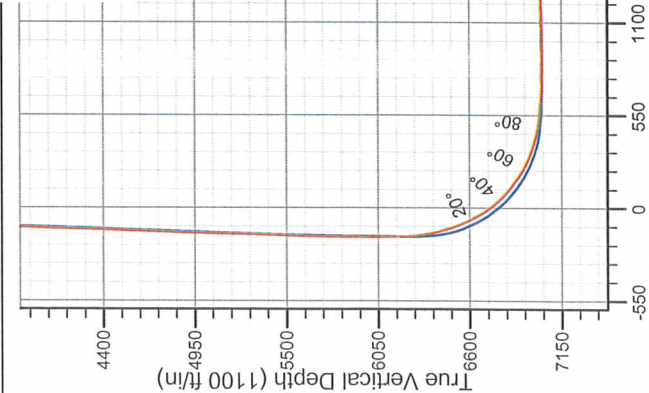


Noble Energy Inc.- Weld County, CO (Grid North)

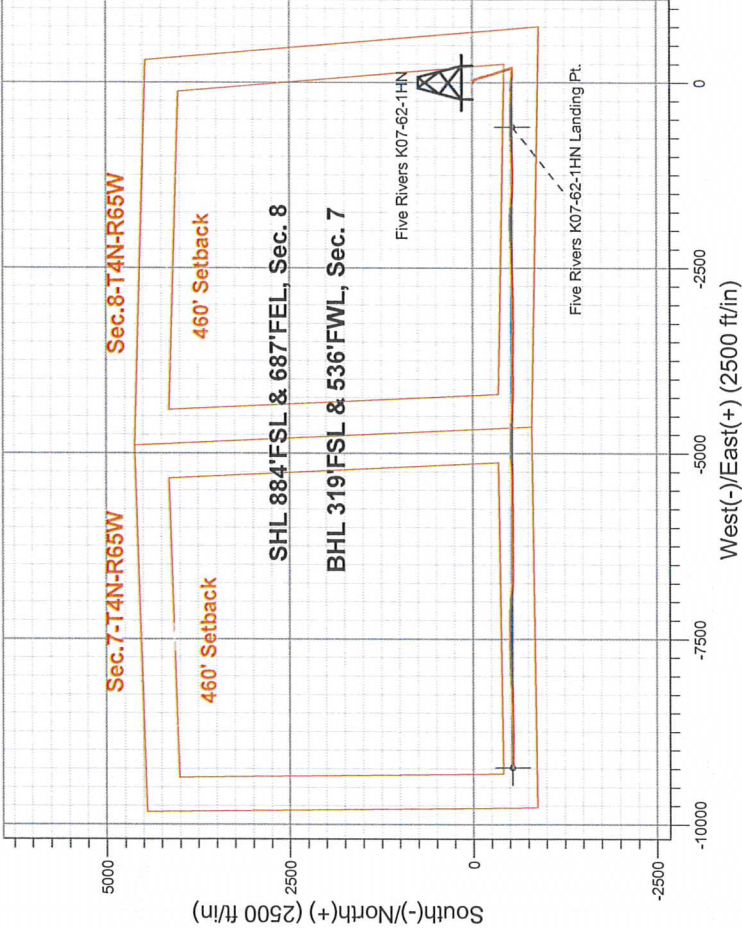
Well Name: Five Rivers K07-62-1HN					
Surface Location: Five Rivers K07-62-1HN Pad Sec.8-T4N-R66W					
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone					
+N/-S	+E/-W	Northing	Eastng	Latitude	Longitude
0.0	0.0	1360701.74	3196664.66	40.321380	-104.794680
Precision 828 RKB - 16" WELL @ 4718.0ft (Precision 828 RKB - 16")					

FINAL SURVEY

Projected Bottom Hole Location
16152'MD 6977'TVD 545'S & 9231'W of SHL
90.6 degree Incl @ 267.99 degree AZM



Vertical Section at 266.69° (1100 ft/in)



