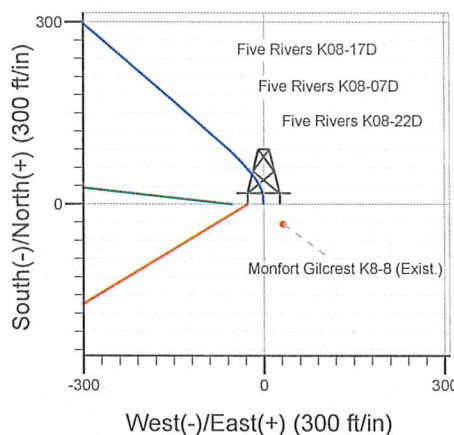
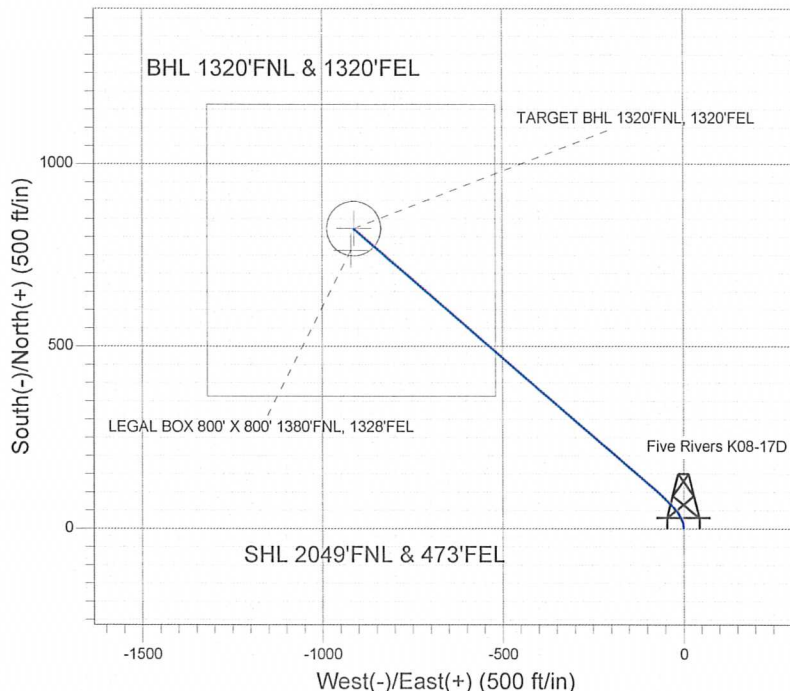
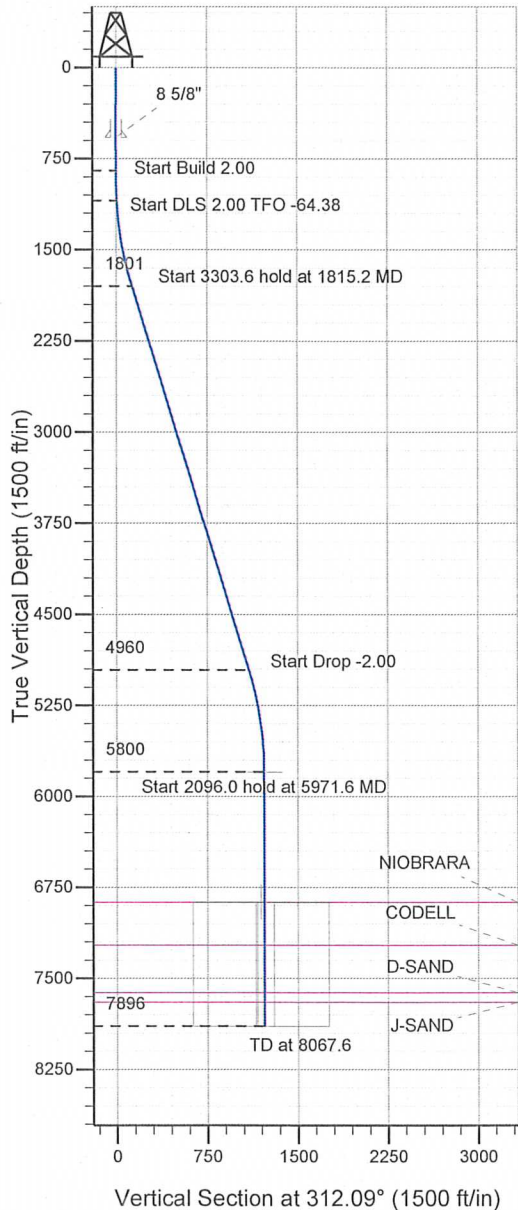


