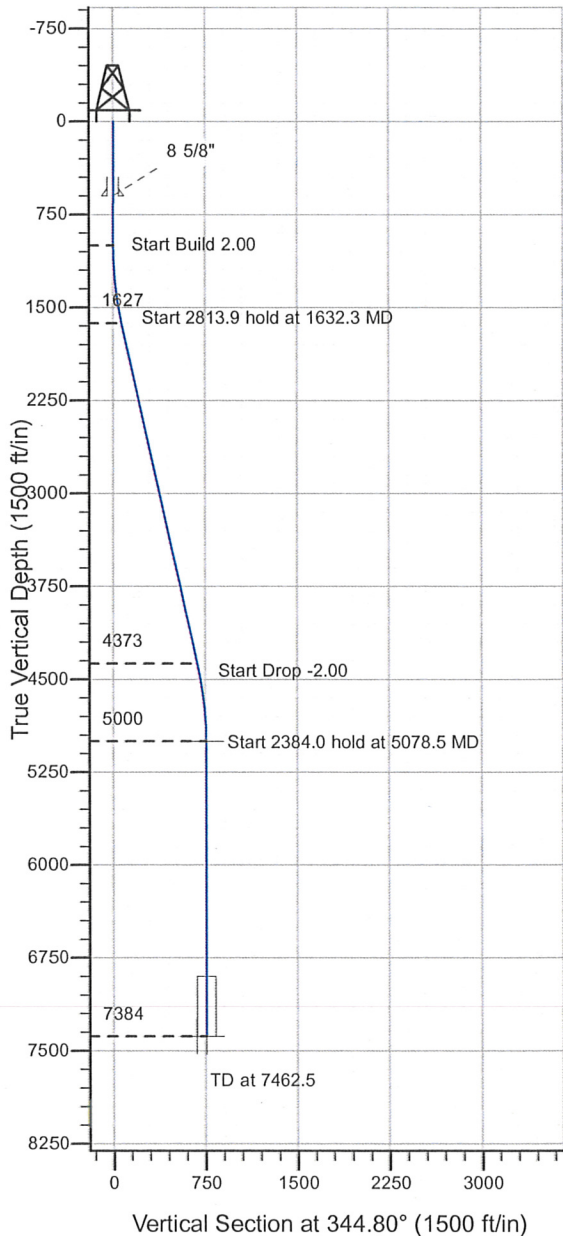
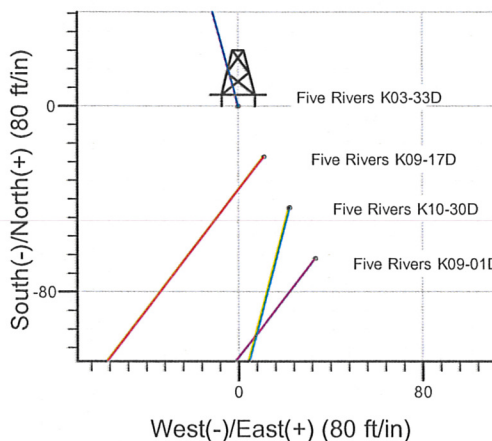
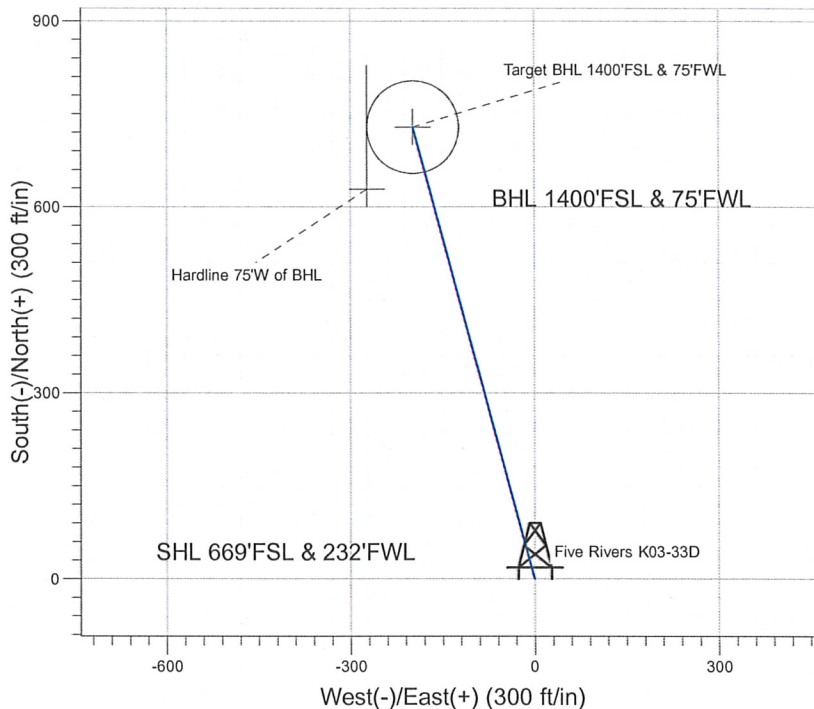


