

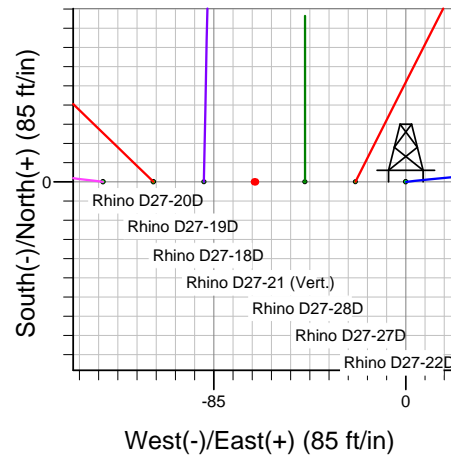
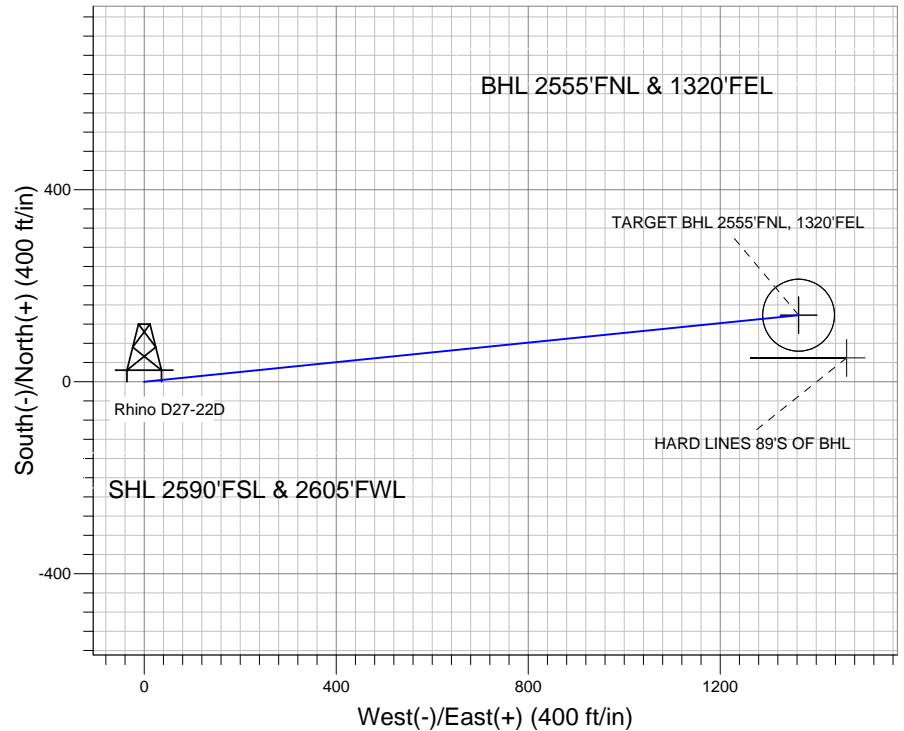
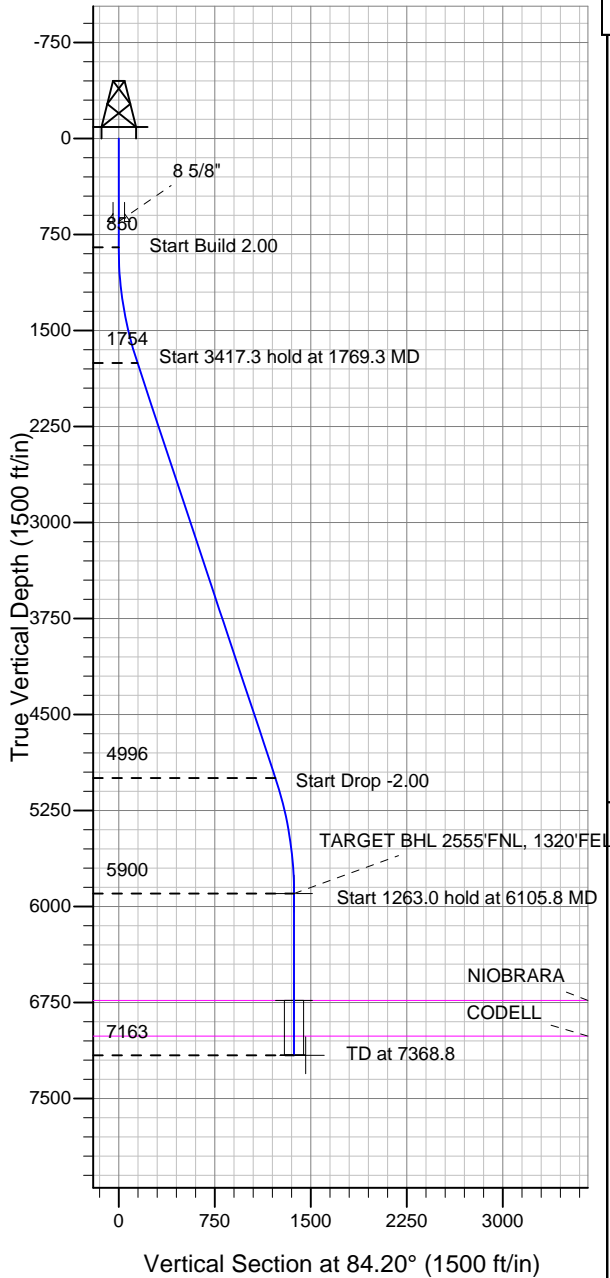
ENSIGN

