

ENSIGN

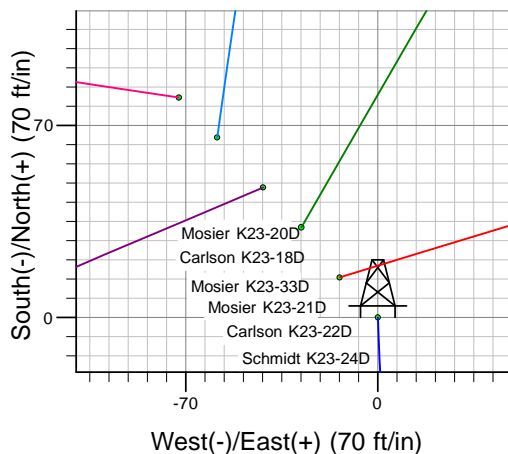
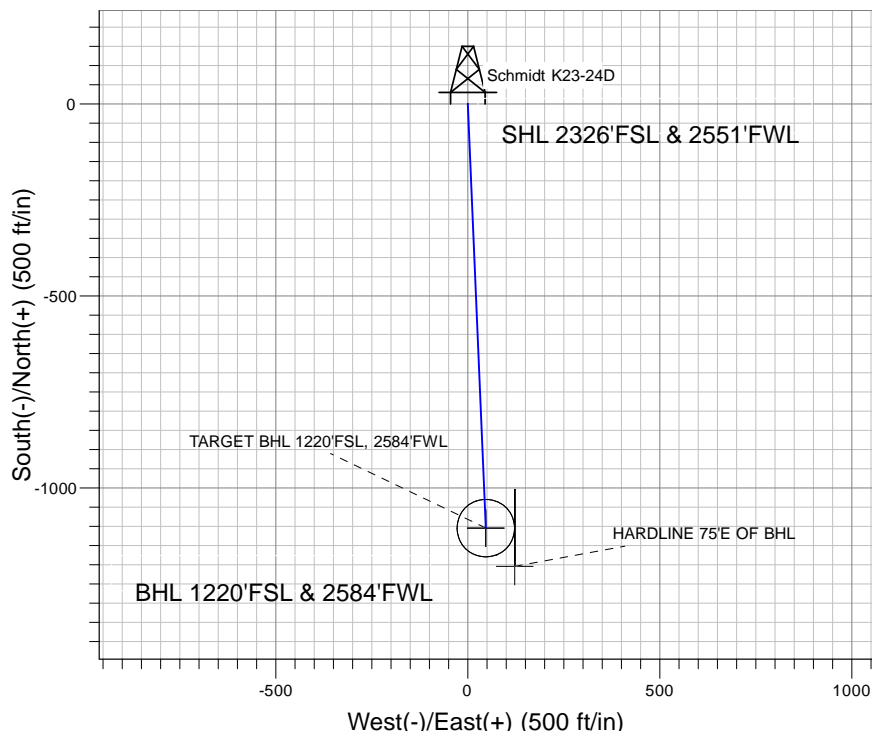
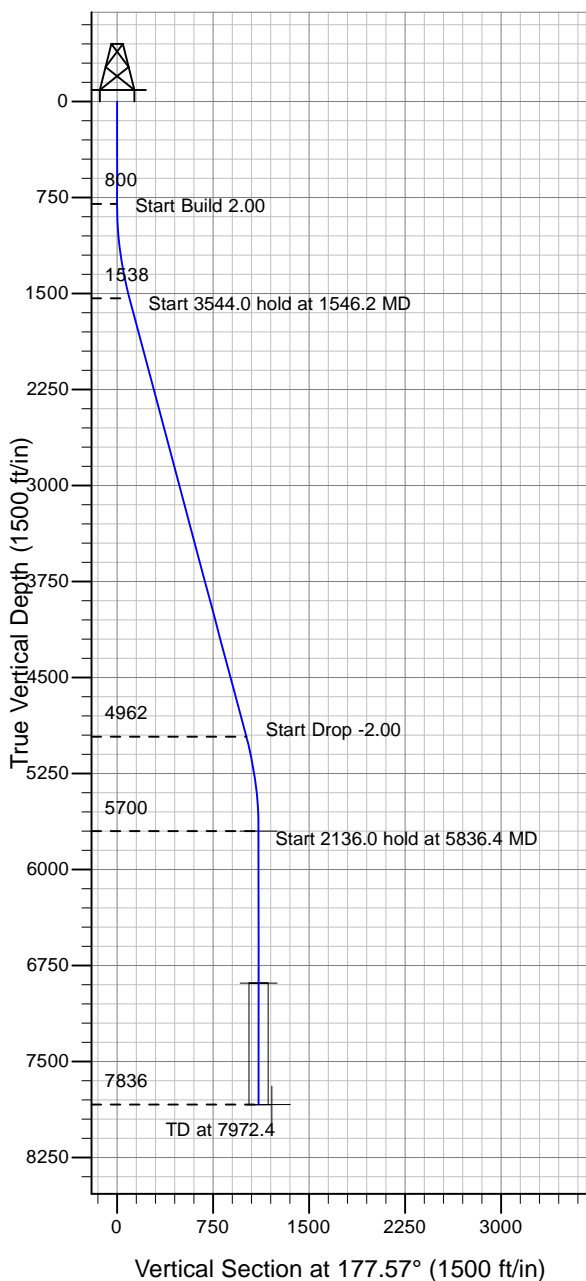
Directional

