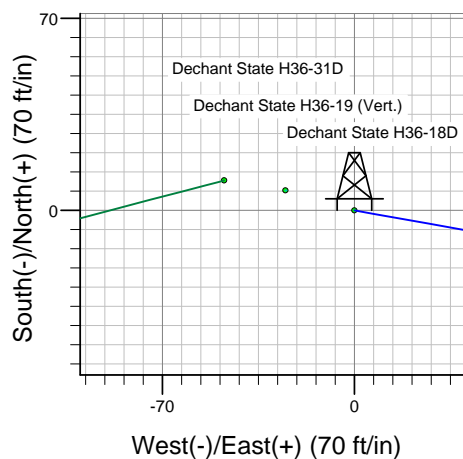
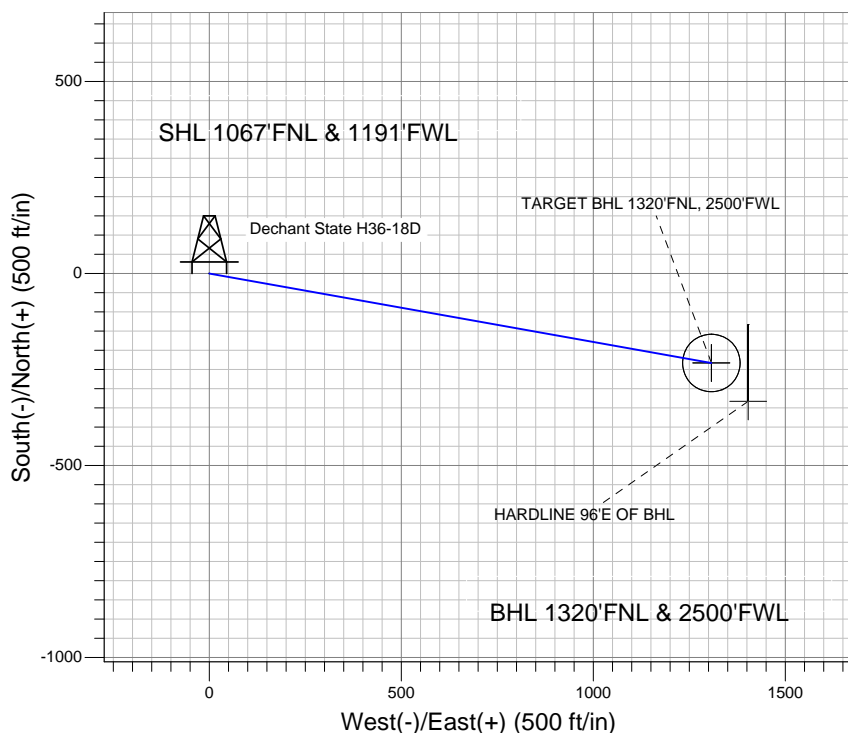
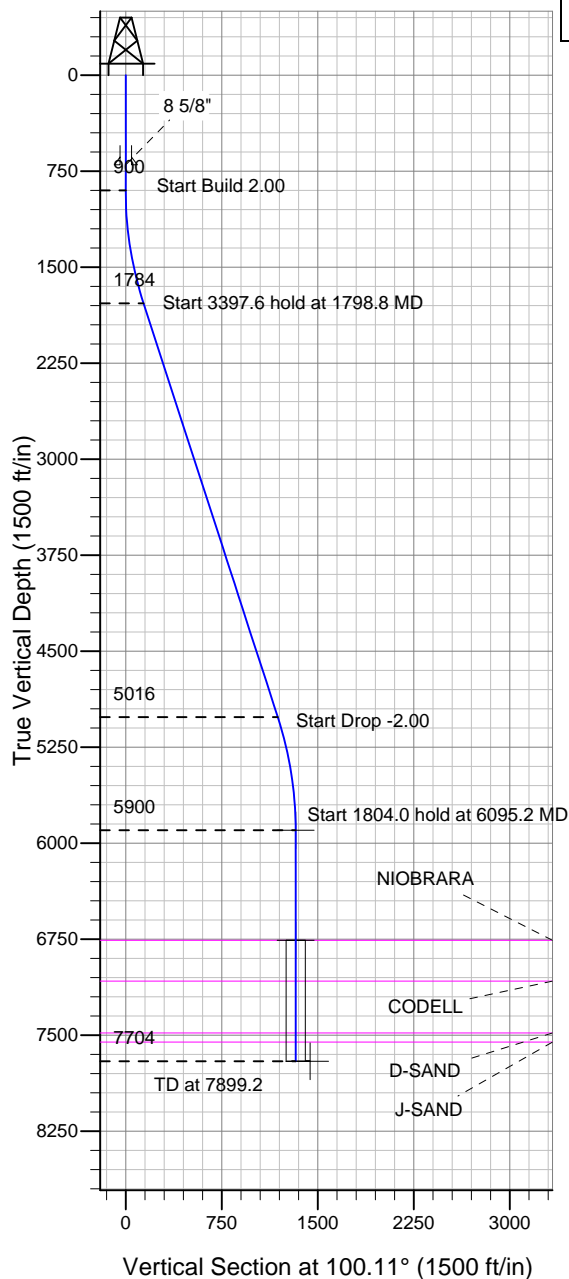


Well Name: Dechant State H36-18D

Surface Location: Dechant State H36-18D Pad Sec. 36-T3N-R65W
North American Datum 1983, US State Plane 1983 Colorado Northern Zone
Ground Elevation: 4816.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1311792.92	3246554.73	40° 11' 9.240 N	104° 37' 3.036 W	
Original Well EleWELL @ 4829.0ft (Original Well Elev)						

NOBLE ENERGY INC WELD COUNTY CO



Dechant State H36-18D Pad Sec. 36-T3N-R65W
Dechant State H36-18D
Noble Dechant State H36-18D Plan #1 (08-27-10)
16:11, August 30 2010



Azimuths to True North
Magnetic North: 8.90°
Magnetic Field
Strength: 53142.2snT
Dip Angle: 66.94°
Date: 6/9/2010
Model: IGRF2010

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 1320'FNL, 2500'FWL	5900.0	-233.1	1307.6	40° 11' 6.936 N	104° 36' 46.188 W	Point
TARGET CIRCLE 1320'FNL, 2500'FWL	6759.0	-233.1	1307.6	40° 11' 6.936 N	104° 36' 46.188 W	Circle (Radius: 75.0)
HARDLINE 96°E OF BHL	7704.0	-333.1	1403.6	40° 11' 5.948 N	104° 36' 44.951 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	1798.8	17.98	100.11	1784.1	-24.5	137.7	2.00	100.11	139.8	
4	5196.4	17.98	100.11	5015.9	-208.6	1169.9	0.00	0.00	1188.4	
5	6095.2	0.00	0.00	5900.0	-233.1	1307.6	2.00	180.00	1328.2	TARGET BHL 1320'FNL, 2500'FWL
6	7899.2	0.00	0.00	7704.0	-233.1	1307.6	0.00	0.00	1328.2	



Directional

NOBLE ENERGY INC WELD COUNTY CO

SEC.36-T3N-R65W

Dechant State H36-18D Pad Sec. 36-T3N-R65W

Dechant State H36-18D

Wellbore #1

Plan: Noble Dechant State H36-18D Plan #1 (08-27-10)

