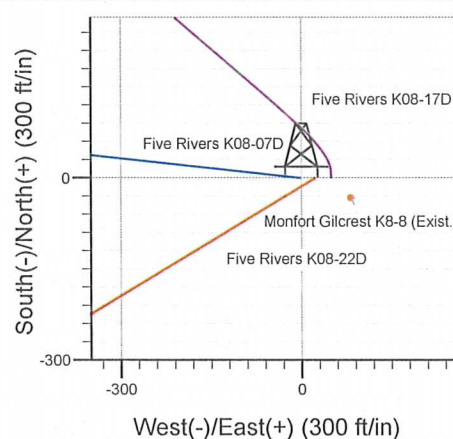
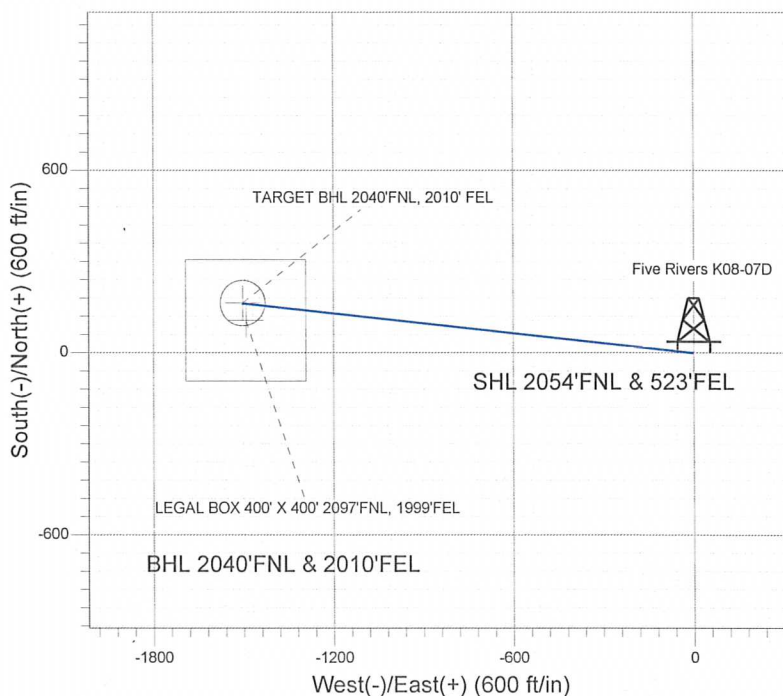
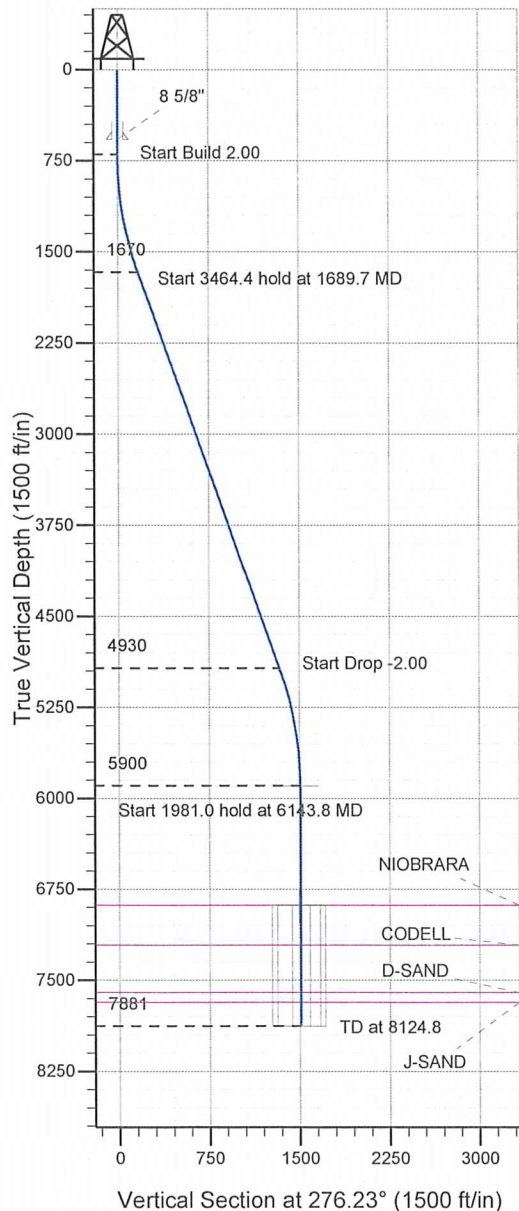


