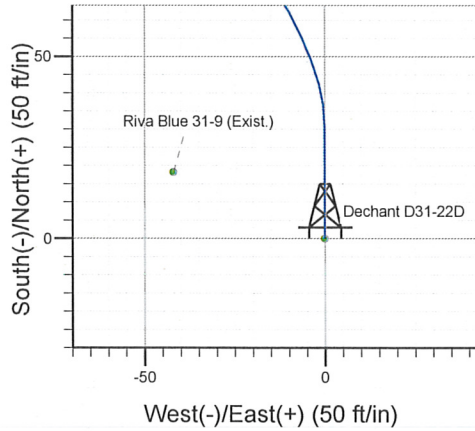
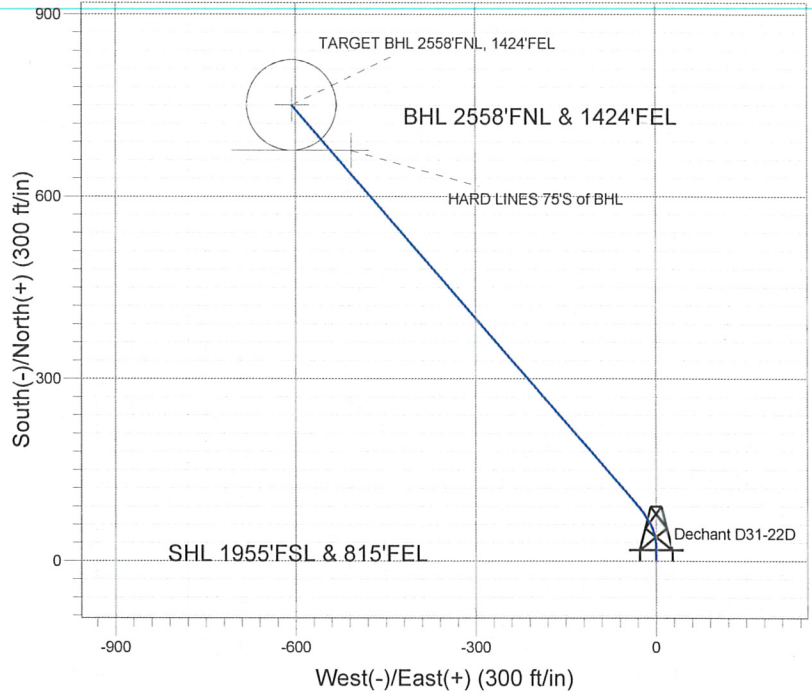
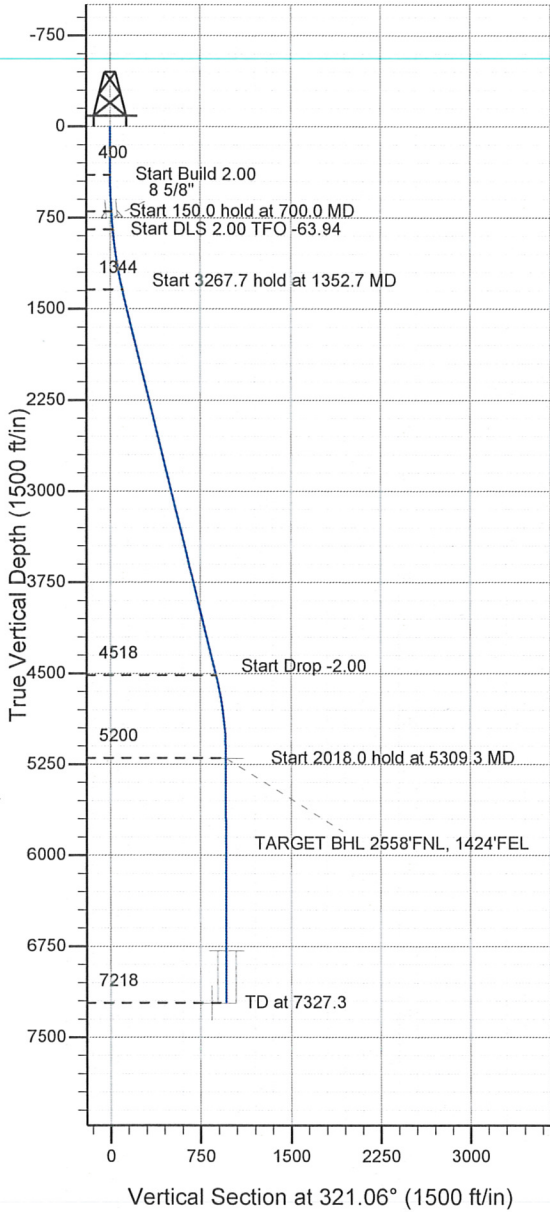