Directional

Well Name: Rhino D27-22D

Surface Location: Rhino D27-20D Pad Sec.27-T3N-R64W
 North American Datum 1983 US State Plane 1983 Colorado Northern Zone
 Ground Elevation: 4866.0
 +N/-S +E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1315787.75 3268821.97 40.196230 -104.537660
 Original Well Elev WELL @ 4879.0ft (Original Well Elev)

NOBLE ENERGY INC WELD COUNTY CO



Rhino D27-20D Pad Sec.27-T3N-R64W
 Rhino D27-22D
 Noble Rhino D27-22D Plan #1 (4-21-11)
 11:41, April 25 2011



Azimuths to True North
 Magnetic North: 8.74°

Magnetic Field
 Strength: 53064.4snT
 Dip Angle: 66.93°
 Date: 4/21/2011
 Model: IGRF2010

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 2555'FNL, 1320'FEL	5900.0	138.5	1363.3	40.196610	-104.532780	Point
TARGET CIRCLE 2555'FNL & 1320'FEL	6733.0	138.5	1363.3	40.196610	-104.532780	Circle (Radius: 75.0)
HARD LINES 89'S OF BHL	7163.0	49.5	1463.3	40.196366	-104.532422	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	850.0	0.00	0.00	850.0	0.0	0.0	0.00	0.00	0.0	
3	1769.3	18.39	84.20	1753.6	14.8	145.5	2.00	84.20	146.2	
4	5186.5	18.39	84.20	4996.4	123.8	1217.8	0.00	0.00	1224.1	
5	6105.8	0.00	0.00	5900.0	138.5	1363.3	2.00	180.00	1370.3	TARGET BHL 2555'FNL, 1320'FEL
6	7368.8	0.00	0.00	7163.0	138.5	1363.3	0.00	0.00	1370.3	



Directional

NOBLE ENERGY INC WELD COUNTY CO

SEC.27-T3N-R64W

Rhino D27-20D Pad Sec.27-T3N-R64W

Rhino D27-22D

Wellbore #1

Plan: Noble Rhino D27-22D Plan #1 (4-21-11)

Standard Planning Report

25 April, 2011



Database:	Landmark	Local Co-ordinate Reference:	Well Rhino D27-22D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4879.0ft (Original Well Elev)
Project:	SEC.27-T3N-R64W	MD Reference:	WELL @ 4879.0ft (Original Well Elev)
Site:	Rhino D27-20D Pad Sec.27-T3N-R64W	North Reference:	True
Well:	Rhino D27-22D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Rhino D27-22D Plan #1 (4-21-11)		