Well Name: **Five Rivers K08-07D**

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	1363142.25	3196625.73	40° 19' 41.088 N	104° 47' 41.100 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 K08-07D
Noble Five Rivers K08-07D Plan #1 (9-03-10)
13:11, September 15 2010



Azimuths to True North
Magnetic North: 8.98°
Magnetic Field
Strength: 53173.9nT
Dip Angle: 67.01°
Date: 9/3/2010
Model: IGRF2010

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 2040'FNL, 2010' FEL	5900.0	164.0	-1502.8	40° 19' 42.708 N	104° 48' 0.504 W	Point
LEGAL BOX 400' X 400' 2097'FNL, 1999'FEL	6881.0	107.0	-1491.8	40° 19' 42.145 N	104° 48' 0.362 W	Rectangle (Sides: L400.0 W400.0)
TARGET CIRCLE 2040'FNL, 2010'FEL	6881.0	164.0	-1502.8	40° 19' 42.708 N	104° 48' 0.504 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	700.0	0.00	0.00	700.0	0.0	0.0	0.00	0.00	0.0	
3	1689.7	19.79	276.23	1670.2	18.4	-168.3	2.00	276.23	169.3	
4	5154.1	19.79	276.23	4929.8	145.6	-1334.5	0.00	0.00	1342.5	
5	6143.8	0.00	0.00	5900.0	164.0	-1502.8	2.00	180.00	1511.7	TARGET BHL 2040'FNL, 2010' FEL
6	8124.8	0.00	0.00	7881.0	164.0	-1502.8	0.00	0.00	1511.7	



Directional

**NOBLE ENERGY INC WELD
COUNTY CO**

SEC.8-T4N-R66W

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

Five Rivers K08-07D

Wellbore #1

Plan: Noble Five Rivers K08-07D Plan #1 (9-03-10)

Standard Planning Report

15 September, 2010



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 K08-07D
 Wellbore: Wellbore #1
 Design: Noble Five Rivers K08-07D Plan #1 (9-03-10)

Local Co-ordinate Reference: Well Five Rivers K08-07D
 TVD Reference: WELL @ 4711.0ft (Original Well Elev)
 MD Reference: WELL @ 4711.0ft (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 K08-07D 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 K08-07D					
Well Position	+N/-S	0.0 ft	Northing:	1,363,142.25 ft	Latitude:	40° 19' 41.088 N
	+E/-W	0.0 ft	Easting:	3,196,625.73 ft	Longitude:	104° 47' 41.100 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	9/3/2010	8.98	67.01	53,174

Design	Noble Five Rivers K08-07D 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	276.23	

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	
1,689.7	19.79	276.23	1,670.2	18.4	-168.3	2.00	2.00	0.00	276.23	
5,154.1	19.79	276.23	4,929.8	145.6	-1,334.5	0.00	0.00	0.00	0.00	
6,143.8	0.00	0.00	5,900.0	164.0	-1,502.8	2.00	-2.00	0.00	180.00	TARGET BHL 204C
8,124.8	0.00	0.00	7,881.0	164.0	-1,502.8	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 K08-07D
Wellbore: Wellbore #1
Design: Noble Five Rivers K08-07D Plan #1 (9-03-10)