Five Rivers K07-62-1HN Pad Sec.8-T4N-R66W Five Rivers K07-62-1HN 12:54, January 14 2014 Wellbore #1	ANNOTATIONS
	No annotation data is available.
LEGEND	
—X— Five Rivers K07-62-1HN, Wellbore #1, Plan A - Rev 0 V0	
—□— Wellbore #1	



Directional

Noble Energy Inc.- Weld County, CO (Grid North)

Sec.8-T4N-R66W

Five Rivers K07-62-1HN Pad Sec.8-T4N-R66W

Five Rivers K07-62-1HN

Wellbore #1

Design: Wellbore #1

Standard Survey Report

14 January, 2014

Company:	Noble Energy Inc.- Weld County, CO (Grid North)	Local Co-ordinate Reference:	Well Five Rivers K07-62-1HN
Project:	Sec.8-T4N-R66W	TVD Reference:	WELL @ 4718.0ft (Precision 828 RKB - 16')
Site:	Five Rivers K07-62-1HN Pad Sec.8-T4N-R66W	MD Reference:	WELL @ 4718.0ft (Precision 828 RKB - 16')
Well:	Five Rivers K07-62-1HN	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Project	Sec.8-T4N-R66W, Weld County, CO		
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 K07-62-1HN Pad Sec.8-T4N-R66W			
Site Position:		Northing:	1,360,701.75 ft	Latitude:	40.321380
From:	Lat/Long	Easting:	3,196,664.66 ft	Longitude:	-104.794680
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.46 °

Well	Five Rivers K07-62-1HN					
Well Position	+N/-S	0.0 ft	Northing:	1,360,701.74 ft	Latitude:	40.321380
	+E/-W	0.0 ft	Easting:	3,196,664.66 ft	Longitude:	-104.794680
Position Uncertainty	0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,702.0 ft	

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	12/21/2013	8.53	66.90	52,823

Design	Wellbore #1			
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Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	266.69

Survey Program		Date	1/14/2014		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
299.0	616.0	Surface (Wellbore #1)	Flexi-Shot	VES Flexi-Shot Tool	
657.0	7,393.0	Intermediate (Wellbore #1)	MWD+IFR1+MS_WY	Fixed:v2:Rockies, crustal dec + 3-axis correction	
7,538.0	16,152.0	Lateral (Wellbore #1)	MWD+IFR1+MS_WY	Fixed:v2:Rockies, crustal dec + 3-axis correction	

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
	299.0	0.20	288.30	299.0	0.2	-0.5	0.5	0.07	0.07	0.00
	616.0	0.20	140.60	616.0	-0.1	-0.7	0.7	0.12	0.00	-46.59
	657.0	0.70	157.50	657.0	-0.4	-0.5	0.5	1.25	1.22	41.22
	747.0	1.10	91.30	747.0	-0.9	0.5	-0.5	1.15	0.44	-73.56
	837.0	1.10	91.32	837.0	-0.9	2.3	-2.2	0.00	0.00	0.02
	927.0	0.80	105.54	927.0	-1.1	3.7	-3.7	0.42	-0.33	15.80
	1,017.0	2.50	110.89	1,016.9	-2.0	6.2	-6.1	1.89	1.89	5.94
	1,125.0	3.50	97.73	1,124.8	-3.3	11.6	-11.4	1.12	0.93	-12.19
	1,220.0	4.00	121.73	1,219.6	-5.4	17.3	-17.0	1.72	0.53	25.26

