

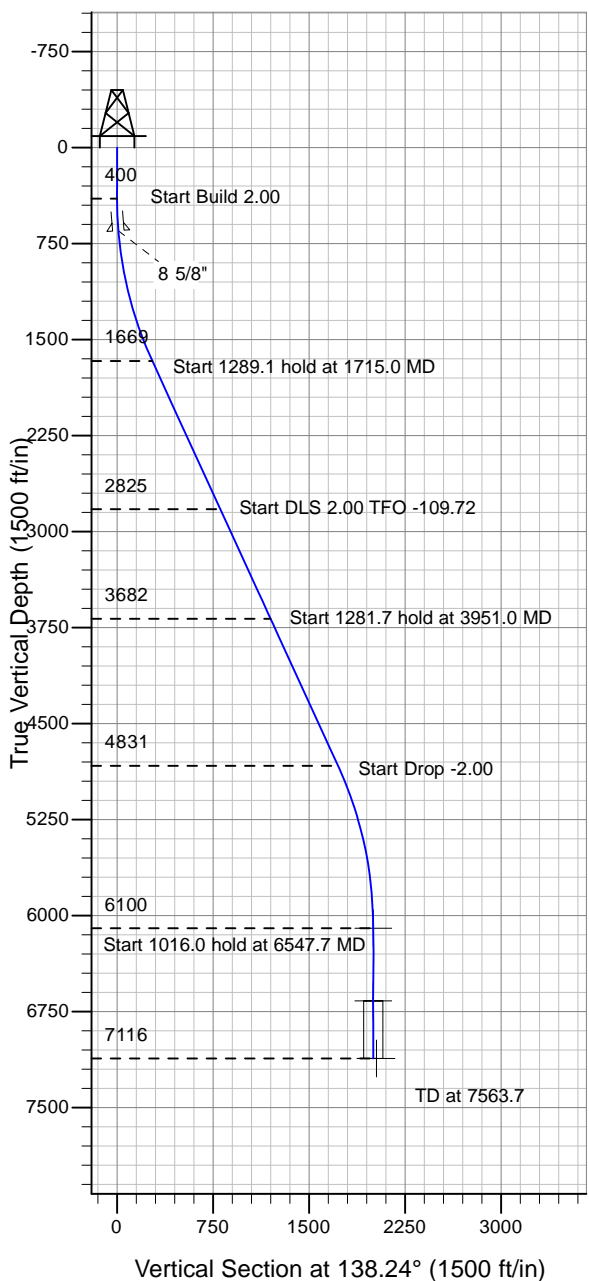
# ENSIGN

## Directional

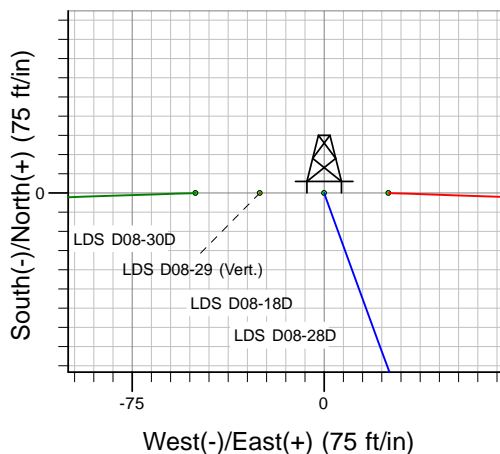
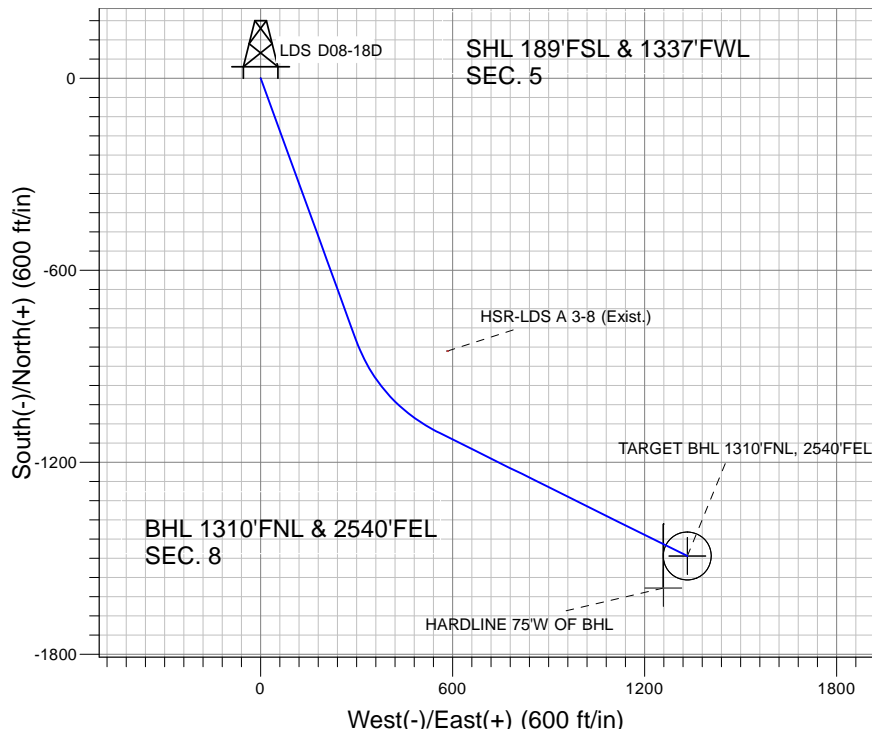
### Well Name: LDS D08-18D