Project	SEC.27-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						Rhino D27-20D Pad Sec.27-T3N-R64W											
Site Position:						Northing:			1,315,786.36ft			Latitude:			40.196230		
From:			Lat/Long			Easting:			3,268,687.89ft			Longitude:			-104.538140		
Position Uncertainty:			0.0 ft			Slot Radius:			"			Grid Convergence:			0.62 °		

Well	Rhino D27-22D					
Well Position	+N/-S	-0.1 ft	Northing:	1,315,787.75 ft	Latitude:	40.196230
	+E/-W	134.1 ft	Easting:	3,268,821.97 ft	Longitude:	-104.537660
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,866.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	4/21/2011	8.74	66.93	53,064

Design	Noble Rhino D27-22D Plan #1 (4-21-11)			
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	84.20

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	
850.0	0.00	0.00	850.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,769.3	18.39	84.20	1,753.6	14.8	145.5	2.00	2.00	0.00	84.20	
5,186.5	18.39	84.20	4,996.4	123.8	1,217.8	0.00	0.00	0.00	0.00	
6,105.8	0.00	0.00	5,900.0	138.5	1,363.3	2.00	-2.00	0.00	180.00	TARGET BHL 2555
7,368.8	0.00	0.00	7,163.0	138.5	1,363.3	0.00	0.00	0.00	0.00	

Database:	Landmark	Local Co-ordinate Reference:	Well Rhino D27-22D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4879.0ft (Original Well Elev)
Project:	SEC.27-T3N-R64W	MD Reference:	WELL @ 4879.0ft (Original Well Elev)
Site:	Rhino D27-20D Pad Sec.27-T3N-R64W	North Reference:	True
Well:	Rhino D27-22D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Rhino D27-22D Plan #1 (4-21-11)		