Company:	Noble Energy Inc.- Weld County, CO (Grid North)	Local Co-ordinate Reference:	Well Five Rivers K07-62-1HN
Project:	Sec.8-T4N-R66W	TVD Reference:	WELL @ 4718.0ft (Precision 828 RKB - 16')
Site:	Five Rivers K07-62-1HN Pad Sec.8-T4N-R66W	MD Reference:	WELL @ 4718.0ft (Precision 828 RKB - 16')
Well:	Five Rivers K07-62-1HN	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	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)
1,315.0	5.40	136.54	1,314.3	-10.4	23.2	-22.6	1.94	1.47	15.59
1,410.0	5.50	140.65	1,408.8	-17.2	29.2	-28.2	0.42	0.11	4.33
1,505.0	6.50	148.22	1,503.3	-25.3	34.9	-33.4	1.34	1.05	7.97
1,599.0	6.80	161.69	1,596.7	-35.1	39.5	-37.4	1.69	0.32	14.33
1,694.0	7.70	156.70	1,690.9	-46.3	43.7	-41.0	1.16	0.95	-5.25
1,789.0	6.50	156.45	1,785.2	-57.0	48.4	-45.0	1.26	-1.26	-0.26
1,884.0	6.30	159.12	1,879.6	-66.8	52.4	-48.5	0.38	-0.21	2.81
1,979.0	7.30	158.85	1,973.9	-77.3	56.5	-51.9	1.05	1.05	-0.28
2,059.0	8.30	160.95	2,053.2	-87.5	60.2	-55.0	1.30	1.25	2.63
2,148.0	7.00	152.64	2,141.4	-98.4	64.8	-59.0	1.91	-1.46	-9.34
2,238.0	7.10	158.44	2,230.7	-108.5	69.3	-62.9	0.80	0.11	6.44
2,328.0	7.90	160.74	2,319.9	-119.5	73.4	-66.4	0.95	0.89	2.56
2,418.0	8.40	166.45	2,409.0	-131.7	77.0	-69.3	1.06	0.56	6.34
2,508.0	8.10	165.92	2,498.1	-144.2	80.1	-71.6	0.34	-0.33	-0.59
2,597.0	8.10	163.95	2,586.2	-156.3	83.3	-74.2	0.31	0.00	-2.21
2,687.0	8.10	164.93	2,675.3	-168.6	86.7	-76.9	0.15	0.00	1.09
2,777.0	7.80	162.42	2,764.5	-180.5	90.2	-79.6	0.51	-0.33	-2.79
2,867.0	7.50	162.85	2,853.7	-191.9	93.8	-82.6	0.34	-0.33	0.48
2,957.0	8.40	167.75	2,942.8	-204.0	96.9	-85.0	1.25	1.00	5.44
3,047.0	8.30	166.54	3,031.8	-216.7	99.8	-87.2	0.22	-0.11	-1.34
3,137.0	7.70	164.54	3,121.0	-228.9	103.0	-89.6	0.73	-0.67	-2.22
3,226.0	7.40	167.50	3,209.2	-240.2	105.8	-91.7	0.55	-0.34	3.33
3,316.0	7.70	167.20	3,298.4	-251.7	108.4	-93.7	0.34	0.33	-0.33
3,406.0	7.90	157.51	3,387.6	-263.3	112.1	-96.7	1.48	0.22	-10.77
3,496.0	6.90	160.59	3,476.8	-274.1	116.2	-100.2	1.19	-1.11	3.42
3,586.0	7.30	164.79	3,566.1	-284.8	119.5	-102.9	0.73	0.44	4.67
3,676.0	6.20	163.16	3,655.5	-294.9	122.5	-105.2	1.24	-1.22	-1.81
3,766.0	7.60	160.17	3,744.9	-305.2	125.9	-108.0	1.61	1.56	-3.32
3,855.0	7.70	160.56	3,833.1	-316.3	129.9	-111.4	0.13	0.11	0.44
3,945.0	7.70	160.00	3,922.3	-327.7	133.9	-114.8	0.08	0.00	-0.62
4,035.0	6.00	155.58	4,011.6	-337.6	137.9	-118.2	1.98	-1.89	-4.91
4,125.0	5.90	161.16	4,101.1	-346.3	141.4	-121.1	0.65	-0.11	6.20
4,215.0	6.80	165.74	4,190.6	-355.8	144.2	-123.4	1.15	1.00	5.09
4,305.0	7.30	163.04	4,279.9	-366.5	147.2	-125.7	0.67	0.56	-3.00
4,395.0	7.70	163.14	4,369.1	-377.7	150.6	-128.5	0.44	0.44	0.11
4,485.0	8.30	164.82	4,458.2	-389.8	154.0	-131.2	0.72	0.67	1.87
4,575.0	7.50	161.27	4,547.4	-401.6	157.6	-134.1	1.04	-0.89	-3.94
4,664.0	6.20	156.75	4,635.8	-411.5	161.4	-137.3	1.58	-1.46	-5.08
4,754.0	6.70	154.55	4,725.2	-420.7	165.5	-141.0	0.62	0.56	-2.44
4,844.0	7.40	162.66	4,814.5	-431.0	169.5	-144.3	1.35	0.78	9.01
4,934.0	6.30	161.06	4,903.9	-441.2	172.9	-147.1	1.24	-1.22	-1.78
5,024.0	7.00	162.85	4,993.3	-451.1	176.1	-149.7	0.81	0.78	1.99
5,114.0	6.90	165.28	5,082.6	-461.6	179.1	-152.1	0.35	-0.11	2.70
5,204.0	7.70	166.88	5,171.9	-472.7	181.8	-154.2	0.92	0.89	1.78
5,294.0	7.80	167.02	5,261.0	-484.5	184.6	-156.3	0.11	0.11	0.16
5,384.0	6.50	159.53	5,350.3	-495.2	187.7	-158.8	1.77	-1.44	-8.32
5,474.0	5.80	161.71	5,439.8	-504.3	190.9	-161.5	0.82	-0.78	2.42
5,564.0	5.50	167.51	5,529.4	-512.8	193.3	-163.3	0.72	-0.33	6.44
5,653.0	6.10	155.43	5,617.9	-521.3	196.2	-165.7	1.52	0.67	-13.57
5,743.0	4.50	153.73	5,707.6	-528.8	199.7	-168.8	1.79	-1.78	-1.89
5,833.0	2.70	150.59	5,797.4	-533.8	202.3	-171.1	2.01	-2.00	-3.49
5,923.0	1.10	178.72	5,887.3	-536.5	203.4	-172.0	2.01	-1.78	31.26
6,013.0	0.80	261.72	5,977.3	-537.5	202.8	-171.4	1.42	-0.33	92.22
6,102.0	0.90	268.27	6,066.3	-537.6	201.5	-170.1	0.16	0.11	7.36

