

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	900.0	0.00	0.00	900.0	0.0	0.0	0.00	0.00	0.0	
3	1611.3	14.23	325.02	1604.0	72.0	-50.4	2.00	325.02	87.8	
4	4388.5	14.23	325.02	4296.0	631.1	-441.6	0.00	0.00	770.3	
5	5099.7	0.00	0.00	5000.0	703.1	-492.0	2.00	180.00	858.2	TARGET BHL 1320'FSL, 2550'FEL
6	8020.7	0.00	0.00	7921.0	703.1	-492.0	0.00	0.00	858.2	



**Directional**

**NOBLE ENERGY INC WELD  
COUNTY CO**

**SEC.8-T2N-R65W**

**Dechant X08-24D Pad Sec.8-T2N-R65W**

**Dechant X08-24D**

**Wellbore #1**

**Plan: Noble Dechant X08-24D Plan #1 (7-30-10)**

**Standard Planning Report**

**04 August, 2010**

**Database:** Landmark  
**Company:** NOBLE ENERGY INC WELD COUNTY CO  
**Project:** SEC.8-T2N-R65W  
**Site:** Dechant X08-24D Pad Sec.8-T2N-R65W  
**Well:** Dechant X08-24D  
**Wellbore:** Wellbore #1  
**Design:** Noble Dechant X08-24D Plan #1 (7-30-10)

**Local Co-ordinate Reference:** Well Dechant X08-24D  
**TVD Reference:** WELL @ 4926.0ft (Original Well Elev)  
**MD Reference:** WELL @ 4926.0ft (Original Well Elev)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature

<b>Project</b>	SEC.8-T2N-R65W, 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		Using Well Reference Point
<b>Map Zone:</b>	Colorado Northern Zone		Using geodetic scale factor

<b>Site</b>	Dechant X08-24D Pad Sec.8-T2N-R65W				
<b>Site Position:</b>		<b>Northing:</b>	1,297,677.47 ft	<b>Latitude:</b>	40° 8' 51.540 N
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,227,629.16 ft	<b>Longitude:</b>	104° 41' 8.556 W
<b>Position Uncertainty:</b>	0.0 ft	<b>Slot Radius:</b>	"	<b>Grid Convergence:</b>	0.53 °

Well	Dechant X08-24D					
Well Position	+N/-S	0.0 ft	Northing:	1,297,677.46 ft	Latitude:	40° 8' 51.540 N
	+E/-W	0.0 ft	Easting:	3,227,629.16 ft	Longitude:	104° 41' 8.556 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,913.0 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	8/3/2010	8.92	66.89	53,098

<b>Design</b>	Noble Dechant X08-24D Plan #1 (7-30-10)				
<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	325.02	

<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	
900.0	0.00	0.00	900.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,611.3	14.23	325.02	1,604.0	72.0	-50.4	2.00	2.00	0.00	325.02	
4,388.5	14.23	325.02	4,296.0	631.1	-441.6	0.00	0.00	0.00	0.00	
5,099.7	0.00	0.00	5,000.0	703.1	-492.0	2.00	-2.00	0.00	180.00	TARGET BHL 132C
8,020.7	0.00	0.00	7,921.0	703.1	-492.0	0.00	0.00	0.00	0.00	



