

ENSIGN

Directional

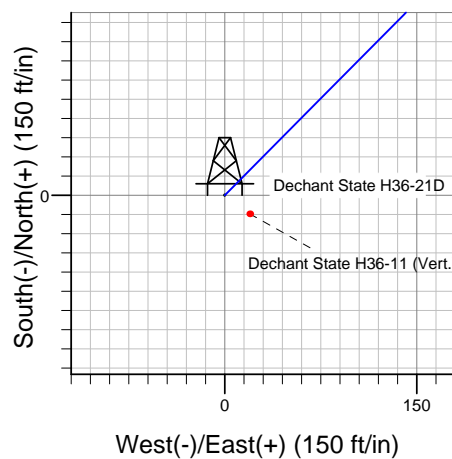
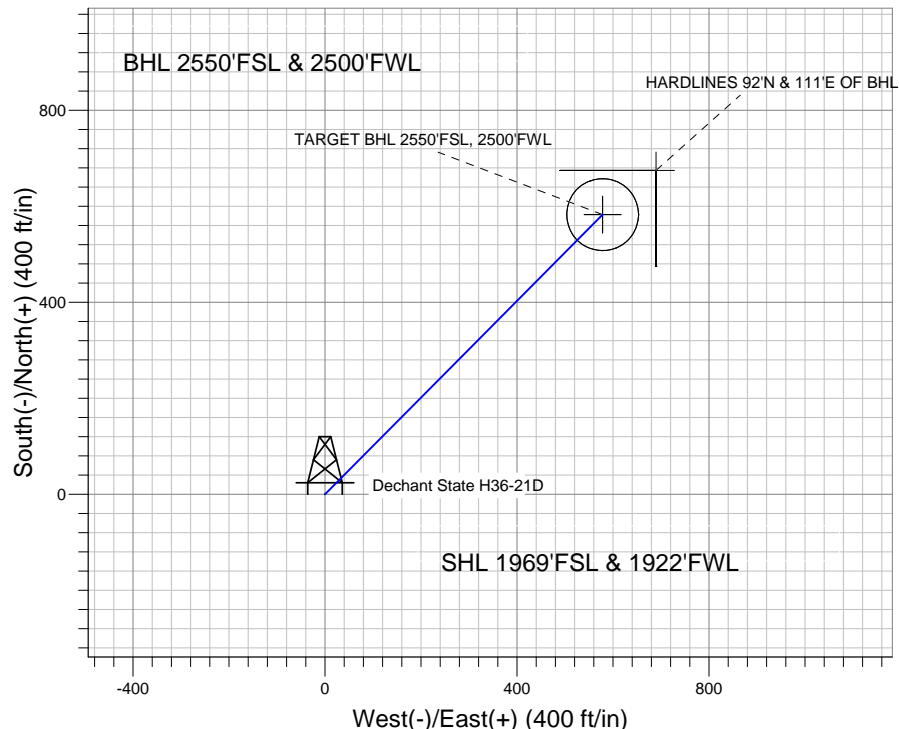
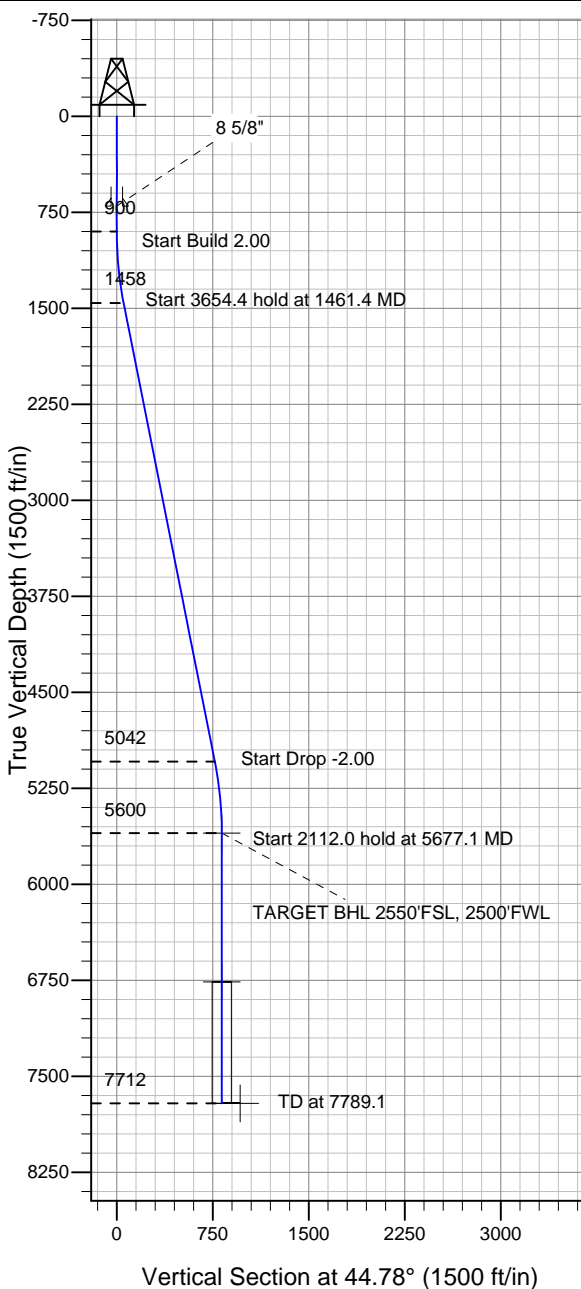
Well Name: Dechant State H36-21D