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
650.0	0.00	0.00	650.0	0.0	0.0	0.0	0.00	0.00	0.00
8 5/8"									
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
850.0	0.00	0.00	850.0	0.0	0.0	0.0	0.00	0.00	0.00
880.0	0.60	84.20	880.0	0.0	0.2	0.2	2.00	2.00	0.00
920.0	1.40	84.20	920.0	0.1	0.9	0.9	2.00	2.00	0.00
960.0	2.20	84.20	960.0	0.2	2.1	2.1	2.00	2.00	0.00
1,000.0	3.00	84.20	999.9	0.4	3.9	3.9	2.00	2.00	0.00
1,040.0	3.80	84.20	1,039.9	0.6	6.3	6.3	2.00	2.00	0.00
1,080.0	4.60	84.20	1,079.8	0.9	9.2	9.2	2.00	2.00	0.00
1,120.0	5.40	84.20	1,119.6	1.3	12.6	12.7	2.00	2.00	0.00
1,160.0	6.20	84.20	1,159.4	1.7	16.7	16.8	2.00	2.00	0.00
1,200.0	7.00	84.20	1,199.1	2.2	21.2	21.4	2.00	2.00	0.00
1,240.0	7.80	84.20	1,238.8	2.7	26.4	26.5	2.00	2.00	0.00
1,280.0	8.60	84.20	1,278.4	3.3	32.0	32.2	2.00	2.00	0.00
1,320.0	9.40	84.20	1,317.9	3.9	38.3	38.5	2.00	2.00	0.00
1,360.0	10.20	84.20	1,357.3	4.6	45.0	45.3	2.00	2.00	0.00
1,400.0	11.00	84.20	1,396.6	5.3	52.4	52.6	2.00	2.00	0.00
1,440.0	11.80	84.20	1,435.8	6.1	60.2	60.5	2.00	2.00	0.00
1,480.0	12.60	84.20	1,474.9	7.0	68.6	69.0	2.00	2.00	0.00
1,520.0	13.40	84.20	1,513.9	7.9	77.6	78.0	2.00	2.00	0.00
1,560.0	14.20	84.20	1,552.8	8.8	87.1	87.5	2.00	2.00	0.00
1,600.0	15.00	84.20	1,591.5	9.9	97.1	97.6	2.00	2.00	0.00
1,640.0	15.80	84.20	1,630.0	10.9	107.7	108.2	2.00	2.00	0.00
1,680.0	16.60	84.20	1,668.4	12.1	118.8	119.4	2.00	2.00	0.00
1,720.0	17.40	84.20	1,706.7	13.3	130.4	131.1	2.00	2.00	0.00
1,760.0	18.20	84.20	1,744.8	14.5	142.6	143.3	2.00	2.00	0.00
1,769.3	18.39	84.20	1,753.6	14.8	145.5	146.2	2.00	2.00	0.00
1,800.0	18.39	84.20	1,782.7	15.8	155.1	155.9	0.00	0.00	0.00
1,840.0	18.39	84.20	1,820.7	17.0	167.7	168.5	0.00	0.00	0.00
1,880.0	18.39	84.20	1,858.7	18.3	180.2	181.2	0.00	0.00	0.00
1,920.0	18.39	84.20	1,896.6	19.6	192.8	193.8	0.00	0.00	0.00
1,960.0	18.39	84.20	1,934.6	20.9	205.3	206.4	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Rhino D27-22D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4879.0ft (Original Well Elev)
Project:	SEC.27-T3N-R64W	MD Reference:	WELL @ 4879.0ft (Original Well Elev)
Site:	Rhino D27-20D Pad Sec.27-T3N-R64W	North Reference:	True
Well:	Rhino D27-22D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Rhino D27-22D Plan #1 (4-21-11)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
2,000.0	18.39	84.20	1,972.5	22.1	217.9	219.0	0.00	0.00	0.00
2,040.0	18.39	84.20	2,010.5	23.4	230.4	231.6	0.00	0.00	0.00
2,080.0	18.39	84.20	2,048.4	24.7	243.0	244.2	0.00	0.00	0.00
2,120.0	18.39	84.20	2,086.4	26.0	255.5	256.9	0.00	0.00	0.00
2,160.0	18.39	84.20	2,124.4	27.2	268.1	269.5	0.00	0.00	0.00
2,200.0	18.39	84.20	2,162.3	28.5	280.6	282.1	0.00	0.00	0.00
2,240.0	18.39	84.20	2,200.3	29.8	293.2	294.7	0.00	0.00	0.00
2,280.0	18.39	84.20	2,238.2	31.1	305.7	307.3	0.00	0.00	0.00
2,320.0	18.39	84.20	2,276.2	32.3	318.3	319.9	0.00	0.00	0.00
2,360.0	18.39	84.20	2,314.2	33.6	330.8	332.5	0.00	0.00	0.00
2,400.0	18.39	84.20	2,352.1	34.9	343.4	345.2	0.00	0.00	0.00
2,440.0	18.39	84.20	2,390.1	36.2	355.9	357.8	0.00	0.00	0.00