Database: Landmark  
Company: NOBLE ENERGY INC WELD COUNTY CO  
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TVD Reference: WELL @ 4926.0ft (Original Well Elev)  
MD Reference: WELL @ 4926.0ft (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
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
880.0	0.00	0.00	880.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
920.0	0.40	325.02	920.0	0.1	0.0	0.1	2.00	2.00	0.00
960.0	1.20	325.02	960.0	0.5	-0.4	0.6	2.00	2.00	0.00
1,000.0	2.00	325.02	1,000.0	1.4	-1.0	1.7	2.00	2.00	0.00
1,040.0	2.80	325.02	1,039.9	2.8	-2.0	3.4	2.00	2.00	0.00
1,080.0	3.60	325.02	1,079.9	4.6	-3.2	5.7	2.00	2.00	0.00
1,120.0	4.40	325.02	1,119.8	6.9	-4.8	8.4	2.00	2.00	0.00
1,160.0	5.20	325.02	1,159.6	9.7	-6.8	11.8	2.00	2.00	0.00
1,200.0	6.00	325.02	1,199.5	12.9	-9.0	15.7	2.00	2.00	0.00
1,240.0	6.80	325.02	1,239.2	16.5	-11.6	20.2	2.00	2.00	0.00
1,280.0	7.60	325.02	1,278.9	20.6	-14.4	25.2	2.00	2.00	0.00
1,320.0	8.40	325.02	1,318.5	25.2	-17.6	30.7	2.00	2.00	0.00
1,360.0	9.20	325.02	1,358.0	30.2	-21.1	36.9	2.00	2.00	0.00
1,400.0	10.00	325.02	1,397.5	35.7	-25.0	43.5	2.00	2.00	0.00
1,440.0	10.80	325.02	1,436.8	41.6	-29.1	50.7	2.00	2.00	0.00
1,480.0	11.60	325.02	1,476.0	47.9	-33.5	58.5	2.00	2.00	0.00
1,520.0	12.40	325.02	1,515.2	54.8	-38.3	66.8	2.00	2.00	0.00
1,560.0	13.20	325.02	1,554.2	62.0	-43.4	75.7	2.00	2.00	0.00
1,600.0	14.00	325.02	1,593.1	69.7	-48.8	85.1	2.00	2.00	0.00
1,611.3	14.23	325.02	1,604.0	72.0	-50.4	87.8	2.00	2.00	0.00
1,640.0	14.23	325.02	1,631.8	77.8	-54.4	94.9	0.00	0.00	0.00
1,680.0	14.23	325.02	1,670.6	85.8	-60.0	104.7	0.00	0.00	0.00
1,720.0	14.23	325.02	1,709.4	93.9	-65.7	114.6	0.00	0.00	0.00
1,760.0	14.23	325.02	1,748.2	101.9	-71.3	124.4	0.00	0.00	0.00
1,800.0	14.23	325.02	1,786.9	110.0	-77.0	134.2	0.00	0.00	0.00
1,840.0	14.23	325.02	1,825.7	118.0	-82.6	144.1	0.00	0.00	0.00
1,880.0	14.23	325.02	1,864.5	126.1	-88.2	153.9	0.00	0.00	0.00
1,920.0	14.23	325.02	1,903.2	134.1	-93.9	163.7	0.00	0.00	0.00
1,960.0	14.23	325.02	1,942.0	142.2	-99.5	173.5	0.00	0.00	0.00