Surface Location: Dechant State H36-21D Pad Sec.36-T3N-R65W
 North American Datum 1983 US State Plane 1983 Colorado Northern Zone

Ground Elevation: 4819.0

+N/-S +E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1309549.05 3247306.37 40° 10' 46.992 N 104° 36' 53.640 W
 Original Well Elev WELL @ 4832.0ft (Original Well Elev)

NOBLE ENERGY INC WELD COUNTY CO



Dechant State H36-21D Pad Sec.36-T3N-R65W
 Dechant State H36-21D
 Noble Dechant State H36-21D Plan #3 (11-05-10)
 10:14, November 05 2010



Azimuths to True North
 Magnetic North: 8.85°

Magnetic Field
 Strength: 53096.1snT
 Dip Angle: 66.92°
 Date: 11/5/2010
 Model: IGRF2010

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 2550'FSL, 2500'FWL	5600.0	582.9	578.4	40° 10' 52.752 N	104° 36' 46.188 W	Point
TARGET CIRCLE 2500'FNL, 2500'FWL	6762.0	582.9	578.4	40° 10' 52.752 N	104° 36' 46.188 W	Circle (Radius: 75.0)
HARDLINES 92°N & 111°E OF BHL	7712.0	674.9	689.4	40° 10' 53.661 N	104° 36' 44.758 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	900.0	0.00	0.00	900.0	0.0	0.0	0.00	0.00	0.0	
3	1461.4	11.23	44.78	1457.8	38.9	38.6	2.00	44.78	54.8	
4	5115.7	11.23	44.78	5042.2	544.0	539.8	0.00	0.00	766.3	
5	5677.1	0.00	0.00	5600.0	582.9	578.4	2.00	180.00	821.2	TARGET BHL 2550'FSL, 2500'FWL
6	7789.1	0.00	0.00	7712.0	582.9	578.4	0.00	0.00	821.2	



Directional

NOBLE ENERGY INC WELD COUNTY CO

SEC.36-T3N-R65W

Dechant State H36-21D Pad Sec.36-T3N-R65W

Dechant State H36-21D

Wellbore #1

Plan: Noble Dechant State H36-21D Plan #3 (11-05-10)

Standard Planning Report

05 November, 2010



Database:	Landmark	Local Co-ordinate Reference:	Well Dechant State H36-21D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4832.0ft (Original Well Elev)
Project:	SEC.36-T3N-R65W	MD Reference:	WELL @ 4832.0ft (Original Well Elev)
Site:	Dechant State H36-21D Pad Sec.36-T3N-R65W	North Reference:	True
Well:	Dechant State H36-21D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Dechant State H36-21D Plan #3 (11-05-		

