

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	750.0	0.00	0.00	750.0	0.0	0.0	0.00	0.00	0.0	
3	1677.2	18.54	277.74	1661.1	20.0	-147.4	2.00	277.74	148.7	
4	5081.8	18.54	277.74	4888.9	165.8	-1220.3	0.00	0.00	1231.5	
5	6009.0	0.00	0.00	5800.0	185.8	-1367.7	2.00	180.00	1380.3	Target BHL 2545°FNL & 75°FEL
6	7260.0	0.00	0.00	7051.0	185.8	-1367.7	0.00	0.00	1380.3	



Directional

**NOBLE ENERGY INC WELD
COUNTY CO**

SEC.3-T3N-R64W

Becca D03-32D Pad Sec.3-T3N-R64W

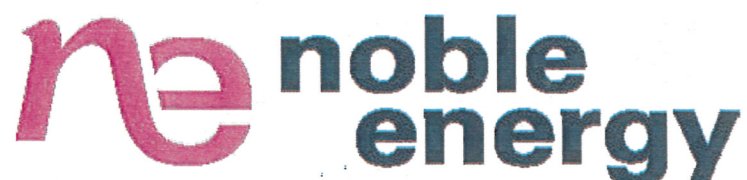
Becca D03-32D

Wellbore #1

Plan: Noble Becca D03-32D Plan #1 (8-18-10)

Standard Planning Report

25 August, 2010



Database: EDM den0-adp01 Server Data
Company: NOBLE ENERGY INC WELD COUNTY CO
Project: SEC.3-T3N-R64W
Site: Becca D03-32D Pad Sec.3-T3N-R64W
Well: Becca D03-32D
Wellbore: Wellbore #1
Design: Noble Becca D03-32D Plan #1 (8-18-10)

Local Co-ordinate Reference: Well Becca D03-32D
TVD Reference: WELL @ 4721.0ft (Original Well Elev)
MD Reference: WELL @ 4721.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

Project	SEC.3-T3N-R64W, 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	Becca D03-32D Pad Sec.3-T3N-R64W				
Site Position:		Northing:	1,336,909.37 ft	Latitude:	40° 15' 15.300 N
From:	Lat/Long	Easting:	3,267,392.50 ft	Longitude:	104° 32' 31.056 W
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.62 °

Well	Becca D03-32D					
Well Position	+N/-S	0.0 ft	Northing:	1,336,909.36 ft	Latitude:	40° 15' 15.300 N
	+E/-W	0.0 ft	Easting:	3,267,392.50 ft	Longitude:	104° 32' 31.056 W
Position Uncertainty	0.0 ft		Wellhead Elevation:	ft	Ground Level:	4,708.0 ft

Wellbore	Wellbore #1					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)	
	IGRF2010	8/18/2010	8.84	67.00	53,167	

Design	Noble Becca D03-32D Plan #1 (8-18-10)			
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	277.74

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	
750.0	0.00	0.00	750.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,677.2	18.54	277.74	1,661.1	20.0	-147.4	2.00	2.00	0.00	277.74	
5,081.8	18.54	277.74	4,888.9	165.8	-1,220.3	0.00	0.00	0.00	0.00	
6,009.0	0.00	0.00	5,800.0	185.8	-1,367.7	2.00	-2.00	0.00	180.00	Target BHL 2545'FI
7,260.0	0.00	0.00	7,051.0	185.8	-1,367.7	0.00	0.00	0.00	0.00	