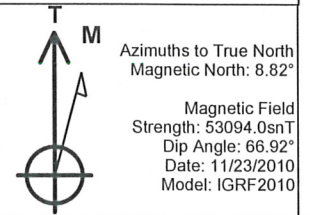
Well Name: Dechant D31-22D

Surface Location: Dechant D31-22D Pad Sec. 31-T3N-R64W
 North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone
 Ground Elevation: 4815.0
 +N/-S +E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1309659.25 3254944.86 40° 10' 47.316 N 104° 35' 15.216 W
 Original Well Elev WELL @ 4828.0ft (Original Well Elev)

NOBLE ENERGY INC WELD COUNTY CO



Dechant D31-22D Pad Sec. 31-T3N-R64W
 Dechant D31-22D
 Noble Dechant D31-22D Plan #1 (11-23-10)
 16:23, November 30 2010



WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 2558'FNL, 1424'FEL	5200.0	750.5	-606.3	40° 10' 54.732 N	104° 35' 23.028 W	Point
TARGET CIRCLE 2558'FNL, 1424'FEL	6788.0	750.5	-606.3	40° 10' 54.732 N	104° 35' 23.028 W	Circle (Radius: 75.0)
HARD LINES 75'S of BHL	7218.0	675.5	-506.3	40° 10' 53.991 N	104° 35' 21.739 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	700.0	6.00	0.00	699.5	15.7	0.0	2.00	0.00	12.2	
4	850.0	6.00	0.00	848.6	31.4	0.0	0.00	0.00	24.4	
5	1352.7	13.78	318.81	1344.0	102.9	-39.5	2.00	-63.94	104.9	
6	4620.5	13.78	318.81	4517.8	688.5	-552.1	0.00	0.00	882.5	
7	5309.3	0.00	0.00	5200.0	750.5	-606.3	2.00	180.00	964.8	TARGET BHL 2558'FNL, 1424'FEL
8	7327.3	0.00	0.00	7218.0	750.5	-606.3	0.00	0.00	964.8	



Directional

NOBLE ENERGY INC WELD COUNTY CO

SEC.31-T3N-R64W

Dechant D31-22D Pad Sec. 31-T3N-R64W

Dechant D31-22D

Wellbore #1

Plan: Noble Dechant D31-22D Plan #1 (11-23-10)

Standard Planning Report

30 November, 2010



Database:	Landmark	Local Co-ordinate Reference:	Well Dechant D31-22D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4828.0ft (Original Well Elev)
Project:	SEC.31-T3N-R64W	MD Reference:	WELL @ 4828.0ft (Original Well Elev)
Site:	Dechant D31-22D Pad Sec. 31-T3N-R64W	North Reference:	True
Well:	Dechant D31-22D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Dechant D31-22D Plan #1 (11-23-10)		

Project	SEC.31-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	Dechant D31-22D Pad Sec. 31-T3N-R64W				
Site Position:		Northing:	1,309,659.26ft	Latitude:	40° 10' 47.316 N
From:	Lat/Long	Easting:	3,254,944.86ft	Longitude:	104° 35' 15.216 W
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.59 °

Well	Dechant D31-22D					
Well Position	+N/-S	0.0 ft	Northing:	1,309,659.25 ft	Latitude:	40° 10' 47.316 N
	+E/-W	0.0 ft	Easting:	3,254,944.86 ft	Longitude:	104° 35' 15.216 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,815.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	11/23/2010	8.82	66.92	53,094

