



# Daily Drilling 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

Report No: 12

Report For 15-Feb-21

<b>Operator:</b> University of Utah	<b>Rig:</b> Frontier	<b>Spud Date:</b>	<b>Daily Cost / Mud (\$):</b> ---
<b>Measured Depth (ft):</b> 5143	<b>Last Casing:</b> 9.625 at 3,494	<b>Wellbore:</b> Original Wellbore	<b>AFE No.</b> <b>AFE (\$)</b> <b>Actual (\$)</b>
<b>Vertical Depth (ft):</b> 5141	<b>Next Casing:</b> 5.500 at 9,000	<b>RKB Elevation (ft):</b> 30.40	---      ---      ---
<b>Proposed TD (ft):</b> 9000	<b>Last BOP Test:</b> 12-Feb-21	<b>Job Reference RKB (ft):</b> 28.50	---      ---      ---
<b>Hole Made (ft) / Hrs:</b> 441 / 22.75	<b>Next BOP Test:</b>	<b>Working Interest:</b>	<b>Totals:</b> ---      ---
<b>Average ROP (ft/hr):</b> 19.38		<b>LOT (lbs/gal):</b> 16.00	<b>Well Cost (\$):</b> ---
<b>Drilling Days (act./plan):</b> 8/30	<b>Flat Days (act./plan):</b> 0/8	<b>Total Days (act./plan):</b> 8/38	<b>Days On Location:</b> 12
<b>Pers/Hrs: Operator:</b> 2 / 24	<b>Contractor:</b> 14 / 168	<b>Service:</b> 8 / 96	<b>Other:</b> 0 / 0 <b>Total:</b> 24 / 288

**Safety Summary:** No incidents or events reported. Conducted Safety Meeting.

**Current Operations:** Making up new 8-3/4" PDC bit and mud motor.

**Planned Operations:** Drill 8-3/4" hole with PDC bit.

**Toolpusher:** Justin Bristol, Steve Caldwell

**Wellsite Supervisors:** Virgil Welch, Paul Stroud

Tel No.: 7132807438

### Operations Summary

From	To	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	1:00	1.00	4,715	3-2-3	Slide drilled 8.-3/4" hole from 4,702' to 4,715'.	
1:00	11:30	10.50	4,932	3-2-2	Rotary drilled 8.-3/4" hole from 4,715' to 4,932'.	
11:30	12:00	0.50	4,932	SERV	Serviced Rig.	
12:00	23:15	11.25	5,143	3-2-2	Rotary drilled 8-3/4" hole from 4,932' to 5,143'.	
23:15	0:00	0.75	5,143	3-5-1	Circulated bottoms up in preparation for trip out of hole.	

### Management Summary

Drilled 8-3/4" hole from 4,702' to 5,143' and circulated bottoms up for trip out of hole due to pressure spike. NOTE: Bit was locked up and ground flat on two cones. Motor also failed.

### Comments

Drilling in Granodiorte.

### Casing/Tubular Information

Type	Size (ins)	Top MD (ft)	Top TVD (ft)	Bottom MD (ft)	Bottom TVD (ft)	Hole Section	OH Diam. (ins)	Nom. Wgt. (lbs)	Nominal Grade	LOT (lbs/gal)
FULL	20.000	30	30	129	129	COND				
FULL	13.375	0	0	382	382	SURF	17.500	55	J-55	16.30
FULL	9.625	0	0	3,494	3,488	INT1	12.250	36	J-55	16.00

### Mud Information

%														Gels			Temp		Mud	
Dens.	Vis	PV	YP	Filt.	Cake	pH/ES	Solids	Oil	Water	Sand	LGS	Cl	Ca	CaCl	10s	10m	30m	In	Out	Loss
15-Feb-21 22:00 at Depth 5,113 ft Mud Pits																				
8.60	44	11	21	8.8	1	10.5	5	0	95	1		1200	960		4	8	15	124	130	

### Mud Consumables

Item Description	Qty.	Cost	Item Description	Qty.	Cost
Barite - OTHER	10	---	caustic - OTHER	1	---
Defoamer - OTHER	2	---	DMA/SPA - 100#SK	2	---
Drispac - OTHER	1	---	Gel - OTHER	10	---
micro c - OTHER	10	---	SAwdust - OTHER	2	---
walnut Pine - OTHER	10	---	xanthan gum - OTHER	1	---