Database: Landmark  
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Site: Dechant X08-24D Pad Sec.8-T2N-R65W  
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MD Reference: WELL @ 4926.0ft (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)
2,000.0	14.23	325.02	1,980.8	150.2	-105.1	183.4	0.00	0.00	0.00
2,040.0	14.23	325.02	2,019.6	158.3	-110.8	193.2	0.00	0.00	0.00
2,080.0	14.23	325.02	2,058.3	166.3	-116.4	203.0	0.00	0.00	0.00
2,120.0	14.23	325.02	2,097.1	174.4	-122.0	212.9	0.00	0.00	0.00
2,160.0	14.23	325.02	2,135.9	182.5	-127.7	222.7	0.00	0.00	0.00
2,200.0	14.23	325.02	2,174.7	190.5	-133.3	232.5	0.00	0.00	0.00
2,240.0	14.23	325.02	2,213.4	198.6	-138.9	242.3	0.00	0.00	0.00
2,280.0	14.23	325.02	2,252.2	206.6	-144.6	252.2	0.00	0.00	0.00
2,320.0	14.23	325.02	2,291.0	214.7	-150.2	262.0	0.00	0.00	0.00
2,360.0	14.23	325.02	2,329.8	222.7	-155.9	271.8	0.00	0.00	0.00
2,400.0	14.23	325.02	2,368.5	230.8	-161.5	281.7	0.00	0.00	0.00
2,440.0	14.23	325.02	2,407.3	238.8	-167.1	291.5	0.00	0.00	0.00
2,480.0	14.23	325.02	2,446.1	246.9	-172.8	301.3	0.00	0.00	0.00
2,520.0	14.23	325.02	2,484.8	254.9	-178.4	311.2	0.00	0.00	0.00
2,560.0	14.23	325.02	2,523.6	263.0	-184.0	321.0	0.00	0.00	0.00
2,600.0	14.23	325.02	2,562.4	271.0	-189.7	330.8	0.00	0.00	0.00
2,640.0	14.23	325.02	2,601.2	279.1	-195.3	340.6	0.00	0.00	0.00
2,680.0	14.23	325.02	2,639.9	287.2	-200.9	350.5	0.00	0.00	0.00
2,720.0	14.23	325.02	2,678.7	295.2	-206.6	360.3	0.00	0.00	0.00
2,760.0	14.23	325.02	2,717.5	303.3	-212.2	370.1	0.00	0.00	0.00
2,800.0	14.23	325.02	2,756.3	311.3	-217.8	380.0	0.00	0.00	0.00
2,840.0	14.23	325.02	2,795.0	319.4	-223.5	389.8	0.00	0.00	0.00
2,880.0	14.23	325.02	2,833.8	327.4	-229.1	399.6	0.00	0.00	0.00
2,920.0	14.23	325.02	2,872.6	335.5	-234.8	409.5	0.00	0.00	0.00
2,960.0	14.23	325.02	2,911.4	343.5	-240.4	419.3	0.00	0.00	0.00
