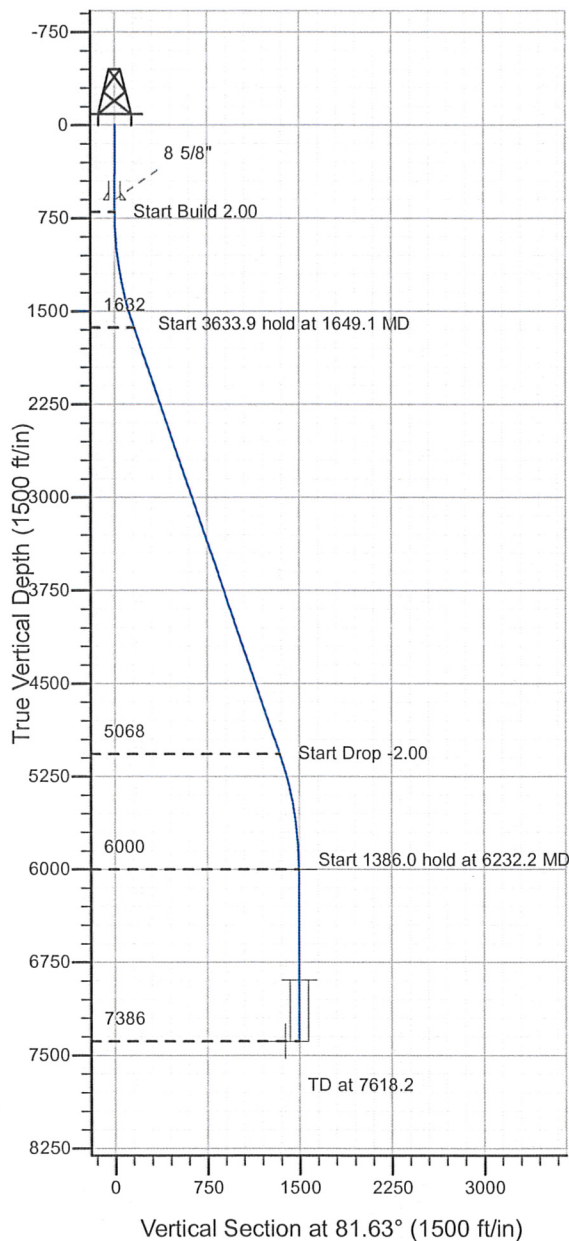
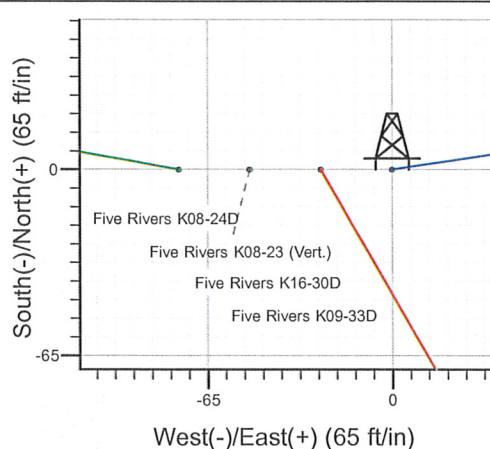
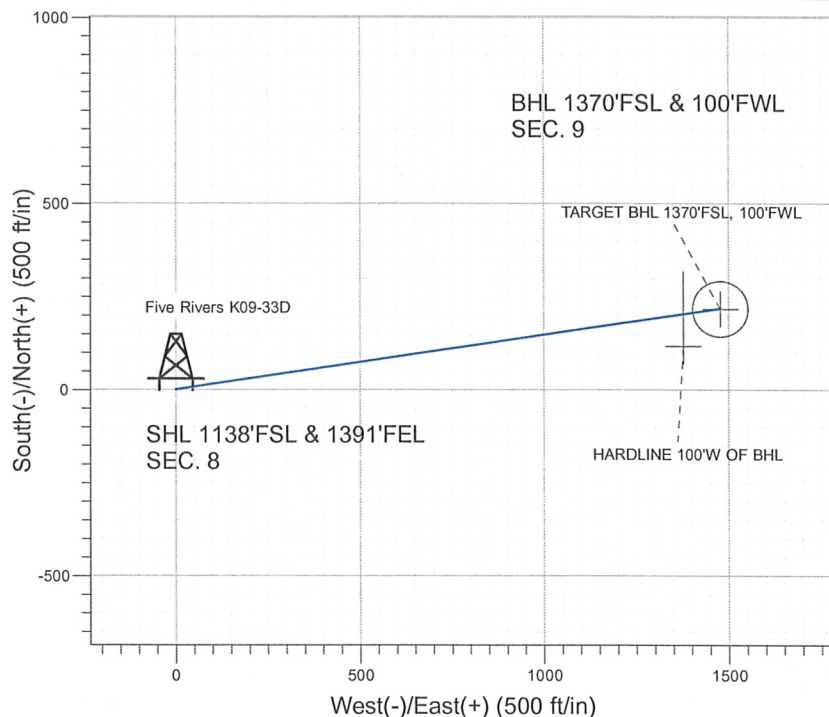