Design	Noble Dechant D31-22D Plan #1 (11-23-10)			
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	321.06

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	
400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.00	0.00	
700.0	6.00	0.00	699.5	15.7	0.0	2.00	2.00	0.00	0.00	
850.0	6.00	0.00	848.6	31.4	0.0	0.00	0.00	0.00	0.00	
1,352.7	13.78	318.81	1,344.0	102.9	-39.5	2.00	1.55	-8.19	-63.94	
4,620.5	13.78	318.81	4,517.8	688.5	-552.1	0.00	0.00	0.00	0.00	
5,309.3	0.00	0.00	5,200.0	750.5	-606.3	2.00	-2.00	0.00	180.00	TARGET BHL 255E
7,327.3	0.00	0.00	7,218.0	750.5	-606.3	0.00	0.00	0.00	0.00	

Database:	Landmark	Local Co-ordinate Reference:	Well Dechant D31-22D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4828.0ft (Original Well Elev)
Project:	SEC.31-T3N-R64W	MD Reference:	WELL @ 4828.0ft (Original Well Elev)
Site:	Dechant D31-22D Pad Sec. 31-T3N-R64W	North Reference:	True
Well:	Dechant D31-22D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Dechant D31-22D Plan #1 (11-23-10)		

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	0.00	440.0	0.3	0.0	0.2	2.00	2.00	0.00
480.0	1.60	0.00	480.0	1.1	0.0	0.9	2.00	2.00	0.00
520.0	2.40	0.00	520.0	2.5	0.0	2.0	2.00	2.00	0.00
560.0	3.20	0.00	559.9	4.5	0.0	3.5	2.00	2.00	0.00
600.0	4.00	0.00	599.8	7.0	0.0	5.4	2.00	2.00	0.00
640.0	4.80	0.00	639.7	10.0	0.0	7.8	2.00	2.00	0.00
680.0	5.60	0.00	679.6	13.7	0.0	10.6	2.00	2.00	0.00
700.0	6.00	0.00	699.5	15.7	0.0	12.2	2.00	2.00	0.00
720.0	6.00	0.00	719.3	17.8	0.0	13.8	0.00	0.00	0.00
750.8	6.00	0.00	750.0	21.0	0.0	16.3	0.00	0.00	0.00
8 5/8"									
760.0	6.00	0.00	759.1	22.0	0.0	17.1	0.00	0.00	0.00
800.0	6.00	0.00	798.9	26.1	0.0	20.3	0.00	0.00	0.00
840.0	6.00	0.00	838.7	30.3	0.0	23.6	0.00	0.00	0.00
850.0	6.00	0.00	848.6	31.4	0.0	24.4	0.00	0.00	0.00
880.0	6.29	355.07	878.5	34.6	-0.1	27.0	2.00	0.96	-16.43
920.0	6.73	349.21	918.2	39.1	-0.8	30.9	2.00	1.12	-14.65
960.0	7.24	344.12	957.9	43.8	-1.9	35.3	2.00	1.27	-12.73
1,000.0	7.80	339.72	997.6	48.8	-3.5	40.1	2.00	1.39	-11.00
1,040.0	8.39	335.93	1,037.2	54.0	-5.7	45.5	2.00	1.49	-9.49
1,080.0	9.02	332.64	1,076.7	59.4	-8.3	51.4	2.00	1.57	-8.21
1,120.0	9.67	329.79	1,116.2	65.1	-11.4	57.8	2.00	1.63	-7.13
1,160.0	10.34	327.30	1,155.6	71.0	-15.1	64.7	2.00	1.68	-6.23
1,200.0	11.03	325.11	1,194.9	77.2	-19.2	72.1	2.00	1.72	-5.47
1,240.0	11.74	323.18	1,234.1	83.6	-23.8	80.0	2.00	1.76	-4.82
1,280.0	12.45	321.47	1,273.2	90.2	-28.9	88.4	2.00	1.79	-4.28
1,320.0	13.18	319.94	1,312.2	97.1	-34.6	97.2	2.00	1.81	-3.82
1,352.7	13.78	318.81	1,344.0	102.9	-39.5	104.9	2.00	1.83	-3.46
1,360.0	13.78	318.81	1,351.1	104.2	-40.7	106.6	0.00	0.00	0.00
1,400.0	13.78	318.81	1,389.9	111.3	-46.9	116.1	0.00	0.00	0.00
1,440.0	13.78	318.81	1,428.8	118.5	-53.2	125.6	0.00	0.00	0.00
1,480.0	13.78	318.81	1,467.6	125.7	-59.5	135.1	0.00	0.00	0.00
1,520.0	13.78	318.81	1,506.5	132.8	-65.8	144.7	0.00	0.00	0.00
1,560.0	13.78	318.81	1,545.3	140.0	-72.0	154.2	0.00	0.00	0.00
1,600.0	13.78	318.81	1,584.2	147.2	-78.3	163.7	0.00	0.00	0.00
1,640.0	13.78	318.81	1,623.0	154.4	-84.6	173.2	0.00	0.00	0.00
1,680.0	13.78	318.81	1,661.9	161.5	-90.9	182.7	0.00	0.00	0.00
1,720.0	13.78	318.81	1,700.7	168.7	-97.1	192.3	0.00	0.00	0.00
1,760.0	13.78	318.81	1,739.6	175.9	-103.4	201.8	0.00	0.00	0.00
1,800.0	13.78	318.81	1,778.4	183.0	-109.7	211.3	0.00	0.00	0.00
1,840.0	13.78	318.81	1,817.3	190.2	-116.0	220.8	0.00	0.00	0.00
1,880.0	13.78	318.81	1,856.1	197.4	-122.2	230.3	0.00	0.00	0.00
1,920.0	13.78	318.81	1,895.0	204.5	-128.5	239.8	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Dechant D31-22D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4828.0ft (Original Well Elev)
Project:	SEC.31-T3N-R64W	MD Reference:	WELL @ 4828.0ft (Original Well Elev)
Site:	Dechant D31-22D Pad Sec. 31-T3N-R64W	North Reference:	True
Well:	Dechant D31-22D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Dechant D31-22D Plan #1 (11-23-10)		

