



Directional Survey Report

Geothermal Resource Group, Inc.

Well ID: Forge 56-32

Well Name: 56-32

Field: UTAHFORGE

Sect: 32 Town: 26S Rng: 9W County: Beaver State: UT

Survey Type	Meas. Depth (ft)	Inc. (deg)	Azimuth (deg)	TVD (ft)	Coordinates N-S (ft)	E-W (ft)	Closure (ft)	Vertical Section (ft)	Dog Leg Severity (deg/100)
Wellbore: Original Wellbore					Plane of Vertical Section: 0				
** Tieln	0.0	0.00	0	0.0	0.0	0.0		0.0	
MWD	201.0	0.22	63.64	201.0	0.2	0.3	0.4	0.2	0.109
MWD	292.0	0.43	44.92	292.0	0.5	0.7	0.9	0.5	0.256
MWD	401.0	0.70	31.38	401.0	1.3	1.4	1.9	1.3	0.275
MWD	493.0	0.70	352.1	493.0	2.4	1.6	2.9	2.4	0.511
MWD	585.0	1.14	358.25	585.0	3.9	1.5	4.1	3.9	0.489
MWD	676.0	1.05	258.25	676.0	4.6	0.6	4.6	4.6	1.845
MWD	767.0	1.36	355	767.0	5.5	-0.3	5.5	5.5	1.992
MWD	858.0	1.54	7.21	857.9	7.8	-0.2	7.8	7.8	0.392
MWD	949.0	1.41	6.33	948.9	10.1	0.1	10.1	10.1	0.145
MWD	1,040.0	1.54	10.46	1,039.9	12.4	0.4	12.4	12.4	0.184
MWD	1,135.0	1.71	5.63	1,134.8	15.1	0.8	15.1	15.1	0.230
MWD	1,230.0	1.85	13.45	1,229.8	18.0	1.3	18.0	18.0	0.295
MWD	1,325.0	1.85	16.88	1,324.7	21.0	2.1	21.1	21.0	0.117
MWD	1,419.0	2.02	16.7	1,418.7	24.0	3.0	24.2	24.0	0.181
MWD	1,514.0	1.36	30.5	1,513.6	26.6	4.1	26.9	26.6	0.811
MWD	1,608.0	1.54	37.53	1,607.6	28.5	5.4	29.0	28.5	0.269
MWD	1,703.0	1.71	43.6	1,702.6	30.6	7.1	31.4	30.6	0.254
MWD	1,798.0	1.98	49.14	1,797.5	32.7	9.4	34.0	32.7	0.340
MWD	1,892.0	1.36	55.82	1,891.5	34.4	11.5	36.2	34.4	0.690
MWD	1,986.0	1.27	71.72	1,985.5	35.3	13.4	37.8	35.3	0.398
MWD	2,081.0	1.45	63.02	2,080.4	36.2	15.5	39.4	36.2	0.288
MWD	2,175.0	1.23	72.43	2,174.4	37.0	17.5	41.0	37.0	0.330
MWD	2,270.0	1.49	60.74	2,269.4	37.9	19.6	42.7	37.9	0.399
MWD	2,365.0	1.36	74.27	2,364.3	38.9	21.7	44.5	38.9	0.379
MWD	2,458.0	1.32	71.2	2,457.3	39.5	23.8	46.1	39.5	0.088
MWD	2,551.0	1.67	73.66	2,550.3	40.2	26.1	48.0	40.2	0.383
MWD	2,648.0	2.02	78.93	2,647.2	40.9	29.2	50.3	40.9	0.401
MWD	2,743.0	2.02	85.26	2,742.2	41.4	32.5	52.6	41.4	0.235
MWD	2,839.0	1.54	70.32	2,838.1	42.0	35.4	54.9	42.0	0.691
MWD	2,934.0	1.27	61.7	2,933.1	42.9	37.5	57.0	42.9	0.360
MWD	3,029.0	1.80	66.01	3,028.1	44.0	39.8	59.3	44.0	0.571
MWD	3,124.0	0.97	100.38	3,123.0	44.5	41.9	61.1	44.5	1.199
MWD	3,219.0	0.70	92.55	3,218.0	44.3	43.3	62.0	44.3	0.308
MWD	3,314.0	1.41	113.56	3,313.0	43.8	45.0	62.8	43.8	0.839
MWD	3,410.0	1.49	110.57	3,409.0	42.9	47.2	63.8	42.9	0.115
MWD	3,447.0	1.45	119.54	3,446.0	42.5	48.1	64.2	42.5	0.631
MWD	3,497.0	1.45	119.71	3,496.0	41.9	49.2	64.6	41.9	0.009
MWD	3,592.0	0.09	235.73	3,590.9	41.2	50.2	64.9	41.2	1.570
MWD	3,687.0	1.19	275.81	3,685.9	41.3	49.1	64.2	41.3	1.182
MWD	3,792.0	1.14	257.35	3,790.9	41.2	47.0	62.5	41.2	0.359
MWD	3,877.0	1.71	259.02	3,875.9	40.8	44.9	60.7	40.8	0.672
MWD	3,972.0	2.37	239.68	3,970.8	39.5	41.9	57.5	39.5	0.995
MWD	4,067.0	0.88	14.51	4,065.8	39.2	40.3	56.3	39.2	3.216