Standard Planning Report

30 August, 2010



Database:	Landmark	Local Co-ordinate Reference:	Well Dechant State H36-18D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4829.0ft (Original Well Elev)
Project:	SEC.36-T3N-R65W	MD Reference:	WELL @ 4829.0ft (Original Well Elev)
Site:	Dechant State H36-18D Pad Sec. 36-T3N-R65W	North Reference:	True
Well:	Dechant State H36-18D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Dechant State H36-18D Plan #1 (08-27-		

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 H36-18D Pad Sec. 36-T3N-R65W											
Site Position:						Northing:			1,311,792.94 ft			Latitude:			40° 11' 9.240 N		
From:			Lat/Long			Easting:			3,246,554.73 ft			Longitude:			104° 37' 3.036 W		
Position Uncertainty:			0.0 ft			Slot Radius:			"			Grid Convergence:			0.57 °		

Well	Dechant State H36-18D					
Well Position	+N/-S	0.0 ft	Northing:	1,311,792.92 ft	Latitude:	40° 11' 9.240 N
	+E/-W	0.0 ft	Easting:	3,246,554.73 ft	Longitude:	104° 37' 3.036 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,816.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	6/9/2010	8.90	66.94	53,142

Design	Noble Dechant State H36-18D Plan #1 (08-27-10)			
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	100.11

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	
1,798.8	17.98	100.11	1,784.1	-24.5	137.7	2.00	2.00	0.00	100.11	
5,196.4	17.98	100.11	5,015.9	-208.6	1,169.9	0.00	0.00	0.00	0.00	
6,095.2	0.00	0.00	5,900.0	-233.1	1,307.6	2.00	-2.00	0.00	180.00	TARGET BHL 132C
7,899.2	0.00	0.00	7,704.0	-233.1	1,307.6	0.00	0.00	0.00	0.00	

Database:	Landmark	Local Co-ordinate Reference:	Well Dechant State H36-18D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4829.0ft (Original Well Elev)
Project:	SEC.36-T3N-R65W	MD Reference:	WELL @ 4829.0ft (Original Well Elev)
Site:	Dechant State H36-18D Pad Sec. 36-T3N-R65W	North Reference:	True
Well:	Dechant State H36-18D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Dechant State H36-18D Plan #1 (08-27-		

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	100.11	920.0	0.0	0.1	0.1	2.00	2.00	0.00
960.0	1.20	100.11	960.0	-0.1	0.6	0.6	2.00	2.00	0.00
1,000.0	2.00	100.11	1,000.0	-0.3	1.7	1.7	2.00	2.00	0.00
1,040.0	2.80	100.11	1,039.9	-0.6	3.4	3.4	2.00	2.00	0.00
1,080.0	3.60	100.11	1,079.9	-1.0	5.6	5.7	2.00	2.00	0.00
1,120.0	4.40	100.11	1,119.8	-1.5	8.3	8.4	2.00	2.00	0.00
1,160.0	5.20	100.11	1,159.6	-2.1	11.6	11.8	2.00	2.00	0.00
1,200.0	6.00	100.11	1,199.5	-2.8	15.5	15.7	2.00	2.00	0.00
1,240.0	6.80	100.11	1,239.2	-3.5	19.8	20.2	2.00	2.00	0.00
1,280.0	7.60	100.11	1,278.9	-4.4	24.8	25.2	2.00	2.00	0.00
1,320.0	8.40	100.11	1,318.5	-5.4	30.3	30.7	2.00	2.00	0.00
1,360.0	9.20	100.11	1,358.0	-6.5	36.3	36.9	2.00	2.00	0.00
1,400.0	10.00	100.11	1,397.5	-7.6	42.8	43.5	2.00	2.00	0.00
1,440.0	10.80	100.11	1,436.8	-8.9	50.0	50.7	2.00	2.00	0.00
1,480.0	11.60	100.11	1,476.0	-10.3	57.6	58.5	2.00	2.00	0.00
1,520.0	12.40	100.11	1,515.2	-11.7	65.8	66.8	2.00	2.00	0.00
1,560.0	13.20	100.11	1,554.2	-13.3	74.5	75.7	2.00	2.00	0.00
1,600.0	14.00	100.11	1,593.1	-14.9	83.8	85.1	2.00	2.00	0.00
1,640.0	14.80	100.11	1,631.8	-16.7	93.6	95.0	2.00	2.00	0.00
1,680.0	15.60	100.11	1,670.4	-18.5	103.9	105.5	2.00	2.00	0.00
1,720.0	16.40	100.11	1,708.8	-20.5	114.7	116.6	2.00	2.00	0.00
1,760.0	17.20	100.11	1,747.1	-22.5	126.1	128.1	2.00	2.00	0.00
1,798.8	17.98	100.11	1,784.1	-24.5	137.7	139.8	2.00	2.00	0.00
1,800.0	17.98	100.11	1,785.3	-24.6	138.0	140.2	0.00	0.00	0.00
1,840.0	17.98	100.11	1,823.3	-26.8	150.2	152.6	0.00	0.00	0.00
1,880.0	17.98	100.11	1,861.4	-28.9	162.3	164.9	0.00	0.00	0.00
1,920.0	17.98	100.11	1,899.4	-31.1	174.5	177.2	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Dechant State H36-18D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4829.0ft (Original Well Elev)
Project:	SEC.36-T3N-R65W	MD Reference:	WELL @ 4829.0ft (Original Well Elev)
Site:	Dechant State H36-18D Pad Sec. 36-T3N-R65W	North Reference:	True
Well:	Dechant State H36-18D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Dechant State H36-18D Plan #1 (08-27-		