3,000.0	14.23	325.02	2,950.1	351.6	-246.0	429.1	0.00	0.00	0.00
3,040.0	14.23	325.02	2,988.9	359.6	-251.7	438.9	0.00	0.00	0.00
3,080.0	14.23	325.02	3,027.7	367.7	-257.3	448.8	0.00	0.00	0.00
3,120.0	14.23	325.02	3,066.5	375.7	-262.9	458.6	0.00	0.00	0.00
3,160.0	14.23	325.02	3,105.2	383.8	-268.6	468.4	0.00	0.00	0.00
3,200.0	14.23	325.02	3,144.0	391.8	-274.2	478.3	0.00	0.00	0.00
3,240.0	14.23	325.02	3,182.8	399.9	-279.8	488.1	0.00	0.00	0.00
3,280.0	14.23	325.02	3,221.5	408.0	-285.5	497.9	0.00	0.00	0.00
3,320.0	14.23	325.02	3,260.3	416.0	-291.1	507.7	0.00	0.00	0.00
3,360.0	14.23	325.02	3,299.1	424.1	-296.7	517.6	0.00	0.00	0.00
3,400.0	14.23	325.02	3,337.9	432.1	-302.4	527.4	0.00	0.00	0.00
3,440.0	14.23	325.02	3,376.6	440.2	-308.0	537.2	0.00	0.00	0.00
3,480.0	14.23	325.02	3,415.4	448.2	-313.7	547.1	0.00	0.00	0.00
3,520.0	14.23	325.02	3,454.2	456.3	-319.3	556.9	0.00	0.00	0.00
3,560.0	14.23	325.02	3,493.0	464.3	-324.9	566.7	0.00	0.00	0.00
3,600.0	14.23	325.02	3,531.7	472.4	-330.6	576.6	0.00	0.00	0.00
3,640.0	14.23	325.02	3,570.5	480.4	-336.2	586.4	0.00	0.00	0.00
3,680.0	14.23	325.02	3,609.3	488.5	-341.8	596.2	0.00	0.00	0.00
3,720.0	14.23	325.02	3,648.1	496.5	-347.5	606.0	0.00	0.00	0.00
3,760.0	14.23	325.02	3,686.8	504.6	-353.1	615.9	0.00	0.00	0.00
3,800.0	14.23	325.02	3,725.6	512.7	-358.7	625.7	0.00	0.00	0.00
3,840.0	14.23	325.02	3,764.4	520.7	-364.4	635.5	0.00	0.00	0.00
3,880.0	14.23	325.02	3,803.1	528.8	-370.0	645.4	0.00	0.00	0.00
3,920.0	14.23	325.02	3,841.9	536.8	-375.6	655.2	0.00	0.00	0.00
3,960.0	14.23	325.02	3,880.7	544.9	-381.3	665.0	0.00	0.00	0.00
4,000.0	14.23	325.02	3,919.5	552.9	-386.9	674.9	0.00	0.00	0.00
4,040.0	14.23	325.02	3,958.2	561.0	-392.6	684.7	0.00	0.00	0.00
4,080.0	14.23	325.02	3,997.0	569.0	-398.2	694.5	0.00	0.00	0.00
4,120.0	14.23	325.02	4,035.8	577.1	-403.8	704.3	0.00	0.00	0.00