Company:	Noble Energy Inc.- Weld County, CO (Grid North)	Local Co-ordinate Reference:	Well Five Rivers K07-62-1HN
Project:	Sec.8-T4N-R66W	TVD Reference:	WELL @ 4718.0ft (Precision 828 RKB - 16')
Site:	Five Rivers K07-62-1HN Pad Sec.8-T4N-R66W	MD Reference:	WELL @ 4718.0ft (Precision 828 RKB - 16')
Well:	Five Rivers K07-62-1HN	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	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)	
6,192.0	0.70	260.73	6,156.3	-537.7	200.2	-168.8	0.25	-0.22	-8.38	
6,236.0	1.20	246.15	6,200.3	-537.9	199.5	-168.1	1.25	1.14	-33.14	
6,281.0	4.10	275.85	6,245.2	-538.0	197.5	-166.1	6.92	6.44	66.00	
6,326.0	6.90	283.66	6,290.0	-537.2	193.3	-161.9	6.43	6.22	17.36	
6,371.0	9.60	280.25	6,334.6	-535.9	187.0	-155.7	6.10	6.00	-7.58	
6,416.0	11.80	276.62	6,378.8	-534.7	178.7	-147.5	5.11	4.89	-8.07	
6,461.0	14.10	275.05	6,422.6	-533.6	168.7	-137.5	5.17	5.11	-3.49	
6,506.0	17.10	273.06	6,466.0	-532.8	156.6	-125.5	6.77	6.67	-4.42	
6,551.0	20.00	271.91	6,508.6	-532.2	142.3	-111.3	6.50	6.44	-2.56	
6,596.0	23.00	268.31	6,550.5	-532.2	125.8	-94.8	7.28	6.67	-8.00	
6,641.0	26.00	267.86	6,591.4	-532.8	107.2	-76.2	6.68	6.67	-1.00	
6,686.0	28.80	270.49	6,631.4	-533.1	86.5	-55.5	6.78	6.22	5.84	
6,730.0	31.40	273.69	6,669.4	-532.3	64.4	-33.5	6.94	5.91	7.27	
6,776.0	35.00	275.52	6,707.9	-530.2	39.3	-8.6	8.12	7.83	3.98	
6,820.0	39.20	275.91	6,743.0	-527.6	12.9	17.6	9.56	9.55	0.89	
6,865.0	44.10	273.20	6,776.6	-525.3	-16.9	47.2	11.60	10.89	-6.02	
6,910.0	48.50	270.82	6,807.7	-524.1	-49.4	79.6	10.50	9.78	-5.29	
6,955.0	50.90	270.01	6,836.8	-523.9	-83.7	113.8	5.51	5.33	-1.80	
7,000.0	52.70	269.26	6,864.6	-524.1	-119.1	149.2	4.21	4.00	-1.67	
7,045.0	54.40	269.02	6,891.4	-524.7	-155.3	185.3	3.80	3.78	-0.53	
7,090.0	58.40	268.78	6,916.3	-525.4	-192.7	222.8	8.90	8.89	-0.53	
7,135.0	63.70	268.75	6,938.1	-526.2	-232.1	262.1	11.78	11.78	-0.07	
7,180.0	67.70	269.46	6,956.6	-526.9	-273.1	303.1	9.00	8.89	1.58	
7,225.0	70.70	270.76	6,972.5	-526.8	-315.1	345.1	7.19	6.67	2.89	
