



Daily Drilling Report

Well ID: Forge 56-32

Field: UTAHFORGE

Geothermal Resource Group, Inc.

Well Name: 56-32

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

Report No: 13

Report For 16-Feb-21

Operator:	University of Utah	Rig:	Frontier	Spud Date:		Daily Cost / Mud (\$):	---
Measured Depth (ft):	5610	Last Casing:	9.625 at 3,494	Wellbore:	Original Wellbore	AFE No.	AFE (\$) Actual (\$)
Vertical Depth (ft):	5608	Next Casing:	5.500 at 9,000	RKB Elevation (ft):	30.40	---	---
Proposed TD (ft):	9000	Last BOP Test:	12-Feb-21	Job Reference RKB (ft):	28.50	---	---
Hole Made (ft) / Hrs:	467 / 23.5	Next BOP Test:		Working Interest:		Totals:	---
Average ROP (ft/hr):	19.87			LOT (lbs/gal):	16.00	Well Cost (\$):	---
Drilling Days (act./plan):	9/30	Flat Days (act./plan):	0/8	Total Days (act./plan):	9/38	Days On Location:	13
Pers/Hrs: Operator:	2 / 24	Contractor:	14 / 168	Service:	8 / 96	Other:	0 / 0 Total: 24 / 288

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

Current Operations: Changing out BHA and running in the hole with new 8-3/4" PDC

Planned Operations: Finish running in the hole with BHA #9. Continue drilling 8-3/4" hole to 7,500'.

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	5:00	5.00	5,143	3-6-2	Pulled out of the hole and laid down bit and mud motor.	
5:00	7:30	2.50	5,143	3-6-1	Made up new bit and mud motor, ran in the hole to 5,083'.	
7:30	8:00	0.50	5,143	3-53	Filled pipe and washed to bottom at 5,143'.	
8:00	8:30	0.50	5,174	3-2-2	Rotary drilled 8-3/4" hole from 5,143' to 5,174'.	
8:30	9:00	0.50	5,189	3-2-3	Slide drilled 8-3/4" hole from 5,174' to 5,189'.	
9:00	14:30	5.50	5,363	3-2-2	Rotary drilled 8-3/4" hole from 5,189' to 5,363'.	
14:30	15:30	1.00	5,375	3-2-3	Slide drilled 8-3/4" hole from 5,363' to 5,375'.	
15:30	22:00	6.50	5,543	3-2-2	Rotary drilled 8-3/4" hole from 5,375' to 5,543'.	
22:00	22:30	0.50	5,558	3-2-3	Slide drilled 8-3/4" hole from 5,543' to 5,558'.	
22:30	0:00	1.50	5,610	3-2-2	Rotary drilled 8-3/4" hole from 5,558' to 5,610'.	

Management Summary

Tripped for Bit and BHA#8. Rotated and slid drilled 8.75" hole from 4310' to 5610'.

Comments

Bit number 8 looks good. MWD failed and bearing in motor are worn out. Top stabilizer starting to come apart. Drilling in 100% Granodiotite.

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
16-Feb-21 22:00 at Depth 5,544 ft Mud Pits																				
8.70	44	12	16	9.8	1	10.5	6	0	94	1.25		1200	960		5	8	17	118	125	

Mud Consumables

Item Description	Qty.	Cost	Item Description	Qty.	Cost
Barite - OTHER	21	---	caustic - OTHER	4	---
Defoamer - OTHER	3	---	Driscac - OTHER	3	---
Gel - OTHER	20	---	lime - OTHER	3	---
micro c - OTHER	10	---	PAllets/Wrap - OTHER	4	---
soda ash - OTHER	1	---	walnut Pine - OTHER	24	---

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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	
7	1	HTC	EP5475	8.750	4596	467	15.42	30.3	61.0	40	40	7	8	700	2800	244	416	170	690	
Jets: 20 20 20					Out: 5143		Grade: Cutter:		8 / 8		Dull: FC / BT		Wear: A		Brgs: 8		Gge: 0.25		Pull: PP	
8	1	REED	TKC63	8.750	5143															
Jets: 14 14 14 14 14 14					Out: 5610		Grade: Cutter:		1 / 1		Dull: NO / NO		Wear: A		Brgs: X		Gge: 1		Pull: DTF	
BHA - No. 8 - BIT, MMTR, OTHER, STAB, MONEL, SHOCK, DC, HWDP = 1178.50																				

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	
4,143	5,174	30.0	41.0	40	45	40	45	6	7	700	700	2,750
Annular Velocity:		Drill Collars:		538.0		Drill Pipe:		340.0				
5,174	5,189	20.0	25.0	45	45	0	0			700	701	2,750
Annular Velocity:		Drill Collars:		538.0		Drill Pipe:		340.0				
5,189	5,363	30.0	31.0	45	45	40	50	6	7	700	700	2,750
Annular Velocity:		Drill Collars:		538.0		Drill Pipe:		340.0				
5,363	5,375	20.0	21.0	40	44	0	0			700	700	2,780
Annular Velocity:		Drill Collars:		538.0		Drill Pipe:		340.0				
5,375	5,545	30.0	41.0	40	45	40	45	7	8	700	700	2,800
Annular Velocity:		Drill Collars:		538.0		Drill Pipe:		340.0				
5,545	5,558	20.0	20.0	40	45	0	0	0	0	700	700	2,800
Annular Velocity:		Drill Collars:		538.0		Drill Pipe:		340.0				
5,558	5,610	33.0	41.0	40	40	40	40	8	8	700	700	2,800
Annular Velocity:		Drill Collars:		538.0		Drill Pipe:		340.0				

Comments: Pull out of the well bore due to MWD

Miscellaneous Drilling Parameters

Hook Loads (lbs):		Off Bottom Rotate:		160	Pick Up:		170	Slack Off:		150	Drag Avg/Max:		10 / 12
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						

Survey Information

Survey Type	Meas. Depth		Inc.	Azimuth	TVD	Closure	Vertical Section	Coordinates		
								N-S	E-W	D.L.S.
MWD	5,113.0	1.85		211.0	5,111.5	54.4	46.5	N 46.5	E 28.2	2.035
MWD	5,208.0	2.42		23.9	5,206.5	54.8	47.0	N 47.0	E 28.3	4.486
MWD	5,302.0	2.68		273.6	5,300.4	55.8	48.9	N 48.9	E 26.9	4.455
MWD	5,397.0	1.01		17.6	5,395.4	55.8	49.9	N 49.9	E 24.9	3.246

Mud Log Information

Depth (ft)		TVD (ft)		Gas (Units)		Gas Connect.	Trip	Drilling Exp.	Pore Press	Mud Dens.	Shale Dens.	ROP	
From	To	From	To	Avg	Max							Shale	Sand
5,140	5,370	5,138	5,368							8.70			
Formation Name:													
Lithology: 100% Granodiorite (frequent fluctuations in amount of biotite)													
5,370	5,600	5,368	5,598							8.70			
Formation Name:													
Lithology: 100% Granodiorite (Less overall secondary minerals)													

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
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Safety	60	Making connections from derrick.
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First Aid Treatments: Medical Treatments: Lost Time Incidents: Days Since LTI:

☐ BOP Test ☐ Crownamatic Check

Weather Information

Sky Condition:	Cloudy	Visibility:	8
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Air Temperature:	21 degF	Bar. Pressure:	29.95
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Wind Speed/Dir:	8 / N	Wind Gusts:	10
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