Surface Location: LDS D08-30D Pad Sec.5-T3N-R64W  
 North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone  
 Ground Elevation: 4753.0

+N/-S+E/-W Northing Easting Latitude Longitude Slot  
 0.0 0.0 1334405.59 3256982.05 40° 14' 51.648 N 104° 34' 45.660 W  
 Original Well Elev WELL @ 4766.0ft (Original Well Elev)



### NOBLE ENERGY INC WELD COUNTY CO



LDS D08-30D Pad Sec.5-T3N-R64W  
 LDS D08-18D  
 Noble LDS D08-18D Plan #1 (05-07-10)  
 18:08, May 13 2010



Azimuths to True North  
 Magnetic North: 8.90°

Magnetic Field  
 Strength: 53189.0nT  
 Dip Angle: 67.00°  
 Date: 5/7/2010  
 Model: IGRF2010

### WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 1310'FNL, 2540'FEL	6100.0	-1493.0	1333.0	40° 14' 36.894 N	104° 34' 28.470 W	Point
TARGET CIRCLE 1310'FNL, 2540'FEL	6666.0	-1493.0	1333.0	40° 14' 36.894 N	104° 34' 28.470 W	Circle (Radius: 75.0)
HARDLINE 75'W OF BHL	7116.0	-1593.0	1258.0	40° 14' 35.906 N	104° 34' 29.437 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	1715.0	26.30	160.00	1669.3	-278.7	101.4	2.00	160.00	275.4	
4	3004.1	26.30	160.00	2825.0	-815.4	296.8	0.00	0.00	805.9	
5	3951.0	26.30	116.41	3681.7	-1108.5	558.8	2.00	-109.72	1199.0	
6	5232.7	26.30	116.41	4830.7	-1361.1	1067.4	0.00	0.00	1726.2	
7	6547.7	0.00	0.00	6100.0	-1493.0	1333.0	2.00	180.00	2001.5	TARGET BHL 1310'FNL, 2540'FEL
8	7563.7	0.00	0.00	7116.0	-1493.0	1333.0	0.00	0.00	2001.5	



# **NOBLE ENERGY INC WELD COUNTY CO**

**SEC.5-T3N-R64W**

**LDS D08-30D Pad Sec.5-T3N-R64W**

**LDS D08-18D**

**Wellbore #1**

**Plan: Noble LDS D08-18D Plan #1 (05-07-10)**

## **Standard Planning Report**

**13 May, 2010**



<b>Database:</b>	EDM den0-adp01 Server Data	<b>Local Co-ordinate Reference:</b>	Well LDS D08-18D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4766.0ft (Original Well Elev)
<b>Project:</b>	SEC.5-T3N-R64W	<b>MD Reference:</b>	WELL @ 4766.0ft (Original Well Elev)
<b>Site:</b>	LDS D08-30D Pad Sec.5-T3N-R64W	<b>North Reference:</b>	True
<b>Well:</b>	LDS D08-18D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble LDS D08-18D Plan #1 (05-07-10)		

<b>Project</b>	SEC.5-T3N-R64W, Weld County, Colorado		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Northern Zone		Using geodetic scale factor

Site						LDS D08-30D Pad Sec.5-T3N-R64W											
Site Position:						Northing:			1,334,405.07 ft			Latitude:			40° 14' 51.648 N		
From:			Lat/Long			Easting:			3,256,931.80 ft			Longitude:			104° 34' 46.308 W		
Position Uncertainty:			0.0 ft			Slot Radius:			"			Grid Convergence:			0.59 °		

Well	LDS D08-18D					
Well Position	+N/-S	0.0 ft	Northing:	1,334,405.59 ft	Latitude:	40° 14' 51.648 N
	+E/-W	50.2 ft	Easting:	3,256,982.05 ft	Longitude:	104° 34' 45.660 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,753.0 ft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	5/7/2010	8.90	67.00	53,189