Database: EDM den0-adp01 Server Data
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MD Reference: WELL @ 4721.0ft (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
550.0	0.00	0.00	550.0	0.0	0.0	0.0	0.00	0.00	0.00
8 5/8"									
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
750.0	0.00	0.00	750.0	0.0	0.0	0.0	0.00	0.00	0.00
760.0	0.20	277.74	760.0	0.0	0.0	0.0	2.00	2.00	0.00
800.0	1.00	277.74	800.0	0.1	-0.4	0.4	2.00	2.00	0.00
840.0	1.80	277.74	840.0	0.2	-1.4	1.4	2.00	2.00	0.00
880.0	2.60	277.74	880.0	0.4	-2.9	2.9	2.00	2.00	0.00
920.0	3.40	277.74	919.9	0.7	-5.0	5.0	2.00	2.00	0.00
960.0	4.20	277.74	959.8	1.0	-7.6	7.7	2.00	2.00	0.00
1,000.0	5.00	277.74	999.7	1.5	-10.8	10.9	2.00	2.00	0.00
1,040.0	5.80	277.74	1,039.5	2.0	-14.5	14.7	2.00	2.00	0.00
1,080.0	6.60	277.74	1,079.3	2.6	-18.8	19.0	2.00	2.00	0.00
1,120.0	7.40	277.74	1,119.0	3.2	-23.6	23.9	2.00	2.00	0.00
1,160.0	8.20	277.74	1,158.6	3.9	-29.0	29.3	2.00	2.00	0.00
1,200.0	9.00	277.74	1,198.2	4.7	-34.9	35.3	2.00	2.00	0.00
1,240.0	9.80	277.74	1,237.6	5.6	-41.4	41.8	2.00	2.00	0.00
1,280.0	10.60	277.74	1,277.0	6.6	-48.4	48.9	2.00	2.00	0.00
1,320.0	11.40	277.74	1,316.2	7.6	-56.0	56.5	2.00	2.00	0.00
1,360.0	12.20	277.74	1,355.4	8.7	-64.1	64.7	2.00	2.00	0.00
1,400.0	13.00	277.74	1,394.4	9.9	-72.8	73.4	2.00	2.00	0.00
1,440.0	13.80	277.74	1,433.3	11.1	-81.9	82.7	2.00	2.00	0.00
1,480.0	14.60	277.74	1,472.1	12.5	-91.7	92.5	2.00	2.00	0.00
1,520.0	15.40	277.74	1,510.8	13.8	-101.9	102.9	2.00	2.00	0.00
1,560.0	16.20	277.74	1,549.3	15.3	-112.7	113.7	2.00	2.00	0.00
1,600.0	17.00	277.74	1,587.6	16.9	-124.0	125.2	2.00	2.00	0.00
1,640.0	17.80	277.74	1,625.8	18.5	-135.9	137.1	2.00	2.00	0.00
1,677.2	18.54	277.74	1,661.1	20.0	-147.4	148.7	2.00	2.00	0.00
1,680.0	18.54	277.74	1,663.8	20.1	-148.3	149.6	0.00	0.00	0.00
1,720.0	18.54	277.74	1,701.7	21.9	-160.9	162.4	0.00	0.00	0.00
1,760.0	18.54	277.74	1,739.6	23.6	-173.5	175.1	0.00	0.00	0.00
1,800.0	18.54	277.74	1,777.5	25.3	-186.1	187.8	0.00	0.00	0.00
1,840.0	18.54	277.74	1,815.4	27.0	-198.7	200.5	0.00	0.00	0.00
1,880.0	18.54	277.74	1,853.4	28.7	-211.3	213.2	0.00	0.00	0.00
1,920.0	18.54	277.74	1,891.3	30.4	-223.9	226.0	0.00	0.00	0.00
1,960.0	18.54	277.74	1,929.2	32.1	-236.5	238.7	0.00	0.00	0.00