Well Name: **Five Rivers K08-17D**
 Surface Location: Five Rivers K08-07D Pad Sec.8-T4N-R66W
 North American Datum 1983, US State Plane 1983 Colorado Northern Zone
 Ground Elevation: 4698.0
 +N/-S +E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1363142.66 3196675.91 40° 19' 41.088 N 104° 47' 40.452 W
 Original Well EleWELL @ 4711.0ft (Original Well Elev)

NOBLE ENERGY INC WELD COUNTY CO



Five Rivers K08-07D Pad Sec.8-T4N-R66W
 Five Rivers K08-17D
 Noble Five Rivers K08-17D Plan #1 (9-03-10)
 14:02, September 15 2010



Azimuths to True North
 Magnetic North: 8.97°
 Magnetic Field
 Strength: 53170.4snT
 Dip Angle: 67.01°
 Date: 9/15/2010
 Model: IGRF2010

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 1320'FNL, 1320'FEL	5800.0	823.4	-911.7	40° 19' 49.224 N	104° 47' 52.224 W	Point
LEGAL BOX 800' X 800' 1380'FNL, 1328'FEL	5871.0	763.4	-919.7	40° 19' 48.631 N	104° 47' 52.327 W	Rectangle (Sides: L800.0 W800.0)
TARGET CIRCLE 1320'FNL & 1320'FEL	6871.0	823.4	-911.7	40° 19' 49.224 N	104° 47' 52.224 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	850.0	0.00	0.00	850.0	0.0	0.0	0.00	0.00	0.0	
3	1100.0	5.00	0.00	1099.7	10.9	0.0	2.00	0.00	7.3	
4	1815.2	17.06	310.59	1801.4	110.8	-80.1	2.00	-64.38	133.7	
5	5118.7	17.06	310.59	4959.6	741.4	-816.0	0.00	0.00	1102.5	
6	5971.6	0.00	0.00	5800.0	823.4	-911.7	2.00	180.00	1228.5	TARGET BHL 1320'FNL, 1320'FEL
7	8067.6	0.00	0.00	7896.0	823.4	-911.7	0.00	0.00	1228.5	



Directional

**NOBLE ENERGY INC WELD
COUNTY CO**

SEC.8-T4N-R66W

Five Rivers K08-07D Pad Sec.8-T4N-R66W

Five Rivers K08-17D

Wellbore #1

Plan: Noble Five Rivers K08-17D Plan #1 (9-03-10)

Standard Planning Report

15 September, 2010



Database:	Landmark	Local Co-ordinate Reference:	Well Five Rivers K08-17D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4711.0ft (Original Well Elev)
Project:	SEC.8-T4N-R66W	MD Reference:	WELL @ 4711.0ft (Original Well Elev)
Site:	Five Rivers K08-07D Pad Sec.8-T4N-R66W	North Reference:	True
Well:	Five Rivers K08-17D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Five Rivers K08-17D Plan #1 (9-03-10)		

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 K08-07D Pad Sec.8-T4N-R66W				
Site Position:		Northing:	1,363,142.27 ft	Latitude:	40° 19' 41.088 N
From:	Lat/Long	Easting:	3,196,625.73 ft	Longitude:	104° 47' 41.100 W
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.46 °

Well	Five Rivers K08-17D					
Well Position	+N/-S	0.0 ft	Northing:	1,363,142.66 ft	Latitude:	40° 19' 41.088 N
	+E/-W	50.2 ft	Easting:	3,196,675.91 ft	Longitude:	104° 47' 40.452 W
Position Uncertainty	0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,698.0 ft	

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	9/15/2010	8.97	67.01	53,170

Design	Noble Five Rivers K08-17D Plan #1 (9-03-10)			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(ft)	(ft)	(ft)	(°)
	0.0	0.0	0.0	312.09