<b>Design</b>	Noble LDS D08-18D Plan #1 (05-07-10)			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	138.24

<b>Plan Sections</b>										
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	
1,715.0	26.30	160.00	1,669.3	-278.7	101.4	2.00	2.00	0.00	160.00	
3,004.1	26.30	160.00	2,825.0	-815.4	296.8	0.00	0.00	0.00	0.00	
3,951.0	26.30	116.41	3,681.7	-1,108.5	558.8	2.00	0.00	-4.60	-109.72	
5,232.7	26.30	116.41	4,830.7	-1,361.1	1,067.4	0.00	0.00	0.00	0.00	
6,547.7	0.00	0.00	6,100.0	-1,493.0	1,333.0	2.00	-2.00	0.00	180.00	TARGET BHL 131C
7,563.7	0.00	0.00	7,116.0	-1,493.0	1,333.0	0.00	0.00	0.00	0.00	

<b>Database:</b>	EDM den0-adp01 Server Data	<b>Local Co-ordinate Reference:</b>	Well LDS D08-18D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4766.0ft (Original Well Elev)
<b>Project:</b>	SEC.5-T3N-R64W	<b>MD Reference:</b>	WELL @ 4766.0ft (Original Well Elev)
<b>Site:</b>	LDS D08-30D Pad Sec.5-T3N-R64W	<b>North Reference:</b>	True
<b>Well:</b>	LDS D08-18D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble LDS D08-18D Plan #1 (05-07-10)		

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	160.00	440.0	-0.3	0.1	0.3	2.00	2.00	0.00
480.0	1.60	160.00	480.0	-1.0	0.4	1.0	2.00	2.00	0.00
520.0	2.40	160.00	520.0	-2.4	0.9	2.3	2.00	2.00	0.00
560.0	3.20	160.00	559.9	-4.2	1.5	4.1	2.00	2.00	0.00
600.0	4.00	160.00	599.8	-6.6	2.4	6.5	2.00	2.00	0.00
640.0	4.80	160.00	639.7	-9.4	3.4	9.3	2.00	2.00	0.00
650.3	5.01	160.00	650.0	-10.3	3.7	10.2	2.00	2.00	0.00
8 5/8"									
680.0	5.60	160.00	679.6	-12.8	4.7	12.7	2.00	2.00	0.00
720.0	6.40	160.00	719.3	-16.8	6.1	16.6	2.00	2.00	0.00
760.0	7.20	160.00	759.1	-21.2	7.7	21.0	2.00	2.00	0.00
800.0	8.00	160.00	798.7	-26.2	9.5	25.9	2.00	2.00	0.00
840.0	8.80	160.00	838.3	-31.7	11.5	31.3	2.00	2.00	0.00
880.0	9.60	160.00	877.8	-37.7	13.7	37.3	2.00	2.00	0.00
920.0	10.40	160.00	917.1	-44.2	16.1	43.7	2.00	2.00	0.00
960.0	11.20	160.00	956.4	-51.3	18.7	50.7	2.00	2.00	0.00
1,000.0	12.00	160.00	995.6	-58.8	21.4	58.1	2.00	2.00	0.00
1,040.0	12.80	160.00	1,034.7	-66.9	24.3	66.1	2.00	2.00	0.00
1,080.0	13.60	160.00	1,073.6	-75.5	27.5	74.6	2.00	2.00	0.00
1,120.0	14.40	160.00	1,112.4	-84.6	30.8	83.6	2.00	2.00	0.00
1,160.0	15.20	160.00	1,151.1	-94.2	34.3	93.1	2.00	2.00	0.00
1,200.0	16.00	160.00	1,189.6	-104.3	38.0	103.1	2.00	2.00	0.00
1,240.0	16.80	160.00	1,228.0	-114.9	41.8	113.6	2.00	2.00	0.00
1,280.0	17.60	160.00	1,266.2	-126.0	45.9	124.5	2.00	2.00	0.00
1,320.0	18.40	160.00	1,304.3	-137.6	50.1	136.0	2.00	2.00	0.00
1,360.0	19.20	160.00	1,342.1	-149.7	54.5	148.0	2.00	2.00	0.00
1,400.0	20.00	160.00	1,379.8	-162.3	59.1	160.5	2.00	2.00	0.00
1,440.0	20.80	160.00	1,417.3	-175.5	63.9	173.4	2.00	2.00	0.00
1,480.0	21.60	160.00	1,454.6	-189.0	68.8	186.8	2.00	2.00	0.00
1,520.0	22.40	160.00	1,491.7	-203.1	73.9	200.8	2.00	2.00	0.00
1,560.0	23.20	160.00	1,528.6	-217.7	79.2	215.2	2.00	2.00	0.00
1,600.0	24.00	160.00	1,565.2	-232.7	84.7	230.0	2.00	2.00	0.00
1,640.0	24.80	160.00	1,601.6	-248.3	90.4	245.4	2.00	2.00	0.00
1,680.0	25.60	160.00	1,637.8	-264.3	96.2	261.2	2.00	2.00	0.00
1,715.0	26.30	160.00	1,669.3	-278.7	101.4	275.4	2.00	2.00	0.00
1,720.0	26.30	160.00	1,673.8	-280.7	102.2	277.5	0.00	0.00	0.00
1,760.0	26.30	160.00	1,709.6	-297.4	108.2	293.9	0.00	0.00	0.00
1,800.0	26.30	160.00	1,745.5	-314.0	114.3	310.4	0.00	0.00	0.00
1,840.0	26.30	160.00	1,781.4	-330.7	120.4	326.9	0.00	0.00	0.00
1,880.0	26.30	160.00	1,817.2	-347.4	126.4	343.3	0.00	0.00	0.00
1,920.0	26.30	160.00	1,853.1	-364.0	132.5	359.8	0.00	0.00	0.00
1,960.0	26.30	160.00	1,888.9	-380.7	138.6	376.2	0.00	0.00	0.00
2,000.0	26.30	160.00	1,924.8	-397.3	144.6	392.7	0.00	0.00	0.00