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)
1,960.0	13.78	318.81	1,933.8	211.7	-134.8	249.4	0.00	0.00	0.00
2,000.0	13.78	318.81	1,972.7	218.9	-141.0	258.9	0.00	0.00	0.00
2,040.0	13.78	318.81	2,011.5	226.0	-147.3	268.4	0.00	0.00	0.00
2,080.0	13.78	318.81	2,050.4	233.2	-153.6	277.9	0.00	0.00	0.00
2,120.0	13.78	318.81	2,089.2	240.4	-159.9	287.4	0.00	0.00	0.00
2,160.0	13.78	318.81	2,128.1	247.5	-166.1	297.0	0.00	0.00	0.00
2,200.0	13.78	318.81	2,166.9	254.7	-172.4	306.5	0.00	0.00	0.00
2,240.0	13.78	318.81	2,205.8	261.9	-178.7	316.0	0.00	0.00	0.00
2,280.0	13.78	318.81	2,244.6	269.0	-185.0	325.5	0.00	0.00	0.00
2,320.0	13.78	318.81	2,283.5	276.2	-191.2	335.0	0.00	0.00	0.00
2,360.0	13.78	318.81	2,322.3	283.4	-197.5	344.5	0.00	0.00	0.00
2,400.0	13.78	318.81	2,361.2	290.5	-203.8	354.1	0.00	0.00	0.00
2,440.0	13.78	318.81	2,400.0	297.7	-210.1	363.6	0.00	0.00	0.00
2,480.0	13.78	318.81	2,438.9	304.9	-216.3	373.1	0.00	0.00	0.00
2,520.0	13.78	318.81	2,477.7	312.0	-222.6	382.6	0.00	0.00	0.00
2,560.0	13.78	318.81	2,516.6	319.2	-228.9	392.1	0.00	0.00	0.00
2,600.0	13.78	318.81	2,555.4	326.4	-235.2	401.7	0.00	0.00	0.00
2,640.0	13.78	318.81	2,594.3	333.6	-241.4	411.2	0.00	0.00	0.00
2,680.0	13.78	318.81	2,633.1	340.7	-247.7	420.7	0.00	0.00	0.00
2,720.0	13.78	318.81	2,672.0	347.9	-254.0	430.2	0.00	0.00	0.00
2,760.0	13.78	318.81	2,710.8	355.1	-260.2	439.7	0.00	0.00	0.00
2,800.0	13.78	318.81	2,749.7	362.2	-266.5	449.3	0.00	0.00	0.00
2,840.0	13.78	318.81	2,788.5	369.4	-272.8	458.8	0.00	0.00	0.00
2,880.0	13.78	318.81	2,827.4	376.6	-279.1	468.3	0.00	0.00	0.00
2,920.0	13.78	318.81	2,866.2	383.7	-285.3	477.8	0.00	0.00	0.00
2,960.0	13.78	318.81	2,905.1	390.9	-291.6	487.3	0.00	0.00	0.00
3,000.0	13.78	318.81	2,943.9	398.1	-297.9	496.8	0.00	0.00	0.00
3,040.0	13.78	318.81	2,982.8	405.2	-304.2	506.4	0.00	0.00	0.00
3,080.0	13.78	318.81	3,021.6	412.4	-310.4	515.9	0.00	0.00	0.00
3,120.0	13.78	318.81	3,060.4	419.6	-316.7	525.4	0.00	0.00	0.00