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	17.98	100.11	1,937.5	-33.3	186.6	189.6	0.00	0.00	0.00	
2,000.0	17.98	100.11	1,975.5	-35.4	198.8	201.9	0.00	0.00	0.00	
2,040.0	17.98	100.11	2,013.6	-37.6	211.0	214.3	0.00	0.00	0.00	
2,080.0	17.98	100.11	2,051.6	-39.8	223.1	226.6	0.00	0.00	0.00	
2,120.0	17.98	100.11	2,089.6	-41.9	235.3	239.0	0.00	0.00	0.00	
2,160.0	17.98	100.11	2,127.7	-44.1	247.4	251.3	0.00	0.00	0.00	
2,200.0	17.98	100.11	2,165.7	-46.3	259.6	263.7	0.00	0.00	0.00	
2,240.0	17.98	100.11	2,203.8	-48.4	271.7	276.0	0.00	0.00	0.00	
2,280.0	17.98	100.11	2,241.8	-50.6	283.9	288.3	0.00	0.00	0.00	
2,320.0	17.98	100.11	2,279.9	-52.8	296.0	300.7	0.00	0.00	0.00	
2,360.0	17.98	100.11	2,317.9	-54.9	308.2	313.0	0.00	0.00	0.00	
2,400.0	17.98	100.11	2,356.0	-57.1	320.3	325.4	0.00	0.00	0.00	
2,440.0	17.98	100.11	2,394.0	-59.3	332.5	337.7	0.00	0.00	0.00	
2,480.0	17.98	100.11	2,432.1	-61.4	344.6	350.1	0.00	0.00	0.00	
2,520.0	17.98	100.11	2,470.1	-63.6	356.8	362.4	0.00	0.00	0.00	
2,560.0	17.98	100.11	2,508.2	-65.8	368.9	374.8	0.00	0.00	0.00	
2,600.0	17.98	100.11	2,546.2	-67.9	381.1	387.1	0.00	0.00	0.00	
2,640.0	17.98	100.11	2,584.3	-70.1	393.2	399.4	0.00	0.00	0.00	
2,680.0	17.98	100.11	2,622.3	-72.3	405.4	411.8	0.00	0.00	0.00	
2,720.0	17.98	100.11	2,660.4	-74.4	417.6	424.1	0.00	0.00	0.00	
2,760.0	17.98	100.11	2,698.4	-76.6	429.7	436.5	0.00	0.00	0.00	
2,800.0	17.98	100.11	2,736.5	-78.8	441.9	448.8	0.00	0.00	0.00	
2,840.0	17.98	100.11	2,774.5	-80.9	454.0	461.2	0.00	0.00	0.00	
2,880.0	17.98	100.11	2,812.6	-83.1	466.2	473.5	0.00	0.00	0.00	
2,920.0	17.98	100.11	2,850.6	-85.3	478.3	485.9	0.00	0.00	0.00	
2,960.0	17.98	100.11	2,888.6	-87.4	490.5	498.2	0.00	0.00	0.00	
3,000.0	17.98	100.11	2,926.7	-89.6	502.6	510.5	0.00	0.00	0.00	
3,040.0	17.98	100.11	2,964.7	-91.8	514.8	522.9	0.00	0.00	0.00	
3,080.0	17.98	100.11	3,002.8	-93.9	526.9	535.2	0.00	0.00	0.00	
3,120.0	17.98	100.11	3,040.8	-96.1	539.1	547.6	0.00	0.00	0.00	
3,160.0	17.98	100.11	3,078.9	-98.3	551.2	559.9	0.00	0.00	0.00	
3,200.0	17.98	100.11	3,116.9	-100.4	563.4	572.3	0.00	0.00	0.00	
3,240.0	17.98	100.11	3,155.0	-102.6	575.5	584.6	0.00	0.00	0.00	
3,280.0	17.98	100.11	3,193.0	-104.8	587.7	597.0	0.00	0.00	0.00	
3,320.0	17.98	100.11	3,231.1	-106.9	599.8	609.3	0.00	0.00	0.00	
3,360.0	17.98	100.11	3,269.1	-109.1	612.0	621.7	0.00	0.00	0.00	
3,400.0	17.98	100.11	3,307.2	-111.3	624.2	634.0	0.00	0.00	0.00	
3,440.0	17.98	100.11	3,345.2	-113.4	636.3	646.3	0.00	0.00	0.00	
3,480.0	17.98	100.11	3,383.3	-115.6	648.5	658.7	0.00	0.00	0.00	
3,520.0	17.98	100.11	3,421.3	-117.8	660.6	671.0	0.00	0.00	0.00	
3,560.0	17.98	100.11	3,459.4	-119.9	672.8	683.4	0.00	0.00	0.00	
3,600.0	17.98	100.11	3,497.4	-122.1	684.9	695.7	0.00	0.00	0.00	
3,640.0	17.98	100.11	3,535.5	-124.3	697.1	708.1	0.00	0.00	0.00	
3,680.0	17.98	100.11	3,573.5	-126.4	709.2	720.4	0.00	0.00	0.00	
3,720.0	17.98	100.11	3,611.5	-128.6	721.4	732.8	0.00	0.00	0.00	
3,760.0	17.98	100.11	3,649.6	-130.8	733.5	745.1	0.00	0.00	0.00	
3,800.0	17.98	100.11	3,687.6	-132.9	745.7	757.4	0.00	0.00	0.00	
3,840.0	17.98	100.11	3,725.7	-135.1	757.8	769.8	0.00	0.00	0.00	
3,880.0	17.98	100.11	3,763.7	-137.3	770.0	782.1	0.00	0.00	0.00	
3,920.0	17.98	100.11	3,801.8	-139.4	782.1	794.5	0.00	0.00	0.00	
3,960.0	17.98	100.11	3,839.8	-141.6	794.3	806.8	0.00	0.00	0.00	
4,000.0	17.98	100.11	3,877.9	-143.8	806.5	819.2	0.00	0.00	0.00	
4,040.0	17.98	100.11	3,915.9	-145.9	818.6	831.5	0.00	0.00	0.00	

Database:	Landmark	Local Co-ordinate Reference:	Well Dechant State H36-18D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4829.0ft (Original Well Elev)
Project:	SEC.36-T3N-R65W	MD Reference:	WELL @ 4829.0ft (Original Well Elev)
Site:	Dechant State H36-18D Pad Sec. 36-T3N-R65W	North Reference:	True
Well:	Dechant State H36-18D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Dechant State H36-18D Plan #1 (08-27-		