Well Name: Five Rivers K03-33D

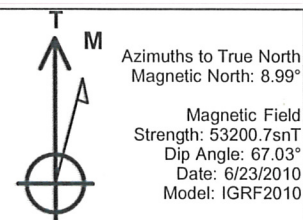
Surface Location: Five Rivers K03-33D Pad Sec.3-T4N-R66W
 North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone
 Ground Elevation: 4721.0
 +N/-S+E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1365851.33 3202773.69 40° 20' 7.368 N 104° 46' 21.432 W
 Original Well Elev WELL @ 4734.0ft (Original Well Elev)



NOBLE ENERGY INC WELD COUNTY CO



Five Rivers K03-33D Pad Sec.3-T4N-R66W
 Five Rivers K03-33D
 Noble Five Rivers K03-33D Plan#1 (6-29-10)
 15:22, July 07 2010



WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
Target BHL 1400'FSL & 75'FWL	5000.0	728.6	-197.9	40° 20' 14.568 N	104° 46' 23.988 W	Point
Hardline 75'W of BHL	7384.0	628.6	-272.9	40° 20' 13.580 N	104° 46' 24.956 W	Polygon
Target Circle 1400'FSL & 75'FWL	7384.0	728.6	-197.9	40° 20' 14.568 N	104° 46' 23.988 W	Circle (Radius: 75.0)

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	1000.0	0.00	0.00	1000.0	0.0	0.0	0.00	0.00	0.0	
3	1632.3	12.65	344.80	1627.2	67.1	-18.2	2.00	344.80	69.5	
4	4446.2	12.65	344.80	4372.8	661.6	-179.7	0.00	0.00	685.5	
5	5078.5	0.00	0.00	5000.0	728.6	-197.9	2.00	180.00	755.0	Target BHL 1400'FSL & 75'FWL
6	7462.5	0.00	0.00	7384.0	728.6	-197.9	0.00	0.00	755.0	



Directional

NOBLE ENERGY INC WELD COUNTY CO

SEC.3-T4N-R66W

Five Rivers K03-33D Pad Sec.3-T4N-R66W

Five Rivers K03-33D

Wellbore #1

Plan: Noble Five Rivers K03-33D Plan#1 (6-29-10)

Standard Planning Report

07 July, 2010



Database: EDM den0-adp01 Server Data
Company: NOBLE ENERGY INC WELD COUNTY CO
Project: SEC.3-T4N-R66W
Site: Five Rivers K03-33D Pad Sec.3-T4N-R66W
Well: Five Rivers K03-33D
Wellbore: Wellbore #1
Design: Noble Five Rivers K03-33D Plan#1 (6-29-10)

Local Co-ordinate Reference: Well Five Rivers K03-33D
TVD Reference: WELL @ 4734.0ft (Original Well Elev)
MD Reference: WELL @ 4734.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

