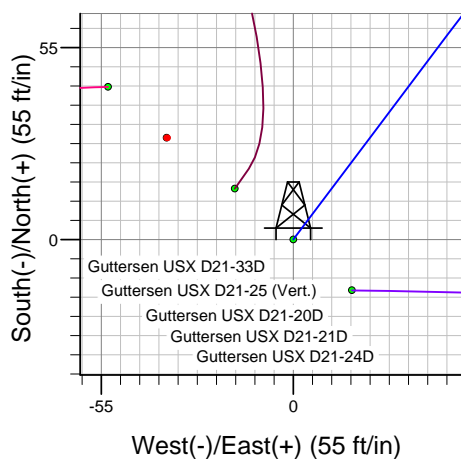
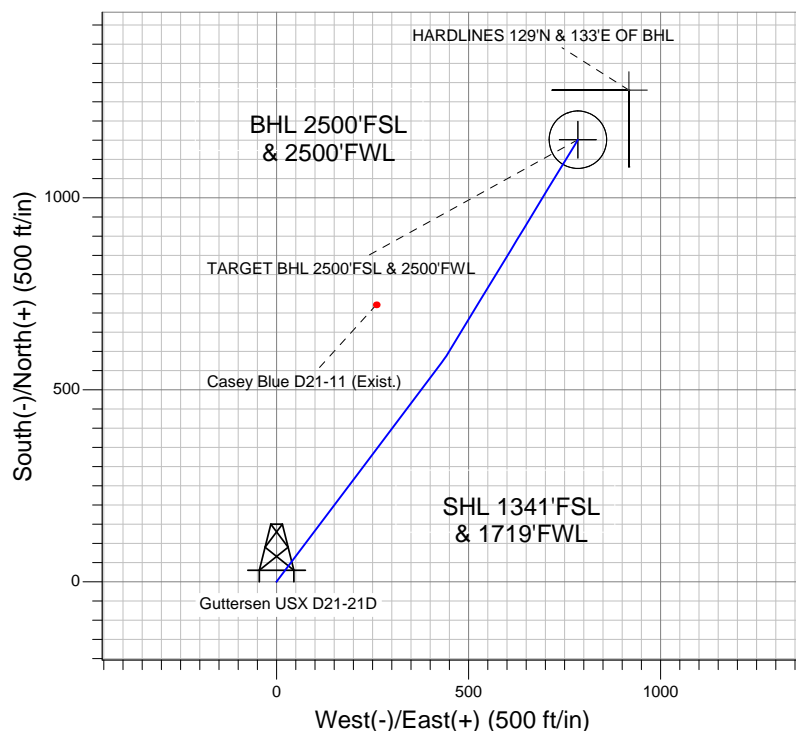
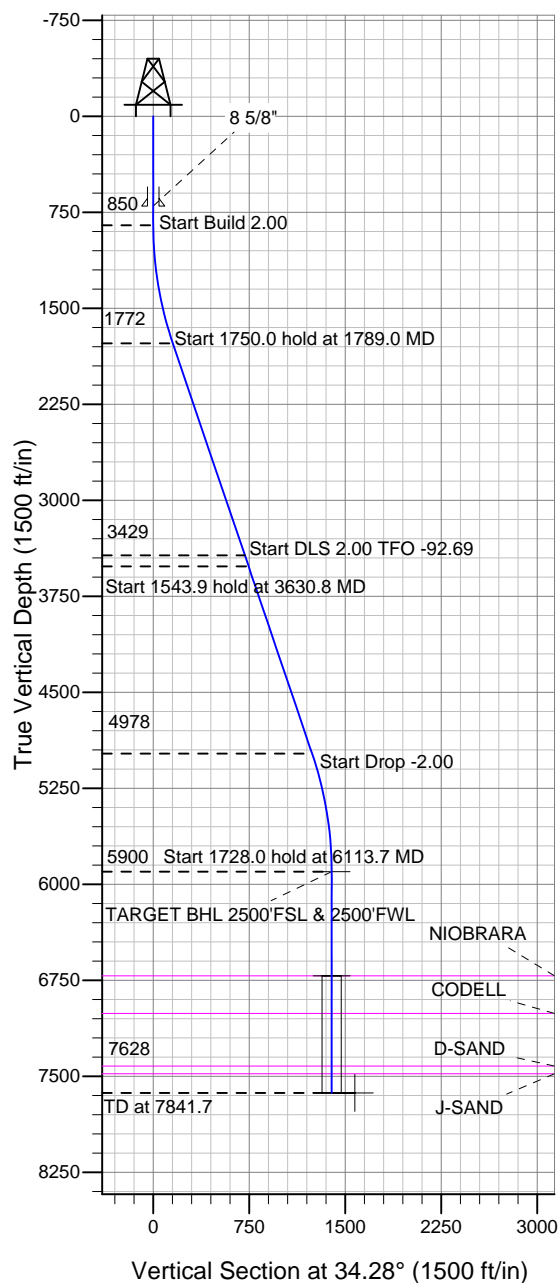


