

Geothermal Resource Group, Inc.

Well Name: 78B-32

Well ID: Forge 78B-32

Field: UTAHFORGF

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

Report No: 1								Report For	27-Jun-21
Operator:	University of Utah	Rig:	Frontier Rig 1	6 Spud Date:	28-	Jun-21	Daily Cost / M	ud (\$):	
Measured Depth (ff	i): 128	Last Casing:		Wellbore:	Original V	Vellbore	AFE No.	AFE (\$)	Actual (\$)
Vertical Depth (ft):		Next Casing:	24.000 at 12	9 RKB Elevation	n (ft):	30.40			
Proposed TD (ft):	9500	Last BOP Tes	t:	Job Reference	e RKB (ft):				
Hole Made (ft) / Hrs	0 / 0.0	Next BOP Tes	t:	Working Inte	rest:		Totals:		
Average ROP (ft/hr):						Well Cost (\$):		
Drilling Days (act./	olan): 1/21 F	lat Days (act./pl	an): 0/9	Total Days (ac	t./plan):	1/30	Days On Loca	ition:	1
Pers/Hrs: Opera	ator: 3 / 36	Contractor:	12 / 144	Service:	8 / 96	Other:	1 / 12	Total:	24 / 288
Safaty Summary	No incidente er ev	ente reported 0 d	lovo cinco I TI	Conducted Safe	ty Mooting				

Safety Summary: No incidents or events reported. 0 days since LTI. Conducted Safety Meeting.

Current Operations: Finished drilling 22 in hole to 421 ft

Circulating hole clean at 421 ft.

Planned Operations: POH and run 16 in casing and cement in place.

Nipple up and test 20 in BOP.

Toolpusher: Steve Caldwell , Justin Bristol

Wellsite Supervisors: Virgil Welch , Brian Gresham Tel No.: 7132807438

					Operations Summary	
From	То	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	6:00	6.00	128	WOD	Wait on daylight.	
6:00	9:00	3.00	128	RIGU	Pre-Spud Inspection.	
9:00	16:00	7.00	128	1-01	Cut and removed conductor pipe at 4" above ground level. Rigged up cellar pump. Set pipe racks in place. Strapped 105 joints of 5" drill pipe 9 joints of 5" HWDP and readied for pick up. Mixed spud mud.	
16:00	17:00	1.00	128	10-341	Pick up and make up 5 stands of 5" HWDP.	
17:00	22:30	5.50	128	10-341	Pick up 114 joints of 5" drill pipe and rack back in derrick.	
22:30	0:00	1.50	128	3-34-3	Make up 22" surface hole assembly.	

Management Summary

Waited on Day Light and conducted Pre-Spud Rig Inspection.

Strapped, OD, ID and Fishing Neck of HWDP.

Picked up 5 stands of HWDP and stood back in Derrick.

Picked up 114 joints (38 Stands) of 5" DP and stood back in derrick.

Cleaned and strapped 16 in Casing.

Made up Directional tools.

Comments

Rig on "Day Rate" at 0900 hours of June 27,2021.

Note: Spoke to Jim Goddard with Department of Water Resources. Jim had received our start casing, cementing, and BOP testing schedule and waived witnessing of the 20 in BOP test provided testing to be done by a 3rd party. Results to be documented and sent to DWR. Fuel on hand 7.637.

Activities prior to Rig Move/ Spud

June 8, 2021

- Drill 36" hole from surface to 100'. All material was alluvium (decomposed granite). Experienced no hole cave or sluff.
- weld lifting eyes on 24", move all dirt out of the way and prep to run conductor and cement same in the morning

June 9, 2021

- Check hole for fill / clean out to 100' / welding 3 joints of 24", ½" wall. 125.5#/ft conductor casing / set on bottom / pull rig forward / center and level conductor (102' total)
- From surface pour 14 cu. Yds (2 trucks) in annulus. Cement came to within 33' of surface.

Cement is 4000 psi mix with 3/4" rock

- Prep 14" casing for mouse hole. Will top off conductor cement @ 8:00 tomorrow morning prior to drilling service hole. Crew released for the day. No accidents, incidents or injuries

June 10, 2021

- Dump 6 cu. Yds of 4000 psi w/ ¾ rock ready mix around conductor bringing the level from 33'bgl to 5'bgl. Used another 2 cu yds to cement tower foundation on 78-32
- Let cement around conductor thicken
- Drill 26" mouse hole to 75' bgl
- Weld 3 each 25' long 14" line pipe pieces for the mouse hole and lower in the ground
- Cement the mouse shuck with 7 cu. Yds of 4000 psi mix w/ 3/4" rock. Level 5' bgl
- Using excavator dig hole for cellar and install 10'OD x 5' deep cellar ring
- Pour 1 foot of 4000 psi, w/ 3/4" rock in bottom of cellar

Printed: 06:50 28-Jun-21 RIMBase 7.5.582.0 Page: 1 of 3



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Field: UTAHFORGE

Report No: 1 Report For 27-Jun-21

- Clean up site and release Wyoming Casing

June 21,2021

- With H&B move company man quarters, tool pusher quarters, septic system, fresh water system, power distribution panel and generator from 56-32 to 78B-32 and rig up same. Move Command center from 16A to 78B-32 and rig up same

June 22, 2021

- MSE training with all 4 Frontier crews, and 3 pushers, 3 GRG supervisors, 2 GRG office staff, 1 mud man, 2 mud loggers, 2 solids control

June 23, 2021

- MSE training with all contractors

June 24, 2021

- Tear down and move everything off 56-32 location except for subbase, On 78B-32 set and rig up pump package and mud pits, solids equipment, SCR and motor package, derrick, tool house. Removed monkey board from derrick and welder cut all racking fingers out of board and re-install to accept 5.5" drill pipe

June 25,2021

- Hold JSA with all crews involved with rig move, On 56-32 rig down subbase and load out same, clean location and call for dumpster pick up, 56-32 completed. On 78B-32 set matting boards and build subbase, install drawworks, hang derrick and string blocks, welder completed modifing racking board to accommodate 5.5" drill pie, install modified racking board and raise A-Legs, set mud loggers trailer, set solids equipment, unload 16", set 2 mud coolers, received 1st load of diesel, finish setting top dog houses and hanging wind walls, rig up Pason NOTE: Spoke to Jim Goddard with Department of Water Resources Jim had received messages of our start casing, cementing and BOP testing schedule and waived witnessing of the 20" BOP test provided testing be done by a 3rd party and results be documented and sent to DWR

June 26, 2021

- Raise derrick and unbridal
- Rig up Top drive, mud coolers, fill tanks w/ water prepare to PUDP

						Bit/BHA	\/Work	string	Inform	nation	1							
				Depth	This	Run	R.C).P.				M	ud	Pump)			
No Run N		Model	Diam	In	Dist	Hrs	Avg	Max	WOB	RPM	Torque	Wt	Flow	Press	J. Vel	P. Drp	HHP	JIF
1 1 Sm	nith	XR-C	22.000	128														
Jets: 28 2				Out: 421		Grade:			Dι		/	Wear:	Br	gs:	Gge:		Pull:	
BHA - No. 1	1 - B	IT, BS, XC	, MWD, X	O, MONEL	, FLO	AT, OTH	ER, XO	, HWD	P = 314	.30								
							Rig Ir	nforma	ation									
Equipment	t Probl	ems:																
Location C	onditi	on:																
Transport:																		
						Solid	ds Con	trol In	forma	tion								
Screen Siz	es:	Тор	Middl	e 1 Midd	le 2	Bottom	Eq	uipme	nt Usaç	ge (Hrs	s):							
Shaker	No 1:	6	0	60	60	60)											
Shaker	No 2:	6	0	60	60	60) Ce	ntrifug	je 1: 4				С	entrifu	ge 2: 4			
Shaker	No 3:	6	0	60	60	60)											
							Bulk	Inven	tory									
		Item T	уре			Uni	ts	Begi	nning		Used		eceive	-	On Har		Ne	
Diesel (OBM	<i>1</i>)								1,000		73	5	7,	372	7	,637		6,63
							Prill Pi											
DP Size		oints	Weight	Gra	de		read		DP Size	•	Joints	W	eight		Grade		Threa	d
5'	<u>"</u>	114	19.	5 S-135		4.5IF												
							Safety											
Meetings/D	Orills	Time						ription										
Safety				emicals, pir														
		ents:	0 M	edical Tre		ts:	(Los	t Time	Incide	nts:		0 D a	ays Sin	ce LTI:			0
First Aid T			Crownama															



Daily Drilling Report Well ID: Forge 78B-32

Geothermal Resource Group, Inc.

Well Name: 78B-32

Field: UTAHFORGE

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

Report No: 1 Report For 27-Jun-21

vveatner	mormation
Sky Condition: Clear	Visibility: 10
Air Temperature: 56 degF	Bar. Pressure: 29.87
Wind Speed/Dir: 10 / SE	Wind Gusts: 12



Report No: 2

Daily Drilling Report

Geothermal Resource Group, Inc.

Well Name: 78B-32

Well ID: Forge 78B-32

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

Field: UTAHFORGE Sect: 32

Report For 28-Jun-21

Operator:	University of Utah	Rig: Frontier	Rig 16	Spud Date:	28-Jun-21	Daily Cost / M	ud (\$):	
Measured Depth (ft)	: 421	Last Casing: 16.000	at 416	Wellbore: Orig	ginal Wellbore	AFE No.	AFE (\$)	Actual (\$)
Vertical Depth (ft):		Next Casing: 11.750 at	3,300	RKB Elevation (ft)	: 30.40			
Proposed TD (ft):	9500	Last BOP Test: 28-	Jun-21	Job Reference RK	B (ft):			
Hole Made (ft) / Hrs:	293 / 4.0	Next BOP Test: 19-	Jul-21	Working Interest:		Totals:		
Average ROP (ft/hr)	73.25					Well Cost (\$):		
Drilling Days (act./p	lan): 2/21 F	lat Days (act./plan):	0/9	Total Days (act./plai	n): 2/30	Days On Loca	tion:	2
Pers/Hrs: Operat	or: 3/36 C	contractor: 14 /	168 S e	ervice:	4 / 48 Other:	3 / 36	Total:	24 / 288

Safety Summary: No incidents or events reported. Conducted BOP Test, Crown Check, Safety Meeting.

Current Operations: Testing out choke manifold at report time.

Planned Operations: Test casing along with BOPE.

Pick up 8" drill collars.

Trip in the hole with tri-cone bit.

Drill out shoe track and 10 ft of new formation to perform LOT

Pull out of the hole and lay down tricone bit

Make up 14 3/4" BHA with PDC and continue drilling 14 3/4" section.

Toolpusher: Steve Caldwell , Justin Bristol

Wellsite Supervisors: Virgil Welch , Brian Gresham Tel No.: 7132807438

					Operations Summary	
From	То	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	1:00	1.00	128	3-34-3	Make up 22" surface hole assembly.	
1:00	1:30	0.50	128	03-051	Filled pipe and hole.	
1:30	5:00	3.50	421	03-021	Drilled 22" hole from 128' to 421'.	
5:00	5:30	0.50	421	03-051	Circulated well bore clean.	
5:30	6:00	0.50	421	3-27	Wiped hole f/ 421' t/ 100' with no issues. No fill on bottom.	
6:00	6:30	0.50	421	3-6-2	Pull out of the hole f/ 421'	
6:30	7:00	0.50	421	3-34-4	Lay down NMDC and bit	
7:00	8:00	1.00	421	4-56	Rig up casing crew.	
8:00	10:00	2.00	421	4-12-1	Rigged up and Ran 9 joints of 16" k-55 64# BTC casing (382.89') of total casing. Landed out with 33' landing joint. Shoe set at 416' KB. Float collar at 372' KB.	
10:00	11:00	1.00	421	4-56	Rig down casing crew	
11:00	12:30	1.50	421	4-12-1	Land casing with well head 3' below ground level.	
12:30	13:00	0.50	421	5-56	RIH with stab-in and stab into float collar at 378	
13:00	14:30	1.50	421	5-56	Rig up cement crew	
14:30	16:00	1.50	421	5-99	Pressure test to 1500 psi, Pump 20 bbl fresh water, pump 50 bbls of sepiolite, pum 5 bbl of fresh water, pump 13 bbl od sodium silkicate, pump 5 bbls fresh water, Miz and pump 146 bbl of 13.88 RC Theremelite w/ 2% CC, displace w/ 6 bbls fresh water, believed the floats CIP @ 16:00	x
16:00	16:30	0.50	421	5-56	Rig down cement crew	
16:30	17:00	0.50	421	5-6-2	POH with stab-in	
17:00	0:00	7.00	421	1-14	Installed BOP as followed. 16" x 20" 2M DSA, 20" 2M spacer spool, 20" 2M x 20" 3 DSA, 20" 3M mud cross, 20" 3M X 20" 2M DSA, 20" 2M double gates, 20" 2M annular, 20" 2M flow spool.	ЗМ

Management Summary

Drilled 22" hole from 128' to 421'. Circulated hole clean. Wiped hole from 421' to 100'.

Pulled out laying down tools.

Rigged up and ran 9 joints of 65 ppf, K-55 16" Buttress casing setting shoe at 416' KB.

Ran in the hole with stab-in tool.

Rigged up Resource cementing and cemented casing in place CIP @ 16:00.

Rigged down Resource cementing.

Pulled out of the hole with stab-in tool.

Installed 20" BOPE. Nippled up BOPE.

Comments

Good cement to surface.



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Field: UTAHFORGE

Geothermal Resource Group, Inc.

Well Name: 78B-32

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

_	Size	Top MI				D Bottom				•	Nominal	LOT
Type ULL	(ins) 16.000	(ft)	0	(ft)	(ft) 41	(ft)	Secti	ion (SURF	22.000	(lbs) 65	Grade K-55	(lbs/gal
JLL	10.000		0			o Nud Inforr		JOIN	22.000	00	11-55	
					%					Gels	Tem	p Mu
ens. Vis P	V YP F	ilt. Cak	e pH/ES	Solids (Dil Wat	er Sand L	.GS CI	Ca Ca	CI 10s	10m 30m		Out Los
28-Jun-21 05:1	5 at Depth	421 ft Mu	ud Pits									
8.90 51	19 22 1	12.2	1 9	11	0 8	9 2.5	800	120	0 9	16 2	5 85	85 10
							g Informat	ion				
de Boos Made		. Di	Depth			R.O.P.	WOD DE		Mud	Pump	/- L D. D	
No Run Mak	xR-C	1 Diam 22.000	In) 12	Dist 293		Avg Max 83.7 250.0	WOB RP	90 7	9 80	v Press J. v 00 576 1	42 161	75 5
Jets: 28 28		22.000	Out: 4		rade: C					Brgs: 0 Gge		Pull: TD
BHA - No. 1 -		O. MWD.					DP = 314.30	1107110	rreal. A	orgs. ∪ Oge	. 0	r un. 1D
		,	,	,		illing Para						
Depth (ft)	ROP (ft/	hr)	WOB			RPM	Torqu	e (ft lbs)	Flow (ga	ls/min)	Pressure
From	To A	vg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	(psi)
128	421	0.08	120.0	15		0 7	5 80	3	8	650	800	1,100
Annular Veloc	ity: Drill C	ollars:	37.		<u> </u>	34.7						
							ing Parame					
Hook Loads (I		Off Botto			Pick Up		Slack Off:	78	Drag Avg/	Max:	3/5	
Hours on BHA	\ :	Since i	nspection	n: 3.5	Tota		Jars:					
Sı	ırvey M	Meas.			31	irvey Info	rmation	Vertical	Cor	ordinates		
		Depth	Inc.	Azimutl	1 7	VD .	Closure	Section	N-S	E-W	D.L	.S.
	WD	241.0	0.69	358.	3	241.0	1.5	1.5	N 1.	5 W 0	.0 0.	286
М	WD	337.0	1.04	359.	5	337.0	2.9	2.9	N 2.9	9 W 0	.1 0.	365
					l	Rig Inforn	nation					
Equipment Pr	oblems: N	lone										
Location Con	dition: G	Good.										
Transport:					<u> </u>	<u> </u>	• 41					
<u> </u>							nformation					
Screen Sizes: Shaker No					Sottom	Equipm	ent Usage (I	Hrs): Desilter		Damasaari	0	
Shaker No		60	60 60	60 60	60 60		er: 4 ge 1 : 4 (Sol			Degasser:	U	
Shaker No		60	60	60	60	Centino	ge 1. 4 (50)	ius i terriova	11)			
Onditor 110	<u> </u>	00	00	00	00	Bulk Inve	ntorv					
	Item	Туре			Units		ginning	Used	Receiv	red On	Hand	Net
Diesel (OBM)							7,637	94	0		6,697	
					Dr	ill Pipe In	ventory					
DP Size	Joints	Weigh	nt (Grade	Thre	ead	DP Size	Joints	Weigh	t Grad	de	Thread
5"	114	1	19.5 S-13	35	4.5IF							
					Sa	afety Infor						
Meetings/Drill						Descriptio						
Safety	60					ipple up, Pi			0			
				reatments	5;	U LC	st Time Inci	aents:	0	Days Since I	-11:	
First Aid Trea	✓	Crowna	matic Che	eck								
✓ BOP Test												



Daily Drilling Report Well ID: Forge 78B-32

Geothermal Resource Group, Inc.

Well Name: 78B-32

Field: UTAHFORGE

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

Report No: 2 Report For 28-Jun-21

vveatn	er information
Sky Condition: Clear	Visibility: 10
Air Temperature: 66 degF	Bar. Pressure: 29.96
Wind Speed/Dir: 8 / NNE	Wind Gusts: 2



Geothermal Resource Group, Inc.

Well Name: 78B-32

Well ID: Forge 78B-32

Field: UTAHFORGE

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

Report No: 3								Report For	29-Jun-21
Operator:	University of Uta	h Rig : F	rontier Rig 16	Spud Date:	28-	Jun-21	Daily Cost / M	ud (\$):	
Measured Depth	(ft): 43	3 Last Casing:	16.000 at 416	Wellbore:	Original V	Vellbore	AFE No.	AFE (\$)	Actual (\$)
Vertical Depth (ft): 43	3 Next Casing: 11	1.750 at 3,300	RKB Elevatio	n (ft):	30.40			
Proposed TD (ft):	950	0 Last BOP Test:	29-Jun-21	Job Reference	e RKB (ft):				
Hole Made (ft) / H	Irs: 12 / 1.	5 Next BOP Test:	19-Jul-21	Working Inter	rest:		Totals:		
Average ROP (ft/	hr): 8.	0		LOT (lbs/gal):	•	19.20	Well Cost (\$):		
Drilling Days (act	t./plan): 3/21	Flat Days (act./plan	n): 0/9	Total Days (act	t./plan):	3/30	Days On Loca	ition:	3
Pers/Hrs: Ope	erator: 3 / 36	Contractor:	14 / 168	Service:	4 / 48	Other:	3 / 36	Total:	24 / 288
Safety Summary:	: No incidents or ev	ents reported. Cond	ucted BOP T	est, Crown Chec	k, Safety M	eeting.			

Current Operations: Picked up RSS and ran in the hole. Drilled 14 3/4" hole section from 433' to 1,524' (report time)

Planned Operations: Drill 14 3/4" section.

Toolpusher: Steve Caldwell , Justin Bristol

Wellsite Supervisors: Virgil Welch , Brian Gresham Tel No.: 7132807438

					Operations Summary
From	То	Elapsed	End MD(ft)	Code	Operations Description Non-Prod
0:00	3:00	3.00	421	3-15	Installed inner and outer choke and kill valves. Installed choke and kill lines. Torqued all flanges.
3:00	6:00	3.00	421	3-15	Attempted to Test BOPE system to 300 psi low to 1,000 psi high. First Low test of 300 psi testing against the pipe rams held. Stepped pressure up to 1,000 psi and pressure bleed back down to 500 psi. Attempted to pressure back up to 1,000 psi, pressure bleed back down to 500 psi. Inspected all surface equipment for leaks. No leaks were found. Decision was made to test choke manifold while allowing more time for cement to set. Tested out all valves on choke manifold to 300 psi low for 5 mins and 1,000 psi high for 10 mins.
6:00	9:00	3.00	421	2-14	Nipple up Flow nipple w/ rotating head to flow line
9:00	10:00	1.00	421	2-14	Walk catwalk into place and raise V-Door
10:00	11:30	1.50	421	3-34-3	Set racks and move and strap 15 each 8" DCS
11:30	14:30	3.00	421	3-34-3	Pick up 15 each 8" DCS and stand back in Derrick
14:30	16:30	2.00	421	3-15	Test Blind rams to 250 psi for 5 min low & 1000 psi for 10 min high / test good / PU stand of drill pipe and test pipe rams to 250 psi for 5 min & 1000 psi for 10 min test good, test bag to 250 psi for 5 min low & 1000 psi high for 10 min
16:30	18:00	1.50	421	3-34-3	PU 14-3/4" bit, bit sub, 3 stands of DCS and 1 stand of HWDP and RIH to drill float, cement and shoe
18:00	18:30	0.50	421	2-14	Installed rotating rubber bushing to bearing assembly. Installed rotating rubber.
18:30	19:30	1.00	421	3-28	Drilled out shoe track from 370' to 416'. Good cement Throughout shoe track.
19:30	20:00	0.50	421	SERV	Serviced rig.
20:00	20:45	0.75	421	3-28	Cleaned out rat hole to 421'. Drilled new formation to 433'
20:45	21:00	0.25	421	3-5-1	Circulated hole clean for FIT.
21:00	22:00	1.00	421	3-46	Performed FIT.
22:00	23:30	1.50	421	3-6-2	Pulled out of the hole from 433' to surface. Broke out bit along with bit sub.
23:30	0:00	0.50	421	3-98	Held detailed safety meeting with all involved personal on picking up BHA.

Management Summary

Installed inner and outer choke and kill valves.

Torqued up all breaks on BOPE.

Attempted to test BOPE. High pressure test leaked off. Decision was made to allow more time for cement to set.

Tested out choke manifold.

Nippled up riser and installed flowline.

Walked catwalk into place and raised V-Door.

Set racks in place. Strapped 15-8" drill collars. Picked up 5 stands of 8" drill collars and racked back in the derrick.

Tested out BOPE. Good test.

Made up 14 3/4" slick assembly.

Tripped in the hole.

Drilled out shoe track from 370' to 416'.

Drilled new formation to 433'.

Circulated hole clean.

Performed FIT to a 1 psi/ft. Good test.

Pulled out of the hole.

Held detailed safety meeting with all involved personal on picking up BHA.



Geothermal Resource Group, Inc.

Well Name: 78B-32

Well ID: Forge 78B-32 Field: UTAHFORGE

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

Report No: 3 Report For 29-Jun-21

Report No: 3)																r 29-J	
							Com	ments										
Test out all BOF	PE to 300	osi low ar	d 1,00	0 psi high	. All tes	t good	d				-							
					(Casin	ıg/Tubul	ar Info	rmatio	on								
	Size	Top N	1D	Top TVD	Bot	tom N	ID Botto	m TVD		ole	OH Dia	m. N	lom. W	/gt.		ninal		.OT
Туре	(ins)	(ft)		(ft)		(ft)		ft)		tion	(ins)	1	(lbs)		Gra	ade		s/gal)
FULL	16.000		0			-	16			SURF	22.	000		65		K-55		19.2
						%	Mud Inf	ormatio	on									
) \/:- D\	, vp i			VEO 0-11	ı. O''				01	0-	0-01	40-	Gels			Ten	•	Mud
Dens. Vis PV				I/ES Solid			iter Sand	LGS	CI	Ca	CaCI	10s	10m	1 3	30m	In	Out	Los
29-Jun-21 21:00 8.60 36		18.8		s, Type: S 11.5	•	a 0	95 0.5	0.6	000	240	`	1		c	11	0E	97	
8.60 36	8 7	10.0	I	11.5	5	-	lud Con		900	240	,	4		6	11	85	91	
14	em Descr	intion			Qty.	IV	Cost	Suman	ies	Itom	Descript	ion				ty.		ost
Bicarb - 50#SK	eili Desci	iption			10			Descr	CF -	25#SK	Descript	1011			Q	3		- -
Engineering - E	ΔСН				10				em - O							1		
wraps - OTHER					2			perdic)III - O	111111						'		
wiaps - OTTIET						ВНУ	/Workst	ring In	forma	tion								
				epth	This R		R.O.P		Omma	LIOII		Mud	Pu	mp				
No Run Make	. Mod	el Dian		~ p	Dist H				OB R	РМ То	rque W			-	J. Vel	P. Dru	ННР	JII
2 1 BAKEF	GT-C1	14.75	0	360	93	1.5		30.0	10	50	3			184	194	289	76	_
Jets: 18 18 1	8		0	ut: 433	Gra	de: (Cutter:	1/1	Dull:	NO/N	O Wea	ar: A	Brgs:	0 0	Gge:		Pull:	вна
			5 A 4\A7	D 4 OTH	R MM	ITR. F	RR, FLOA	T, 2 OTI	HER, D	C, XO,					•			
BHA - No. 3 -	BIT, OTH	ER, STA	3, IVIVV	D, 4 O I I I	、,													
BHA - No. 3 -	BIT, OTH	ER, STA	B, IVIVV	D, 4 OTT	=1 1, 14114				tion									
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				Avg	Gas (l	Μι Jnits)	ıd Log I	nforma	Gas	l rip	Orilling Exp.	Pore Press		ud ns.	Shale Dens.		RO nale	P Sand
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Depth (ft) From T 422	o F	TVD (f	t) To	Avg	Gas (l	Μι Jnits)	ıd Log I	nforma	Gas		_							
From T 422 Formation Nan	o F 436 ne: Alluvi	TVD (f	t) To -cobble	Avg	Gas (l	Μι Jnits)	ıd Log I	nforma	Gas		_							
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Depth (ft) From T 422 Formation Nan Lithology: Equipment Pro Location Cond Transport:	o F 436 ne: Alluvi 100%	TVD (forom um (sand Alluvium None. Good.	t) To -cobble	Avg	Gas (U	Mu Jnits)	Depth Rig Info	nforma (Connec	Gas ct. Tr	nip	_							
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Depth (ft) From T 422 Formation Nan Lithology: Equipment Pro Location Cond Transport:	o F 436 ne: Alluvi 100% blems: ition:	TVD (form) um (sand) Alluvium None. Good.	t) To -cobble (grani	Avg es) tic) Middle	Gas (UMAX	Mu Jnits) c at	Rig Info	ormatic	Gas ct. Tr on matio	on (Hrs):	Exp.	Press						
Depth (ft) From T 422 Formation Nan Lithology: Equipment Pro Location Cond Transport: Screen Sizes: Shaker No	o F 436 ne: Alluvi 100% blems: ition: To	TVD (form) um (sand) Alluvium None. Good.	t) To -cobble (grani	Avg es) tic) Middle 66	Gas (UMAX)	Mu Jnits) at Solid ttom	Rig Info	ormatic	Gas ct. Tr on matio	on (Hrs):	Exp.	Press						
Depth (ft) From T 422 Formation Nan Lithology: Equipment Pro Location Cond Transport: Screen Sizes: Shaker No 2	o F 436 ne: Alluvi 100% blems: ition: To	TVD (form) um (sand) Alluvium None. Good.	t) To -cobble (grani	Avg es) tic) Middle 66	Gas (UMAX) 2 Bo 0 0	Mu Jnits) at Solid ttom 60	Rig Info	ormatic	Gas ct. Ti on cmatic Jsage	on (Hrs):	Exp.	Press						
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Geothermal Resource Group, Inc.