2,480.0	18.39	84.20	2,428.0	37.4	368.5	370.4	0.00	0.00	0.00
2,520.0	18.39	84.20	2,466.0	38.7	381.1	383.0	0.00	0.00	0.00
2,560.0	18.39	84.20	2,503.9	40.0	393.6	395.6	0.00	0.00	0.00
2,600.0	18.39	84.20	2,541.9	41.3	406.2	408.2	0.00	0.00	0.00
2,640.0	18.39	84.20	2,579.9	42.5	418.7	420.9	0.00	0.00	0.00
2,680.0	18.39	84.20	2,617.8	43.8	431.3	433.5	0.00	0.00	0.00
2,720.0	18.39	84.20	2,655.8	45.1	443.8	446.1	0.00	0.00	0.00
2,760.0	18.39	84.20	2,693.7	46.4	456.4	458.7	0.00	0.00	0.00
2,800.0	18.39	84.20	2,731.7	47.7	468.9	471.3	0.00	0.00	0.00
2,840.0	18.39	84.20	2,769.7	48.9	481.5	483.9	0.00	0.00	0.00
2,880.0	18.39	84.20	2,807.6	50.2	494.0	496.6	0.00	0.00	0.00
2,920.0	18.39	84.20	2,845.6	51.5	506.6	509.2	0.00	0.00	0.00
2,960.0	18.39	84.20	2,883.5	52.8	519.1	521.8	0.00	0.00	0.00
3,000.0	18.39	84.20	2,921.5	54.0	531.7	534.4	0.00	0.00	0.00
3,040.0	18.39	84.20	2,959.4	55.3	544.2	547.0	0.00	0.00	0.00
3,080.0	18.39	84.20	2,997.4	56.6	556.8	559.6	0.00	0.00	0.00
3,120.0	18.39	84.20	3,035.4	57.9	569.3	572.3	0.00	0.00	0.00
3,160.0	18.39	84.20	3,073.3	59.1	581.9	584.9	0.00	0.00	0.00
3,200.0	18.39	84.20	3,111.3	60.4	594.4	597.5	0.00	0.00	0.00
3,240.0	18.39	84.20	3,149.2	61.7	607.0	610.1	0.00	0.00	0.00
3,280.0	18.39	84.20	3,187.2	63.0	619.5	622.7	0.00	0.00	0.00
3,320.0	18.39	84.20	3,225.2	64.2	632.1	635.3	0.00	0.00	0.00
3,360.0	18.39	84.20	3,263.1	65.5	644.6	648.0	0.00	0.00	0.00
3,400.0	18.39	84.20	3,301.1	66.8	657.2	660.6	0.00	0.00	0.00
3,440.0	18.39	84.20	3,339.0	68.1	669.7	673.2	0.00	0.00	0.00
3,480.0	18.39	84.20	3,377.0	69.3	682.3	685.8	0.00	0.00	0.00
3,520.0	18.39	84.20	3,414.9	70.6	694.8	698.4	0.00	0.00	0.00
3,560.0	18.39	84.20	3,452.9	71.9	707.4	711.0	0.00	0.00	0.00
3,600.0	18.39	84.20	3,490.9	73.2	719.9	723.7	0.00	0.00	0.00
3,640.0	18.39	84.20	3,528.8	74.4	732.5	736.3	0.00	0.00	0.00
3,680.0	18.39	84.20	3,566.8	75.7	745.0	748.9	0.00	0.00	0.00
3,720.0	18.39	84.20	3,604.7	77.0	757.6	761.5	0.00	0.00	0.00
3,760.0	18.39	84.20	3,642.7	78.3	770.2	774.1	0.00	0.00	0.00
3,800.0	18.39	84.20	3,680.6	79.5	782.7	786.7	0.00	0.00	0.00
3,840.0	18.39	84.20	3,718.6	80.8	795.3	799.4	0.00	0.00	0.00
3,880.0	18.39	84.20	3,756.6	82.1	807.8	812.0	0.00	0.00	0.00
3,920.0	18.39	84.20	3,794.5	83.4	820.4	824.6	0.00	0.00	0.00
3,960.0	18.39	84.20	3,832.5	84.6	832.9	837.2	0.00	0.00	0.00
4,000.0	18.39	84.20	3,870.4	85.9	845.5	849.8	0.00	0.00	0.00
4,040.0	18.39	84.20	3,908.4	87.2	858.0	862.4	0.00	0.00	0.00
4,080.0	18.39	84.20	3,946.4	88.5	870.6	875.0	0.00	0.00	0.00
4,120.0	18.39	84.20	3,984.3	89.7	883.1	887.7	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Rhino D27-22D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4879.0ft (Original Well Elev)
Project:	SEC.27-T3N-R64W	MD Reference:	WELL @ 4879.0ft (Original Well Elev)
Site:	Rhino D27-20D Pad Sec.27-T3N-R64W	North Reference:	True
Well:	Rhino D27-22D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Rhino D27-22D Plan #1 (4-21-11)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,160.0	18.39	84.20	4,022.3	91.0	895.7	900.3	0.00	0.00	0.00