Well Name: Gutteresen USX D21-21D

Surface Location: Gutteresen USX D21-32D Pad Sec.21-T3N-R64W
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	1319787.37	3262664.29	40.207390	-104.559550	
		Original Well Elev	WELL @ 4833.0ft (Original Well Elev)			

NOBLE ENERGY INC WELD COUNTY CO



Gutteresen USX D21-32D Pad Sec.21-T3N-R64W
Gutteresen USX D21-21D
Noble Gutteresen USX D21-21D Plan #2 (1-24-12)
11:52, January 24 2012



Azimuths to True North
Magnetic North: 8.65°
Magnetic Field
Strength: 52987.9snT
Dip Angle: 66.91°
Date: 1/24/2012
Model: IGRF2010

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 2500'FSL & 2500'FWL	5900.0	1151.2	784.8	40.210550	-104.556740	Point
TARGET CIRCLE 2500'FSL & 2500'FWL	6713.0	1151.2	784.8	40.210550	-104.556740	Circle (Radius: 75.0)
HARDLINES 129°N & 133°E OF BHL	7628.0	1280.2	917.8	40.210904	-104.556264	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	850.0	0.00	0.00	850.0	0.0	0.0	0.00	0.00	0.0	
3	1789.0	18.78	37.00	1772.3	121.8	91.8	2.00	37.00	152.3	
4	3539.0	18.78	37.00	3429.1	571.7	430.8	0.00	0.00	715.1	
5	3630.8	18.78	31.30	3516.0	596.2	447.4	2.00	-92.69	744.6	
6	5174.7	18.78	31.30	4977.7	1020.9	705.6	0.00	0.00	1241.0	
7	6113.7	0.00	0.00	5900.0	1151.2	784.8	2.00	180.00	1393.3	TARGET BHL 2500'FSL & 2500'FWL
8	7841.7	0.00	0.00	7628.0	1151.2	784.8	0.00	0.00	1393.3	



NOBLE ENERGY INC WELD COUNTY CO

SEC.21-T3N-R64W

Guttersen USX D21-32D Pad Sec.21-T3N-R64W

Guttersen USX D21-21D

Wellbore #1

Plan: Noble Guttersen USX D21-21D Plan #2 (1-24-12)

Standard Planning Report

24 January, 2012



Database:	Landmark	Local Co-ordinate Reference:	Well Guttersen USX D21-21D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4833.0ft (Original Well Elev)
Project:	SEC.21-T3N-R64W	MD Reference:	WELL @ 4833.0ft (Original Well Elev)
Site:	Guttersen USX D21-32D Pad Sec.21-T3N-R64W	North Reference:	True
Well:	Guttersen USX D21-21D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Guttersen USX D21-21D Plan #2 (1-24-12)		

Project	SEC.21-T3N-R64W, Weld County, CO		
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						Guttersen USX D21-32D Pad Sec.21-T3N-R64W											
Site Position:						Northing:			1,319,830.53ft			Latitude:			40.207510		
From:			Lat/Long			Easting:			3,262,610.76ft			Longitude:			-104.559740		
Position Uncertainty:			0.0 ft			Slot Radius:			"			Grid Convergence:			0.61 °		

Well	Guttersen USX D21-21D					
Well Position	+N/-S	-43.7 ft	Northing:	1,319,787.37 ft	Latitude:	40.207390
	+E/-W	53.1 ft	Easting:	3,262,664.29 ft	Longitude:	-104.559550
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)
	IGRF2010	1/24/2012	8.66	66.91	52,988

Design	Noble Guttersen USX D21-21D Plan #2 (1-24-12)			
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	34.28