Project	SEC.3-T4N-R66W, 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		Five Rivers K03-33D Pad Sec.3-T4N-R66W			
Site Position:		Northing:	1,365,851.35 ft	Latitude:	40° 20' 7.368 N
From:	Lat/Long	Easting:	3,202,773.69 ft	Longitude:	104° 46' 21.432 W
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.47 °

Well	Five Rivers K03-33D					
Well Position	+N/-S	0.0 ft	Northing:	1,365,851.33 ft	Latitude:	40° 20' 7.368 N
	+E/-W	0.0 ft	Easting:	3,202,773.69 ft	Longitude:	104° 46' 21.432 W
Position Uncertainty	0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,721.0 ft	

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	6/23/2010	8.99	67.03	53,201

Design	Noble Five Rivers K03-33D Plan#1 (6-29-10)			
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	344.80

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	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,632.3	12.65	344.80	1,627.2	67.1	-18.2	2.00	2.00	0.00	344.80	
4,446.2	12.65	344.80	4,372.8	661.6	-179.7	0.00	0.00	0.00	0.00	
5,078.5	0.00	0.00	5,000.0	728.6	-197.9	2.00	-2.00	0.00	180.00	Target BHL 1400'F!
7,462.5	0.00	0.00	7,384.0	728.6	-197.9	0.00	0.00	0.00	0.00	

Database: EDM den0-adp01 Server Data
Company: NOBLE ENERGY INC WELD COUNTY CO
Project: SEC.3-T4N-R66W
Site: Five Rivers K03-33D Pad Sec.3-T4N-R66W
Well: Five Rivers K03-33D
Wellbore: Wellbore #1
Design: Noble Five Rivers K03-33D Plan#1 (6-29-10)

Local Co-ordinate Reference: Well Five Rivers K03-33D
TVD Reference: WELL @ 4734.0ft (Original Well Elev)
MD Reference: WELL @ 4734.0ft (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
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
920.0	0.00	0.00	920.0	0.0	0.0	0.0	0.00	0.00	0.00
960.0	0.00	0.00	960.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,040.0	0.80	344.80	1,040.0	0.3	-0.1	0.3	2.00	2.00	0.00
1,080.0	1.60	344.80	1,080.0	1.1	-0.3	1.1	2.00	2.00	0.00
1,120.0	2.40	344.80	1,120.0	2.4	-0.7	2.5	2.00	2.00	0.00
1,160.0	3.20	344.80	1,159.9	4.3	-1.2	4.5	2.00	2.00	0.00
1,200.0	4.00	344.80	1,199.8	6.7	-1.8	7.0	2.00	2.00	0.00
1,240.0	4.80	344.80	1,239.7	9.7	-2.6	10.0	2.00	2.00	0.00
1,280.0	5.60	344.80	1,279.6	13.2	-3.6	13.7	2.00	2.00	0.00
1,320.0	6.40	344.80	1,319.3	17.2	-4.7	17.9	2.00	2.00	0.00
1,360.0	7.20	344.80	1,359.1	21.8	-5.9	22.6	2.00	2.00	0.00
1,400.0	8.00	344.80	1,398.7	26.9	-7.3	27.9	2.00	2.00	0.00
1,440.0	8.80	344.80	1,438.3	32.5	-8.8	33.7	2.00	2.00	0.00
1,480.0	9.60	344.80	1,477.8	38.7	-10.5	40.1	2.00	2.00	0.00
1,520.0	10.40	344.80	1,517.1	45.4	-12.3	47.1	2.00	2.00	0.00
1,560.0	11.20	344.80	1,556.4	52.7	-14.3	54.6	2.00	2.00	0.00
1,600.0	12.00	344.80	1,595.6	60.4	-16.4	62.6	2.00	2.00	0.00
1,632.3	12.65	344.80	1,627.2	67.1	-18.2	69.5	2.00	2.00	0.00
1,640.0	12.65	344.80	1,634.7	68.7	-18.7	71.2	0.00	0.00	0.00
1,680.0	12.65	344.80	1,673.7	77.1	-21.0	79.9	0.00	0.00	0.00
1,720.0	12.65	344.80	1,712.8	85.6	-23.3	88.7	0.00	0.00	0.00
1,760.0	12.65	344.80	1,751.8	94.0	-25.5	97.5	0.00	0.00	0.00
1,800.0	12.65	344.80	1,790.8	102.5	-27.8	106.2	0.00	0.00	0.00
1,840.0	12.65	344.80	1,829.8	110.9	-30.1	115.0	0.00	0.00	0.00
1,880.0	12.65	344.80	1,868.9	119.4	-32.4	123.7	0.00	0.00	0.00
1,920.0	12.65	344.80	1,907.9	127.8	-34.7	132.5	0.00	0.00	0.00
1,960.0	12.65	344.80	1,946.9	136.3	-37.0	141.2	0.00	0.00	0.00
2,000.0	12.65	344.80	1,986.0	144.8	-39.3	150.0	0.00	0.00	0.00
2,040.0	12.65	344.80	2,025.0	153.2	-41.6	158.8	0.00	0.00	0.00

