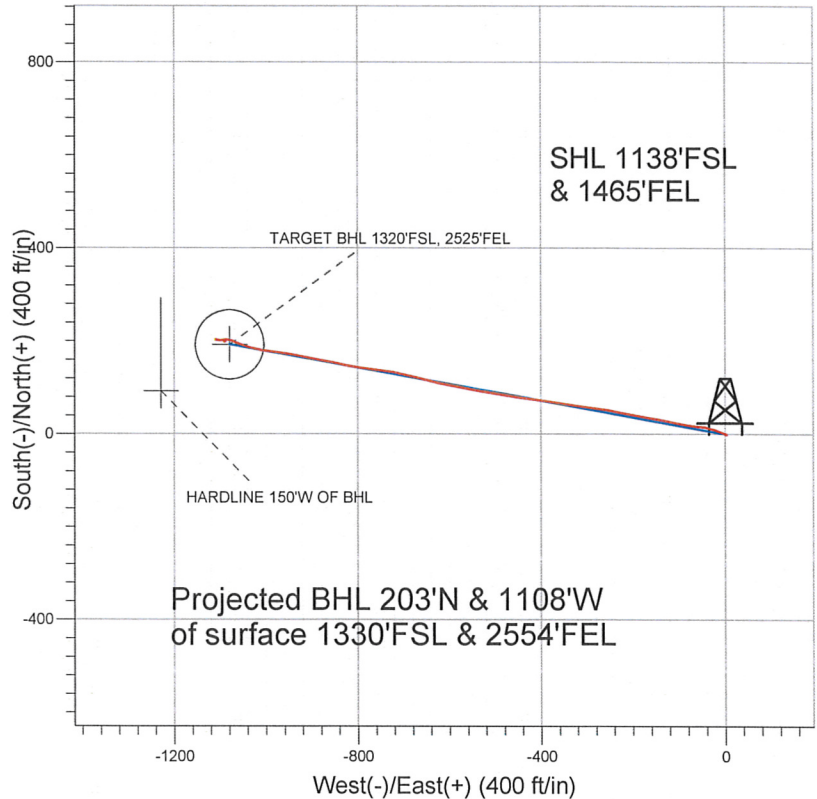
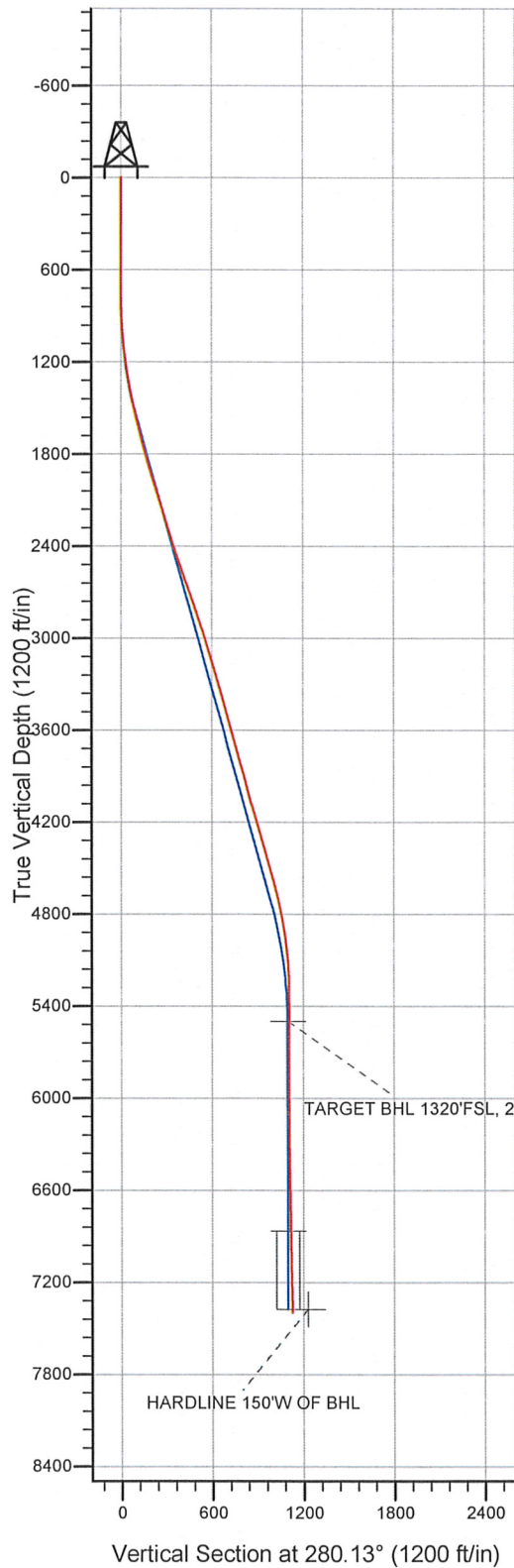