Well Name: 78B-32

Well ID: Forge 78B-32 Field: UTAHFORGE

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

Report No: 3 Report For 29-Jun-21

Weather Information									
Sky Condition:	Partly Cloudy	Visibility:	10						
Air Temperature:	61 degF	Bar. Pressure:	29.94						
Wind Speed/Dir:	4 / NW	Wind Gusts:	1						



Pers/Hrs:

Daily Drilling Report

Geothermal Resource Group, Inc.

3 / 36 **Total**:

Well Name: 78B-32

24 / 288

Χ

Χ

Well ID: Forge 78B-32

Field: UTAHFORGF

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

Report No: 4							Report For	30-Jun-21
Operator:	University of Utah	Rig: Fr	ontier Rig 16	Spud Date:	28-Jun-21	Daily Cost / Mu	d (\$):	
Measured Depth (ft)): 2699	Last Casing: 1	6.000 at 416	Wellbore:	Original Wellbore	AFE No.	AFE (\$)	Actual (\$)
Vertical Depth (ft):	2699	Next Casing: 11.	.750 at 3,300	RKB Elevation	(ft): 30.40			
Proposed TD (ft):	9500	Last BOP Test:	29-Jun-21	Job Reference	RKB (ft):			
Hole Made (ft) / Hrs	: 2,266 / 15.0	Next BOP Test:	19-Jul-21	Working Interes	st:	Totals:		
Average ROP (ft/hr)	: 151.07			LOT (lbs/gal):	0.58	Well Cost (\$):		
Drilling Days (act./p	olan): 4/21 F	lat Days (act./plan)): 0/9	Total Days (act./p	olan): 4/30	Days On Locati	on:	4

3 / 36 Contractor: Safety Summary: No incidents or events reported. Conducted Safety Meeting.

Current Operations: Pulled out of the hole from 951' to Surface.

Changed bit. Tipped in the hole to 2,699'.

2,359 3-2-3

2,359 REPR

2,399 3-2-3

2,399 REPR

2,399 3-2-3

2,399 3-5-1

2,399 3-6-4

Drilled 14 3/4" hole section from 2,699' to 2,818' (report time)

Drill 14 3/4" section to casing point. **Planned Operations:**

Toolpusher: Steve Caldwell . Justin Bristol

Operator:

Virgil Welch, Brian Gresham Tel No.: 7132807438 Wellsite Supervisors:

14 / 168 Service:

	Operations Summary											
From	То	Elapsed	End MD(ft)	Code	Operations Description No	on-Prod						
0:00	3:30	3.50	433	3-34-3	Picked up 14 3/4" RSS BHA to 433'.							
3:30	4:15	0.75	665	3-2-3	Drilled 14 3/4" hole from 433' to 665' with full returns.							
4:15	4:30	0.25	665	03-051	Circulated hole clean to rack back HWDP and place 3 stands of 8" drill collars into BHA.							
4:30	5:30	1.00	665	3-34-3	Pulled out of the hole from 665' to 389'. Racked back 3 stands of HWDP. Installed 3 stands of 8" drill collars into the BHA. Tripped in the hole to 665'.							
5:30	6:00	0.50	858	3-2-3	Drilled 14 3/4" hole from 665' to 858 with full returns.							
6:00	10:00	4.00	2,077	3-2-3	Drilled 14-3/4" hole from 858' to 2,077' with full returns.							
10:00	10:30	0.50	2,077	SERV	Serviced rig / torqued saver sub							
10:30	11:00	0.50	2,232	3-2-3	Drilled 14-3/4" hole from 2,077' to 2,232' with full returns.							
11:00	11:30	0.50	2,232	REPR	Rig blacked out/ cleaned #2 generator radiator due to overheating.	Х						

Drilled 14-3/4" hole from 2,232' to 2,359' with full returns.

Drilled 14-3/4" hole from 2,359' to 2,399' with full returns.

Drilled 14-3/4" hole from 2,399' to 2,699' with full returns.

Rig Repair cleaned #1 generator radiator due to overheating.

Rig Repairs cleaned #3 generator radiator due to overheating.

Circulate hole clean. Pump 15 bbl slug. Pull out of the hole from 2,699' to 951'. Tight hole encountered from 2,351' to 1,799' 50-100k over string weight. Extended trip time due to tight connections and using rig tongs. Removed rotating rubber at 850'.

4 / 48 Other:

Picked up 14 3/4" RSS BHA to 433'.

12:30

13:30

14:00

15:30

21:15 22:00

0:00

Drilled 14 3/4" hole from 433' to 665' with full returns.

1.00

1.00

0.50

1.50

5.75

0.75

2.00

Circulated hole clean.

11:30

12:30

13:30

14:00

15:30

21:15

22:00

Pulled out of the hole from 665' to 389'.

Racked back 3 stands of HWDP.

Installed 3 stands of 8" drill collars into the BHA.

Tripped in the hole to 665'.

Drilled 14 3/4" hole from 665' to 2,077' with full returns. Serviced rig.

Drilled 14-3/4" hole from 2,077' to 2,232' with full returns. Circulated while cleaning radiator on gen #2 due to overheating.

Drilled 14-3/4" hole from 2,232' to 2,359' with full returns. Circulated while cleaning radiator on gen #1 due to overheating.

Drilled 14-3/4" hole from 2,359' to 2,399' with full returns. Circulated while cleaning radiator on gen #3 due to overheating.

Drilled 14-3/4" hole from 2,399' to 2,699' with full returns. Circulated hole clean. Tripped out of the hole to 951'.

Comments

Management Summary

BOPE test results emailed DWR (Jim Goddard).

	Casing/Tubular Information											
	T										LOT	
TILL 16 000 0 146 CUDE 22 000 65 1/ 55	туре	(ins)	(π)	(π)	(π)	(π)	Section	(Ins)	(IDS)	Grade	(lbs/gal)	
FOLL 10.000 0 410 SURF 22.000 05 K-55	FULL	16.000	0		416		SURF	22.000	65	K-55	0.58	



Daily Drilling Report Well ID: Forge 78B-32

Geothermal Resource Group, Inc.

Well Name: 78B-32

Field: UTAHFORGF

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

Report No: 4																t Fa.	- 00 1	un-21
	•																	
	Mud Information								n									
						%							Gels			Ten	ıp	Mud
Dens. Vis PV	YP	Filt. (Cake	pH/ES	Solids (Oil W	ater Sand	LGS	CI	Ca	CaCI	10s	10m	30r	m	In	Out	Loss
30-Jun-21 21:00	at Depth	1 2,697	ft Mu	ud Pits, T	ype: Low	Solids	Non-Dispe	rsed										
9.10 42 14	T i	9.4	1		9	0	91 12.5		800	120		3	7	7	11	110	118	
							Mud Con		es									
Ite	m Desci	iption			Qty.		Cost			Item D	escripti	on			Q	ty.	С	ost
Barite - 100#SK		•				:0		Desco	CF - 2		•					1		
DMA - 50#SK						5		Drispa								5		
Engineering - EA	СН					1		FlowZa								10		
Gel - 100#SK					7	0		Micro C	C - 50#	SK						50		
pallets - OTHER						3		perdier	n - OTI	HER						1		
Trucking - EACH						1		'										
Tracking Extern							A/Workst	rina Infa	rmati	ion								
				Depth			R.O.P		Jilliati	1011		Mud	Pui	mn				
No Run Make	Mod	ol Di	am	In	Dist	Hrs		lax WO	R RP	M Tord	nue Wi			•	Vel	P. Drp	ННР	JIF
2 1 BAKER			750	360		3					15					1361	754	
Jets: 18 18 18				Out: 4			Cutter:			NO/NO		-	Brgs: (Pull:	
3 1 NOV	TKC66	14	750	433			151.1	.,,		107110	1100		50 30		281	645		1259
Jets : 15 15 15			., 00	Out: 20			Cutter:	3/1	Dull-	LT/CT	Wea		3rgs: >			0.10	Pull:	
			ΓΔR N				RR, FLOA						_	· Og	О.		ı uıı.	1 11
DITA NO. 0	511, 011	LIX, 01	710, 1	VIVID, 4 (J 111LTX, 1X					J, 7(O, 1	100	000.01						
								arannete	13									
Drilling Parameters Porth (ft) POR (ft/hr) WOR (lhe) Processor										To	raua (ft	lhe\	FI	w las	ale/m	nin\	Dros	CUITO
Depth (ft)	<u> </u>		•	•		(lbs)		RPM										
From To		Avg	` M	lax	Avg		c Av	RPM g I		Av	9	Max	A۱	/g	М	lax	(p	si)
From To 433 2,	699	Avg 174.3	1,	300.0	Avg 40	(lbs) Max	6 5	RPM	Max 120	Av			A۱		М	•	(p	
From To	699	Avg 174.3	1,	lax	Avg 40 7 Drill F	(lbs) Max Pipe:	65 128.2	RPM g !	120	Av	9	Max	A۱	/g	М	lax	(p	si)
From To 433 2, Annular Velocity	699 y: Drill	Avg 174.3 Collars	1,	300.0 197.7	Avg 40 7 Drill F Mi	(lbs) Max Pipe: scella	65 128.2	RPM g I 70 rilling Pa	120 arame	Ave	13	Max 22	A	/g 950	M	1,050	(p	si)
From To 433 2, Annular Velocity Hook Loads (lbs	699 y: Drill	Avg 174.3 Collars	1,	300.0	Avg 40 7 Drill F Mi	(lbs) Max Pipe:	65 128.2	RPM g !	120 arame	Ave	13	Max	A	/g 950	М	1,050	(p	si)
From To 433 2, Annular Velocity Hook Loads (lbs Slow Circulation	699 y: Drill s): n Data:	Avg 174.3 Collars Off Bo	1,	300.0 197.7	40 40 7 Drill F Mi 125	(lbs) Max Pipe: scella	65 128.2 100 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150	RPM g I 70 rilling Pa	120 arame k Off:	Ave eters	13 Dra	Max 22 ag Avg	A	/g 950	M	1,050	(p	si)
From To 433 2, Annular Velocity Hook Loads (lbs Slow Circulation Pump 1	699 y: Drill s): n Data:	Avg 174.3 Collars Off Bo	1, s:	300.0 197.7	40 40 7 Drill I 125 95 psi	(lbs) Max Pipe: scella	65 128.2 neous Di	RPM g I 70 rilling Pa	120 arame k Off: 210 p	Ave	13 00 Dra	Max 22 ag Avg	A	/g 950 1	10 / 1 psi	1,050	(p	si)
From To 433 2, Annular Velocity Hook Loads (lbs Slow Circulation Pump 1 Pump 2	699 y: Drill s): n Data:	Avg 174.3 Collars Off Bo 35 s 35 s	1, ottom	300.0 197.7	40 40 7 Drill F Mi 125 95 psi 95 psi	(lbs) Max Pipe: scella	65 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 1	RPM g I 70 rilling Pa	120 arame k Off: 210 p	eters 10	13 00 Dra 60 60	Max 22 ag Avg	A	950 950 1 375 375	M 10 / 1 psi psi	1,050	(p	si)
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From To 433 2, Annular Velocity Hook Loads (lbs Slow Circulation Pump 1 Pump 2 Pump 3	699 y: Drill s): n Data: :	174.3 Collars Off Bo 35 s 35 s 35 s	1, s:	lax 300.0 197.7 Rotate:	40 40 7 Drill F Mi 125 95 psi 95 psi 95 psi	(lbs) Max Pipe: scella Pick t	65 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 128.2 1	RPM g / 70 70 filling Pa 50 Slact 9 Jars ng:	120 arame k Off: 210 p 210 p 210 p 310	Ave	13 00 Dra	Max 22 ag Avg	Av	950 950 375 375 375	M 10 / 1 psi psi psi	1,050	(p	si)
From To 433 2, Annular Velocity Hook Loads (lbs Slow Circulation Pump 1 Pump 2 Pump 3 Hours on BHA: Hours on Casing	699 y: Drill s): n Data: : : : : : : : : : : : : : : : : : :	174.3 Collars Off Bo 35 s 35 s 35 s Since Rote	ottom spm spm spm ce Ins	lax 300.0 197.7 Rotate:	40 40 7 Drill F Mi 125 95 psi	(lbs) Max Pipe: scella Pick t	65 128.2 Ineous DI Up: 15 45 spm 45 spm 45 spm tal:	RPM g / 70 70 filling Pa 50 Slact 9 Jars ng:	120 arame k Off: 210 p 210 p 210 p 310	eters 10 osi osi osi osi osi osi	13 13 13 16 16 16 16 16	ag Avg	Av//Max:	950 1 375 375 375 375 Insta	M 10 / 1 psi psi psi	1,050	(p	si)
From To 433 2, Annular Velocity Hook Loads (lbs Slow Circulation Pump 1 Pump 2 Pump 3 Hours on BHA: Hours on Casing	699 y: Drill s): n Data: : : : : : : : : : : : : : : : : : :	174.3 Collars Off Bo 35 s 35 s Since Rote Meas.	ottom spm spm ce Ins	lax 300.0 197.1 Rotate:	95 psi 95 psi 9 9 / 0	(lbs) Max Pipe: Scella Pick I	45 spm 45 spm 45 spm tal: Trippir	RPM g / 70 70 rilling Pa 50 Slact 9 Jars ng: formati	120 arame x Off: 210 p 210 p 210 p 3 / 0 on	eters 10 osi osi osi osi osi Vertica	13 13 10 Dra 60 60 10 10 10 10 10 10	ag Avg	Av	950 1 375 375 375 1 1 1 1 1 1 1 1 1	M 10 / 1 psi psi psi	1,050	q)	si)
From To 433 2, Annular Velocity Hook Loads (lbs Slow Circulation Pump 1: Pump 2: Pump 3: Hours on BHA: Hours on Casing	699 y: Drill s): n Data: : : : g/Liner:	Off Bo 35 s 35 s 35 s Sinc Rota	ottom spm spm ce Insating	Rotate:	40 40 7 Drill F Mi 125 95 psi 95 psi 95 psi 97 0	(lbs) Max Pipe: Scella Pick I	45 spm 45 spm 45 spm tal: Trippir	RPM g f 70 rilling Pa 50 Slaci 9 Jars ng: formati	120 arame k Off: 210 p 210 p 210 p 3 / 0 on	eters 10 osi osi osi osi Verticc Section	13 13 10 10 10 10 10 10	ag Avg	Av//Max:	950 1 375 375 375 Insta	M 10 / 1 psi psi psi psi	1,050 1,050 D.L	S.	si)
From To 433 2, Annular Velocity Hook Loads (lbs Slow Circulation Pump 1: Pump 2: Pump 3: Hours on BHA: Hours on Casing	699 y: Drill s): n Data: : : : : cycy	174.3 Collars Off Bo 35 s 35 s Sinc Rote Meas. Depth 545.6	MM 1,	Spection	95 psi 95 psi 97 0 Azimutl 93.	(lbs) Max Pipe: Scella Pick I	45 spm 45 spm 45 spm 45 spm 55 spm 45 spm 45 spm 45 spm 45 spm 45 spm	RPM g 70 70 rilling Pa 50 Slaci 9 Jars ng: formati	120 arame k Off: 210 p 210 p 210 p 3 / 0 on	eters 10 psi	9 13 13 100 Dra 60 60 60 10 N	ag Avg	Av/Max:	950 1 375 375 375 375 4 4 4 4 4 4 4 4 4	M psi psi psi psi psi	1,050 1,050 D.L	S .	si)
From To 433 2, Annular Velocity Hook Loads (lbs Slow Circulation Pump 1; Pump 2; Pump 3; Hours on BHA: Hours on Casing Surv Typ MWI	699 y: Drill s): n Data: : : : cyey pee D D	174.3 Collars Off Bo 35 s 35 s Sinc Rot: Meas. Depth 545.0 731.0	MM 1, 1, s:: spm spm spm ce Insating	Section	95 psi 95 psi 97 0 97 0 97 0 97 0 97 0 97 1 97 1 97 1	(lbs) Max Pipe: scella Pick I	45 spm 45 spm 45 spm 45 spm 545 spm 45 spm	RPM g 70 70 rilling Pa 50 Slaci 9 Jars ng: formati Closu	120 arame k Off: 210 p 210 p 210 p 3 / 0 on	eters 10 psi psi psi psi psi psi 44	13 13 13 14 15 15 15 15 15 15 15	ag Avg	/Max: ushing	950 1 375 375 375 375 4 1 1 1 1 1 1 1 1 1	M psi psi psi psi psi psi	1,050 15 D.L 0	S . .513	si)
From To 433 2, Annular Velocity Hook Loads (lbs Slow Circulation Pump 1 Pump 2 Pump 3 Hours on BHA: Hours on Casing MWI MWI	699 y: Drill s): n Data: : : : pg/Liner: pee D D D	174.3 Collars Off Bo 35 s 35 s Sinc Rot Meas. Depth 545.0 731.0	MM 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1	Sepection	95 psi 95 psi 97 0 97 0 97 0 97 0 97 0 97 0 97 0 97	(lbs) Max Pipe: Scella Pick I	45 spm 45 spm 45 spm 45 spm 545.0 TVD 545.0 731.0 822.0	RPM g / 70 70 rilling Pa 50 Slaci 9 Jars ng: formati	120 arame k Off: 210 g 210 g 210 g 3 / 0 on re 1.8 1.8	eters 10 psi psi psi psi psi 44 44	13 13 13 14 15 15 15 15 15 15 15	ag Avga) spm) spm) spm Vear B Co N-S N 4. N 4.	/Max: ushing ordina	950 1 375 375 375 1 1 1 1 1 1 1 1 1	my my man	D.L 0.0000000000000000000000000000000000	S . 513 .129 .187	si)
From To 433 2, Annular Velocity Hook Loads (lbs Slow Circulation Pump 1 Pump 2 Pump 3 Hours on BHA: Hours on Casing MWI MWI MWI	699 y: Drill s): n Data: : : : //ey pe D D D D	174.3 Collars Off Bo 35 s 35 s Sinc Rots Depth 545.0 731.0 822.0	MM 1, 1, sepm spm spm ce Insating	Rotate: Inc. 0.17 0.07 0.12 0.15	95 psi 95 psi 97 0 97 0 97 0 97 0 97 0 97 0 97 0 97	(lbs) Max Pipe: scella Pick I	45 spm 45 spm 45 spm 45 spm 545.0 Trippir Survey In 731.0 822.0 914.0	RPM g f 70 rilling Pa 50 Slaci 9 Jars ng: formati	120 arame k Off: 210 p 210 p 210 p 3 / 0 on re 4.8 4.8 4.8 5.0	Ave	60 Dra 60 60 60 60 60 80 60 60	22 ag Avg.) spm) spm) spm) spm Near B Co N-S N 4. N 4. N 5.	Avushing	950 1 375 375 375 375 E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C E C C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E C E	M psi	D.L 0 0 0	S . 513 129 187 138	si)
From To 433 2, Annular Velocity Hook Loads (lbs Slow Circulation Pump 1 Pump 2 Pump 3 Hours on BHA: Hours on Casing MWI MWI	699 y: Drill s): n Data: : : : cey D D D D D D	174.3 Collars Off Bo 35 s 35 s Since Rote Meas. Depth 545.0 731.0	MM 1, 1, separation spm spm ce Insating 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Sepection	95 psi 95 psi 97 0 97 0 97 0 97 0 97 0 97 0 97 0 97	Max Pipe: Scella Pick I Tot h 9 8 4 6 3	45 spm 45 spm 45 spm 45 spm 545.0 TVD 545.0 731.0 822.0	RPM g f 70 rilling Pa 50 Slaci 9 Jars ng: closu	120 arame k Off: 210 g 210 g 210 g 3 / 0 on re 1.8 1.8	Ave	13 13 13 14 15 15 15 15 15 15 15	ag Avga) spm) spm) spm Vear B Co N-S N 4. N 4.	/Max: ushing ordina 8 8 8 8 8	950 1 375 375 375 1 1 1 1 1 1 1 1 1	min	D.L 0.0000000000000000000000000000000000	S . 513 .129 .187	si)



Geothermal Resource Group, Inc.

Well ID: Forge 78B-32

Well Name: 78B-32

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

Report No:	4											Report	For 30-	Jun-21
						Mud Log	Information	on						
Depth (f			D (ft)		Gas (Unit		Ga		Drilling	Pore	Mud	Shale		OP
From	То	From	То	Avg	Max	at Depth	Connect.	Trip	Exp.	Press	Dens.	Dens.	Shale	Sand
0	430	0	430	0 0	0						9.10			
Formation Na														
Lithology:		00% Alluv												
430	2,430	430	2,430	0 0	0									
Formation Na														
Lithology:		00% Alluv												
2,440	2,630	2,430			0									
Formation Na														
Lithology:			0% Alluviu											
2,630	2,650	2,440			0									
Formation Na	ame: 90)% Clay 1	0% Alluviu	m										
Lithology:	10	00% Alluv	ium											
2,650	2,670	2,570	,		0									
Formation Na	ame: 70)% Clay, 3	30% Rhyol	ite										
Lithology:	10)-50% Rh	yolite 50-9	0% Alluviu	m									
2,670	2,700	2,580	2,640	0	0									
Formation Na	ame: 90)\$ Rhyolit	e, 10% Cla	ay										
Lithology:	10	00% Alluv	ium											
						Rig In	formation							
Equipment P	roblems	: Gener	ators overl	neating. cle	aned rad	iators on a	ıll 3 gens.							
Location Con	dition:	Good.												
Transport:														
					Sol	ids Cont	rol Inform	ation						
Screen Sizes	:	Тор	Middle 1	Middle 2	Botto	m								
Shaker No	1:	60	60	60		30								
Shaker No	2:	60	60	60		30								
Shaker No	3:	60	60	60		30								
						Bulk	Inventory							
	li	tem Type	•		U	nits	Beginning	ı (Jsed	Receive	ed (On Hand		Net
Rig Fuel							6,22		1,624	3	,500	8,0	96	1,876
						Drill Pip	e Inventor	У	·		·			
DP Size	Joint	s V	/eight	Grade	1	hread	DP Si	ze	Joints	Weight	: G	Frade	Thr	ead
5"		114	19.5	S-135	4.5IF									
		1				Safety I	nformatio	n						
Meetings/Dril	ls Tir	me				Descr								
Safety			o 30 min P	re tour safe	ety meetir		oth crews. Ti	rip hazar	ds, pinch po	ints, Wor	king at he	eights.		
First Aid Trea	atments			al Treatm	•		Lost Time		•		ays Sind	_		
BOP Test			wnamatic							, L				
				- CHOOK	,	Weather	Information	nn .						
Sky Condition	n· Pr	artly Cloud	dv				Visibility		10					
Air Temperat		degF	ч				Bar. Pre		29.94					
Wind Speed/I	oir: 10) / W					Wind Gu	มรเร:	2					



Geothermal Resource Group, Inc.

Well Name: 78B-32

Well ID: Forge 78B-32

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

Report No: 5								Report For	01-Jul-21
Operator:	University of Utah	n Rig:	Frontier Rig 10	6 Spud Date:	28-	Jun-21	Daily Cost / M	ud (\$):	
Measured Depth (ft)): 2699	9 Last Casing:	16.000 at 410	6 Wellbore:	Original W	/ellbore	AFE No.	AFE (\$)	Actual (\$)
Vertical Depth (ft):	2699	Next Casing: 1	1.750 at 3,300	0 RKB Elevation	n (ft):	30.40			
Proposed TD (ft):	9500	Last BOP Test:	29-Jun-2	1 Job Referenc	e RKB (ft):				
Hole Made (ft) / Hrs	310 / 22.75	Next BOP Test:	: 19-Jul-2	1 Working Inter	est:		Totals:		
Average ROP (ft/hr)	: 13.63	3		LOT (lbs/gal):		0.58	Well Cost (\$):		
Drilling Days (act./p	olan): 5/21 F	Flat Days (act./pla	n): 0/9	Total Days (act	./plan):	5/30	Days On Loca	ition:	5
Pers/Hrs: Opera	tor: 3 / 36 C	Contractor:	14 / 148	Service:	4 / 48	Other:	3 / 36	Total:	24 / 268

Safety Summary: No incidents or events reported. Conducted Crown Check, Safety Meeting.

Current Operations: Cleaned and cleared rig floor. Rigged up and ran 11 3/4" casing to 2,800' (report time)

Planned Operations: Run 11 3/4" casing to set depth. Rig down Casing crew.

Run in the hole with stab-in tool. Circulate and cement 11 3/4" casing. Nipple down 20" BOPE.