7,270.0	73.50	269.70	6,986.4	-526.6	-358.0	387.8	6.61	6.22	-2.36	
7,315.0	76.70	270.33	6,997.9	-526.6	-401.4	431.2	7.24	7.11	1.40	
7,360.0	79.60	270.49	7,007.2	-526.3	-445.5	475.1	6.45	6.44	0.36	
7,393.0	81.80	270.59	7,012.5	-526.0	-478.0	507.6	6.67	6.67	0.30	
7,512.1	85.41	270.02	7,025.8	-525.3	-596.4	625.7	3.07	3.03	-0.48	
Five Rivers K07-62-1HN Landing Pt.										
7,538.0	86.20	269.90	7,027.7	-525.4	-622.2	651.5	3.07	3.03	-0.47	
7,628.0	88.60	269.83	7,031.8	-525.6	-712.1	741.3	2.67	2.67	-0.08	
7,718.0	89.60	269.28	7,033.2	-526.3	-802.1	831.2	1.27	1.11	-0.61	
7,808.0	90.40	268.48	7,033.2	-528.0	-892.1	921.1	1.26	0.89	-0.89	
7,897.0	91.10	267.92	7,032.0	-530.8	-981.0	1,010.1	1.01	0.79	-0.63	
7,987.0	91.60	267.87	7,029.9	-534.1	-1,070.9	1,100.0	0.56	0.56	-0.06	
8,077.0	91.70	266.76	7,027.3	-538.4	-1,160.8	1,190.0	1.24	0.11	-1.23	
8,167.0	91.00	268.86	7,025.2	-541.8	-1,250.7	1,279.9	2.46	-0.78	2.33	
8,257.0	89.80	271.22	7,024.5	-541.7	-1,340.7	1,369.8	2.94	-1.33	2.62	
8,346.0	90.20	273.89	7,024.5	-537.8	-1,429.6	1,458.3	3.03	0.45	3.00	
8,436.0	90.50	274.77	7,024.0	-531.0	-1,519.3	1,547.5	1.03	0.33	0.98	
8,526.0	90.60	273.02	7,023.1	-524.9	-1,609.1	1,636.8	1.95	0.11	-1.94	
8,616.0	90.90	274.59	7,021.9	-518.9	-1,698.9	1,726.1	1.78	0.33	1.74	
8,705.0	91.50	270.75	7,020.1	-514.7	-1,787.8	1,814.5	4.37	0.67	-4.31	
8,795.0	91.50	269.90	7,017.7	-514.2	-1,877.7	1,904.3	0.94	0.00	-0.94	
8,885.0	91.10	268.00	7,015.7	-515.9	-1,967.7	1,994.2	2.16	-0.44	-2.11	
8,975.0	89.40	267.89	7,015.3	-519.1	-2,057.6	2,084.2	1.89	-1.89	-0.12	
9,065.0	89.70	267.53	7,016.0	-522.7	-2,147.6	2,174.2	0.52	0.33	-0.40	
9,155.0	89.10	268.93	7,016.9	-525.5	-2,237.5	2,264.1	1.69	-0.67	1.56	
9,244.0	89.40	267.51	7,018.1	-528.2	-2,326.5	2,353.1	1.63	0.34	-1.60	
9,334.0	89.30	268.11	7,019.1	-531.7	-2,416.4	2,443.1	0.68	-0.11	0.67	
9,424.0	89.90	268.49	7,019.8	-534.3	-2,506.3	2,533.0	0.79	0.67	0.42	
9,514.0	90.10	268.67	7,019.8	-536.6	-2,596.3	2,623.0	0.30	0.22	0.20	