Database: EDM den0-adp01 Server Data
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Project: SEC.3-T3N-R64W
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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)
2,000.0	18.54	277.74	1,967.1	33.9	-249.1	251.4	0.00	0.00	0.00
2,040.0	18.54	277.74	2,005.1	35.6	-261.7	264.1	0.00	0.00	0.00
2,080.0	18.54	277.74	2,043.0	37.3	-274.3	276.8	0.00	0.00	0.00
2,120.0	18.54	277.74	2,080.9	39.0	-286.9	289.6	0.00	0.00	0.00
2,160.0	18.54	277.74	2,118.8	40.7	-299.5	302.3	0.00	0.00	0.00
2,200.0	18.54	277.74	2,156.8	42.4	-312.1	315.0	0.00	0.00	0.00
2,240.0	18.54	277.74	2,194.7	44.1	-324.7	327.7	0.00	0.00	0.00
2,280.0	18.54	277.74	2,232.6	45.8	-337.4	340.5	0.00	0.00	0.00
2,320.0	18.54	277.74	2,270.5	47.6	-350.0	353.2	0.00	0.00	0.00
2,360.0	18.54	277.74	2,308.4	49.3	-362.6	365.9	0.00	0.00	0.00
2,400.0	18.54	277.74	2,346.4	51.0	-375.2	378.6	0.00	0.00	0.00
2,440.0	18.54	277.74	2,384.3	52.7	-387.8	391.3	0.00	0.00	0.00
2,480.0	18.54	277.74	2,422.2	54.4	-400.4	404.1	0.00	0.00	0.00
2,520.0	18.54	277.74	2,460.1	56.1	-413.0	416.8	0.00	0.00	0.00
2,560.0	18.54	277.74	2,498.1	57.8	-425.6	429.5	0.00	0.00	0.00
2,600.0	18.54	277.74	2,536.0	59.5	-438.2	442.2	0.00	0.00	0.00
2,640.0	18.54	277.74	2,573.9	61.3	-450.8	454.9	0.00	0.00	0.00
2,680.0	18.54	277.74	2,611.8	63.0	-463.4	467.7	0.00	0.00	0.00
2,720.0	18.54	277.74	2,649.8	64.7	-476.0	480.4	0.00	0.00	0.00
2,760.0	18.54	277.74	2,687.7	66.4	-488.6	493.1	0.00	0.00	0.00
2,800.0	18.54	277.74	2,725.6	68.1	-501.2	505.8	0.00	0.00	0.00
2,840.0	18.54	277.74	2,763.5	69.8	-513.8	518.6	0.00	0.00	0.00
2,880.0	18.54	277.74	2,801.4	71.5	-526.4	531.3	0.00	0.00	0.00
2,920.0	18.54	277.74	2,839.4	73.2	-539.0	544.0	0.00	0.00	0.00
2,960.0	18.54	277.74	2,877.3	75.0	-551.6	556.7	0.00	0.00	0.00
3,000.0	18.54	277.74	2,915.2	76.7	-564.3	569.4	0.00	0.00	0.00
3,040.0	18.54	277.74	2,953.1	78.4	-576.9	582.2	0.00	0.00	0.00
3,080.0	18.54	277.74	2,991.1	80.1	-589.5	594.9	0.00	0.00	0.00
3,120.0	18.54	277.74	3,029.0	81.8	-602.1	607.6	0.00	0.00	0.00
3,160.0	18.54	277.74	3,066.9	83.5	-614.7	620.3	0.00	0.00	0.00
3,200.0	18.54	277.74	3,104.8	85.2	-627.3	633.0	0.00	0.00	0.00
3,240.0	18.54	277.74	3,142.8	87.0	-639.9	645.8	0.00	0.00	0.00
3,280.0	18.54	277.74	3,180.7	88.7	-652.5	658.5	0.00	0.00	0.00
3,320.0	18.54	277.74	3,218.6	90.4	-665.1	671.2	0.00	0.00	0.00
3,360.0	18.54	277.74	3,256.5	92.1	-677.7	683.9	0.00	0.00	0.00
3,400.0	18.54	277.74	3,294.4	93.8	-690.3	696.7	0.00	0.00	0.00
3,440.0	18.54	277.74	3,332.4	95.5	-702.9	709.4	0.00	0.00	0.00
3,480.0	18.54	277.74	3,370.3	97.2	-715.5	722.1	0.00	0.00	0.00
3,520.0	18.54	277.74	3,408.2	98.9	-728.1	734.8	0.00	0.00	0.00
3,560.0	18.54	277.74	3,446.1	100.7	-740.7	747.5	0.00	0.00	0.00
3,600.0	18.54	277.74	3,484.1	102.4	-753.3	760.3	0.00	0.00	0.00
3,640.0	18.54	277.74	3,522.0	104.1	-765.9	773.0	0.00	0.00	0.00
3,680.0	18.54	277.74	3,559.9	105.8	-778.5	785.7	0.00	0.00	0.00
3,720.0	18.54	277.74	3,597.8	107.5	-791.2	798.4	0.00	0.00	0.00
3,760.0	18.54	277.74	3,635.8	109.2	-803.8	811.1	0.00	0.00	0.00
3,800.0	18.54	277.74	3,673.7	110.9	-816.4	823.9	0.00	0.00	0.00
3,840.0	18.54	277.74	3,711.6	112.6	-829.0	836.6	0.00	0.00	0.00
3,880.0	18.54	277.74	3,749.5	114.4	-841.6	849.3	0.00	0.00	0.00
3,920.0	18.54	277.74	3,787.4	116.1	-854.2	862.0	0.00	0.00	0.00
3,960.0	18.54	277.74	3,825.4	117.8	-866.8	874.8	0.00	0.00	0.00
4,000.0	18.54	277.74	3,863.3	119.5	-879.4	887.5	0.00	0.00	0.00
4,040.0	18.54	277.74	3,901.2	121.2	-892.0	900.2	0.00	0.00	0.00
4,080.0	18.54	277.74	3,939.1	122.9	-904.6	912.9	0.00	0.00	0.00
4,120.0	18.54	277.74	3,977.1	124.6	-917.2	925.6	0.00	0.00	0.00