Well Name: Schmidt K23-24D

Surface Location: Schmidt K23-24D Pad Sec.23-T4N-R66W
 North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone
 Ground Elevation: 4726.0

+N/-S+E/-W Northing Easting Latitude Longitude Slot
 0.0 0.01351771.21 3210641.06 40° 17' 47.580 N 104° 44' 41.388 W
 Original Well Elev WELL @ 4739.0ft (Original Well Elev)

NOBLE ENERGY INC WELD COUNTY CO



Schmidt K23-24D Pad Sec.23-T4N-R66W
 Schmidt K23-24D
 Noble Schmidt K23-24D Plan #2 (04-15-10)
 17:49, April 15 2010



Azimuths to True North
 Magnetic North: 9.00°

Magnetic Field
 Strength: 53203.3snT
 Dip Angle: 67.01°
 Date: 4/15/2010
 Model: IGRF2010

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 1220'FSL, 2584'FWL	5700.0	-1105.0	46.9	40° 17' 36.661 N	104° 44' 40.783 W	Point
TARGET CIRCLE 1220'FSL, 2584'FWL	6889.0	-1105.0	46.9	40° 17' 36.660 N	104° 44' 40.783 W	Circle (Radius: 75.0)
HARDLINE 75'E OF BHL	7836.0	-1205.0	121.9	40° 17' 35.672 N	104° 44' 39.815 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	800.0	0.00	0.00	800.0	0.0	0.0	0.00	0.00	0.0	
3	1546.2	14.92	177.57	1537.8	-96.5	4.1	2.00	177.57	96.6	
4	5090.2	14.92	177.57	4962.2	-1008.4	42.8	0.00	0.00	1009.3	
5	5836.4	0.00	0.00	5700.0	-1105.0	46.9	2.00	180.00	1106.0	TARGET BHL 1220'FSL, 2584'FWL
6	7972.4	0.00	0.00	7836.0	-1105.0	46.9	0.00	0.00	1106.0	



NOBLE ENERGY INC WELD COUNTY CO

SEC.23-T4N-R66W

Schmidt K23-24D Pad Sec.23-T4N-R66W

Schmidt K23-24D

Wellbore #1

Plan: Noble Schmidt K23-24D Plan #2 (04-15-10)

Standard Planning Report

15 April, 2010



Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Schmidt K23-24D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4739.0ft (Original Well Elev)
Project:	SEC.23-T4N-R66W	MD Reference:	WELL @ 4739.0ft (Original Well Elev)
Site:	Schmidt K23-24D Pad Sec.23-T4N-R66W	North Reference:	True
Well:	Schmidt K23-24D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Schmidt K23-24D Plan #2 (04-15-10)		

Project	SEC.23-T4N-R66W, Weld County, Colorado		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site						Schmidt K23-24D Pad Sec.23-T4N-R66W											
Site Position:						Northing:			1,351,771.22 ft			Latitude:			40° 17' 47.580 N		
From:			Lat/Long			Easting:			3,210,641.06 ft			Longitude:			104° 44' 41.388 W		
Position Uncertainty:			0.0 ft			Slot Radius:			"			Grid Convergence:			0.49 °		