Toolpusher: Steve Caldwell , Justin Bristol

Wellsite Supervisors: Virgil Welch , Brian Gresham Tel No.: 7132807438

					Operations Summary	
From	То	Elapsed	End MD(ft)	Code	Operations Description N	Non-Proc
0:00	2:00	2.00	2,699	3-6-2	Pulled out of the hole from 951' to Surface. Broke out bit and inspected MWD. No visible wear on roller reamer or stabs. Motor had minimal movement in bearing assembly. cleaned and cleared rig floor.	
2:00	4:00	2.00	2,699	3-6-1	Make up 14 3/4" Bit and trip in the hole with BHA to 951'.	
4:00	5:15	1.25	2,699	10-6-3	Trip in the hole from 951' to 2,699'.	
5:15	15:30	10.25	3,009	3-2-3	Drilled 14-3/4" hole from 2,699' to 3,009' with full returns.	
15:30	16:00	0.50	3,009	3-2-3	After making a hook ROP dropped from 15'/hour to 0'/hour. Perform step test from 5 to 30K no ROP / No change in diff pressure and no pressure loss and no hook load change but found excessive amounts of metal on ditch magnet mix dry job.	
16:00	19:30	3.50	3,009	3-6-2	Pulled out of the hole from 3,009' to 951' with no issues. hoe taking proper fill. Stopped and removed rotating rubber at 1,100'.	
19:30	0:00	4.50	3,009	3-6-2	Racked back HWDP. Racked back 8" drill collars. Laid out Cubic sensor, Diffuser su along with float sub. Pulled up and broke out bit. laid out the remaining RSS tools. (Note: Bit was 3.75" under gage, 3.5" of the center of the bit was washed out with 4 jets missing. RSS had signs of wear below the pads approximately .25" wide by .25" deep. No signs of wear on the stabilizers or roller reamer. Motor had approximately .25" of play in bearing assembly.	,

Management Summary

Pulled out of the hole from 951' to Surface.

Picked up 14 3/4" PDC bit.

Tripped in the hole to 2,699'.

Drilled 14-3/4" hole from 2,699' to 3,009' with full returns. Decision was made to pull out of the hole at 3,009' due to low ROP.

Pulled out of the hole from 3,009' to surface.

Laid out RSS assembly. cleaned and cleared rig floor for casing run.

Comments

Bit was 3.75" under gage with 3.5" of the center of the bit was washed out with 4 jets missing. RSS had signs of wear below the pads approximately 0.25" wide by 0.25" deep. No signs of wear on the stabilizers or roller reamer.

								C	asing/ ⁻	Tubula	ar Info	rmatio	n							
		;	Size	To	p MD	To	p TVD	Botto	m MD	Bottor	n TVD	Hol	е	OH Dia	m. No	om. Wg	t. No	ominal		LOT
Туј	ре	(ins)		(ft)		(ft)	(ft)	(f	t)	Secti	ion	(ins)		(lbs)	G	rade	(lb	s/gal)
FULL			16.00	00		0			416			S	URF	22.0	000	6	35	K-5	5	0.58
									Mu	id Info	rmatio	on								
								(%							Gels		Te	mp	Mud
Dens.	Vis	PV	ΥP	Filt.	Cake	pH/ES	Solids	Oil	Water	Sand	LGS	CI	Ca	CaCl	10s	10m	30m	ln	Out	Loss
01-Jul	-21 20):00 a	at Dep	th 3,009	ft Mu	d Pits, 1	ype: Lo	w Solid	ds Non-	Dispers	ed									
9.00	42	14	15	7.8	1	11	9	0	92	1	3.2	800	120		5	9	16	116	109	



Well ID: Forge 78B-32

Field: UTAHFORGE

Geothermal Resource Group, Inc.

Well Name: 78B-32

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

												Repo	rt Fo	r 01-J	uI-Z
Report No: 5				N	/lud Con	sumables						Поро			
Item D	escription	 າ	Q	ty.	Cost			m Desc	ription			Qt	y.	Co	st
Barite - 100#SK	•			20		Engineer	ing - EA	CH	•				1		_
Gel - 100#SK				96		perdiem							1		-
Zanflow - 25#SK				5		'									
				-	/Worksti	ring Infor	mation								
		Dr	epth Th	is Run	R.O.P		mation		Mud	Pı	ımp				
No Run Make I	Model D		-	t Hrs		lax WOB	RPM	Torque			•	l. Vel F	. Drp	ННР	JI
		4.750	433 2,26		251.8	1102		4				267	572	301	
ets: 15 15 15 15			ıt: 2699	Grade:		3/1 D	ull: LT	/CT \	Wear: N	Brgs:	X G			Pull: F	
				0 10.25		75.0 40		15		900 2		267	572	301	
ets: 15 15 15 15			ut: 3009	Grade:			ull: RG		Wear: A					Pull: F	
), 4 OTHER							_	^ G	ge. s.	75	ruii. r	-11
DIA - NO. 4 - DII,	OTHER, S	TAD, WIVVL	J, 4 OTHER					O, HVVL	JF - 930.0)					
B (1 (6)		D (5(1))	1000		rilling Pa	arameters	•		(6(11)		. ,	. , .			
Depth (ft)		P (ft/hr)		OB (lbs)	A	RPM			e (ft lbs)			gals/mi	•	Press	
From To	Avg	Max	Avg	Max				Avg	Max		Avg	Ma		(ps	
2,699 3,009				-		188	220	15	2	1	900		950	2	,587
Annular Velocity: [Orill Collar	rs:		II Pipe:	129.3										
				_		rilling Par									
look Loads (lbs):		ottom Rot	ate: 14	45 Pick L	Jp: 16	65 Slack (Off:	135	Drag Av	g/Max:		10 / 15	5		
Slow Circulation Da															
Pump 1:	30	spm	95 ps		45 spm		210 psi		60 spm			0 psi			
Pump 2:	30	spm	95 ps	si	45 spm	2	210 psi		60 spm		35	0 psi			
Pump 3:	30	spm	95 ps	si	45 spm	:	210 psi		60 spm		35	0 psi			
lours on BHA:	Siı	nce Inspec	tion: 19.	25 Tot	al: 19.2	25 Jars:	C								
						ouis.	•								
Hours on Casing/Lir	ner: Ro	tating:	19.25 <i>1</i> 1	10.25	Trippir		11/8		Wear	Bushin	ng Ins	talled			
Hours on Casing/Lir			19.25 <i>l</i> 1				11/8		Wear	Bushin	ng Ins	talled			
Depth (ft)		tating:		Mı as (Units)	ud Log Ir	ng: nformatio Gas	11/8 n	Drillin				talled Shale		ROF	•
•		D (ft)	G Avg	Mı as (Units)	ud Log Ir	ng: nformatio	11/8 n		ng Por	e M	lud		Sh		
Depth (ft) From To 2,650 2,670	TV From 2,650	To (ft) To 2,670	Avg	Mı as (Units)	ud Log Ir	ng: nformatio Gas	11/8 n	Drillin Exp.	ng Por	e M s De	lud	Shale	Sh		
Depth (ft) From To 2,650 2,670	TV From 2,650	To (ft) To 2,670	Avg	Mı as (Units) Max a	ud Log Ir t Depth	ng: nformatio Gas Connect.	n Trip	Drillin Exp.	ng Pore	e M s De	lud ens.	Shale	Sha		
Depth (ft) From To 2,650 2,670 Formation Name: 1	TV From 2,650	To (ft) To 2,670	Avg	Mı as (Units) Max a	ud Log Ir t Depth	ng: nformatio Gas Connect.	n Trip	Drillin Exp.	ng Pore	e M s De	lud ens.	Shale	Sha		
Depth (ft) From To 2,650 2,670 Formation Name: 1	TV From 2,650	To (ft) To 2,670 yolite 50-90	Avg 0 0 % Granite	Mı as (Units) Max a	ud Log Ir t Depth	ng: nformatio Gas Connect.	n Trip	Drillir Exp	ng Pore	e M s De	lud ens.	Shale	Sh		
Depth (ft) From To 2,650 2,670 Formation Name: 1 Lithology: 2,700	TV From 2,650 050% Rhy	To (ft) To 2,670 yolite 50-90	Avg 0 0 % Granite	Mu as (Units) Max a	t Depth	ng: nformatio Gas Connect.	11 / 8 n s Trip	Drillir Exp	ng Pores	e M s De	lud ens. 9.00	Shale	Sha		
Depth (ft) From To 2,650 2,670	TV From 2,650 050% Rhy	To To 2,670 (rollite 50-90) 2,700	Avg 0 0 % Granite	Mu as (Units) Max a	t Depth	ng: nformatio Gas Connect.	11 / 8 n s Trip	Drillir Exp	ng Pores	e M s De	lud ens. 9.00	Shale	Sha		
Depth (ft) From To 2,650 2,670	TV From 2,650 050% Rhy 2,670	D (ft) To 2,670 /olite 50-90 2,700	Avg 0 0 0 % Granite	Muas (Units) Max a 0	t Depth	ng: nformatio Gas Connect. 0	11 / 8 n s Trip	Drillir Exp.	ng Pores	e M s De	9.00	Shale	Sh		
Depth (ft) From To 2,650 2,670	TV From 2,650 050% Rhy 2,670	D (ft) To 2,670 /olite 50-90 2,700	Avg 0 0 0 % Granite	Mu as (Units) Max a	t Depth	ng: nformatio Gas Connect.	11/8 n s Trip 0	Drillir Exp.	ng Pores	e M s De	lud ens. 9.00	Shale	Sha		
Depth (ft) From To 2,650 2,670	TV From 2,650 050% Rhy 2,670 00% Gran 2,700	To To 2,670 colite 50-90 2,700 colite 50-90 3,000 colite 50-90 3,000 colite 50-90 c	Avg 0 0 0 % Granite	Muas (Units) Max a 0	t Depth	ng: nformatio Gas Connect. 0	11/8 n s Trip 0	Drillir Exp.	ng Pores	e M s De	9.00	Shale	Sh		
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Depth (ft) From To 2,650 2,670	TV From 2,650 050% Rhy 2,670 00% Gran 2,700	D (ft) To 2,670 /olite 50-90 2,700 iite 3,000	Avg 0 0 0 % Granite 0 0	Muas (Units) Max a 0 0	t Depth 0 0 Rig Info	ng: nformatio Gas Connect. 0 0	11 / 8 n s Trip 0	Drillir Exp.	ng Pores	e M s De	9.00	Shale	Sha		
Depth (ft) From To 2,650 2,670	TV From 2,650 050% Rhy 2,670 00% Gran 2,700 00% Gran	D (ft) To 2,670 /olite 50-90 2,700 iite 3,000	Avg 0 0 0 % Granite	Muas (Units) Max a 0 0	t Depth 0 0 Rig Info	ng: nformatio Gas Connect. 0 0	11 / 8 n s Trip 0	Drillir Exp.	ng Pores	e M s De	9.00	Shale	Sha		
Depth (ft) From To 2,650 2,670 Formation Name: 1 Lithology: 2,670 2,700 Formation Name: Lithology: 1 2,700 3,000 Formation Name: Lithology: 1 Equipment Problem Location Condition:	TV From 2,650 050% Rhy 2,670 00% Gran 2,700 00% Gran	D (ft) To 2,670 /olite 50-90 2,700 iite 3,000	Avg 0 0 0 % Granite 0 0	Muas (Units) Max a 0 0	t Depth 0 0 Rig Info	ng: nformatio Gas Connect. 0 0	11 / 8 n s Trip 0	Drillir Exp.	ng Pores	e M s De	9.00	Shale	Sha		
Depth (ft) From To 2,650 2,670 Formation Name: 1 Lithology: 2,670 2,700 Formation Name: Lithology: 1 2,700 3,000 Formation Name: Lithology: 1 Equipment Problem Location Condition:	TV From 2,650 050% Rhy 2,670 00% Gran 2,700 00% Gran	D (ft) To 2,670 /olite 50-90 2,700 iite 3,000	Avg 0 0 0 % Granite 0 0	as (Units) Max a 0 0 0	t Depth 0 0 Rig Info	ng: nformatio Gas Connect. 0 0 0 ormation higher pum	11 / 8 n 5 Trip 0	Drillir Exp.	ng Pores	e M s De	9.00	Shale	Sh		
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Depth (ft) From To 2,650 2,670 Formation Name: 1 Lithology: 2,670 2,700 Formation Name: Lithology: 1 2,700 3,000 Formation Name: Lithology: 1 Equipment Problem Location Condition: Transport: Screen Sizes: Shaker No 1:	TV From 2,650 050% Rhy 2,670 00% Gran 2,700 00% Gran Good	D (ft) To 2,670 /olite 50-90 2,700 iite 3,000 iite ators havin Middle 1 60	Avg O O % Granite O O Middle 2	th over heat	t Depth 0 0 Rig Info	ng: nformatio Gas Connect. 0 0 ormation higher pum ol Informatorment Usa	n Trip 0 0 p rates.	Drillin Exp.	ng Pore. Pres	e M s De	9.00 9.00	Shale Dens.			
Depth (ft) From To 2,650 2,670 Formation Name: 1 Lithology: 2,670 2,700 Formation Name: Lithology: 1 2,700 3,000 Formation Name: Lithology: 1 Equipment Problem Location Condition: Fransport: Screen Sizes:	TV From 2,650 050% Rhy 2,670 00% Gran 2,700 00% Gran S: Gener Good	D (ft) To 2,670 /olite 50-90 2,700 iite 3,000 materials and selection an	Avg 0 0 0 % Granite 0 0 0 Middle 2	as (Units) Max a 0 0 th over hea Solid Bottom	t Depth 0 0 Rig Info	ng: nformatio Gas Connect. 0 0 ormation higher pum	n Trip 0 0 p rates.	Drillin Exp.	ng Pore. Pres	e M s De	9.00 9.00	Shale			
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Depth (ft) From To 2,650 2,670 Formation Name: 1 Lithology: 2,670 2,700 Formation Name: Lithology: 1 2,700 3,000 Formation Name: Lithology: 1 Equipment Problem Location Condition: Transport: Screen Sizes: Shaker No 1: Shaker No 2:	TV From 2,650 050% Rhy 2,670 00% Gran 2,700 00% Gran S: Gener Good	D (ft) To 2,670 colite 50-90 2,700 dite 3,000 dite material material for the following for the following for the following following for the following for t	Avg 0 0 0 % Granite 0 0 0 Middle 2 60 60	th over heat	Rig Info	ng: nformatio Gas Connect. 0 0 ormation higher pum ol Informatorment Usa	n Trip 0 0 p rates.	Drillin Exp.	ng Pore. Pres	e M s De	9.00 9.00	Shale Dens.			
Depth (ft) From To 2,650 2,670 Formation Name: 1 Lithology: 2,670 2,700 Formation Name: Lithology: 1 2,700 3,000 Formation Name: Lithology: 1 Equipment Problem Location Condition: Transport: Screen Sizes: Shaker No 1: Shaker No 2:	TV From 2,650 050% Rhy 2,670 00% Gran 2,700 00% Gran S: Gener Good	To	Avg 0 0 0 % Granite 0 0 0 Middle 2 60 60	th over heat	t Depth 0 0 Rig Info ating with Equip Centr	ng: nformatio Gas Connect. 0 0 ormation higher pum ol Informa oment Usa	n Trip 0 0 p rates. ation ge (Hrs)	Drillin Exp.	ng Pore. Pres	e M s De	9.00 9.00 9.00	Shale Dens.			San



Geothermal Resource Group, Inc.

Well ID: Forge 78B-32

Well Name: 78B-32 Sect: 32 Town: 26 Rng: 9W County: Beaver State: UT

Field: UTAHFORGE Sect: 32 Town: 26 Rng: 9W Cour

Report No: 5 Report For 01-Jul-21										
Drill Pipe Inventory										
DP Size Jo	oints	Weight	Grade	Thread	DP Size	Joints	Weight	Grade	Thread	
5"	114	19.5	S-135	4.5IF						
				Safety In	formation					
Meetings/Drills	Time			Descrip	tion					
Safety	60	Two 30 min	Pre tour safety	y meetings with both	n crews. Handlin	g BHA, Trippi	ing pipe, Riggi	ng up and runn	ing casing.	
First Aid Treatme	nts:	0 Med	ical Treatmei	nts: 0	Lost Time Incid	lents:	0 Days	Since LTI:		
BOP Test	✓	Crownamati	c Check							
				Weather In	nformation					
Sky Condition:	Clear				Visibility:	10	1			
Air Temperature:	70 degF	=			Bar. Pressure	: 29.83				
Wind Speed/Dir:	6 / NNV	V			Wind Gusts:	1				



Geothermal Resource Group, Inc.

Well ID: Forge 78B-32

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

Field: UTAHFORGE

Report For 02-Jul-21

Well Name: 78B-32

Report No: 6								Report For	02-Jui-21
Operator:	University of Uta	ah Rig :	Frontier Rig 1	6 Spud Date:	28-J	un-21	Daily Cost / M	ud (\$):	
Measured Depth (f	t): 300	09 Last Casing	: 11.750 at 2,99	0 Wellbore:	Original We	ellbore	AFE No.	AFE (\$)	Actual (\$)
Vertical Depth (ft):	300	09 Next Casing	: 7.000 at 8,50	0 RKB Elevation	າ (ft):	30.40			
Proposed TD (ft):	950	00 Last BOP Te	est: 29-Jun-2	1 Job Reference	RKB (ft):				
Hole Made (ft) / Hrs	s: 0/0	0.0 Next BOP To	est: 19-Jul-2	1 Working Inter	est:		Totals:		
Average ROP (ft/h	r):						Well Cost (\$):		
Drilling Days (act./	plan): 6/21	Flat Days (act./	plan): 0/9	Total Days (act.	/plan):	6/30	Days On Loca	ition:	6
Pers/Hrs: Oper	ator: 3 / 36	Contractor:	14 / 168	Service:	4 / 48	Other:	7 / 84	Total:	28 / 336

Safety Summary: No incidents or events reported. Conducted Crown Check, Safety Meeting.

Current Operations: Installing 13 5/8" 5M BOPE. (report time) Nipple up 13 5/8" 5M BOPE. Test BOPE. **Planned Operations:** Run in the hole and lay down 5" drill pipe. Pick up and rack back 5.5" drill pipe.

Toolpusher: Steve Caldwell, Justin Bristol

Wellsite Supervisors: Virgil Welch, Brian Gresham Tel No.: 7132807438

Operat	ions S	Summarv	

From	То	Elapsed	End MD(ft)	Code	Operations Description Non-	-Proc
0:00	0:30	0.50	3,009	3-97	Cleaned and cleared rig floor of 14 3/4" handling tools.	
0:30	1:00	0.50	3,009	10-98	Hold detailed safety meeting with Wyoming Casing Service/Rig crew along with GRG representative.	
1:00	2:00	1.00	3,009	CASE	Rig up 11 3/4" casing running equipment.	
2:00	8:30	6.50	3,009	CASE	Run 11 3/4", 54 lbs/ft, J-55 BTC casing as follows:. Float Shoe, 2-joints, Float collar followed by 71-joints. Landed out with 31' landing joint to set depth of 2,989.99' Total casing ran 2,958.99' Shoe set 2,984.70 KB. Float Collar 2,903.97' KB.	
8:30	9:00	0.50	3,009	CASE	Rig down casing crew	
9:00	9:30	0.50	3,009	SERV	Service rig	
9:30	11:30	2.00	3,009	CMTP	Install valve in wellhead, rig up pumps in cellar, 4 bolt BOP	
11:30	12:30	1.00	3,009	TRPI	Trip in hole with stab-in	
12:30	13:30	1.00	3,009	CIRC	Circulate bottoms upo	
13:30	14:30	1.00	3,009	CMTP	Rig up cement crew and held JSA	
14:30	16:30	2.00	3,009	CMTP	Pump 2 bbl water, pressure test lines to 3000 psi, pump 52 bbls fresh water, @ 6bpm, 20 bbl mud clean, @ 6 bpm, 10 bbl fresh water @ 6bpm-HTHSLD atr 6 bpm, nix and pump 315 bbl RC-Thermalite (cement to surface at 300 bbl, Displace with 3 bbl water and 47 bbl drilling mud, check floats, CIP @ 16:00	
16:30	18:00	1.50	3,009	CMTP	Un-sting and trip out of the hole with stab-in to surface.	
18:00	21:00	3.00	3,009	ВОРО	Nipple down 21-1/4" BOPE and set out.	
21:00	23:45	2.75	3,009	WELLHD	Installed temporary 11 3/4" x 13 5/8 " SOW flange. Test to 1,000 psi. Good test.	
23:45	0:00	0.25	3,009	2-14	Installed 13 5/8" 5M BOPE stack.	

Management Summary

Cleaned and cleared rig floor.

Held safety meeting.

Rigged up and ran 11 3/4" casing with shoe depth of 2,899.99' KB.

Rigged down casing crew.

Ran in the hole with stab-in tool.

Rigged up Resource cementing and cemented casing with 315 bbl RC-Thermalite cement. Had good cement to surface. CIP @ 16:00.

Rigged down Resource cementing.

Pulled out of the hole with stab-in tool.

Nippled down 21-1/4" BOPE.

Installed temporary 11 3/4" x 13 5/8 " SOW flange. Test to 1,000 psi. Good test. Installed 13 5/8" 5m BOPE stack.

Comments

CIP @ 1600 HRS.

Good cement to surface.



Geothermal Resource Group, Inc.

Well ID: Forge 78B-32

Well Name: 78B-32 Sect: 32 Town: 26 Rng: 9W County: Beaver State: UT

Field: UTAHFORGE Sect: 32 Town: 26 Rng: 9W County: Beaver St

Report No	: 6									Rep	ort F	or 02-	Jul-21
				Casing/	Tubular Info	mation							
Туре	Size (ins)	Top MD (ft)	Top TVD (ft)	Bottom MD (ft)	Bottom TVD (ft)	Hole Sectio		Diam. ins)	Nom. Wgt (lbs)		minal rade		LOT s/gal)
FULL	16.000	0		416		SU	IRF	22.000	6	55	K-5	5	0.58
FULL	11.750	0		2,990		II.	NT1	14.750	5	54	J-5	5	
					ud Informatio	n							
				%					Gels		Ter	np	Mud
Dens. Vis		•			r Sand LGS	CI	Ca C	CI 10)s 10m	30m	ln	Out	Loss
		3,009 ft Mud P	• •										
8.90 43	43 29	7.8 1	10.5 7	93 0		900	120		5 9	16	109	118	
					d Consumab								
	Item Desc	ription	Qt	•	ost		tem Desc	ription			Qty.		Cost
Engineering	- EACH			1		m - OTH	ER				1		
				Ri	ig Informatio	n							
Equipment Problems: Replaced HYD hose on top drive.													
Location Condition: Good.													
Transport:		Received 2- 10	5/8" nov bit's.				V. sent in	20" dou	ble gate alo	ng with s	spacer	spools	
					Control Infor								
Screen Size		p Middle 1		Bottom	Equipment U	sage (Hr	s):						
Shaker I		60 60		60									
Shaker I		60 60		60	Centrifuge 1:	6 (Solid	s Remov	al)	Centrif	uge 2:	6 (Solid	is Rem	noval)
Shaker I	No 3:	60 60	60	60									
	14	. .			Bulk Inventory		11		! !	0:: 11-			1 - 4
Dia Fuel	Iten	n Type		Units	Beginnir	ıg	Used	Ke	ceived	On Ha		N	let
Rig Fuel				Drill	l Pipe Invente	2 PM			3,500	•	3,500		
DP Size	Joints	Weight	Grade	Threa		•	Joints	\/\/	eight	Grade		Thre	ad
5"			S-135	4.5IF	iu Dr)12 6	Jonnes	***	rigint	Grade		11116	au
	11	10.0	0 100		ety Informati	on							
Meetings/D	rills Time				escription	011							
Safety	60	Two 30 min F	Pre tour safet		•	Running	casing C	ementin	a Handling	BOPE			
Safety 60 Two 30 min Pre tour safety meetings with both crews. Running casing, Cementing, Handling BOPE. First Aid Treatments: 0 Medical Treatments: 0 Lost Time Incidents: 0 Days Since LTI:													
BOP Te		_			o Lost III	ne mora	U1110.		o Days or		•		
	[V	_ =:=::::::::::::::::::::::::::::::::::		Wea	ther Informat	ion							
Sky Condit	ion: Clear			1100	Visibil			10					
Air Temper						ressure:	29						
Wind Speed		•			Wind (20	2					
	, -,							-					



Geothermal Resource Group, Inc.

Well Name: 78B-32

Well ID: Forge 78B-32

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

Report No: 7									Report For	^r 03-Jul-21
Operator:	University of Uta	h Ri ç	g:	Frontier Rig 1	6 Spud Date:	28-	Jun-21	Daily Cost / M	lud (\$):	
Measured Depth (ft): 300	9 La :	st Casing:	11.750 at 2,99	00 Wellbore:	Original V	Vellbore	AFE No.	AFE (\$)	Actual (\$)
Vertical Depth (ft):	300	9 Ne	xt Casing:	7.000 at 8,50	00 RKB Elevat	ion (ft):	30.40			
Proposed TD (ft):	950	00 La s	st BOP Test	t: 03-Jul-2	Job Refere	nce RKB (ft):				
Hole Made (ft) / Hrs	: 0/0	.0 Ne	xt BOP Tes	t: 24-Jul-2	21 Working Int	erest:		Totals:		
Average ROP (ft/hr)):				LOT (lbs/ga	l):	11.70	Well Cost (\$):		
Drilling Days (act./p	olan): 7/21	Flat D	ays (act./pl	an): 0/9	Total Days (a	ct./plan):	7/30	Days On Loca	ation:	7
Pers/Hrs: Opera	tor: 3 / 36	Contr	ractor:	14 / 168	Service:	4 / 48	Other:	7 / 84	Total:	28 / 336

Safety Summary: No incidents or events reported. Conducted BOP Test, Crown Check, Safety Meeting.

Current Operations: Picked up 5.5" drill pipe from 740' to 2,900'.

Filled Pipe.

Drilled out shoe track from 2,902' to 2,989'.

Perform FIT. **Planned Operations:**

Pull out of the hole.

Pick up 10 5/8" RSS assembly.

Trip in the hole. Drill 10 5/8" hole.