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	
1,100.0	5.00	0.00	1,099.7	10.9	0.0	2.00	2.00	0.00	0.00	
1,815.2	17.06	310.59	1,801.4	110.8	-80.1	2.00	1.69	-6.91	-64.38	
5,118.7	17.06	310.59	4,959.6	741.4	-816.0	0.00	0.00	0.00	0.00	
5,971.6	0.00	0.00	5,800.0	823.4	-911.7	2.00	-2.00	0.00	180.00	TARGET BHL 132C
8,067.6	0.00	0.00	7,896.0	823.4	-911.7	0.00	0.00	0.00	0.00	

Database: Landmark
Company: NOBLE ENERGY INC WELD COUNTY CO
Project: SEC.8-T4N-R66W
Site: Five Rivers K08-07D Pad Sec.8-T4N-R66W
Well: Five Rivers K08-17D
Wellbore: Wellbore #1
Design: Noble Five Rivers K08-17D Plan #1 (9-03-10)

Local Co-ordinate Reference: Well Five Rivers K08-17D
TVD Reference: WELL @ 4711.0ft (Original Well Elev)
MD Reference: WELL @ 4711.0ft (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
575.0	0.00	0.00	575.0	0.0	0.0	0.0	0.00	0.00	0.00
8 5/8"									
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	0.00	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	0.00	880.0	0.2	0.0	0.1	2.00	2.00	0.00
920.0	1.40	0.00	920.0	0.9	0.0	0.6	2.00	2.00	0.00
960.0	2.20	0.00	960.0	2.1	0.0	1.4	2.00	2.00	0.00
1,000.0	3.00	0.00	999.9	3.9	0.0	2.6	2.00	2.00	0.00
1,040.0	3.80	0.00	1,039.9	6.3	0.0	4.2	2.00	2.00	0.00
1,080.0	4.60	0.00	1,079.8	9.2	0.0	6.2	2.00	2.00	0.00
1,100.0	5.00	0.00	1,099.7	10.9	0.0	7.3	2.00	2.00	0.00
1,120.0	5.19	356.01	1,119.6	12.7	-0.1	8.5	2.00	0.93	-19.97
1,160.0	5.62	348.89	1,159.4	16.4	-0.6	11.4	2.00	1.10	-17.79
1,200.0	6.14	342.88	1,199.2	20.4	-1.6	14.8	2.00	1.28	-15.04
1,240.0	6.70	337.83	1,239.0	24.6	-3.1	18.8	2.00	1.42	-12.62
1,280.0	7.31	333.59	1,278.7	29.0	-5.1	23.2	2.00	1.53	-10.59
1,320.0	7.96	330.03	1,318.3	33.7	-7.6	28.2	2.00	1.61	-8.92
1,360.0	8.63	327.00	1,357.9	38.6	-10.6	33.8	2.00	1.68	-7.57
1,400.0	9.32	324.41	1,397.4	43.8	-14.2	39.8	2.00	1.73	-6.47
1,440.0	10.03	322.18	1,436.8	49.1	-18.2	46.4	2.00	1.77	-5.58
1,480.0	10.75	320.24	1,476.2	54.8	-22.7	53.5	2.00	1.80	-4.84
1,520.0	11.48	318.55	1,515.4	60.6	-27.7	61.2	2.00	1.83	-4.24
1,560.0	12.22	317.06	1,554.6	66.7	-33.2	69.4	2.00	1.85	-3.73
1,600.0	12.96	315.73	1,593.6	73.0	-39.2	78.1	2.00	1.87	-3.31
1,640.0	13.71	314.55	1,632.5	79.5	-45.8	87.3	2.00	1.88	-2.96
1,680.0	14.47	313.49	1,671.3	86.3	-52.8	97.0	2.00	1.89	-2.65
1,720.0	15.23	312.53	1,710.0	93.3	-60.3	107.3	2.00	1.90	-2.39
1,760.0	16.00	311.66	1,748.5	100.5	-68.3	118.0	2.00	1.91	-2.17
1,800.0	16.77	310.87	1,786.9	108.0	-76.7	129.3	2.00	1.92	-1.98
1,815.2	17.06	310.59	1,801.4	110.8	-80.1	133.7	2.00	1.93	-1.86
1,840.0	17.06	310.59	1,825.1	115.6	-85.6	141.0	0.00	0.00	0.00
1,880.0	17.06	310.59	1,863.4	123.2	-94.5	152.7	0.00	0.00	0.00
1,920.0	17.06	310.59	1,901.6	130.8	-103.4	164.5	0.00	0.00	0.00