<b>Database:</b>	EDM den0-adp01 Server Data	<b>Local Co-ordinate Reference:</b>	Well LDS D08-18D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4766.0ft (Original Well Elev)
<b>Project:</b>	SEC.5-T3N-R64W	<b>MD Reference:</b>	WELL @ 4766.0ft (Original Well Elev)
<b>Site:</b>	LDS D08-30D Pad Sec.5-T3N-R64W	<b>North Reference:</b>	True
<b>Well:</b>	LDS D08-18D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble LDS D08-18D Plan #1 (05-07-10)		

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)
2,040.0	26.30	160.00	1,960.7	-414.0	150.7	409.2	0.00	0.00	0.00
2,080.0	26.30	160.00	1,996.5	-430.6	156.7	425.6	0.00	0.00	0.00
2,120.0	26.30	160.00	2,032.4	-447.3	162.8	442.1	0.00	0.00	0.00
2,160.0	26.30	160.00	2,068.2	-463.9	168.9	458.5	0.00	0.00	0.00
2,200.0	26.30	160.00	2,104.1	-480.6	174.9	475.0	0.00	0.00	0.00
2,240.0	26.30	160.00	2,140.0	-497.2	181.0	491.5	0.00	0.00	0.00
2,280.0	26.30	160.00	2,175.8	-513.9	187.0	507.9	0.00	0.00	0.00
2,320.0	26.30	160.00	2,211.7	-530.6	193.1	524.4	0.00	0.00	0.00
2,360.0	26.30	160.00	2,247.5	-547.2	199.2	540.8	0.00	0.00	0.00
2,400.0	26.30	160.00	2,283.4	-563.9	205.2	557.3	0.00	0.00	0.00
2,440.0	26.30	160.00	2,319.3	-580.5	211.3	573.8	0.00	0.00	0.00
2,480.0	26.30	160.00	2,355.1	-597.2	217.4	590.2	0.00	0.00	0.00
2,520.0	26.30	160.00	2,391.0	-613.8	223.4	606.7	0.00	0.00	0.00
2,560.0	26.30	160.00	2,426.8	-630.5	229.5	623.1	0.00	0.00	0.00
2,600.0	26.30	160.00	2,462.7	-647.1	235.5	639.6	0.00	0.00	0.00
2,640.0	26.30	160.00	2,498.6	-663.8	241.6	656.1	0.00	0.00	0.00
2,680.0	26.30	160.00	2,534.4	-680.4	247.7	672.5	0.00	0.00	0.00
2,720.0	26.30	160.00	2,570.3	-697.1	253.7	689.0	0.00	0.00	0.00
2,760.0	26.30	160.00	2,606.1	-713.7	259.8	705.4	0.00	0.00	0.00
2,800.0	26.30	160.00	2,642.0	-730.4	265.8	721.9	0.00	0.00	0.00
2,840.0	26.30	160.00	2,677.9	-747.1	271.9	738.4	0.00	0.00	0.00
2,880.0	26.30	160.00	2,713.7	-763.7	278.0	754.8	0.00	0.00	0.00
2,920.0	26.30	160.00	2,749.6	-780.4	284.0	771.3	0.00	0.00	0.00
2,960.0	26.30	160.00	2,785.4	-797.0	290.1	787.7	0.00	0.00	0.00
3,000.0	26.30	160.00	2,821.3	-813.7	296.2	804.2	0.00	0.00	0.00
3,004.1	26.30	160.00	2,825.0	-815.4	296.8	805.9	0.00	0.00	0.00
3,040.0	26.07	158.46	2,857.2	-830.2	302.4	820.7	2.00	-0.65	-4.28