Local Co-ordinate Reference: Well Five Rivers K08-07D
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
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
720.0	0.40	276.23	720.0	0.0	-0.1	0.1	2.00	2.00	0.00
760.0	1.20	276.23	760.0	0.1	-0.6	0.6	2.00	2.00	0.00
800.0	2.00	276.23	800.0	0.2	-1.7	1.7	2.00	2.00	0.00
840.0	2.80	276.23	839.9	0.4	-3.4	3.4	2.00	2.00	0.00
880.0	3.60	276.23	879.9	0.6	-5.6	5.7	2.00	2.00	0.00
920.0	4.40	276.23	919.8	0.9	-8.4	8.4	2.00	2.00	0.00
960.0	5.20	276.23	959.6	1.3	-11.7	11.8	2.00	2.00	0.00
1,000.0	6.00	276.23	999.5	1.7	-15.6	15.7	2.00	2.00	0.00
1,040.0	6.80	276.23	1,039.2	2.2	-20.0	20.2	2.00	2.00	0.00
1,080.0	7.60	276.23	1,078.9	2.7	-25.0	25.2	2.00	2.00	0.00
1,120.0	8.40	276.23	1,118.5	3.3	-30.6	30.7	2.00	2.00	0.00
1,160.0	9.20	276.23	1,158.0	4.0	-36.6	36.9	2.00	2.00	0.00
1,200.0	10.00	276.23	1,197.5	4.7	-43.3	43.5	2.00	2.00	0.00
1,240.0	10.80	276.23	1,236.8	5.5	-50.4	50.7	2.00	2.00	0.00
1,280.0	11.60	276.23	1,276.0	6.3	-58.2	58.5	2.00	2.00	0.00
1,320.0	12.40	276.23	1,315.2	7.2	-66.4	66.8	2.00	2.00	0.00
1,360.0	13.20	276.23	1,354.2	8.2	-75.2	75.7	2.00	2.00	0.00
1,400.0	14.00	276.23	1,393.1	9.2	-84.6	85.1	2.00	2.00	0.00
1,440.0	14.80	276.23	1,431.8	10.3	-94.5	95.0	2.00	2.00	0.00
1,480.0	15.60	276.23	1,470.4	11.4	-104.9	105.5	2.00	2.00	0.00
1,520.0	16.40	276.23	1,508.8	12.6	-115.9	116.6	2.00	2.00	0.00
1,560.0	17.20	276.23	1,547.1	13.9	-127.4	128.1	2.00	2.00	0.00
1,600.0	18.00	276.23	1,585.3	15.2	-139.4	140.2	2.00	2.00	0.00
1,640.0	18.80	276.23	1,623.2	16.6	-151.9	152.8	2.00	2.00	0.00
1,680.0	19.60	276.23	1,661.0	18.0	-165.0	166.0	2.00	2.00	0.00
1,689.7	19.79	276.23	1,670.2	18.4	-168.3	169.3	2.00	2.00	0.00
1,720.0	19.79	276.23	1,698.6	19.5	-178.5	179.5	0.00	0.00	0.00
1,760.0	19.79	276.23	1,736.3	20.9	-191.9	193.1	0.00	0.00	0.00
1,800.0	19.79	276.23	1,773.9	22.4	-205.4	206.6	0.00	0.00	0.00
1,840.0	19.79	276.23	1,811.5	23.9	-218.9	220.2	0.00	0.00	0.00
1,880.0	19.79	276.23	1,849.2	25.4	-232.3	233.7	0.00	0.00	0.00
1,920.0	19.79	276.23	1,886.8	26.8	-245.8	247.3	0.00	0.00	0.00
1,960.0	19.79	276.23	1,924.5	28.3	-259.3	260.8	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 K08-07D
Wellbore: Wellbore #1
Design: Noble Five Rivers K08-07D Plan #1 (9-03-10)

