



# 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: 17

Report For 20-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> 7207	<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> 7198	<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> 442 / 23.0	<b>Next BOP Test:</b>	<b>Working Interest:</b>	<b>Totals:</b> ---		
<b>Average ROP (ft/hr):</b> 19.22		<b>LOT (lbs/gal):</b> 16.00	<b>Job/Well Cost (\$):</b> ---		
<b>Drilling Days (act./plan):</b> 13/30	<b>Flat Days (act./plan):</b> 0/8	<b>Total Days (act./plan):</b> 13/38	<b>Days On Location:</b> 17		
<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:** Drilling 8-3/4" hole at 7,235'.

**Planned Operations:** Drill 8-3/4" hole to 7,620' and pull out for "Mud Hammer".

**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	8:30	8.50	6,965	3-2-2	Rotary drilled 8-3/4" hole from 6,765' to 6,965'.	
8:30	10:00	1.50	6,990	3-2-3	Slide drilled 8-3/4" hole from 6,965' to 6,990'.	
10:00	12:00	2.00	7,050	3-2-2	Rotary drilled 8-3/4" hole from 6,990' to 7,050'.	
12:00	12:30	0.50	7,050	SERV	Serviced Rig.	
12:30	13:00	0.50	7,060	3-2-2	Rotary drilled 8-3/4" hole from 7,050' to 7,060'.	
13:00	15:00	2.00	7,085	3-2-3	Slide drilled 8-3/4" hole from 7,060' to 7,085'.	
15:00	19:30	4.50	7,207	3-2-2	Rotary drilled 8-3/4" hole from 7,085' to 7,207'.	
19:30	20:00	0.50	7,207	3-5-1	Circulated bottoms up.	
20:00	0:00	4.00	7,207	3-6-2	Pulled out of the well bore laying down BHA and bit.	

### Management Summary

Drilled 8-3/4" hole from 6,765' to 7,207'. Pulled out of the well bore laying down Bit #10 and BHA.

### Comments

Bit 10 was grooved on shoulder and the discovery mud motor bearings were out.

Drilled in 100% Granodiorite with some heavy alterations at 6960' to 6980' with high percentage of biotite.

### 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
20-Feb-21 20:00 at Depth 2,707 ft Mud Pits																				
8.70	47	17	20	10	1	10	6	0	94	0.75		1100	1160		5	9	17	103	111	

### Mud Consumables

Item Description	Qty.	Cost	Item Description	Qty.	Cost
Barite - OTHER	40	---	caustic - OTHER	2	---
Gel - OTHER	20	---	lime - OTHER	1	---
micro c - OTHER	15	---	PAllets/Wrap - OTHER	2	---
walnut Pine - OTHER	15	---	xanthan gum - OTHER	5	---

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**Bit/BHA/Workstring Information**

No	Run	Make	Model	Diam	Depth		This Run			R.O.P.		Mud		Pump		J. Vel	P. Drp	HHP	JIF
					In	Dist	Hrs	Avg	Max	WOB	RPM	Torque	Wt	Flow	Press				
10	1	REED	TKC73	8.750	5999	1,156	55.5	20.8	40.0	40	40	9	670	3100	253	498	195	763	
<b>Jets:</b> 13 13 13 13 12 12 12					<b>Out:</b> 7207		<b>Grade:</b> Cutter: 3/8		<b>Dull:</b> BT/RO		<b>Wear:</b> S		<b>Brgs:</b> X		<b>Gge:</b> 1		<b>Pull:</b> PR		
<b>BHA - No. 10 - BIT, MMTR, OTHER, STAB, MONEL, 12 DC, 24 HWDP = 1169.59</b>																			

**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	
6,910	6,980	20.0	23.0	40	45	40	50	6	7	670	670	3,100
<b>Annular Velocity: Drill Collars:</b>				554.0		<b>Drill Pipe:</b>		351.0				
<b>Comments:</b> Granodiorite												
6,980	7,200	23.0	30.0	45	50	45	55	7	8	670	670	3,150
<b>Annular Velocity: Drill Collars:</b>				554.0		<b>Drill Pipe:</b>		351.0				
<b>Comments:</b> Granodiorite												
6,670	6,910	22.0	24.0	45	48	40	50	6	7	670	670	3,100
<b>Annular Velocity: Drill Collars:</b>				554.0		<b>Drill Pipe:</b>		351.0				
<b>Comments:</b> Granodiorite												

**Miscellaneous Drilling Parameters**

<b>Hook Loads (lbs):</b>	<b>Off Bottom Rotate:</b>	210	<b>Pick Up:</b>	220	<b>Slack Off:</b>	180	<b>Drag Avg/Max:</b>	10 / 10
<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		

**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
6,670	6,910	6,665	6,905											
<b>Formation Name:</b>														
<b>Lithology:</b> 100% Granodiorite														
6,910	6,980	6,905	6,975											
<b>Formation Name:</b>														
<b>Lithology:</b> 100% Granodiorite (high percentage of biotite, recryst. Qtz, hematite)														
6,980	7,200	6,975	7,195											
<b>Formation Name:</b>														
<b>Lithology:</b> 100% Granodiorite (Increase in pervasive chlorite)														

**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	Making connections, mixing chemicals, pinch points.
<b>First Aid Treatments:</b>	<b>Medical Treatments:</b>	<b>Lost Time Incidents:</b>
<input type="checkbox"/> BOP Test	<input type="checkbox"/> Crownamatic Check	<b>Days Since LTI:</b>



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## Weather Information

<b>Sky Condition:</b> Cloudy	<b>Visibility:</b> 10
<b>Air Temperature:</b> 21 degF	<b>Bar. Pressure:</b> 30.28
<b>Wind Speed/Dir:</b> 14 / N	<b>Wind Gusts:</b> 14