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MWD	4,163.0	0.70	68.65	4,161.8	40.1	41.1	57.4	40.1	0.767
MWD	4,258.0	1.14	248.47	4,256.8	40.0	40.7	57.1	40.0	1.937
MWD	4,353.0	1.89	253.31	4,351.8	39.2	38.4	54.8	39.2	0.800
MWD	4,448.0	1.19	338.56	4,446.7	39.7	36.5	53.9	39.7	2.261
MWD	4,544.0	3.34	310.96	4,542.7	42.4	34.0	54.4	42.4	2.449
MWD	4,640.0	2.02	246.1	4,638.6	43.6	30.4	53.1	43.6	3.211
MWD	4,734.0	1.27	30.85	4,732.6	43.8	29.4	52.7	43.8	3.344
MWD	4,829.0	0.70	7.29	4,827.5	45.3	30.0	54.3	45.3	0.724
MWD	4,924.0	0.84	3.61	4,922.5	46.6	30.1	55.4	46.6	0.156
MWD	5,018.0	0.75	295.93	5,016.5	47.5	29.6	56.0	47.5	0.945
MWD	5,113.0	1.85	211.03	5,111.5	46.5	28.2	54.4	46.5	2.035
MWD	5,208.0	2.42	23.91	5,206.5	47.0	28.3	54.8	47.0	4.486
MWD	5,302.0	2.68	273.61	5,300.4	48.9	26.9	55.8	48.9	4.455
MWD	5,397.0	1.96	289.22	5,395.3	49.6	23.1	54.7	49.6	1.002
MWD	5,492.0	3.92	267.35	5,490.2	50.0	18.3	53.3	50.0	2.341
MWD	5,587.0	6.34	263.45	5,584.8	49.3	9.9	50.2	49.3	2.572
MWD	5,681.0	5.97	255.77	5,678.3	47.5	0.0	47.5	47.5	0.959
MWD	5,776.0	4.04	248.12	5,772.9	45.0	-7.9	45.7	45.0	2.145
MWD	5,871.0	4.02	254.32	5,867.7	42.9	-14.2	45.1	42.9	0.459
MWD	5,954.0	4.02	231.45	5,950.5	40.3	-19.3	44.6	40.3	1.919
MWD	6,049.0	3.45	191.93	6,045.3	35.4	-22.5	41.9	35.4	2.716
MWD	6,144.0	2.73	190.1	6,140.2	30.4	-23.5	38.4	30.4	0.765
MWD	6,238.0	0.77	198.5	6,234.1	27.6	-24.1	36.6	27.6	2.097
MWD	6,333.0	1.45	232.32	6,329.1	26.2	-25.2	36.4	26.2	0.965
MWD	6,428.0	2.80	243.67	6,424.0	24.4	-28.2	37.4	24.4	1.482
MWD	6,523.0	2.49	239.04	6,518.9	22.4	-32.1	39.1	22.4	0.396
MWD	6,619.0	2.03	255.21	6,614.9	20.8	-35.5	41.2	20.8	0.814
MWD	6,713.0	0.71	244.52	6,708.8	20.2	-37.7	42.7	20.2	1.424
MWD	6,808.0	1.51	223.95	6,803.8	19.0	-39.1	43.4	19.0	0.928
