	196.68	5,771.8	-1,693.3	-664.6	1,819.0	2.00	-2.00	0.00
6,160.0	18.11	196.68	5,809.7	-1,705.5	-668.2	1,831.7	2.00	-2.00	0.00
6,200.0	17.31	196.68	5,847.8	-1,717.1	-671.7	1,843.8	2.00	-2.00	0.00
6,240.0	16.51	196.68	5,886.1	-1,728.3	-675.1	1,855.4	2.00	-2.00	0.00
6,280.0	15.71	196.68	5,924.5	-1,738.9	-678.3	1,866.5	2.00	-2.00	0.00

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Sherwood L30-32D
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 L30-32D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (7-22-09)		

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)
6,320.0	14.91	196.68	5,963.1	-1,749.0	-681.3	1,877.0	2.00	-2.00	0.00
6,360.0	14.11	196.68	6,001.8	-1,758.6	-684.2	1,887.0	2.00	-2.00	0.00
6,400.0	13.31	196.68	6,040.7	-1,767.7	-686.9	1,896.4	2.00	-2.00	0.00
6,440.0	12.51	196.68	6,079.6	-1,776.2	-689.4	1,905.3	2.00	-2.00	0.00
6,480.0	11.71	196.68	6,118.8	-1,784.3	-691.9	1,913.7	2.00	-2.00	0.00
6,520.0	10.91	196.68	6,158.0	-1,791.8	-694.1	1,921.5	2.00	-2.00	0.00
6,560.0	10.11	196.68	6,197.3	-1,798.8	-696.2	1,928.8	2.00	-2.00	0.00
6,600.0	9.31	196.68	6,236.7	-1,805.2	-698.1	1,935.5	2.00	-2.00	0.00
6,640.0	8.51	196.68	6,276.3	-1,811.2	-699.9	1,941.7	2.00	-2.00	0.00
6,680.0	7.71	196.68	6,315.9	-1,816.6	-701.5	1,947.3	2.00	-2.00	0.00
6,720.0	6.91	196.68	6,355.5	-1,821.4	-703.0	1,952.4	2.00	-2.00	0.00
6,760.0	6.11	196.68	6,395.3	-1,825.8	-704.3	1,956.9	2.00	-2.00	0.00
6,800.0	5.31	196.68	6,435.1	-1,829.6	-705.4	1,960.9	2.00	-2.00	0.00
6,840.0	4.51	196.68	6,474.9	-1,832.9	-706.4	1,964.3	2.00	-2.00	0.00
6,880.0	3.71	196.68	6,514.8	-1,835.6	-707.2	1,967.1	2.00	-2.00	0.00
6,920.0	2.91	196.68	6,554.8	-1,837.8	-707.9	1,969.4	2.00	-2.00	0.00
6,960.0	2.11	196.68	6,594.7	-1,839.5	-708.4	1,971.2	2.00	-2.00	0.00
7,000.0	1.31	196.68	6,634.7	-1,840.6	-708.7	1,972.4	2.00	-2.00	0.00
7,040.0	0.51	196.68	6,674.7	-1,841.2	-708.9	1,973.0	2.00	-2.00	0.00
7,065.3	0.00	0.00	6,700.0	-1,841.3	-709.0	1,973.1	2.00	-2.00	0.00
TARGET BHL 2555'FNL, 75'FWL									
7,080.0	0.00	0.00	6,714.7	-1,841.3	-709.0	1,973.1	0.00	0.00	0.00
7,120.0	0.00	0.00	6,754.7	-1,841.3	-709.0	1,973.1	0.00	0.00	0.00
7,160.0	0.00	0.00	6,794.7	-1,841.3	-709.0	1,973.1	0.00	0.00	0.00
7,200.0	0.00	0.00	6,834.7	-1,841.3	-709.0	1,973.1	0.00	0.00	0.00
7,240.0	0.00	0.00	6,874.7	-1,841.3	-709.0	1,973.1	0.00	0.00	0.00
7,280.0	0.00	0.00	6,914.7	-1,841.3	-709.0	1,973.1	0.00	0.00	0.00
7,320.0	0.00	0.00	6,954.7	-1,841.3	-709.0	1,973.1	0.00	0.00	0.00
7,360.0	0.00	0.00	6,994.7	-1,841.3	-709.0	1,973.1	0.00	0.00	0.00
7,383.3	0.00	0.00	7,018.0	-1,841.3	-709.0	1,973.1	0.00	0.00	0.00
NIOBRARA									
7,400.0	0.00	0.00	7,034.7	-1,841.3	-709.0	1,973.1	0.00	0.00	0.00
7,440.0	0.00	0.00	7,074.7	-1,841.3	-709.0	1,973.1	0.00	0.00	0.00
7,480.0	0.00	0.00	7,114.7	-1,841.3	-709.0	1,973.1	0.00	0.00	0.00
7,520.0	0.00	0.00	7,154.7	-1,841.3	-709.0	1,973.1	0.00	0.00	0.00
7,560.0	0.00	0.00	7,194.7	-1,841.3	-709.0	1,973.1	0.00	0.00	0.00
7,600.0	0.00	0.00	7,234.7	-1,841.3	-709.0	1,973.1	0.00	0.00	0.00
7,640.0	0.00	0.00	7,274.7	-1,841.3	-709.0	1,973.1	0.00	0.00	0.00
7,673.3	0.00	0.00	7,308.0	-1,841.3	-709.0	1,973.1	0.00	0.00	0.00
CODELL									
7,680.0	0.00	0.00	7,314.7	-1,841.3	-709.0	1,973.1	0.00	0.00	0.00
7,720.0	0.00	0.00	7,354.7	-1,841.3	-709.0	1,973.1	0.00	0.00	0.00
7,760.0	0.00	0.00	7,394.7	-1,841.3	-709.0	1,973.1	0.00	0.00	0.00
7,800.0	0.00	0.00	7,434.7	-1,841.3	-709.0	1,973.1	0.00	0.00	0.00
7,840.0	0.00	0.00	7,474.7	-1,841.3	-709.0	1,973.1	0.00	0.00	0.00
7,880.0	0.00	0.00	7,514.7	-1,841.3	-709.0	1,973.1	0.00	0.00	0.00
7,920.0	0.00	0.00	7,554.7	-1,841.3	-709.0	1,973.1	0.00	0.00	0.00
7,960.0	0.00	0.00	7,594.7	-1,841.3	-709.0	1,973.1	0.00	0.00	0.00
8,000.0	0.00	0.00	7,634.7	-1,841.3	-709.0	1,973.1	0.00	0.00	0.00
8,040.0	0.00	0.00	7,674.7	-1,841.3	-709.0	1,973.1	0.00	0.00	0.00
8,080.0	0.00	0.00	7,714.7	-1,841.3	-709.0	1,973.1	0.00	0.00	0.00
8,118.3	0.00	0.00	7,753.0	-1,841.3	-709.0	1,973.1	0.00	0.00	0.00
J-SAND									