Database: EDM den0-adp01 Server Data
Company: NOBLE ENERGY INC WELD COUNTY CO
Project: SEC.3-T4N-R66W
Site: Five Rivers K03-33D Pad Sec.3-T4N-R66W
Well: Five Rivers K03-33D
Wellbore: Wellbore #1
Design: Noble Five Rivers K03-33D Plan#1 (6-29-10)

Local Co-ordinate Reference: Well Five Rivers K03-33D
TVD Reference: WELL @ 4734.0ft (Original Well Elev)
MD Reference: WELL @ 4734.0ft (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)
2,080.0	12.65	344.80	2,064.0	161.7	-43.9	167.5	0.00	0.00	0.00
2,120.0	12.65	344.80	2,103.0	170.1	-46.2	176.3	0.00	0.00	0.00
2,160.0	12.65	344.80	2,142.1	178.6	-48.5	185.0	0.00	0.00	0.00
2,200.0	12.65	344.80	2,181.1	187.0	-50.8	193.8	0.00	0.00	0.00
2,240.0	12.65	344.80	2,220.1	195.5	-53.1	202.5	0.00	0.00	0.00
2,280.0	12.65	344.80	2,259.2	203.9	-55.4	211.3	0.00	0.00	0.00
2,320.0	12.65	344.80	2,298.2	212.4	-57.7	220.1	0.00	0.00	0.00
2,360.0	12.65	344.80	2,337.2	220.8	-60.0	228.8	0.00	0.00	0.00
2,400.0	12.65	344.80	2,376.3	229.3	-62.3	237.6	0.00	0.00	0.00
2,440.0	12.65	344.80	2,415.3	237.7	-64.6	246.3	0.00	0.00	0.00
2,480.0	12.65	344.80	2,454.3	246.2	-66.9	255.1	0.00	0.00	0.00
2,520.0	12.65	344.80	2,493.3	254.6	-69.2	263.8	0.00	0.00	0.00
2,560.0	12.65	344.80	2,532.4	263.1	-71.5	272.6	0.00	0.00	0.00
2,600.0	12.65	344.80	2,571.4	271.5	-73.8	281.4	0.00	0.00	0.00
2,640.0	12.65	344.80	2,610.4	280.0	-76.1	290.1	0.00	0.00	0.00
2,680.0	12.65	344.80	2,649.5	288.4	-78.3	298.9	0.00	0.00	0.00
2,720.0	12.65	344.80	2,688.5	296.9	-80.6	307.6	0.00	0.00	0.00
2,760.0	12.65	344.80	2,727.5	305.3	-82.9	316.4	0.00	0.00	0.00
2,800.0	12.65	344.80	2,766.6	313.8	-85.2	325.1	0.00	0.00	0.00
2,840.0	12.65	344.80	2,805.6	322.2	-87.5	333.9	0.00	0.00	0.00
2,880.0	12.65	344.80	2,844.6	330.7	-89.8	342.7	0.00	0.00	0.00
2,920.0	12.65	344.80	2,883.6	339.1	-92.1	351.4	0.00	0.00	0.00
2,960.0	12.65	344.80	2,922.7	347.6	-94.4	360.2	0.00	0.00	0.00
3,000.0	12.65	344.80	2,961.7	356.0	-96.7	368.9	0.00	0.00	0.00