3,160.0	13.78	318.81	3,099.3	426.7	-323.0	534.9	0.00	0.00	0.00
3,200.0	13.78	318.81	3,138.1	433.9	-329.3	544.4	0.00	0.00	0.00
3,240.0	13.78	318.81	3,177.0	441.1	-335.5	554.0	0.00	0.00	0.00
3,280.0	13.78	318.81	3,215.8	448.2	-341.8	563.5	0.00	0.00	0.00
3,320.0	13.78	318.81	3,254.7	455.4	-348.1	573.0	0.00	0.00	0.00
3,360.0	13.78	318.81	3,293.5	462.6	-354.4	582.5	0.00	0.00	0.00
3,400.0	13.78	318.81	3,332.4	469.7	-360.6	592.0	0.00	0.00	0.00
3,440.0	13.78	318.81	3,371.2	476.9	-366.9	601.5	0.00	0.00	0.00
3,480.0	13.78	318.81	3,410.1	484.1	-373.2	611.1	0.00	0.00	0.00
3,520.0	13.78	318.81	3,448.9	491.2	-379.5	620.6	0.00	0.00	0.00
3,560.0	13.78	318.81	3,487.8	498.4	-385.7	630.1	0.00	0.00	0.00
3,600.0	13.78	318.81	3,526.6	505.6	-392.0	639.6	0.00	0.00	0.00
3,640.0	13.78	318.81	3,565.5	512.8	-398.3	649.1	0.00	0.00	0.00
3,680.0	13.78	318.81	3,604.3	519.9	-404.5	658.7	0.00	0.00	0.00
3,720.0	13.78	318.81	3,643.2	527.1	-410.8	668.2	0.00	0.00	0.00
3,760.0	13.78	318.81	3,682.0	534.3	-417.1	677.7	0.00	0.00	0.00
3,800.0	13.78	318.81	3,720.9	541.4	-423.4	687.2	0.00	0.00	0.00
3,840.0	13.78	318.81	3,759.7	548.6	-429.6	696.7	0.00	0.00	0.00
3,880.0	13.78	318.81	3,798.6	555.8	-435.9	706.2	0.00	0.00	0.00
3,920.0	13.78	318.81	3,837.4	562.9	-442.2	715.8	0.00	0.00	0.00
3,960.0	13.78	318.81	3,876.3	570.1	-448.5	725.3	0.00	0.00	0.00
4,000.0	13.78	318.81	3,915.1	577.3	-454.7	734.8	0.00	0.00	0.00
4,040.0	13.78	318.81	3,954.0	584.4	-461.0	744.3	0.00	0.00	0.00
4,080.0	13.78	318.81	3,992.8	591.6	-467.3	753.8	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Dechant D31-22D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4828.0ft (Original Well Elev)
Project:	SEC.31-T3N-R64W	MD Reference:	WELL @ 4828.0ft (Original Well Elev)
Site:	Dechant D31-22D Pad Sec. 31-T3N-R64W	North Reference:	True
Well:	Dechant D31-22D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Dechant D31-22D Plan #1 (11-23-10)		