3,080.0	25.82	156.72	2,893.2	-846.4	309.1	837.2	2.00	-0.60	-4.36
3,120.0	25.60	154.95	2,929.2	-862.2	316.2	853.7	2.00	-0.55	-4.43
3,160.0	25.41	153.15	2,965.3	-877.7	323.7	870.3	2.00	-0.50	-4.50
3,200.0	25.23	151.32	3,001.5	-892.8	331.7	886.9	2.00	-0.44	-4.56
3,240.0	25.08	149.48	3,037.7	-907.6	340.1	903.5	2.00	-0.38	-4.62
3,280.0	24.95	147.61	3,073.9	-922.0	348.9	920.1	2.00	-0.33	-4.67
3,320.0	24.84	145.72	3,110.2	-936.1	358.1	936.8	2.00	-0.27	-4.71
3,360.0	24.76	143.83	3,146.5	-949.8	367.8	953.5	2.00	-0.21	-4.74
3,400.0	24.70	141.92	3,182.8	-963.1	377.9	970.1	2.00	-0.15	-4.77
3,440.0	24.66	140.01	3,219.2	-976.1	388.4	986.8	2.00	-0.09	-4.79
3,480.0	24.65	138.09	3,255.5	-988.7	399.4	1,003.5	2.00	-0.03	-4.79
3,520.0	24.66	136.17	3,291.9	-1,000.9	410.7	1,020.2	2.00	0.03	-4.79
3,560.0	24.70	134.26	3,328.2	-1,012.8	422.5	1,036.9	2.00	0.09	-4.78
3,600.0	24.76	132.35	3,364.6	-1,024.3	434.7	1,053.5	2.00	0.16	-4.77
3,640.0	24.85	130.46	3,400.9	-1,035.4	447.2	1,070.2	2.00	0.22	-4.74
3,680.0	24.96	128.57	3,437.2	-1,046.1	460.2	1,086.8	2.00	0.27	-4.70
3,720.0	25.09	126.71	3,473.4	-1,056.4	473.6	1,103.5	2.00	0.33	-4.66
3,760.0	25.25	124.86	3,509.6	-1,066.4	487.4	1,120.1	2.00	0.39	-4.61
3,800.0	25.43	123.04	3,545.8	-1,075.9	501.6	1,136.7	2.00	0.45	-4.55
3,840.0	25.63	121.25	3,581.9	-1,085.1	516.2	1,153.2	2.00	0.50	-4.49
3,880.0	25.85	119.48	3,617.9	-1,093.9	531.2	1,169.8	2.00	0.56	-4.42
3,920.0	26.10	117.74	3,653.8	-1,102.3	546.6	1,186.3	2.00	0.61	-4.35
3,951.0	26.30	116.41	3,681.7	-1,108.5	558.8	1,199.0	2.00	0.66	-4.28
3,960.0	26.30	116.41	3,689.7	-1,110.3	562.4	1,202.7	0.00	0.00	0.00
4,000.0	26.30	116.41	3,725.6	-1,118.1	578.2	1,219.2	0.00	0.00	0.00
4,040.0	26.30	116.41	3,761.4	-1,126.0	594.1	1,235.6	0.00	0.00	0.00
4,080.0	26.30	116.41	3,797.3	-1,133.9	610.0	1,252.1	0.00	0.00	0.00

<b>Database:</b>	EDM den0-adp01 Server Data	<b>Local Co-ordinate Reference:</b>	Well LDS D08-18D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4766.0ft (Original Well Elev)
<b>Project:</b>	SEC.5-T3N-R64W	<b>MD Reference:</b>	WELL @ 4766.0ft (Original Well Elev)
<b>Site:</b>	LDS D08-30D Pad Sec.5-T3N-R64W	<b>North Reference:</b>	True
<b>Well:</b>	LDS D08-18D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble LDS D08-18D Plan #1 (05-07-10)		