Well Name: Five Rivers K09-33D

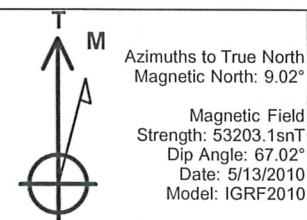
Surface Location: Five Rivers K08-24D Pad Sec.8-T4N-R66W
 North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone
 Ground Elevation: 4703.0
 +N/-S+E/-W Northing Easting Latitude Longitude Slot
 0.0 0.01360961.913195937.6140° 19' 19.596 N104° 47' 50.208 W
 Original Well Elev WELL @ 4716.0ft (Original Well Elev)



NOBLE ENERGY INC WELD COUNTY CO



Five Rivers K08-24D Pad Sec.8-T4N-R66W
 Five Rivers K09-33D
 Noble Five Rivers K08-33D Plan #1 (05-13-10)
 11:56, May 15 2010



WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 1370'FSL, 100'FWL	6000.0	217.3	1477.7	40° 19' 21.743 N	104° 47' 31.130 W	Point
TARGET CIRCLE 1370'FSL, 100'FWL	6891.0	217.3	1477.7	40° 19' 21.743 N	104° 47' 31.130 W	Circle (Radius: 75.0)
HARDLINE 100'W OF BHL	7386.0	117.3	1377.7	40° 19' 20.755 N	104° 47' 32.421 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	700.0	0.00	0.00	700.0	0.0	0.0	0.00	0.00	0.0	
3	1649.1	18.98	81.63	1631.9	22.7	154.1	2.00	81.63	155.8	
4	5283.0	18.98	81.63	5068.1	194.6	1323.6	0.00	0.00	1337.8	
5	6232.2	0.00	0.00	6000.0	217.3	1477.7	2.00	180.00	1493.6	TARGET BHL 1370'FSL, 100'FWL
6	7618.2	0.00	0.00	7386.0	217.3	1477.7	0.00	0.00	1493.6	



Directional

**NOBLE ENERGY INC WELD
COUNTY CO**

SEC.8-T4N-R66W

Five Rivers K08-24D Pad Sec.8-T4N-R66W

Five Rivers K09-33D

Wellbore #1

Plan: Noble Five Rivers K08-33D Plan #1 (05-13-10)

Standard Planning Report

15 May, 2010



Database: EDM den0-adp01 Server Data
Company: NOBLE ENERGY INC WELD COUNTY CO
Project: SEC.8-T4N-R66W
Site: Five Rivers K08-24D Pad Sec.8-T4N-R66W
Well: Five Rivers K09-33D
Wellbore: Wellbore #1
Design: Noble Five Rivers K08-33D Plan #1 (05-13-10)

Local Co-ordinate Reference: Well Five Rivers K09-33D
TVD Reference: WELL @ 4716.0ft (Original Well Elev)
MD Reference: WELL @ 4716.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

Project	SEC.8-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	Five Rivers K08-24D Pad Sec.8-T4N-R66W				
Site Position:		Northing:	1,360,961.32 ft	Latitude:	40° 19' 19.596 N
From:	Lat/Long	Easting:	3,195,862.33 ft	Longitude:	104° 47' 51.180 W
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.45 °

