

**Daily Drilling Report**

Well ID: Forge 56-32

Field: UTAHFORGE

Job ID: Original

**Geothermal Resource Group, Inc.**

Well Name: 56-32

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

Report No: 21

Report For 24-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>	8353	<b>Last Casing:</b>	9.625 at 3,494	<b>Wellbore:</b>	Original Wellbore	<b>AFE No.</b>	
<b>Vertical Depth (ft):</b>	8348	<b>Next Casing:</b>	5.500 at 9,000	<b>RKB Elevation (ft):</b>	30.40	<b>AFE (\$)</b>	---
<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>	687 / 21.0	<b>Next BOP Test:</b>		<b>Working Interest:</b>		<b>Totals:</b>	---
<b>Average ROP (ft/hr):</b>	32.71			<b>LOT (lbs/gal):</b>	16.00	<b>Job/Well Cost (\$):</b>	---
<b>Drilling Days (act./plan):</b>	17/30	<b>Flat Days (act./plan):</b>	0/8	<b>Total Days (act./plan):</b>	17/38	<b>Days On Location:</b>	21
<b>Pers/Hrs:</b>	<b>Operator:</b> 2 / 24	<b>Contractor:</b>	14 / 168	<b>Service:</b>	11 / 132	<b>Other:</b>	0 / 0
						<b>Total:</b>	27 / 324

**Safety Summary:** No incidents or events reported. Conducted Safety Meeting.**Current Operations:** Drilling 8-3/4" hole at 8,471' at 0600 hours.**Planned Operations:** Rotary and slide drill 8-3/4" hole.

Plan to test EAVOR mud hammer in the mouse hole today. If successful, will attempt to drill with hammer, after logs.

**Toolpusher:** David Seddell, Vince Shaffer**Wellsite Supervisors:** Virgil Welch, Paul Stroud**Tel No.:** 7132807438**Operations Summary**

From	To	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	4:00	4.00	7,666	03-061	Made up bit and tools. Ran in hole to 3,561'.	
4:00	6:00	2.00	7,666	CUTDL	Slipped and cut 100' to drilling line.	
6:00	7:30	1.50	7,666	3-6-1	Ran in the hole to bottom at 7,666'.	
7:30	8:00	0.50	7,751	3-2-2	Rotary drilled 8-3/4" hole from 7,666' to 7,751'.	
8:00	8:30	0.50	7,776	3-2-3	Slide drilled 8-3/4" hole from 7,751' to 7,776'.	
8:30	9:30	1.00	7,846	3-2-2	Rotary drilled 8-3/4" hole from 7,776' to 7,846'.	
9:30	10:30	1.00	7,871	3-2-3	Slide drilled 8-3/4" hole from 7,846' to 7,871'.	
10:30	12:30	2.00	8,000	3-2-2	Rotary drilled 8-3/4" hole from 7,871' to 8,000'.	
12:30	13:00	0.50	8,000	3-5-1	Circulated bottoms up.	
13:00	13:30	0.50	8,000	3-6-2	Pulled out of the hole from 8,000' to 7,750'.	
13:30	14:00	0.50	8,000	3-3	Reamed 8-3/4" hole from 7,750' to 8,000'.	
14:00	14:30	0.50	8,035	3-2-2	Rotary drilled 8-3/4" hole from 8,000' to 8,035'.	
14:30	16:00	1.50	8,065	3-2-3	Slide drilled 8-3/4" hole from 8,035' to 8,065'.	
16:00	18:00	2.00	8,140	3-2-2	Rotary drilled 8-3/4" hole from 8,065' to 8,140'.	
18:00	18:30	0.50	8,147	3-2-3	Slide drilled 8-3/4" hole from 8,140' to 8,147'.	
18:30	0:00	5.50	8,353	3-2-2	Rotary drilled 8-3/4" hole from 8,147' to 8,353'.	

**Management Summary**

Made up bit and BHA. Ran in the well bore to 3,561'. Slipped and cut 100' of drilling line. Ran to bottom at 7,666'. Rotary and slide drilled 8-3/4" hole from 7,666' to 8,353'.