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)
4,080.0	17.98	100.11	3,954.0	-148.1	830.8	843.9	0.00	0.00	0.00
4,120.0	17.98	100.11	3,992.0	-150.3	842.9	856.2	0.00	0.00	0.00
4,160.0	17.98	100.11	4,030.1	-152.4	855.1	868.5	0.00	0.00	0.00
4,200.0	17.98	100.11	4,068.1	-154.6	867.2	880.9	0.00	0.00	0.00
4,240.0	17.98	100.11	4,106.2	-156.8	879.4	893.2	0.00	0.00	0.00
4,280.0	17.98	100.11	4,144.2	-158.9	891.5	905.6	0.00	0.00	0.00
4,320.0	17.98	100.11	4,182.3	-161.1	903.7	917.9	0.00	0.00	0.00
4,360.0	17.98	100.11	4,220.3	-163.3	915.8	930.3	0.00	0.00	0.00
4,400.0	17.98	100.11	4,258.4	-165.4	928.0	942.6	0.00	0.00	0.00
4,440.0	17.98	100.11	4,296.4	-167.6	940.1	955.0	0.00	0.00	0.00
4,480.0	17.98	100.11	4,334.5	-169.8	952.3	967.3	0.00	0.00	0.00
4,520.0	17.98	100.11	4,372.5	-171.9	964.4	979.6	0.00	0.00	0.00
4,560.0	17.98	100.11	4,410.5	-174.1	976.6	992.0	0.00	0.00	0.00
4,600.0	17.98	100.11	4,448.6	-176.3	988.7	1,004.3	0.00	0.00	0.00
4,640.0	17.98	100.11	4,486.6	-178.4	1,000.9	1,016.7	0.00	0.00	0.00
4,680.0	17.98	100.11	4,524.7	-180.6	1,013.1	1,029.0	0.00	0.00	0.00
4,720.0	17.98	100.11	4,562.7	-182.8	1,025.2	1,041.4	0.00	0.00	0.00
4,760.0	17.98	100.11	4,600.8	-184.9	1,037.4	1,053.7	0.00	0.00	0.00
4,800.0	17.98	100.11	4,638.8	-187.1	1,049.5	1,066.1	0.00	0.00	0.00
4,840.0	17.98	100.11	4,676.9	-189.3	1,061.7	1,078.4	0.00	0.00	0.00
4,880.0	17.98	100.11	4,714.9	-191.4	1,073.8	1,090.7	0.00	0.00	0.00
4,920.0	17.98	100.11	4,753.0	-193.6	1,086.0	1,103.1	0.00	0.00	0.00
4,960.0	17.98	100.11	4,791.0	-195.8	1,098.1	1,115.4	0.00	0.00	0.00
5,000.0	17.98	100.11	4,829.1	-197.9	1,110.3	1,127.8	0.00	0.00	0.00
5,040.0	17.98	100.11	4,867.1	-200.1	1,122.4	1,140.1	0.00	0.00	0.00
5,080.0	17.98	100.11	4,905.2	-202.3	1,134.6	1,152.5	0.00	0.00	0.00
5,120.0	17.98	100.11	4,943.2	-204.4	1,146.7	1,164.8	0.00	0.00	0.00
5,160.0	17.98	100.11	4,981.3	-206.6	1,158.9	1,177.2	0.00	0.00	0.00
5,196.4	17.98	100.11	5,015.9	-208.6	1,169.9	1,188.4	0.00	0.00	0.00
5,200.0	17.90	100.11	5,019.3	-208.8	1,171.0	1,189.5	2.00	-2.00	0.00
5,240.0	17.10	100.11	5,057.5	-210.9	1,182.9	1,201.5	2.00	-2.00	0.00
5,280.0	16.30	100.11	5,095.8	-212.9	1,194.2	1,213.0	2.00	-2.00	0.00
5,320.0	15.50	100.11	5,134.2	-214.8	1,205.0	1,224.0	2.00	-2.00	0.00
5,360.0	14.70	100.11	5,172.9	-216.6	1,215.3	1,234.4	2.00	-2.00	0.00
5,400.0	13.90	100.11	5,211.6	-218.4	1,225.0	1,244.3	2.00	-2.00	0.00
5,440.0	13.10	100.11	5,250.5	-220.0	1,234.2	1,253.6	2.00	-2.00	0.00
5,480.0	12.30	100.11	5,289.5	-221.6	1,242.8	1,262.4	2.00	-2.00	0.00
5,520.0	11.50	100.11	5,328.7	-223.0	1,251.0	1,270.7	2.00	-2.00	0.00
5,560.0	10.70	100.11	5,367.9	-224.4	1,258.5	1,278.4	2.00	-2.00	0.00
5,600.0	9.90	100.11	5,407.3	-225.6	1,265.6	1,285.5	2.00	-2.00	0.00
5,640.0	9.10	100.11	5,446.7	-226.8	1,272.1	1,292.1	2.00	-2.00	0.00
5,680.0	8.30	100.11	5,486.3	-227.8	1,278.0	1,298.2	2.00	-2.00	0.00
5,720.0	7.50	100.11	5,525.9	-228.8	1,283.5	1,303.7	2.00	-2.00	0.00
5,760.0	6.70	100.11	5,565.6	-229.7	1,288.3	1,308.6	2.00	-2.00	0.00
5,800.0	5.90	100.11	5,605.3	-230.4	1,292.7	1,313.0	2.00	-2.00	0.00
5,840.0	5.10	100.11	5,645.1	-231.1	1,296.4	1,316.9	2.00	-2.00	0.00
5,880.0	4.30	100.11	5,685.0	-231.7	1,299.7	1,320.2	2.00	-2.00	0.00
5,920.0	3.50	100.11	5,724.9	-232.2	1,302.3	1,322.9	2.00	-2.00	0.00
5,960.0	2.70	100.11	5,764.9	-232.5	1,304.5	1,325.0	2.00	-2.00	0.00
6,000.0	1.90	100.11	5,804.8	-232.8	1,306.1	1,326.6	2.00	-2.00	0.00
6,040.0	1.10	100.11	5,844.8	-233.0	1,307.1	1,327.7	2.00	-2.00	0.00
6,080.0	0.30	100.11	5,884.8	-233.1	1,307.6	1,328.2	2.00	-2.00	0.00
6,095.2	0.00	0.00	5,900.0	-233.1	1,307.6	1,328.2	2.00	-2.00	-658.97

Database:	Landmark	Local Co-ordinate Reference:	Well Dechant State H36-18D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4829.0ft (Original Well Elev)
Project:	SEC.36-T3N-R65W	MD Reference:	WELL @ 4829.0ft (Original Well Elev)
Site:	Dechant State H36-18D Pad Sec. 36-T3N-R65W	North Reference:	True
Well:	Dechant State H36-18D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Dechant State H36-18D Plan #1 (08-27-		

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)
TARGET BHL 1320'FNL, 2500'FWL									
6,120.0	0.00	0.00	5,924.8	-233.1	1,307.6	1,328.2	0.00	0.00	0.00
6,160.0	0.00	0.00	5,964.8	-233.1	1,307.6	1,328.2	0.00	0.00	0.00
6,200.0	0.00	0.00	6,004.8	-233.1	1,307.6	1,328.2	0.00	0.00	0.00
6,240.0	0.00	0.00	6,044.8	-233.1	1,307.6	1,328.2	0.00	0.00	0.00
6,280.0	0.00	0.00	6,084.8	-233.1	1,307.6	1,328.2	0.00	0.00	0.00
6,320.0	0.00	0.00	6,124.8	-233.1	1,307.6	1,328.2	0.00	0.00	0.00
6,360.0	0.00	0.00	6,164.8	-233.1	1,307.6	1,328.2	0.00	0.00	0.00
6,400.0	0.00	0.00	6,204.8	-233.1	1,307.6	1,328.2	0.00	0.00	0.00
6,440.0	0.00	0.00	6,244.8	-233.1	1,307.6	1,328.2	0.00	0.00	0.00
6,480.0	0.00	0.00	6,284.8	-233.1	1,307.6	1,328.2	0.00	0.00	0.00
6,520.0	0.00	0.00	6,324.8	-233.1	1,307.6	1,328.2	0.00	0.00	0.00
6,560.0	0.00	0.00	6,364.8	-233.1	1,307.6	1,328.2	0.00	0.00	0.00
6,600.0	0.00	0.00	6,404.8	-233.1	1,307.6	1,328.2	0.00	0.00	0.00
6,640.0	0.00	0.00	6,444.8	-233.1	1,307.6	1,328.2	0.00	0.00	0.00
6,680.0	0.00	0.00	6,484.8	-233.1	1,307.6	1,328.2	0.00	0.00	0.00
6,720.0	0.00	0.00	6,524.8	-233.1	1,307.6	1,328.2	0.00	0.00	0.00
6,760.0	0.00	0.00	6,564.8	-233.1	1,307.6	1,328.2	0.00	0.00	0.00
6,800.0	0.00	0.00	6,604.8	-233.1	1,307.6	1,328.2	0.00	0.00	0.00
6,840.0	0.00	0.00	6,644.8	-233.1	1,307.6	1,328.2	0.00	0.00	0.00
6,880.0	0.00	0.00	6,684.8	-233.1	1,307.6	1,328.2	0.00	0.00	0.00
6,920.0	0.00	0.00	6,724.8	-233.1	1,307.6	1,328.2	0.00	0.00	0.00
6,954.2	0.00	0.00	6,759.0	-233.1	1,307.6	1,328.2	0.00	0.00	0.00
NOIBRARA - TARGET CIRCLE 1320'FNL, 2500'FWL									
6,960.0	0.00	0.00	6,764.8	-233.1	1,307.6	1,328.2	0.00	0.00	0.00
7,000.0	0.00	0.00	6,804.8	-233.1	1,307.6	1,328.2	0.00	0.00	0.00
7,040.0	0.00	0.00	6,844.8	-233.1	1,307.6	1,328.2	0.00	0.00	0.00
7,080.0	0.00	0.00	6,884.8	-233.1	1,307.6	1,328.2	0.00	0.00	0.00
7,120.0	0.00	0.00	6,924.8	-233.1	1,307.6	1,328.2	0.00	0.00	0.00
7,160.0	0.00	0.00	6,964.8	-233.1	1,307.6	1,328.2	0.00	0.00	0.00
7,200.0	0.00	0.00	7,004.8	-233.1	1,307.6	1,328.2	0.00	0.00	0.00
7,240.0	0.00	0.00	7,044.8	-233.1	1,307.6	1,328.2	0.00	0.00	0.00
7,274.2	0.00	0.00	7,079.0	-233.1	1,307.6	1,328.2	0.00	0.00	0.00
CODELL									
7,280.0	0.00	0.00	7,084.8	-233.1	1,307.6	1,328.2	0.00	0.00	0.00
7,320.0	0.00	0.00	7,124.8	-233.1	1,307.6	1,328.2	0.00	0.00	0.00
7,360.0	0.00	0.00	7,164.8	-233.1	1,307.6	1,328.2	0.00	0.00	0.00
7,400.0	0.00	0.00	7,204.8	-233.1	1,307.6	1,328.2	0.00	0.00	0.00
7,440.0	0.00	0.00	7,244.8	-233.1	1,307.6	1,328.2	0.00	0.00	0.00
7,480.0	0.00	0.00	7,284.8	-233.1	1,307.6	1,328.2	0.00	0.00	0.00
7,520.0	0.00	0.00	7,324.8	-233.1	1,307.6	1,328.2	0.00	0.00	0.00
7,560.0	0.00	0.00	7,364.8	-233.1	1,307.6	1,328.2	0.00	0.00	0.00
7,600.0	0.00	0.00	7,404.8	-233.1	1,307.6	1,328.2	0.00	0.00	0.00
7,640.0	0.00	0.00	7,444.8	-233.1	1,307.6	1,328.2	0.00	0.00	0.00
7,679.2	0.00	0.00	7,484.0	-233.1	1,307.6	1,328.2	0.00	0.00	0.00
D-SAND									
7,680.0	0.00	0.00	7,484.8	-233.1	1,307.6	1,328.2	0.00	0.00	0.00
7,720.0	0.00	0.00	7,524.8	-233.1	1,307.6	1,328.2	0.00	0.00	0.00
7,749.2	0.00	0.00	7,554.0	-233.1	1,307.6	1,328.2	0.00	0.00	0.00
J-SAND									
7,760.0	0.00	0.00	7,564.8	-233.1	1,307.6	1,328.2	0.00	0.00	0.00
7,800.0	0.00	0.00	7,604.8	-233.1	1,307.6	1,328.2	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Dechant State H36-18D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4829.0ft (Original Well Elev)
Project:	SEC.36-T3N-R65W	MD Reference:	WELL @ 4829.0ft (Original Well Elev)
Site:	Dechant State H36-18D Pad Sec. 36-T3N-R65W	North Reference:	True
Well:	Dechant State H36-18D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Dechant State H36-18D Plan #1 (08-27-		