Project	SEC.36-T3N-R65W, 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 State H36-21D Pad Sec.36-T3N-R65W											
Site Position:						Northing:			1,309,549.05 ft			Latitude:			40° 10' 46.992 N		
From:			Lat/Long			Easting:			3,247,306.37 ft			Longitude:			104° 36' 53.640 W		
Position Uncertainty:			0.0 ft			Slot Radius:			"			Grid Convergence:			0.57 °		

Well	Dechant State H36-21D					
Well Position	+N-S	0.0 ft	Northing:	1,309,549.05 ft	Latitude:	40° 10' 46.992 N
	+E-W	0.0 ft	Easting:	3,247,306.37 ft	Longitude:	104° 36' 53.640 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,819.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	11/5/2010	8.85	66.92	53,096

Design	Noble Dechant State H36-21D Plan #3 (11-05-10)			
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	44.78

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	
900.0	0.00	0.00	900.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,461.4	11.23	44.78	1,457.8	38.9	38.6	2.00	2.00	0.00	44.78	
5,115.7	11.23	44.78	5,042.2	544.0	539.8	0.00	0.00	0.00	0.00	
5,677.1	0.00	0.00	5,600.0	582.9	578.4	2.00	-2.00	0.00	180.00	TARGET BHL 255C
7,789.1	0.00	0.00	7,712.0	582.9	578.4	0.00	0.00	0.00	0.00	

Database:	Landmark	Local Co-ordinate Reference:	Well Dechant State H36-21D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4832.0ft (Original Well Elev)
Project:	SEC.36-T3N-R65W	MD Reference:	WELL @ 4832.0ft (Original Well Elev)
Site:	Dechant State H36-21D Pad Sec.36-T3N-R65W	North Reference:	True
Well:	Dechant State H36-21D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Dechant State H36-21D Plan #3 (11-05-		

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
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	44.78	920.0	0.0	0.0	0.1	2.00	2.00	0.00
960.0	1.20	44.78	960.0	0.4	0.4	0.6	2.00	2.00	0.00
1,000.0	2.00	44.78	1,000.0	1.2	1.2	1.7	2.00	2.00	0.00
1,040.0	2.80	44.78	1,039.9	2.4	2.4	3.4	2.00	2.00	0.00
1,080.0	3.60	44.78	1,079.9	4.0	4.0	5.7	2.00	2.00	0.00
1,120.0	4.40	44.78	1,119.8	6.0	5.9	8.4	2.00	2.00	0.00
1,160.0	5.20	44.78	1,159.6	8.4	8.3	11.8	2.00	2.00	0.00
1,200.0	6.00	44.78	1,199.5	11.1	11.1	15.7	2.00	2.00	0.00
1,240.0	6.80	44.78	1,239.2	14.3	14.2	20.2	2.00	2.00	0.00
1,280.0	7.60	44.78	1,278.9	17.9	17.7	25.2	2.00	2.00	0.00
1,320.0	8.40	44.78	1,318.5	21.8	21.6	30.7	2.00	2.00	0.00
1,360.0	9.20	44.78	1,358.0	26.2	26.0	36.9	2.00	2.00	0.00
1,400.0	10.00	44.78	1,397.5	30.9	30.7	43.5	2.00	2.00	0.00
1,440.0	10.80	44.78	1,436.8	36.0	35.7	50.7	2.00	2.00	0.00
1,461.4	11.23	44.78	1,457.8	38.9	38.6	54.8	2.00	2.00	0.00
1,480.0	11.23	44.78	1,476.1	41.5	41.2	58.5	0.00	0.00	0.00
1,520.0	11.23	44.78	1,515.3	47.0	46.7	66.2	0.00	0.00	0.00
1,560.0	11.23	44.78	1,554.5	52.5	52.1	74.0	0.00	0.00	0.00
1,600.0	11.23	44.78	1,593.8	58.1	57.6	81.8	0.00	0.00	0.00
1,640.0	11.23	44.78	1,633.0	63.6	63.1	89.6	0.00	0.00	0.00
1,680.0	11.23	44.78	1,672.2	69.1	68.6	97.4	0.00	0.00	0.00
1,720.0	11.23	44.78	1,711.5	74.7	74.1	105.2	0.00	0.00	0.00
1,760.0	11.23	44.78	1,750.7	80.2	79.6	113.0	0.00	0.00	0.00
1,800.0	11.23	44.78	1,789.9	85.7	85.1	120.8	0.00	0.00	0.00
1,840.0	11.23	44.78	1,829.2	91.2	90.5	128.5	0.00	0.00	0.00
1,880.0	11.23	44.78	1,868.4	96.8	96.0	136.3	0.00	0.00	0.00
1,920.0	11.23	44.78	1,907.6	102.3	101.5	144.1	0.00	0.00	0.00
1,960.0	11.23	44.78	1,946.9	107.8	107.0	151.9	0.00	0.00	0.00
2,000.0	11.23	44.78	1,986.1	113.4	112.5	159.7	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Dechant State H36-21D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4832.0ft (Original Well Elev)
Project:	SEC.36-T3N-R65W	MD Reference:	WELL @ 4832.0ft (Original Well Elev)
Site:	Dechant State H36-21D Pad Sec.36-T3N-R65W	North Reference:	True
Well:	Dechant State H36-21D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Dechant State H36-21D Plan #3 (11-05-		