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	
850.0	0.00	0.00	850.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,789.0	18.78	37.00	1,772.3	121.8	91.8	2.00	2.00	0.00	37.00	
3,539.0	18.78	37.00	3,429.1	571.7	430.8	0.00	0.00	0.00	0.00	
3,630.8	18.78	31.30	3,516.0	596.2	447.4	2.00	0.00	-6.21	-92.69	
5,174.7	18.78	31.30	4,977.7	1,020.9	705.6	0.00	0.00	0.00	0.00	
6,113.7	0.00	0.00	5,900.0	1,151.2	784.8	2.00	-2.00	0.00	180.00	TARGET BHL 250C
7,841.7	0.00	0.00	7,628.0	1,151.2	784.8	0.00	0.00	0.00	0.00	

Database:	Landmark	Local Co-ordinate Reference:	Well Guttersen USX D21-21D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4833.0ft (Original Well Elev)
Project:	SEC.21-T3N-R64W	MD Reference:	WELL @ 4833.0ft (Original Well Elev)
Site:	Guttersen USX D21-32D Pad Sec.21-T3N-R64W	North Reference:	True
Well:	Guttersen USX D21-21D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Guttersen USX D21-21D Plan #2 (1-24-'		

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
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
8 5/8"									
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
850.0	0.00	0.00	850.0	0.0	0.0	0.0	0.00	0.00	0.00
880.0	0.60	37.00	880.0	0.1	0.1	0.2	2.00	2.00	0.00
920.0	1.40	37.00	920.0	0.7	0.5	0.9	2.00	2.00	0.00
960.0	2.20	37.00	960.0	1.7	1.3	2.1	2.00	2.00	0.00
1,000.0	3.00	37.00	999.9	3.1	2.4	3.9	2.00	2.00	0.00
1,040.0	3.80	37.00	1,039.9	5.0	3.8	6.3	2.00	2.00	0.00
1,080.0	4.60	37.00	1,079.8	7.4	5.6	9.2	2.00	2.00	0.00
1,120.0	5.40	37.00	1,119.6	10.2	7.7	12.7	2.00	2.00	0.00
1,160.0	6.20	37.00	1,159.4	13.4	10.1	16.7	2.00	2.00	0.00
1,200.0	7.00	37.00	1,199.1	17.1	12.9	21.3	2.00	2.00	0.00
1,240.0	7.80	37.00	1,238.8	21.2	16.0	26.5	2.00	2.00	0.00
1,280.0	8.60	37.00	1,278.4	25.7	19.4	32.2	2.00	2.00	0.00
1,320.0	9.40	37.00	1,317.9	30.7	23.2	38.4	2.00	2.00	0.00
1,360.0	10.20	37.00	1,357.3	36.2	27.2	45.2	2.00	2.00	0.00
1,400.0	11.00	37.00	1,396.6	42.0	31.7	52.6	2.00	2.00	0.00
1,440.0	11.80	37.00	1,435.8	48.3	36.4	60.5	2.00	2.00	0.00
1,480.0	12.60	37.00	1,474.9	55.1	41.5	68.9	2.00	2.00	0.00
1,520.0	13.40	37.00	1,513.9	62.3	46.9	77.9	2.00	2.00	0.00
1,560.0	14.20	37.00	1,552.8	69.9	52.7	87.4	2.00	2.00	0.00
1,600.0	15.00	37.00	1,591.5	78.0	58.7	97.5	2.00	2.00	0.00
1,640.0	15.80	37.00	1,630.0	86.4	65.1	108.1	2.00	2.00	0.00
1,680.0	16.60	37.00	1,668.4	95.4	71.9	119.3	2.00	2.00	0.00
1,720.0	17.40	37.00	1,706.7	104.7	78.9	130.9	2.00	2.00	0.00
1,760.0	18.20	37.00	1,744.8	114.5	86.3	143.2	2.00	2.00	0.00
1,789.0	18.78	37.00	1,772.3	121.8	91.8	152.3	2.00	2.00	0.00
1,800.0	18.78	37.00	1,782.7	124.6	93.9	155.9	0.00	0.00	0.00
1,840.0	18.78	37.00	1,820.6	134.9	101.7	168.7	0.00	0.00	0.00
1,880.0	18.78	37.00	1,858.4	145.2	109.4	181.6	0.00	0.00	0.00
1,920.0	18.78	37.00	1,896.3	155.5	117.2	194.5	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Guttersen USX D21-21D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4833.0ft (Original Well Elev)
Project:	SEC.21-T3N-R64W	MD Reference:	WELL @ 4833.0ft (Original Well Elev)
Site:	Guttersen USX D21-32D Pad Sec.21-T3N-R64W	North Reference:	True
Well:	Guttersen USX D21-21D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Guttersen USX D21-21D Plan #2 (1-24-'		