Well	Five Rivers K09-33D					
Well Position	+N/-S	0.0 ft	Northing:	1,360,961.91 ft	Latitude:	40° 19' 19.596 N
	+E/-W	75.3 ft	Easting:	3,195,937.61 ft	Longitude:	104° 47' 50.208 W
Position Uncertainty	0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,703.0 ft	

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	5/13/2010	9.02	67.02	53,203

Design	Noble Five Rivers K08-33D Plan #1 (05-13-10)			
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	81.63

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	
700.0	0.00	0.00	700.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,649.1	18.98	81.63	1,631.9	22.7	154.1	2.00	2.00	0.00	81.63	
5,283.0	18.98	81.63	5,068.1	194.6	1,323.6	0.00	0.00	0.00	0.00	
6,232.2	0.00	0.00	6,000.0	217.3	1,477.7	2.00	-2.00	0.00	180.00	TARGET BHL 137C
7,618.2	0.00	0.00	7,386.0	217.3	1,477.7	0.00	0.00	0.00	0.00	

Database: EDM den0-adp01 Server Data
Company: NOBLE ENERGY INC WELD COUNTY CO
Project: SEC.8-T4N-R66W
Site: Five Rivers K08-24D Pad Sec.8-T4N-R66W
Well: Five Rivers K09-33D
Wellbore: Wellbore #1
Design: Noble Five Rivers K08-33D Plan #1 (05-13-10)

Local Co-ordinate Reference: Well Five Rivers K09-33D
TVD Reference: WELL @ 4716.0ft (Original Well Elev)
MD Reference: WELL @ 4716.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

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
8 5/8"									
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
720.0	0.40	81.63	720.0	0.0	0.1	0.1	2.00	2.00	0.00
760.0	1.20	81.63	760.0	0.1	0.6	0.6	2.00	2.00	0.00
800.0	2.00	81.63	800.0	0.3	1.7	1.7	2.00	2.00	0.00
840.0	2.80	81.63	839.9	0.5	3.4	3.4	2.00	2.00	0.00
880.0	3.60	81.63	879.9	0.8	5.6	5.7	2.00	2.00	0.00
920.0	4.40	81.63	919.8	1.2	8.4	8.4	2.00	2.00	0.00
960.0	5.20	81.63	959.6	1.7	11.7	11.8	2.00	2.00	0.00
1,000.0	6.00	81.63	999.5	2.3	15.5	15.7	2.00	2.00	0.00
1,040.0	6.80	81.63	1,039.2	2.9	19.9	20.2	2.00	2.00	0.00
1,080.0	7.60	81.63	1,078.9	3.7	24.9	25.2	2.00	2.00	0.00
1,120.0	8.40	81.63	1,118.5	4.5	30.4	30.7	2.00	2.00	0.00
1,160.0	9.20	81.63	1,158.0	5.4	36.5	36.9	2.00	2.00	0.00
1,200.0	10.00	81.63	1,197.5	6.3	43.1	43.5	2.00	2.00	0.00
1,240.0	10.80	81.63	1,236.8	7.4	50.2	50.7	2.00	2.00	0.00
1,280.0	11.60	81.63	1,276.0	8.5	57.9	58.5	2.00	2.00	0.00
1,320.0	12.40	81.63	1,315.2	9.7	66.1	66.8	2.00	2.00	0.00
1,360.0	13.20	81.63	1,354.2	11.0	74.9	75.7	2.00	2.00	0.00
1,400.0	14.00	81.63	1,393.1	12.4	84.2	85.1	2.00	2.00	0.00
1,440.0	14.80	81.63	1,431.8	13.8	94.0	95.0	2.00	2.00	0.00
1,480.0	15.60	81.63	1,470.4	15.4	104.4	105.5	2.00	2.00	0.00
1,520.0	16.40	81.63	1,508.8	17.0	115.3	116.6	2.00	2.00	0.00
1,560.0	17.20	81.63	1,547.1	18.6	126.8	128.1	2.00	2.00	0.00
1,600.0	18.00	81.63	1,585.3	20.4	138.7	140.2	2.00	2.00	0.00
1,640.0	18.80	81.63	1,623.2	22.2	151.2	152.8	2.00	2.00	0.00
1,649.1	18.98	81.63	1,631.9	22.7	154.1	155.8	2.00	2.00	0.00
1,680.0	18.98	81.63	1,661.1	24.1	164.1	165.8	0.00	0.00	0.00
1,720.0	18.98	81.63	1,698.9	26.0	176.9	178.8	0.00	0.00	0.00
1,760.0	18.98	81.63	1,736.7	27.9	189.8	191.9	0.00	0.00	0.00
1,800.0	18.98	81.63	1,774.5	29.8	202.7	204.9	0.00	0.00	0.00
1,840.0	18.98	81.63	1,812.4	31.7	215.6	217.9	0.00	0.00	0.00
1,880.0	18.98	81.63	1,850.2	33.6	228.4	230.9	0.00	0.00	0.00
1,920.0	18.98	81.63	1,888.0	35.5	241.3	243.9	0.00	0.00	0.00
1,960.0	18.98	81.63	1,925.8	37.4	254.2	256.9	0.00	0.00	0.00
2,000.0	18.98	81.63	1,963.7	39.3	267.1	269.9	0.00	0.00	0.00