Database: Landmark
Company: NOBLE ENERGY INC WELD COUNTY CO
Project: SEC.8-T4N-R66W
Site: Five Rivers K08-07D Pad Sec.8-T4N-R66W
Well: Five Rivers K08-17D
Wellbore: Wellbore #1
Design: Noble Five Rivers K08-17D Plan #1 (9-03-10)

Local Co-ordinate Reference: Well Five Rivers K08-17D
TVD Reference: WELL @ 4711.0ft (Original Well Elev)
MD Reference: WELL @ 4711.0ft (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)
1,960.0	17.06	310.59	1,939.9	138.5	-112.3	176.2	0.00	0.00	0.00
2,000.0	17.06	310.59	1,978.1	146.1	-121.2	187.9	0.00	0.00	0.00
2,040.0	17.06	310.59	2,016.3	153.7	-130.2	199.6	0.00	0.00	0.00
2,080.0	17.06	310.59	2,054.6	161.4	-139.1	211.4	0.00	0.00	0.00
2,120.0	17.06	310.59	2,092.8	169.0	-148.0	223.1	0.00	0.00	0.00
2,160.0	17.06	310.59	2,131.1	176.7	-156.9	234.8	0.00	0.00	0.00
2,200.0	17.06	310.59	2,169.3	184.3	-165.8	246.6	0.00	0.00	0.00
2,240.0	17.06	310.59	2,207.5	191.9	-174.7	258.3	0.00	0.00	0.00
2,280.0	17.06	310.59	2,245.8	199.6	-183.6	270.0	0.00	0.00	0.00
2,320.0	17.06	310.59	2,284.0	207.2	-192.5	281.8	0.00	0.00	0.00
2,360.0	17.06	310.59	2,322.3	214.8	-201.4	293.5	0.00	0.00	0.00
2,400.0	17.06	310.59	2,360.5	222.5	-210.4	305.2	0.00	0.00	0.00
2,440.0	17.06	310.59	2,398.7	230.1	-219.3	316.9	0.00	0.00	0.00
2,480.0	17.06	310.59	2,437.0	237.7	-228.2	328.7	0.00	0.00	0.00
2,520.0	17.06	310.59	2,475.2	245.4	-237.1	340.4	0.00	0.00	0.00
2,560.0	17.06	310.59	2,513.5	253.0	-246.0	352.1	0.00	0.00	0.00
2,600.0	17.06	310.59	2,551.7	260.6	-254.9	363.9	0.00	0.00	0.00
2,640.0	17.06	310.59	2,590.0	268.3	-263.8	375.6	0.00	0.00	0.00
2,680.0	17.06	310.59	2,628.2	275.9	-272.7	387.3	0.00	0.00	0.00
2,720.0	17.06	310.59	2,666.4	283.5	-281.6	399.1	0.00	0.00	0.00
2,760.0	17.06	310.59	2,704.7	291.2	-290.6	410.8	0.00	0.00	0.00
2,800.0	17.06	310.59	2,742.9	298.8	-299.5	422.5	0.00	0.00	0.00
2,840.0	17.06	310.59	2,781.2	306.4	-308.4	434.2	0.00	0.00	0.00
2,880.0	17.06	310.59	2,819.4	314.1	-317.3	446.0	0.00	0.00	0.00
2,920.0	17.06	310.59	2,857.6	321.7	-326.2	457.7	0.00	0.00	0.00
2,960.0	17.06	310.59	2,895.9	329.3	-335.1	469.4	0.00	0.00	0.00
3,000.0	17.06	310.59	2,934.1	337.0	-344.0	481.2	0.00	0.00	0.00