### Bit/BHA/Workstring Information

No Run		Make	Model	Diam	Depth In	This Run Dist	R.O.P. Hrs	Avg	Max	WOB	RPM	Torque	Mud Wt	Pump Flow	Press	J. Vel	P. Drp	HHP	JIF	
7	1	HTC	EP5475	8.750	4596	535	27.25	19.6	118.9	40	50	7	9	670	2700	234	425	166	705	
<b>Jets:</b> 20 20 20					<b>Out:</b> 5143	<b>Grade:</b> Cutter:	8 / 8		<b>Dull:</b> FC / BT	<b>Wear:</b> A	<b>Brgs:</b> 8	<b>Gge:</b> 0.25	<b>Pull:</b> PP							
<b>BHA - No. 7 - BIT, MMTR, XO, STAB, MONEL, SH/SUB, 12 DC, 24 HWDP = 1178.54</b>																				



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### Drilling Parameters

Depth (ft)		ROP (ft/hr)		WOB (lbs)		RPM		Torque (ft lbs)		Flow (gals/min)		Pressure (psi)
From	To	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	
4,702	4,832	18.0	22.0	35	45	50	55	7	8	740	768	2,700
<b>Annular Velocity:</b>		<b>Drill Collars:</b>		538.0		<b>Drill Pipe:</b>		340.0				
<b>Comments:</b> Rotating												
4,832	4,932	20.0	23.0	43	45	40	50	7	8	740	768	27,500
<b>Annular Velocity:</b>		<b>Drill Collars:</b>		538.0		<b>Drill Pipe:</b>		340.0				
<b>Comments:</b> Rotating												

### Miscellaneous Drilling Parameters

<b>Hook Loads (lbs):</b>	<b>Off Bottom Rotate:</b>	160	<b>Pick Up:</b>	170	<b>Slack Off:</b>	150	<b>Drag Avg/Max:</b>	10 / 15	
<b>Slow Circulation Data:</b>									
<b>Pump 1:</b>	20 spm	170 psi	40 spm	290 psi	60 spm	490 psi			
<b>Pump 2:</b>	20 spm	160 psi	40 spm	300 psi	60 spm	520 psi			

### Survey Information

Survey Type	Meas. Depth	Inc.	Azimuth	TVD	Closure	Vertical Section	Coordinates		
							N-S	E-W	D.L.S.
MWD	4,734.0	1.27	30.9	4,732.6	52.7	43.8	N 43.8	E 29.4	3.344
MWD	4,829.0	0.70	7.3	4,827.5	54.3	45.3	N 45.3	E 30.0	0.724
MWD	4,924.0	0.84	3.6	4,922.5	55.4	46.6	N 46.6	E 30.1	0.156
MWD	5,018.0	0.75	295.9	5,016.5	56.0	47.5	N 47.5	E 29.6	0.945

### Mud Log Information

Depth (ft)		TVD (ft)		Gas (Units)		Gas	Drilling	Pore	Mud	Shale	ROP	
From	To	From	To	Avg	Max	at Depth	Connect. Trip	Exp.	Press	Dens.	Dens.	Shale Sand
4,760	4,870	4,758	4,868									
<b>Formation Name:</b>												
<b>Lithology:</b> 80% Granodiorite, 20% altered zone (increase in Hematite * chlorite wash, infreq epidote)												
4,870	5,140	4,868	5,138									
<b>Formation Name:</b>												
<b>Lithology:</b> 100% Granodiorite												

### Rig Information

<b>Equipment Problems:</b>
<b>Location Condition:</b>
<b>Transport:</b>

### Solids Control Information

Screen Sizes:	Top	Bottom
<b>Shaker No 1:</b>	170	
<b>Shaker No 2:</b>	170	
<b>Shaker No 3:</b>	140	

### Drill Pipe Inventory

DP Size	Joints	Weight	Grade	Thread	DP Size	Joints	Weight	Grade	Thread
5	277	19.5	S-135	4.5IF					

### Safety Information

Meetings/Drills	Time	Description
Safety	60	Connections and pinch points
<b>First Aid Treatments:</b>		
<b>Medical Treatments:</b>		
<b>Lost Time Incidents:</b>		
<b>Days Since LTI:</b>		
<input type="checkbox"/> BOP Test	<input type="checkbox"/> Crownamatic Check	

### Weather Information

<b>Sky Condition:</b> Cloudy	<b>Visibility:</b> 8
<b>Air Temperature:</b> 27 degF	<b>Bar. Pressure:</b> 29.82
<b>Wind Speed/Dir:</b> 9 / SSW	<b>Wind Gusts:</b> 12