Toolpusher: Steve Caldwell , Justin Bristol

Wellsite Supervisors: Virgil Welch , Brian Gresham Tel No.: 7132807438

					Operations Summary
From	То	Elapsed	End MD(ft)	Code	Operations Description Non-Pro
0:00	7:00	7.00	3,009	2-14	Installed BOP as followed. 11.75" x 13 5/8" 2M Spacer spool. 13 5/8" 5M mud cross, 5M Double gates, 13 5/8" 5M Annular, 13 5/8" Riser with rotating head. Installed inner and outer choke and kill valves. Installed choke and kill lines. Torqued all flanges. (Note: removed variable 3.5"x 5" ram blocks and installed 5.5" ram blocks)
7:00	11:30	4.50	3,009	2-15	#1 Test Blind rams, check valve, casing and 3 choke valves to 250 low pressure for 5 min and 1000 psi high pressure for 30 min, #2 Test pipe rams, outside kill side mud cross and 3 choke valves to 250 psi low pressure for 5 min and 1000 psi high pressure for 10 min, #3Test Bag, inside kill mud cross and 3 choke valves to 250 psi low pressure for 5 min and 1000 psi high pressure for 10 min #4 Test HCR valve to 250 psi low pressure for 5 min and 1000 psi high pressure for 10 min #5 Test inside choke side mud cross valve to 250 psi for 5 min and 1000 psi for 10 min. All test are good
11:30	15:00	3.50	3,009	3-34-2	RIH with 5 stands of 5" HWDP and 20 stands of 5" DP / POH laying down DP and transporting to 16A for inspection / excessive over torque.
15:00	17:30	2.50	3,009	4-34-2	RIH with same 5 stands of HWDP and remaining 18 stands of 5" drill pipe / Laid down 54 joints of 5" drill pipe and 15 joints of 5" HWDP and transport to 16A for inspection / excessive over torque Note: When laying down 5" DP every 3rd joint that had not been serviced (due to making only 2 trips) was extremely over torqued (55-70K) more than double max torque due to extreme drilling parameters. SD-80 unable to break so manual tongs were utilized teamed by 2 air tuggers to break the connection and ultimately had to go to a 4 part break line after the torque cylinder was destroyed.
17:30	18:00	0.50	3,009	SERV	Serviced rig.
18:00	21:00	3.00	3,009	OTHER	Rebuild I-BOP with new 6 5/8" X 6 5/8" sub. Installed 6 5/8" X 5.5" X/O lower Valve. Installed saver sub. Installed torque clamps.
21:00	23:00	2.00	3,009	3-34-1	Transport 5.5" HWDP along with 71-joints of 5.5" drill pipe from 16A location to rig site. Load racks and strap same.
23:00	0:00	1.00	3,009	3-34-3	Make up 10 5/8" drill out assembly as followed. 10 5/8" Mill Tooth. 8 1/8" Junk Basket. 3-Stands of 8" DC. 5-Stands of 5.5" HWDP.

Management Summary

Nipple up and test 13 5/8' 5M BOPE.

Ran in the hole with 5" HWDP and 5" drill pipe to 2,327'.

Laid out 5" drill pipe to HWDP.

Ran in the hole with remaining 18 stands of drill pipe and laid out same.

Serviced rig.

Changed out saver sub.



Well ID: Forge 78B-32

Field: UTAHFORGE

Geothermal Resource Group, Inc.

Well Name: 78B-32

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

Report No: 7 Report For 03-Jul-21

Transported 5.5" drill pipe from 16A to rig site. Loaded racks with 5.5" drill pipe, strapped same. Made up 10 5/8" drill out assembly.

Comments

Test out all BOPE to 300 psi low and 1,000 psi high, all test good. Pressure test results were sent to Jim Goddard (State Engineer)

Pressur	Pressure test results were sent to Jim Goddard (State Engineer)																			
	Casing/Tubular Information																			
Туре	е		Size ins)	To	p MD (ft)	•	TVD (ft)		om MD (ft)	Bottor (f		Hol Secti		OH Dia	m. N	lom. Wg (lbs)		ominal Grade		LOT s/gal)
FULL			16.00	0	()			416			S	URF	22.0	000	6	35	K-5	5	0.58
FULL			11.75	0	()			2,990				INT1	14.7	750	5	54	J-5	5	11.70
	Mud Information																			
	% Gels Temp Mud																			
Dens.	Vis	PV	ΥP	Filt.	Cake	pH/ES	Solids	Oil	Water	Sand	LGS	CI	Ca	CaCl	10s	10m	30m	In	Out	Loss
03-Jul-2	21 14	:00 a	t Deptl	า 3,009	ft Muc	l Pits, T	ype: Lov	w Soli	ds Non-	Dispers	sed									
8.80	41	15	9	8.8	1	10	6	0	94	0.25	2.1	800	120		3	6	8	85	85	
	Mud Consumables																			
Item Description Qty. Cost Item Description Qty. Cost																				
Engine	ering	- EAC	H					1			perdie	m - OTI	HER					1		
Truckin	g - E/	4CH						1												

Bit/BHA/Workstring Information

BHA - No. 5 - BIT, JUNK, 9 DC, XO, 15 HWDP = 739.12

Rig Information

Equipment Problems: None. **Location Condition:** Good.

Transport:

Solids	Control	Information
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Screen Sizes:	Тор	Middle 1	Middle 2	Bottom	
Shaker No 1:	60	60	60	60	
Shaker No 2:	60	60	60	60	
Shaker No 3:	60	60	60	60	

Bulk In	ventory
---------	---------

Item Type	Units	Beginning	Used	Received	On Hand	Net
Rig Fuel		8,752			8,752	

		Drill Pipe	inventory

DP Size	Joints	Weight	Grade	Thread	DP Size	Joints	Weight	Grade	Thread		
5"	114	19.5	S-135	4.5IF							

Safety Information

I	Meetings/Drills	Time			Descri	otion		
	Safety	60	Two 30	min Pre tour safety meeting	gs with bot	h crews. Cementing, laying do	wn drill	pipe, forklift operations.
	First Aid Treatme	ents:	0	Medical Treatments:	0	Lost Time Incidents:	0	Days Since LTI:

✓ BOP Test **✓** Crownamatic Check

Weather Information											
Sky Condition:	Clear	Visibility: 10									
Air Temperature:	75 degF	Bar. Pressure: 29.78									
Wind Speed/Dir:	10 / S	Wind Gusts: 2									



Geothermal Resource Group, Inc.

Well Name: 78B-32

Well ID: Forge 78B-32

Field: UTAHFORGE

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

Report No: 8								Report For	04-Jul-21
Operator:	University of Utah	n Rig:	Frontier Rig 1	6 Spud Date:	Spud Date: 28-Jun-21 I			ud (\$):	
Measured Depth (ft	3456	Last Casing:	11.750 at 2,99	0 Wellbore:	Original W	/ellbore	AFE No.	AFE (\$)	Actual (\$)
Vertical Depth (ft):	3009	Next Casing:	7.000 at 8,50	0 RKB Elevation	n (ft):	30.40			
Proposed TD (ft):	9500	Last BOP Tes	t: 03-Jul-2	1 Job Reference	e RKB (ft):				
Hole Made (ft) / Hrs	447 / 10.5	Next BOP Tes	t: 24-Jul-2	1 Working Inter	est:		Totals:		
Average ROP (ft/hr)	: 42.57	7		LOT (lbs/gal):		11.70	Well Cost (\$):		
Drilling Days (act./p	lan): 8/21 F	Flat Days (act./pl	lan): 0/9	Total Days (act	./plan):	8/30	Days On Loca	ition:	8
Pers/Hrs: Opera	tor: 3 / 36 C	Contractor:	14 / 168	Service:	6 / 72	Other:	2 / 24	Total:	25 / 300

Safety Summary: No incidents or events reported. Conducted Crown Check, Safety Meeting.

Current Operations: Drilling 10 5/8" hole section at 3,628'.

Planned Operations: Drill 10 5/8" hole section to 3,622'. Possibly trip to pick up conventional assembly with 1.5 deg motor due to build in angle.

Toolpusher: Steve Caldwell , Justin Bristol

Wellsite Supervisors: Virgil Welch , Brian Gresham Tel No.: 7132807438

Operations Summary											
From	То	Elapsed	End MD(ft)	Code	Operations Description N	on-Prod					
0:00	4:00	4.00	3,009	3-34-1	Picked up 5.5" drill pipe from 740' to 2,900'.						
4:00	4:15	0.25	3,009	3-5-1	Lined up mud pumps and shakers. Filled pipe.						
4:15	6:00	1.75	3,009	3-28	Drilled out shoe track from 2,902' to 2,989'. Good cement in shoe track from 2,922' to shoe. Observed 4' off good cement outside of the shoe. Cleaned out rat hole from 2,989' to 3,009'.)					
6:00	7:00	1.00	3,009	3-46	Perform FIT. Gradient of 0.61 psi/ft with EQM of 11.7 ppg						
7:00	9:30	2.50	3,009	3-6-4	POH and lay down junk sub and bit. Junk basket had nine pieces of metal, small in size 0.5" by .5".						
9:30	10:00	0.50	3,009	4-34-3	Picked up Directional Tools and PDC						
10:00	11:00	1.00	3,009	OTHER	Repaired depth tracker in crown with Pason						
11:00	12:00	1.00	3,009	4-34-3	Picked up directional Tools and PDC						
12:00	12:30	0.50	3,009	SERV	Serviced Rig.						
12:30	13:30	1.00	3,009	OTHER	Broke off TIW and saver sub / welded saver sub to TIW and reinstalled same.						
13:30	16:00	2.50	3,009	TRPI	Triped in hole to 3,009'. torqued every connection to 42K on 5.5" drill pipe.						
16:00	0:00	8.00	3,456	3-2-3	Drilled 10 5/8" section from 3,009' to 3,456'. Performed rotary step from 3,230' to 3,260'. Performed weight on bit step test from 3,265' to 3,291'.						

Management Summary

Picked up 5.5" drill pipe from 740' to 2,900'.

Lined up mud pumps and shakers. Filled pipe.

Drilled out shoe track from 2,902' to 2,989'.

Performed FIT.

Pulled out of the hole and laid out bit and junk basket. Found a few small pieces of bit debris in junk basket from last 14 3/4" bit run.

Picked up 10 5/8" RSS assembly.

Repaired depth tracker in crown with Pason.

Continued picking up 10 5/8" RSS assembly.

Broke off TIW and saver sub and tack welded saver sub to TIW and reinstalled same.

Tripped in hole to 3,009'.

Drilled 10 5/8" section from 3,009' to 3,456'.

Comments

Observed 70' of good cement throughout shoe track.

4' of good cement outside of shoe track.

Torque all 5.5" drill pipe to 42K.

Performed rotary step from 3,230' to 3,260'.

Performed weight on bit step test from 3,265' to 3,291'.

Pumped 100 bbl's of fresh water down at 3,430' with ROP increased 85-95% once water hit the bit. ROP dropped back down once water cleared the



Geothermal Resource Group, Inc.

Well Name: 78B-32

Well ID: Forge 78B-32

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

Field: UTAHFORGE Report For 04-Jul-21

Report No): 8															Re	port Fo	or 04-J	ul-21
bit. Lost commu	ınicatio	n with N	//WD at 3,3	346'. Trou	ble shoo	t commu	ınicatior	issue:	S.										
			<u> </u>			Cas	ing/Tu	bular	Inforr	natio	n								
Туре		ize ns)	Top ME (ft)		TVD (ft)	Bottom (ft)	MD B	ottom (ft)	TVD	Hole Section		OH [n. Wgt. Ibs)		minal rade		OT s/gal)
FULL		16.000	, ,	0		•	416			S	URF	2	2.000		65	5	K-55	5	0.61
FULL		11.750		0		2	,990				INT1	1	4.750		54	4	J-55	5	11.70
				<u> </u>	,		Mud	Inforn	natior	1									
						%									Gels		Ten	np	Mud
Dens. Vis	PV	YP F	ilt. Cake	pH/ES	Solids	Oil W	later S	and L	.GS	CI	Ca	Ca	CI 10	0s	10m	30m	In	Out	Loss
04-Jul-21 20	0:30 at	Depth :	3,341 ft M	ud Pits, T	ype: Lov	v Solids	Non-Dis	spersed	t										
8.70 39	9	10	9.4	1 10.5	6	0	94 (0.25	1.6	900	250			4	5	11	105	114	
							Mud C	onsu	mable	s									
	Item	Descri	ption		Qt	y.	Cost				Item I	Descr	ption				Qty.	C	ost
Bicarb - 50#	[‡] SK					12		C	austic	Soda -	- 50#S	K					2		
DeFoam 14	- GAL					2		[Desco (CF - 25	5#SK						2		
Engineering	- EAC	Н				1		F	lowZa	n - 25#	#SK						6		
pallets - OT	HER					1		p	erdien	ı - OTH	HER						1		
					·	Bit/BH	A/Wor	kstrin	g Info	rmati	on								
	Bit/BHA/Workstring Information Depth This Run R.O.P. Mud Pump																		
No Run M	lake	Mode	l Diam	In	Dis	t Hrs	Avg	Max	WO	B RP	M To	que	Wt	Flow	Press	J. Ve	I P. Dr	HHP	JIF
5 1 VA	REL \	√M-1	10.625	300	9	0 1.5	0.0		1	0	50	6	9	600	1300	107	88	31	285
Jets: 28 2				Out: 3	3009	Grade:	Cutter	: 1.	/1 I	Dull: V	VT / No	O W	lear: A		gs : 0			Pull: I	BHA
6 1 NO	V -	TKC83	10.625	300	9 28	2 8	35.2						9	800	2330	278	596	278	991
Jets: 12 1:	2 12	12 12	12 13 1	3 Out:		Grade:	Cutter	: .	/ I	Dull:	/	W	ear:	Br	gs:	Gge:		Pull:	
BHA - No. 6	S - BI	T, OTHI	ER, STAB,	MWD, 4	OTHER	, MMTR,	RR, FL	OAT, 2	2 OTH	ER, DO	C, XO,	HWDI	P = 966	6.88					
							Drilling	g Para	mete	rs									
Depth	(ft)		ROP (ft/h	ır)	WC	B (lbs)		ı	RPM		To	orque	(ft lbs)		(gals/	min)	Pres	sure
From	То			Max	Avg	Ma	x	Avg	N	lax	A۱	/g	Max	x	Avg		Max	(p:	si)
3,009	3,4		35.0	150.0	5	5	65	4	5	65		7		9	8	00	815	2	2,181
Annular Ve	locity:	Drill C	Collars:	478.		l Pipe:	23												
					ı	Viscella	aneous	Drilli	ing Pa	arame	ters								
Hook Load	s (lbs):		Off Bottor	n Rotate	: 18	5 Pick	Up:	195	Slack	Off:	1	75	Drag A	Avg/M	lax:	5 /	10		
Slow Circu	lation I	Data:																	
Pu	mp 1:		30 spm		110 ps		40 s	pm		215 p			50 sp	m		311 ps			
Pu	mp 2:		30 spm		110 ps	i	40 s	pm		215 p			50 sp	m		311 ps	i		
Pu	mp 3:		30 spm		110 ps	i	40 s	pm		215 p	osi		50 sp	m	;	311 ps	i		
Hours on B	HA:		Since Ir	spection	n: 27.	25 T o	tal: 2	27.25	Jars	:	0								
Hours on E						-		-		•	-								



Geothermal Resource Group, Inc.

Well ID: Forge 78B-32

Well Name: 78B-32 Sect: 32 Town: 26 Rng: 9W County: Beaver State: UT

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

Report No	: 8											Repoi	t For 04	-Jul-21
						Mud Log	Information	on						
Depth	(ft)	T۱	/D (ft)		Gas (Ur		Ga	s	Drilling	Pore	Mud	Shale	R	OP
From	То	From	То	Avg	Max	at Depth	Connect.	Trip	Exp.	Press	Dens.	Dens.	Shale	Sand
2,700	3,040													
Formation N														
Lithology:		00% Grai	nite											
3,040	3,190													
Formation N														
Lithology:		60-100% F	Hornblende	Quartz M	onzodiori	ite, 0-40% G	Franite							
3,190	3,330													
Formation N														
Lithology:		00% Grai	nite											
3,330	3,380													
Formation N														
Lithology:		00% Qua	rtz Monzoo	liorite										
3,380	3,420													
Formation N														
Lithology:		00% Grai	nodiorite											
3,420	3,470													
Formation N														
Lithology:	1	00% Qua	rtz Monzoo	liorite										
						Rig In	formation							
Equipment	Problem	s: None												
Location Co	ndition:	Good												
Transport:		Rece	ived 7" floa	t equipme	nt.									
					S	olids Cont	rol Inform	ation						
Screen Size	s:	Тор	Middle 1	Middle	2 Bott	om Equ	ipment Usa	age (Hrs):					
Shaker N	lo 1:	60	60	6	0	60								
Shaker N	lo 2:	120	120	8	0	80 Cer	trifuge 1:	12 (Solid	s Removal)	(Centrifuç	ge 2 : 12	(Solids R	emoval)
Shaker N	lo 3:	120	120	8	0	80								
						Bulk	Inventory							
		Item Typ	е			Units	Beginning	ι	Jsed	Receive	ed (On Hand		Net
Rig Fuel							8,75	52	1,711	3	,502	10,5	43	1,79
						Drill Pip	e Inventor	у						
DP Size	Join	ts \	Neight	Grade		Thread	DP Siz	ze	Joints	Weight	: 0	3rade	Thr	read
5.5		194	24.7	S-135	5.5	IF								
						Safety I	nformatio	n						
Meetings/Di	rills T	ime				Descr	iption							
Safety		60 Tw	vo 30 min F	re tour sa	fety mee	tings with bo	oth crews. Tr	ipping pi	ipe, Handlin	g BHA, H	ouse kee	ping, Tri	o hazards	i.
First Aid Tro	eatments	s:	0 Medi	cal Treatr	nents:	0	Lost Time	Incider	nts:	0 🗖	ays Sin	ce LTI:		
BOP Tes	st	✓ Cro	ownamatic	Check										
						Weather	Informatio	n						
Sky Conditi	on: F	Partly Clou	ıdy				Visibility		10					
-		•					_							
Air Tempera Wind Speed	ature: 7	5 degF 0 / SW					Bar. Pre Wind Gu	ssure:	29.78					



Pers/Hrs:

Daily Drilling Report

Geothermal Resource Group, Inc.

6 / 72 **Total**:

Well Name: 78B-32

29 / 348

Well ID: Forge 78B-32

Field: UTAHFORGE

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

6 / 72 Other:

Report No: 9							Report For	05-Jul-21
Operator:	University of Utah	Rig: Fro	ontier Rig 16	Spud Date:	28-Jun-21	Daily Cost / Mu	d (\$):	
Measured Depth (ft):	3730	Last Casing: 11.	750 at 2,990	Wellbore: O	riginal Wellbore	AFE No.	AFE (\$)	Actual (\$)
Vertical Depth (ft):	3009	Next Casing: 7.	000 at 8,500	RKB Elevation (f	t): 30.40			
Proposed TD (ft):	9500	Last BOP Test:	03-Jul-21	Job Reference R	KB (ft):			
Hole Made (ft) / Hrs:	274 / 14.0	Next BOP Test:	24-Jul-21	Working Interest	:	Totals:		
Average ROP (ft/hr):	19.57			LOT (lbs/gal):	11.70	Well Cost (\$):		
Drilling Days (act./pla	an): 9/21 F	lat Days (act./plan)	: 0/9	Total Days (act./pla	an): 9/30	Days On Locati	ion:	9

Safety Summary: No incidents or events reported. Conducted Crown Check, Safety Meeting.

3 / 36 Contractor:

Current Operations: Drilling 10 5/8" hole section at 4,260'.

Planned Operations:Drill 10 5/8" hole section.Toolpusher:Steve Caldwell , Justin Bristol

Operator:

Wellsite Supervisors: Virgil Welch , Brian Gresham Tel No.: 7132807438

14 / 168 **Service**:

Operations Summary											
From	То	Elapsed	End MD(ft)	Code	Operations Description N	lon-Prod					
0:00	5:00	5.00	3,582	3-2-3	Drilled 10 5/8" section from 3,456' to 3,582'. Pumped 100 bbl's of fresh water down at 3,557', ROP increased 85-95% once water hit the bit. ROP dropped back down once water cleared the bit. Reduced pump rate from 800 to 775 per Texas A&M advisor.						
5:00	5:30	0.50	3,582	3-5-1	Circulated while discussing survey of 3.75 deg with team. Decision was made to drill 40' of new hole and take a check shoot.						
5:30	6:00	0.50	3,602	3-2-3	Drilled 10 5/8" section from 3,582' to 3,602'.						
6:00	7:30	1.50	3,651	3-2-3	Drilled 10-5/8" hole from 3,602' to 3,651'.						
7:30	8:00	0.50	3,651	CIRC	Take check shot and confirm steerable not working / circ and pump slug						
8:00	12:00	4.00	3,651	3-6-4	POH to change out directional assembly.						
12:00	13:30	1.50	3,651	4-34-4	Lay down rotary steerable assembly and bit						
13:30	14:30	1.00	3,651	4-34-3	Picked up 1.5 deg bent assembly						
14:30	16:00	1.50	3,651	3-6-3	RIH to shoe						
16:00	21:30	5.50	3,651	OTHER	Transferred mud from 78B-32 to sump @ 58-32 / cleaned pits / filled pits with water to prepare for change over.						
21:30	22:00	0.50	3,651	3-6-3	RIH from 2900' to 3,645'.						
22:00	23:00	1.00	3,651	3-5-1	Filled pipe and change hole over to fresh water with a total of 3,800 strokes at 486 gpm.						
23:00	23:30	0.50	3,681	3-2-3	Slide drill 10 5/8" hole from 3,651' to 3,681'.						
23:30	0:00	0.50	3,730	3-2-3	Drilled 10-5/8" hole from 3,681' to 3,730'						

Management Summary

Drilled 10 5/8" section from 3,456' to 3,582'.

Circulated while discussing survey of 3.75 deg with team.

Drilled 10 5/8" section from 3,582' to 3,651'.

Took check shot and confirm steerable not working.

Circulated and pumped slug.

Pulled out of the hole to change out directional assembly.

Laid down rotary steer-able assembly and bit.

Picked up 1.5 deg bent assembly.

Tripped in the hole to 2,900'.

Transferred mud from 78B-32 to sump @ 58-32 / cleaned pits / filled pits with water to prepare for change over.

Tripped in the hole from 2900' to 3,645'.

Filled pipe and change hole over to fresh water.

Slide drilled 10 5/8" hole with water from 3,651' to 3,681'.

Drilled 10-5/8" hole from 3,681' to 3,730'.

Comments

Performed weight on bit step test at 3,711'.

Performed RPM step test at 3,820'.



MWD

MWD

3,642.0

3,737.0

3.93

1.10

218.3

218.9

3,641.6

3,736.5

9.4

13.4

-4.7

-8.0

S 4.7

S 8.0

W 8.2

W 10.8

0.498

2.979

Daily Drilling Report

Geothermal Resource Group, Inc.

Well ID: Forge 78B-32

Well Name: 78B-32 Field: UTAHFORGF Sect: 32 Town: 26 Rng: 9W County: Beaver State: UT Report No: 9 Report For 05-Jul-21 Casing/Tubular Information Size Top MD Top TVD Bottom MD Bottom TVD OH Diam. Nom. Wgt. Nominal LOT Type (ins) Section (ins) (lbs) Grade (lbs/gal) FULL 16.000 0 416 SURF 22.000 65 K-55 0.61 0 2.990 **FULL** 11.750 INT1 14.750 54 J-55 11.70 **Mud Information** Gels Temp Mud Filt. Cake pH/ES Solids Oil Water Sand LGS CaCI 10s 10m 30m Out Ca In Loss 05-Jul-21 23:00 at Depth 3,651 ft Mud Pits, Type: Low Solids Non-Dispersed 600 90 8.30 0 120 1 1 1 114 **Mud Consumables Item Description** Item Description Qty. Cost Qty. Cost Barite - 100#SK 40 Engineering - EACH FlowZan - 25#SK 22 pallets - OTHER 2 perdiem - OTHER **Bit/BHA/Workstring Information** R.O.P. Mud Pump Depth This Run No Run Make Model Diam In Dist Hrs WOB RPM Torque Wt Flow Press J. Vel P. Drp HHP Avg Max 25.8 1 NOV 15 800 2495 278 278 TKC83 10.625 3009 387 65.0 65 40 991 Wear: A Jets: 12 12 12 12 12 13 13 Out: 3651 Grade: Cutter: 1/1 Dull: WT/NO Brgs: X Gge: 0 Pull: DTF 7 1 NOV TKC83 10.625 79.0 79.0 2510 278 265 3651 79 55 60 11 8 800 569 945 Jets: 13 13 12 12 12 12 12 12 Out: Grade: Cutter: 1 Dull: Wear: Brgs: Gge: Pull: BHA - No. 7 - BIT, MMTR, STAB, MWD, 2 OTHER, STAB, MONEL, 3 OTHER, DC, XO, HWDP = 960.36 **Drilling Parameters** Depth (ft) ROP (ft/hr) WOB (lbs) Torque (ft lbs) Flow (gals/min) **Pressure RPM** Avg From To Max Max Max Avg Max Avg Max (psi) Avg Avg 3,651 3,730 130.0 157.0 45 65 60 60 12 14 800 830 2,460 Annular Velocity: Drill Collars: 478.0 **Drill Pipe:** 231.0 Slide drilled 10 5/8" hole from 3,651' to 3,681'. Comments: Miscellaneous Drilling Parameters Hook Loads (lbs): Off Bottom Rotate: 196 Pick Up: 199 Slack Off: Drag Avg/Max: 5000 / 8000 **Slow Circulation Data:** 30 spm 40 spm Pump 1: 110 psi 215 psi 50 spm 311 psi Pump 2: 30 spm 110 psi 40 spm 215 psi 50 spm 311 psi 50 spm Pump 3: 30 spm 110 psi 40 spm 215 psi 311 psi Hours on BHA: Since Inspection: 35.25 Total: 35.25 0 Jars: Hours on Casing/Liner: Rotating: 18 *I* Tripping: Wear Bushing Installed 14 *I* **Survey Information** Survey Meas. Vertical Coordinates Type Depth Inc. **Azimuth** TVD Closure Section N-S E-W D.L.S. 3,384.0 0.76 3,384.0 N 4.1 0.794 **MWD** 228.4 4.2 4.1 E 0.9 **MWD** 3,480.0 2.55 232.0 3,479.9 2.7 2.4 N 2.4 W 1.3 1.867 S 1.3 **MWD** 3.93 223.2 3,574.8 5.3 -1.3 W 5.2 1.539 3,575.0



Geothermal Resource Group, Inc.