Local Co-ordinate Reference: Well Five Rivers K08-07D
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)
2,000.0	19.79	276.23	1,962.1	29.8	-272.7	274.3	0.00	0.00	0.00
2,040.0	19.79	276.23	1,999.7	31.2	-286.2	287.9	0.00	0.00	0.00
2,080.0	19.79	276.23	2,037.4	32.7	-299.7	301.4	0.00	0.00	0.00
2,120.0	19.79	276.23	2,075.0	34.2	-313.1	315.0	0.00	0.00	0.00
2,160.0	19.79	276.23	2,112.6	35.6	-326.6	328.5	0.00	0.00	0.00
2,200.0	19.79	276.23	2,150.3	37.1	-340.1	342.1	0.00	0.00	0.00
2,240.0	19.79	276.23	2,187.9	38.6	-353.5	355.6	0.00	0.00	0.00
2,280.0	19.79	276.23	2,225.6	40.0	-367.0	369.2	0.00	0.00	0.00
2,320.0	19.79	276.23	2,263.2	41.5	-380.5	382.7	0.00	0.00	0.00
2,360.0	19.79	276.23	2,300.8	43.0	-393.9	396.3	0.00	0.00	0.00
2,400.0	19.79	276.23	2,338.5	44.5	-407.4	409.8	0.00	0.00	0.00
2,440.0	19.79	276.23	2,376.1	45.9	-420.8	423.3	0.00	0.00	0.00
2,480.0	19.79	276.23	2,413.7	47.4	-434.3	436.9	0.00	0.00	0.00
2,520.0	19.79	276.23	2,451.4	48.9	-447.8	450.4	0.00	0.00	0.00
2,560.0	19.79	276.23	2,489.0	50.3	-461.2	464.0	0.00	0.00	0.00
2,600.0	19.79	276.23	2,526.6	51.8	-474.7	477.5	0.00	0.00	0.00
2,640.0	19.79	276.23	2,564.3	53.3	-488.2	491.1	0.00	0.00	0.00
2,680.0	19.79	276.23	2,601.9	54.7	-501.6	504.6	0.00	0.00	0.00
2,720.0	19.79	276.23	2,639.6	56.2	-515.1	518.2	0.00	0.00	0.00
2,760.0	19.79	276.23	2,677.2	57.7	-528.6	531.7	0.00	0.00	0.00
2,800.0	19.79	276.23	2,714.8	59.2	-542.0	545.3	0.00	0.00	0.00
2,840.0	19.79	276.23	2,752.5	60.6	-555.5	558.8	0.00	0.00	0.00
2,880.0	19.79	276.23	2,790.1	62.1	-569.0	572.4	0.00	0.00	0.00
2,920.0	19.79	276.23	2,827.7	63.6	-582.4	585.9	0.00	0.00	0.00
2,960.0	19.79	276.23	2,865.4	65.0	-595.9	599.4	0.00	0.00	0.00
3,000.0	19.79	276.23	2,903.0	66.5	-609.4	613.0	0.00	0.00	0.00
3,040.0	19.79	276.23	2,940.6	68.0	-622.8	626.5	0.00	0.00	0.00
3,080.0	19.79	276.23	2,978.3	69.4	-636.3	640.1	0.00	0.00	0.00
3,120.0	19.79	276.23	3,015.9	70.9	-649.8	653.6	0.00	0.00	0.00
3,160.0	19.79	276.23	3,053.6	72.4	-663.2	667.2	0.00	0.00	0.00
3,200.0	19.79	276.23	3,091.2	73.8	-676.7	680.7	0.00	0.00	0.00
3,240.0	19.79	276.23	3,128.8	75.3	-690.2	694.3	0.00	0.00	0.00
3,280.0	19.79	276.23	3,166.5	76.8	-703.6	707.8	0.00	0.00	0.00
3,320.0	19.79	276.23	3,204.1	78.3	-717.1	721.4	0.00	0.00	0.00
3,360.0	19.79	276.23	3,241.7	79.7	-730.6	734.9	0.00	0.00	0.00
3,400.0	19.79	276.23	3,279.4	81.2	-744.0	748.4	0.00	0.00	0.00
3,440.0	19.79	276.23	3,317.0	82.7	-757.5	762.0	0.00	0.00	0.00
3,480.0	19.79	276.23	3,354.6	84.1	-771.0	775.5	0.00	0.00	0.00