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TVD Reference: WELL @ 4926.0ft (Original Well Elev)  
MD Reference: WELL @ 4926.0ft (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)
4,160.0	14.23	325.02	4,074.6	585.1	-409.5	714.2	0.00	0.00	0.00
4,200.0	14.23	325.02	4,113.3	593.2	-415.1	724.0	0.00	0.00	0.00
4,240.0	14.23	325.02	4,152.1	601.2	-420.7	733.8	0.00	0.00	0.00
4,280.0	14.23	325.02	4,190.9	609.3	-426.4	743.7	0.00	0.00	0.00
4,320.0	14.23	325.02	4,229.7	617.3	-432.0	753.5	0.00	0.00	0.00
4,360.0	14.23	325.02	4,268.4	625.4	-437.6	763.3	0.00	0.00	0.00
4,388.5	14.23	325.02	4,296.0	631.1	-441.6	770.3	0.00	0.00	0.00
4,400.0	13.99	325.02	4,307.2	633.4	-443.3	773.1	2.00	-2.00	0.00
4,440.0	13.19	325.02	4,346.1	641.1	-448.6	782.5	2.00	-2.00	0.00
4,480.0	12.39	325.02	4,385.1	648.4	-453.7	791.4	2.00	-2.00	0.00
4,520.0	11.59	325.02	4,424.2	655.2	-458.5	799.7	2.00	-2.00	0.00
4,560.0	10.79	325.02	4,463.5	661.6	-462.9	807.5	2.00	-2.00	0.00
4,600.0	9.99	325.02	4,502.8	667.5	-467.1	814.7	2.00	-2.00	0.00
4,640.0	9.19	325.02	4,542.2	672.9	-470.9	821.3	2.00	-2.00	0.00
4,680.0	8.39	325.02	4,581.8	678.0	-474.4	827.5	2.00	-2.00	0.00
4,720.0	7.59	325.02	4,621.4	682.5	-477.6	833.0	2.00	-2.00	0.00
4,760.0	6.79	325.02	4,661.1	686.6	-480.5	838.0	2.00	-2.00	0.00
4,800.0	5.99	325.02	4,700.8	690.3	-483.0	842.5	2.00	-2.00	0.00
4,840.0	5.19	325.02	4,740.6	693.5	-485.3	846.4	2.00	-2.00	0.00
4,880.0	4.39	325.02	4,780.5	696.2	-487.2	849.7	2.00	-2.00	0.00
4,920.0	3.59	325.02	4,820.4	698.5	-488.8	852.5	2.00	-2.00	0.00
4,960.0	2.79	325.02	4,860.3	700.3	-490.1	854.7	2.00	-2.00	0.00
5,000.0	1.99	325.02	4,900.3	701.7	-491.0	856.4	2.00	-2.00	0.00
5,040.0	1.19	325.02	4,940.3	702.6	-491.7	857.5	2.00	-2.00	0.00
5,080.0	0.39	325.02	4,980.3	703.0	-492.0	858.1	2.00	-2.00	0.00
5,099.7	0.00	0.00	5,000.0	703.1	-492.0	858.2	2.00	-2.00	0.00
TARGET BHL 1320'FSL, 2550'FEL									
5,120.0	0.00	0.00	5,020.3	703.1	-492.0	858.2	0.00	0.00	0.00
5,160.0	0.00	0.00	5,060.3	703.1	-492.0	858.2	0.00	0.00	0.00
5,200.0	0.00	0.00	5,100.3	703.1	-492.0	858.2	0.00	0.00	0.00
5,240.0	0.00	0.00	5,140.3	703.1	-492.0	858.2	0.00	0.00	0.00
5,280.0	0.00	0.00	5,180.3	703.1	-492.0	858.2	0.00	0.00	0.00
5,320.0	0.00	0.00	5,220.3	703.1	-492.0	858.2	0.00	0.00	0.00
5,360.0	0.00	0.00	5,260.3	703.1	-492.0	858.2	0.00	0.00	0.00
5,400.0	0.00	0.00	5,300.3	703.1	-492.0	858.2	0.00	0.00	0.00
5,440.0	0.00	0.00	5,340.3	703.1	-492.0	858.2	0.00	0.00	0.00
5,480.0	0.00	0.00	5,380.3	703.1	-492.0	858.2	0.00	0.00	0.00
5,520.0	0.00	0.00	5,420.3	703.1	-492.0	858.2	0.00	0.00	0.00
5,560.0	0.00	0.00	5,460.3	703.1	-492.0	858.2	0.00	0.00	0.00
5,600.0	0.00	0.00	5,500.3	703.1	-492.0	858.2	0.00	0.00	0.00
5,640.0	0.00	0.00	5,540.3	703.1	-492.0	858.2	0.00	0.00	0.00
5,680.0	0.00	0.00	5,580.3	703.1	-492.0	858.2	0.00	0.00	0.00
5,720.0	0.00	0.00	5,620.3	703.1	-492.0	858.2	0.00	0.00	0.00
5,760.0	0.00	0.00	5,660.3	703.1	-492.0	858.2	0.00	0.00	0.00
5,800.0	0.00	0.00	5,700.3	703.1	-492.0	858.2	0.00	0.00	0.00
5,840.0	0.00	0.00	5,740.3	703.1	-492.0	858.2	0.00	0.00	0.00
5,880.0	0.00	0.00	5,780.3	703.1	-492.0	858.2	0.00	0.00	0.00
5,920.0	0.00	0.00	5,820.3	703.1	-492.0	858.2	0.00	0.00	0.00
5,960.0	0.00	0.00	5,860.3	703.1	-492.0	858.2	0.00	0.00	0.00
6,000.0	0.00	0.00	5,900.3	703.1	-492.0	858.2	0.00	0.00	0.00
6,040.0	0.00	0.00	5,940.3	703.1	-492.0	858.2	0.00	0.00	0.00
6,080.0	0.00	0.00	5,980.3	703.1	-492.0	858.2	0.00	0.00	0.00
6,120.0	0.00	0.00	6,020.3	703.1	-492.0	858.2	0.00	0.00	0.00
6,160.0	0.00	0.00	6,060.3	703.1	-492.0	858.2	0.00	0.00	0.00