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	11.23	44.78	2,025.3	118.9	118.0	167.5	0.00	0.00	0.00	
2,080.0	11.23	44.78	2,064.6	124.4	123.5	175.3	0.00	0.00	0.00	
2,120.0	11.23	44.78	2,103.8	129.9	128.9	183.1	0.00	0.00	0.00	
2,160.0	11.23	44.78	2,143.0	135.5	134.4	190.9	0.00	0.00	0.00	
2,200.0	11.23	44.78	2,182.3	141.0	139.9	198.6	0.00	0.00	0.00	
2,240.0	11.23	44.78	2,221.5	146.5	145.4	206.4	0.00	0.00	0.00	
2,280.0	11.23	44.78	2,260.7	152.1	150.9	214.2	0.00	0.00	0.00	
2,320.0	11.23	44.78	2,300.0	157.6	156.4	222.0	0.00	0.00	0.00	
2,360.0	11.23	44.78	2,339.2	163.1	161.9	229.8	0.00	0.00	0.00	
2,400.0	11.23	44.78	2,378.5	168.6	167.3	237.6	0.00	0.00	0.00	
2,440.0	11.23	44.78	2,417.7	174.2	172.8	245.4	0.00	0.00	0.00	
2,480.0	11.23	44.78	2,456.9	179.7	178.3	253.2	0.00	0.00	0.00	
2,520.0	11.23	44.78	2,496.2	185.2	183.8	260.9	0.00	0.00	0.00	
2,560.0	11.23	44.78	2,535.4	190.8	189.3	268.7	0.00	0.00	0.00	
2,600.0	11.23	44.78	2,574.6	196.3	194.8	276.5	0.00	0.00	0.00	
2,640.0	11.23	44.78	2,613.9	201.8	200.3	284.3	0.00	0.00	0.00	
2,680.0	11.23	44.78	2,653.1	207.3	205.7	292.1	0.00	0.00	0.00	
2,720.0	11.23	44.78	2,692.3	212.9	211.2	299.9	0.00	0.00	0.00	
2,760.0	11.23	44.78	2,731.6	218.4	216.7	307.7	0.00	0.00	0.00	
2,800.0	11.23	44.78	2,770.8	223.9	222.2	315.5	0.00	0.00	0.00	
2,840.0	11.23	44.78	2,810.0	229.5	227.7	323.2	0.00	0.00	0.00	
2,880.0	11.23	44.78	2,849.3	235.0	233.2	331.0	0.00	0.00	0.00	
2,920.0	11.23	44.78	2,888.5	240.5	238.7	338.8	0.00	0.00	0.00	
2,960.0	11.23	44.78	2,927.7	246.0	244.1	346.6	0.00	0.00	0.00	
3,000.0	11.23	44.78	2,967.0	251.6	249.6	354.4	0.00	0.00	0.00	
3,040.0	11.23	44.78	3,006.2	257.1	255.1	362.2	0.00	0.00	0.00	
3,080.0	11.23	44.78	3,045.4	262.6	260.6	370.0	0.00	0.00	0.00	
3,120.0	11.23	44.78	3,084.7	268.2	266.1	377.8	0.00	0.00	0.00	
3,160.0	11.23	44.78	3,123.9	273.7	271.6	385.6	0.00	0.00	0.00	
3,200.0	11.23	44.78	3,163.1	279.2	277.1	393.3	0.00	0.00	0.00	
3,240.0	11.23	44.78	3,202.4	284.7	282.5	401.1	0.00	0.00	0.00	
3,280.0	11.23	44.78	3,241.6	290.3	288.0	408.9	0.00	0.00	0.00	
3,320.0	11.23	44.78	3,280.8	295.8	293.5	416.7	0.00	0.00	0.00	
3,360.0	11.23	44.78	3,320.1	301.3	299.0	424.5	0.00	0.00	0.00	
3,400.0	11.23	44.78	3,359.3	306.8	304.5	432.3	0.00	0.00	0.00	
3,440.0	11.23	44.78	3,398.5	312.4	310.0	440.1	0.00	0.00	0.00	
3,480.0	11.23	44.78	3,437.8	317.9	315.5	447.9	0.00	0.00	0.00	
3,520.0	11.23	44.78	3,477.0	323.4	320.9	455.6	0.00	0.00	0.00	
3,560.0	11.23	44.78	3,516.3	329.0	326.4	463.4	0.00	0.00	0.00	
3,600.0	11.23	44.78	3,555.5	334.5	331.9	471.2	0.00	0.00	0.00	
3,640.0	11.23	44.78	3,594.7	340.0	337.4	479.0	0.00	0.00	0.00	
3,680.0	11.23	44.78	3,634.0	345.5	342.9	486.8	0.00	0.00	0.00	
3,720.0	11.23	44.78	3,673.2	351.1	348.4	494.6	0.00	0.00	0.00	
3,760.0	11.23	44.78	3,712.4	356.6	353.9	502.4	0.00	0.00	0.00	
3,800.0	11.23	44.78	3,751.7	362.1	359.3	510.2	0.00	0.00	0.00	
3,840.0	11.23	44.78	3,790.9	367.7	364.8	518.0	0.00	0.00	0.00	
3,880.0	11.23	44.78	3,830.1	373.2	370.3	525.7	0.00	0.00	0.00	
3,920.0	11.23	44.78	3,869.4	378.7	375.8	533.5	0.00	0.00	0.00	
3,960.0	11.23	44.78	3,908.6	384.2	381.3	541.3	0.00	0.00	0.00	
4,000.0	11.23	44.78	3,947.8	389.8	386.8	549.1	0.00	0.00	0.00	
4,040.0	11.23	44.78	3,987.1	395.3	392.3	556.9	0.00	0.00	0.00	
4,080.0	11.23	44.78	4,026.3	400.8	397.7	564.7	0.00	0.00	0.00	
4,120.0	11.23	44.78	4,065.5	406.4	403.2	572.5	0.00	0.00	0.00	