Database: EDM den0-adp01 Server Data
Company: NOBLE ENERGY INC WELD COUNTY CO
Project: SEC.8-T4N-R66W
Site: Five Rivers K08-24D Pad Sec.8-T4N-R66W
Well: Five Rivers K09-33D
Wellbore: Wellbore #1
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MD Reference: WELL @ 4716.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

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	18.98	81.63	2,001.5	41.2	279.9	282.9	0.00	0.00	0.00
2,080.0	18.98	81.63	2,039.3	43.1	292.8	295.9	0.00	0.00	0.00
2,120.0	18.98	81.63	2,077.1	44.9	305.7	309.0	0.00	0.00	0.00
2,160.0	18.98	81.63	2,114.9	46.8	318.5	322.0	0.00	0.00	0.00
2,200.0	18.98	81.63	2,152.8	48.7	331.4	335.0	0.00	0.00	0.00
2,240.0	18.98	81.63	2,190.6	50.6	344.3	348.0	0.00	0.00	0.00
2,280.0	18.98	81.63	2,228.4	52.5	357.2	361.0	0.00	0.00	0.00
2,320.0	18.98	81.63	2,266.2	54.4	370.0	374.0	0.00	0.00	0.00
2,360.0	18.98	81.63	2,304.1	56.3	382.9	387.0	0.00	0.00	0.00
2,400.0	18.98	81.63	2,341.9	58.2	395.8	400.0	0.00	0.00	0.00
2,440.0	18.98	81.63	2,379.7	60.1	408.7	413.0	0.00	0.00	0.00
2,480.0	18.98	81.63	2,417.5	62.0	421.5	426.1	0.00	0.00	0.00
2,520.0	18.98	81.63	2,455.4	63.9	434.4	439.1	0.00	0.00	0.00
2,560.0	18.98	81.63	2,493.2	65.8	447.3	452.1	0.00	0.00	0.00
2,600.0	18.98	81.63	2,531.0	67.7	460.1	465.1	0.00	0.00	0.00
2,640.0	18.98	81.63	2,568.8	69.6	473.0	478.1	0.00	0.00	0.00
2,680.0	18.98	81.63	2,606.7	71.4	485.9	491.1	0.00	0.00	0.00
2,720.0	18.98	81.63	2,644.5	73.3	498.8	504.1	0.00	0.00	0.00
2,760.0	18.98	81.63	2,682.3	75.2	511.6	517.1	0.00	0.00	0.00
2,800.0	18.98	81.63	2,720.1	77.1	524.5	530.1	0.00	0.00	0.00
2,840.0	18.98	81.63	2,758.0	79.0	537.4	543.2	0.00	0.00	0.00
2,880.0	18.98	81.63	2,795.8	80.9	550.3	556.2	0.00	0.00	0.00
2,920.0	18.98	81.63	2,833.6	82.8	563.1	569.2	0.00	0.00	0.00
2,960.0	18.98	81.63	2,871.4	84.7	576.0	582.2	0.00	0.00	0.00
3,000.0	18.98	81.63	2,909.3	86.6	588.9	595.2	0.00	0.00	0.00
3,040.0	18.98	81.63	2,947.1	88.5	601.7	608.2	0.00	0.00	0.00
3,080.0	18.98	81.63	2,984.9	90.4	614.6	621.2	0.00	0.00	0.00
3,120.0	18.98	81.63	3,022.7	92.3	627.5	634.2	0.00	0.00	0.00
3,160.0	18.98	81.63	3,060.6	94.2	640.4	647.2	0.00	0.00	0.00
3,200.0	18.98	81.63	3,098.4	96.1	653.2	660.3	0.00	0.00	0.00
3,240.0	18.98	81.63	3,136.2	97.9	666.1	673.3	0.00	0.00	0.00
3,280.0	18.98	81.63	3,174.0	99.8	679.0	686.3	0.00	0.00	0.00
3,320.0	18.98	81.63	3,211.9	101.7	691.9	699.3	0.00	0.00	0.00
3,360.0	18.98	81.63	3,249.7	103.6	704.7	712.3	0.00	0.00	0.00
3,400.0	18.98	81.63	3,287.5	105.5	717.6	725.3	0.00	0.00	0.00
3,440.0	18.98	81.63	3,325.3	107.4	730.5	738.3	0.00	0.00	0.00
3,480.0	18.98	81.63	3,363.2	109.3	743.3	751.3	0.00	0.00	0.00
3,520.0	18.98	81.63	3,401.0	111.2	756.2	764.3	0.00	0.00	0.00
3,560.0	18.98	81.63	3,438.8	113.1	769.1	777.4	0.00	0.00	0.00
3,600.0	18.98	81.63	3,476.6	115.0	782.0	790.4	0.00	0.00	0.00
3,640.0	18.98	81.63	3,514.5	116.9	794.8	803.4	0.00	0.00	0.00
3,680.0	18.98	81.63	3,552.3	118.8	807.7	816.4	0.00	0.00	0.00
3,720.0	18.98	81.63	3,590.1	120.7	820.6	829.4	0.00	0.00	0.00
3,760.0	18.98	81.63	3,627.9	122.6	833.5	842.4	0.00	0.00	0.00
3,800.0	18.98	81.63	3,665.8	124.4	846.3	855.4	0.00	0.00	0.00
3,840.0	18.98	81.63	3,703.6	126.3	859.2	868.4	0.00	0.00	0.00
3,880.0	18.98	81.63	3,741.4	128.2	872.1	881.5	0.00	0.00	0.00
3,920.0	18.98	81.63	3,779.2	130.1	884.9	894.5	0.00	0.00	0.00
3,960.0	18.98	81.63	3,817.1	132.0	897.8	907.5	0.00	0.00	0.00
4,000.0	18.98	81.63	3,854.9	133.9	910.7	920.5	0.00	0.00	0.00
4,040.0	18.98	81.63	3,892.7	135.8	923.6	933.5	0.00	0.00	0.00
4,080.0	18.98	81.63	3,930.5	137.7	936.4	946.5	0.00	0.00	0.00
4,120.0	18.98	81.63	3,968.4	139.6	949.3	959.5	0.00	0.00	0.00
4,160.0	18.98	81.63	4,006.2	141.5	962.2	972.5	0.00	0.00	0.00

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MD Reference: WELL @ 4716.0ft (Original Well Elev)
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Survey Calculation Method: Minimum Curvature