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)
7,840.0	0.00	0.00	7,644.8	-233.1	1,307.6	1,328.2	0.00	0.00	0.00
7,880.0	0.00	0.00	7,684.8	-233.1	1,307.6	1,328.2	0.00	0.00	0.00
7,899.2	0.00	0.00	7,704.0	-233.1	1,307.6	1,328.2	0.00	0.00	0.00
HARDLINE 96'E OF BHL									

Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
TARGET BHL 1320'F	0.00	0.00	5,900.0	-233.1	1,307.6	1,311,572.86	3,247,864.54	40° 11' 6.936 N	104° 36' 46.188 W
- plan hits target									
- Point									
HARDLINE 96'E OF E	0.00	0.00	7,704.0	-333.1	1,403.6	1,311,473.82	3,247,961.52	40° 11' 5.948 N	104° 36' 44.951 W
- plan misses by 138.6ft at 7899.2ft MD (7704.0 TVD, -233.1 N, 1307.6 E)									
- Polygon									
Point 1			7,704.0	0.0	0.0	1,311,473.82	3,247,961.52		
Point 2			7,704.0	200.0	0.0	1,311,673.81	3,247,959.53		
TARGET CIRCLE 132	0.00	0.00	6,759.0	-233.1	1,307.6	1,311,572.86	3,247,864.54	40° 11' 6.936 N	104° 36' 46.188 W
- plan hits target									
- Circle (radius 75.0)									

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 (°)
6,954.2	6,759.0	NIOBRARA		0.00	
7,274.2	7,079.0	CODELL		0.00	
7,679.2	7,484.0	D-SAND		0.00	
7,749.2	7,554.0	J-SAND		0.00	



Directional

NOBLE ENERGY INC WELD COUNTY CO

SEC.36-T3N-R65W

Dechant State H36-18D Pad Sec. 36-T3N-R65W

Dechant State H36-18D

Wellbore #1

Noble Dechant State H36-18D Plan #1 (08-27-10)

Anticollision Report

30 August, 2010



Company:	NOBLE ENERGY INC WELD COUNTY CO	Local Co-ordinate Reference:	Well Dechant State H36-18D
Project:	SEC.36-T3N-R65W	TVD Reference:	WELL @ 4829.0ft (Original Well Elev)
Reference Site:	Dechant State H36-18D Pad Sec. 36-T3N-R65W	MD Reference:	WELL @ 4829.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dechant State H36-18D	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Noble Dechant State H36-18D Plan #1 (08-27-10)	Offset TVD Reference:	Offset Datum

Reference	Noble Dechant State H36-18D Plan		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 10,000.0ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program	Date	8/30/2010		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	7,899.2	Noble Dechant State H36-18D Plan #1 (08-27-10)	MWD	MWD - Standard

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Dechant State H36-18D Pad Sec. 36-T3N-R65W						
Dechant State H36-19 (Vert.) - Wellbore #1 - Design #1	900.0	900.0	26.2	22.4	6.852	CC, ES
Dechant State H36-19 (Vert.) - Wellbore #1 - Design #1	1,000.0	1,000.0	27.9	23.7	6.563	SF