Well	Schmidt K23-24D					
Well Position	+N-S	0.0 ft	Northing:	1,351,771.21 ft	Latitude:	40° 17' 47.580 N
	+E-W	0.0 ft	Easting:	3,210,641.06 ft	Longitude:	104° 44' 41.388 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,726.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	4/15/2010	9.00	67.01	53,203

Design	Noble Schmidt K23-24D Plan #2 (04-15-10)			
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	177.57

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	
800.0	0.00	0.00	800.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,546.2	14.92	177.57	1,537.8	-96.5	4.1	2.00	2.00	0.00	177.57	
5,090.2	14.92	177.57	4,962.2	-1,008.4	42.8	0.00	0.00	0.00	0.00	
5,836.4	0.00	0.00	5,700.0	-1,105.0	46.9	2.00	-2.00	0.00	180.00	TARGET BHL 122C
7,972.4	0.00	0.00	7,836.0	-1,105.0	46.9	0.00	0.00	0.00	0.00	

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Schmidt K23-24D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4739.0ft (Original Well Elev)
Project:	SEC.23-T4N-R66W	MD Reference:	WELL @ 4739.0ft (Original Well Elev)
Site:	Schmidt K23-24D Pad Sec.23-T4N-R66W	North Reference:	True
Well:	Schmidt K23-24D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Schmidt K23-24D Plan #2 (04-15-10)		

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	0.00	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	0.80	177.57	840.0	-0.3	0.0	0.3	2.00	2.00	0.00
880.0	1.60	177.57	880.0	-1.1	0.0	1.1	2.00	2.00	0.00
920.0	2.40	177.57	920.0	-2.5	0.1	2.5	2.00	2.00	0.00
960.0	3.20	177.57	959.9	-4.5	0.2	4.5	2.00	2.00	0.00
1,000.0	4.00	177.57	999.8	-7.0	0.3	7.0	2.00	2.00	0.00
1,040.0	4.80	177.57	1,039.7	-10.0	0.4	10.0	2.00	2.00	0.00
1,080.0	5.60	177.57	1,079.6	-13.7	0.6	13.7	2.00	2.00	0.00
1,120.0	6.40	177.57	1,119.3	-17.8	0.8	17.9	2.00	2.00	0.00
1,160.0	7.20	177.57	1,159.1	-22.6	1.0	22.6	2.00	2.00	0.00
1,200.0	8.00	177.57	1,198.7	-27.9	1.2	27.9	2.00	2.00	0.00
1,240.0	8.80	177.57	1,238.3	-33.7	1.4	33.7	2.00	2.00	0.00
1,280.0	9.60	177.57	1,277.8	-40.1	1.7	40.1	2.00	2.00	0.00
1,320.0	10.40	177.57	1,317.1	-47.0	2.0	47.1	2.00	2.00	0.00
1,360.0	11.20	177.57	1,356.4	-54.5	2.3	54.6	2.00	2.00	0.00
1,400.0	12.00	177.57	1,395.6	-62.5	2.7	62.6	2.00	2.00	0.00
1,440.0	12.80	177.57	1,434.7	-71.1	3.0	71.2	2.00	2.00	0.00
1,480.0	13.60	177.57	1,473.6	-80.3	3.4	80.3	2.00	2.00	0.00
1,520.0	14.40	177.57	1,512.4	-89.9	3.8	90.0	2.00	2.00	0.00
1,546.2	14.92	177.57	1,537.8	-96.5	4.1	96.6	2.00	2.00	0.00
1,560.0	14.92	177.57	1,551.1	-100.1	4.2	100.2	0.00	0.00	0.00
1,600.0	14.92	177.57	1,589.8	-110.4	4.7	110.5	0.00	0.00	0.00
1,640.0	14.92	177.57	1,628.4	-120.7	5.1	120.8	0.00	0.00	0.00
1,680.0	14.92	177.57	1,667.1	-131.0	5.6	131.1	0.00	0.00	0.00
1,720.0	14.92	177.57	1,705.7	-141.3	6.0	141.4	0.00	0.00	0.00
1,760.0	14.92	177.57	1,744.4	-151.6	6.4	151.7	0.00	0.00	0.00
1,800.0	14.92	177.57	1,783.0	-161.9	6.9	162.0	0.00	0.00	0.00
1,840.0	14.92	177.57	1,821.7	-172.1	7.3	172.3	0.00	0.00	0.00
1,880.0	14.92	177.57	1,860.3	-182.4	7.7	182.6	0.00	0.00	0.00
1,920.0	14.92	177.57	1,899.0	-192.7	8.2	192.9	0.00	0.00	0.00
1,960.0	14.92	177.57	1,937.6	-203.0	8.6	203.2	0.00	0.00	0.00
2,000.0	14.92	177.57	1,976.3	-213.3	9.1	213.5	0.00	0.00	0.00
2,040.0	14.92	177.57	2,014.9	-223.6	9.5	223.8	0.00	0.00	0.00
2,080.0	14.92	177.57	2,053.6	-233.9	9.9	234.1	0.00	0.00	0.00