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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)
4,160.0	18.54	277.74	4,015.0	126.3	-929.8	938.4	0.00	0.00	0.00
4,200.0	18.54	277.74	4,052.9	128.1	-942.4	951.1	0.00	0.00	0.00
4,240.0	18.54	277.74	4,090.8	129.8	-955.0	963.8	0.00	0.00	0.00
4,280.0	18.54	277.74	4,128.8	131.5	-967.6	976.5	0.00	0.00	0.00
4,320.0	18.54	277.74	4,166.7	133.2	-980.2	989.2	0.00	0.00	0.00
4,360.0	18.54	277.74	4,204.6	134.9	-992.8	1,002.0	0.00	0.00	0.00
4,400.0	18.54	277.74	4,242.5	136.6	-1,005.4	1,014.7	0.00	0.00	0.00
4,440.0	18.54	277.74	4,280.4	138.3	-1,018.1	1,027.4	0.00	0.00	0.00
4,480.0	18.54	277.74	4,318.4	140.1	-1,030.7	1,040.1	0.00	0.00	0.00
4,520.0	18.54	277.74	4,356.3	141.8	-1,043.3	1,052.9	0.00	0.00	0.00
4,560.0	18.54	277.74	4,394.2	143.5	-1,055.9	1,065.6	0.00	0.00	0.00
4,600.0	18.54	277.74	4,432.1	145.2	-1,068.5	1,078.3	0.00	0.00	0.00
4,640.0	18.54	277.74	4,470.1	146.9	-1,081.1	1,091.0	0.00	0.00	0.00
4,680.0	18.54	277.74	4,508.0	148.6	-1,093.7	1,103.7	0.00	0.00	0.00
4,720.0	18.54	277.74	4,545.9	150.3	-1,106.3	1,116.5	0.00	0.00	0.00
4,760.0	18.54	277.74	4,583.8	152.0	-1,118.9	1,129.2	0.00	0.00	0.00
4,800.0	18.54	277.74	4,621.8	153.8	-1,131.5	1,141.9	0.00	0.00	0.00
4,840.0	18.54	277.74	4,659.7	155.5	-1,144.1	1,154.6	0.00	0.00	0.00
4,880.0	18.54	277.74	4,697.6	157.2	-1,156.7	1,167.3	0.00	0.00	0.00
4,920.0	18.54	277.74	4,735.5	158.9	-1,169.3	1,180.1	0.00	0.00	0.00
4,960.0	18.54	277.74	4,773.5	160.6	-1,181.9	1,192.8	0.00	0.00	0.00
5,000.0	18.54	277.74	4,811.4	162.3	-1,194.5	1,205.5	0.00	0.00	0.00
5,040.0	18.54	277.74	4,849.3	164.0	-1,207.1	1,218.2	0.00	0.00	0.00
5,080.0	18.54	277.74	4,887.2	165.7	-1,219.7	1,231.0	0.00	0.00	0.00
5,081.8	18.54	277.74	4,888.9	165.8	-1,220.3	1,231.5	0.00	0.00	0.00
5,120.0	17.78	277.74	4,925.2	167.4	-1,232.1	1,243.4	2.00	-2.00	0.00