3,520.0	19.79	276.23	3,392.3	85.6	-784.4	789.1	0.00	0.00	0.00
3,560.0	19.79	276.23	3,429.9	87.1	-797.9	802.6	0.00	0.00	0.00
3,600.0	19.79	276.23	3,467.6	88.5	-811.4	816.2	0.00	0.00	0.00
3,640.0	19.79	276.23	3,505.2	90.0	-824.8	829.7	0.00	0.00	0.00
3,680.0	19.79	276.23	3,542.8	91.5	-838.3	843.3	0.00	0.00	0.00
3,720.0	19.79	276.23	3,580.5	92.9	-851.8	856.8	0.00	0.00	0.00
3,760.0	19.79	276.23	3,618.1	94.4	-865.2	870.4	0.00	0.00	0.00
3,800.0	19.79	276.23	3,655.7	95.9	-878.7	883.9	0.00	0.00	0.00
3,840.0	19.79	276.23	3,693.4	97.4	-892.2	897.5	0.00	0.00	0.00
3,880.0	19.79	276.23	3,731.0	98.8	-905.6	911.0	0.00	0.00	0.00
3,920.0	19.79	276.23	3,768.7	100.3	-919.1	924.5	0.00	0.00	0.00
3,960.0	19.79	276.23	3,806.3	101.8	-932.6	938.1	0.00	0.00	0.00
4,000.0	19.79	276.23	3,843.9	103.2	-946.0	951.6	0.00	0.00	0.00
4,040.0	19.79	276.23	3,881.6	104.7	-959.5	965.2	0.00	0.00	0.00
4,080.0	19.79	276.23	3,919.2	106.2	-973.0	978.7	0.00	0.00	0.00
4,120.0	19.79	276.23	3,956.8	107.6	-986.4	992.3	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
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Local Co-ordinate Reference: Well Five Rivers K08-07D
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)
4,160.0	19.79	276.23	3,994.5	109.1	-999.9	1,005.8	0.00	0.00	0.00
4,200.0	19.79	276.23	4,032.1	110.6	-1,013.3	1,019.4	0.00	0.00	0.00
4,240.0	19.79	276.23	4,069.7	112.1	-1,026.8	1,032.9	0.00	0.00	0.00
4,280.0	19.79	276.23	4,107.4	113.5	-1,040.3	1,046.5	0.00	0.00	0.00
4,320.0	19.79	276.23	4,145.0	115.0	-1,053.7	1,060.0	0.00	0.00	0.00
4,360.0	19.79	276.23	4,182.7	116.5	-1,067.2	1,073.5	0.00	0.00	0.00
4,400.0	19.79	276.23	4,220.3	117.9	-1,080.7	1,087.1	0.00	0.00	0.00
4,440.0	19.79	276.23	4,257.9	119.4	-1,094.1	1,100.6	0.00	0.00	0.00
4,480.0	19.79	276.23	4,295.6	120.9	-1,107.6	1,114.2	0.00	0.00	0.00
4,520.0	19.79	276.23	4,333.2	122.3	-1,121.1	1,127.7	0.00	0.00	0.00
4,560.0	19.79	276.23	4,370.8	123.8	-1,134.5	1,141.3	0.00	0.00	0.00
4,600.0	19.79	276.23	4,408.5	125.3	-1,148.0	1,154.8	0.00	0.00	0.00
4,640.0	19.79	276.23	4,446.1	126.7	-1,161.5	1,168.4	0.00	0.00	0.00
4,680.0	19.79	276.23	4,483.7	128.2	-1,174.9	1,181.9	0.00	0.00	0.00
4,720.0	19.79	276.23	4,521.4	129.7	-1,188.4	1,195.5	0.00	0.00	0.00
4,760.0	19.79	276.23	4,559.0	131.2	-1,201.9	1,209.0	0.00	0.00	0.00
4,800.0	19.79	276.23	4,596.7	132.6	-1,215.3	1,222.6	0.00	0.00	0.00
4,840.0	19.79	276.23	4,634.3	134.1	-1,228.8	1,236.1	0.00	0.00	0.00
4,880.0	19.79	276.23	4,671.9	135.6	-1,242.3	1,249.6	0.00	0.00	0.00