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)	
1,960.0	18.78	37.00	1,934.2	165.8	124.9	207.3	0.00	0.00	0.00	
2,000.0	18.78	37.00	1,972.0	176.1	132.7	220.2	0.00	0.00	0.00	
2,040.0	18.78	37.00	2,009.9	186.3	140.4	233.1	0.00	0.00	0.00	
2,080.0	18.78	37.00	2,047.8	196.6	148.2	245.9	0.00	0.00	0.00	
2,120.0	18.78	37.00	2,085.7	206.9	155.9	258.8	0.00	0.00	0.00	
2,160.0	18.78	37.00	2,123.5	217.2	163.7	271.6	0.00	0.00	0.00	
2,200.0	18.78	37.00	2,161.4	227.5	171.4	284.5	0.00	0.00	0.00	
2,240.0	18.78	37.00	2,199.3	237.8	179.2	297.4	0.00	0.00	0.00	
2,280.0	18.78	37.00	2,237.1	248.0	186.9	310.2	0.00	0.00	0.00	
2,320.0	18.78	37.00	2,275.0	258.3	194.7	323.1	0.00	0.00	0.00	
2,360.0	18.78	37.00	2,312.9	268.6	202.4	336.0	0.00	0.00	0.00	
2,400.0	18.78	37.00	2,350.7	278.9	210.2	348.8	0.00	0.00	0.00	
2,440.0	18.78	37.00	2,388.6	289.2	217.9	361.7	0.00	0.00	0.00	
2,480.0	18.78	37.00	2,426.5	299.5	225.7	374.6	0.00	0.00	0.00	
2,520.0	18.78	37.00	2,464.4	309.8	233.4	387.4	0.00	0.00	0.00	
2,560.0	18.78	37.00	2,502.2	320.0	241.2	400.3	0.00	0.00	0.00	
2,600.0	18.78	37.00	2,540.1	330.3	248.9	413.1	0.00	0.00	0.00	
2,640.0	18.78	37.00	2,578.0	340.6	256.7	426.0	0.00	0.00	0.00	
2,680.0	18.78	37.00	2,615.8	350.9	264.4	438.9	0.00	0.00	0.00	
2,720.0	18.78	37.00	2,653.7	361.2	272.2	451.7	0.00	0.00	0.00	
2,760.0	18.78	37.00	2,691.6	371.5	279.9	464.6	0.00	0.00	0.00	
2,800.0	18.78	37.00	2,729.5	381.7	287.7	477.5	0.00	0.00	0.00	
2,840.0	18.78	37.00	2,767.3	392.0	295.4	490.3	0.00	0.00	0.00	
2,880.0	18.78	37.00	2,805.2	402.3	303.2	503.2	0.00	0.00	0.00	
2,920.0	18.78	37.00	2,843.1	412.6	310.9	516.0	0.00	0.00	0.00	
2,960.0	18.78	37.00	2,880.9	422.9	318.7	528.9	0.00	0.00	0.00	
3,000.0	18.78	37.00	2,918.8	433.2	326.4	541.8	0.00	0.00	0.00	
3,040.0	18.78	37.00	2,956.7	443.4	334.2	554.6	0.00	0.00	0.00	
3,080.0	18.78	37.00	2,994.5	453.7	341.9	567.5	0.00	0.00	0.00	
3,120.0	18.78	37.00	3,032.4	464.0	349.7	580.4	0.00	0.00	0.00	
3,160.0	18.78	37.00	3,070.3	474.3	357.4	593.2	0.00	0.00	0.00	
3,200.0	18.78	37.00	3,108.2	484.6	365.2	606.1	0.00	0.00	0.00	
3,240.0	18.78	37.00	3,146.0	494.9	372.9	618.9	0.00	0.00	0.00	
3,280.0	18.78	37.00	3,183.9	505.2	380.7	631.8	0.00	0.00	0.00	
3,320.0	18.78	37.00	3,221.8	515.4	388.4	644.7	0.00	0.00	0.00	
3,360.0	18.78	37.00	3,259.6	525.7	396.2	657.5	0.00	0.00	0.00	
3,400.0	18.78	37.00	3,297.5	536.0	403.9	670.4	0.00	0.00	0.00	
3,440.0	18.78	37.00	3,335.4	546.3	411.7	683.3	0.00	0.00	0.00	
3,480.0	18.78	37.00	3,373.3	556.6	419.4	696.1	0.00	0.00	0.00	
3,520.0	18.78	37.00	3,411.1	566.9	427.2	709.0	0.00	0.00	0.00	
3,539.0	18.78	37.00	3,429.1	571.7	430.8	715.1	0.00	0.00	0.00	
3,560.0	18.76	35.70	3,449.0	577.2	434.8	721.9	2.00	-0.07	-6.21	
3,600.0	18.76	33.21	3,486.9	587.8	442.1	734.7	2.00	-0.01	-6.22	
3,630.8	18.78	31.30	3,516.0	596.2	447.4	744.6	2.00	0.06	-6.21	
3,640.0	18.78	31.30	3,524.7	598.7	448.9	747.6	0.00	0.00	0.00	
3,680.0	18.78	31.30	3,562.6	609.7	455.6	760.4	0.00	0.00	0.00	
3,720.0	18.78	31.30	3,600.5	620.7	462.3	773.3	0.00	0.00	0.00	
3,760.0	18.78	31.30	3,638.4	631.7	469.0	786.2	0.00	0.00	0.00	
3,800.0	18.78	31.30	3,676.2	642.7	475.7	799.0	0.00	0.00	0.00	
3,840.0	18.78	31.30	3,714.1	653.7	482.4	811.9	0.00	0.00	0.00	
3,880.0	18.78	31.30	3,752.0	664.7	489.1	824.7	0.00	0.00	0.00	
3,920.0	18.78	31.30	3,789.8	675.7	495.8	837.6	0.00	0.00	0.00	
3,960.0	18.78	31.30	3,827.7	686.7	502.5	850.5	0.00	0.00	0.00	