Database: Landmark  
Company: NOBLE ENERGY INC WELD COUNTY CO  
Project: SEC.8-T2N-R65W  
Site: Dechant X08-24D Pad Sec.8-T2N-R65W  
Well: Dechant X08-24D  
Wellbore: Wellbore #1  
Design: Noble Dechant X08-24D Plan #1 (7-30-10)

Local Co-ordinate Reference: Well Dechant X08-24D  
TVD Reference: WELL @ 4926.0ft (Original Well Elev)  
MD Reference: WELL @ 4926.0ft (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	6,100.3	703.1	-492.0	858.2	0.00	0.00	0.00
6,240.0	0.00	0.00	6,140.3	703.1	-492.0	858.2	0.00	0.00	0.00
6,280.0	0.00	0.00	6,180.3	703.1	-492.0	858.2	0.00	0.00	0.00
6,320.0	0.00	0.00	6,220.3	703.1	-492.0	858.2	0.00	0.00	0.00
6,360.0	0.00	0.00	6,260.3	703.1	-492.0	858.2	0.00	0.00	0.00
6,400.0	0.00	0.00	6,300.3	703.1	-492.0	858.2	0.00	0.00	0.00
6,440.0	0.00	0.00	6,340.3	703.1	-492.0	858.2	0.00	0.00	0.00
6,480.0	0.00	0.00	6,380.3	703.1	-492.0	858.2	0.00	0.00	0.00
6,520.0	0.00	0.00	6,420.3	703.1	-492.0	858.2	0.00	0.00	0.00
6,560.0	0.00	0.00	6,460.3	703.1	-492.0	858.2	0.00	0.00	0.00
6,600.0	0.00	0.00	6,500.3	703.1	-492.0	858.2	0.00	0.00	0.00
6,640.0	0.00	0.00	6,540.3	703.1	-492.0	858.2	0.00	0.00	0.00
6,680.0	0.00	0.00	6,580.3	703.1	-492.0	858.2	0.00	0.00	0.00
6,720.0	0.00	0.00	6,620.3	703.1	-492.0	858.2	0.00	0.00	0.00
6,760.0	0.00	0.00	6,660.3	703.1	-492.0	858.2	0.00	0.00	0.00
6,800.0	0.00	0.00	6,700.3	703.1	-492.0	858.2	0.00	0.00	0.00
6,840.0	0.00	0.00	6,740.3	703.1	-492.0	858.2	0.00	0.00	0.00
6,880.0	0.00	0.00	6,780.3	703.1	-492.0	858.2	0.00	0.00	0.00
6,920.0	0.00	0.00	6,820.3	703.1	-492.0	858.2	0.00	0.00	0.00
6,960.0	0.00	0.00	6,860.3	703.1	-492.0	858.2	0.00	0.00	0.00
7,000.0	0.00	0.00	6,900.3	703.1	-492.0	858.2	0.00	0.00	0.00
7,040.0	0.00	0.00	6,940.3	703.1	-492.0	858.2	0.00	0.00	0.00
7,080.0	0.00	0.00	6,980.3	703.1	-492.0	858.2	0.00	0.00	0.00
7,080.7	0.00	0.00	6,981.0	703.1	-492.0	858.2	0.00	0.00	0.00
NIOBRARA - TARGET CIRCLE 1320'FSL, 2550'FEL									
7,120.0	0.00	0.00	7,020.3	703.1	-492.0	858.2	0.00	0.00	0.00
7,160.0	0.00	0.00	7,060.3	703.1	-492.0	858.2	0.00	0.00	0.00
7,200.0	0.00	0.00	7,100.3	703.1	-492.0	858.2	0.00	0.00	0.00
7,240.0	0.00	0.00	7,140.3	703.1	-492.0	858.2	0.00	0.00	0.00
7,280.0	0.00	0.00	7,180.3	703.1	-492.0	858.2	0.00	0.00	0.00
7,320.0	0.00	0.00	7,220.3	703.1	-492.0	858.2	0.00	0.00	0.00
7,360.0	0.00	0.00	7,260.3	703.1	-492.0	858.2	0.00	0.00	0.00
7,372.7	0.00	0.00	7,273.0	703.1	-492.0	858.2	0.00	0.00	0.00
CODELL									
7,400.0	0.00	0.00	7,300.3	703.1	-492.0	858.2	0.00	0.00	0.00
7,440.0	0.00	0.00	7,340.3	703.1	-492.0	858.2	0.00	0.00	0.00
7,480.0	0.00	0.00	7,380.3	703.1	-492.0	858.2	0.00	0.00	0.00
7,520.0	0.00	0.00	7,420.3	703.1	-492.0	858.2	0.00	0.00	0.00
7,560.0	0.00	0.00	7,460.3	703.1	-492.0	858.2	0.00	0.00	0.00
7,600.0	0.00	0.00	7,500.3	703.1	-492.0	858.2	0.00	0.00	0.00
7,640.0	0.00	0.00	7,540.3	703.1	-492.0	858.2	0.00	0.00	0.00
7,680.0	0.00	0.00	7,580.3	703.1	-492.0	858.2	0.00	0.00	0.00
7,720.0	0.00	0.00	7,620.3	703.1	-492.0	858.2	0.00	0.00	0.00
7,760.0	0.00	0.00	7,660.3	703.1	-492.0	858.2	0.00	0.00	0.00
7,762.7	0.00	0.00	7,663.0	703.1	-492.0	858.2	0.00	0.00	0.00
D-SAND									
7,800.0	0.00	0.00	7,700.3	703.1	-492.0	858.2	0.00	0.00	0.00
7,820.7	0.00	0.00	7,721.0	703.1	-492.0	858.2	0.00	0.00	0.00
J-SAND									
7,840.0	0.00	0.00	7,740.3	703.1	-492.0	858.2	0.00	0.00	0.00
7,880.0	0.00	0.00	7,780.3	703.1	-492.0	858.2	0.00	0.00	0.00
7,920.0	0.00	0.00	7,820.3	703.1	-492.0	858.2	0.00	0.00	0.00
7,960.0	0.00	0.00	7,860.3	703.1	-492.0	858.2	0.00	0.00	0.00