5,160.0	16.98	277.74	4,963.4	169.0	-1,243.9	1,255.4	2.00	-2.00	0.00
5,200.0	16.18	277.74	5,001.7	170.6	-1,255.3	1,266.8	2.00	-2.00	0.00
5,240.0	15.38	277.74	5,040.2	172.0	-1,266.0	1,277.7	2.00	-2.00	0.00
5,280.0	14.58	277.74	5,078.9	173.4	-1,276.3	1,288.0	2.00	-2.00	0.00
5,320.0	13.78	277.74	5,117.6	174.7	-1,286.0	1,297.8	2.00	-2.00	0.00
5,360.0	12.98	277.74	5,156.6	176.0	-1,295.2	1,307.1	2.00	-2.00	0.00
5,400.0	12.18	277.74	5,195.6	177.2	-1,303.8	1,315.8	2.00	-2.00	0.00
5,440.0	11.38	277.74	5,234.8	178.3	-1,311.9	1,323.9	2.00	-2.00	0.00
5,480.0	10.58	277.74	5,274.0	179.3	-1,319.4	1,331.6	2.00	-2.00	0.00
5,520.0	9.78	277.74	5,313.4	180.2	-1,326.4	1,338.6	2.00	-2.00	0.00
5,560.0	8.98	277.74	5,352.9	181.1	-1,332.9	1,345.1	2.00	-2.00	0.00
5,600.0	8.18	277.74	5,392.4	181.9	-1,338.8	1,351.1	2.00	-2.00	0.00
5,640.0	7.38	277.74	5,432.0	182.7	-1,344.2	1,356.5	2.00	-2.00	0.00
5,680.0	6.58	277.74	5,471.7	183.3	-1,349.0	1,361.4	2.00	-2.00	0.00
5,720.0	5.78	277.74	5,511.5	183.9	-1,353.3	1,365.7	2.00	-2.00	0.00
5,760.0	4.98	277.74	5,551.3	184.4	-1,357.0	1,369.4	2.00	-2.00	0.00
5,800.0	4.18	277.74	5,591.2	184.8	-1,360.1	1,372.6	2.00	-2.00	0.00
5,840.0	3.38	277.74	5,631.1	185.2	-1,362.7	1,375.3	2.00	-2.00	0.00
5,880.0	2.58	277.74	5,671.1	185.5	-1,364.8	1,377.4	2.00	-2.00	0.00
5,920.0	1.78	277.74	5,711.0	185.7	-1,366.3	1,378.9	2.00	-2.00	0.00
5,960.0	0.98	277.74	5,751.0	185.8	-1,367.3	1,379.8	2.00	-2.00	0.00
6,000.0	0.18	277.74	5,791.0	185.8	-1,367.7	1,380.2	2.00	-2.00	0.00
6,009.0	0.00	0.00	5,800.0	185.8	-1,367.7	1,380.3	2.00	-2.00	0.00
Target BHL 2545°FNL & 75°FEL									
6,040.0	0.00	0.00	5,831.0	185.8	-1,367.7	1,380.3	0.00	0.00	0.00
6,080.0	0.00	0.00	5,871.0	185.8	-1,367.7	1,380.3	0.00	0.00	0.00
6,120.0	0.00	0.00	5,911.0	185.8	-1,367.7	1,380.3	0.00	0.00	0.00
6,160.0	0.00	0.00	5,951.0	185.8	-1,367.7	1,380.3	0.00	0.00	0.00