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)
4,120.0	26.30	116.41	3,833.2	-1,141.8	625.8	1,268.5	0.00	0.00	0.00
4,160.0	26.30	116.41	3,869.0	-1,149.7	641.7	1,285.0	0.00	0.00	0.00
4,200.0	26.30	116.41	3,904.9	-1,157.6	657.6	1,301.4	0.00	0.00	0.00
4,240.0	26.30	116.41	3,940.7	-1,165.4	673.5	1,317.9	0.00	0.00	0.00
4,280.0	26.30	116.41	3,976.6	-1,173.3	689.3	1,334.3	0.00	0.00	0.00
4,320.0	26.30	116.41	4,012.5	-1,181.2	705.2	1,350.8	0.00	0.00	0.00
4,360.0	26.30	116.41	4,048.3	-1,189.1	721.1	1,367.2	0.00	0.00	0.00
4,400.0	26.30	116.41	4,084.2	-1,197.0	737.0	1,383.7	0.00	0.00	0.00
4,440.0	26.30	116.41	4,120.0	-1,204.8	752.8	1,400.1	0.00	0.00	0.00
4,480.0	26.30	116.41	4,155.9	-1,212.7	768.7	1,416.6	0.00	0.00	0.00
4,520.0	26.30	116.41	4,191.8	-1,220.6	784.6	1,433.0	0.00	0.00	0.00
4,560.0	26.30	116.41	4,227.6	-1,228.5	800.5	1,449.5	0.00	0.00	0.00
4,600.0	26.30	116.41	4,263.5	-1,236.4	816.3	1,466.0	0.00	0.00	0.00
4,640.0	26.30	116.41	4,299.3	-1,244.3	832.2	1,482.4	0.00	0.00	0.00
4,680.0	26.30	116.41	4,335.2	-1,252.1	848.1	1,498.9	0.00	0.00	0.00
4,720.0	26.30	116.41	4,371.1	-1,260.0	863.9	1,515.3	0.00	0.00	0.00
4,760.0	26.30	116.41	4,406.9	-1,267.9	879.8	1,531.8	0.00	0.00	0.00
4,800.0	26.30	116.41	4,442.8	-1,275.8	895.7	1,548.2	0.00	0.00	0.00
4,840.0	26.30	116.41	4,478.6	-1,283.7	911.6	1,564.7	0.00	0.00	0.00
4,880.0	26.30	116.41	4,514.5	-1,291.6	927.4	1,581.1	0.00	0.00	0.00
4,920.0	26.30	116.41	4,550.4	-1,299.4	943.3	1,597.6	0.00	0.00	0.00
4,960.0	26.30	116.41	4,586.2	-1,307.3	959.2	1,614.0	0.00	0.00	0.00
5,000.0	26.30	116.41	4,622.1	-1,315.2	975.1	1,630.5	0.00	0.00	0.00
5,040.0	26.30	116.41	4,657.9	-1,323.1	990.9	1,646.9	0.00	0.00	0.00
5,080.0	26.30	116.41	4,693.8	-1,331.0	1,006.8	1,663.4	0.00	0.00	0.00
5,120.0	26.30	116.41	4,729.7	-1,338.9	1,022.7	1,679.8	0.00	0.00	0.00
5,160.0	26.30	116.41	4,765.5	-1,346.7	1,038.5	1,696.3	0.00	0.00	0.00
5,200.0	26.30	116.41	4,801.4	-1,354.6	1,054.4	1,712.7	0.00	0.00	0.00
5,232.7	26.30	116.41	4,830.7	-1,361.1	1,067.4	1,726.2	0.00	0.00	0.00
5,240.0	26.15	116.41	4,837.2	-1,362.5	1,070.3	1,729.2	2.00	-2.00	0.00
5,280.0	25.35	116.41	4,873.3	-1,370.2	1,085.9	1,745.3	2.00	-2.00	0.00
5,320.0	24.55	116.41	4,909.5	-1,377.7	1,101.0	1,761.0	2.00	-2.00	0.00
5,360.0	23.75	116.41	4,946.0	-1,385.0	1,115.6	1,776.2	2.00	-2.00	0.00
5,400.0	22.95	116.41	4,982.8	-1,392.1	1,129.8	1,790.9	2.00	-2.00	0.00
5,440.0	22.15	116.41	5,019.7	-1,398.9	1,143.6	1,805.1	2.00	-2.00	0.00
5,480.0	21.35	116.41	5,056.8	-1,405.5	1,156.8	1,818.9	2.00	-2.00	0.00
5,520.0	20.55	116.41	5,094.2	-1,411.9	1,169.7	1,832.2	2.00	-2.00	0.00
5,560.0	19.75	116.41	5,131.7	-1,418.0	1,182.0	1,845.0	2.00	-2.00	0.00
5,600.0	18.95	116.41	5,169.5	-1,423.9	1,193.9	1,857.3	2.00	-2.00	0.00
5,640.0	18.15	116.41	5,207.4	-1,429.5	1,205.3	1,869.1	2.00	-2.00	0.00
5,680.0	17.35	116.41	5,245.5	-1,435.0	1,216.2	1,880.4	2.00	-2.00	0.00
5,720.0	16.55	116.41	5,283.8	-1,440.2	1,226.6	1,891.2	2.00	-2.00	0.00
5,760.0	15.75	116.41	5,322.2	-1,445.1	1,236.6	1,901.6	2.00	-2.00	0.00
5,800.0	14.95	116.41	5,360.8	-1,449.8	1,246.1	1,911.4	2.00	-2.00	0.00
5,840.0	14.15	116.41	5,399.5	-1,454.3	1,255.1	1,920.7	2.00	-2.00	0.00
5,880.0	13.35	116.41	5,438.3	-1,458.5	1,263.6	1,929.6	2.00	-2.00	0.00
5,920.0	12.55	116.41	5,477.3	-1,462.5	1,271.7	1,937.9	2.00	-2.00	0.00
5,960.0	11.75	116.41	5,516.4	-1,466.3	1,279.2	1,945.7	2.00	-2.00	0.00
6,000.0	10.95	116.41	5,555.6	-1,469.8	1,286.2	1,953.0	2.00	-2.00	0.00
6,040.0	10.15	116.41	5,594.9	-1,473.0	1,292.8	1,959.8	2.00	-2.00	0.00
6,080.0	9.35	116.41	5,634.4	-1,476.0	1,298.9	1,966.1	2.00	-2.00	0.00
6,120.0	8.55	116.41	5,673.9	-1,478.8	1,304.5	1,971.9	2.00	-2.00	0.00
6,160.0	7.75	116.41	5,713.5	-1,481.3	1,309.5	1,977.1	2.00	-2.00	0.00
6,200.0	6.95	116.41	5,753.1	-1,483.6	1,314.1	1,981.9	2.00	-2.00	0.00