Well Name: **Five Rivers K08-24D**
Surface Location: Five Rivers K08-24D Pad Sec.8-T4N-R66W
North American Datum 1983 US State Plane 1983 Colorado Northern Zone
Ground Elevation: 4703.0
+N/-S +E/-W Northing Easting Latitude Longitude Slot
0.0 0.0 1360961.31 3195862.33 40.322110 -104.797550
Original Well Elev WELL @ 4716.0ft (Original Well Elev)

NOBLE ENERGY INC WELD COUNTY CO



LEGEND

- Five Rivers K08-24D, Wellbore #1, Noble Five Rivers K08-24D Plan #1 (05-13-10) VO
- Wellbore #1
- Survey #1

Final Survey Plot

Projected Final Survey -
7548'MD & 7395'TVD @ 1126'VS
1.0 deg Inc 280.2 deg AZ

Project: SEC.8-T4N-R66W
Site: Five Rivers K08-24D Pad Sec.8-T4N-R66W
Well: Five Rivers K08-24D
Plan: Wellbore #1

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 K08-24D
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Well Five Rivers K08-24D
TVD Reference: WELL @ 4716.0ft (Original Well Elev)
MD Reference: WELL @ 4716.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: Landmark

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:	1,363,128.14 ft	Latitude:	40.328060
From:	Lat/Long	Easting:	3,195,764.31 ft	Longitude:	-104.797840
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.45 °

Well	Five Rivers K08-24D					
Well Position	+N/-S	0.0 ft	Northing:	1,360,961.31 ft	Latitude:	40.322110
	+E/-W	0.0 ft	Easting:	3,195,862.33 ft	Longitude:	-104.797550
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	3/10/2011	8.91	66.99	53,116

Design	Wellbore #1				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction	
	(ft)	(ft)	(ft)	(°)	
	0.0	0.0	0.0	280.13	

Survey Program	Date 4/1/2011				
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
641.0	7,548.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard	

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
641.0	0.50	115.80	641.0	-1.2	2.5	-2.7	0.08	0.08	0.00
734.0	0.40	114.90	734.0	-1.5	3.2	-3.4	0.11	-0.11	-0.97
827.0	1.10	316.90	827.0	-1.0	2.9	-3.0	1.59	0.75	-169.89
921.0	3.90	295.80	920.9	1.0	-0.6	0.8	3.09	2.98	-22.45
1,015.0	5.40	291.10	1,014.6	4.0	-7.6	8.2	1.65	1.60	-5.00
1,108.0	6.80	288.00	1,107.0	7.3	-17.0	18.0	1.55	1.51	-3.33
1,202.0	8.50	287.10	1,200.2	11.1	-28.9	30.4	1.81	1.81	-0.96
1,296.0	9.60	278.70	1,293.0	14.3	-43.3	45.1	1.83	1.17	-8.94
1,389.0	10.80	274.20	1,384.6	16.1	-59.6	61.5	1.55	1.29	-4.84
1,483.0	11.50	280.50	1,476.8	18.5	-77.6	79.7	1.49	0.74	6.70
1,576.0	13.40	280.00	1,567.6	22.0	-97.4	99.7	2.05	2.04	-0.54
1,670.0	14.80	282.40	1,658.8	26.5	-119.8	122.6	1.61	1.49	2.55

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 K08-24D
 Wellbore: Wellbore #1
 Design: Wellbore #1

Local Co-ordinate Reference: Well Five Rivers K08-24D
 TVD Reference: WELL @ 4716.0ft (Original Well Elev)
 MD Reference: WELL @ 4716.0ft (Original Well Elev)
 North Reference: True
 Survey Calculation Method: Minimum Curvature
 Database: Landmark