4,200.0	18.39	84.20	4,060.2	92.3	908.2	912.9	0.00	0.00	0.00
4,240.0	18.39	84.20	4,098.2	93.6	920.8	925.5	0.00	0.00	0.00
4,280.0	18.39	84.20	4,136.1	94.8	933.3	938.1	0.00	0.00	0.00
4,320.0	18.39	84.20	4,174.1	96.1	945.9	950.7	0.00	0.00	0.00
4,360.0	18.39	84.20	4,212.1	97.4	958.4	963.4	0.00	0.00	0.00
4,400.0	18.39	84.20	4,250.0	98.7	971.0	976.0	0.00	0.00	0.00
4,440.0	18.39	84.20	4,288.0	99.9	983.5	988.6	0.00	0.00	0.00
4,480.0	18.39	84.20	4,325.9	101.2	996.1	1,001.2	0.00	0.00	0.00
4,520.0	18.39	84.20	4,363.9	102.5	1,008.6	1,013.8	0.00	0.00	0.00
4,560.0	18.39	84.20	4,401.9	103.8	1,021.2	1,026.4	0.00	0.00	0.00
4,600.0	18.39	84.20	4,439.8	105.0	1,033.7	1,039.1	0.00	0.00	0.00
4,640.0	18.39	84.20	4,477.8	106.3	1,046.3	1,051.7	0.00	0.00	0.00
4,680.0	18.39	84.20	4,515.7	107.6	1,058.8	1,064.3	0.00	0.00	0.00
4,720.0	18.39	84.20	4,553.7	108.9	1,071.4	1,076.9	0.00	0.00	0.00
4,760.0	18.39	84.20	4,591.6	110.2	1,083.9	1,089.5	0.00	0.00	0.00
4,800.0	18.39	84.20	4,629.6	111.4	1,096.5	1,102.1	0.00	0.00	0.00
4,840.0	18.39	84.20	4,667.6	112.7	1,109.0	1,114.8	0.00	0.00	0.00
4,880.0	18.39	84.20	4,705.5	114.0	1,121.6	1,127.4	0.00	0.00	0.00
4,920.0	18.39	84.20	4,743.5	115.3	1,134.1	1,140.0	0.00	0.00	0.00
4,960.0	18.39	84.20	4,781.4	116.5	1,146.7	1,152.6	0.00	0.00	0.00
5,000.0	18.39	84.20	4,819.4	117.8	1,159.3	1,165.2	0.00	0.00	0.00
5,040.0	18.39	84.20	4,857.4	119.1	1,171.8	1,177.8	0.00	0.00	0.00
5,080.0	18.39	84.20	4,895.3	120.4	1,184.4	1,190.5	0.00	0.00	0.00
5,120.0	18.39	84.20	4,933.3	121.6	1,196.9	1,203.1	0.00	0.00	0.00
5,160.0	18.39	84.20	4,971.2	122.9	1,209.5	1,215.7	0.00	0.00	0.00
5,186.5	18.39	84.20	4,996.4	123.8	1,217.8	1,224.1	0.00	0.00	0.00
5,200.0	18.12	84.20	5,009.2	124.2	1,222.0	1,228.3	2.00	-2.00	0.00
5,240.0	17.32	84.20	5,047.3	125.4	1,234.1	1,240.4	2.00	-2.00	0.00
5,280.0	16.52	84.20	5,085.6	126.6	1,245.7	1,252.1	2.00	-2.00	0.00
5,320.0	15.72	84.20	5,124.0	127.7	1,256.7	1,263.2	2.00	-2.00	0.00
5,360.0	14.92	84.20	5,162.6	128.8	1,267.2	1,273.8	2.00	-2.00	0.00
5,400.0	14.12	84.20	5,201.3	129.8	1,277.2	1,283.8	2.00	-2.00	0.00
5,440.0	13.32	84.20	5,240.2	130.8	1,286.6	1,293.3	2.00	-2.00	0.00
5,480.0	12.52	84.20	5,279.1	131.7	1,295.5	1,302.2	2.00	-2.00	0.00
5,520.0	11.72	84.20	5,318.3	132.5	1,303.9	1,310.6	2.00	-2.00	0.00
5,560.0	10.92	84.20	5,357.5	133.3	1,311.7	1,318.5	2.00	-2.00	0.00
5,600.0	10.12	84.20	5,396.8	134.0	1,319.0	1,325.8	2.00	-2.00	0.00
5,640.0	9.32	84.20	5,436.2	134.7	1,325.7	1,332.5	2.00	-2.00	0.00
5,680.0	8.52	84.20	5,475.7	135.3	1,331.8	1,338.7	2.00	-2.00	0.00
5,720.0	7.72	84.20	5,515.3	135.9	1,337.5	1,344.3	2.00	-2.00	0.00
5,760.0	6.92	84.20	5,555.0	136.4	1,342.5	1,349.4	2.00	-2.00	0.00
5,800.0	6.12	84.20	5,594.8	136.9	1,347.0	1,354.0	2.00	-2.00	0.00
5,840.0	5.32	84.20	5,634.6	137.3	1,351.0	1,358.0	2.00	-2.00	0.00
5,880.0	4.52	84.20	5,674.4	137.6	1,354.4	1,361.4	2.00	-2.00	0.00
5,920.0	3.72	84.20	5,714.3	137.9	1,357.3	1,364.3	2.00	-2.00	0.00
5,960.0	2.92	84.20	5,754.2	138.2	1,359.6	1,366.6	2.00	-2.00	0.00