Database:	Landmark	Local Co-ordinate Reference:	Well Guttersen USX D21-21D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4833.0ft (Original Well Elev)
Project:	SEC.21-T3N-R64W	MD Reference:	WELL @ 4833.0ft (Original Well Elev)
Site:	Guttersen USX D21-32D Pad Sec.21-T3N-R64W	North Reference:	True
Well:	Guttersen USX D21-21D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Guttersen USX D21-21D Plan #2 (1-24-'		

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)
4,000.0	18.78	31.30	3,865.6	697.7	509.2	863.3	0.00	0.00	0.00
4,040.0	18.78	31.30	3,903.4	708.7	515.8	876.2	0.00	0.00	0.00
4,080.0	18.78	31.30	3,941.3	719.7	522.5	889.0	0.00	0.00	0.00
4,120.0	18.78	31.30	3,979.2	730.8	529.2	901.9	0.00	0.00	0.00
4,160.0	18.78	31.30	4,017.1	741.8	535.9	914.8	0.00	0.00	0.00
4,200.0	18.78	31.30	4,054.9	752.8	542.6	927.6	0.00	0.00	0.00
4,240.0	18.78	31.30	4,092.8	763.8	549.3	940.5	0.00	0.00	0.00
4,280.0	18.78	31.30	4,130.7	774.8	556.0	953.3	0.00	0.00	0.00
4,320.0	18.78	31.30	4,168.5	785.8	562.7	966.2	0.00	0.00	0.00
4,360.0	18.78	31.30	4,206.4	796.8	569.4	979.1	0.00	0.00	0.00
4,400.0	18.78	31.30	4,244.3	807.8	576.1	991.9	0.00	0.00	0.00
4,440.0	18.78	31.30	4,282.1	818.8	582.7	1,004.8	0.00	0.00	0.00
4,480.0	18.78	31.30	4,320.0	829.8	589.4	1,017.6	0.00	0.00	0.00
4,520.0	18.78	31.30	4,357.9	840.8	596.1	1,030.5	0.00	0.00	0.00
4,560.0	18.78	31.30	4,395.8	851.8	602.8	1,043.4	0.00	0.00	0.00
4,600.0	18.78	31.30	4,433.6	862.8	609.5	1,056.2	0.00	0.00	0.00
4,640.0	18.78	31.30	4,471.5	873.8	616.2	1,069.1	0.00	0.00	0.00
4,680.0	18.78	31.30	4,509.4	884.8	622.9	1,081.9	0.00	0.00	0.00
4,720.0	18.78	31.30	4,547.2	895.8	629.6	1,094.8	0.00	0.00	0.00
4,760.0	18.78	31.30	4,585.1	906.8	636.3	1,107.7	0.00	0.00	0.00
4,800.0	18.78	31.30	4,623.0	917.8	642.9	1,120.5	0.00	0.00	0.00
4,840.0	18.78	31.30	4,660.9	928.8	649.6	1,133.4	0.00	0.00	0.00
4,880.0	18.78	31.30	4,698.7	939.8	656.3	1,146.2	0.00	0.00	0.00
4,920.0	18.78	31.30	4,736.6	950.8	663.0	1,159.1	0.00	0.00	0.00
4,960.0	18.78	31.30	4,774.5	961.8	669.7	1,172.0	0.00	0.00	0.00
5,000.0	18.78	31.30	4,812.3	972.8	676.4	1,184.8	0.00	0.00	0.00
5,040.0	18.78	31.30	4,850.2	983.8	683.1	1,197.7	0.00	0.00	0.00