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)
1,763.0	16.00	280.80	1,748.4	31.4	-144.0	147.3	1.37	1.29	-1.72
1,857.0	16.40	280.00	1,838.7	36.2	-169.8	173.5	0.49	0.43	-0.85
1,950.0	16.80	279.30	1,927.8	40.6	-196.0	200.1	0.48	0.43	-0.75
2,044.0	17.40	280.30	2,017.7	45.3	-223.2	227.7	0.71	0.64	1.06
2,138.0	17.10	280.70	2,107.4	50.4	-250.6	255.6	0.34	-0.32	0.43
2,231.0	16.90	277.10	2,196.4	54.6	-277.5	282.8	1.15	-0.22	-3.87
2,325.0	17.20	277.40	2,286.2	58.1	-304.8	310.3	0.33	0.32	0.32
2,419.0	18.20	279.40	2,375.8	62.3	-333.1	338.9	1.24	1.06	2.13
2,512.0	18.50	277.50	2,464.1	66.6	-362.1	368.1	0.72	0.32	-2.04
2,606.0	19.20	277.90	2,553.0	70.7	-392.1	398.5	0.76	0.74	0.43
2,699.0	19.80	278.80	2,640.7	75.2	-422.9	429.5	0.72	0.65	0.97
2,793.0	19.80	278.00	2,729.1	79.8	-454.4	461.3	0.29	0.00	-0.85
2,887.0	17.90	278.20	2,818.1	84.1	-484.4	491.7	2.02	-2.02	0.21
2,980.0	19.00	280.20	2,906.3	88.8	-513.5	521.1	1.36	1.18	2.15
3,074.0	17.90	280.70	2,995.5	94.2	-542.7	550.8	1.18	-1.17	0.53
3,167.0	17.00	280.40	3,084.2	99.3	-570.1	578.7	0.97	-0.97	-0.32
3,261.0	16.20	278.60	3,174.3	103.8	-596.6	605.6	1.01	-0.85	-1.91
3,354.0	16.00	284.50	3,263.6	108.9	-621.9	631.3	1.77	-0.22	6.34
3,448.0	16.30	284.40	3,353.9	115.4	-647.2	657.4	0.32	0.32	-0.11
3,542.0	16.00	283.10	3,444.2	121.6	-672.6	683.5	0.50	-0.32	-1.38
3,635.0	15.80	282.60	3,533.7	127.3	-697.4	708.9	0.26	-0.22	-0.54
3,729.0	14.40	280.60	3,624.4	132.3	-721.4	733.4	1.59	-1.49	-2.13
3,822.0	16.00	277.90	3,714.2	136.1	-745.5	757.8	1.88	1.72	-2.90
3,916.0	16.00	276.70	3,804.5	139.4	-771.2	783.7	0.35	0.00	-1.28
4,010.0	15.80	277.20	3,894.9	142.5	-796.7	809.4	0.26	-0.21	0.53
4,103.0	15.30	282.10	3,984.5	146.7	-821.3	834.3	1.51	-0.54	5.27
4,197.0	14.80	282.10	4,075.3	151.8	-845.2	858.7	0.53	-0.53	0.00
4,290.0	17.20	279.40	4,164.7	156.6	-870.3	884.3	2.70	2.58	-2.90
4,384.0	16.40	281.50	4,254.7	161.5	-897.1	911.5	1.07	-0.85	2.23
4,478.0	15.50	282.00	4,345.1	166.7	-922.3	937.3	0.97	-0.96	0.53
4,571.0	17.20	278.10	4,434.3	171.3	-948.1	963.5	2.18	1.83	-4.19
4,665.0	15.90	278.30	4,524.4	175.1	-974.6	990.2	1.38	-1.38	0.21
4,759.0	15.00	278.10	4,615.0	178.6	-999.4	1,015.2	0.96	-0.96	-0.21
4,852.0	13.20	281.90	4,705.2	182.5	-1,021.7	1,037.9	2.18	-1.94	4.09
4,946.0	10.80	288.00	4,797.1	187.5	-1,040.6	1,057.3	2.88	-2.55	6.49
5,039.0	9.40	289.30	4,888.7	192.7	-1,056.0	1,073.5	1.53	-1.51	1.40
5,133.0	7.70	296.50	4,981.7	198.0	-1,068.9	1,087.1	2.13	-1.81	7.66
5,226.0	5.30	281.50	5,074.1	201.7	-1,078.7	1,097.4	3.14	-2.58	-16.13
5,320.0	3.70	270.60	5,167.8	202.5	-1,086.0	1,104.7	1.92	-1.70	-11.60
5,413.0	1.50	254.40	5,260.7	202.3	-1,090.2	1,108.8	2.47	-2.37	-17.42
5,507.0	1.70	160.50	5,354.6	200.6	-1,090.9	1,109.2	2.49	0.21	-99.89
5,601.0	1.00	146.30	5,448.6	198.6	-1,090.0	1,107.9	0.82	-0.74	-15.11
5,652.5	0.56	124.47	5,500.1	198.1	-1,089.5	1,107.4	1.01	-0.85	-42.37
TARGET BHL 1320'FSL, 2525'FEL									
5,694.0	0.40	76.00	5,541.6	198.0	-1,089.2	1,107.1	1.01	-0.39	-116.83
5,788.0	0.90	41.60	5,635.6	198.6	-1,088.4	1,106.4	0.65	0.53	-36.60
5,881.0	0.50	19.40	5,728.6	199.6	-1,087.8	1,105.9	0.51	-0.43	-23.87
5,975.0	0.40	328.90	5,822.6	200.2	-1,087.8	1,106.1	0.42	-0.11	-53.72
6,069.0	0.40	313.10	5,916.6	200.7	-1,088.2	1,106.6	0.12	0.00	-16.81
6,162.0	0.50	295.50	6,009.6	201.1	-1,088.8	1,107.2	0.18	0.11	-18.92
6,256.0	0.60	287.00	6,103.6	201.5	-1,089.7	1,108.1	0.14	0.11	-9.04
6,349.0	0.60	282.20	6,196.6	201.7	-1,090.6	1,109.1	0.05	0.00	-5.16
6,443.0	0.70	271.10	6,290.6	201.8	-1,091.7	1,110.1	0.17	0.11	-11.81
6,536.0	0.70	273.90	6,383.6	201.9	-1,092.8	1,111.3	0.04	0.00	3.01