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Project:	SEC.23-T4N-R66W	MD Reference:	WELL @ 4739.0ft (Original Well Elev)
Site:	Schmidt K23-24D Pad Sec.23-T4N-R66W	North Reference:	True
Well:	Schmidt K23-24D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Schmidt K23-24D Plan #2 (04-15-10)		

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)
2,120.0	14.92	177.57	2,092.2	-244.2	10.4	244.4	0.00	0.00	0.00
2,160.0	14.92	177.57	2,130.9	-254.5	10.8	254.7	0.00	0.00	0.00
2,200.0	14.92	177.57	2,169.5	-264.8	11.2	265.0	0.00	0.00	0.00
2,240.0	14.92	177.57	2,208.2	-275.1	11.7	275.3	0.00	0.00	0.00
2,280.0	14.92	177.57	2,246.8	-285.4	12.1	285.6	0.00	0.00	0.00
2,320.0	14.92	177.57	2,285.5	-295.7	12.5	295.9	0.00	0.00	0.00
2,360.0	14.92	177.57	2,324.1	-305.9	13.0	306.2	0.00	0.00	0.00
2,400.0	14.92	177.57	2,362.8	-316.2	13.4	316.5	0.00	0.00	0.00
2,440.0	14.92	177.57	2,401.4	-326.5	13.9	326.8	0.00	0.00	0.00
2,480.0	14.92	177.57	2,440.1	-336.8	14.3	337.1	0.00	0.00	0.00
2,520.0	14.92	177.57	2,478.7	-347.1	14.7	347.4	0.00	0.00	0.00
2,560.0	14.92	177.57	2,517.4	-357.4	15.2	357.7	0.00	0.00	0.00
2,600.0	14.92	177.57	2,556.0	-367.7	15.6	368.0	0.00	0.00	0.00
2,640.0	14.92	177.57	2,594.7	-378.0	16.0	378.3	0.00	0.00	0.00
2,680.0	14.92	177.57	2,633.3	-388.3	16.5	388.6	0.00	0.00	0.00
2,720.0	14.92	177.57	2,672.0	-398.6	16.9	398.9	0.00	0.00	0.00
2,760.0	14.92	177.57	2,710.6	-408.9	17.4	409.2	0.00	0.00	0.00
2,800.0	14.92	177.57	2,749.3	-419.2	17.8	419.5	0.00	0.00	0.00
2,840.0	14.92	177.57	2,787.9	-429.4	18.2	429.8	0.00	0.00	0.00
2,880.0	14.92	177.57	2,826.6	-439.7	18.7	440.1	0.00	0.00	0.00
2,920.0	14.92	177.57	2,865.3	-450.0	19.1	450.4	0.00	0.00	0.00
2,960.0	14.92	177.57	2,903.9	-460.3	19.5	460.7	0.00	0.00	0.00
3,000.0	14.92	177.57	2,942.6	-470.6	20.0	471.0	0.00	0.00	0.00
3,040.0	14.92	177.57	2,981.2	-480.9	20.4	481.3	0.00	0.00	0.00
3,080.0	14.92	177.57	3,019.9	-491.2	20.8	491.6	0.00	0.00	0.00
3,120.0	14.92	177.57	3,058.5	-501.5	21.3	501.9	0.00	0.00	0.00
3,160.0	14.92	177.57	3,097.2	-511.8	21.7	512.2	0.00	0.00	0.00
3,200.0	14.92	177.57	3,135.8	-522.1	22.2	522.5	0.00	0.00	0.00
3,240.0	14.92	177.57	3,174.5	-532.4	22.6	532.9	0.00	0.00	0.00
3,280.0	14.92	177.57	3,213.1	-542.7	23.0	543.2	0.00	0.00	0.00
3,320.0	14.92	177.57	3,251.8	-553.0	23.5	553.5	0.00	0.00	0.00
3,360.0	14.92	177.57	3,290.4	-563.2	23.9	563.8	0.00	0.00	0.00
3,400.0	14.92	177.57	3,329.1	-573.5	24.3	574.1	0.00	0.00	0.00
3,440.0	14.92	177.57	3,367.7	-583.8	24.8	584.4	0.00	0.00	0.00
3,480.0	14.92	177.57	3,406.4	-594.1	25.2	594.7	0.00	0.00	0.00
3,520.0	14.92	177.57	3,445.0	-604.4	25.6	605.0	0.00	0.00	0.00
3,560.0	14.92	177.57	3,483.7	-614.7	26.1	615.3	0.00	0.00	0.00
3,600.0	14.92	177.57	3,522.3	-625.0	26.5	625.6	0.00	0.00	0.00
3,640.0	14.92	177.57	3,561.0	-635.3	27.0	635.9	0.00	0.00	0.00
3,680.0	14.92	177.57	3,599.6	-645.6	27.4	646.2	0.00	0.00	0.00
3,720.0	14.92	177.57	3,638.3	-655.9	27.8	656.5	0.00	0.00	0.00
3,760.0	14.92	177.57	3,676.9	-666.2	28.3	666.8	0.00	0.00	0.00
3,800.0	14.92	177.57	3,715.6	-676.5	28.7	677.1	0.00	0.00	0.00
3,840.0	14.92	177.57	3,754.2	-686.8	29.1	687.4	0.00	0.00	0.00
3,880.0	14.92	177.57	3,792.9	-697.0	29.6	697.7	0.00	0.00	0.00
3,920.0	14.92	177.57	3,831.5	-707.3	30.0	708.0	0.00	0.00	0.00
3,960.0	14.92	177.57	3,870.2	-717.6	30.5	718.3	0.00	0.00	0.00
4,000.0	14.92	177.57	3,908.8	-727.9	30.9	728.6	0.00	0.00	0.00
4,040.0	14.92	177.57	3,947.5	-738.2	31.3	738.9	0.00	0.00	0.00
4,080.0	14.92	177.57	3,986.1	-748.5	31.8	749.2	0.00	0.00	0.00
4,120.0	14.92	177.57	4,024.8	-758.8	32.2	759.5	0.00	0.00	0.00
4,160.0	14.92	177.57	4,063.4	-769.1	32.6	769.8	0.00	0.00	0.00
4,200.0	14.92	177.57	4,102.1	-779.4	33.1	780.1	0.00	0.00	0.00
4,240.0	14.92	177.57	4,140.7	-789.7	33.5	790.4	0.00	0.00	0.00