Company:	Noble Energy Inc.- Weld County, CO (Grid North)	Local Co-ordinate Reference:	Well Five Rivers K07-62-1HN
Project:	Sec.8-T4N-R66W	TVD Reference:	WELL @ 4718.0ft (Precision 828 RKB - 16')
Site:	Five Rivers K07-62-1HN Pad Sec.8-T4N-R66W	MD Reference:	WELL @ 4718.0ft (Precision 828 RKB - 16')
Well:	Five Rivers K07-62-1HN	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	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)	
9,604.0	90.40	268.90	7,019.4	-538.5	-2,686.3	2,712.9	0.42	0.33	0.26	
9,694.0	90.30	267.92	7,018.8	-541.0	-2,776.3	2,802.9	1.09	-0.11	-1.09	
9,784.0	90.30	268.47	7,018.3	-543.8	-2,866.2	2,892.8	0.61	0.00	0.61	
9,874.0	89.70	269.04	7,018.3	-545.8	-2,956.2	2,982.8	0.92	-0.67	0.63	
9,963.0	90.50	270.59	7,018.2	-546.1	-3,045.2	3,071.7	1.96	0.90	1.74	
10,053.0	91.50	269.87	7,016.6	-545.7	-3,135.2	3,161.5	1.37	1.11	-0.80	
10,143.0	89.90	268.60	7,015.5	-546.9	-3,225.1	3,251.4	2.27	-1.78	-1.41	
10,219.0	89.20	269.72	7,016.1	-548.0	-3,301.1	3,327.3	1.74	-0.92	1.47	
10,312.0	89.00	269.53	7,017.6	-548.6	-3,394.1	3,420.2	0.30	-0.22	-0.20	
10,405.0	89.10	270.27	7,019.1	-548.8	-3,487.1	3,513.0	0.80	0.11	0.80	
10,496.0	91.20	272.33	7,018.9	-546.7	-3,578.1	3,603.7	3.23	2.31	2.26	
10,589.0	91.20	271.94	7,016.9	-543.3	-3,671.0	3,696.3	0.42	0.00	-0.42	
10,684.0	90.90	270.87	7,015.2	-540.9	-3,765.9	3,790.9	1.17	-0.32	-1.13	
10,776.0	89.30	266.77	7,015.0	-542.8	-3,857.9	3,882.8	4.78	-1.74	-4.46	
10,868.0	90.00	268.57	7,015.6	-546.6	-3,949.8	3,974.8	2.10	0.76	1.96	
10,960.0	89.80	271.35	7,015.8	-546.6	-4,041.8	4,066.6	3.03	-0.22	3.02	
11,051.0	90.20	271.43	7,015.8	-544.4	-4,132.8	4,157.3	0.45	0.44	0.09	
11,143.0	90.60	272.01	7,015.1	-541.7	-4,224.7	4,249.0	0.77	0.43	0.63	
11,236.0	91.80	272.50	7,013.2	-538.0	-4,317.6	4,341.5	1.39	1.29	0.53	
11,330.0	90.80	270.99	7,011.0	-535.1	-4,411.6	4,435.1	1.93	-1.06	-1.61	
11,424.0	90.90	271.99	7,009.6	-532.7	-4,505.5	4,528.8	1.07	0.11	1.06	
11,518.0	91.10	272.62	7,008.0	-528.9	-4,599.4	4,622.3	0.70	0.21	0.67	
11,613.0	90.40	271.15	7,006.8	-525.8	-4,694.4	4,716.9	1.71	-0.74	-1.55	
11,706.0	90.10	270.43	7,006.3	-524.5	-4,787.4	4,809.7	0.84	-0.32	-0.77	