<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Dechant X08-24D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4926.0ft (Original Well Elev)
<b>Project:</b>	SEC.8-T2N-R65W	<b>MD Reference:</b>	WELL @ 4926.0ft (Original Well Elev)
<b>Site:</b>	Dechant X08-24D Pad Sec.8-T2N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	Dechant X08-24D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble Dechant X08-24D Plan #1 (7-30-10)		

**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)
8,000.0	0.00	0.00	7,900.3	703.1	-492.0	858.2	0.00	0.00	0.00
8,020.7	0.00	0.00	7,921.0	703.1	-492.0	858.2	0.00	0.00	0.00

HARDLINE 88°W OF BHL

**Targets**
**Target Name**

- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- Shape									
HARDLINE 88°W OF I	0.00	0.00	7,921.0	603.1	-580.0	1,298,275.18	3,227,043.68	40° 8' 57.500 N	104° 41' 16.025 W
- plan misses by 133.2ft at 8020.7ft MD (7921.0 TVD, 703.1 N, -492.0 E)									
- Polygon									
Point 1			7,921.0	0.0	0.0	1,298,275.18	3,227,043.68		
Point 2			7,921.0	200.0	0.0	1,298,475.16	3,227,041.84		
TARGET CIRCLE 132	0.00	0.00	6,981.0	703.1	-492.0	1,298,375.98	3,227,130.75	40° 8' 58.488 N	104° 41' 14.892 W
- plan hits target									
- Circle (radius 75.0)									
TARGET BHL 1320°F:	0.00	0.00	5,000.0	703.1	-492.0	1,298,375.98	3,227,130.74	40° 8' 58.488 N	104° 41' 14.892 W
- plan hits target									
- Point									

**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 (°)
7,080.7	6,981.0	NIOBRARA		0.00	
7,372.7	7,273.0	CODELL		0.00	
7,762.7	7,663.0	D-SAND		0.00	
7,820.7	7,721.0	J-SAND		0.00	