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Project:	SEC.36-T3N-R65W	MD Reference:	WELL @ 4832.0ft (Original Well Elev)
Site:	Dechant State H36-21D Pad Sec.36-T3N-R65W	North Reference:	True
Well:	Dechant State H36-21D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Dechant State H36-21D Plan #3 (11-05-		

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	11.23	44.78	4,104.8	411.9	408.7	580.3	0.00	0.00	0.00
4,200.0	11.23	44.78	4,144.0	417.4	414.2	588.0	0.00	0.00	0.00
4,240.0	11.23	44.78	4,183.2	422.9	419.7	595.8	0.00	0.00	0.00
4,280.0	11.23	44.78	4,222.5	428.5	425.2	603.6	0.00	0.00	0.00
4,320.0	11.23	44.78	4,261.7	434.0	430.7	611.4	0.00	0.00	0.00
4,360.0	11.23	44.78	4,300.9	439.5	436.1	619.2	0.00	0.00	0.00
4,400.0	11.23	44.78	4,340.2	445.1	441.6	627.0	0.00	0.00	0.00
4,440.0	11.23	44.78	4,379.4	450.6	447.1	634.8	0.00	0.00	0.00
4,480.0	11.23	44.78	4,418.6	456.1	452.6	642.6	0.00	0.00	0.00
4,520.0	11.23	44.78	4,457.9	461.6	458.1	650.3	0.00	0.00	0.00
4,560.0	11.23	44.78	4,497.1	467.2	463.6	658.1	0.00	0.00	0.00
4,600.0	11.23	44.78	4,536.3	472.7	469.1	665.9	0.00	0.00	0.00
4,640.0	11.23	44.78	4,575.6	478.2	474.5	673.7	0.00	0.00	0.00
4,680.0	11.23	44.78	4,614.8	483.8	480.0	681.5	0.00	0.00	0.00
4,720.0	11.23	44.78	4,654.1	489.3	485.5	689.3	0.00	0.00	0.00
4,760.0	11.23	44.78	4,693.3	494.8	491.0	697.1	0.00	0.00	0.00
4,800.0	11.23	44.78	4,732.5	500.3	496.5	704.9	0.00	0.00	0.00
4,840.0	11.23	44.78	4,771.8	505.9	502.0	712.7	0.00	0.00	0.00
4,880.0	11.23	44.78	4,811.0	511.4	507.5	720.4	0.00	0.00	0.00
4,920.0	11.23	44.78	4,850.2	516.9	512.9	728.2	0.00	0.00	0.00
4,960.0	11.23	44.78	4,889.5	522.5	518.4	736.0	0.00	0.00	0.00
5,000.0	11.23	44.78	4,928.7	528.0	523.9	743.8	0.00	0.00	0.00
5,040.0	11.23	44.78	4,967.9	533.5	529.4	751.6	0.00	0.00	0.00
5,080.0	11.23	44.78	5,007.2	539.0	534.9	759.4	0.00	0.00	0.00
5,115.7	11.23	44.78	5,042.2	544.0	539.8	766.3	0.00	0.00	0.00
5,120.0	11.14	44.78	5,046.4	544.6	540.4	767.2	2.00	-2.00	0.00
5,160.0	10.34	44.78	5,085.7	549.9	545.6	774.6	2.00	-2.00	0.00