5,080.0	18.78	31.30	4,888.1	994.8	689.8	1,210.5	0.00	0.00	0.00
5,120.0	18.78	31.30	4,925.9	1,005.8	696.5	1,223.4	0.00	0.00	0.00
5,160.0	18.78	31.30	4,963.8	1,016.8	703.2	1,236.3	0.00	0.00	0.00
5,174.7	18.78	31.30	4,977.7	1,020.9	705.6	1,241.0	0.00	0.00	0.00
5,200.0	18.27	31.30	5,001.7	1,027.8	709.8	1,249.0	2.00	-2.00	0.00
5,240.0	17.47	31.30	5,039.8	1,038.3	716.2	1,261.3	2.00	-2.00	0.00
5,280.0	16.67	31.30	5,078.0	1,048.3	722.3	1,273.0	2.00	-2.00	0.00
5,320.0	15.87	31.30	5,116.4	1,057.9	728.1	1,284.2	2.00	-2.00	0.00
5,360.0	15.07	31.30	5,155.0	1,067.0	733.6	1,294.9	2.00	-2.00	0.00
5,400.0	14.27	31.30	5,193.7	1,075.6	738.9	1,305.0	2.00	-2.00	0.00
5,440.0	13.47	31.30	5,232.5	1,083.8	743.9	1,314.5	2.00	-2.00	0.00
5,480.0	12.67	31.30	5,271.5	1,091.6	748.6	1,323.6	2.00	-2.00	0.00
5,520.0	11.87	31.30	5,310.6	1,098.8	753.0	1,332.1	2.00	-2.00	0.00
5,560.0	11.07	31.30	5,349.8	1,105.6	757.1	1,340.0	2.00	-2.00	0.00
5,600.0	10.27	31.30	5,389.1	1,112.0	761.0	1,347.4	2.00	-2.00	0.00
5,640.0	9.47	31.30	5,428.5	1,117.8	764.5	1,354.3	2.00	-2.00	0.00
5,680.0	8.67	31.30	5,468.0	1,123.2	767.8	1,360.6	2.00	-2.00	0.00
5,720.0	7.87	31.30	5,507.5	1,128.1	770.8	1,366.3	2.00	-2.00	0.00
5,760.0	7.07	31.30	5,547.2	1,132.6	773.5	1,371.5	2.00	-2.00	0.00
5,800.0	6.27	31.30	5,586.9	1,136.6	775.9	1,376.2	2.00	-2.00	0.00
5,840.0	5.47	31.30	5,626.7	1,140.1	778.1	1,380.2	2.00	-2.00	0.00
5,880.0	4.67	31.30	5,666.6	1,143.1	779.9	1,383.8	2.00	-2.00	0.00
5,920.0	3.87	31.30	5,706.5	1,145.6	781.4	1,386.8	2.00	-2.00	0.00
5,960.0	3.07	31.30	5,746.4	1,147.7	782.7	1,389.2	2.00	-2.00	0.00
6,000.0	2.27	31.30	5,786.3	1,149.3	783.7	1,391.0	2.00	-2.00	0.00
6,040.0	1.47	31.30	5,826.3	1,150.4	784.3	1,392.3	2.00	-2.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Guttersen USX D21-21D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4833.0ft (Original Well Elev)
Project:	SEC.21-T3N-R64W	MD Reference:	WELL @ 4833.0ft (Original Well Elev)
Site:	Guttersen USX D21-32D Pad Sec.21-T3N-R64W	North Reference:	True
Well:	Guttersen USX D21-21D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Guttersen USX D21-21D Plan #2 (1-24-'		