4,920.0	19.79	276.23	4,709.6	137.0	-1,255.7	1,263.2	0.00	0.00	0.00
4,960.0	19.79	276.23	4,747.2	138.5	-1,269.2	1,276.7	0.00	0.00	0.00
5,000.0	19.79	276.23	4,784.8	140.0	-1,282.7	1,290.3	0.00	0.00	0.00
5,040.0	19.79	276.23	4,822.5	141.4	-1,296.1	1,303.8	0.00	0.00	0.00
5,080.0	19.79	276.23	4,860.1	142.9	-1,309.6	1,317.4	0.00	0.00	0.00
5,120.0	19.79	276.23	4,897.7	144.4	-1,323.1	1,330.9	0.00	0.00	0.00
5,154.1	19.79	276.23	4,929.8	145.6	-1,334.5	1,342.5	0.00	0.00	0.00
5,160.0	19.68	276.23	4,935.4	145.8	-1,336.5	1,344.5	2.00	-2.00	0.00
5,200.0	18.88	276.23	4,973.1	147.3	-1,349.7	1,357.7	2.00	-2.00	0.00
5,240.0	18.08	276.23	5,011.1	148.7	-1,362.3	1,370.3	2.00	-2.00	0.00
5,280.0	17.28	276.23	5,049.2	150.0	-1,374.3	1,382.5	2.00	-2.00	0.00
5,320.0	16.48	276.23	5,087.5	151.2	-1,385.9	1,394.1	2.00	-2.00	0.00
5,360.0	15.68	276.23	5,125.9	152.4	-1,396.9	1,405.2	2.00	-2.00	0.00
5,400.0	14.88	276.23	5,164.5	153.6	-1,407.4	1,415.7	2.00	-2.00	0.00
5,440.0	14.08	276.23	5,203.2	154.7	-1,417.3	1,425.7	2.00	-2.00	0.00
5,480.0	13.28	276.23	5,242.1	155.7	-1,426.7	1,435.2	2.00	-2.00	0.00
5,520.0	12.48	276.23	5,281.1	156.7	-1,435.6	1,444.1	2.00	-2.00	0.00
5,560.0	11.68	276.23	5,320.2	157.6	-1,443.9	1,452.5	2.00	-2.00	0.00
5,600.0	10.88	276.23	5,359.4	158.4	-1,451.7	1,460.3	2.00	-2.00	0.00
5,640.0	10.08	276.23	5,398.8	159.2	-1,458.9	1,467.5	2.00	-2.00	0.00
5,680.0	9.28	276.23	5,438.2	159.9	-1,465.6	1,474.3	2.00	-2.00	0.00
5,720.0	8.48	276.23	5,477.7	160.6	-1,471.7	1,480.4	2.00	-2.00	0.00
5,760.0	7.68	276.23	5,517.3	161.2	-1,477.3	1,486.1	2.00	-2.00	0.00
5,800.0	6.88	276.23	5,557.0	161.8	-1,482.3	1,491.1	2.00	-2.00	0.00
5,840.0	6.08	276.23	5,596.7	162.3	-1,486.8	1,495.6	2.00	-2.00	0.00
5,880.0	5.28	276.23	5,636.5	162.7	-1,490.8	1,499.6	2.00	-2.00	0.00
5,920.0	4.48	276.23	5,676.4	163.0	-1,494.1	1,503.0	2.00	-2.00	0.00
5,960.0	3.68	276.23	5,716.3	163.4	-1,497.0	1,505.8	2.00	-2.00	0.00
6,000.0	2.88	276.23	5,756.2	163.6	-1,499.2	1,508.1	2.00	-2.00	0.00
6,040.0	2.08	276.23	5,796.2	163.8	-1,500.9	1,509.9	2.00	-2.00	0.00
6,080.0	1.28	276.23	5,836.2	163.9	-1,502.1	1,511.0	2.00	-2.00	0.00
6,120.0	0.48	276.23	5,876.2	164.0	-1,502.7	1,511.6	2.00	-2.00	0.00
6,143.8	0.00	0.00	5,900.0	164.0	-1,502.8	1,511.7	2.00	-2.00	351.41
TARGET BHL 2040'FNL, 2010' FEL									
6,160.0	0.00	0.00	5,916.2	164.0	-1,502.8	1,511.7	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 K08-07D
Wellbore: Wellbore #1
Design: Noble Five Rivers K08-07D Plan #1 (9-03-10)