11,801.0	89.90	270.32	7,006.3	-523.9	-4,882.4	4,904.5	0.24	-0.21	-0.12	
11,895.0	90.20	269.32	7,006.3	-524.2	-4,976.4	4,998.3	1.11	0.32	-1.06	
11,989.0	90.50	268.42	7,005.7	-526.0	-5,070.3	5,092.3	1.01	0.32	-0.96	
12,084.0	90.50	267.09	7,004.9	-529.8	-5,165.3	5,187.2	1.40	0.00	-1.40	
12,178.0	90.20	267.18	7,004.3	-534.5	-5,259.1	5,281.2	0.33	-0.32	0.10	
12,272.0	91.00	269.80	7,003.3	-536.9	-5,353.1	5,375.2	2.91	0.85	2.79	
12,367.0	91.20	269.08	7,001.5	-537.9	-5,448.1	5,470.1	0.79	0.21	-0.76	
12,461.0	90.70	270.10	6,999.9	-538.5	-5,542.1	5,563.9	1.21	-0.53	1.09	
12,556.0	90.90	270.01	6,998.6	-538.4	-5,637.0	5,658.7	0.23	0.21	-0.09	
12,650.0	91.30	270.18	6,996.8	-538.3	-5,731.0	5,752.6	0.46	0.43	0.18	
12,771.0	91.40	270.26	6,993.9	-537.8	-5,825.0	5,873.3	0.11	0.08	0.07	
12,861.0	91.60	270.21	6,991.6	-537.5	-5,942.0	5,963.1	0.23	0.22	-0.06	
12,951.0	91.30	269.55	6,989.3	-537.6	-6,031.9	6,052.9	0.81	-0.33	-0.73	
13,041.0	92.00	269.25	6,986.7	-538.6	-6,121.9	6,142.8	0.85	0.78	-0.33	
13,131.0	90.60	268.99	6,984.7	-540.0	-6,211.9	6,232.7	1.58	-1.56	-0.29	
13,220.0	89.90	268.65	6,984.3	-541.8	-6,300.8	6,321.6	0.87	-0.79	-0.38	
13,310.0	89.00	270.46	6,985.1	-542.5	-6,390.8	6,411.5	2.25	-1.00	2.01	
13,400.0	90.20	271.08	6,985.8	-541.3	-6,480.8	6,501.3	1.50	1.33	0.69	
13,490.0	90.20	270.54	6,985.5	-540.0	-6,570.8	6,591.0	0.60	0.00	-0.60	
13,580.0	90.50	269.94	6,984.9	-539.6	-6,660.8	6,680.9	0.75	0.33	-0.67	
13,670.0	90.30	272.93	6,984.3	-537.4	-6,750.8	6,770.5	3.33	-0.22	3.32	
13,760.0	91.00	274.57	6,983.3	-531.5	-6,840.6	6,859.8	1.98	0.78	1.82	
13,850.0	90.00	275.01	6,982.5	-524.0	-6,930.2	6,948.9	1.21	-1.11	0.49	
13,940.0	90.50	274.17	6,982.1	-516.8	-7,019.9	7,038.1	1.09	0.56	-0.93	
14,029.0	90.10	273.66	6,981.6	-510.7	-7,108.7	7,126.4	0.73	-0.45	-0.57	
14,119.0	90.50	271.27	6,981.1	-506.8	-7,198.6	7,215.9	2.69	0.44	-2.66	
14,209.0	90.20	269.77	6,980.6	-506.0	-7,288.6	7,305.7	1.70	-0.33	-1.67	
14,299.0	91.20	271.95	6,979.5	-504.7	-7,378.6	7,395.4	2.66	1.11	2.42	
14,389.0	88.90	270.13	6,979.4	-503.0	-7,468.6	7,485.2	3.26	-2.56	-2.02	
14,479.0	88.20	268.59	6,981.7	-504.0	-7,558.6	7,575.0	1.88	-0.78	-1.71	