5,200.0	9.54	44.78	5,125.1	554.8	550.5	781.5	2.00	-2.00	0.00
5,240.0	8.74	44.78	5,164.6	559.3	555.0	787.9	2.00	-2.00	0.00
5,280.0	7.94	44.78	5,204.2	563.4	559.0	793.7	2.00	-2.00	0.00
5,320.0	7.14	44.78	5,243.8	567.1	562.7	798.9	2.00	-2.00	0.00
5,360.0	6.34	44.78	5,283.5	570.4	566.1	803.6	2.00	-2.00	0.00
5,400.0	5.54	44.78	5,323.3	573.4	569.0	807.8	2.00	-2.00	0.00
5,440.0	4.74	44.78	5,363.2	575.9	571.5	811.4	2.00	-2.00	0.00
5,480.0	3.94	44.78	5,403.0	578.1	573.6	814.4	2.00	-2.00	0.00
5,520.0	3.14	44.78	5,443.0	579.8	575.4	816.9	2.00	-2.00	0.00
5,560.0	2.34	44.78	5,482.9	581.2	576.7	818.8	2.00	-2.00	0.00
5,600.0	1.54	44.78	5,522.9	582.2	577.7	820.1	2.00	-2.00	0.00
5,640.0	0.74	44.78	5,562.9	582.7	578.2	820.9	2.00	-2.00	0.00
5,677.1	0.00	0.00	5,600.0	582.9	578.4	821.2	2.00	-2.00	0.00
5,680.0	0.00	0.00	5,602.9	582.9	578.4	821.2	0.00	0.00	0.00
5,720.0	0.00	0.00	5,642.9	582.9	578.4	821.2	0.00	0.00	0.00
5,760.0	0.00	0.00	5,682.9	582.9	578.4	821.2	0.00	0.00	0.00
5,800.0	0.00	0.00	5,722.9	582.9	578.4	821.2	0.00	0.00	0.00
5,840.0	0.00	0.00	5,762.9	582.9	578.4	821.2	0.00	0.00	0.00
5,880.0	0.00	0.00	5,802.9	582.9	578.4	821.2	0.00	0.00	0.00
5,920.0	0.00	0.00	5,842.9	582.9	578.4	821.2	0.00	0.00	0.00
5,960.0	0.00	0.00	5,882.9	582.9	578.4	821.2	0.00	0.00	0.00
6,000.0	0.00	0.00	5,922.9	582.9	578.4	821.2	0.00	0.00	0.00
6,040.0	0.00	0.00	5,962.9	582.9	578.4	821.2	0.00	0.00	0.00
6,080.0	0.00	0.00	6,002.9	582.9	578.4	821.2	0.00	0.00	0.00
6,120.0	0.00	0.00	6,042.9	582.9	578.4	821.2	0.00	0.00	0.00
6,160.0	0.00	0.00	6,082.9	582.9	578.4	821.2	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Dechant State H36-21D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4832.0ft (Original Well Elev)
Project:	SEC.36-T3N-R65W	MD Reference:	WELL @ 4832.0ft (Original Well Elev)
Site:	Dechant State H36-21D Pad Sec.36-T3N-R65W	North Reference:	True
Well:	Dechant State H36-21D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Dechant State H36-21D Plan #3 (11-05-		