3,040.0	12.65	344.80	3,000.7	364.5	-99.0	377.7	0.00	0.00	0.00
3,080.0	12.65	344.80	3,039.8	372.9	-101.3	386.4	0.00	0.00	0.00
3,120.0	12.65	344.80	3,078.8	381.4	-103.6	395.2	0.00	0.00	0.00
3,160.0	12.65	344.80	3,117.8	389.8	-105.9	404.0	0.00	0.00	0.00
3,200.0	12.65	344.80	3,156.8	398.3	-108.2	412.7	0.00	0.00	0.00
3,240.0	12.65	344.80	3,195.9	406.7	-110.5	421.5	0.00	0.00	0.00
3,280.0	12.65	344.80	3,234.9	415.2	-112.8	430.2	0.00	0.00	0.00
3,320.0	12.65	344.80	3,273.9	423.6	-115.1	439.0	0.00	0.00	0.00
3,360.0	12.65	344.80	3,313.0	432.1	-117.4	447.7	0.00	0.00	0.00
3,400.0	12.65	344.80	3,352.0	440.5	-119.7	456.5	0.00	0.00	0.00
3,440.0	12.65	344.80	3,391.0	449.0	-122.0	465.3	0.00	0.00	0.00
3,480.0	12.65	344.80	3,430.1	457.4	-124.3	474.0	0.00	0.00	0.00
3,520.0	12.65	344.80	3,469.1	465.9	-126.6	482.8	0.00	0.00	0.00
3,560.0	12.65	344.80	3,508.1	474.3	-128.9	491.5	0.00	0.00	0.00
3,600.0	12.65	344.80	3,547.1	482.8	-131.1	500.3	0.00	0.00	0.00
3,640.0	12.65	344.80	3,586.2	491.2	-133.4	509.0	0.00	0.00	0.00
3,680.0	12.65	344.80	3,625.2	499.7	-135.7	517.8	0.00	0.00	0.00
3,720.0	12.65	344.80	3,664.2	508.1	-138.0	526.6	0.00	0.00	0.00
3,760.0	12.65	344.80	3,703.3	516.6	-140.3	535.3	0.00	0.00	0.00
3,800.0	12.65	344.80	3,742.3	525.0	-142.6	544.1	0.00	0.00	0.00
3,840.0	12.65	344.80	3,781.3	533.5	-144.9	552.8	0.00	0.00	0.00
3,880.0	12.65	344.80	3,820.4	541.9	-147.2	561.6	0.00	0.00	0.00
3,920.0	12.65	344.80	3,859.4	550.4	-149.5	570.3	0.00	0.00	0.00
3,960.0	12.65	344.80	3,898.4	558.8	-151.8	579.1	0.00	0.00	0.00
4,000.0	12.65	344.80	3,937.4	567.3	-154.1	587.9	0.00	0.00	0.00
4,040.0	12.65	344.80	3,976.5	575.8	-156.4	596.6	0.00	0.00	0.00
4,080.0	12.65	344.80	4,015.5	584.2	-158.7	605.4	0.00	0.00	0.00
4,120.0	12.65	344.80	4,054.5	592.7	-161.0	614.1	0.00	0.00	0.00
4,160.0	12.65	344.80	4,093.6	601.1	-163.3	622.9	0.00	0.00	0.00
4,200.0	12.65	344.80	4,132.6	609.6	-165.6	631.6	0.00	0.00	0.00