Offset Design												
Dechant State H36-18D Pad Sec. 36-T3N-R65W - Dechant State H36-19 (Vert.) - Wellbore #1 - Design												
Survey Program: 0-MWD												
Reference	Offset	Semi Major Axis			Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor
0.0	0.0	0.0	0.0	0.0	0.0	-73.83	7.3	-25.1	26.2			
100.0	100.0	100.0	100.0	0.1	0.1	-73.83	7.3	-25.1	26.2	26.0	0.22	116.484
200.0	200.0	200.0	200.0	0.3	0.3	-73.83	7.3	-25.1	26.2	25.5	0.67	38.828
300.0	300.0	300.0	300.0	0.6	0.6	-73.83	7.3	-25.1	26.2	25.1	1.12	23.297
400.0	400.0	400.0	400.0	0.8	0.8	-73.83	7.3	-25.1	26.2	24.6	1.57	16.641
500.0	500.0	500.0	500.0	1.0	1.0	-73.83	7.3	-25.1	26.2	24.2	2.02	12.943
600.0	600.0	600.0	600.0	1.2	1.2	-73.83	7.3	-25.1	26.2	23.7	2.47	10.589
700.0	700.0	700.0	700.0	1.5	1.5	-73.83	7.3	-25.1	26.2	23.3	2.92	8.960
800.0	800.0	800.0	800.0	1.7	1.7	-73.83	7.3	-25.1	26.2	22.8	3.37	7.766
900.0	900.0	900.0	900.0	1.9	1.9	-73.83	7.3	-25.1	26.2	22.4	3.82	6.852 CC, ES
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-174.31	7.3	-25.1	27.9	23.7	4.25	6.563 SF
1,100.0	1,099.8	1,099.8	1,099.8	2.3	2.4	-175.20	7.3	-25.1	33.1	28.5	4.67	7.091
1,200.0	1,199.5	1,199.5	1,199.5	2.5	2.6	-176.19	7.3	-25.1	41.8	36.7	5.09	8.215
1,300.0	1,298.7	1,298.7	1,298.7	2.8	2.8	-177.04	7.3	-25.1	54.0	48.5	5.51	9.800
1,400.0	1,397.5	1,397.5	1,397.5	3.1	3.0	-177.69	7.3	-25.1	69.6	63.7	5.93	11.749
1,500.0	1,495.6	1,495.6	1,495.6	3.4	3.2	-178.17	7.3	-25.1	88.7	82.3	6.34	13.989
1,600.0	1,593.1	1,593.1	1,593.1	3.7	3.5	-178.53	7.3	-25.1	111.2	104.4	6.75	16.465
1,700.0	1,689.6	1,689.6	1,689.6	4.2	3.7	-178.80	7.3	-25.1	137.0	129.9	7.16	19.134
1,798.8	1,784.1	1,784.1	1,784.1	4.7	3.9	-179.00	7.3	-25.1	165.9	158.3	7.57	21.926
1,800.0	1,785.3	1,785.3	1,785.3	4.7	3.9	-179.00	7.3	-25.1	166.3	158.7	7.57	21.960
1,900.0	1,880.4	1,880.4	1,880.4	5.2	4.1	-179.16	7.3	-25.1	197.1	189.1	8.04	24.531
2,000.0	1,975.5	1,975.5	1,975.5	5.8	4.3	-179.27	7.3	-25.1	228.0	219.5	8.51	26.800
2,100.0	2,070.6	2,070.6	2,070.6	6.4	4.5	-179.36	7.3	-25.1	258.8	249.9	8.98	28.811

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	NOBLE ENERGY INC WELD COUNTY CO	Local Co-ordinate Reference:	Well Dechant State H36-18D
Project:	SEC.36-T3N-R65W	TVD Reference:	WELL @ 4829.0ft (Original Well Elev)
Reference Site:	Dechant State H36-18D Pad Sec. 36-T3N-R65W	MD Reference:	WELL @ 4829.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dechant State H36-18D	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Noble Dechant State H36-18D Plan #1 (08-27-10)	Offset TVD Reference:	Offset Datum

Offset Design Dechant State H36-18D Pad Sec. 36-T3N-R65W - Dechant State H36-19 (Vert.) - Wellbore #1 - Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference	Offset		Semi Major Axis		Distance									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
2,200.0	2,165.7	2,165.7	2,165.7	7.0	4.8	-179.43	7.3	-25.1	289.7	280.2	9.47	30.604		
2,300.0	2,260.9	2,260.9	2,260.9	7.6	5.0	-179.48	7.3	-25.1	320.6	310.6	9.95	32.209		
2,400.0	2,356.0	2,356.0	2,356.0	8.2	5.2	-179.53	7.3	-25.1	351.4	341.0	10.44	33.653		
2,500.0	2,451.1	2,451.1	2,451.1	8.9	5.4	-179.56	7.3	-25.1	382.3	371.4	10.94	34.959		
2,600.0	2,546.2	2,546.2	2,546.2	9.5	5.6	-179.60	7.3	-25.1	413.1	401.7	11.43	36.143		
2,700.0	2,641.3	2,641.3	2,641.3	10.1	5.8	-179.63	7.3	-25.1	444.0	432.1	11.93	37.223		
2,800.0	2,736.5	2,736.5	2,736.5	10.8	6.0	-179.65	7.3	-25.1	474.9	462.4	12.43	38.209		
2,900.0	2,831.6	2,831.6	2,831.6	11.4	6.3	-179.67	7.3	-25.1	505.7	492.8	12.93	39.115		
3,000.0	2,926.7	2,926.7	2,926.7	12.0	6.5	-179.69	7.3	-25.1	536.6	523.2	13.43	39.948		
3,100.0	3,021.8	3,021.8	3,021.8	12.7	6.7	-179.71	7.3	-25.1	567.5	553.5	13.94	40.717		
3,200.0	3,116.9	3,116.9	3,116.9	13.3	6.9	-179.72	7.3	-25.1	598.3	583.9	14.44	41.429		
3,300.0	3,212.0	3,212.0	3,212.0	14.0	7.1	-179.74	7.3	-25.1	629.2	614.2	14.95	42.090		
3,400.0	3,307.2	3,307.2	3,307.2	14.6	7.3	-179.75	7.3	-25.1	660.0	644.6	15.46	42.704		
3,500.0	3,402.3	3,402.3	3,402.3	15.3	7.5	-179.76	7.3	-25.1	690.9	674.9	15.96	43.278		
3,600.0	3,497.4	3,497.4	3,497.4	15.9	7.7	-179.77	7.3	-25.1	721.8	705.3	16.47	43.813		
3,700.0	3,592.5	3,592.5	3,592.5	16.6	8.0	-179.78	7.3	-25.1	752.6	735.6	16.98	44.315		
3,800.0	3,687.6	3,687.6	3,687.6	17.2	8.2	-179.79	7.3	-25.1	783.5	766.0	17.49	44.786		
3,900.0	3,782.8	3,782.8	3,782.8	17.9	8.4	-179.80	7.3	-25.1	814.3	796.3	18.01	45.228		
4,000.0	3,877.9	3,877.9	3,877.9	18.5	8.6	-179.80	7.3	-25.1	845.2	826.7	18.52	45.645		
4,100.0	3,973.0	3,973.0	3,973.0	19.2	8.8	-179.81	7.3	-25.1	876.1	857.0	19.03	46.038		
4,200.0	4,068.1	4,068.1	4,068.1	19.8	9.0	-179.82	7.3	-25.1	906.9	887.4	19.54	46.409		
4,300.0	4,163.2	4,163.2	4,163.2	20.5	9.2	-179.82	7.3	-25.1	937.8	917.7	20.06	46.760		
4,400.0	4,258.4	4,258.4	4,258.4	21.2	9.5	-179.83	7.3	-25.1	968.6	948.1	20.57	47.093		
4,500.0	4,353.5	4,353.5	4,353.5	21.8	9.7	-179.83	7.3	-25.1	999.5	978.4	21.08	47.408		
4,600.0	4,448.6	4,448.6	4,448.6	22.5	9.9	-179.84	7.3	-25.1	1,030.4	1,008.8	21.60	47.707		
4,700.0	4,543.7	4,543.7	4,543.7	23.1	10.1	-179.84	7.3	-25.1	1,061.2	1,039.1	22.11	47.992		
4,800.0	4,638.8	4,638.8	4,638.8	23.8	10.3	-179.85	7.3	-25.1	1,092.1	1,069.5	22.63	48.263		
4,900.0	4,733.9	4,733.9	4,733.9	24.4	10.5	-179.85	7.3	-25.1	1,123.0	1,099.8	23.14	48.521		
5,000.0	4,829.1	4,829.1	4,829.1	25.1	10.7	-179.86	7.3	-25.1	1,153.8	1,130.2	23.66	48.768		
5,100.0	4,924.2	4,924.2	4,924.2	25.8	11.0	-179.86	7.3	-25.1	1,184.7	1,160.5	24.18	49.003		
5,196.4	5,015.9	5,015.9	5,015.9	26.4	11.2	-179.86	7.3	-25.1	1,214.4	1,189.8	24.67	49.220		
5,200.0	5,019.3	5,019.3	5,019.3	26.4	11.2	-179.86	7.3	-25.1	1,215.5	1,190.8	24.70	49.220		
5,300.0	5,115.0	5,115.0	5,115.0	26.9	11.4	-179.87	7.3	-25.1	1,244.6	1,219.3	25.28	49.233		
5,400.0	5,211.6	5,211.6	5,211.6	27.3	11.6	-179.87	7.3	-25.1	1,270.3	1,244.5	25.83	49.180		
5,500.0	5,309.1	5,309.1	5,309.1	27.7	11.8	-179.87	7.3	-25.1	1,292.7	1,266.3	26.34	49.068		
5,600.0	5,407.3	5,407.3	5,407.3	28.0	12.0	-179.88	7.3	-25.1	1,311.6	1,284.8	26.82	48.902		
5,700.0	5,506.1	5,506.1	5,506.1	28.3	12.3	-179.88	7.3	-25.1	1,327.1	1,299.8	27.26	48.685		
5,800.0	5,605.3	5,605.3	5,605.3	28.6	12.5	-179.88	7.3	-25.1	1,339.1	1,311.4	27.66	48.420		
5,900.0	5,705.0	5,705.0	5,705.0	28.8	12.7	-179.88	7.3	-25.1	1,347.6	1,319.6	28.01	48.109		
6,000.0	5,804.8	5,804.8	5,804.8	28.9	12.9	-179.88	7.3	-25.1	1,352.7	1,324.4	28.33	47.753		
6,095.2	5,900.0	5,900.0	5,900.0	29.0	13.1	-79.78	7.3	-25.1	1,354.3	1,325.7	28.59	47.364		
6,100.0	5,904.8	5,904.8	5,904.8	29.0	13.2	-79.78	7.3	-25.1	1,354.3	1,325.7	28.61	47.334		
6,200.0	6,004.8	6,004.8	6,004.8	29.1	13.4	-79.78	7.3	-25.1	1,354.3	1,325.3	29.00	46.701		
6,300.0	6,104.8	6,104.8	6,104.8	29.2	13.6	-79.78	7.3	-25.1	1,354.3	1,324.9	29.39	46.082		
6,400.0	6,204.8	6,204.8	6,204.8	29.3	13.8	-79.78	7.3	-25.1	1,354.3	1,324.5	29.78	45.477		
6,500.0	6,304.8	6,304.8	6,304.8	29.4	14.1	-79.78	7.3	-25.1	1,354.3	1,324.1	30.17	44.886		
6,600.0	6,404.8	6,404.8	6,404.8	29.5	14.3	-79.78	7.3	-25.1	1,354.3	1,323.7	30.56	44.308		
6,700.0	6,504.8	6,504.8	6,504.8	29.6	14.5	-79.78	7.3	-25.1	1,354.3	1,323.3	30.96	43.743		
6,800.0	6,604.8	6,604.8	6,604.8	29.7	14.7	-79.78	7.3	-25.1	1,354.3	1,322.9	31.36	43.190		
6,900.0	6,704.8	6,704.8	6,704.8	29.8	15.0	-79.78	7.3	-25.1	1,354.3	1,322.5	31.75	42.649		
7,000.0	6,804.8	6,804.8	6,804.8	29.9	15.2	-79.78	7.3	-25.1	1,354.3	1,322.1	32.15	42.120		