Company:	Noble Energy Inc.- Weld County, CO (Grid North)	Local Co-ordinate Reference:	Well Five Rivers K07-62-1HN
Project:	Sec.8-T4N-R66W	TVD Reference:	WELL @ 4718.0ft (Precision 828 RKB - 16')
Site:	Five Rivers K07-62-1HN Pad Sec.8-T4N-R66W	MD Reference:	WELL @ 4718.0ft (Precision 828 RKB - 16')
Well:	Five Rivers K07-62-1HN	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	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)
14,568.0	89.30	268.16	6,983.6	-506.6	-7,647.5	7,664.0	1.33	1.24	-0.48
14,658.0	90.80	267.74	6,983.6	-509.8	-7,737.4	7,754.0	1.73	1.67	-0.47
14,748.0	90.70	267.28	6,982.4	-513.7	-7,827.3	7,843.9	0.52	-0.11	-0.51
14,838.0	90.90	267.38	6,981.1	-517.9	-7,917.2	7,933.9	0.25	0.22	0.11
14,928.0	89.30	267.12	6,981.0	-522.2	-8,007.1	8,023.9	1.80	-1.78	-0.29
15,018.0	89.50	266.79	6,981.9	-527.0	-8,097.0	8,113.9	0.43	0.22	-0.37
15,107.0	90.30	268.89	6,982.1	-530.3	-8,185.9	8,202.9	2.52	0.90	2.36
15,197.0	89.60	267.68	6,982.1	-533.0	-8,275.9	8,292.9	1.55	-0.78	-1.34
15,287.0	90.00	268.51	6,982.5	-536.0	-8,365.8	8,382.8	1.02	0.44	0.92
15,377.0	90.80	270.39	6,981.8	-536.9	-8,455.8	8,472.7	2.27	0.89	2.09
15,467.0	90.00	265.87	6,981.2	-539.8	-8,545.7	8,562.7	5.10	-0.89	-5.02
15,557.0	90.30	269.74	6,981.0	-543.3	-8,635.7	8,652.6	4.31	0.33	4.30
15,647.0	90.10	268.91	6,980.6	-544.3	-8,725.7	8,742.5	0.95	-0.22	-0.92
15,736.0	91.20	270.62	6,979.6	-544.7	-8,814.6	8,831.4	2.28	1.24	1.92
15,826.0	89.70	271.44	6,978.9	-543.1	-8,904.6	8,921.1	1.90	-1.67	0.91
15,916.0	90.20	270.84	6,979.0	-541.3	-8,994.6	9,010.9	0.87	0.56	-0.67
16,006.0	90.20	269.25	6,978.7	-541.2	-9,084.6	9,100.7	1.77	0.00	-1.77
16,090.0	90.60	267.99	6,978.1	-543.2	-9,168.6	9,184.6	1.57	0.48	-1.50
16,152.0	90.60	267.99	6,977.5	-545.4	-9,230.5	9,246.6	0.00	0.00	0.00
Five Rivers K07-62-1HN BHL 330'FSL & 535'FWL									

Checked By: _____ Approved By: _____ Date: _____