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)
4,200.0	18.98	81.63	4,044.0	143.4	975.1	985.5	0.00	0.00	0.00
4,240.0	18.98	81.63	4,081.8	145.3	987.9	998.6	0.00	0.00	0.00
4,280.0	18.98	81.63	4,119.7	147.2	1,000.8	1,011.6	0.00	0.00	0.00
4,320.0	18.98	81.63	4,157.5	149.1	1,013.7	1,024.6	0.00	0.00	0.00
4,360.0	18.98	81.63	4,195.3	150.9	1,026.5	1,037.6	0.00	0.00	0.00
4,400.0	18.98	81.63	4,233.1	152.8	1,039.4	1,050.6	0.00	0.00	0.00
4,440.0	18.98	81.63	4,271.0	154.7	1,052.3	1,063.6	0.00	0.00	0.00
4,480.0	18.98	81.63	4,308.8	156.6	1,065.2	1,076.6	0.00	0.00	0.00
4,520.0	18.98	81.63	4,346.6	158.5	1,078.0	1,089.6	0.00	0.00	0.00
4,560.0	18.98	81.63	4,384.4	160.4	1,090.9	1,102.6	0.00	0.00	0.00
4,600.0	18.98	81.63	4,422.3	162.3	1,103.8	1,115.7	0.00	0.00	0.00
4,640.0	18.98	81.63	4,460.1	164.2	1,116.7	1,128.7	0.00	0.00	0.00
4,680.0	18.98	81.63	4,497.9	166.1	1,129.5	1,141.7	0.00	0.00	0.00
4,720.0	18.98	81.63	4,535.7	168.0	1,142.4	1,154.7	0.00	0.00	0.00
4,760.0	18.98	81.63	4,573.6	169.9	1,155.3	1,167.7	0.00	0.00	0.00
4,800.0	18.98	81.63	4,611.4	171.8	1,168.1	1,180.7	0.00	0.00	0.00
4,840.0	18.98	81.63	4,649.2	173.7	1,181.0	1,193.7	0.00	0.00	0.00
4,880.0	18.98	81.63	4,687.0	175.6	1,193.9	1,206.7	0.00	0.00	0.00
4,920.0	18.98	81.63	4,724.9	177.4	1,206.8	1,219.7	0.00	0.00	0.00
4,960.0	18.98	81.63	4,762.7	179.3	1,219.6	1,232.8	0.00	0.00	0.00
5,000.0	18.98	81.63	4,800.5	181.2	1,232.5	1,245.8	0.00	0.00	0.00
5,040.0	18.98	81.63	4,838.3	183.1	1,245.4	1,258.8	0.00	0.00	0.00
5,080.0	18.98	81.63	4,876.2	185.0	1,258.3	1,271.8	0.00	0.00	0.00
5,120.0	18.98	81.63	4,914.0	186.9	1,271.1	1,284.8	0.00	0.00	0.00
5,160.0	18.98	81.63	4,951.8	188.8	1,284.0	1,297.8	0.00	0.00	0.00
5,200.0	18.98	81.63	4,989.6	190.7	1,296.9	1,310.8	0.00	0.00	0.00