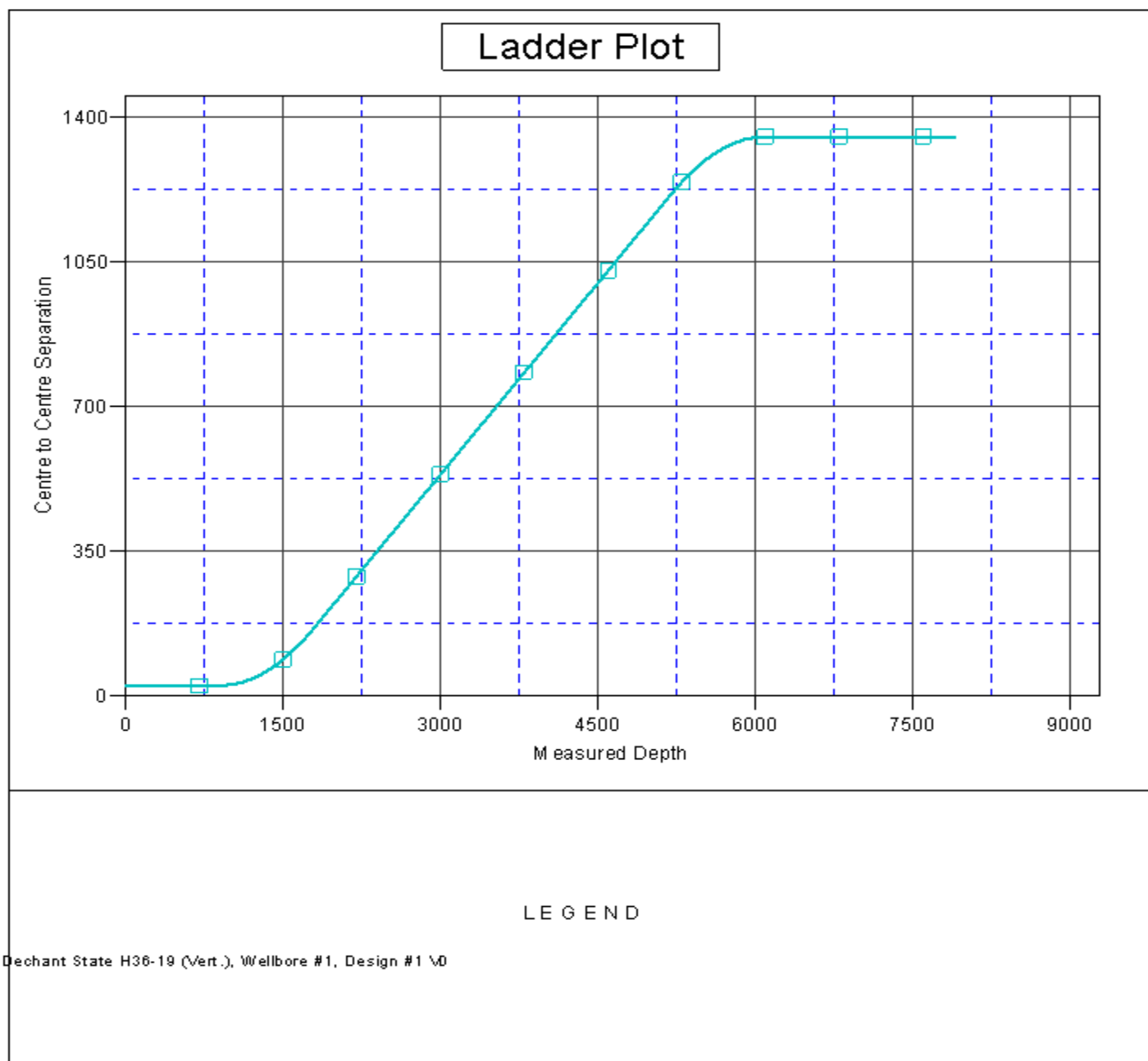
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	NOBLE ENERGY INC WELD COUNTY CO	Local Co-ordinate Reference:	Well Dechant State H36-18D
Project:	SEC.36-T3N-R65W	TVD Reference:	WELL @ 4829.0ft (Original Well Elev)
Reference Site:	Dechant State H36-18D Pad Sec. 36-T3N-R65W	MD Reference:	WELL @ 4829.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dechant State H36-18D	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Noble Dechant State H36-18D Plan #1 (08-27-10)	Offset TVD Reference:	Offset Datum