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Project:	SEC.23-T4N-R66W	MD Reference:	WELL @ 4739.0ft (Original Well Elev)
Site:	Schmidt K23-24D Pad Sec.23-T4N-R66W	North Reference:	True
Well:	Schmidt K23-24D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Schmidt K23-24D Plan #2 (04-15-10)		

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)
4,280.0	14.92	177.57	4,179.4	-800.0	33.9	800.7	0.00	0.00	0.00
4,320.0	14.92	177.57	4,218.0	-810.3	34.4	811.0	0.00	0.00	0.00
4,360.0	14.92	177.57	4,256.7	-820.6	34.8	821.3	0.00	0.00	0.00
4,400.0	14.92	177.57	4,295.3	-830.8	35.3	831.6	0.00	0.00	0.00
4,440.0	14.92	177.57	4,334.0	-841.1	35.7	841.9	0.00	0.00	0.00
4,480.0	14.92	177.57	4,372.6	-851.4	36.1	852.2	0.00	0.00	0.00
4,520.0	14.92	177.57	4,411.3	-861.7	36.6	862.5	0.00	0.00	0.00
4,560.0	14.92	177.57	4,449.9	-872.0	37.0	872.8	0.00	0.00	0.00
4,600.0	14.92	177.57	4,488.6	-882.3	37.4	883.1	0.00	0.00	0.00
4,640.0	14.92	177.57	4,527.2	-892.6	37.9	893.4	0.00	0.00	0.00
4,680.0	14.92	177.57	4,565.9	-902.9	38.3	903.7	0.00	0.00	0.00
4,720.0	14.92	177.57	4,604.5	-913.2	38.8	914.0	0.00	0.00	0.00
4,760.0	14.92	177.57	4,643.2	-923.5	39.2	924.3	0.00	0.00	0.00
4,800.0	14.92	177.57	4,681.8	-933.8	39.6	934.6	0.00	0.00	0.00
4,840.0	14.92	177.57	4,720.5	-944.1	40.1	944.9	0.00	0.00	0.00
4,880.0	14.92	177.57	4,759.1	-954.4	40.5	955.2	0.00	0.00	0.00
4,920.0	14.92	177.57	4,797.8	-964.6	40.9	965.5	0.00	0.00	0.00
4,960.0	14.92	177.57	4,836.4	-974.9	41.4	975.8	0.00	0.00	0.00
5,000.0	14.92	177.57	4,875.1	-985.2	41.8	986.1	0.00	0.00	0.00
5,040.0	14.92	177.57	4,913.7	-995.5	42.2	996.4	0.00	0.00	0.00
5,080.0	14.92	177.57	4,952.4	-1,005.8	42.7	1,006.7	0.00	0.00	0.00
5,090.2	14.92	177.57	4,962.2	-1,008.4	42.8	1,009.3	0.00	0.00	0.00
5,120.0	14.33	177.57	4,991.1	-1,016.0	43.1	1,016.9	2.00	-2.00	0.00
5,160.0	13.53	177.57	5,029.9	-1,025.6	43.5	1,026.5	2.00	-2.00	0.00