Local Co-ordinate Reference: Well Five Rivers K08-07D
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)
6,200.0	0.00	0.00	5,956.2	164.0	-1,502.8	1,511.7	0.00	0.00	0.00
6,240.0	0.00	0.00	5,996.2	164.0	-1,502.8	1,511.7	0.00	0.00	0.00
6,280.0	0.00	0.00	6,036.2	164.0	-1,502.8	1,511.7	0.00	0.00	0.00
6,320.0	0.00	0.00	6,076.2	164.0	-1,502.8	1,511.7	0.00	0.00	0.00
6,360.0	0.00	0.00	6,116.2	164.0	-1,502.8	1,511.7	0.00	0.00	0.00
6,400.0	0.00	0.00	6,156.2	164.0	-1,502.8	1,511.7	0.00	0.00	0.00
6,440.0	0.00	0.00	6,196.2	164.0	-1,502.8	1,511.7	0.00	0.00	0.00
6,480.0	0.00	0.00	6,236.2	164.0	-1,502.8	1,511.7	0.00	0.00	0.00
6,520.0	0.00	0.00	6,276.2	164.0	-1,502.8	1,511.7	0.00	0.00	0.00
6,560.0	0.00	0.00	6,316.2	164.0	-1,502.8	1,511.7	0.00	0.00	0.00
6,600.0	0.00	0.00	6,356.2	164.0	-1,502.8	1,511.7	0.00	0.00	0.00
6,640.0	0.00	0.00	6,396.2	164.0	-1,502.8	1,511.7	0.00	0.00	0.00
6,680.0	0.00	0.00	6,436.2	164.0	-1,502.8	1,511.7	0.00	0.00	0.00
6,720.0	0.00	0.00	6,476.2	164.0	-1,502.8	1,511.7	0.00	0.00	0.00
6,760.0	0.00	0.00	6,516.2	164.0	-1,502.8	1,511.7	0.00	0.00	0.00
6,800.0	0.00	0.00	6,556.2	164.0	-1,502.8	1,511.7	0.00	0.00	0.00
6,840.0	0.00	0.00	6,596.2	164.0	-1,502.8	1,511.7	0.00	0.00	0.00
6,880.0	0.00	0.00	6,636.2	164.0	-1,502.8	1,511.7	0.00	0.00	0.00
6,920.0	0.00	0.00	6,676.2	164.0	-1,502.8	1,511.7	0.00	0.00	0.00
6,960.0	0.00	0.00	6,716.2	164.0	-1,502.8	1,511.7	0.00	0.00	0.00
7,000.0	0.00	0.00	6,756.2	164.0	-1,502.8	1,511.7	0.00	0.00	0.00
7,040.0	0.00	0.00	6,796.2	164.0	-1,502.8	1,511.7	0.00	0.00	0.00
7,080.0	0.00	0.00	6,836.2	164.0	-1,502.8	1,511.7	0.00	0.00	0.00
7,120.0	0.00	0.00	6,876.2	164.0	-1,502.8	1,511.7	0.00	0.00	0.00
7,124.8	0.00	0.00	6,881.0	164.0	-1,502.8	1,511.7	0.00	0.00	0.00
NIOBRARA - TARGET CIRCLE 2040'FNL, 2010'FEL - LEGAL BOX 400' X 400' 2097'FNL, 1999'FEL									
7,160.0	0.00	0.00	6,916.2	164.0	-1,502.8	1,511.7	0.00	0.00	0.00
7,200.0	0.00	0.00	6,956.2	164.0	-1,502.8	1,511.7	0.00	0.00	0.00
7,240.0	0.00	0.00	6,996.2	164.0	-1,502.8	1,511.7	0.00	0.00	0.00
7,280.0	0.00	0.00	7,036.2	164.0	-1,502.8	1,511.7	0.00	0.00	0.00
7,320.0	0.00	0.00	7,076.2	164.0	-1,502.8	1,511.7	0.00	0.00	0.00
7,360.0	0.00	0.00	7,116.2	164.0	-1,502.8	1,511.7	0.00	0.00	0.00
7,400.0	0.00	0.00	7,156.2	164.0	-1,502.8	1,511.7	0.00	0.00	0.00
7,440.0	0.00	0.00	7,196.2	164.0	-1,502.8	1,511.7	0.00	0.00	0.00
7,454.8	0.00	0.00	7,211.0	164.0	-1,502.8	1,511.7	0.00	0.00	0.00
CODELL									
7,480.0	0.00	0.00	7,236.2	164.0	-1,502.8	1,511.7	0.00	0.00	0.00
7,520.0	0.00	0.00	7,276.2	164.0	-1,502.8	1,511.7	0.00	0.00	0.00
7,560.0	0.00	0.00	7,316.2	164.0	-1,502.8	1,511.7	0.00	0.00	0.00
7,600.0	0.00	0.00	7,356.2	164.0	-1,502.8	1,511.7	0.00	0.00	0.00
7,640.0	0.00	0.00	7,396.2	164.0	-1,502.8	1,511.7	0.00	0.00	0.00
7,680.0	0.00	0.00	7,436.2	164.0	-1,502.8	1,511.7	0.00	0.00	0.00
7,720.0	0.00	0.00	7,476.2	164.0	-1,502.8	1,511.7	0.00	0.00	0.00
7,760.0	0.00	0.00	7,516.2	164.0	-1,502.8	1,511.7	0.00	0.00	0.00
7,800.0	0.00	0.00	7,556.2	164.0	-1,502.8	1,511.7	0.00	0.00	0.00
7,840.0	0.00	0.00	7,596.2	164.0	-1,502.8	1,511.7	0.00	0.00	0.00
7,844.8	0.00	0.00	7,601.0	164.0	-1,502.8	1,511.7	0.00	0.00	0.00
D-SAND									
7,880.0	0.00	0.00	7,636.2	164.0	-1,502.8	1,511.7	0.00	0.00	0.00
7,920.0	0.00	0.00	7,676.2	164.0	-1,502.8	1,511.7	0.00	0.00	0.00
7,924.8	0.00	0.00	7,681.0	164.0	-1,502.8	1,511.7	0.00	0.00	0.00
J-SAND									
7,960.0	0.00	0.00	7,716.2	164.0	-1,502.8	1,511.7	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 K08-07D
Wellbore: Wellbore #1
Design: Noble Five Rivers K08-07D Plan #1 (9-03-10)