6,000.0	2.12	84.20	5,794.2	138.3	1,361.3	1,368.3	2.00	-2.00	0.00
6,040.0	1.32	84.20	5,834.2	138.5	1,362.5	1,369.5	2.00	-2.00	0.00
6,080.0	0.52	84.20	5,874.2	138.5	1,363.2	1,370.2	2.00	-2.00	0.00
6,105.8	0.00	0.00	5,900.0	138.5	1,363.3	1,370.3	2.00	-2.00	0.00
TARGET BHL 2555'FNL, 1320'FEL									
6,120.0	0.00	0.00	5,914.2	138.5	1,363.3	1,370.3	0.00	0.00	0.00
6,160.0	0.00	0.00	5,954.2	138.5	1,363.3	1,370.3	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Rhino D27-22D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4879.0ft (Original Well Elev)
Project:	SEC.27-T3N-R64W	MD Reference:	WELL @ 4879.0ft (Original Well Elev)
Site:	Rhino D27-20D Pad Sec.27-T3N-R64W	North Reference:	True
Well:	Rhino D27-22D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Rhino D27-22D Plan #1 (4-21-11)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
6,200.0	0.00	0.00	5,994.2	138.5	1,363.3	1,370.3	0.00	0.00	0.00
6,240.0	0.00	0.00	6,034.2	138.5	1,363.3	1,370.3	0.00	0.00	0.00
6,280.0	0.00	0.00	6,074.2	138.5	1,363.3	1,370.3	0.00	0.00	0.00
6,320.0	0.00	0.00	6,114.2	138.5	1,363.3	1,370.3	0.00	0.00	0.00
6,360.0	0.00	0.00	6,154.2	138.5	1,363.3	1,370.3	0.00	0.00	0.00
6,400.0	0.00	0.00	6,194.2	138.5	1,363.3	1,370.3	0.00	0.00	0.00
6,440.0	0.00	0.00	6,234.2	138.5	1,363.3	1,370.3	0.00	0.00	0.00
6,480.0	0.00	0.00	6,274.2	138.5	1,363.3	1,370.3	0.00	0.00	0.00
6,520.0	0.00	0.00	6,314.2	138.5	1,363.3	1,370.3	0.00	0.00	0.00
6,560.0	0.00	0.00	6,354.2	138.5	1,363.3	1,370.3	0.00	0.00	0.00
6,600.0	0.00	0.00	6,394.2	138.5	1,363.3	1,370.3	0.00	0.00	0.00
6,640.0	0.00	0.00	6,434.2	138.5	1,363.3	1,370.3	0.00	0.00	0.00
6,680.0	0.00	0.00	6,474.2	138.5	1,363.3	1,370.3	0.00	0.00	0.00
6,720.0	0.00	0.00	6,514.2	138.5	1,363.3	1,370.3	0.00	0.00	0.00
6,760.0	0.00	0.00	6,554.2	138.5	1,363.3	1,370.3	0.00	0.00	0.00
6,800.0	0.00	0.00	6,594.2	138.5	1,363.3	1,370.3	0.00	0.00	0.00
6,840.0	0.00	0.00	6,634.2	138.5	1,363.3	1,370.3	0.00	0.00	0.00
6,880.0	0.00	0.00	6,674.2	138.5	1,363.3	1,370.3	0.00	0.00	0.00
6,920.0	0.00	0.00	6,714.2	138.5	1,363.3	1,370.3	0.00	0.00	0.00
6,938.8	0.00	0.00	6,733.0	138.5	1,363.3	1,370.3	0.00	0.00	0.00
NIOBRARA - TARGET CIRCLE 2555'FNL & 1320'FEL									
6,960.0	0.00	0.00	6,754.2	138.5	1,363.3	1,370.3	0.00	0.00	0.00
7,000.0	0.00	0.00	6,794.2	138.5	1,363.3	1,370.3	0.00	0.00	0.00
7,040.0	0.00	0.00	6,834.2	138.5	1,363.3	1,370.3	0.00	0.00	0.00
7,080.0	0.00	0.00	6,874.2	138.5	1,363.3	1,370.3	0.00	0.00	0.00
7,120.0	0.00	0.00	6,914.2	138.5	1,363.3	1,370.3	0.00	0.00	0.00
7,160.0	0.00	0.00	6,954.2	138.5	1,363.3	1,370.3	0.00	0.00	0.00
7,200.0	0.00	0.00	6,994.2	138.5	1,363.3	1,370.3	0.00	0.00	0.00
7,218.8	0.00	0.00	7,013.0	138.5	1,363.3	1,370.3	0.00	0.00	0.00
CODELL									
7,240.0	0.00	0.00	7,034.2	138.5	1,363.3	1,370.3	0.00	0.00	0.00
7,280.0	0.00	0.00	7,074.2	138.5	1,363.3	1,370.3	0.00	0.00	0.00
7,320.0	0.00	0.00	7,114.2	138.5	1,363.3	1,370.3	0.00	0.00	0.00
7,360.0	0.00	0.00	7,154.2	138.5	1,363.3	1,370.3	0.00	0.00	0.00
7,368.8	0.00	0.00	7,163.0	138.5	1,363.3	1,370.3	0.00	0.00	0.00
HARD LINES 89'S OF BHL									