5,240.0	18.98	81.63	5,027.5	192.6	1,309.7	1,323.8	0.00	0.00	0.00
5,280.0	18.98	81.63	5,065.3	194.5	1,322.6	1,336.8	0.00	0.00	0.00
5,283.0	18.98	81.63	5,068.1	194.6	1,323.6	1,337.8	0.00	0.00	0.00
5,320.0	18.24	81.63	5,103.2	196.3	1,335.3	1,349.6	2.00	-2.00	0.00
5,360.0	17.44	81.63	5,141.3	198.1	1,347.4	1,361.9	2.00	-2.00	0.00
5,400.0	16.64	81.63	5,179.5	199.8	1,359.0	1,373.6	2.00	-2.00	0.00
5,440.0	15.84	81.63	5,217.9	201.5	1,370.1	1,384.8	2.00	-2.00	0.00
5,480.0	15.04	81.63	5,256.5	203.0	1,380.6	1,395.4	2.00	-2.00	0.00
5,520.0	14.24	81.63	5,295.2	204.5	1,390.6	1,405.6	2.00	-2.00	0.00
5,560.0	13.44	81.63	5,334.0	205.9	1,400.1	1,415.1	2.00	-2.00	0.00
5,600.0	12.64	81.63	5,373.0	207.2	1,409.0	1,424.2	2.00	-2.00	0.00
5,640.0	11.84	81.63	5,412.1	208.4	1,417.4	1,432.6	2.00	-2.00	0.00
5,680.0	11.04	81.63	5,451.3	209.6	1,425.2	1,440.6	2.00	-2.00	0.00
5,720.0	10.24	81.63	5,490.6	210.6	1,432.6	1,448.0	2.00	-2.00	0.00
5,760.0	9.44	81.63	5,530.0	211.6	1,439.3	1,454.8	2.00	-2.00	0.00
5,800.0	8.64	81.63	5,569.5	212.6	1,445.5	1,461.1	2.00	-2.00	0.00
5,840.0	7.84	81.63	5,609.1	213.4	1,451.2	1,466.8	2.00	-2.00	0.00
5,880.0	7.04	81.63	5,648.7	214.1	1,456.3	1,472.0	2.00	-2.00	0.00
5,920.0	6.24	81.63	5,688.5	214.8	1,460.9	1,476.6	2.00	-2.00	0.00
5,960.0	5.44	81.63	5,728.3	215.4	1,464.9	1,480.7	2.00	-2.00	0.00
6,000.0	4.64	81.63	5,768.1	215.9	1,468.4	1,484.2	2.00	-2.00	0.00
6,040.0	3.84	81.63	5,808.0	216.4	1,471.4	1,487.2	2.00	-2.00	0.00
6,080.0	3.04	81.63	5,847.9	216.7	1,473.7	1,489.6	2.00	-2.00	0.00
6,120.0	2.24	81.63	5,887.9	217.0	1,475.6	1,491.4	2.00	-2.00	0.00
6,160.0	1.44	81.63	5,927.9	217.2	1,476.8	1,492.7	2.00	-2.00	0.00
6,200.0	0.64	81.63	5,967.8	217.3	1,477.6	1,493.4	2.00	-2.00	0.00
6,232.2	0.00	0.00	6,000.0	217.3	1,477.7	1,493.6	2.00	-2.00	0.00