<b>Database:</b>	EDM den0-adp01 Server Data	<b>Local Co-ordinate Reference:</b>	Well LDS D08-18D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4766.0ft (Original Well Elev)
<b>Project:</b>	SEC.5-T3N-R64W	<b>MD Reference:</b>	WELL @ 4766.0ft (Original Well Elev)
<b>Site:</b>	LDS D08-30D Pad Sec.5-T3N-R64W	<b>North Reference:</b>	True
<b>Well:</b>	LDS D08-18D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble LDS D08-18D Plan #1 (05-07-10)		

**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	6.15	116.41	5,792.9	-1,485.6	1,318.2	1,986.1	2.00	-2.00	0.00
6,280.0	5.35	116.41	5,832.7	-1,487.4	1,321.8	1,989.9	2.00	-2.00	0.00
6,320.0	4.55	116.41	5,872.5	-1,488.9	1,324.9	1,993.1	2.00	-2.00	0.00
6,360.0	3.75	116.41	5,912.4	-1,490.2	1,327.5	1,995.8	2.00	-2.00	0.00
6,400.0	2.95	116.41	5,952.4	-1,491.3	1,329.6	1,997.9	2.00	-2.00	0.00
6,440.0	2.15	116.41	5,992.3	-1,492.1	1,331.2	1,999.6	2.00	-2.00	0.00
6,480.0	1.35	116.41	6,032.3	-1,492.6	1,332.3	2,000.7	2.00	-2.00	0.00
6,520.0	0.55	116.41	6,072.3	-1,492.9	1,332.9	2,001.3	2.00	-2.00	0.00
6,547.7	0.00	0.00	6,100.0	-1,493.0	1,333.0	2,001.5	2.00	-2.00	0.00
<b>TARGET BHL 1310'FNL, 2540'FEL</b>									
6,560.0	0.00	0.00	6,112.3	-1,493.0	1,333.0	2,001.5	0.00	0.00	0.00
6,600.0	0.00	0.00	6,152.3	-1,493.0	1,333.0	2,001.5	0.00	0.00	0.00
6,640.0	0.00	0.00	6,192.3	-1,493.0	1,333.0	2,001.5	0.00	0.00	0.00
6,680.0	0.00	0.00	6,232.3	-1,493.0	1,333.0	2,001.5	0.00	0.00	0.00
6,720.0	0.00	0.00	6,272.3	-1,493.0	1,333.0	2,001.5	0.00	0.00	0.00
6,760.0	0.00	0.00	6,312.3	-1,493.0	1,333.0	2,001.5	0.00	0.00	0.00
6,800.0	0.00	0.00	6,352.3	-1,493.0	1,333.0	2,001.5	0.00	0.00	0.00
6,840.0	0.00	0.00	6,392.3	-1,493.0	1,333.0	2,001.5	0.00	0.00	0.00
6,880.0	0.00	0.00	6,432.3	-1,493.0	1,333.0	2,001.5	0.00	0.00	0.00
6,920.0	0.00	0.00	6,472.3	-1,493.0	1,333.0	2,001.5	0.00	0.00	0.00
6,960.0	0.00	0.00	6,512.3	-1,493.0	1,333.0	2,001.5	0.00	0.00	0.00
7,000.0	0.00	0.00	6,552.3	-1,493.0	1,333.0	2,001.5	0.00	0.00	0.00
7,040.0	0.00	0.00	6,592.3	-1,493.0	1,333.0	2,001.5	0.00	0.00	0.00
7,080.0	0.00	0.00	6,632.3	-1,493.0	1,333.0	2,001.5	0.00	0.00	0.00
7,113.7	0.00	0.00	6,666.0	-1,493.0	1,333.0	2,001.5	0.00	0.00	0.00
<b>NIOBRARA - TARGET CIRCLE 1310'FNL, 2540'FEL</b>									
7,120.0	0.00	0.00	6,672.3	-1,493.0	1,333.0	2,001.5	0.00	0.00	0.00
7,160.0	0.00	0.00	6,712.3	-1,493.0	1,333.0	2,001.5	0.00	0.00	0.00