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	6,122.9	582.9	578.4	821.2	0.00	0.00	0.00
6,240.0	0.00	0.00	6,162.9	582.9	578.4	821.2	0.00	0.00	0.00
6,280.0	0.00	0.00	6,202.9	582.9	578.4	821.2	0.00	0.00	0.00
6,320.0	0.00	0.00	6,242.9	582.9	578.4	821.2	0.00	0.00	0.00
6,360.0	0.00	0.00	6,282.9	582.9	578.4	821.2	0.00	0.00	0.00
6,400.0	0.00	0.00	6,322.9	582.9	578.4	821.2	0.00	0.00	0.00
6,440.0	0.00	0.00	6,362.9	582.9	578.4	821.2	0.00	0.00	0.00
6,480.0	0.00	0.00	6,402.9	582.9	578.4	821.2	0.00	0.00	0.00
6,520.0	0.00	0.00	6,442.9	582.9	578.4	821.2	0.00	0.00	0.00
6,560.0	0.00	0.00	6,482.9	582.9	578.4	821.2	0.00	0.00	0.00
6,600.0	0.00	0.00	6,522.9	582.9	578.4	821.2	0.00	0.00	0.00
6,640.0	0.00	0.00	6,562.9	582.9	578.4	821.2	0.00	0.00	0.00
6,680.0	0.00	0.00	6,602.9	582.9	578.4	821.2	0.00	0.00	0.00
6,720.0	0.00	0.00	6,642.9	582.9	578.4	821.2	0.00	0.00	0.00
6,760.0	0.00	0.00	6,682.9	582.9	578.4	821.2	0.00	0.00	0.00
6,800.0	0.00	0.00	6,722.9	582.9	578.4	821.2	0.00	0.00	0.00
6,840.0	0.00	0.00	6,762.9	582.9	578.4	821.2	0.00	0.00	0.00
6,880.0	0.00	0.00	6,802.9	582.9	578.4	821.2	0.00	0.00	0.00
6,920.0	0.00	0.00	6,842.9	582.9	578.4	821.2	0.00	0.00	0.00
6,960.0	0.00	0.00	6,882.9	582.9	578.4	821.2	0.00	0.00	0.00
7,000.0	0.00	0.00	6,922.9	582.9	578.4	821.2	0.00	0.00	0.00
7,040.0	0.00	0.00	6,962.9	582.9	578.4	821.2	0.00	0.00	0.00
7,080.0	0.00	0.00	7,002.9	582.9	578.4	821.2	0.00	0.00	0.00
7,120.0	0.00	0.00	7,042.9	582.9	578.4	821.2	0.00	0.00	0.00
7,160.0	0.00	0.00	7,082.9	582.9	578.4	821.2	0.00	0.00	0.00
7,200.0	0.00	0.00	7,122.9	582.9	578.4	821.2	0.00	0.00	0.00
7,240.0	0.00	0.00	7,162.9	582.9	578.4	821.2	0.00	0.00	0.00
7,280.0	0.00	0.00	7,202.9	582.9	578.4	821.2	0.00	0.00	0.00
7,320.0	0.00	0.00	7,242.9	582.9	578.4	821.2	0.00	0.00	0.00
7,360.0	0.00	0.00	7,282.9	582.9	578.4	821.2	0.00	0.00	0.00
7,400.0	0.00	0.00	7,322.9	582.9	578.4	821.2	0.00	0.00	0.00
7,440.0	0.00	0.00	7,362.9	582.9	578.4	821.2	0.00	0.00	0.00
7,480.0	0.00	0.00	7,402.9	582.9	578.4	821.2	0.00	0.00	0.00
7,520.0	0.00	0.00	7,442.9	582.9	578.4	821.2	0.00	0.00	0.00
7,560.0	0.00	0.00	7,482.9	582.9	578.4	821.2	0.00	0.00	0.00
7,600.0	0.00	0.00	7,522.9	582.9	578.4	821.2	0.00	0.00	0.00
7,640.0	0.00	0.00	7,562.9	582.9	578.4	821.2	0.00	0.00	0.00
7,680.0	0.00	0.00	7,602.9	582.9	578.4	821.2	0.00	0.00	0.00
7,720.0	0.00	0.00	7,642.9	582.9	578.4	821.2	0.00	0.00	0.00
7,760.0	0.00	0.00	7,682.9	582.9	578.4	821.2	0.00	0.00	0.00
7,789.1	0.00	0.00	7,712.0	582.9	578.4	821.2	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Dechant State H36-21D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4832.0ft (Original Well Elev)
Project:	SEC.36-T3N-R65W	MD Reference:	WELL @ 4832.0ft (Original Well Elev)
Site:	Dechant State H36-21D Pad Sec.36-T3N-R65W	North Reference:	True
Well:	Dechant State H36-21D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Dechant State H36-21D Plan #3 (11-05-		

Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
- Shape									
HARDLINES 92'N & 1	0.00	0.00	7,712.0	674.9	689.4	1,310,230.76	3,247,988.97	40° 10' 53.661 N	104° 36' 44.758 W
- plan misses by 144.2ft at 7789.1ft MD (7712.0 TVD, 582.9 N, 578.4 E)									
- Polygon									
Point 1			7,712.0	0.0	0.0	1,310,230.76	3,247,988.97		
Point 2			7,712.0	0.0	-200.0	1,310,228.77	3,247,788.99		
Point 3			7,712.0	0.0	0.0	1,310,230.76	3,247,988.97		
Point 4			7,712.0	-200.0	0.0	1,310,030.78	3,247,990.97		
TARGET CIRCLE 250'	0.00	0.00	6,762.0	582.9	578.4	1,310,137.66	3,247,878.90	40° 10' 52.752 N	104° 36' 46.188 W
- plan hits target									
- Circle (radius 75.0)									
TARGET BHL 2550'F:	0.00	0.00	5,600.0	582.9	578.4	1,310,137.66	3,247,878.90	40° 10' 52.752 N	104° 36' 46.188 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 (°)
6,839.1	6,762.0	NIOBRARA		0.00	
7,159.1	7,082.0	CODELL		0.00	
7,559.1	7,482.0	D-SAND		0.00	
7,639.1	7,562.0	J-SAND		0.00	