Well Name: 78B-32

Well ID: Forge 78B-32

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

Field: UTAHFORGE Report For 05-Jul-21

						u Log	Informatio	n						
Depth (f			D (ft)		Gas (Units)		Gas		Drilling	Pore	Mud	Shale		ROP
From	То	From	То	Avg	Max at I	Depth	Connect.	Trip	Exp.	Press	Dens.	Dens.	Shale	Sand
3,520	3,560													
ormation Na														
ithology:		0-60% Qu	artz Monzo	diorite 40	-80% Granod	iorite								
3,570	3,580													
ormation Na														
ithology:		00% Quar	tz Monzodi	orite										
3,590	3,630													
ormation Na														
ithology:		0% Quartz	z Monzodio	rite 80% (Grandodiorite									
3,640	3,730													
ormation Na	ame:													
ithology:		00% Quar	tz Monzodi	orite										
3,330	3,380													
ormation Na	ame:													
ithology:		00% Quar	tz Monzodi	orite										
3,380	3,420													
ormation Na	ame:													
ithology:	10	00% Gran	odiorite											
	3,510													
3,420	3,310													
ormation Naithology:	ame:		tz Monzodi	orite	F	Rig Inf	ormation							
Formation Na Lithology: Equipment P Location Cor	ame:	S: None.		orite				ntion.						
Formation Nation National Property of the Internation Conference o	ame: 10 Problems ndition:	S: None. Good.			Solids	Cont	rol Informa		۸.					
Formation Na Lithology: Equipment P Location Cor Transport: Screen Sizes	ame: 10 Problems ndition:	S: None. Good.	Middle 1	Middle 2	Solids 2 Bottom	Cont	rol Informa ipment Usa	ge (Hrs			Dogasso			
Formation Na Lithology: Equipment P Location Cor Transport: Screen Sizes Shaker No	ame: 10 Problems ndition: 3: 0: 11	Good. Top	Middle 1 100	Middle 2	Solids 2 Bottom 100	Contr Equ Des	rol Informa ipment Usa ander: 0	ge (Hrs	Desilter:	-	Degasse		(Solide P	Pamoval
Formation Na Lithology: Equipment P Location Cor Transport: Screen Sizes Shaker No Shaker No	ame: 10 Problems ndition: 3: 0 1: 0 2:	For 100 120	Middle 1 100 120	Middle 2 100 80	Solids 2 Bottom 100 80	Contr Equ Des	rol Informa ipment Usa	ge (Hrs	Desilter:	-		or: 0 ge 2: 10	(Solids R	demoval)
Equipment P Location Cor Fransport: Screen Sizes Shaker No	ame: 10 Problems ndition: 3: 0 1: 0 2:	Good. Top	Middle 1 100	Middle 2	Solids 2 Bottom 100 80	Equ Des Cen	rol Informa ipment Usa ander: 0 trifuge 1: 1	ge (Hrs	Desilter:	-			(Solids R	demoval)
Equipment P Location Cor Fransport: Screen Sizes Shaker No	Problems ndition:	Top 100 120 120	Middle 1 100 120 120	Middle 2 100 80	Solids 2 Bottom 100 80 80	Equ Des Cen	rol Informa ipment Usa ander: 0 trifuge 1: 1 nventory	ge (Hrs	Desilter: (s Removal)		Centrifu	ge 2: 10	`	,
Equipment P Location Cor Transport: Screen Sizes Shaker No	Problems ndition:	For 100 120	Middle 1 100 120 120	Middle 2 100 80	Solids 2 Bottom 100 80	Equ Des Cen	rol Informa ipment Usa ander: 0 trifuge 1: 1 nventory Beginning	ge (Hrs	Desilter: (s Removal)	-	Centrifug	ge 2: 10 On Hand		Net
Equipment P Location Cor Transport: Screen Sizes Shaker No	Problems ndition:	Top 100 120 120	Middle 1 100 120 120	Middle 2 100 80	Solids 2 Bottom 100 80 80 Units	Equ Des Cen	rol Informa ipment Usa ander: 0 trifuge 1: 1 nventory Beginning	ge (Hrs 0 (Solid	Desilter: (s Removal)		Centrifu	ge 2: 10		,
Equipment P Location Cor Transport: Screen Sizes Shaker No Shaker No	ame: 10 Problems ndition: 3: 0 1: 0 2: 0 3:	Top 100 120 120	Middle 1 100 120 120	Middle 2 100 80 80	Solids 2 Bottom 100 80 0 80 Units	Equ Des Cen Bulk I	rol Informa ipment Usa ander: 0 trifuge 1: 1 nventory Beginning 10,54	ge (Hrs 0 (Solid	Desilter: (s Removal) Jsed 2,147	Receive	ed 0	On Hand	96	Net -2,14
Equipment P Location Cor Transport: Screen Sizes Shaker No Shaker No	Problems ndition:	Top 100 120 120 1tem Type	Middle 1 100 120 120	Middle 2 100 80 80	Solids 2 Bottom 100 80 80	Equ Des Cen Bulk I	rol Informa ipment Usa ander: 0 trifuge 1: 1 nventory Beginning	ge (Hrs 0 (Solid	Desilter: (s Removal)		ed 0	ge 2: 10 On Hand	96	Net
Equipment P Location Cor Transport: Screen Sizes Shaker No Shaker No	ame: 10 Problems ndition: 3: 0 1: 0 2: 0 3:	Top 100 120 120	Middle 1 100 120 120	Middle 2 100 80 80	Solids 2 Bottom 100 80 0 80 Units Dr Thre	Equ Des Cen Bulk I	rol Informa ipment Usa ander: 0 trifuge 1: 1 nventory Beginning 10,54: e Inventory	ge (Hrs 0 (Solid	Desilter: (s Removal) Jsed 2,147	Receive	ed 0	On Hand	96	Net -2,14
Equipment P Location Cor Transport: Screen Sizes Shaker No Shaker No Shaker No	Problems ndition: 10 2: 0 1: 0 2: 0 3:	Top 100 120 120 14tem Type	Middle 1 100 120 120	Middle 2 100 80 80	Solids Solids	Equ Des Cen Bulk I	rol Informa ipment Usa ander: 0 trifuge 1: 1 nventory Beginning 10,54: Elinventory DP Siz	ge (Hrs 0 (Solid	Desilter: (s Removal) Jsed 2,147	Receive	ed 0	On Hand	96	Net -2,14
Equipment P Location Cor Transport: Screen Sizes Shaker No Shaker No Shaker No Shaker No Shaker No	Problems ndition: 10 2: 0 1: 0 2: 0 3:	Top 100 120 120 120 14em Type	Middle 1 100 120 120 120 Veight 24.7 S	Middle 2 100 80 80 Grade 6-135	Solids Solids	Equ Des Cen Bulk I	rol Information ipment Usa ander: 0 trifuge 1: 1 nventory Beginning 10,54: e Inventory DP Siz information	ge (Hrs	Desilter: (s Removal) Jsed 2,147 Joints	Receive	ed 0	On Hand 8,3 Grade	96 Thi	Net -2,14
Equipment P Location Cor Transport: Screen Sizes Shaker No Shaker No Shaker No Shaker No DP Size 5.5 Meetings/Dri Safety	ame: 10 Problems ndition: 3: 0 1: 0 2: 0 3: Joint	Top 100 120 120 120 14tem Type 194 194	Middle 1 100 120 120 120 Veight 24.7 S	Middle 2 100 80 80 Grade 6-135	Solids 2 Bottom 100 80 80	Equ Des Cen Bulk I	rol Information ipment Usa ander: 0 trifuge 1: 1 nventory Beginning 10,54: e Inventory DP Siz nformation ption th crews. Tri	ge (Hrs 0 (Solid	Desilter: (s Removal) Jsed 2,147 Joints	Receive Weight	Centrifue ed 0 t (On Hand 8,3 Grade	96 Thi	Net -2,14
Equipment P Location Cor Transport: Screen Sizes Shaker No	ame: 10 Problems ndition: 3: 0 1: 0 2: 0 3: Joint Ills Ti	Top 100 120 120 120 14tem Type 194 me 60 Two:	Middle 1 100 120 120 120 Veight 24.7 S	Middle 2 100 80 80 Grade 6-135	Solids 2 Bottom 100 80 80	Equ Des Cen Bulk I	rol Information ipment Usa ander: 0 trifuge 1: 1 nventory Beginning 10,54: e Inventory DP Siz information	ge (Hrs 0 (Solid	Desilter: (s Removal) Jsed 2,147 Joints	Receive Weight	ed 0	On Hand 8,3 Grade	96 Thi	Net -2,14
Equipment P Location Cor Transport: Screen Sizes Shaker No	ame: 10 Problems ndition: 3: 0 1: 0 2: 0 3: Joint Ills Ti	Top 100 120 120 120 14tem Type 194 me 60 Two:	Middle 1 100 120 120 120 Veight 24.7 S	Middle 2 100 80 80 Grade 6-135	Solids Do Solids Sol	Equ Des Cen Bulk I	rol Informa ipment Usa ander: 0 trifuge 1: 1 nventory Beginning 10,54: Elinventory DP Siz nformation ption th crews. Tri	ge (Hrs 0 (Solid	Desilter: (s Removal) Jsed 2,147 Joints	Receive Weight	Centrifue ed 0 t (On Hand 8,3 Grade	96 Thi	Net -2,14
Equipment P Location Cor Transport: Screen Sizes Shaker No	ame: 10 Problems Indition: 3: 0 1: 0 2: 0 3: Joint Ills Ti atments	Top 100 120 120 120 14tem Type 194 me 60 Two:	Middle 1 100 120 120 120 Veight 24.7 S	Middle 2 100 80 80 Grade 6-135	Solids Do Solids Sol	Equ Des Cen Bulk I	rol Informa ipment Usa ander: 0 trifuge 1: 1 nventory Beginning 10,54: e Inventory DP Siz nformation ption th crews. Tri Lost Time	ge (Hrs 0 (Solid	Desilter: (s Removal) Jsed 2,147 Joints ipe, Handlin nts:	Receive Weight	Centrifue ed 0 t (On Hand 8,3 Grade	96 Thi	Net -2,14
Equipment P Location Cor Transport: Screen Sizes Shaker No	ame: 10 Problems ndition: 3: 0 1: 0 2: 0 3: Joint Ills Ti atments t	Top 100 120 120 120 14tem Type 194 me 60 Two:	Middle 1 100 120 120 120 Veight 24.7 S	Middle 2 100 80 80 Grade 6-135	Solids Do Solids Sol	Equ Des Cen Bulk I	rol Information prior DP Siz Information th crews. Trime Informatio Visibility:	ge (Hrs 0 (Solid	Desilter: (s Removal) Jsed 2,147 Joints ipe, Handlin nts:	Receive Weight	Centrifue ed 0 t (On Hand 8,3 Grade	96 Thi	Net -2,14
Equipment P Location Cor Transport: Screen Sizes Shaker No Shaker No Shaker No Shaker No DP Size 5.5 Meetings/Dri Safety First Aid Trea	ame: 10 Problems ndition: 3: 0 1: 0 2: 0 3: Joint Ills Ti atments t con: C ture: 7:	Top 100 120 120 120 14tem Type 194 me 60 Two:	Middle 1 100 120 120 120 Veight 24.7 S	Middle 2 100 80 80 Grade 6-135	Solids Do Solids Sol	Equ Des Cen Bulk I	rol Informa ipment Usa ander: 0 trifuge 1: 1 nventory Beginning 10,54: e Inventory DP Siz nformation ption th crews. Tri Lost Time	ge (Hrs 0 (Solid 1 3 7 e pping pi Incider n : ssure:	Desilter: (s Removal) Jsed 2,147 Joints ipe, Handlin nts:	Receive Weight	Centrifue ed 0 t (On Hand 8,3 Grade	96 Thi	Net -2,14



Pers/Hrs:

Daily Drilling Report

Geothermal Resource Group, Inc.

4 / 48 **Total**:

Well Name: 78B-32

27 / 324

Well ID: Forge 78B-32 Field: UTAHFORGE

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

6 / 72 Other:

Report No: 10 Report For 06-Jul-21 Operator: University of Utah Rig: Frontier Rig 16 Spud Date: 28-Jun-21 Daily Cost / Mud (\$): Measured Depth (ft): 5334 Last Casing: 11.750 at 2,990 Wellbore: Original Wellbore AFE No. AFE (\$) Actual (\$) Vertical Depth (ft): 5333 Next Casing: 7.000 at 8.500 RKB Elevation (ft): 30.40 ---Proposed TD (ft): 9500 Last BOP Test: 03-Jul-21 Job Reference RKB (ft): Hole Made (ft) / Hrs: 1.604 / 23.0 **Next BOP Test:** 24-Jul-21 Working Interest: Totals: 69.74 11.70 Well Cost (\$): Average ROP (ft/hr): LOT (lbs/gal): 0/9 Total Days (act./plan): 10/21 Flat Days (act./plan): Drilling Days (act./plan): 10/30 Days On Location: 10

14 / 168 Service:

Safety Summary: No incidents or events reported. Conducted Crown Check, Safety Meeting.

Drilling 10 5/8" hole section at 5,717'. (report time) **Current Operations: Planned Operations:** Drill 10 5/8" hole section until ROP drops below 30 ft/hr.

3 / 36 Contractor:

Trip out of the hole for new bit.

Continue to drill 10 5/8" hole section to coring point (6,700')

Toolpusher: Steve Caldwell . Justin Bristol

Operator:

Virgil Welch, Brian Gresham Tel No.: 7132807438 Wellsite Supervisors:

Operations Summary

From	То	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	0:30	0.50	3,765	3-2-3	Drilled 10-5/8" hole from 3,730' to 3,765'	
0:30	0:45	0.25	3,780	3-2-3	Slide drill 10 5/8" hole from 3,765' to 3,780'.	
0:45	1:30	0.75	3,927	3-2-3	Drilled 10-5/8" hole from 3,780' to 3,927'.	
1:30	2:00	0.50	3,947	3-2-3	Slide drill 10 5/8" hole from 3,927' to 3,947'.	
2:00	3:00	1.00	4,060	3-2-3	Drilled 10-5/8" hole from 3,947' to 4,060'.	
3:00	3:30	0.50	4,085	3-2-3	Slide drill 10 5/8" hole from 4,060' to 4,085'.	
3:30	4:15	0.75	4,153	3-2-3	Drilled 10-5/8" hole from 4,085' to 4,153'. Performed weight on bit step test at 4,099' per Texas A&M advisor 50-70k.	
4:15	4:45	0.50	4,168	3-2-3	Slide drill 10 5/8" hole from 4,153' to 4,168'.	
4:45	11:45	7.00	4,753	3-2-3	Drilled 10-5/8" hole from 4,168' to 4,753	
11:45	12:15	0.50	4,773	3-2-3	Slide drill 10-5/8" hole from 4,753' to 4,773'.	
12:15	16:30	4.25	5,036	3-2-3	Drilled 10-5/8" hole from 4,773' to 5,036'.	
16:30	17:00	0.50	5,036	SERV	Serviced Rig.	
17:00	17:30	0.50	5,036	OTHER	Replaced stroke counter on # 2 mud pump.	
17:30	18:15	0.75	5,051	3-2-3	Slide drill 10-5/8" hole from 5,036' to 5,051'.	
18:15	0:00	5.75	5,334	3-2-3	Drilled 10-5/8" hole from 5,051' to 5,334'. Dump and diluted system with 200 bbl's of fresh water while drilling ahead at 5,166'	1.

Management Summary

Drilled 10 5/8" section from 3,730' to 5,036'.

Serviced rig.

Replaced stroke counter on #2 mud pump. Drilled 10 5/8" section from 5.036' to 5.334'.

Comments

Performed weight on bit step test at 4,099'.

Dump and diluted system with 200 bbl's of fresh water while drilling ahead at 5,166'.

			Casing/Tubular Infor	mation
Size	Top MD	Top TVD	Bottom MD Bottom TVD	Hole

Nom. Wgt. Hole OH Diam. Nominal LOT Type (ins) (ft) (ft) Section (ins) (lbs) Grade (lbs/gal) **FULL** 16.000 0 416 SURF 22.000 65 K-55 0.61 FULL 11.750 0 2,990 14.750 54 J-55 11.70 INT1

	%													Temp		Mud					
Den	s. Vis	s P\	/ Y	Έ	Filt.	Cake	pH/ES	Solids	Oil	Water	Sand	LGS	CI	Ca	CaCl	10s	10m	30m	ln	Out	Loss
06-	Jul-21	18:00	at [Dept	h 5,051	l ft Mu	d Pits, T	ype: Lov	v Soli	ds Non-	Dispers	sed									
8.4	0 2	6	0	1	0	1	11	3	0	97	0.01	0.6	600	120		1	1	1	97	109	



Field: UTAHFORGE

Well ID: Forge 78B-32

Geothermal Resource Group, Inc.