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Sherwood L30-32D
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 L30-32D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (7-22-09)		

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)
8,120.0	0.00	0.00	7,754.7	-1,841.3	-709.0	1,973.1	0.00	0.00	0.00
8,160.0	0.00	0.00	7,794.7	-1,841.3	-709.0	1,973.1	0.00	0.00	0.00
8,200.0	0.00	0.00	7,834.7	-1,841.3	-709.0	1,973.1	0.00	0.00	0.00
8,240.0	0.00	0.00	7,874.7	-1,841.3	-709.0	1,973.1	0.00	0.00	0.00
8,268.3	0.00	0.00	7,903.0	-1,841.3	-709.0	1,973.1	0.00	0.00	0.00

HARDLINE 75°W & 77°S 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									
HARDLINE 75°W & 77°	0.00	0.00	7,903.0	-1,918.3	-783.9	1,314,786.46	3,187,180.74	40° 11' 43.959 N	104° 49' 47.770 W
- plan misses target center by 107.5ft at 8268.3ft MD (7903.0 TVD, -1841.3 N, -709.0 E)									
- Polygon									
Point 1			7,903.0	0.0	0.0	1,314,786.46	3,187,180.74		
Point 2			7,903.0	0.0	200.0	1,314,787.98	3,187,380.73		
Point 3			7,903.0	0.0	0.0	1,314,786.46	3,187,180.74		
Point 4			7,903.0	200.0	0.0	1,314,986.45	3,187,179.22		
TARGET BHL 2555°F	0.00	0.00	6,700.0	-1,841.3	-709.0	1,314,864.02	3,187,255.13	40° 11' 44.720 N	104° 49' 46.804 W
- plan hits target center									
- Point									

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
7,383.3	7,018.0	NIOBRARA		0.00	
7,673.3	7,308.0	CODELL		0.00	
8,118.3	7,753.0	J-SAND		0.00	