3,040.0	17.06	310.59	2,972.4	344.6	-352.9	492.9	0.00	0.00	0.00
3,080.0	17.06	310.59	3,010.6	352.2	-361.8	504.6	0.00	0.00	0.00
3,120.0	17.06	310.59	3,048.8	359.9	-370.7	516.4	0.00	0.00	0.00
3,160.0	17.06	310.59	3,087.1	367.5	-379.7	528.1	0.00	0.00	0.00
3,200.0	17.06	310.59	3,125.3	375.1	-388.6	539.8	0.00	0.00	0.00
3,240.0	17.06	310.59	3,163.6	382.8	-397.5	551.5	0.00	0.00	0.00
3,280.0	17.06	310.59	3,201.8	390.4	-406.4	563.3	0.00	0.00	0.00
3,320.0	17.06	310.59	3,240.0	398.1	-415.3	575.0	0.00	0.00	0.00
3,360.0	17.06	310.59	3,278.3	405.7	-424.2	586.7	0.00	0.00	0.00
3,400.0	17.06	310.59	3,316.5	413.3	-433.1	598.5	0.00	0.00	0.00
3,440.0	17.06	310.59	3,354.8	421.0	-442.0	610.2	0.00	0.00	0.00
3,480.0	17.06	310.59	3,393.0	428.6	-450.9	621.9	0.00	0.00	0.00
3,520.0	17.06	310.59	3,431.2	436.2	-459.9	633.7	0.00	0.00	0.00
3,560.0	17.06	310.59	3,469.5	443.9	-468.8	645.4	0.00	0.00	0.00
3,600.0	17.06	310.59	3,507.7	451.5	-477.7	657.1	0.00	0.00	0.00
3,640.0	17.06	310.59	3,546.0	459.1	-486.6	668.8	0.00	0.00	0.00
3,680.0	17.06	310.59	3,584.2	466.8	-495.5	680.6	0.00	0.00	0.00
3,720.0	17.06	310.59	3,622.4	474.4	-504.4	692.3	0.00	0.00	0.00
3,760.0	17.06	310.59	3,660.7	482.0	-513.3	704.0	0.00	0.00	0.00
3,800.0	17.06	310.59	3,698.9	489.7	-522.2	715.8	0.00	0.00	0.00
3,840.0	17.06	310.59	3,737.2	497.3	-531.1	727.5	0.00	0.00	0.00
3,880.0	17.06	310.59	3,775.4	504.9	-540.1	739.2	0.00	0.00	0.00
3,920.0	17.06	310.59	3,813.6	512.6	-549.0	751.0	0.00	0.00	0.00
3,960.0	17.06	310.59	3,851.9	520.2	-557.9	762.7	0.00	0.00	0.00
4,000.0	17.06	310.59	3,890.1	527.8	-566.8	774.4	0.00	0.00	0.00
4,040.0	17.06	310.59	3,928.4	535.5	-575.7	786.1	0.00	0.00	0.00
4,080.0	17.06	310.59	3,966.6	543.1	-584.6	797.9	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Five Rivers K08-17D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4711.0ft (Original Well Elev)
Project:	SEC.8-T4N-R66W	MD Reference:	WELL @ 4711.0ft (Original Well Elev)
Site:	Five Rivers K08-07D Pad Sec.8-T4N-R66W	North Reference:	True
Well:	Five Rivers K08-17D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Five Rivers K08-17D Plan #1 (9-03-10)		