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	13.78	318.81	4,031.7	598.8	-473.6	763.4	0.00	0.00	0.00
4,160.0	13.78	318.81	4,070.5	605.9	-479.8	772.9	0.00	0.00	0.00
4,200.0	13.78	318.81	4,109.4	613.1	-486.1	782.4	0.00	0.00	0.00
4,240.0	13.78	318.81	4,148.2	620.3	-492.4	791.9	0.00	0.00	0.00
4,280.0	13.78	318.81	4,187.1	627.4	-498.7	801.4	0.00	0.00	0.00
4,320.0	13.78	318.81	4,225.9	634.6	-504.9	811.0	0.00	0.00	0.00
4,360.0	13.78	318.81	4,264.8	641.8	-511.2	820.5	0.00	0.00	0.00
4,400.0	13.78	318.81	4,303.6	648.9	-517.5	830.0	0.00	0.00	0.00
4,440.0	13.78	318.81	4,342.5	656.1	-523.7	839.5	0.00	0.00	0.00
4,480.0	13.78	318.81	4,381.3	663.3	-530.0	849.0	0.00	0.00	0.00
4,520.0	13.78	318.81	4,420.2	670.4	-536.3	858.5	0.00	0.00	0.00
4,560.0	13.78	318.81	4,459.0	677.6	-542.6	868.1	0.00	0.00	0.00
4,600.0	13.78	318.81	4,497.9	684.8	-548.8	877.6	0.00	0.00	0.00
4,620.5	13.78	318.81	4,517.8	688.5	-552.1	882.5	0.00	0.00	0.00
4,640.0	13.39	318.81	4,536.7	691.9	-555.1	887.0	2.00	-2.00	0.00
4,680.0	12.59	318.81	4,575.7	698.7	-561.0	896.0	2.00	-2.00	0.00
4,720.0	11.79	318.81	4,614.8	705.0	-566.6	904.5	2.00	-2.00	0.00
4,760.0	10.99	318.81	4,654.0	711.0	-571.8	912.3	2.00	-2.00	0.00
4,800.0	10.19	318.81	4,693.3	716.5	-576.6	919.7	2.00	-2.00	0.00
4,840.0	9.39	318.81	4,732.8	721.6	-581.1	926.5	2.00	-2.00	0.00
4,880.0	8.59	318.81	4,772.3	726.3	-585.2	932.7	2.00	-2.00	0.00
4,920.0	7.79	318.81	4,811.9	730.6	-588.9	938.4	2.00	-2.00	0.00
4,960.0	6.99	318.81	4,851.5	734.5	-592.3	943.6	2.00	-2.00	0.00
5,000.0	6.19	318.81	4,891.3	737.9	-595.4	948.1	2.00	-2.00	0.00
5,040.0	5.39	318.81	4,931.1	741.0	-598.0	952.2	2.00	-2.00	0.00
5,080.0	4.59	318.81	4,970.9	743.6	-600.3	955.6	2.00	-2.00	0.00
5,120.0	3.79	318.81	5,010.8	745.8	-602.2	958.6	2.00	-2.00	0.00
5,160.0	2.99	318.81	5,050.7	747.5	-603.8	960.9	2.00	-2.00	0.00
5,200.0	2.19	318.81	5,090.7	748.9	-605.0	962.7	2.00	-2.00	0.00
5,240.0	1.39	318.81	5,130.7	749.8	-605.8	964.0	2.00	-2.00	0.00
5,280.0	0.59	318.81	5,170.7	750.4	-606.2	964.7	2.00	-2.00	0.00
5,309.3	0.00	0.00	5,200.0	750.5	-606.3	964.8	2.00	-2.00	0.00
TARGET BHL 2558'FNL, 1424'FEL									
5,320.0	0.00	0.00	5,210.7	750.5	-606.3	964.8	0.00	0.00	0.00
5,360.0	0.00	0.00	5,250.7	750.5	-606.3	964.8	0.00	0.00	0.00
5,400.0	0.00	0.00	5,290.7	750.5	-606.3	964.8	0.00	0.00	0.00
5,440.0	0.00	0.00	5,330.7	750.5	-606.3	964.8	0.00	0.00	0.00
5,480.0	0.00	0.00	5,370.7	750.5	-606.3	964.8	0.00	0.00	0.00
5,520.0	0.00	0.00	5,410.7	750.5	-606.3	964.8	0.00	0.00	0.00
5,560.0	0.00	0.00	5,450.7	750.5	-606.3	964.8	0.00	0.00	0.00
5,600.0	0.00	0.00	5,490.7	750.5	-606.3	964.8	0.00	0.00	0.00
5,640.0	0.00	0.00	5,530.7	750.5	-606.3	964.8	0.00	0.00	0.00
5,680.0	0.00	0.00	5,570.7	750.5	-606.3	964.8	0.00	0.00	0.00
5,720.0	0.00	0.00	5,610.7	750.5	-606.3	964.8	0.00	0.00	0.00
5,760.0	0.00	0.00	5,650.7	750.5	-606.3	964.8	0.00	0.00	0.00
5,800.0	0.00	0.00	5,690.7	750.5	-606.3	964.8	0.00	0.00	0.00
5,840.0	0.00	0.00	5,730.7	750.5	-606.3	964.8	0.00	0.00	0.00
5,880.0	0.00	0.00	5,770.7	750.5	-606.3	964.8	0.00	0.00	0.00
5,920.0	0.00	0.00	5,810.7	750.5	-606.3	964.8	0.00	0.00	0.00
5,960.0	0.00	0.00	5,850.7	750.5	-606.3	964.8	0.00	0.00	0.00
6,000.0	0.00	0.00	5,890.7	750.5	-606.3	964.8	0.00	0.00	0.00
6,040.0	0.00	0.00	5,930.7	750.5	-606.3	964.8	0.00	0.00	0.00
6,080.0	0.00	0.00	5,970.7	750.5	-606.3	964.8	0.00	0.00	0.00
6,120.0	0.00	0.00	6,010.7	750.5	-606.3	964.8	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Dechant D31-22D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4828.0ft (Original Well Elev)
Project:	SEC.31-T3N-R64W	MD Reference:	WELL @ 4828.0ft (Original Well Elev)
Site:	Dechant D31-22D Pad Sec. 31-T3N-R64W	North Reference:	True
Well:	Dechant D31-22D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Dechant D31-22D Plan #1 (11-23-10)		