Database: EDM den0-adp01 Server Data
Company: NOBLE ENERGY INC WELD COUNTY CO
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TVD Reference: WELL @ 4734.0ft (Original Well Elev)
MD Reference: WELL @ 4734.0ft (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)
4,240.0	12.65	344.80	4,171.6	618.0	-167.9	640.4	0.00	0.00	0.00
4,280.0	12.65	344.80	4,210.6	626.5	-170.2	649.2	0.00	0.00	0.00
4,320.0	12.65	344.80	4,249.7	634.9	-172.5	657.9	0.00	0.00	0.00
4,360.0	12.65	344.80	4,288.7	643.4	-174.8	666.7	0.00	0.00	0.00
4,400.0	12.65	344.80	4,327.7	651.8	-177.1	675.4	0.00	0.00	0.00
4,440.0	12.65	344.80	4,366.8	660.3	-179.4	684.2	0.00	0.00	0.00
4,446.2	12.65	344.80	4,372.8	661.6	-179.7	685.5	0.00	0.00	0.00
4,480.0	11.97	344.80	4,405.8	668.5	-181.6	692.8	2.00	-2.00	0.00
4,520.0	11.17	344.80	4,445.0	676.3	-183.7	700.8	2.00	-2.00	0.00
4,560.0	10.37	344.80	4,484.3	683.5	-185.7	708.2	2.00	-2.00	0.00
4,600.0	9.57	344.80	4,523.7	690.2	-187.5	715.2	2.00	-2.00	0.00
4,640.0	8.77	344.80	4,563.2	696.3	-189.2	721.5	2.00	-2.00	0.00
4,680.0	7.97	344.80	4,602.8	701.9	-190.7	727.4	2.00	-2.00	0.00
4,720.0	7.17	344.80	4,642.4	707.0	-192.1	732.6	2.00	-2.00	0.00
4,760.0	6.37	344.80	4,682.1	711.6	-193.3	737.4	2.00	-2.00	0.00
4,800.0	5.57	344.80	4,721.9	715.6	-194.4	741.5	2.00	-2.00	0.00
4,840.0	4.77	344.80	4,761.8	719.1	-195.3	745.1	2.00	-2.00	0.00
4,880.0	3.97	344.80	4,801.7	722.0	-196.1	748.2	2.00	-2.00	0.00
4,920.0	3.17	344.80	4,841.6	724.4	-196.8	750.7	2.00	-2.00	0.00
4,960.0	2.37	344.80	4,881.5	726.3	-197.3	752.6	2.00	-2.00	0.00
5,000.0	1.57	344.80	4,921.5	727.6	-197.7	754.0	2.00	-2.00	0.00
5,040.0	0.77	344.80	4,961.5	728.4	-197.9	754.8	2.00	-2.00	0.00
5,078.5	0.00	0.00	5,000.0	728.6	-197.9	755.0	2.00	-2.00	39.47