TARGET BHL 1370'FSL, 100'FWL

Database: EDM den0-adp01 Server Data
Company: NOBLE ENERGY INC WELD COUNTY CO
Project: SEC.8-T4N-R66W
Site: Five Rivers K08-24D Pad Sec.8-T4N-R66W
Well: Five Rivers K09-33D
Wellbore: Wellbore #1
Design: Noble Five Rivers K08-33D Plan #1 (05-13-10)

Local Co-ordinate Reference: Well Five Rivers K09-33D
TVD Reference: WELL @ 4716.0ft (Original Well Elev)
MD Reference: WELL @ 4716.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

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)
6,240.0	0.00	0.00	6,007.8	217.3	1,477.7	1,493.6	0.00	0.00	0.00
6,280.0	0.00	0.00	6,047.8	217.3	1,477.7	1,493.6	0.00	0.00	0.00
6,320.0	0.00	0.00	6,087.8	217.3	1,477.7	1,493.6	0.00	0.00	0.00
6,360.0	0.00	0.00	6,127.8	217.3	1,477.7	1,493.6	0.00	0.00	0.00
6,400.0	0.00	0.00	6,167.8	217.3	1,477.7	1,493.6	0.00	0.00	0.00
6,440.0	0.00	0.00	6,207.8	217.3	1,477.7	1,493.6	0.00	0.00	0.00
6,480.0	0.00	0.00	6,247.8	217.3	1,477.7	1,493.6	0.00	0.00	0.00
6,520.0	0.00	0.00	6,287.8	217.3	1,477.7	1,493.6	0.00	0.00	0.00
6,560.0	0.00	0.00	6,327.8	217.3	1,477.7	1,493.6	0.00	0.00	0.00
6,600.0	0.00	0.00	6,367.8	217.3	1,477.7	1,493.6	0.00	0.00	0.00
6,640.0	0.00	0.00	6,407.8	217.3	1,477.7	1,493.6	0.00	0.00	0.00
6,680.0	0.00	0.00	6,447.8	217.3	1,477.7	1,493.6	0.00	0.00	0.00
6,720.0	0.00	0.00	6,487.8	217.3	1,477.7	1,493.6	0.00	0.00	0.00
6,760.0	0.00	0.00	6,527.8	217.3	1,477.7	1,493.6	0.00	0.00	0.00
6,800.0	0.00	0.00	6,567.8	217.3	1,477.7	1,493.6	0.00	0.00	0.00
6,840.0	0.00	0.00	6,607.8	217.3	1,477.7	1,493.6	0.00	0.00	0.00
6,880.0	0.00	0.00	6,647.8	217.3	1,477.7	1,493.6	0.00	0.00	0.00
6,920.0	0.00	0.00	6,687.8	217.3	1,477.7	1,493.6	0.00	0.00	0.00
6,960.0	0.00	0.00	6,727.8	217.3	1,477.7	1,493.6	0.00	0.00	0.00
7,000.0	0.00	0.00	6,767.8	217.3	1,477.7	1,493.6	0.00	0.00	0.00
7,040.0	0.00	0.00	6,807.8	217.3	1,477.7	1,493.6	0.00	0.00	0.00
7,080.0	0.00	0.00	6,847.8	217.3	1,477.7	1,493.6	0.00	0.00	0.00
7,120.0	0.00	0.00	6,887.8	217.3	1,477.7	1,493.6	0.00	0.00	0.00
7,123.2	0.00	0.00	6,891.0	217.3	1,477.7	1,493.6	0.00	0.00	0.00
NIOBRARA - TARGET CIRCLE 1370'FSL, 100'FWL									
7,160.0	0.00	0.00	6,927.8	217.3	1,477.7	1,493.6	0.00	0.00	0.00