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)
6,160.0	0.00	0.00	6,050.7	750.5	-606.3	964.8	0.00	0.00	0.00
6,200.0	0.00	0.00	6,090.7	750.5	-606.3	964.8	0.00	0.00	0.00
6,240.0	0.00	0.00	6,130.7	750.5	-606.3	964.8	0.00	0.00	0.00
6,280.0	0.00	0.00	6,170.7	750.5	-606.3	964.8	0.00	0.00	0.00
6,320.0	0.00	0.00	6,210.7	750.5	-606.3	964.8	0.00	0.00	0.00
6,360.0	0.00	0.00	6,250.7	750.5	-606.3	964.8	0.00	0.00	0.00
6,400.0	0.00	0.00	6,290.7	750.5	-606.3	964.8	0.00	0.00	0.00
6,440.0	0.00	0.00	6,330.7	750.5	-606.3	964.8	0.00	0.00	0.00
6,480.0	0.00	0.00	6,370.7	750.5	-606.3	964.8	0.00	0.00	0.00
6,520.0	0.00	0.00	6,410.7	750.5	-606.3	964.8	0.00	0.00	0.00
6,560.0	0.00	0.00	6,450.7	750.5	-606.3	964.8	0.00	0.00	0.00
6,600.0	0.00	0.00	6,490.7	750.5	-606.3	964.8	0.00	0.00	0.00
6,640.0	0.00	0.00	6,530.7	750.5	-606.3	964.8	0.00	0.00	0.00
6,680.0	0.00	0.00	6,570.7	750.5	-606.3	964.8	0.00	0.00	0.00
6,720.0	0.00	0.00	6,610.7	750.5	-606.3	964.8	0.00	0.00	0.00
6,760.0	0.00	0.00	6,650.7	750.5	-606.3	964.8	0.00	0.00	0.00
6,800.0	0.00	0.00	6,690.7	750.5	-606.3	964.8	0.00	0.00	0.00
6,840.0	0.00	0.00	6,730.7	750.5	-606.3	964.8	0.00	0.00	0.00
6,880.0	0.00	0.00	6,770.7	750.5	-606.3	964.8	0.00	0.00	0.00
6,897.3	0.00	0.00	6,788.0	750.5	-606.3	964.8	0.00	0.00	0.00
NIOBRARA - TARGET CIRCLE 2558'FNL, 1424'FEL									
6,920.0	0.00	0.00	6,810.7	750.5	-606.3	964.8	0.00	0.00	0.00
6,960.0	0.00	0.00	6,850.7	750.5	-606.3	964.8	0.00	0.00	0.00
7,000.0	0.00	0.00	6,890.7	750.5	-606.3	964.8	0.00	0.00	0.00
7,040.0	0.00	0.00	6,930.7	750.5	-606.3	964.8	0.00	0.00	0.00
7,080.0	0.00	0.00	6,970.7	750.5	-606.3	964.8	0.00	0.00	0.00
7,120.0	0.00	0.00	7,010.7	750.5	-606.3	964.8	0.00	0.00	0.00
7,160.0	0.00	0.00	7,050.7	750.5	-606.3	964.8	0.00	0.00	0.00
7,177.3	0.00	0.00	7,068.0	750.5	-606.3	964.8	0.00	0.00	0.00
CODELL									
7,200.0	0.00	0.00	7,090.7	750.5	-606.3	964.8	0.00	0.00	0.00
7,240.0	0.00	0.00	7,130.7	750.5	-606.3	964.8	0.00	0.00	0.00
7,280.0	0.00	0.00	7,170.7	750.5	-606.3	964.8	0.00	0.00	0.00
7,320.0	0.00	0.00	7,210.7	750.5	-606.3	964.8	0.00	0.00	0.00
7,327.3	0.00	0.00	7,218.0	750.5	-606.3	964.8	0.00	0.00	0.00
HARD LINES 75'S of BHL									