Database:	Landmark	Local Co-ordinate Reference:	Well Rhino D27-22D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4879.0ft (Original Well Elev)
Project:	SEC.27-T3N-R64W	MD Reference:	WELL @ 4879.0ft (Original Well Elev)
Site:	Rhino D27-20D Pad Sec.27-T3N-R64W	North Reference:	True
Well:	Rhino D27-22D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Rhino D27-22D Plan #1 (4-21-11)		

Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
TARGET CIRCLE 25'	0.00	0.00	6,733.0	138.5	1,363.3	1,315,941.07	3,270,183.60	40.196610	-104.532780
- plan hits target center									
- Circle (radius 75.0)									
HARD LINES 89'S OF	0.00	0.00	7,163.0	49.5	1,463.3	1,315,853.13	3,270,284.58	40.196366	-104.532422
- plan misses target center by 133.9ft at 7368.8ft MD (7163.0 TVD, 138.5 N, 1363.3 E)									
- Polygon									
Point 1			7,163.0	0.0	0.0	1,315,853.13	3,270,284.58		
Point 2			7,163.0	0.0	-200.0	1,315,850.96	3,270,084.60		
TARGET BHL 2555'F	0.00	0.00	5,900.0	138.5	1,363.3	1,315,941.07	3,270,183.60	40.196610	-104.532780
- plan hits target center									
- Point									

Casing Points					
Measured Depth	Vertical Depth		Name	Casing Diameter	Hole Diameter
(ft)	(ft)			(")	(")
650.0	650.0	8 5/8"		8-5/8	12-1/4

Formations					
Measured Depth	Vertical Depth		Name	Lithology	Dip
(ft)	(ft)				(°)
6,938.8	6,733.0	NIOBRARA			0.00
7,218.8	7,013.0	CODELL			0.00