Well Name: 78B-32

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

				Mud Con	sumables						
	scription		Qty.	Cost		Item Desc	ription		Qty.	Cost	
Barite - 100#SK			80		caustic Sod				2		
Engineering - EACH			1		pallets - OT	HER			4		
perdiem - OTHER 1											
Bit/BHA/Workstring Information											
Na Dana Malaa M	Ladal Blans	Depth	This Ru			DM T	Mud	Pump			
	lodel Diam	In 3651	Dist Hr		Max WOB F 75.0 65			Press J. Ve			
									5 605	289 10	
Jets: 13 13 12 12				de: Cutter:	/ Dull			gs: Gge:		Pull:	
BHA - No. 7 - BIT, MMTR, STAB, MWD, 2 OTHER, STAB, MONEL, 3 OTHER, DC, XO, HWDP = 960.36 Drilling Parameters											
Depth (ft) ROP (ft/hr) WOB (lbs) RPM Torque (ft lbs) Flow (gals/min) Pressur											
From To	Avg	Max	•	Max Av		Avg	Max	Avg	Max	(psi)	
3,730 5,334	65.0	175.0	65	70	<u> </u>	30 8		820	830	2,68	
Annular Velocity: D		478.5			-					,	
Comments: Slide drill 10 5/8" hole from 3,765' to 3,780'. Slide drill 10 5/8" hole from 3,927' to 3,947'. Slide drill 10 5/8" hole from 4,060' to 4,085'. Slide drill 10 5/8" hole from 4,153' to 4,168'. Slide drill 10-5/8" hole from 4,753' to 4,773'. Slide drill 10-5/8" hole from 5,036' to 5,051'.											
Siluo u	1111 10 0/0 11010	3 110111 0,00		ellaneous D	rilling Parar	neters					
Hook Loads (lbs):	Off Botto	m Rotate:	236 Pi		55 Slack Off		Drag Avg/N	lax: 10	/ 15		
Slow Circulation Data	a:			•							
Pump 1: 30 spm			110 psi	40 spm	21	5 psi	50 spm	311 ps	i		
Pump 2 : 30 spm		110 psi	40 spm	215 psi		50 spm 31		i			
Pump 3 : 30 spm		440	4.0								
Pump 3:	30 spm		110 psi	40 spm	21	5 psi	50 spm	311 ps	il		
•	•	nspection:	•	40 spm Total: 58.2		5 psi 0	50 spm	311 ps	si		
Hours on BHA:	Since I	nspection:	•	•	25 Jars :	0		311 ps shing Installe			
Hours on BHA:	Since I	nspection:	58.25	Total: 58.2	25 Jars :	0	Wear Bus	shing Installe			
Hours on BHA: Hours on Casing/Lin Survey	Since I er: Rotatin Meas.	nspection:	58.25 41 /	Total: 58.2 Trippi Survey In	Jars: 14 ng: 14	0 / Vertical	Wear Bus	shing Installe	d		
Hours on BHA: Hours on Casing/Lin Survey Type	Since I er: Rotatin Meas. Depth	nspection: g: Inc.	58.25 41 / Azimuth	Total: 58.2 Trippi Survey In	Jars: ng: 14 nformation Closure	0 / Vertical Section	Wear Bus	shing Installe dinates E-W	d D.L	S.	
Hours on BHA: Hours on Casing/Lin Survey Type MWD	Since II er: Rotatin Meas. Depth 3,832.0	Inc.	58.25 41 / Azimuth 93.7	Total: 58.2 Trippi Survey In TVD 3,831.5	25 Jars: ng: 14 nformation Closure 13.6	Vertical Section -8.8	Coor N-S S 8.8	ching Installer dinates E-W W 10.4	D.L 2	.065	
Hours on BHA: Hours on Casing/Lin Survey Type MWD MWD	Since	Inc. 1.11 1.83	58.25 41 / Azimuth 93.7 89.4	Total: 58.2	25 Jars: ng: 14 nformation Closure 13.6 11.9	Vertical Section -8.8	Coor N-S S 8.8 S 8.8	rdinates E-W W 10.4 W 8.0	D.L 2	.065 .766	
Hours on BHA: Hours on Casing/Lin Survey Type MWD MWD MWD	Meas. Depth 3,832.0 3,927.0 4,022.0	Inc. 1.11 1.83 3.01	58.25 41 / Azimuth 93.7 89.4 85.3	Total: 58.2 Trippi Survey In TVD 3,831.5 3,926.5 4,021.4	25 Jars: ng: 14 nformation Closure 13.6 11.9 9.5	Vertical Section -8.8 -8.6	Coor N-S S 8.8 S 8.8 S 8.6	ching Installe dinates E-W W 10.4 W 8.0 W 4.0	D.L 2. 0.	.065 .766 .255	
Hours on BHA: Hours on Casing/Lin Survey Type MWD MWD MWD MWD MWD	Meas. Depth 3,832.0 3,927.0 4,022.0 4,117.0	Inc. 1.11 1.83 3.01 1.92	58.25 41 / Azimuth 93.7 89.4 85.3 159.4	Total: 58.2 Trippi Survey Ir TVD 3,831.5 3,926.5 4,021.4 4,116.3	25 Jars: ng: 14 nformation Closure 13.6 11.9 9.5 9.9	Vertical Section -8.8 -8.6 -9.9	Coor N-S S 8.8 S 8.8 S 8.6 S 9.9	rdinates E-W W 10.4 W 8.0 W 4.0 W 0.9	D.L 2 0 1	.065 .766 .255	
Hours on BHA: Hours on Casing/Lin Survey Type MWD MWD MWD MWD MWD MWD MWD MWD	Since II er: Rotatin Meas. Depth 3,832.0 3,927.0 4,022.0 4,117.0 4,181.0	Inc. 1.11 1.83 3.01 1.92 1.19	58.25 41 / Azimuth 93.7 89.4 85.3 159.4 199.7	Total: 58.2 Trippi Survey Ir TVD 3,831.5 3,926.5 4,021.4 4,116.3 4,180.3	25 Jars: ng: 14 nformation Closure 13.6 11.9 9.5 9.9 11.5	Vertical Section -8.8 -8.8 -8.6 -9.9 -11.5	Coor N-S S 8.8 S 8.8 S 8.6 S 9.9 S 11.5	w 4.0 W 0.9 W 0.8	D.L 2 0 1 3	.065 .766 .255 .259	
Hours on BHA: Hours on Casing/Lin Survey Type MWD	Since I er: Rotatin Meas. Depth 3,832.0 3,927.0 4,022.0 4,117.0 4,181.0 4,213.0	Inc. 1.11 1.83 3.01 1.92 1.19 0.99	58.25 41 / Azimuth 93.7 89.4 85.3 159.4 199.7 220.1	Total: 58.2 Trippii Survey Ir TVD 3,831.5 3,926.5 4,021.4 4,116.3 4,180.3 4,212.3	25 Jars: ng: 14 nformation Closure 13.6 11.9 9.5 9.9 11.5 12.1	Vertical Section -8.8 -8.8 -8.6 -9.9 -11.5 -12.0	Coor N-S S 8.8 S 8.6 S 9.9 S 11.5 S 12.0	w 10.4 W 10.4 W 8.0 W 4.0 W 0.9 W 0.8 W 1.1	D.L 2 0 1 3 1.	.065 .766 .255 .259 .987	
Hours on BHA: Hours on Casing/Lin Survey Type MWD	Meas. Depth 3,832.0 4,022.0 4,117.0 4,181.0 4,213.0 4,308.0	Inc. 1.11 1.83 3.01 1.92 1.19 0.99 0.86	58.25 41 / Azimuth 93.7 89.4 85.3 159.4 199.7 220.1 209.3	Total: 58.2 Trippi Survey In TVD 3,831.5 3,926.5 4,021.4 4,116.3 4,180.3 4,212.3 4,307.3	25 Jars: ng: 14 nformation Closure 13.6 11.9 9.5 9.9 11.5 12.1 13.4	Vertical Section -8.8 -8.8 -8.6 -9.9 -11.5 -12.0 -13.3	Coor N-S \$ 8.8 \$ 8.6 \$ 9.9 \$ 11.5 \$ 12.0 \$ 13.3	w 10.4 W 10.4 W 8.0 W 4.0 W 0.9 W 0.8 W 1.1 W 1.9	D.L 2 0 1 3 3 1	.065 .766 .255 .259 .987 .354	
Hours on BHA: Hours on Casing/Lin Survey Type MWD	Meas. Depth 3,832.0 3,927.0 4,022.0 4,117.0 4,181.0 4,213.0 4,308.0 4,403.0	Inc. 1.11 1.83 3.01 1.92 1.19 0.99 0.86 0.40	58.25 41 / Azimuth 93.7 89.4 85.3 159.4 199.7 220.1 209.3 258.7	Total: 58.2 Trippi Survey Ir TVD 3,831.5 3,926.5 4,021.4 4,116.3 4,180.3 4,212.3 4,307.3 4,402.3	25 Jars: ng: 14 nformation Closure 13.6 11.9 9.5 9.9 11.5 12.1 13.4 14.2	Vertical Section -8.8 -8.8 -8.6 -9.9 -11.5 -12.0 -13.3 -14.0	Coor N-S S 8.8 S 8.6 S 9.9 S 11.5 S 12.0 S 13.3 S 14.0	w 10.4 W 10.4 W 8.0 W 4.0 W 0.9 W 0.8 W 1.1 W 1.9 W 2.6	D.L. 22 0 11 3 1 1 0 0	.065 .766 .255 .259 .987 .354 .229	
Hours on BHA: Hours on Casing/Lin Survey Type MWD	Meas. Depth 3,832.0 3,927.0 4,022.0 4,117.0 4,181.0 4,213.0 4,308.0 4,403.0 4,498.0	Inc. 1.11 1.83 3.01 1.92 1.19 0.99 0.86 0.40 0.66	58.25 41 / Azimuth 93.7 89.4 85.3 159.4 199.7 220.1 209.3 258.7 264.5	Total: 58.2 Trippi Survey Ir TVD 3,831.5 3,926.5 4,021.4 4,116.3 4,180.3 4,212.3 4,307.3 4,402.3 4,497.3	25 Jars: ng: 14 nformation Closure	Vertical Section -8.8 -8.6 -9.9 -11.5 -12.0 -13.3 -14.0 -14.1	Coor N-S S 8.8 S 8.6 S 9.9 S 11.5 S 12.0 S 13.3 S 14.0 S 14.1	w 1.0.4 W 10.4 W 8.0 W 4.0 W 0.9 W 0.8 W 1.1 W 1.9 W 2.6 W 3.5	D.L 2 0 1 3 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	.065 .766 .255 .259 .987 .354 .229 .708	
Hours on BHA: Hours on Casing/Lin Survey Type MWD	Meas. Depth 3,832.0 3,927.0 4,022.0 4,117.0 4,181.0 4,213.0 4,308.0 4,403.0 4,498.0 4,593.0	Inc. 1.11 1.83 3.01 1.92 1.19 0.99 0.86 0.40 0.66 1.33	58.25 41 / Azimuth 93.7 89.4 85.3 159.4 199.7 220.1 209.3 258.7 264.5 319.3	Total: 58.2 Trippi Survey Ir TVD 3,831.5 3,926.5 4,021.4 4,116.3 4,180.3 4,212.3 4,307.3 4,402.3 4,497.3 4,592.2	25 Jars: ng: 14 nformation Closure 13.6 11.9 9.5 9.9 11.5 12.1 13.4 14.2 14.5 14.1	Vertical Section -8.8 -8.8 -8.6 -9.9 -11.5 -12.0 -13.3 -14.0 -14.1 -13.3	Coor N-S S 8.8 S 8.6 S 9.9 S 11.5 S 12.0 S 13.3 S 14.0 S 14.1	## Shing Installe ## Colorates ## E-W W 10.4 W 8.0 W 4.0 W 0.9 W 0.8 W 1.1 W 1.9 W 2.6 W 3.5 W 4.8	D.L 2 0 1 3 1 1 0 0 0 0	.065 .766 .255 .259 .987 .354 .229 .708 .279	
Hours on BHA: Hours on Casing/Lin Survey Type MWD	Meas. Depth 3,832.0 3,927.0 4,022.0 4,117.0 4,181.0 4,213.0 4,308.0 4,403.0 4,498.0 4,593.0 4,688.0	Inc. 1.11 1.83 3.01 1.92 1.19 0.99 0.86 0.40 0.66 1.33 1.75	58.25 41 / Azimuth 93.7 89.4 85.3 159.4 199.7 220.1 209.3 258.7 264.5 319.3 318.6	Total: 58.2 Trippi Survey Ir TVD 3,831.5 3,926.5 4,021.4 4,116.3 4,180.3 4,212.3 4,307.3 4,402.3 4,497.3 4,592.2 4,687.2	25 Jars: ng: 14 nformation Closure 13.6 11.9 9.5 9.9 11.5 12.1 13.4 14.2 14.5 14.1 13.1	Vertical Section -8.8 -8.8 -8.6 -9.9 -11.5 -12.0 -13.3 -14.0 -14.1 -13.3 -11.4	Coor N-S S 8.8 S 8.6 S 9.9 S 11.5 S 12.0 S 13.3 S 14.0 S 14.1 S 13.3 S 11.4	## Shing Installe ## Colorates E-W	D.L 2 0 1 1 3 1 1 0 0 0 0 1 1 0 0 0 0 1 1 0 0 0 0	.065 .766 .255 .259 .987 .354 .229 .708 .279 .148	
Hours on BHA: Hours on Casing/Lin Survey Type MWD	Meas. Depth 3,832.0 3,927.0 4,022.0 4,117.0 4,181.0 4,213.0 4,308.0 4,403.0 4,498.0 4,593.0 4,688.0 4,783.0	Inc. 1.11 1.83 3.01 1.92 1.19 0.99 0.86 0.40 0.66 1.33 1.75 1.48	58.25 41 / Azimuth 93.7 89.4 85.3 159.4 199.7 220.1 209.3 258.7 264.5 319.3 318.6 0.5	Total: 58.2 Trippi Survey Ir TVD 3,831.5 3,926.5 4,021.4 4,116.3 4,180.3 4,212.3 4,307.3 4,402.3 4,497.3 4,497.3 4,592.2 4,687.2 4,782.2	25 Jars: ng: 14 nformation Closure 13.6 11.9 9.5 9.9 11.5 12.1 13.4 14.2 14.5 14.1 13.1 11.7	Vertical Section -8.8 -8.8 -8.6 -9.9 -11.5 -12.0 -13.3 -14.0 -14.1 -13.3 -11.4 -9.1	Coor N-S S 8.8 S 8.6 S 9.9 S 11.5 S 12.0 S 13.3 S 14.0 S 14.1 S 13.3 S 11.4	## Shing Installe ## Colorates E-W	D.L 2 0 1 1 3 1 1 0 0 0 0 1 1 0 0 1 1 1 0 0 0 0	.065 .766 .255 .259 .987 .354 .229 .708 .279 .148 .443	
Hours on BHA: Hours on Casing/Lin Survey Type MWD	Meas. Depth 3,832.0 3,927.0 4,022.0 4,117.0 4,181.0 4,213.0 4,308.0 4,403.0 4,498.0 4,593.0 4,688.0 4,783.0 4,879.0	Inc. 1.11 1.83 3.01 1.92 1.19 0.99 0.86 0.40 0.66 1.33 1.75 1.48 1.68	58.25 41 / Azimuth 93.7 89.4 85.3 159.4 199.7 220.1 209.3 258.7 264.5 319.3 318.6 0.5 339.3	Total: 58.2 Trippi Survey Ir TVD 3,831.5 3,926.5 4,021.4 4,116.3 4,180.3 4,212.3 4,307.3 4,402.3 4,497.3 4,592.2 4,687.2 4,782.2 4,878.1	25 Jars: ng: 14 nformation Closure 13.6 11.9 9.5 9.9 11.5 12.1 13.4 14.2 14.5 14.1 13.1 11.7 10.2	Vertical Section -8.8 -8.8 -8.6 -9.9 -11.5 -12.0 -13.3 -14.0 -14.1 -13.3 -11.4 -9.1 -6.5	Coor N-S S 8.8 S 8.6 S 9.9 S 11.5 S 12.0 S 13.3 S 14.0 S 14.1 S 13.3 S 11.4 S 9.1 S 6.5	## Shing Installe ## Colorates ## E-W W 10.4 W 8.0 W 4.0 W 0.9 W 0.8 W 1.1 W 1.9 W 2.6 W 3.5 W 4.8 W 6.4 W 7.4 W 7.9	D.L 2 0 1 1 3 3 1 1 0 0 0 0 1 1 0 0 0 0 0 0 0	.065 .766 .255 .259 .987 .354 .229 .708 .279 .148 .443 .246	
Hours on BHA: Hours on Casing/Lin Survey Type MWD	Meas. Depth 3,832.0 3,927.0 4,022.0 4,117.0 4,181.0 4,213.0 4,308.0 4,403.0 4,498.0 4,593.0 4,688.0 4,783.0 4,879.0 4,974.0	Inc. 1.11 1.83 3.01 1.92 1.19 0.99 0.86 0.40 0.66 1.33 1.75 1.48 1.68 1.65	58.25 41 / Azimuth 93.7 89.4 85.3 159.4 199.7 220.1 209.3 258.7 264.5 319.3 318.6 0.5 339.3 322.9	Total: 58.2 Trippi Survey Ir TVD 3,831.5 3,926.5 4,021.4 4,116.3 4,180.3 4,212.3 4,307.3 4,402.3 4,497.3 4,592.2 4,687.2 4,782.2 4,878.1 4,973.1	25 Jars: ng: 14 nformation Closure 13.6 11.9 9.5 9.9 11.5 12.1 13.4 14.2 14.5 14.1 13.1 11.7 10.2 10.1	Vertical Section -8.8 -8.8 -8.6 -9.9 -11.5 -12.0 -13.3 -14.0 -14.1 -13.3 -11.4 -9.1 -6.5 -4.1	Coor N-S S 8.8 S 8.6 S 9.9 S 11.5 S 12.0 S 13.3 S 14.0 S 14.1 S 13.3 S 11.4 S 9.1 S 6.5 S 4.1	W 10.4 W 8.0 W 0.9 W 0.8 W 1.1 W 1.9 W 2.6 W 3.5 W 4.8 W 7.4 W 7.9 W 9.2	D.L 2 0 1 1 3 3 1 1 0 0 0 0 1 1 0 0 0 0 0 0 0	.065 .766 .255 .259 .987 .354 .229 .708 .279 .148 .443 .246 .641	
Hours on BHA: Hours on Casing/Lin Survey Type MWD	Meas. Depth 3,832.0 3,927.0 4,022.0 4,117.0 4,181.0 4,213.0 4,308.0 4,403.0 4,498.0 4,593.0 4,688.0 4,783.0 4,879.0 4,974.0 5,069.0	Inc. 1.11 1.83 3.01 1.92 1.19 0.99 0.86 0.40 0.66 1.33 1.75 1.48 1.68 1.65 0.45	58.25 41 / Azimuth 93.7 89.4 85.3 159.4 199.7 220.1 209.3 258.7 264.5 319.3 318.6 0.5 339.3 322.9 52.1	Total: 58.2 Trippi Survey Ir TVD 3,831.5 3,926.5 4,021.4 4,116.3 4,180.3 4,212.3 4,307.3 4,402.3 4,497.3 4,592.2 4,687.2 4,782.2 4,878.1 4,973.1 5,068.1	25 Jars: ng: 14 nformation Closure 13.6 11.9 9.5 9.9 11.5 12.1 13.4 14.2 14.5 14.1 13.1 11.7 10.2 10.1	Vertical Section -8.8 -8.6 -9.9 -11.5 -12.0 -13.3 -14.0 -14.1 -13.3 -11.4 -9.1 -6.5 -4.1 -2.8	Coor N-S S 8.8 S 8.6 S 9.9 S 11.5 S 12.0 S 13.3 S 14.0 S 14.1 S 13.3 S 11.4 S 9.1 S 6.5 S 4.1	## Shing Installe ## Colorates ## E-W W 10.4 W 8.0 W 4.0 W 0.9 W 0.8 W 1.1 W 1.9 W 2.6 W 3.5 W 4.8 W 6.4 W 7.4 W 7.9 W 9.2 W 9.7	D.L 2 0 1 3 1 1 0 0 0 0 1 1 0 0 0 0 0 0 0 0 0	.065 .766 .255 .259 .987 .354 .229 .708 .279 .148 .443 .246 .641 .498 .794	
Hours on BHA: Hours on Casing/Lin Survey Type MWD MWD MWD MWD MWD MWD MWD MW	Meas. Depth 3,832.0 3,927.0 4,022.0 4,117.0 4,181.0 4,213.0 4,308.0 4,403.0 4,498.0 4,593.0 4,688.0 4,783.0 4,879.0 4,974.0	Inc. 1.11 1.83 3.01 1.92 1.19 0.99 0.86 0.40 0.66 1.33 1.75 1.48 1.68 1.65	58.25 41 / Azimuth 93.7 89.4 85.3 159.4 199.7 220.1 209.3 258.7 264.5 319.3 318.6 0.5 339.3 322.9	Total: 58.2 Trippi Survey Ir TVD 3,831.5 3,926.5 4,021.4 4,116.3 4,180.3 4,212.3 4,307.3 4,402.3 4,497.3 4,592.2 4,687.2 4,782.2 4,878.1 4,973.1	25 Jars: ng: 14 nformation Closure 13.6 11.9 9.5 9.9 11.5 12.1 13.4 14.2 14.5 14.1 13.1 11.7 10.2 10.1	Vertical Section -8.8 -8.8 -8.6 -9.9 -11.5 -12.0 -13.3 -14.0 -14.1 -13.3 -11.4 -9.1 -6.5 -4.1	Coor N-S S 8.8 S 8.6 S 9.9 S 11.5 S 12.0 S 13.3 S 14.0 S 14.1 S 13.3 S 11.4 S 9.1 S 6.5 S 4.1	W 10.4 W 8.0 W 0.9 W 0.8 W 1.1 W 1.9 W 2.6 W 3.5 W 4.8 W 7.4 W 7.9 W 9.2	D.L 2 0 1 3 1 1 0 0 0 0 1 1 0 0 0 0 1 0 0 0 0	.065 .766 .255 .259 .987 .354 .229 .708 .279 .148 .443 .246 .641	



Geothermal Resource Group, Inc.

Well ID: Forge 78B-32

Well Name: 78B-32 Sect: 32 Town: 26 Rng: 9W County: Beaver State: UT

Field: UTAHFORGE Sect: 32 Town: 26 Rng: 9W County: Beaver State:

Report No: 10 Report For 06-Jul-21														
Mud Log Information														
Depth	(ft)		TVD (ft)	(Gas (Un		Gas	S	Drilling	Pore	Mud	Shale	R	OP
From	То	Fron		Avg	Max	at Depth	Connect.	Trip	Exp.	Press	Dens.	Dens.	Shale	Sand
3,990	4,77	0 3,9	989 4,769	9										
Formation Name:														
Lithology:			uartz Monzod											
4,770	4,79	0 4,7	69 4,789	9										
Formation I	Name:													
Lithology: 60-80% Granite, 20-40% Quartz Monzodiorite														
4,790	5,33	3 4,7	789 5,332	2										
Formation I	Name:													
Lithology: 100% Quartz Monzodiorite														
Rig Information														
Equipment	Proble	ms: Nor	ne.											
Location Co	onditio	n: God	od.											
Transport:														
Solids Control Information														
Screen Size	es:	Тор	Middle 1	Middle 2	Bott	om Equ	ıipment Usa	ge (Hrs):					
Shaker I	No 1:	12	0 120	120		120 Des	ander: 0		Desilter: (0	Degasse	r: 0		
Shaker I	Shaker No 2: 120 120 120 Centrifuge 1: 24 (Solids Removal) Centrifuge 2: 24 (Solids Removal)								emoval)					
Shaker I	No 3:	12	0 120	120		120								
						Bulk	Inventory							
		Item Ty	/pe			Jnits	Beginning	, t	Jsed	Received On Hand				Net
Rig Fuel							8,39		1,858			6,5	38	
						-	e Inventor							
DP Size		ints	Weight	Grade		Thread	DP Siz	e	Joints	Weigh	t (Grade	Thr	ead
5.5"		258	24.7	S-135	5.51	•								
						Safety I	nformatior	1						
Meetings/D	rills	Time				Descr	•							
Safety		60	Γwo 30 min P	re tour safe	ety meet	ings with bo	oth crews. Fo	rklift ope	erations, Ho	use keep	oing, Prop	er lifting	technique	s.
First Aid Tr	eatmen	its:	0 Medi	cal Treatm	ents:	0	Lost Time	Incider	nts:	0 1	Days Sin	ce LTI:		
BOP Tes	st	√ C	rownamatic	Check										
						Weather	Informatio	n						
Sky Conditi	ion:	Clear					Visibility	:	10					
Air Tempera	ature:	75 degF					Bar. Pres	ssure:	29.89					
Wind Speed	d/Dir:	8 / SE					Wind Gu	sts:	2					



Geothermal Resource Group, Inc.

Well Name: 78B-32

Well ID: Forge 78B-32

Field: UTAHFORGE

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

Report No: 11 Report For 07-Jul-21

Operator:	University of Utah	Rig:	Frontier Rig 1	6 Spud Date:	28-	Jun-21	Daily Cost / M	lud (\$):	
Measured Depth (ft	5761	Last Casing:	11.750 at 2,99	00 Wellbore:	Original V	Vellbore	AFE No.	AFE (\$)	Actual (\$)
Vertical Depth (ft):	5760	Next Casing:	7.000 at 8,50	00 RKB Elevation	n (ft):	30.40			
Proposed TD (ft):	9500	Last BOP Tes	t: 03-Jul-2	Job Reference	e RKB (ft):				
Hole Made (ft) / Hrs	427 / 12.0	Next BOP Tes	t: 24-Jul-2	21 Working Inter	est:		Totals:		
Average ROP (ft/hr)	: 35.58			LOT (lbs/gal):		11.70	Well Cost (\$):		
Drilling Days (act./p	lan): 11/21 F	lat Days (act./pl	an): 0/9	Total Days (act	./plan):	11/30	Days On Loca	ation:	11
Pers/Hrs: Opera	tor: 3 / 36 C	ontractor:	14 / 168	Service:	6 / 72	Other:	5 / 60	Total:	28 / 336

Safety Summary: No incidents or events reported. Conducted Crown Check, Safety Meeting.

Current Operations: Changing out motor from 1.5 deg, 0.111 rev/gal to 1.25 deg, 0.116 rev/gal.

Planned Operations: Swap out motor from 0.111 rev/gal to 0.116 rev/gal.

Trip in the hole to 2,946'.

Wait on SCR electrician to arrive from Vernal, estimated arrival time 0900 HRS.

Troubleshoot issues with traction A motor on drawworks and repair.

Trip in the hole to 5,761'.

Continue to drill 10-5/8" hole section from 5,761' to 6,700' (coring depth)

Toolpusher: Steve Caldwell , Justin Bristol

Wellsite Supervisors: Virgil Welch , Brian Gresham Tel No.: 7132807438

	Operations Summary									
From	То	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod				
0:00	4:30	4.50	5,628	3-2-3	Drilled 10-5/8" hole from 5,334' to 5,628'.					
4:30	5:00	0.50	5,628	3-2-3	Slide drill 10 5/8" hole from 5,628' to 5,643'.					
5:00	7:30	2.50	5,761	3-2-3	Drilled 10-5/8" hole from 5,628' to 5,761'					
7:30	11:00	3.50	5,761	3-6-4	ROP dropped to 30%, POH for Bit					
11:00	12:30	1.50	5,761	10-6-2	POH w/BHA / found 2 jets plugged with motor rubber and bit DBR'd. NOTE: no over torqued connections.					
12:30	13:00	0.50	5,761	10-344	Lay down NMDC, Motor and bit.					
13:00	15:30	2.50	5,761	CUTDL	Slipped and Cut drilling line while waiting on Schlumberger tools to arrive. Note: Dumped and diluted system with 250 bbl's of fresh water.					
15:30	16:00	0.50	5,761	SERV	Serviced rig while waiting on Schlumberger tools to arrive.					
16:00	19:00	3.00	5,761	3-34-1	Picked up 5.5" drill pipe and standing back in derrick while waiting on Schlumberge tools to arrive. Motor arrived on location at 19:10 HRS.	er				
19:00	19:30	0.50	5,761	3-34-3	Strap Motor prior to picking up.					
19:30	22:30	3.00	5,761	3-34-3	Picked up 1.50 deg bent assembly. Scribe Motor. Run in the hole with BHA to 1,042'.					
22:30	23:30	1.00	5,761	3-6-3	Ran in the hole from 1,042' to 2,946'. Installed TIW valve in sting. Picked up and racked back 6 stands of 5.5" drill pipe.					
23:30	0:00	0.50	5,761	3-34-1	Picked up and racked back 6 stands of 5.5" drill pipe out of the mouse hole.					

Management Summary

Drilled 10-5/8" hole from 5,334' to 5,761'.

Tripped out of the hole from 5,761' to surface due to low ROP.

Laid down NMDC, Motor and bit.

Slipped and Cut drilling line.

Serviced rig.

Picked up and racked back 5 stands of drill pipe while waiting on Schlumberger tools to arrive.

Motor arrived on location at 19:10 HRS.

Picked up 1.25 deg bent assembly and tripped in the hole to 2,926'.

Picked up and racked back 6 stands of 5.5" drill pipe.

Comments

Found 2 jets plugged with rubber the stator section of the motor.

Bit was DBR'd.

No over torqued connections.

Dumped and diluted system with 250 bbl's of fresh water while out of the hole.



Geothermal Resource Group, Inc.

Well ID: Forge 78B-32

Field: UTAHFORGE

Well Name: 78B-32 Sect: 32 Town: 26 Rng: 9W County: Beaver State: UT

Casing/Tubular Information	11.70 np Mud Out Loss 105 Cost									
Size	(lbs/gal)									
Type	(lbs/gal)									
FULL	0.61 11.70 np Mud Out Loss 105									
Multiple Multiple	np Mud Out Loss 105 Cost									
Dens. Vis PV YP Filt. Cake pH/ES Solids Oil Water Sand LGS Ci Ca CaCi 10s 10m 30m In	Out Loss 105 Cost									
Dens. Vis PV VP Filt. Cake pH/ES Solids Oil Water Sand LGS Cl Ca CaCl 10s 10m 30m In	Out Loss 105 Cost									
07-Jul	105 Cost									
No Run Make Model Diam Depth In Dist Hrs Avg Max MOB RM RO Roy Roy	Cost									
No Run Make Model Diam Depth (ft) ROP (ft/hr) ROP (ft/hr) To Avg Max Avg	Cost									
Caustic Soda - 50#SK										
Caustic Sold - 50#SK 1										
Depth Property P	HHP JIF									
Bit/BHA/Workstring Information No Run Make Model Diam In Dight This Run R.O.P. Avg Max WOB RPM Torque Wt Flow Press J. Vel P. Dight J. 1 NoV TKC83 10.625 3651 2,110 31.5 67.0 165.0 65 40 9 8 820 2550 285 605 Jets: 13 13 12 12 12 12 12 20ut: 5761 Grade: Cutter: 4/8 Dull: RO/LT Wear: S Brgs: X Gge: 3 8 1 NOV TCK83 10.625 5761 Grade: Cutter: 0/0 Dull: NO/NO Wear: A Brgs: X Gge: 0 BHA - No. 8 - BIT, MMTR, STAB, MWD, 2 OTHER, STAB, MONEL, 3 OTHER, DC, XO, HWDP = 962.49 Depth (ft) ROP (ft/hr) WOB (lbs) RPM Torque (ft lbs) Flow (gals/min) From To Avg Max Avg Max Avg Max Avg Max Avg Max Avg Max 5,334 5,761 57.0 70.0 60 65 40 45 9 10 810 830 Annular Velocity: Drill Collars: S1628* to 5,643*. Wiscellaneous Drilling Parameters Hook Loads (lbs): Off Bottom Rotate: 248 Pick Up: 257 Slack Off: 235 Drag Avg/Max: 10 / 15 Slow Circulation Data: Pump 1: 30 spm 110 psi 40 spm 215 psi 50 spm 311 psi Pump 2: 30 spm 110 psi 40 spm 215 psi 50 spm 311 psi Pump 3: 30 spm 110 psi 40 spm 215 psi 50 spm 311 psi Hours on BHA: Since Inspection: 65.75 Total: 65.75 Jars: 0 Hours on Casing/Liner: Rotating: 48.5 / Tripping: 22 / Wear Bushing Installed Depth (ft) TVD (ft) From To Avg Max at Depth Connect. Trip Exp. Press Dens. Dens. Section South Sou	HHP JIF									
No Run Make	HHP JIF									
No Run Make Mode Diam In Dist Hrs Avg Max WOB RPM Torque Wt Flow Press J. Vel P. District Torque Torque Wt Flow Press J. Vel P. District Torque Torque Wt Flow Press J. Vel P. District Torque Wt Flow Wish Wi	HHP JIF									
T										
S										
Jets: 13	Pull: PR									
Depth (ft) ROP (ft/hr) WOB (lbs) RPM Torque (ft lbs) ROW (gals/min) ROW (max Avg Max Avg Avg Max Avg Avg Max Avg Avg										
Depth (ft) ROP (ft/hr) WOB (lbs) RPM Torque (ft lbs) Flow (gals/min)	Pull: BHA									
Depth (ft)										
From To Avg Max Avg Avg	· · · · · · · · · · · · · · · · · · ·									
5,334 5,761 57.0 70.0 60 65 40 45 9 10 810 830	Pressure									
Annular Velocity: Drill Collars: 478.5 Drill Pipe: 247.2 Comments: Slide drill 10 5/8" hole from 5,628' to 5,643'. Wiscellaneous Drilling Parameters	(psi)									
Miscellaneous Drilling Parameters										
Hook Loads (lbs): Off Bottom Rotate: 248 Pick Up: 257 Slack Off: 235 Drag Avg/Max: 10 / 15										
Hook Loads (lbs): Off Bottom Rotate: 248 Pick Up: 257 Slack Off: 235 Drag Avg/Max: 10 / 15										
Pump 1: 30 spm 110 psi 40 spm 215 psi 50 spm 311 psi										
Pump 2: 30 spm 110 psi 40 spm 215 psi 50 spm 311 psi Pump 3: 30 spm 110 psi 40 spm 215 psi 50 spm 311 psi Hours on BHA: Since Inspection: 65.75 Total: 65.75 Jars: 0 Hours on Casing/Liner: Rotating: 48.5 / Tripping: 22 / Wear Bushing Installed Mud Log Information Depth (ft) TVD (ft) Gas (Units) Gas Drilling Pore Mud Shale From To Avg Max at Depth Connect. Trip Exp. Press Dens. Dens. S 5,334 5,761 5,333 5,760 Image: Authorized the properties of the propertie										
Pump 3: 30 spm 110 psi 40 spm 215 psi 50 spm 311 psi Hours on BHA: Since Inspection: 65.75 Total: 65.75 Jars: 0 Hours on Casing/Liner: Rotating: 48.5 / Tripping: 22 / Wear Bushing Installed Mud Log Information Depth (ft) TVD (ft) Gas (Units) Gas Drilling Pore Mud Shale From To From To Avg Max at Depth Connect. Trip Exp. Press Dens. Dens. S 5,334 5,761 5,333 5,760 Image: August and Depth Connect. Trip Exp. Press Dens. Dens. S										
Hours on BHA: Since Inspection: 65.75 Total: 65.75 Jars: 0										
Multiplication Hours on Casing/Liner: Rotating: 48.5										
Mud Log Information Depth (ft) TVD (ft) Gas (Units) Gas Drilling Pore Mud Shale From To From To Avg Max at Depth Connect. Trip Exp. Press Dens. Dens. S 5,334 5,761 5,333 5,760										
Depth (ft)TVD (ft)Gas (Units)GasDrillingPoreMudShaleFromToFromToAvgMaxat DepthConnect.TripExp.PressDens.Dens.S5,3345,7615,3335,760Image: Connect of the connec										
FromToFromToAvgMaxat DepthConnect.TripExp.PressDens.S5,3345,7615,3335,760										
5,334 5,761 5,333 5,760	ROP									
	ala Sand									
- 	nale Sand									
Lithology: 100% Granodiorite	nale Sand									
Rig Information	nale Sand									
Equipment Problems: Traction motor A on drawworks kicking SCR breaker. Electrician in route to troubleshoot.	nale Sand									
Location Condition: Good.	nale Sand									
Transport: Received 8" 1.25 deg motor along with RSS tool. Back hauled 2 dirty motors along with dirty RSS tool.	nale Sand									
Solids Control Information	nale Sand									
Screen Sizes: Top Middle 1 Middle 2 Bottom Equipment Usage (Hrs):	nale Sand									
Shaker No 1: 120 120 120 Desander: 0 Desilter: 0 Degasser: 0	nale Sand									
Shaker No 2: 120 120 120 120 Centrifuge 1: 24 (Solids Removal) Centrifuge 2: 24 (Solids Removal)	aale Sand									
Shaker No 3: 120 120 120 120										
Bulk Inventory										



Daily Drilling Report Well ID: Forge 78B-32

Geothermal Resource Group, Inc.