MWD	6,902.0	2.28	225.96	6,897.8	16.8	-41.3	44.6	16.8	0.822
MWD	6,998.0	2.12	223.09	6,993.7	14.2	-43.9	46.1	14.2	0.202
MWD	7,093.0	1.58	233.46	7,088.6	12.1	-46.1	47.7	12.1	0.667
MWD	7,187.0	1.11	207.96	7,182.6	10.6	-47.6	48.7	10.6	0.798
MWD	7,281.0	1.49	226.8	7,276.6	8.9	-48.9	49.7	8.9	0.603
MWD	7,471.0	1.80	195.54	7,466.5	4.4	-51.5	51.7	4.4	0.492
MWD	7,566.0	2.35	198.56	7,561.5	1.1	-52.5	52.5	1.1	0.590
MWD	7,693.0	3.78	209.82	7,688.3	-5.0	-55.4	55.7	-5.0	1.216
MWD	7,788.0	2.83	205.09	7,783.1	-9.9	-58.0	58.8	-9.9	1.040
MWD	7,883.0	2.40	187.52	7,878.0	-14.0	-59.2	60.9	-14.0	0.952
MWD	7,977.0	3.49	215.53	7,971.9	-18.2	-61.2	63.8	-18.2	1.888
MWD	8,071.0	1.86	235.78	8,065.8	-21.4	-64.1	67.6	-21.4	1.979
MWD	8,166.0	0.75	258.68	8,160.8	-22.4	-66.0	69.7	-22.4	1.268
MWD	8,260.0	1.39	294.03	8,254.7	-22.1	-67.6	71.1	-22.1	0.948
MWD	8,355.0	2.45	290.59	8,349.7	-20.9	-70.6	73.6	-20.9	1.122
MWD	8,450.0	1.75	310.26	8,444.6	-19.2	-73.6	76.0	-19.2	1.047



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Survey Type	Meas. Depth (ft)	Inc. (deg)	Azimuth (deg)	TVD (ft)	Coordinates		Closure (ft)	Vertical Section (ft)	Dog Leg Severity (deg/100)
					N-S (ft)	E-W (ft)			
MWD	8,545.0	5.06	292.8	8,539.5	-16.7	-78.5	80.3	-16.7	3.612
MWD	8,640.0	5.84	284.86	8,634.0	-13.8	-87.1	88.2	-13.8	1.140
MWD	8,735.0	4.18	281.32	8,728.7	-11.9	-95.1	95.9	-11.9	1.777
MWD	8,831.0	2.49	148.99	8,824.6	-13.0	-97.5	98.4	-13.0	6.395
MWD	8,927.0	2.44	260.67	8,920.5	-15.1	-98.4	99.6	-15.1	4.249
MWD	9,021.0	1.84	230.13	9,014.5	-16.4	-101.6	102.9	-16.4	1.348
MWD	9,093.0	2.99	239.87	9,086.4	-18.1	-104.1	105.6	-18.1	1.690
MWD	9,145.0	2.99	239.87	9,138.3	-19.5	-106.4	108.2	-19.5	0.000

Calculations using Minimum Curvature Method