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)
6,080.0	0.67	31.30	5,866.3	1,151.0	784.7	1,393.1	2.00	-2.00	0.00
6,113.7	0.00	0.00	5,900.0	1,151.2	784.8	1,393.3	2.00	-2.00	0.00
TARGET BHL 2500'FSL & 2500'FWL									
6,120.0	0.00	0.00	5,906.3	1,151.2	784.8	1,393.3	0.00	0.00	0.00
6,160.0	0.00	0.00	5,946.3	1,151.2	784.8	1,393.3	0.00	0.00	0.00
6,200.0	0.00	0.00	5,986.3	1,151.2	784.8	1,393.3	0.00	0.00	0.00
6,240.0	0.00	0.00	6,026.3	1,151.2	784.8	1,393.3	0.00	0.00	0.00
6,280.0	0.00	0.00	6,066.3	1,151.2	784.8	1,393.3	0.00	0.00	0.00
6,320.0	0.00	0.00	6,106.3	1,151.2	784.8	1,393.3	0.00	0.00	0.00
6,360.0	0.00	0.00	6,146.3	1,151.2	784.8	1,393.3	0.00	0.00	0.00
6,400.0	0.00	0.00	6,186.3	1,151.2	784.8	1,393.3	0.00	0.00	0.00
6,440.0	0.00	0.00	6,226.3	1,151.2	784.8	1,393.3	0.00	0.00	0.00
6,480.0	0.00	0.00	6,266.3	1,151.2	784.8	1,393.3	0.00	0.00	0.00
6,520.0	0.00	0.00	6,306.3	1,151.2	784.8	1,393.3	0.00	0.00	0.00
6,560.0	0.00	0.00	6,346.3	1,151.2	784.8	1,393.3	0.00	0.00	0.00
6,600.0	0.00	0.00	6,386.3	1,151.2	784.8	1,393.3	0.00	0.00	0.00
6,640.0	0.00	0.00	6,426.3	1,151.2	784.8	1,393.3	0.00	0.00	0.00
6,680.0	0.00	0.00	6,466.3	1,151.2	784.8	1,393.3	0.00	0.00	0.00
6,720.0	0.00	0.00	6,506.3	1,151.2	784.8	1,393.3	0.00	0.00	0.00
6,760.0	0.00	0.00	6,546.3	1,151.2	784.8	1,393.3	0.00	0.00	0.00
6,800.0	0.00	0.00	6,586.3	1,151.2	784.8	1,393.3	0.00	0.00	0.00
6,840.0	0.00	0.00	6,626.3	1,151.2	784.8	1,393.3	0.00	0.00	0.00
6,880.0	0.00	0.00	6,666.3	1,151.2	784.8	1,393.3	0.00	0.00	0.00
6,920.0	0.00	0.00	6,706.3	1,151.2	784.8	1,393.3	0.00	0.00	0.00
6,926.7	0.00	0.00	6,713.0	1,151.2	784.8	1,393.3	0.00	0.00	0.00
NIOBRARA - TARGET CIRCLE 2500'FSL & 2500'FWL									
6,960.0	0.00	0.00	6,746.3	1,151.2	784.8	1,393.3	0.00	0.00	0.00
7,000.0	0.00	0.00	6,786.3	1,151.2	784.8	1,393.3	0.00	0.00	0.00
7,040.0	0.00	0.00	6,826.3	1,151.2	784.8	1,393.3	0.00	0.00	0.00
7,080.0	0.00	0.00	6,866.3	1,151.2	784.8	1,393.3	0.00	0.00	0.00
7,120.0	0.00	0.00	6,906.3	1,151.2	784.8	1,393.3	0.00	0.00	0.00
7,160.0	0.00	0.00	6,946.3	1,151.2	784.8	1,393.3	0.00	0.00	0.00
7,200.0	0.00	0.00	6,986.3	1,151.2	784.8	1,393.3	0.00	0.00	0.00
7,221.7	0.00	0.00	7,008.0	1,151.2	784.8	1,393.3	0.00	0.00	0.00
CODELL									
7,240.0	0.00	0.00	7,026.3	1,151.2	784.8	1,393.3	0.00	0.00	0.00
7,280.0	0.00	0.00	7,066.3	1,151.2	784.8	1,393.3	0.00	0.00	0.00
7,320.0	0.00	0.00	7,106.3	1,151.2	784.8	1,393.3	0.00	0.00	0.00
7,360.0	0.00	0.00	7,146.3	1,151.2	784.8	1,393.3	0.00	0.00	0.00
7,400.0	0.00	0.00	7,186.3	1,151.2	784.8	1,393.3	0.00	0.00	0.00
7,440.0	0.00	0.00	7,226.3	1,151.2	784.8	1,393.3	0.00	0.00	0.00
7,480.0	0.00	0.00	7,266.3	1,151.2	784.8	1,393.3	0.00	0.00	0.00
7,520.0	0.00	0.00	7,306.3	1,151.2	784.8	1,393.3	0.00	0.00	0.00
7,560.0	0.00	0.00	7,346.3	1,151.2	784.8	1,393.3	0.00	0.00	0.00
7,600.0	0.00	0.00	7,386.3	1,151.2	784.8	1,393.3	0.00	0.00	0.00
7,631.7	0.00	0.00	7,418.0	1,151.2	784.8	1,393.3	0.00	0.00	0.00
D-SAND									
7,640.0	0.00	0.00	7,426.3	1,151.2	784.8	1,393.3	0.00	0.00	0.00
7,680.0	0.00	0.00	7,466.3	1,151.2	784.8	1,393.3	0.00	0.00	0.00
7,691.7	0.00	0.00	7,478.0	1,151.2	784.8	1,393.3	0.00	0.00	0.00
J-SAND									
7,720.0	0.00	0.00	7,506.3	1,151.2	784.8	1,393.3	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Guttersen USX D21-21D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4833.0ft (Original Well Elev)
Project:	SEC.21-T3N-R64W	MD Reference:	WELL @ 4833.0ft (Original Well Elev)
Site:	Guttersen USX D21-32D Pad Sec.21-T3N-R64W	North Reference:	True
Well:	Guttersen USX D21-21D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Guttersen USX D21-21D Plan #2 (1-24-1		