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)
4,120.0	17.06	310.59	4,004.8	550.7	-593.5	809.6	0.00	0.00	0.00
4,160.0	17.06	310.59	4,043.1	558.4	-602.4	821.3	0.00	0.00	0.00
4,200.0	17.06	310.59	4,081.3	566.0	-611.3	833.1	0.00	0.00	0.00
4,240.0	17.06	310.59	4,119.6	573.6	-620.2	844.8	0.00	0.00	0.00
4,280.0	17.06	310.59	4,157.8	581.3	-629.2	856.5	0.00	0.00	0.00
4,320.0	17.06	310.59	4,196.0	588.9	-638.1	868.3	0.00	0.00	0.00
4,360.0	17.06	310.59	4,234.3	596.5	-647.0	880.0	0.00	0.00	0.00
4,400.0	17.06	310.59	4,272.5	604.2	-655.9	891.7	0.00	0.00	0.00
4,440.0	17.06	310.59	4,310.8	611.8	-664.8	903.4	0.00	0.00	0.00
4,480.0	17.06	310.59	4,349.0	619.5	-673.7	915.2	0.00	0.00	0.00
4,520.0	17.06	310.59	4,387.2	627.1	-682.6	926.9	0.00	0.00	0.00
4,560.0	17.06	310.59	4,425.5	634.7	-691.5	938.6	0.00	0.00	0.00
4,600.0	17.06	310.59	4,463.7	642.4	-700.4	950.4	0.00	0.00	0.00
4,640.0	17.06	310.59	4,502.0	650.0	-709.4	962.1	0.00	0.00	0.00
4,680.0	17.06	310.59	4,540.2	657.6	-718.3	973.8	0.00	0.00	0.00
4,720.0	17.06	310.59	4,578.4	665.3	-727.2	985.6	0.00	0.00	0.00
4,760.0	17.06	310.59	4,616.7	672.9	-736.1	997.3	0.00	0.00	0.00
4,800.0	17.06	310.59	4,654.9	680.5	-745.0	1,009.0	0.00	0.00	0.00
4,840.0	17.06	310.59	4,693.2	688.2	-753.9	1,020.7	0.00	0.00	0.00
4,880.0	17.06	310.59	4,731.4	695.8	-762.8	1,032.5	0.00	0.00	0.00
4,920.0	17.06	310.59	4,769.6	703.4	-771.7	1,044.2	0.00	0.00	0.00
4,960.0	17.06	310.59	4,807.9	711.1	-780.6	1,055.9	0.00	0.00	0.00
5,000.0	17.06	310.59	4,846.1	718.7	-789.5	1,067.7	0.00	0.00	0.00
5,040.0	17.06	310.59	4,884.4	726.3	-798.5	1,079.4	0.00	0.00	0.00
5,080.0	17.06	310.59	4,922.6	734.0	-807.4	1,091.1	0.00	0.00	0.00
5,118.7	17.06	310.59	4,959.6	741.4	-816.0	1,102.5	0.00	0.00	0.00
5,120.0	17.03	310.59	4,960.8	741.6	-816.3	1,102.8	2.00	-2.00	0.00
5,160.0	16.23	310.59	4,999.2	749.1	-825.0	1,114.3	2.00	-2.00	0.00
5,200.0	15.43	310.59	5,037.7	756.2	-833.3	1,125.2	2.00	-2.00	0.00
5,240.0	14.63	310.59	5,076.3	762.9	-841.1	1,135.6	2.00	-2.00	0.00
5,280.0	13.83	310.59	5,115.1	769.3	-848.6	1,145.4	2.00	-2.00	0.00
5,320.0	13.03	310.59	5,154.0	775.3	-855.7	1,154.7	2.00	-2.00	0.00
5,360.0	12.23	310.59	5,193.0	781.0	-862.3	1,163.4	2.00	-2.00	0.00
5,400.0	11.43	310.59	5,232.1	786.4	-868.5	1,171.6	2.00	-2.00	0.00
5,440.0	10.63	310.59	5,271.4	791.4	-874.4	1,179.3	2.00	-2.00	0.00
5,480.0	9.83	310.59	5,310.8	796.0	-879.7	1,186.4	2.00	-2.00	0.00
5,520.0	9.03	310.59	5,350.2	800.2	-884.7	1,192.9	2.00	-2.00	0.00
5,560.0	8.23	310.59	5,389.8	804.2	-889.3	1,199.0	2.00	-2.00	0.00
5,600.0	7.43	310.59	5,429.4	807.7	-893.4	1,204.4	2.00	-2.00	0.00
5,640.0	6.63	310.59	5,469.1	810.9	-897.1	1,209.3	2.00	-2.00	0.00
5,680.0	5.83	310.59	5,508.9	813.7	-900.4	1,213.6	2.00	-2.00	0.00
5,720.0	5.03	310.59	5,548.7	816.2	-903.3	1,217.4	2.00	-2.00	0.00
5,760.0	4.23	310.59	5,588.5	818.3	-905.8	1,220.7	2.00	-2.00	0.00
5,800.0	3.43	310.59	5,628.5	820.0	-907.8	1,223.3	2.00	-2.00	0.00
5,840.0	2.63	310.59	5,668.4	821.4	-909.4	1,225.4	2.00	-2.00	0.00
5,880.0	1.83	310.59	5,708.4	822.4	-910.6	1,227.0	2.00	-2.00	0.00
5,920.0	1.03	310.59	5,748.4	823.1	-911.4	1,228.0	2.00	-2.00	0.00
5,960.0	0.23	310.59	5,788.4	823.3	-911.7	1,228.4	2.00	-2.00	0.00
5,971.6	0.00	0.00	5,800.0	823.4	-911.7	1,228.5	2.00	-2.00	0.00
TARGET BHL 1320'FNL, 1320'FEL									
6,000.0	0.00	0.00	5,828.4	823.4	-911.7	1,228.5	0.00	0.00	0.00
6,040.0	0.00	0.00	5,868.4	823.4	-911.7	1,228.5	0.00	0.00	0.00
6,080.0	0.00	0.00	5,908.4	823.4	-911.7	1,228.5	0.00	0.00	0.00
6,120.0	0.00	0.00	5,948.4	823.4	-911.7	1,228.5	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Five Rivers K08-17D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4711.0ft (Original Well Elev)
Project:	SEC.8-T4N-R66W	MD Reference:	WELL @ 4711.0ft (Original Well Elev)
Site:	Five Rivers K08-07D Pad Sec.8-T4N-R66W	North Reference:	True
Well:	Five Rivers K08-17D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Five Rivers K08-17D Plan #1 (9-03-10)		