7,200.0	0.00	0.00	6,967.8	217.3	1,477.7	1,493.6	0.00	0.00	0.00
7,240.0	0.00	0.00	7,007.8	217.3	1,477.7	1,493.6	0.00	0.00	0.00
7,280.0	0.00	0.00	7,047.8	217.3	1,477.7	1,493.6	0.00	0.00	0.00
7,320.0	0.00	0.00	7,087.8	217.3	1,477.7	1,493.6	0.00	0.00	0.00
7,360.0	0.00	0.00	7,127.8	217.3	1,477.7	1,493.6	0.00	0.00	0.00
7,400.0	0.00	0.00	7,167.8	217.3	1,477.7	1,493.6	0.00	0.00	0.00
7,440.0	0.00	0.00	7,207.8	217.3	1,477.7	1,493.6	0.00	0.00	0.00
7,468.2	0.00	0.00	7,236.0	217.3	1,477.7	1,493.6	0.00	0.00	0.00
CODELL									
7,480.0	0.00	0.00	7,247.8	217.3	1,477.7	1,493.6	0.00	0.00	0.00
7,520.0	0.00	0.00	7,287.8	217.3	1,477.7	1,493.6	0.00	0.00	0.00
7,560.0	0.00	0.00	7,327.8	217.3	1,477.7	1,493.6	0.00	0.00	0.00
7,600.0	0.00	0.00	7,367.8	217.3	1,477.7	1,493.6	0.00	0.00	0.00
7,618.2	0.00	0.00	7,386.0	217.3	1,477.7	1,493.6	0.00	0.00	0.00
HARDLINE 100'W OF BHL									

Database: EDM den0-adp01 Server Data
Company: NOBLE ENERGY INC WELD COUNTY CO
Project: SEC.8-T4N-R66W
Site: Five Rivers K08-24D Pad Sec.8-T4N-R66W
Well: Five Rivers K09-33D
Wellbore: Wellbore #1
Design: Noble Five Rivers K08-33D Plan #1 (05-13-10)

Local Co-ordinate Reference: Well Five Rivers K09-33D
TVD Reference: WELL @ 4716.0ft (Original Well Elev)
MD Reference: WELL @ 4716.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
TARGET BHL 1370'F - plan hits target center - Point	0.00	0.00	6,000.0	217.3	1,477.7	1,361,190.89	3,197,413.50	40° 19' 21.743 N	104° 47' 31.130 W
TARGET CIRCLE 13; - plan hits target center - Circle (radius 75.0)	0.00	0.00	6,891.0	217.3	1,477.7	1,361,190.90	3,197,413.47	40° 19' 21.743 N	104° 47' 31.130 W
HARDLINE 100'W OF - plan misses target center by 141.4ft at 7618.2ft MD (7386.0 TVD, 217.3 N, 1477.7 E) - Polygon	0.00	0.00	7,386.0	117.3	1,377.7	1,361,090.12	3,197,314.27	40° 19' 20.755 N	104° 47' 32.421 W
Point 1			7,386.0	0.0	0.0	1,361,090.12	3,197,314.27		
Point 2			7,386.0	200.0	0.0	1,361,290.10	3,197,312.69		

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
600.0	600.0	8 5/8"	8-5/8	12-1/4

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
7,123.2	6,891.0	NIOBRARA		0.00	
7,468.2	7,236.0	CODELL		0.00	