Offset Design Dechant State H36-18D Pad Sec. 36-T3N-R65W - Dechant State H36-19 (Vert.) - Wellbore #1 - Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference	Offset	Semi Major Axis		Distance		Warning								
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
7,100.0	6,904.8	6,904.8	6,904.8	30.0	15.4	-79.78	7.3	-25.1	1,354.3	1,321.7	32.55	41.603		
7,200.0	7,004.8	7,004.8	7,004.8	30.1	15.6	-79.78	7.3	-25.1	1,354.3	1,321.3	32.95	41.097		
7,300.0	7,104.8	7,104.8	7,104.8	30.2	15.9	-79.78	7.3	-25.1	1,354.3	1,320.9	33.36	40.601		
7,400.0	7,204.8	7,204.8	7,204.8	30.3	16.1	-79.78	7.3	-25.1	1,354.3	1,320.5	33.76	40.116		
7,500.0	7,304.8	7,304.8	7,304.8	30.5	16.3	-79.78	7.3	-25.1	1,354.3	1,320.1	34.16	39.642		
7,600.0	7,404.8	7,404.8	7,404.8	30.6	16.5	-79.78	7.3	-25.1	1,354.3	1,319.7	34.57	39.177		
7,700.0	7,504.8	7,504.8	7,504.8	30.7	16.8	-79.78	7.3	-25.1	1,354.3	1,319.3	34.97	38.722		
7,800.0	7,604.8	7,604.8	7,604.8	30.8	17.0	-79.78	7.3	-25.1	1,354.3	1,318.9	35.38	38.276		
7,899.2	7,704.0	7,704.0	7,704.0	30.9	17.2	-79.78	7.3	-25.1	1,354.3	1,318.5	35.79	37.843		

Company:	NOBLE ENERGY INC WELD COUNTY CO	Local Co-ordinate Reference:	Well Dechant State H36-18D
Project:	SEC.36-T3N-R65W	TVD Reference:	WELL @ 4829.0ft (Original Well Elev)
Reference Site:	Dechant State H36-18D Pad Sec. 36-T3N-R65W	MD Reference:	WELL @ 4829.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dechant State H36-18D	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Noble Dechant State H36-18D Plan #1 (08-27-10)	Offset TVD Reference:	Offset Datum

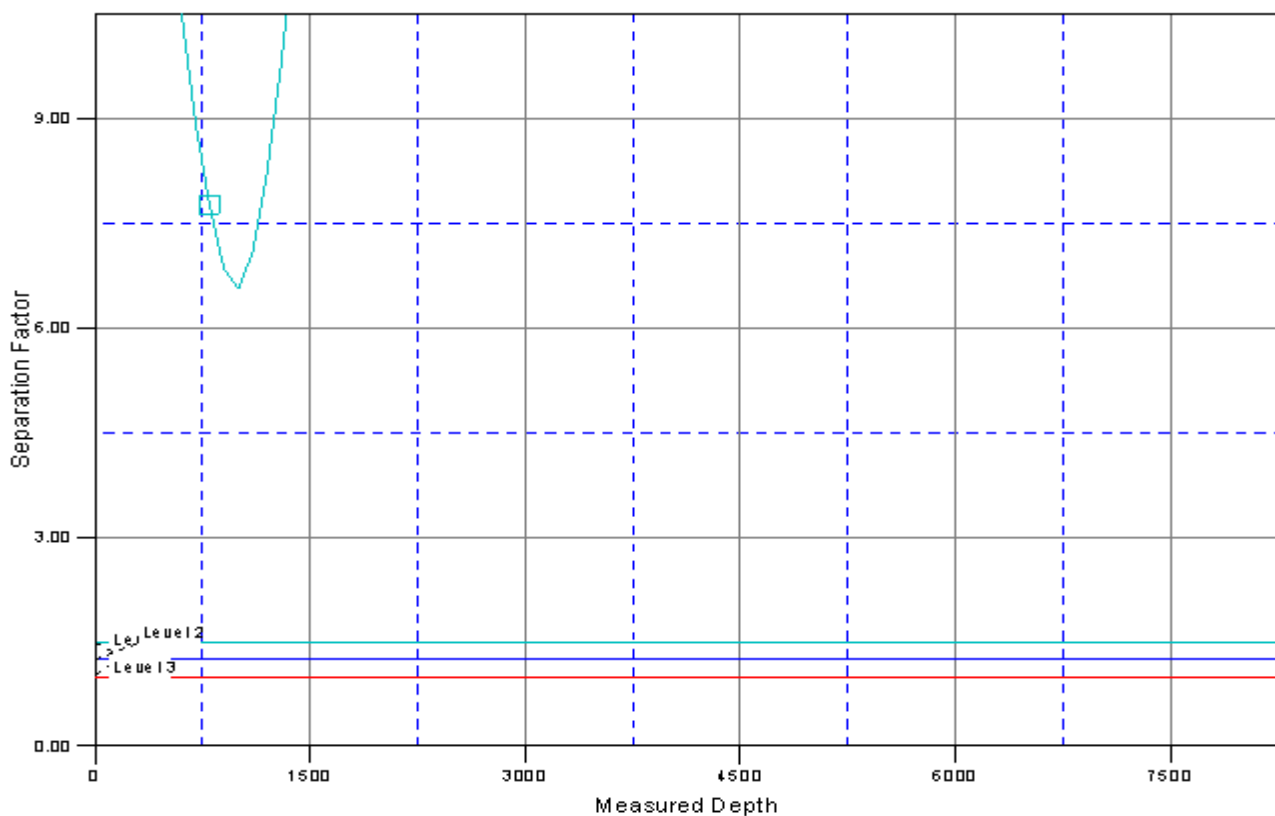
Reference Depths are relative to WELL @ 4829.0ft (Original Well Elev) Coordinates are relative to: Dechant State H36-18D
Offset Depths are relative to Offset Datum
Central Meridian is 105° 30' 0.000 W °
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.57°



Company:	NOBLE ENERGY INC WELD COUNTY CO	Local Co-ordinate Reference:	Well Dechant State H36-18D
Project:	SEC.36-T3N-R65W	TVD Reference:	WELL @ 4829.0ft (Original Well Elev)
Reference Site:	Dechant State H36-18D Pad Sec. 36-T3N-R65W	MD Reference:	WELL @ 4829.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dechant State H36-18D	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Noble Dechant State H36-18D Plan #1 (08-27-10)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4829.0ft (Original Well Elev)Coordinates are relative to: Dechant State H36-18D
Offset Depths are relative to Offset Datum
Central Meridian is 105° 30' 0.000 W °
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.57°

Separation Factor Plot



LEGEND

Dechant State H36-18 (Vert.), Wellbore #1, Design #1 WD