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)
7,760.0	0.00	0.00	7,546.3	1,151.2	784.8	1,393.3	0.00	0.00	0.00
7,800.0	0.00	0.00	7,586.3	1,151.2	784.8	1,393.3	0.00	0.00	0.00
7,840.0	0.00	0.00	7,626.3	1,151.2	784.8	1,393.3	0.00	0.00	0.00
7,841.7	0.00	0.00	7,628.0	1,151.2	784.8	1,393.3	0.00	0.00	0.00
HARDLINES 129°N & 133°E OF BHL									

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
TARGET BHL 2500'F: - plan hits target center - Point	0.00	0.00	5,900.0	1,151.2	784.8	1,320,946.79	3,263,436.84	40.210550	-104.556740
TARGET CIRCLE 250' - plan hits target center - Circle (radius 75.0)	0.00	0.00	6,713.0	1,151.2	784.8	1,320,946.79	3,263,436.84	40.210550	-104.556740
HARDLINES 129°N & 133°E OF BHL - plan misses target center by 185.3ft at 7841.7ft MD (7628.0 TVD, 1151.2 N, 784.8 E) - Polygon	0.00	0.00	7,628.0	1,280.2	917.8	1,321,077.18	3,263,568.42	40.210904	-104.556264
Point 1			7,628.0	0.0	0.0	1,321,077.18	3,263,568.42		
Point 2			7,628.0	-200.0	0.0	1,320,877.20	3,263,570.54		
Point 3			7,628.0	0.0	0.0	1,321,077.18	3,263,568.42		
Point 4			7,628.0	0.0	-200.0	1,321,075.06	3,263,368.44		

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
700.0	700.0	8 5/8"	8-5/8	12-1/4

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
6,926.7	6,713.0	NIOBRARA		0.00	
7,221.7	7,008.0	CODELL		0.00	
7,631.7	7,418.0	D-SAND		0.00	
7,691.7	7,478.0	J-SAND		0.00	