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)
6,160.0	0.00	0.00	5,988.4	823.4	-911.7	1,228.5	0.00	0.00	0.00
6,200.0	0.00	0.00	6,028.4	823.4	-911.7	1,228.5	0.00	0.00	0.00
6,240.0	0.00	0.00	6,068.4	823.4	-911.7	1,228.5	0.00	0.00	0.00
6,280.0	0.00	0.00	6,108.4	823.4	-911.7	1,228.5	0.00	0.00	0.00
6,320.0	0.00	0.00	6,148.4	823.4	-911.7	1,228.5	0.00	0.00	0.00
6,360.0	0.00	0.00	6,188.4	823.4	-911.7	1,228.5	0.00	0.00	0.00
6,400.0	0.00	0.00	6,228.4	823.4	-911.7	1,228.5	0.00	0.00	0.00
6,440.0	0.00	0.00	6,268.4	823.4	-911.7	1,228.5	0.00	0.00	0.00
6,480.0	0.00	0.00	6,308.4	823.4	-911.7	1,228.5	0.00	0.00	0.00
6,520.0	0.00	0.00	6,348.4	823.4	-911.7	1,228.5	0.00	0.00	0.00
6,560.0	0.00	0.00	6,388.4	823.4	-911.7	1,228.5	0.00	0.00	0.00
6,600.0	0.00	0.00	6,428.4	823.4	-911.7	1,228.5	0.00	0.00	0.00
6,640.0	0.00	0.00	6,468.4	823.4	-911.7	1,228.5	0.00	0.00	0.00
6,680.0	0.00	0.00	6,508.4	823.4	-911.7	1,228.5	0.00	0.00	0.00
6,720.0	0.00	0.00	6,548.4	823.4	-911.7	1,228.5	0.00	0.00	0.00
6,760.0	0.00	0.00	6,588.4	823.4	-911.7	1,228.5	0.00	0.00	0.00
6,800.0	0.00	0.00	6,628.4	823.4	-911.7	1,228.5	0.00	0.00	0.00
6,840.0	0.00	0.00	6,668.4	823.4	-911.7	1,228.5	0.00	0.00	0.00
6,880.0	0.00	0.00	6,708.4	823.4	-911.7	1,228.5	0.00	0.00	0.00
6,920.0	0.00	0.00	6,748.4	823.4	-911.7	1,228.5	0.00	0.00	0.00
6,960.0	0.00	0.00	6,788.4	823.4	-911.7	1,228.5	0.00	0.00	0.00
7,000.0	0.00	0.00	6,828.4	823.4	-911.7	1,228.5	0.00	0.00	0.00
7,040.0	0.00	0.00	6,868.4	823.4	-911.7	1,228.5	0.00	0.00	0.00
7,042.6	0.00	0.00	6,871.0	823.4	-911.7	1,228.5	0.00	0.00	0.00
NIORRARA - LEGAL BOX 800' X 800' 1380'FNL, 1328'FEL - TARGET CIRCLE 1320'FNL & 1320'FEL									
7,080.0	0.00	0.00	6,908.4	823.4	-911.7	1,228.5	0.00	0.00	0.00
7,120.0	0.00	0.00	6,948.4	823.4	-911.7	1,228.5	0.00	0.00	0.00
7,160.0	0.00	0.00	6,988.4	823.4	-911.7	1,228.5	0.00	0.00	0.00
7,200.0	0.00	0.00	7,028.4	823.4	-911.7	1,228.5	0.00	0.00	0.00
7,240.0	0.00	0.00	7,068.4	823.4	-911.7	1,228.5	0.00	0.00	0.00
7,280.0	0.00	0.00	7,108.4	823.4	-911.7	1,228.5	0.00	0.00	0.00
7,320.0	0.00	0.00	7,148.4	823.4	-911.7	1,228.5	0.00	0.00	0.00
7,360.0	0.00	0.00	7,188.4	823.4	-911.7	1,228.5	0.00	0.00	0.00
7,397.6	0.00	0.00	7,226.0	823.4	-911.7	1,228.5	0.00	0.00	0.00
CODELL									
7,400.0	0.00	0.00	7,228.4	823.4	-911.7	1,228.5	0.00	0.00	0.00
7,440.0	0.00	0.00	7,268.4	823.4	-911.7	1,228.5	0.00	0.00	0.00
7,480.0	0.00	0.00	7,308.4	823.4	-911.7	1,228.5	0.00	0.00	0.00
7,520.0	0.00	0.00	7,348.4	823.4	-911.7	1,228.5	0.00	0.00	0.00
7,560.0	0.00	0.00	7,388.4	823.4	-911.7	1,228.5	0.00	0.00	0.00
7,600.0	0.00	0.00	7,428.4	823.4	-911.7	1,228.5	0.00	0.00	0.00
7,640.0	0.00	0.00	7,468.4	823.4	-911.7	1,228.5	0.00	0.00	0.00
7,680.0	0.00	0.00	7,508.4	823.4	-911.7	1,228.5	0.00	0.00	0.00
7,720.0	0.00	0.00	7,548.4	823.4	-911.7	1,228.5	0.00	0.00	0.00
7,760.0	0.00	0.00	7,588.4	823.4	-911.7	1,228.5	0.00	0.00	0.00
7,787.6	0.00	0.00	7,616.0	823.4	-911.7	1,228.5	0.00	0.00	0.00
D-SAND									
7,800.0	0.00	0.00	7,628.4	823.4	-911.7	1,228.5	0.00	0.00	0.00
7,840.0	0.00	0.00	7,668.4	823.4	-911.7	1,228.5	0.00	0.00	0.00
7,867.6	0.00	0.00	7,696.0	823.4	-911.7	1,228.5	0.00	0.00	0.00
J-SAND									
7,880.0	0.00	0.00	7,708.4	823.4	-911.7	1,228.5	0.00	0.00	0.00
7,920.0	0.00	0.00	7,748.4	823.4	-911.7	1,228.5	0.00	0.00	0.00