**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
24-Feb-21 21:00 at Depth 8,238 ft Mud Pits																				
9.00	40	40	12	10.6	1	10.5	8	0	92	0.1		1200	1200		4	5	9	107	127	

**Mud Consumables**

Item Description	Qty.	Cost	Item Description	Qty.	Cost
Bicarb - OTHER	5	---	caustic - OTHER	4	---
Defoamer - OTHER	1	---	lime - OTHER	2	---
soda ash - OTHER	6	---	xanthan gum - OTHER	11	---



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## Bit/BHA/Workstring Information

					Depth	This Run		R.O.P.				Mud		Pump					
No	Run	Make	Model	Diam	In	Dist	Hrs	Avg	Max	WOB	RPM	Torque	Wt	Flow	Press	J. Vel	P. Drp	HHP	JIF
13	1	REED	TKC63	8.750	7666	687	15.5	44.3	120.0	30	190	9	9	670	3250	256	528	206	799
Jets: 13 13 13 14 14 14					Out:		Grade: Cutter: /			Dull: /		Wear:		Brgs:		Gge:		Pull:	
BHA - No. 14 - BIT, MMTR, OTHER, STAB, MONEL, 12 DC, 24 HWDP = 1227.95																			

## 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	
8,100	8,110	60.0	107.0	43	45	40	41	8	11	654	654	3,100
Annular Velocity:		Drill Collars:		478.0	Drill Pipe:		318.0					
8,110	8,260	32.0	146.0	41	44	55	57	5	15	654	654	3,200
Annular Velocity:		Drill Collars:		478.0	Drill Pipe:		318.0					
8,260	8,340	30.0	122.0	40	42	40	43	7	12	654	654	3,300
Annular Velocity:		Drill Collars:		478.0	Drill Pipe:		318.0					

## Survey Information

Survey Type	Meas. Depth	Inc.	Azimuth	TVD	Closure	Vertical Section	Coordinates		
							N-S	E-W	D.L.S.
MWD	7,788.0	2.83	205.1	7,783.1	58.8	-9.9	S 9.9	W 58.0	1.040
MWD	7,883.0	2.40	187.5	7,878.0	60.9	-14.0	S 14.0	W 59.2	0.952
MWD	7,977.0	3.49	215.5	7,971.9	63.8	-18.2	S 18.2	W 61.2	1.888
MWD	8,071.0	1.86	235.8	8,065.8	67.6	-21.4	S 21.4	W 64.1	1.979
MWD	8,166.0	0.75	258.7	8,160.8	69.7	-22.4	S 22.4	W 66.0	1.268
MWD	8,260.0	1.39	294.0	8,254.7	71.1	-22.1	S 22.1	W 67.6	0.948
MWD	8,355.0	2.45	290.6	8,349.7	73.6	-20.9	S 20.9	W 70.6	1.122

## Mud Log Information

Depth (ft)		TVD (ft)		Gas (Units)		Gas		Drilling Exp.	Pore Press	Mud Dens.	Shale Dens.	ROP	
From	To	From	To	Avg	Max	at Depth	Connect. Trip					Shale	Sand
7,810	7,860									9.00			
Formation Name:													
Lithology: 100% Granodiorite (increase in secondary mineralization eg. chlorite, calcite, epidote)													
7,860	8,100									9.00			
Formation Name:													
Lithology: 100% Granodiorite (minimal alteration, primarily rare chlorite-minor chlorite)													
8,100	8,110									9.00			
Formation Name:													
Lithology: 100% Quartz Monzonite (possible felsic dike, but contained decreased quartz & increased K-spar)													
8,110	8,210									9.00			
Formation Name:													
Lithology: 100 Granodiorite, (0-80% altered zone, with felsic dike @ 8120') Significant increase in secondary calcite.													
8,210	8,260									9.00			
Formation Name:													
Lithology: 100% Quartz Monzonite from 8210-8240', 100% Granodiorite from 8240-8260'.													
8,260	8,340	8,260								9.00			
Formation Name:													
Lithology: 100% Syenite (except at 8280', appears to be 50/50 Quartz Monzonite/Syenite)													

## Rig Information

Equipment Problems:

Location Condition:

Transport:



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### Solids Control Information

Screen Sizes: Top Bottom

Shaker No 1: 170

Shaker No 2: 170

Shaker No 3: 140

### Drill Pipe Inventory

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

Meetings/Drills Time

Description

Safety 60 Connections

First Aid Treatments:

Medical Treatments:

Lost Time Incidents:

Days Since LTI:

☐ BOP Test

☐ Crownamatic Check

### Weather Information

Sky Condition: Clear

Visibility: 10

Air Temperature: 18 degF

Bar. Pressure: 30.44

Wind Speed/Dir: 18 / N

Wind Gusts: 20