Company: NOBLE ENERGY INC WELD COUNTY CO
Project: SEC.8-T4N-R66W
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Local Co-ordinate Reference: Well Five Rivers K08-24D
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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)
6,630.0	0.80	267.60	6,477.6	201.9	-1,094.0	1,112.5	0.14	0.11	-6.70
6,724.0	0.80	273.90	6,571.5	201.9	-1,095.3	1,113.8	0.09	0.00	6.70
6,817.0	1.00	265.60	6,664.5	201.9	-1,096.8	1,115.2	0.26	0.22	-8.92
6,911.0	1.00	266.90	6,758.5	201.8	-1,098.4	1,116.8	0.02	0.00	1.38
7,004.0	1.00	266.20	6,851.5	201.7	-1,100.0	1,118.4	0.01	0.00	-0.75
7,018.2	0.98	266.54	6,865.7	201.7	-1,100.3	1,118.6	0.12	-0.11	2.43
TARGET CIRCLE 1320'FSL, 2525'FEL									
7,098.0	0.90	268.70	6,945.5	201.6	-1,101.6	1,119.9	0.12	-0.11	2.70
7,192.0	0.90	278.70	7,039.5	201.7	-1,103.1	1,121.4	0.17	0.00	10.64
7,285.0	0.80	281.20	7,132.5	201.9	-1,104.4	1,122.7	0.11	-0.11	2.69
7,379.0	0.70	283.70	7,226.5	202.2	-1,105.6	1,124.0	0.11	-0.11	2.66
7,472.0	0.80	281.50	7,319.5	202.5	-1,106.8	1,125.2	0.11	0.11	-2.37
7,504.0	0.90	276.50	7,351.4	202.5	-1,107.3	1,125.7	0.39	0.31	-15.63
7,530.3	0.96	278.80	7,377.7	202.6	-1,107.7	1,126.1	0.27	0.23	8.76
HARDLINE 150'W OF BHL									
7,548.0	1.00	280.20	7,395.4	202.6	-1,108.0	1,126.4	0.27	0.23	7.88

Checked By: _____ Approved By: _____ Date: _____