5,200.0	12.73	177.57	5,068.9	-1,034.7	43.9	1,035.6	2.00	-2.00	0.00
5,240.0	11.93	177.57	5,107.9	-1,043.2	44.3	1,044.1	2.00	-2.00	0.00
5,280.0	11.13	177.57	5,147.1	-1,051.2	44.6	1,052.1	2.00	-2.00	0.00
5,320.0	10.33	177.57	5,186.4	-1,058.6	44.9	1,059.6	2.00	-2.00	0.00
5,360.0	9.53	177.57	5,225.8	-1,065.5	45.2	1,066.5	2.00	-2.00	0.00
5,400.0	8.73	177.57	5,265.3	-1,071.8	45.5	1,072.8	2.00	-2.00	0.00
5,440.0	7.93	177.57	5,304.9	-1,077.6	45.7	1,078.6	2.00	-2.00	0.00
5,480.0	7.13	177.57	5,344.6	-1,082.9	46.0	1,083.8	2.00	-2.00	0.00
5,520.0	6.33	177.57	5,384.3	-1,087.5	46.2	1,088.5	2.00	-2.00	0.00
5,560.0	5.53	177.57	5,424.1	-1,091.7	46.3	1,092.7	2.00	-2.00	0.00
5,600.0	4.73	177.57	5,463.9	-1,095.2	46.5	1,096.2	2.00	-2.00	0.00
5,640.0	3.93	177.57	5,503.8	-1,098.3	46.6	1,099.2	2.00	-2.00	0.00
5,680.0	3.13	177.57	5,543.7	-1,100.7	46.7	1,101.7	2.00	-2.00	0.00
5,720.0	2.33	177.57	5,583.7	-1,102.6	46.8	1,103.6	2.00	-2.00	0.00
5,760.0	1.53	177.57	5,623.6	-1,104.0	46.8	1,105.0	2.00	-2.00	0.00
5,800.0	0.73	177.57	5,663.6	-1,104.7	46.9	1,105.7	2.00	-2.00	0.00
5,836.4	0.00	0.00	5,700.0	-1,105.0	46.9	1,106.0	2.00	-2.00	0.00
TARGET BHL 1220'FSL, 2584'FWL									
5,840.0	0.00	0.00	5,703.6	-1,105.0	46.9	1,106.0	0.00	0.00	0.00
5,880.0	0.00	0.00	5,743.6	-1,105.0	46.9	1,106.0	0.00	0.00	0.00
5,920.0	0.00	0.00	5,783.6	-1,105.0	46.9	1,106.0	0.00	0.00	0.00
5,960.0	0.00	0.00	5,823.6	-1,105.0	46.9	1,106.0	0.00	0.00	0.00
6,000.0	0.00	0.00	5,863.6	-1,105.0	46.9	1,106.0	0.00	0.00	0.00
6,040.0	0.00	0.00	5,903.6	-1,105.0	46.9	1,106.0	0.00	0.00	0.00
6,080.0	0.00	0.00	5,943.6	-1,105.0	46.9	1,106.0	0.00	0.00	0.00
6,120.0	0.00	0.00	5,983.6	-1,105.0	46.9	1,106.0	0.00	0.00	0.00
6,160.0	0.00	0.00	6,023.6	-1,105.0	46.9	1,106.0	0.00	0.00	0.00
6,200.0	0.00	0.00	6,063.6	-1,105.0	46.9	1,106.0	0.00	0.00	0.00
6,240.0	0.00	0.00	6,103.6	-1,105.0	46.9	1,106.0	0.00	0.00	0.00