7,200.0	0.00	0.00	6,752.3	-1,493.0	1,333.0	2,001.5	0.00	0.00	0.00
7,240.0	0.00	0.00	6,792.3	-1,493.0	1,333.0	2,001.5	0.00	0.00	0.00
7,280.0	0.00	0.00	6,832.3	-1,493.0	1,333.0	2,001.5	0.00	0.00	0.00
7,320.0	0.00	0.00	6,872.3	-1,493.0	1,333.0	2,001.5	0.00	0.00	0.00
7,360.0	0.00	0.00	6,912.3	-1,493.0	1,333.0	2,001.5	0.00	0.00	0.00
7,400.0	0.00	0.00	6,952.3	-1,493.0	1,333.0	2,001.5	0.00	0.00	0.00
7,413.7	0.00	0.00	6,966.0	-1,493.0	1,333.0	2,001.5	0.00	0.00	0.00
<b>CODELL</b>									
7,440.0	0.00	0.00	6,992.3	-1,493.0	1,333.0	2,001.5	0.00	0.00	0.00
7,480.0	0.00	0.00	7,032.3	-1,493.0	1,333.0	2,001.5	0.00	0.00	0.00
7,520.0	0.00	0.00	7,072.3	-1,493.0	1,333.0	2,001.5	0.00	0.00	0.00
7,560.0	0.00	0.00	7,112.3	-1,493.0	1,333.0	2,001.5	0.00	0.00	0.00
7,563.7	0.00	0.00	7,116.0	-1,493.0	1,333.0	2,001.5	0.00	0.00	0.00
<b>HARDLINE 75'W OF BHL</b>									

<b>Database:</b>	EDM den0-adp01 Server Data	<b>Local Co-ordinate Reference:</b>	Well LDS D08-18D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4766.0ft (Original Well Elev)
<b>Project:</b>	SEC.5-T3N-R64W	<b>MD Reference:</b>	WELL @ 4766.0ft (Original Well Elev)
<b>Site:</b>	LDS D08-30D Pad Sec.5-T3N-R64W	<b>North Reference:</b>	True
<b>Well:</b>	LDS D08-18D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble LDS D08-18D Plan #1 (05-07-10)		

Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
TARGET BHL 1310'F	0.00	0.00	6,100.0	-1,493.0	1,333.0	1,332,926.60	3,258,330.41	40° 14' 36.894 N	104° 34' 28.470 W
- plan hits target center									
- Point									
TARGET CIRCLE 131	0.00	0.00	6,666.0	-1,493.0	1,333.0	1,332,926.57	3,258,330.41	40° 14' 36.894 N	104° 34' 28.470 W
- plan hits target center									
- Circle (radius 75.0)									
HARDLINE 75'W OF I	0.00	0.00	7,116.0	-1,593.0	1,258.0	1,332,825.81	3,258,256.46	40° 14' 35.906 N	104° 34' 29.437 W
- plan misses target center by 125.0ft at 7563.7ft MD (7116.0 TVD, -1493.0 N, 1333.0 E)									
- Polygon									
Point 1			7,116.0	0.0	0.0	1,332,825.81	3,258,256.46		
Point 2			7,116.0	200.0	0.0	1,333,025.79	3,258,254.38		

Casing Points					
Measured Depth	Vertical Depth			Casing Diameter	Hole Diameter
(ft)	(ft)			(")	(")
		Name			
650.3	650.0	8 5/8"		8-5/8	12-1/4

Formations					
Measured Depth	Vertical Depth			Dip	Dip Direction
(ft)	(ft)			(°)	(°)
		Name	Lithology		
7,113.7	6,666.0	NIOBRARA		0.00	
7,413.7	6,966.0	CODELL		0.00	