Database: EDM den0-adp01 Server Data
Company: NOBLE ENERGY INC WELD COUNTY CO
Project: SEC.3-T3N-R64W
Site: Becca D03-32D Pad Sec.3-T3N-R64W
Well: Becca D03-32D
Wellbore: Wellbore #1
Design: Noble Becca D03-32D Plan #1 (8-18-10)

Local Co-ordinate Reference: Well Becca D03-32D
TVD Reference: WELL @ 4721.0ft (Original Well Elev)
MD Reference: WELL @ 4721.0ft (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)
6,200.0	0.00	0.00	5,991.0	185.8	-1,367.7	1,380.3	0.00	0.00	0.00
6,240.0	0.00	0.00	6,031.0	185.8	-1,367.7	1,380.3	0.00	0.00	0.00
6,280.0	0.00	0.00	6,071.0	185.8	-1,367.7	1,380.3	0.00	0.00	0.00
6,320.0	0.00	0.00	6,111.0	185.8	-1,367.7	1,380.3	0.00	0.00	0.00
6,360.0	0.00	0.00	6,151.0	185.8	-1,367.7	1,380.3	0.00	0.00	0.00
6,400.0	0.00	0.00	6,191.0	185.8	-1,367.7	1,380.3	0.00	0.00	0.00
6,440.0	0.00	0.00	6,231.0	185.8	-1,367.7	1,380.3	0.00	0.00	0.00
6,480.0	0.00	0.00	6,271.0	185.8	-1,367.7	1,380.3	0.00	0.00	0.00
6,520.0	0.00	0.00	6,311.0	185.8	-1,367.7	1,380.3	0.00	0.00	0.00
6,560.0	0.00	0.00	6,351.0	185.8	-1,367.7	1,380.3	0.00	0.00	0.00
6,600.0	0.00	0.00	6,391.0	185.8	-1,367.7	1,380.3	0.00	0.00	0.00
6,640.0	0.00	0.00	6,431.0	185.8	-1,367.7	1,380.3	0.00	0.00	0.00
6,680.0	0.00	0.00	6,471.0	185.8	-1,367.7	1,380.3	0.00	0.00	0.00
6,720.0	0.00	0.00	6,511.0	185.8	-1,367.7	1,380.3	0.00	0.00	0.00
6,760.0	0.00	0.00	6,551.0	185.8	-1,367.7	1,380.3	0.00	0.00	0.00
6,800.0	0.00	0.00	6,591.0	185.8	-1,367.7	1,380.3	0.00	0.00	0.00
6,815.0	0.00	0.00	6,606.0	185.8	-1,367.7	1,380.3	0.00	0.00	0.00
Niobrara - Target Circle 2545'FNL & 75'FEL									
6,840.0	0.00	0.00	6,631.0	185.8	-1,367.7	1,380.3	0.00	0.00	0.00
6,880.0	0.00	0.00	6,671.0	185.8	-1,367.7	1,380.3	0.00	0.00	0.00
6,920.0	0.00	0.00	6,711.0	185.8	-1,367.7	1,380.3	0.00	0.00	0.00
6,960.0	0.00	0.00	6,751.0	185.8	-1,367.7	1,380.3	0.00	0.00	0.00
7,000.0	0.00	0.00	6,791.0	185.8	-1,367.7	1,380.3	0.00	0.00	0.00
7,040.0	0.00	0.00	6,831.0	185.8	-1,367.7	1,380.3	0.00	0.00	0.00
7,080.0	0.00	0.00	6,871.0	185.8	-1,367.7	1,380.3	0.00	0.00	0.00
7,110.0	0.00	0.00	6,901.0	185.8	-1,367.7	1,380.3	0.00	0.00	0.00
Codell									
7,120.0	0.00	0.00	6,911.0	185.8	-1,367.7	1,380.3	0.00	0.00	0.00
7,160.0	0.00	0.00	6,951.0	185.8	-1,367.7	1,380.3	0.00	0.00	0.00
7,200.0	0.00	0.00	6,991.0	185.8	-1,367.7	1,380.3	0.00	0.00	0.00
7,240.0	0.00	0.00	7,031.0	185.8	-1,367.7	1,380.3	0.00	0.00	0.00
7,260.0	0.00	0.00	7,051.0	185.8	-1,367.7	1,380.3	0.00	0.00	0.00
Hardlines 75'S & 75'E of BHL									

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MD Reference: WELL @ 4721.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

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 Circle 2545'FN - plan hits target center - Circle (radius 75.0)	0.00	0.00	6,606.0	185.8	-1,367.7	1,337,080.41	3,266,022.95	40° 15' 17.136 N	104° 32' 48.696 W
Hardlines 75'S & 75'E - plan misses target center by 106.1ft at 7260.0ft MD (7051.0 TVD, 185.8 N, -1367.7 E) - Polygon	0.00	0.00	7,051.0	110.8	-1,292.7	1,337,006.18	3,266,098.74	40° 15' 16.394 N	104° 32' 47.729 W
Point 1			7,051.0	0.0	0.0	1,337,006.18	3,266,098.74		
Point 2			7,051.0	0.0	-200.0	1,337,004.02	3,265,898.76		
Point 3			7,051.0	0.0	0.0	1,337,006.18	3,266,098.74		
Point 4			7,051.0	200.0	0.0	1,337,206.16	3,266,096.58		
Target BHL 2545'FNL - plan hits target center - Point	0.00	0.00	5,800.0	185.8	-1,367.7	1,337,080.41	3,266,022.95	40° 15' 17.136 N	104° 32' 48.696 W

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
550.0	550.0	8 5/8"	8-5/8	12-1/4

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
6,815.0	6,606.0	Niobrara		0.00	
7,110.0	6,901.0	Codell		0.00	