Well Name: 78B-32

Field: UTAHFORGF

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

	rieia. O i	ANFORGE			Seci	. 32 TOWII.	20 Kilg. 911	County. Deave	er State. Or
Report No: 1	11							Report Fo	or 07-Jul-21
				Bulk	c Inventory				
	Item 1	Гуре		Units	Beginning	Used	Received	On Hand	Net
Rig Fuel					6,538	2,452	4,459	8,545	2,00
				Drill Pi	pe Inventory				
DP Size	Joints	Weight	Grade	Thread	DP Size	Joints	Weight	Grade	Thread
5.5"	258	24.7	S-135	5.5IF					
				Safety	Information				
Meetings/Drills	Time			Desc	ription				
Safety	60	Two 30 min	Pre tour safety	y meetings with b	ooth crews. Forklift o	perations, Ha	andling BHA, Tr	ipping pipe.	
First Aid Treatr	ments:	0 Med	ical Treatme	nts:	O Lost Time Incidents: 0 Days Since LTI:				
Accident Descr	ription: No	one to report.							
BOP Test	V	Crownamati	c Check						
	<u> </u>			Weathe	r Information				
Sky Condition:	Partly (Cloudy			Visibility:	10			
Air Temperatur	e: 75 deg	F			Bar. Pressure:	29.89			
Wind Speed/Dir	r: 8/SW				Wind Gusts:	2			



Geothermal Resource Group, Inc.

Well Name: 78B-32

Well ID: Forge 78B-32

Field: UTAHFORGE

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

Report No: 12 Report For 08-Jul-21										
Operator: University of Utal	Rig: Frontier Rig 16	Spud Date: 28-Jun-21	Daily Cost / Mud (\$):							
Measured Depth (ft): 576	Last Casing: 11.750 at 2,990	Wellbore: Original Wellbore	AFE No. AFE (\$) Actual (\$)							
Vertical Depth (ft): 5760	Next Casing: 7.000 at 8,500	RKB Elevation (ft): 30.40								
Proposed TD (ft): 9500	Last BOP Test: 03-Jul-2	Job Reference RKB (ft):								
Hole Made (ft) / Hrs: 0 / 0.0	Next BOP Test: 24-Jul-2	Working Interest:	Totals:							
Average ROP (ft/hr):		LOT (lbs/gal): 11.70	Well Cost (\$):							
Drilling Days (act./plan): 12/21	lat Days (act./plan): 0/9	Total Days (act./plan): 12/30	Days On Location: 12							
Pers/Hrs: Operator: 3 / 36	Contractor: 14 / 168	Service: 6 / 72 Other:	2 / 24 Total: 25 / 300							

Safety Summary: No incidents or events reported. Conducted Crown Check, Safety Meeting.

Current Operations: Waiting on SCR technician to arrive.

Planned Operations: Wait on SCR technician to arrive.

troubleshoot SCR. Trip in the hole.

Drill 10-5/8" hole section from 5,761' to 6,700' (coring depth).

Toolpusher: Steve Caldwell , Justin Bristol

Wellsite Supervisors: Virgil Welch , Brian Gresham Tel No.: 7132807438

***************************************	upo: 1.00	10. 1191	TTOIOIT, DITE	ar Oroonam	Territori : rezect rec	
					Operations Summary	
From	То	Elapsed	End MD(ft)	Code	Operations Description No	n-Prod
0:00	1:00	1.00	5,761	3-34-1	Continue picking up and racking back 6 stands of 5.5" drill pipe out of the mouse hole.	
1:00	2:00	1.00	5,761	3-5-1	Tripped in one stand to 3,030'. Circulate bottoms up to cool wellbore while waiting on electrician to arrive to troubleshoot issue with drawworks A traction motor. Max temperature observed at the flow line was 105 deg.	
2:00	6:00	4.00	5,761	3-34-3	Tripped out of the hole from 2,946' to Surface. break out bit and swap motor from 1.5 deg, .111 rev to 1.25 deg .166 rev. Note: first motor arrived on location at 1915 HRS on 7-7. No paper work was provided with the motor when it arrived. Motor was made up and ran in the hole to 2,946'. Second motor arrived at 0100 HRS on 7-8. Once paper work was provided to the on-site GRG supervisor it was discovered that the first motor ran in the hole was a low speed high torque motor with a .111 rev. conversation was had with GRG team and decision was made to pull out of the hole and swap motors to the high speed low torque .166 rev that was delivered at 0100 HRS while waiting on electrician to arrive to troubleshoot drawworks A traction motor.	X
6:00	6:30	0.50	5,761	3-34-4	Lay down MWD, NMDC and motor	Х
6:30	11:30	5.00	5,761	9-32	Waiting on Schlumberger to rebuild MWD	Х
11:30	13:00	1.50	5,761	3-34-3	Picked up Directional tools and RIH with same.	Х
13:00	14:00	1.00	5,761	OTHER	Changed Pason sensor in crown.	
14:00	15:00	1.00	5,761	3-34-3	RIH to 1135'.	Х
15:00	0:00	9.00	5,761	REPR	Repair Rig / Work on rig SCR system. Electrician was unable to locate issue with drawwork traction motor A. Wait on SCR tech to arrive.	Х

Management Summary

Continued picking up and racking back 6 stands of 5.5" drill pipe out of the mouse hole.

Tripped in one stand to 3,030'. Circulate bottoms up to cool wellbore while waiting on electrician to arrive to troubleshoot issue with drawworks A traction motor.

Tripped out of the hole from 2,946' to Surface. break out bit and swap motor from 1.5 deg, .111 rev to 1.25 deg 0.166 rev/gal.

Laid down MWD, NMDC and motor.

Rebuild MWD.

Picked up Directional tools and RIH with same.

Changed Pason sensor in crown.

RIH to 1135'.

Repair Rig / Work on rig SCR system.

Comments

Total hours of NPT on daily report 13 due to Schlumberger 12.0 HRS.

Total hours for well to Schlumberger 16.5 HRS.

Total hours of NPT on daily report 13 due to Frontier 9 HRS.

Total hours for well to Schlumberger 9.0 HRS.



Geothermal Resource Group, Inc.

Well ID: Forge 78B-32

Well Name: 78B-32

Field: UTAHFORGF Sect: 32 Town: 26 Rng: 9W County: Beaver State: UT Report No: 12 Report For 08-Jul-21 Casing/Tubular Information Size Top MD Top TVD Bottom MD Bottom TVD OH Diam. Nom. Wgt. Nominal LOT Type (ins) Section (ins) (lbs) Grade (lbs/gal) **FULL** 16.000 0 416 SURF 22.000 65 K-55 0.61 0 2.990 **FULL** 11.750 INT1 14.750 54 J-55 11.70 **Mud Information** Gels Temp Mud Filt. Cake pH/ES Solids Oil Water Sand LGS CaCI 10s 10m 30m Out Loss 08-Jul-21 15:30 at Depth 5,761 ft Mud Pits, Type: Low Solids Non-Dispersed 700 95 8.30 10 2 0.01 120 1 1 1 95 **Mud Consumables Item Description** Qty. Item Description Cost Qty. Cost Engineering - EACH perdiem - OTHER 1 **Bit/BHA/Workstring Information** Depth This Run R.O.P. Mud Pump Dist Hrs Max WOB RPM Torque Wt No Run Make Model Diam In Avg Flow Press J. Vel P. Drp HHP 1 NOV TCK83 10.625 5761 0/0 Jets: 13 13 12 12 12 12 12 12 Out: 5761 Grade: Cutter: Dull: NO/NO Wear: A Brgs: X Gge: 0 Pull: BHA BIT, MMTR, STAB, MWD, 2 OTHER, STAB, MONEL, 3 OTHER, DC, XO, HWDP = 962.49 **BHA -** No. 9 -**Miscellaneous Drilling Parameters** Hook Loads (lbs): Off Bottom Rotate: Pick Up: Slack Off: Drag Avg/Max: **Slow Circulation Data:** 30 spm 110 psi 40 spm 215 psi 50 spm 311 psi Pump 1: Pump 2: 30 spm 110 psi 40 spm 215 psi 50 spm 311 psi 110 psi 40 spm Pump 3: 30 spm 215 psi 50 spm 311 psi 65.75 65.75 Hours on BHA: Since Inspection: Total: Jars: 0 Hours on Casing/Liner: Rotating: 48.5 *I* Tripping: 28 / Wear Bushing Installed **Rig Information Equipment Problems:** Traction motor A on drawwoks tripping SCR breaker. **Location Condition:** Transport: Received 7" wellhead, 2- X/O from Dynasty. Solids Control Information **Screen Sizes:** Top Middle 1 Middle 2 **Bottom** Equipment Usage (Hrs): Shaker No 1: 120 120 120 120 Desander: 0 Desilter: 0 Degasser: 0 Shaker No 2: 120 120 120 120 Centrifuge 1: 24 (Solids Removal) Centrifuge 2: 24 (Solids Removal) Shaker No 3: 120 120 120 120 **Bulk Inventory** Units Beginning Used Received On Hand Net **Item Type** Rig Fuel 8,545 449 8,096 **Drill Pipe Inventory DP Size** Joints Weight Grade **Thread DP Size Joints** Weight Grade Thread 5.5IF 5.5" 258 24.7 S-135 **Safety Information** Meetings/Drills Time Description Safety 60 Two 30 min Pre tour safety meetings with both crews. Forklift operations, LOTO, Working with electrician. First Aid Treatments: 0 Medical Treatments: 0 Lost Time Incidents: 0 Days Since LTI: **Accident Description:** None to report. BOP Test ✓ Crownamatic Check



Daily Drilling Report Well ID: Forge 78B-32

Geothermal Resource Group, Inc.

Well Name: 78B-32

Field: UTAHFORGE

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

Report No: 12 Report For 08-Jul-21

Weather information										
Sky Condition:	Clear	Visibility:	10							
Air Temperature:	78 degF	Bar. Pressure:	29.98							
Wind Speed/Dir:	10 / SW	Wind Gusts:	2							



Geothermal Resource Group, Inc.

Well ID: Forge 78B-32

Field: UTAHFORGE

Well Name: 78B-32

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

Vertical Depth (ft):	9-Jul-21 ctual (\$) 13 47 / 276								
Measured Depth (fft): 5761 Last Casing: 11.750 at 2,990 Wellbore: Original Wellbore AFE No. AFE (\$) A	 13								
Vertical Depth (ft):	 13								
Proposed TD (ft):	 13								
Hole Made (ft) / Hrs:	 13								
Average ROP (ft/hr): Drilling Days (act./plan): 13/21 Flat Days (act./plan): 0/9 Total Days (act./plan): 13/30 Days On Location: Pers/Hrs: Operator: 3 / 36 Contractor: 14 / 168 Service: 6 / 72 Other: 24 / 0 Total: Safety Summary: No incidents or events reported. Conducted Crown Check, Safety Meeting. Current Operations: Waitting on SCR technician to arrive. Planned Operations: Wait on SCR technician to arrive. Planned Operations: Wait on SCR technician to arrive. Trip in the hole. Drill 10-5/8" hole section from 5,761' to 6,700' (coring depth). Toolpusher: Steve Caldwell , Justin Bristol Wellsite Supervisors: Virgil Welch , Brian Gresham Operations Summary From To Elapsed End MD(ft) Code Operations Description O:00 0:00 24.00 5,761 REPR Wait on SCR technician to arrive. Management Summary Waited on SCR technician to arrive.	 13								
Drilling Days (act./plan): 13/21 Flat Days (act./plan): 0/9 Total Days (act./plan): 13/30 Days On Location:	13								
Pers/Hrs: Operator: 3 / 36 Contractor: 14 / 168 Service: 6 / 72 Other: 24 / 0 Total: Safety Summary: No incidents or events reported. Conducted Crown Check, Safety Meeting. Current Operations: Waitting on SCR technician to arrive. Planned Operations: Wait on SCR technician to arrive. Planned Operations: Wait on SCR technician to arrive. Trip in the hole.									
Safety Summary: No incidents or events reported. Conducted Crown Check, Safety Meeting. Current Operations: Waitting on SCR technician to arrive. Planned Operations: Wait on SCR technician to arrive. troubleshoot SCR. Trip in the hole. Drill 10-5/8" hole section from 5,761' to 6,700' (coring depth). Toolpusher: Steve Caldwell , Justin Bristol Wellsite Supervisors: Virgil Welch , Brian Gresham Tel No.: 7132807438 Prom To Elapsed End MD(ft) Code Operations Description 0:00 0:00 24.00 5,761 REPR Wait on SCR technician to arrive. Management Summary Waited on SCR technician to arrive.	47 / 276								
Current Operations: Waitting on SCR technician to arrive. Planned Operations: Wait on SCR technician to arrive. troubleshoot SCR. Trip in the hole. Drill 10-5/8" hole section from 5,761' to 6,700' (coring depth). Toolpusher: Steve Caldwell , Justin Bristol Wellsite Supervisors: Virgil Welch , Brian Gresham Tel No.: 7132807438 Operations Summary From To Elapsed End MD(ft) Code Operations Description 0:00 0:00 24:00 5,761 REPR Wait on SCR technician to arrive. Management Summary Waited on SCR technician to arrive.									
Planned Operations: Wait on SCR technician to arrive. troubleshoot SCR. Trip in the hole. Drill 10-5/8" hole section from 5,761' to 6,700' (coring depth). Toolpusher: Steve Caldwell , Justin Bristol Wellsite Supervisors: Virgil Welch , Brian Gresham Tel No.: 7132807438 Toperations Summary From To Elapsed End MD(ft) Code Operations Description 0:00 0:00 24:00 5,761 REPR Wait on SCR technician to arrive. Management Summary Waited on SCR technician to arrive.									
troubleshoot SCR. Trip in the hole. Drill 10-5/8" hole section from 5,761' to 6,700' (coring depth). Toolpusher: Steve Caldwell , Justin Bristol Wellsite Supervisors: Virgil Welch , Brian Gresham Operations Summary From To Elapsed End MD(ft) Code Operations Description 0:00 0:00 24.00 5,761 REPR Wait on SCR technician to arrive. Management Summary Waited on SCR technician to arrive.									
Wellsite Supervisors: Virgil Welch , Brian Gresham Operations Summary From To Elapsed End MD(ft) Code Operations Description 0:00 0:00 24.00 5,761 REPR Wait on SCR technician to arrive. Management Summary Waited on SCR technician to arrive.									
From To Elapsed End MD(ft) Code Operations Description I 0:00 0:00 24.00 5,761 REPR Wait on SCR technician to arrive. Management Summary Waited on SCR technician to arrive.									
From To Elapsed End MD(ft) Code Operations Description 0:00 0:00 24.00 5,761 REPR Wait on SCR technician to arrive. Management Summary Waited on SCR technician to arrive.									
0:00 0:00 24.00 5,761 REPR Wait on SCR technician to arrive. Management Summary Waited on SCR technician to arrive.	Non-Prod								
Management Summary Waited on SCR technician to arrive.	X								
Waited on SCR technician to arrive.									
Comments									
Total house of NDT are delivered at 4.4 due to Frentier 0.4 LDC									
Total hours of NPT on daily report 14 due to Frontier 24 HRS. Total hours of NPT on Frontier to date 33 HRS.									
Casing/Tubular Information									
Size Top MD Top TVD Bottom MD Bottom TVD Hole OH Diam. Nom. Wgt. Nominal Type (ins) (ft) (ft) (ft) Section (ins) (lbs) Grade (LOT								
FULL 16.000 0 416 SURF 22.000 65 K-55	Ibs/gal) 0.61								
FULL 11.750 0 2,990 INT1 14.750 54 J-55	11.70								
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									
09-Jul-21 14:00 at Depth 5,761 ft Mud Pits, Type: Low Solids Non-Dispersed									
8.30 26 0 1 0 1 10 2 0 98 0.01 0 800 120 1 1 1 90 90	0								
Mud Consumables									
Item Description Qty. Cost Item Description Qty.	Cost								
Engineering - EACH 1 perdiem - OTHER 1									
Bit/BHA/Workstring Information									
BHA - No. 9 - BIT, MMTR, STAB, MWD, 2 OTHER, STAB, MONEL, 3 OTHER, DC, XO, HWDP = 962.49									
Miscellaneous Drilling Parameters									
Hook Loads (lbs): Off Bottom Rotate: Pick Up: Slack Off: Drag Avg/Max: /									
Slow Circulation Data:									
Pump 1: 30 spm 110 psi 40 spm 215 psi 50 spm 311 psi									
Pump 2: 30 spm 110 psi 40 spm 215 psi 50 spm 311 psi									
Pump 3: 30 spm 110 psi 40 spm 215 psi 50 spm 311 psi									
Hours on BHA: Since Inspection: 65.75 Total: 65.75 Jars: 0									
Hours on Casing/Liner: Rotating: 48.5 / Tripping: 28 / Wear Bushing Installed									
Rig Information									
Equipment Problems: Traction motor A on drawwoks tripping SCR breaker.									
Location Condition: Good.									
Transport: Received 2 loads of 7" casing.									
Printed: 07:37 10-1ul-21 RIMBase 7.5.582.0 Printed: 07:37 10-1ul-21									



Daily Drilling Report Well ID: Forge 78B-32

Geothermal Resource Group, Inc.

Field: UTAHFORGE

Well Name: 78B-32

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

Ticid. 617411 GNGE										
Report No: 13 Report For 09-Jul-21										
Solids Control Information										
Screen Sizes:	Тор	Middle 1	Middle 2	Bottom	Equip	ment Usage (F	łrs):			
Shaker No 1:	120	120 120 120 Desander: 0 Desilter: 0 Degasser: 0								
Shaker No 2:	120	120	120	120 Centrifuge 1: 24 (Solids Removal) Centrifuge 2: 24 (Solids Remov						lids Removal)
Shaker No 3:	120	120	120	120						
Bulk Inventory										
	Item Typ	е		Units	Е	Beginning	Used	Receive	ed On Hand	Net
Rig Fuel						8,096	720		7,376	
Drill Pipe Inventory										
DP Size J	oints \	Neight	Grade	Threa	d	DP Size	Joints	Weight	Grade	Thread
5.5"	258	24.7	S-135	5.5IF						
				Safe	ety Inf	ormation				
Meetings/Drills	Time			D	escrip	tion				
Safety	60 Tw	vo 30 min P	re tour safet	y meetings w	ith both	crews. Forklift	operations, LC	OTO, Work	king with electrician.	
First Aid Treatme	ents:	0 Medic	al Treatme	nts:	0	Lost Time Inci	dents:	0 D	ays Since LTI:	
Accident Descrip	otion: None	to report.								
■ BOP Test	✓ Cro	ownamatic	Check							
				Weat	ther In	formation				
Sky Condition:	Clear					Visibility:	10			
Air Temperature	: 66 degF					Bar. Pressure	29.89			
Wind Speed/Dir:	5 / SW					Wind Gusts:	2			



Geothermal Resource Group, Inc.

Well Name: 78B-32

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Well ID: Forge 78B-32

Field: UTAHFORGE

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

Report No: 14								Report For	10-Jul-21
Operator:	University of Utal	n Rig:	Frontier Rig 1	6 Spud Date:	28-	Jun-21	Daily Cost / M	ud (\$):	
Measured Depth (ft): 582 ⁻	1 Last Casing: 1	11.750 at 2,99	0 Wellbore:	Original V	Vellbore	AFE No.	AFE (\$)	Actual (\$)
Vertical Depth (ft):	5820	Next Casing:	7.000 at 8,50	0 RKB Elevation	ո (ft)։	30.40			
Proposed TD (ft):	9500	Last BOP Test	: 03-Jul-2	1 Job Reference	RKB (ft):				
Hole Made (ft) / Hrs	: 60 / 8.5	Next BOP Test	: 24-Jul-2	1 Working Inter	est:		Totals:		
Average ROP (ft/hr)	7.00	6		LOT (lbs/gal):		11.70	Well Cost (\$):		
Drilling Days (act./p	olan): 14/21 l	Flat Days (act./pla	an): 0/9	Total Days (act.	/plan):	14/30	Days On Loca	ition:	14
Pers/Hrs: Opera	tor: 3 / 36	Contractor:	14 / 168	Service:	6 / 72	Other:	3 / 38	Total:	26 / 314
0.64.0				01 1 0 5 1 14					

Safety Summary: No incidents or events reported. Conducted Crown Check, Safety Meeting.

Current Operations: Staged in the hole cooling the directional drilling assembly.

Drilled 10-5/8" hole section from 5821' to 6,107'.

Planned Operations: Drill 10-5/8" hole section to 6,700' (coring depth).

Toolpusher: Steve Caldwell , Justin Bristol

Wellsite Supervisors: Virgil Welch , Brian Gresham Tel No.: 7132807438

velisite Si	uperviso	rs: virgii	i weich , Bria	in Gresnam	Iel No.: /13280/438	
					Operations Summary	
From	То	Elapsed	End MD(ft)	Code	Operations Description N	lon-Prod
0:00	10:00	10.00	5,761	REPR	Wait on SCR technician to arrive.	X
10:00	13:00	3.00	5,761	REPR	Diagnose issues with SCR house and repair same. Rig back on Dayrate @ 13:00 hours on 7/10/2021 Note: SCR tech found two bare wires between SCR bays causing system to short out.	Х
13:00	15:30	2.50	5,761	10-6-3	RIH to bottom / fill pipe	
15:30	16:30	1.00	5,821	3-2-3	Drill 10-5/8" hole from 5,761' to 5,821'. Dumped and diluted 100 bbl's of fresh water while drilling ahead. Note: Observed pressure spike while drilling ahead at 5,806' along with motor stall. Pressure reached 4,158 psi at surface blowing pop-off on mud pump. Picked up off bottom and rest pop off. Once back on bottom differential pressure fell to 198 psi and continued dropping. large pieces of rubber observed at the shakers from stator indicating motor failed. Upon discussion with Schlumberger, it was discovered that the motor in the hole had a temperature rating of 208 deg. Max temperature on bottom was 300 deg.	d
16:30	19:30	3.00	5,821	3-6-4	Trip out of the hole from 5,821' to surface with no issues. Dumped and diluted 100 bbl's of fresh water while tripping out of the hole.	X
19:30	22:00	2.50	5,821	3-6-2	Rack back HWDP along with 8' drill collars. Broke out bit and laid out motor. Note: Motor rotated with no resistance, no fluid in motor. Bit had 2 plugged jets with stator rubber. Stabilizer above the motor at 41' was 3/4" under-gagged.	X

Tripped in the hole with BHA to 1,000'. Management Summary

Picked up new 10-5/8" NOV bit. Picked up new top 10-3/8" stab. Made up and scribed tools.

Picked up new (NOV) motor 1.5 deg, 0.111 rev.

Waited on SCR technician to arrive.

0:00

Diagnose issues with SCR house and repaired same. Rig back on Dayrate @ 13:00 hours on 7/10/2021.

5.821 3-6-1

RIH to bottom / fill pipe.

22:00

Drill 10-5/8" hole from 5,761' to 5,821'.

Tripped out of the hole from 5,821' due to motor failure.

2.00

Laid out motor and bit.

Picked up new (NOV) motor 1.5 deg and 0.111 rev.

Picked up new 10-5/8" NOV bit.

Picked up new top 10-3/8" stab.

Comments

Note: Observed pressure spike along with motor stall while drilling ahead at 5,806'. Pressure reached 4,158 psi at surface blowing pop-off on mud pump. Picked up off bottom and rest pop off. Once back on bottom differential pressure fell to 198 psi and continued dropping. large pieces of rubber observed at the shakers from stator indicating motor failed. Upon discussion with Schlumberger, it was discovered that the motor in the hole had a temperature rating of 208 deg. Max temperature on bottom was 300 deg while tripping in the hole.