Database: Landmark
 Company: NOBLE ENERGY INC WELD COUNTY CO
 Project: SEC.8-T4N-R66W
 Site: Five Rivers K08-07D Pad Sec.8-T4N-R66W
 Well: Five Rivers K08-17D
 Wellbore: Wellbore #1
 Design: Noble Five Rivers K08-17D Plan #1 (9-03-10)

Local Co-ordinate Reference: Well Five Rivers K08-17D
 TVD Reference: WELL @ 4711.0ft (Original Well Elev)
 MD Reference: WELL @ 4711.0ft (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)
7,960.0	0.00	0.00	7,788.4	823.4	-911.7	1,228.5	0.00	0.00	0.00
8,000.0	0.00	0.00	7,828.4	823.4	-911.7	1,228.5	0.00	0.00	0.00
8,040.0	0.00	0.00	7,868.4	823.4	-911.7	1,228.5	0.00	0.00	0.00
8,067.6	0.00	0.00	7,896.0	823.4	-911.7	1,228.5	0.00	0.00	0.00

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
LEGAL BOX 800' X 800' - plan misses by 60.5ft at 7042.6ft MD (6871.0 TVD, 823.4 N, -911.7 E) - Rectangle (sides W800.0 H800.0 D1,025.0)	0.00	0.00	6,871.0	763.4	-919.7	1,363,898.68	3,195,750.21	40° 19' 48.631 N	104° 47' 52.327 W
TARGET BHL 1320'F - plan hits target - Point	0.00	0.00	5,800.0	823.4	-911.7	1,363,958.70	3,195,757.73	40° 19' 49.224 N	104° 47' 52.224 W
TARGET CIRCLE 1320'F - plan hits target - Circle (radius 75.0)	0.00	0.00	6,871.0	823.4	-911.7	1,363,958.70	3,195,757.73	40° 19' 49.224 N	104° 47' 52.224 W

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
575.0	575.0	8 5/8"	8-5/8	12-1/4

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
7,042.6	6,871.0	NIOBRARA		0.00	
7,397.6	7,226.0	CODELL		0.00	
7,787.6	7,616.0	D-SAND		0.00	
7,867.6	7,696.0	J-SAND		0.00	