Database:	Landmark	Local Co-ordinate Reference:	Well Dechant D31-22D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4828.0ft (Original Well Elev)
Project:	SEC.31-T3N-R64W	MD Reference:	WELL @ 4828.0ft (Original Well Elev)
Site:	Dechant D31-22D Pad Sec. 31-T3N-R64W	North Reference:	True
Well:	Dechant D31-22D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Dechant D31-22D Plan #1 (11-23-10)		

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 25ft - plan hits target - Circle (radius 75.0)	0.00	0.00	6,788.0	750.5	-606.3	1,310,403.41	3,254,330.86	40° 10' 54.732 N	104° 35' 23.028 W
HARD LINES 75'S of - plan misses by 125.0ft at 7327.3ft MD (7218.0 TVD, 750.5 N, -606.3 E) - Polygon	0.00	0.00	7,218.0	675.5	-506.3	1,310,329.48	3,254,431.66	40° 10' 53.991 N	104° 35' 21.739 W
Point 1			7,218.0	0.0	0.0	1,310,329.48	3,254,431.66		
Point 2			7,218.0	0.0	-200.0	1,310,327.42	3,254,231.68		
TARGET BHL 2558'F - plan hits target - Point	0.00	0.00	5,200.0	750.5	-606.3	1,310,403.41	3,254,330.86	40° 10' 54.732 N	104° 35' 23.028 W

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
750.8	750.0	8 5/8"	8-5/8	12-1/4

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
6,897.3	6,788.0	NIOBRARA		0.00	
7,177.3	7,068.0	CODELL		0.00	