



# Daily Drilling Report

# Geothermal Resource Group, Inc.

Well ID: Forge 56-32

Job ID: Original

Well Name: 56-32

Field: UTAHFORGE

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

Report No: 23

Report For 26-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> 8900	<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> 8894	<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> 90 / 16.0	<b>Next BOP Test:</b>	<b>Working Interest:</b>	<b>Totals:</b> ---      ---
<b>Average ROP (ft/hr):</b> 5.63		<b>LOT (lbs/gal):</b> 16.00	<b>Job/Well Cost (\$):</b> ---
<b>Drilling Days (act./plan):</b> 19/30	<b>Flat Days (act./plan):</b> 0/8	<b>Total Days (act./plan):</b> 19/38	<b>Days On Location:</b> 23
<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:** Finished drilling 8-3/4" hole to TD (9,145'). Pulling out of the hole for E-Logs.

**Planned Operations:** Finish pulling out of the hole, rig up and run E-Logs and core side wall samples.

**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	1:00	1.00	8,855	3-2-2	Rotary drilled 8-3/4" hole from 8,810' to 8,855'.	
1:00	2:00	1.00	8,871	3-2-3	Slide drilled 8-3/4" hole from 8,855' to 8,871'.	
2:00	3:00	1.00	8,900	3-2-2	Rotary drilled 8-3/4" hole from 8,871' to 8,900'.	
3:00	4:00	1.00	8,900	3-5-1	Circulated well bore clean.	
4:00	9:00	5.00	8,900	3-6-1	Pulled out of the hole laying down bit and tools.	
9:00	14:00	5.00	8,900	OTHER	Tested 2 mud hammers in "Mouse Hole" with mud and water. Hammers worked with water but not with mud.	
14:00	21:30	7.50	8,900	3-6-1	Made up bit and BHA 15 and staged in the hole 2,200-7,651' cooling well bore.	
21:30	22:00	0.50	8,900	3-6-1	Ran in the hole and encountered tight spot at 7651', jarred drill string free and worked tight spot to 8,188'.	
22:00	0:00	2.00	8,900	3-3	Reamed 8-3/4" hole from 8,188' to 8,923'.	

### Management Summary

Drilled 8-3/4" hole from 8,810' to 8,900' sliding and rotating. Pulled out of the well bore and tested mud hammers in "Mouse Hole". Hammers worked on water but failed on mud. Made up BHA15 and ran in the hole to 7,651' and encountered tight hole. Reamed 8-3/4" hole to 8,923'.

### Comments

While tripping in the well bore encountered very tight hole from 7651' to bottom.

Drilled 8-3/4" hole from 8810' to TD at 9145' MD, 9138' TVD at 0450 hours, 2-27-2021.

Bottom hole samples have not been analyzed yet due to fast P-Rates however samples indicate Gneiss formation with very little alteration.

### 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
26-Feb-21 17:00 at Depth 8,900 ft Mud Pits																				
9.00	42	15	14	10.4	1	10.5	8	0	92	0.1		1200	1122		4	5	9	108	118	

### Bit/BHA/Workstring Information

No Run		Make		Model		Diam		Depth		This Run		R.O.P.		Mud		Pump				
In	Dist	Hrs	Avg	Max	WOB	RPM	Torque	Wt	Flow	Press	J. Vel	P. Drp	HPH	JIF						
13	1	REED	TKC63	8.750	7666	1,212	42.5	28.5	61.0	45	40	12	9	697	3100	266	571	232	865	
<b>Jets:</b> 13 13 13 14 14 14		<b>Out:</b> 8900		<b>Grade:</b> Cutter:		8 / 2		<b>Dull:</b> BT / BT		<b>Wear:</b> S		<b>Brgs:</b> X		<b>Gge:</b> 1		<b>Pull:</b> PR				
14	1	REED	TKC813	8.750	8900															
<b>Jets:</b> 14 14 14 14 11 11 11 11		<b>Out:</b>		<b>Grade:</b> Cutter:		/		<b>Dull:</b> /		<b>Wear:</b>		<b>Brgs:</b>		<b>Gge:</b>		<b>Pull:</b>				

**BHA - No. 15 - BIT, MMTR, OTHER, STAB, MONEL, 12 DC, JAR, 24 HWDP = 1202.18**



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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	
8,810	8,900	30.0	80.0	45	45	190	190	9	9	670	670	

Annular Velocity: Drill Collars: 478.6 Drill Pipe: 318.5

### Miscellaneous Drilling Parameters

Hook Loads (lbs): Off Bottom Rotate: Pick Up: Slack Off: Drag Avg/Max: /

#### Slow Circulation Data:

Pump 1:	20 spm	170 psi	40 spm	290 psi	60 spm	490 psi
Pump 2:	20 spm	160 psi	40 spm	300 psi	60 spm	520 psi

### 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
8,840	8,900										9.00			

Formation Name:

Lithology: 40-100% Gneiss (gneissic banding, significant biotite, rexin & migmatic texture in quartz)

### Rig Information

Equipment Problems:

Location Condition:

Transport:

### 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
5	277	19.5	S-135	4.5IF					

### Safety Information

Meetings/Drills	Time	Description
Safety	60	Tripping

First Aid Treatments:

Medical Treatments:

Lost Time Incidents:

Days Since LTI:

BOP Test

Crownamatic Check

### Weather Information

Sky Condition:	Cloudy	Visibility:	10
Air Temperature:	18 degF	Bar. Pressure:	29.73
Wind Speed/Dir:	16 / SW	Wind Gusts:	20