Local Co-ordinate Reference: Well Five Rivers K08-07D
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)
8,000.0	0.00	0.00	7,756.2	164.0	-1,502.8	1,511.7	0.00	0.00	0.00
8,040.0	0.00	0.00	7,796.2	164.0	-1,502.8	1,511.7	0.00	0.00	0.00
8,080.0	0.00	0.00	7,836.2	164.0	-1,502.8	1,511.7	0.00	0.00	0.00
8,120.0	0.00	0.00	7,876.2	164.0	-1,502.8	1,511.7	0.00	0.00	0.00
8,124.8	0.00	0.00	7,881.0	164.0	-1,502.8	1,511.7	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
TARGET CIRCLE 20' - plan hits target - Circle (radius 75.0)	0.00	0.00	6,881.0	164.0	-1,502.8	1,363,294.29	3,195,121.74	40° 19' 42.708 N	104° 48' 0.504 W
LEGAL BOX 400' X 400' - plan misses by 58.1ft at 7124.8ft MD (6881.0 TVD, 164.0 N, -1502.8 E) - Rectangle (sides W400.0 H400.0 D1,000.0)	0.00	0.00	6,881.0	107.0	-1,491.8	1,363,237.38	3,195,133.19	40° 19' 42.145 N	104° 48' 0.362 W
TARGET BHL 2040'F - plan hits target - Point	0.00	0.00	5,900.0	164.0	-1,502.8	1,363,294.29	3,195,121.72	40° 19' 42.708 N	104° 48' 0.504 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 (°)
7,124.8	6,881.0	NIOBRARA		0.00	
7,454.8	7,211.0	CODELL		0.00	
7,844.8	7,601.0	D-SAND		0.00	
7,924.8	7,681.0	J-SAND		0.00	