Target BHL 1400'FSL & 75'FWL

5,080.0	0.00	0.00	5,001.5	728.6	-197.9	755.0	0.00	0.00	0.00
5,120.0	0.00	0.00	5,041.5	728.6	-197.9	755.0	0.00	0.00	0.00
5,160.0	0.00	0.00	5,081.5	728.6	-197.9	755.0	0.00	0.00	0.00
5,200.0	0.00	0.00	5,121.5	728.6	-197.9	755.0	0.00	0.00	0.00
5,240.0	0.00	0.00	5,161.5	728.6	-197.9	755.0	0.00	0.00	0.00
5,280.0	0.00	0.00	5,201.5	728.6	-197.9	755.0	0.00	0.00	0.00
5,320.0	0.00	0.00	5,241.5	728.6	-197.9	755.0	0.00	0.00	0.00
5,360.0	0.00	0.00	5,281.5	728.6	-197.9	755.0	0.00	0.00	0.00
5,400.0	0.00	0.00	5,321.5	728.6	-197.9	755.0	0.00	0.00	0.00
5,440.0	0.00	0.00	5,361.5	728.6	-197.9	755.0	0.00	0.00	0.00
5,480.0	0.00	0.00	5,401.5	728.6	-197.9	755.0	0.00	0.00	0.00
5,520.0	0.00	0.00	5,441.5	728.6	-197.9	755.0	0.00	0.00	0.00
5,560.0	0.00	0.00	5,481.5	728.6	-197.9	755.0	0.00	0.00	0.00
5,600.0	0.00	0.00	5,521.5	728.6	-197.9	755.0	0.00	0.00	0.00
5,640.0	0.00	0.00	5,561.5	728.6	-197.9	755.0	0.00	0.00	0.00
5,680.0	0.00	0.00	5,601.5	728.6	-197.9	755.0	0.00	0.00	0.00
5,720.0	0.00	0.00	5,641.5	728.6	-197.9	755.0	0.00	0.00	0.00
5,760.0	0.00	0.00	5,681.5	728.6	-197.9	755.0	0.00	0.00	0.00
5,800.0	0.00	0.00	5,721.5	728.6	-197.9	755.0	0.00	0.00	0.00
5,840.0	0.00	0.00	5,761.5	728.6	-197.9	755.0	0.00	0.00	0.00
5,880.0	0.00	0.00	5,801.5	728.6	-197.9	755.0	0.00	0.00	0.00
5,920.0	0.00	0.00	5,841.5	728.6	-197.9	755.0	0.00	0.00	0.00
5,960.0	0.00	0.00	5,881.5	728.6	-197.9	755.0	0.00	0.00	0.00
6,000.0	0.00	0.00	5,921.5	728.6	-197.9	755.0	0.00	0.00	0.00
6,040.0	0.00	0.00	5,961.5	728.6	-197.9	755.0	0.00	0.00	0.00
6,080.0	0.00	0.00	6,001.5	728.6	-197.9	755.0	0.00	0.00	0.00
6,120.0	0.00	0.00	6,041.5	728.6	-197.9	755.0	0.00	0.00	0.00
6,160.0	0.00	0.00	6,081.5	728.6	-197.9	755.0	0.00	0.00	0.00
6,200.0	0.00	0.00	6,121.5	728.6	-197.9	755.0	0.00	0.00	0.00
6,240.0	0.00	0.00	6,161.5	728.6	-197.9	755.0	0.00	0.00	0.00

Database: EDM den0-adp01 Server Data
Company: NOBLE ENERGY INC WELD COUNTY CO
Project: SEC.3-T4N-R66W
Site: Five Rivers K03-33D Pad Sec.3-T4N-R66W
Well: Five Rivers K03-33D
Wellbore: Wellbore #1
Design: Noble Five Rivers K03-33D Plan#1 (6-29-10)