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Schmidt K23-24D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4739.0ft (Original Well Elev)
Project:	SEC.23-T4N-R66W	MD Reference:	WELL @ 4739.0ft (Original Well Elev)
Site:	Schmidt K23-24D Pad Sec.23-T4N-R66W	North Reference:	True
Well:	Schmidt K23-24D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Schmidt K23-24D Plan #2 (04-15-10)		

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)
6,280.0	0.00	0.00	6,143.6	-1,105.0	46.9	1,106.0	0.00	0.00	0.00
6,320.0	0.00	0.00	6,183.6	-1,105.0	46.9	1,106.0	0.00	0.00	0.00
6,360.0	0.00	0.00	6,223.6	-1,105.0	46.9	1,106.0	0.00	0.00	0.00
6,400.0	0.00	0.00	6,263.6	-1,105.0	46.9	1,106.0	0.00	0.00	0.00
6,440.0	0.00	0.00	6,303.6	-1,105.0	46.9	1,106.0	0.00	0.00	0.00
6,480.0	0.00	0.00	6,343.6	-1,105.0	46.9	1,106.0	0.00	0.00	0.00
6,520.0	0.00	0.00	6,383.6	-1,105.0	46.9	1,106.0	0.00	0.00	0.00
6,560.0	0.00	0.00	6,423.6	-1,105.0	46.9	1,106.0	0.00	0.00	0.00
6,600.0	0.00	0.00	6,463.6	-1,105.0	46.9	1,106.0	0.00	0.00	0.00
6,640.0	0.00	0.00	6,503.6	-1,105.0	46.9	1,106.0	0.00	0.00	0.00
6,680.0	0.00	0.00	6,543.6	-1,105.0	46.9	1,106.0	0.00	0.00	0.00
6,720.0	0.00	0.00	6,583.6	-1,105.0	46.9	1,106.0	0.00	0.00	0.00
6,760.0	0.00	0.00	6,623.6	-1,105.0	46.9	1,106.0	0.00	0.00	0.00
6,800.0	0.00	0.00	6,663.6	-1,105.0	46.9	1,106.0	0.00	0.00	0.00
6,840.0	0.00	0.00	6,703.6	-1,105.0	46.9	1,106.0	0.00	0.00	0.00
6,880.0	0.00	0.00	6,743.6	-1,105.0	46.9	1,106.0	0.00	0.00	0.00
6,920.0	0.00	0.00	6,783.6	-1,105.0	46.9	1,106.0	0.00	0.00	0.00
6,960.0	0.00	0.00	6,823.6	-1,105.0	46.9	1,106.0	0.00	0.00	0.00
7,000.0	0.00	0.00	6,863.6	-1,105.0	46.9	1,106.0	0.00	0.00	0.00
7,025.4	0.00	0.00	6,889.0	-1,105.0	46.9	1,106.0	0.00	0.00	0.00
NIOBRARA - TARGET CIRCLE 1220'FSL, 2584'FWL									
7,040.0	0.00	0.00	6,903.6	-1,105.0	46.9	1,106.0	0.00	0.00	0.00
7,080.0	0.00	0.00	6,943.6	-1,105.0	46.9	1,106.0	0.00	0.00	0.00
7,120.0	0.00	0.00	6,983.6	-1,105.0	46.9	1,106.0	0.00	0.00	0.00
7,160.0	0.00	0.00	7,023.6	-1,105.0	46.9	1,106.0	0.00	0.00	0.00
7,200.0	0.00	0.00	7,063.6	-1,105.0	46.9	1,106.0	0.00	0.00	0.00
7,240.0	0.00	0.00	7,103.6	-1,105.0	46.9	1,106.0	0.00	0.00	0.00
7,280.0	0.00	0.00	7,143.6	-1,105.0	46.9	1,106.0	0.00	0.00	0.00
7,320.0	0.00	0.00	7,183.6	-1,105.0	46.9	1,106.0	0.00	0.00	0.00
7,350.4	0.00	0.00	7,214.0	-1,105.0	46.9	1,106.0	0.00	0.00	0.00
CODELL									
7,360.0	0.00	0.00	7,223.6	-1,105.0	46.9	1,106.0	0.00	0.00	0.00
7,400.0	0.00	0.00	7,263.6	-1,105.0	46.9	1,106.0	0.00	0.00	0.00
7,440.0	0.00	0.00	7,303.6	-1,105.0	46.9	1,106.0	0.00	0.00	0.00
7,480.0	0.00	0.00	7,343.6	-1,105.0	46.9	1,106.0	0.00	0.00	0.00
7,520.0	0.00	0.00	7,383.6	-1,105.0	46.9	1,106.0	0.00	0.00	0.00
7,560.0	0.00	0.00	7,423.6	-1,105.0	46.9	1,106.0	0.00	0.00	0.00
7,600.0	0.00	0.00	7,463.6	-1,105.0	46.9	1,106.0	0.00	0.00	0.00
7,640.0	0.00	0.00	7,503.6	-1,105.0	46.9	1,106.0	0.00	0.00	0.00
7,680.0	0.00	0.00	7,543.6	-1,105.0	46.9	1,106.0	0.00	0.00	0.00
7,720.0	0.00	0.00	7,583.6	-1,105.0	46.9	1,106.0	0.00	0.00	0.00
7,749.4	0.00	0.00	7,613.0	-1,105.0	46.9	1,106.0	0.00	0.00	0.00
D-SAND									
7,760.0	0.00	0.00	7,623.6	-1,105.0	46.9	1,106.0	0.00	0.00	0.00
7,800.0	0.00	0.00	7,663.6	-1,105.0	46.9	1,106.0	0.00	0.00	0.00
7,822.4	0.00	0.00	7,686.0	-1,105.0	46.9	1,106.0	0.00	0.00	0.00
J-SAND									
7,840.0	0.00	0.00	7,703.6	-1,105.0	46.9	1,106.0	0.00	0.00	0.00
7,880.0	0.00	0.00	7,743.6	-1,105.0	46.9	1,106.0	0.00	0.00	0.00
7,920.0	0.00	0.00	7,783.6	-1,105.0	46.9	1,106.0	0.00	0.00	0.00
7,960.0	0.00	0.00	7,823.6	-1,105.0	46.9	1,106.0	0.00	0.00	0.00
7,972.4	0.00	0.00	7,836.0	-1,105.0	46.9	1,106.0	0.00	0.00	0.00
HARDLINE 75'E OF BHL									

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Schmidt K23-24D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4739.0ft (Original Well Elev)
Project:	SEC.23-T4N-R66W	MD Reference:	WELL @ 4739.0ft (Original Well Elev)
Site:	Schmidt K23-24D Pad Sec.23-T4N-R66W	North Reference:	True
Well:	Schmidt K23-24D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Schmidt K23-24D Plan #2 (04-15-10)		

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									
HARDLINE 75'E OF E	0.00	0.00	7,836.0	-1,205.0	121.9	1,350,567.35	3,210,773.21	40° 17' 35.672 N	104° 44' 39.815 W
- plan misses target center by 125.0ft at 7972.4ft MD (7836.0 TVD, -1105.0 N, 46.9 E)									
- Polygon									
Point 1			7,836.0	0.0	0.0	1,350,567.35	3,210,773.21		
Point 2			7,836.0	200.0	0.0	1,350,767.33	3,210,771.51		
TARGET BHL 1220'F:	0.00	0.00	5,700.0	-1,105.0	46.9	1,350,666.72	3,210,697.36	40° 17' 36.661 N	104° 44' 40.783 W
- plan hits target center									
- Point									
TARGET CIRCLE 122	0.00	0.00	6,889.0	-1,105.0	46.9	1,350,666.70	3,210,697.37	40° 17' 36.660 N	104° 44' 40.783 W
- plan hits target center									
- Circle (radius 75.0)									

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(ft)	(ft)			(°)	(°)	
7,025.4	6,889.0	NIOBRARA		0.00		
7,350.4	7,214.0	CODELL		0.00		
7,749.4	7,613.0	D-SAND		0.00		
7,822.4	7,686.0	J-SAND		0.00		