Local Co-ordinate Reference: Well Five Rivers K03-33D
TVD Reference: WELL @ 4734.0ft (Original Well Elev)
MD Reference: WELL @ 4734.0ft (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)
6,280.0	0.00	0.00	6,201.5	728.6	-197.9	755.0	0.00	0.00	0.00
6,320.0	0.00	0.00	6,241.5	728.6	-197.9	755.0	0.00	0.00	0.00
6,360.0	0.00	0.00	6,281.5	728.6	-197.9	755.0	0.00	0.00	0.00
6,400.0	0.00	0.00	6,321.5	728.6	-197.9	755.0	0.00	0.00	0.00
6,440.0	0.00	0.00	6,361.5	728.6	-197.9	755.0	0.00	0.00	0.00
6,480.0	0.00	0.00	6,401.5	728.6	-197.9	755.0	0.00	0.00	0.00
6,520.0	0.00	0.00	6,441.5	728.6	-197.9	755.0	0.00	0.00	0.00
6,560.0	0.00	0.00	6,481.5	728.6	-197.9	755.0	0.00	0.00	0.00
6,600.0	0.00	0.00	6,521.5	728.6	-197.9	755.0	0.00	0.00	0.00
6,640.0	0.00	0.00	6,561.5	728.6	-197.9	755.0	0.00	0.00	0.00
6,680.0	0.00	0.00	6,601.5	728.6	-197.9	755.0	0.00	0.00	0.00
6,720.0	0.00	0.00	6,641.5	728.6	-197.9	755.0	0.00	0.00	0.00
6,760.0	0.00	0.00	6,681.5	728.6	-197.9	755.0	0.00	0.00	0.00
6,800.0	0.00	0.00	6,721.5	728.6	-197.9	755.0	0.00	0.00	0.00
6,840.0	0.00	0.00	6,761.5	728.6	-197.9	755.0	0.00	0.00	0.00
6,880.0	0.00	0.00	6,801.5	728.6	-197.9	755.0	0.00	0.00	0.00
6,920.0	0.00	0.00	6,841.5	728.6	-197.9	755.0	0.00	0.00	0.00
6,960.0	0.00	0.00	6,881.5	728.6	-197.9	755.0	0.00	0.00	0.00
6,977.5	0.00	0.00	6,899.0	728.6	-197.9	755.0	0.00	0.00	0.00
Niobrara									
7,000.0	0.00	0.00	6,921.5	728.6	-197.9	755.0	0.00	0.00	0.00
7,040.0	0.00	0.00	6,961.5	728.6	-197.9	755.0	0.00	0.00	0.00
7,080.0	0.00	0.00	7,001.5	728.6	-197.9	755.0	0.00	0.00	0.00
7,120.0	0.00	0.00	7,041.5	728.6	-197.9	755.0	0.00	0.00	0.00
7,160.0	0.00	0.00	7,081.5	728.6	-197.9	755.0	0.00	0.00	0.00
7,200.0	0.00	0.00	7,121.5	728.6	-197.9	755.0	0.00	0.00	0.00
7,240.0	0.00	0.00	7,161.5	728.6	-197.9	755.0	0.00	0.00	0.00
7,280.0	0.00	0.00	7,201.5	728.6	-197.9	755.0	0.00	0.00	0.00
7,312.5	0.00	0.00	7,234.0	728.6	-197.9	755.0	0.00	0.00	0.00
Codell									
7,320.0	0.00	0.00	7,241.5	728.6	-197.9	755.0	0.00	0.00	0.00
7,360.0	0.00	0.00	7,281.5	728.6	-197.9	755.0	0.00	0.00	0.00
7,400.0	0.00	0.00	7,321.5	728.6	-197.9	755.0	0.00	0.00	0.00
7,440.0	0.00	0.00	7,361.5	728.6	-197.9	755.0	0.00	0.00	0.00
7,462.5	0.00	0.00	7,384.0	728.6	-197.9	755.0	0.00	0.00	0.00

Hardline 75°W of BHL - Target Circle 1400'FSL & 75'FWL

Database: EDM den0-adp01 Server Data
Company: NOBLE ENERGY INC WELD COUNTY CO
Project: SEC.3-T4N-R66W
Site: Five Rivers K03-33D Pad Sec.3-T4N-R66W
Well: Five Rivers K03-33D
Wellbore: Wellbore #1
Design: Noble Five Rivers K03-33D Plan#1 (6-29-10)

Local Co-ordinate Reference: Well Five Rivers K03-33D
TVD Reference: WELL @ 4734.0ft (Original Well Elev)
MD Reference: WELL @ 4734.0ft (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 1400'FSL - plan hits target center - Point	0.00	0.00	5,000.0	728.6	-197.9	1,366,578.28	3,202,569.79	40° 20' 14.568 N	104° 46' 23.988 W
Hardline 75'W of BHL - plan misses target center by 125.0ft at 7462.5ft MD (7384.0 TVD, 728.6 N, -197.9 E) - Polygon	0.00	0.00	7,384.0	628.6	-272.9	1,366,477.65	3,202,495.65	40° 20' 13.580 N	104° 46' 24.956 W
Point 1			7,384.0	0.0	0.0	1,366,477.65	3,202,495.65		
Point 2			7,384.0	200.0	0.0	1,366,677.64	3,202,494.01		
Target Circle 1400'FS - plan hits target center - Circle (radius 75.0)	0.00	0.00	7,384.0	728.6	-197.9	1,366,578.25	3,202,569.83	40° 20' 14.568 N	104° 46' 23.988 W

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 (°)
6,977.5	6,899.0	Niobrara		0.00	
7,312.5	7,234.0	Codell		0.00	