Total hours of NPT on daily report 15 due to Frontier 13 HRS.

Total hours of NPT on Frontier to date 46 HRS.



Geothermal Resource Group, Inc.

Well Name: 78B-32

Well ID: Forge 78B-32

Field: UTAHFORGF

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

Report No: 14 Report For 10-Jul-21 Total hours of NPT on daily report 15 due to Schlumberger 7.5 HRS. Total hours for well to date for Schlumberger 24 HRS. Casing/Tubular Information Size Top MD Top TVD **Bottom MD Bottom TVD** Nom. Wgt. OH Diam. **Nominal** LOT Type (ins) (ft) (ft) (ft) (ft) Section (ins) (lbs) Grade (lbs/gal) FULL 16.000 22.000 0 416 **SURF** 65 K-55 0.61 **FULL** 11.750 0 2 990 INT1 14.750 54 J-55 11.70 **Mud Information** Gels Temp Mud Filt. Cake pH/ES Solids Oil Water Sand LGS Ca CaCI 10s 10m 30m In Out Loss 10-Jul-21 19:30 at Depth 5,821 ft Mud Pits, Type: Low Solids Non-Dispersed 9.5 98 0.01 800 120 1 1 98 105 **Mud Consumables Item Description** Qty. Cost **Item Description** Qty. Cost Engineering - EACH perdiem - OTHER **Bit/BHA/Workstring Information** Depth This Run $R \cap P$ Mud Pump No Run Model Diam In Max WOB RPM Torque Wt Flow Press J. Vel P. Drp HHP 2 NOV **TCK83** 10.625 60.0 65.0 40 3000 269 957 Jets: 13 13 12 12 12 12 12 12 Out: 5821 Grade: Cutter: 1/3 Dull: WT/NO Wear: S Pull: DMF BIT, MMTR, STAB, MWD, 2 OTHER, STAB, MONEL, 3 OTHER, DC, XO, HWDP = 962.49 **Drilling Parameters** ROP (ft/hr) WOB (lbs) Torque (ft lbs) Depth (ft) RPM Flow (gals/min) **Pressure** From To Avg Max Avg Max Avg Max Max Avg Max (psi) 5,821 65.0 5,761 40 O 65 65 40 40 16 16 800 800 3,000 Annular Velocity: Drill Collars: 478.5 **Drill Pipe:** 247.2 Tripped out of the hole due to motor failure. Miscellaneous Drilling Parameters Hook Loads (lbs): Off Bottom Rotate: 231 Pick Up: 245 Slack Off: 225 Drag Avg/Max: 3/5 **Slow Circulation Data:** 30 spm 110 psi 215 psi Pump 1: 40 spm 50 spm 311 psi Pump 2: 30 spm 110 psi 40 spm 215 psi 50 spm 311 psi Pump 3: 30 spm 110 psi 40 spm 215 psi 50 spm 311 psi Hours on BHA: Since Inspection: 66.75 Total: 66.75 Jars: Hours on Casing/Liner: Rotating: 49.5*I* Wear Bushing Installed Tripping: 37 I **Mud Log Information** Depth (ft) TVD (ft) Mud ROP Shale Gas (Units) Gas Drilling Pore **Press** Dens. From To From To Max at Depth Connect. Trip Exp. Dens. **Shale** Sand 4.790 5.821 4.789 5.820 0 0 0 0 0 0 0.00 8.30 **Formation Name:** 100% Granodiorite Lithology: Rig Information **Equipment Problems:** SCR tech found two wires shorted out on SCR system. **Location Condition:** Good. Received 2 loads of 7" casing. Transport: Solids Control Information Middle 2 Screen Sizes: qoT Middle 1 **Bottom** Equipment Usage (Hrs): Shaker No 1: 120 120 120 120 Desander: 0 Desilter: 0 Degasser: Shaker No 2: 120 120 120 120 Centrifuge 1: 24 (Solids Removal) Centrifuge 2: 24 (Solids Removal) 120 Shaker No 3: 120 120 120 **Bulk Inventory Item Type** Units **Beginning** Used Received On Hand Net Rig Fuel 7.376 7.376



Daily Drilling Report Well ID: Forge 78B-32

Geothermal Resource Group, Inc.

Field: UTAHFORGE

Well Name: 78B-32 Sect: 32 Town: 26 Rng: 9W County: Beaver State: UT

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Report No:	14							Repo	rt For 10-Jul-21
				Water / Flui	ds Inventory				
				Drill Pipe	Inventory				
DP Size	Joints	Weight	Grade	Thread	DP Size	Joints	Weigl	ht Grade	Thread
5.5"	258	24.7	S-135	5.5IF					
				Safety In	formation				
Meetings/Drills	Time			Descrip	tion				
Safety	60	Two 30 min	Pre tour safet	y meetings with both	n crews. Handling	BHA, forklift	operation	ons, LOTO, working	in the heat.
First Aid Treati	ments:	0 Med	ical Treatme	nts: 0	Lost Time Incid	ents:	0	Days Since LTI:	
Accident Desc	ription: No	one to report.							
BOP Test	✓	Crownamati	c Check						
				Weather In	nformation				
Sky Condition:	Clear				Visibility:	10			
Air Temperatur	re: 76 deg	F			Bar. Pressure:	29.89			
Wind Speed/Di	r: 10 / NE				Wind Gusts:	3			
Comments:	Smoky								



Geothermal Resource Group, Inc.

Well Name: 78B-32

Well ID: Forge 78B-32

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

Field: UTAHFORGE Report For 11-Jul-21

Report No. 15								Report For	11-5ul-21
Operator:	University of Utah	Rig:	Frontier Rig 1	6 Spud Date:	28-0	Jun-21	Daily Cost / M	ud (\$):	
Measured Depth (ft)	: 6700	Last Casing:	11.750 at 2,99	0 Wellbore:	Original W	ellbore	AFE No.	AFE (\$)	Actual (\$)
Vertical Depth (ft):	6699	Next Casing:	7.000 at 8,50	0 RKB Elevation	ո (ft):	30.40			
Proposed TD (ft):	9500	Last BOP Test	: 03-Jul-2	Job Reference	RKB (ft):				
Hole Made (ft) / Hrs:	879 / 14.5	Next BOP Test	:: 24-Jul-2	21 Working Inter	est:		Totals:		
Average ROP (ft/hr)	: 60.62			LOT (lbs/gal):		11.70	Well Cost (\$):		
Drilling Days (act./p	lan): 15/21 F	lat Days (act./pla	an): 0/9	Total Days (act.	/plan):	15/30	Days On Loca	ition:	15
Pers/Hrs: Opera	tor: 3 / 36 C	ontractor:	14 / 168	Service:	6 / 72	Other:	3 / 36	Total:	26 / 312

Safety Summary: No incidents or events reported. Conducted BOP Drill, Crown Check, Safety Meeting.

Current Operations: Held safety meeting with all involved personal on picking up coring assembly.

Made up 8-3/4" coring assembly. Picked up 15 joints of 5.5" drill pipe.

Tripping in the hole with 8-3/4" coring assembly at 4,000'.

Planned Operations: Trip in the hole with 8-3/4" coring assembly.

Core 8-3/4" hole from 6,700'. Steve Caldwell , Justin Bristol

Toolpusher: Wellsite Supervisors: Virgil Welch , Brian Gresham

From	То	Elapsed	End MD(ft)	Code	Operations Description No	n-Prod
0:00	1:15	1.25		3-6-3	Tripped in the hole from 1,000' to 3,245'.	X
1:15	1:30	0.25	5,821		Broke circulation at 3,245' to cool tools. Max temp observed at MWD was 189 deg. Max temp at surface was 103 deg.	X
1:30	2:00	0.50	5,821	3-6-3	Tripped in the hole from 3,245' to 4,192'.	Х
2:00	2:15	0.25	5,821	3-5-1	Broke circulation at 4,192' to cool tools. Max temp observed at MWD was 214 deg. Max temp at surface was 107 deg.	Х
2:15	2:45	0.50	5,821	3-6-3	Tripped in the hole from 4,192' to 5,200'.	Х
2:45	3:00	0.25	5,821	3-5-1	Broke circulation at 5,200' to cool tools. Max temp observed at MWD was 222 deg. Max temp at surface was 109 deg.	Х
3:00	3:15	0.25	5,821	3-6-3	Tripped in the hole from 5,200' to 5,710'.	Х
3:15	3:30	0.25	5,821	3-5-1	Broke circulation at 5,710' to cool tools. Washed down from 5,710' to 5,821' Max temp observed at MWD was 254 deg. Max temp at surface was 135 deg.	Х
3:30	6:00	2.50	6,087	3-2-3	Drill 10-5/8" hole from 5,821' to 6,087' Performed WOB step test @ 5,900'. Performed RPM step test @ 5,920'.	
6:00	6:30	0.50	6,108	3-2-3	Slide Drill from 6,087' to 6,108'	
6:30	14:00	7.50	6,561	3-2-3	Drill 10-5/8" hole from 6,108' to 6,561' with 65K WOB, 800 GPM and 40-50 surface RPM, Dump 180 bbl from active system and add 150 bbl fresh water to system	
14:00	14:30	0.50	6,561	SERV	Service rig and top drive while circulating on bottom with 1 pump to keep MWD cool	
14:30	16:00	1.50	6,700	3-2-3	Drill 10-5/8" hole from 6,561' to 6,700' with 65K WOB, 820 GPM and 51 surface RPM with no losses or hole issues: MWD temp has risen from 170F to 176F in the last 500' of drilling	
16:00	16:30	0.50	6,700	3-5-1	Circulate bottoms up while allowing weight to drill off	
16:30	20:00	3.50	6,700	10-6-4	Trip out of the hole from 6,700' to BHA. 30-40k over-pull.	
20:00	23:30	3.50	6,700	3-34-4	Racked back HWDP along with 8' drill collars. Laid out all dir tools. Motor drained good with minimal movement in bearing assembly. Sleeve stab on motor had one blade completely worn off.	
23:30	0:00	0.50	6,700	OTHER	Cleaned and cleared rig floor. Laid out 15 joints of 5.5" drill pipe on racks and strapped same.	

Management Summary

Staged in the hole from 1.000' to 5,821'.

Drilled 10-5/8" hole from 5,821' to 6,700' (core point).

Circulated bottoms up.

Tripped out of the hole from 6,700' to BHA.

Racked back HWDP along with 8' drill collars. Laid out all directional tools.

Cleaned and cleared rig floor.



Well ID: Forge 78B-32

Field: UTAHFORGE

Geothermal Resource Group, Inc.

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

Report For 11-Jul-21 Report No: 15

Laid out 15	joints of 5.5	" drill pipe	on racks.

Comments

						Comr	nents	;								
	of NPT on dai			umberg	er 3.5 H	RS.										
	for well to Sch of NPT on Fro															
Total Hours (JINFI OII FIC	Titler to date	E 40 NKS.		Coolin	or/Tubula	ar lafe	a rmatia								
	Size	Top MD	Top T	VD R		ng/Tubula ID Botto				OH D	am	Nom. We	nt	Nominal		.OT
Type	(ins)	(ft)	(ft)		(ft)	1) 1)	Sect		(ins		(lbs)	gı.	. Nominal Grade		(lbs/gal)	
FULL	16.000		0		4	16	•		SURF	2	2.000	. ,	65	K-55	5	0.61
FULL	11.750		0		2,9	90			INT1	14	1.750		54	J-55	5	11.70
						Mud Info	rmati	ion								
					%							Gels		Ter	np	Mud
Dens. Vis	PV YP I	Filt. Cake	pH/ES So	olids (Dil Wa	ter Sand	LGS	CI	Ca	CaC	l 10s	s 10m	30n	n In	Out	Loss
11-Jul-21 16	:30 at Depth	6,700 ft M	ud Pits, Typ	e: Low S	Solids N	on-Dispers	sed									
8.30 26	0 1	0 1	1 10	2	0	98 0.01	0	900	12	0		1 1		1 114	123	
					N	lud Cons	suma	bles								
	Item Descr	ription		Qty.		Cost				Descri	otion			Qty.	С	ost
caustic Soda	a - 50#SK				2		Engi	neering -	EAC	Н				1		
perdiem - O	THER				1											
						/Workstr		nformat	ion							
			Depth	This		R.O.P.				_	Mud		•			
	ake Mod	-	In 5004	Dist				OB RF					_	Vel P. Dr		_
9 1 NO		10.625	5821	879	12		5.0	65	50	15	8	800 26		278 576		
	3 12 12 12 0 DIT MM				Grade: (3/6	Dull:			ear: S	Brgs: >	Gge	e: 0	Pull:	BHA
ВПА - NO. 11	0 - BIT, MM	IR, SIAD, I	VIVVD, Z OTI	nek, Si					, 🗆 ۷۷۱	JP - 90.	5.10					
Donth	/£4\	DOD /ft/h		WOB		rilling Pa			-	Fara /	ft lba\	Fla	/	la/min)	Dres	sure
Depth From	` '	ROP (ft/h Avg l	- -	Avg	(IDS) Max	Avg	RPN	л Мах		Forque (Avg	Max	Av		ıls/min) Max		ssure si)
5.821	6.700	75.0	165.0	65		75	5 0	70		15		17	800	820		2.670
- , -	locity: Drill		478.5	Drill F		247.2	00						000	020		_,0,0
Comments:	•	from 6,087'														
				Mi	scellar	neous Dr	illina	Param	eters							
Hook Loads	s (lbs):	Off Botton	n Rotate:		Pick U			ack Off:			rag Av	/g/Max:	1	0 / 15		
Slow Circul												.				
Pur	mp 1:	30 spm	1	10 psi		40 spm		215	psi		50 spm	1	311	psi		
Pur	mp 2:	30 spm	1	10 psi		40 spm		215	psi		50 spm	1	311	psi		
Pur	mp 3:	30 spm	1	10 psi		40 spm		215	psi		50 spm	1	311	psi		
Hours on B	HA:	Since Ir	spection:	78.75	Tota	al: 78.7	5 J a	ars:	0							
Hours on Ca	asing/Liner:	Rotating	g : 6	1.5 <i>1</i>		Trippin	g:	49 <i>I</i>			Wear	Bushing	Insta	lled		



Well ID: Forge 78B-32

Field: UTAHFORGE

Geothermal Resource Group, Inc.

Well Name: 78B-32

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

	Fie	ela: UTAHF	ORGE									eaver State:
Report No:	15										Repo	rt For 11-Jul
					Sı	ırvey lı	nformation					
	urvey	Meas.	l	A !	.41.	n./p	01	Vertical		dinates		D O
	Type IWD	Depth 5,354.	Inc. 0 1.12	Azimu 24		,353.1	Closure 11.4	Section -2.8	N-S S 2.8	E-	11.0	D.L.S. 0.590
	IWD	5,499.				,498.0	14.7	-3.7	S 3.7		14.2	0.308
	IWD	5,499.		268		,544.0	16.0	-3.8	S 3.7		15.6	1.293
	IWD						19.3				18.7	0.745
	IWD	5,640.				,639.0	21.6	-4.5 -6.3	S 4.5			1.598
	IWD	5,736.		189		,734.9			S 6.3		20.7	
	IWD	5,832.				,830.9	23.1 24.8	-8.9	S 8.9 S 11.5		21.3	0.256 0.344
	IWD	5,927.				,925.8	24.0	-11.5	S 11.5		21.9	0.410
	IWD	6,022.				,020.8	27.6	-14.1	S 14.1		22.6	0.410
	IWD	6,117.				,115.8	27.0	-16.2	S 10.2		22.4	0.007
		6,307.				,305.7		-19.0			20.4	
	IWD	6,402.		123		,400.7	27.6	-20.1	S 20.1		19.0	0.173
	IWD	6,497.		100		,495.7	27.2	-20.7	S 20.7		17.6	0.532
	IWD	6,592.				,590.7	26.2	-20.2	S 20.2		16.7	0.935
IVI	IWD	6,635.	0.77	50		,633.7	25.6	-19.8	S 19.8	VV	16.2	0.820
D 41- /64	4١	T) (C	(ft)			d Log I	nformation			NAI	011-	DOD
Depth (ft	t) To	TVD From	' (π) Το		s (Units) Max at	Depth	Gas Connect. Trip	Drilling	Pore Press	Mud Dens.	Shale Dens.	ROP Shale Sa
	6,700		6,699	Avg	IVIAX AL	Deptii	Connect. 111	р Ехр.	FIESS	Delis.	Dells.	Silale Sa
Formation Na		3,619	0,099									
		100% Granc	dionito									
Lithology:		100% Grand	diornie									
						Dia Inf	armation					
Farriage and De		.a. Nama				Rig Info	ormation					
• •						Rig Info	ormation					
Location Con		Good.	od 7 loods o	of water to f			ormation					
Location Con		Good.	ed 7 loads o	of water to f	rack tanks							
Location Con Transport:	dition:	: Good. Receive			rack tanks Solids	Contr	ol Information					
Location Con- Transport: Screen Sizes:	dition:	Good. Receive	Middle 1	Middle 2	rack tanks Solids Bottom	Contr	ol Information pment Usage (H	Irs):	0 [Angassa	r: 0	
Location Con Transport: Screen Sizes: Shaker No	dition:	Top	Middle 1 120	Middle 2 120	frack tanks Solids Bottom 120	Contr Equi	ol Information pment Usage (F ander: 0	lrs): Desilter:	-	Degassel		(Solids Pamou
Location Con Transport: Screen Sizes: Shaker No Shaker No	dition:	Top 120 120	Middle 1 120 120	Middle 2 120 120	Frack tanks Solids Bottom 120 120	Contr Equi	ol Information pment Usage (H	lrs): Desilter:	-	_		(Solids Remo
Location Con Transport: Screen Sizes: Shaker No	dition:	Top	Middle 1 120	Middle 2 120	frack tanks Solids Bottom 120	Equi Desa	ol Information pment Usage (H ander: 0 rifuge 1: 24 (Sc	lrs): Desilter:	-	_		(Solids Remo
Location Con Transport: Screen Sizes: Shaker No Shaker No	dition:	Top 120 120 120	Middle 1 120 120	Middle 2 120 120	Frack tanks Solids Bottom 120 120 120	Equi Desa Cent	ol Information pment Usage (H ander: 0 rifuge 1: 24 (Sc	Irs): Desilter: lids Removal)	C	Sentrifug	je 2 : 24	`
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Location Con Transport: Screen Sizes: Shaker No Shaker No Shaker No	dition:	Top 120 120 120	Middle 1 120 120	Middle 2 120 120	Frack tanks Solids Bottom 120 120 120 Units	Equi Desa Cent	ol Information pment Usage (Fander: 0 rifuge 1: 24 (So nventory Beginning 7,375	Irs): Desilter: lids Removal)	Receive	Sentrifug	je 2 : 24 On Hand	`
Location Con Transport: Screen Sizes: Shaker No Shaker No Shaker No	1: 0 1: 0 2: 0 3:	Top 120 120 120 120	Middle 1 120 120 120	Middle 2 120 120 120 120	Frack tanks Solids Bottom 120 120 120 Units GAL	Equi Desa Cent Bulk II	ol Information pment Usage (Finder: 0 rifuge 1: 24 (So nventory Beginning 7,375	drs): Desilter: Dids Removal) Used 2,336	Receive 4,	d (Dn Hand	I Net
Shaker No Shaker No Shaker No Rig Fuel	dition:	Top 120 120 120 120 120 Water Type	Middle 1 120 120 120 120	Middle 2 120 120 120 120	Frack tanks Solids Bottom 120 120 120 Units	Equi Desa Cent Bulk II	ol Information pment Usage (Fander: 0 rifuge 1: 24 (So nventory Beginning 7,375	Irs): Desilter: lids Removal) Used	Receive	d (je 2 : 24 On Hand	l Net
Location Con Transport: Screen Sizes: Shaker No Shaker No Shaker No	1: 0 1: 0 2: 0 3:	Top 120 120 120 120	Middle 1 120 120 120	Middle 2 120 120 120 120	Frack tanks Solids Bottom 120 120 120 Units GAL Dr Thre	S Contr Equi Desa Cent Bulk li	ol Information pment Usage (Hander: 0 rifuge 1: 24 (So nventory Beginning 7,375 Pinventory DP Size	drs): Desilter: Dids Removal) Used 2,336	Receive 4,	d (Dn Hand	I Net
Location Con Transport: Screen Sizes: Shaker No Shaker No Shaker No Rig Fuel DP Size 5.5"	dition:	Top 120 120 120 120 120 120 120	Middle 1 120 120 120 120	Middle 2 120 120 120 120	Frack tanks Solids Bottom 120 120 120 Units GAL Dr Thre	Equi Desa Cent Bulk II	ol Information pment Usage (Fander: 0 rifuge 1: 24 (So nventory Beginning 7,375 Inventory DP Size formation	drs): Desilter: Dids Removal) Used 2,336	Receive 4,	d (Dn Hand	I Net
Location Con Transport: Screen Sizes: Shaker No Shaker No Shaker No Shaker No Posize 5.5"	dition:	Top 120 120 120 120 120 120 120 120 120 120	Middle 1 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 1	Middle 2 120 120 120 120 120	Frack tanks Solids Bottom 120 120 120 Units GAL Dr Three 5.5IF	Equi Desa Cent Bulk II	ol Information pment Usage (Hander: 0 rifuge 1: 24 (So nventory Beginning 7,375 Inventory DP Size formation otion	Irs): Desilter: slids Removal) Used 2,336 Joints	Receive 4,	d (5500	On Hand 9,5	Net 539 2 Thread
Location Con Transport: Screen Sizes: Shaker No Shaker No Shaker No Shaker No Prize 5.5" Meetings/Drill Safety	dition:	Top 120 120 120 120 120 120 158 Time 60 Two	Middle 1 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 1	Middle 2	Frack tanks Solids Bottom 120 120 120 Units GAL Dr Thre 5.5IF Sa	Equi Desa Cent Bulk II	ol Information pment Usage (Fander: 0 rifuge 1: 24 (So nventory Beginning 7,375 Inventory DP Size formation	Irs): Desilter: slids Removal) Used 2,336 Joints	Receive 4,	d (5500	On Hand 9,5	Net 539 2 Thread
Location Con Transport: Screen Sizes: Shaker No Shaker No Shaker No Rig Fuel DP Size 5.5" Meetings/Drill Safety BOP	Join	Good. Receive	Middle 1 I 120 120 120 120 120 120 120 120 120 120	Middle 2 120 120 120 120 120 120 Grade 135 tour safety ions in 80 s	Frack tanks Solids Bottom 120 120 120 Units GAL Dr Thre 5.5IF Sa meetings sec.	Equi Desa Cent Bulk II Sill Pipe ead	ol Information pment Usage (Hander: 0 rifuge 1: 24 (Sonventory Beginning 7,375 Pinventory DP Size formation otion h crews. Handlin	Irs): Desilter: Dids Removal) Used 2,336 Joints g BHA, workin	Receive 4, Weight	d (500 Geat, good	On Hance 9,5 Grade	Net 539 2 Thread
Location Con Transport: Screen Sizes: Shaker No Shaker No Shaker No Rig Fuel DP Size 5.5" Meetings/Drill Safety BOP First Aid Trea	Join	Good. Receive	Middle 1 I 120 120 120 120 120 120 120 120 120 120	Middle 2 120 120 120 120 120 120 Grade 135 tour safety ions in 80 s	Frack tanks Solids Bottom 120 120 120 Units GAL Dr Thre 5.5IF Sa meetings sec.	Equi Desa Cent Bulk II Sill Pipe ead	ol Information pment Usage (Hander: 0 rifuge 1: 24 (So nventory Beginning 7,375 Inventory DP Size formation otion	Irs): Desilter: Dids Removal) Used 2,336 Joints g BHA, workin	Receive 4, Weight	d (5500	On Hance 9,5 Grade	Net 539 2 Thread
Location Con Transport: Screen Sizes: Shaker No Shaker No Shaker No Shaker No Mig Fuel DP Size 5.5" Meetings/Drill Safety BOP First Aid Trea Accident Des	Join Is T attments criptio	Good. Receive	Middle 1 I 120 120 120 120 120 120 120 120 120 120	Middle 2 120 120 120 120 120 Grade 135 tour safety ions in 80 s I Treatmen	Frack tanks Solids Bottom 120 120 120 Units GAL Dr Thre 5.5IF Sa meetings sec.	Equi Desa Cent Bulk II Sill Pipe ead	ol Information pment Usage (Hander: 0 rifuge 1: 24 (Sonventory Beginning 7,375 Pinventory DP Size formation otion h crews. Handlin	Irs): Desilter: Dids Removal) Used 2,336 Joints g BHA, workin	Receive 4, Weight	d (500 Geat, good	On Hance 9,5 Grade	Net 539 2 Thread
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Location Con Transport: Screen Sizes: Shaker No Shaker No Shaker No Shaker No Rig Fuel DP Size 5.5" Meetings/Drill Safety BOP First Aid Trea Accident Dest BOP Test Sky Condition	Join Is T attments criptio	Good. Receive	Middle 1 I 120 120 120 120 120 120 120 120 120 120	Middle 2 120 120 120 120 120 120 Grade 135 tour safety ions in 80 s I Treatmen	Frack tanks Solids Bottom 120 120 120 Units GAL Dr Thre 5.5IF Sa meetings sec.	Centres Bulk In Secretary In Descrip with both	ol Information pment Usage (Fander: 0 rifuge 1: 24 (So nventory Beginning 7,375 Inventory DP Size Inventory Lost Time Incident	Irs): Desilter: Dids Removal) Used 2,336 Joints g BHA, workindents:	Receive 4, Weight	d (500 Geat, good	On Hance 9,5 Grade	Net 539 2 Thread
Location Con Transport: Screen Sizes: Shaker No Shaker No Shaker No Shaker No Rig Fuel DP Size 5.5" Meetings/Drill Safety BOP First Aid Trea Accident Des	Join Is T atments criptio	Good. Receive Top 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120	Middle 1 I 120 120 120 120 120 120 120 120 120 120	Middle 2 120 120 120 120 120 120 Grade 135 tour safety ions in 80 s I Treatmen	Frack tanks Solids Bottom 120 120 120 Units GAL Dr Thre 5.5IF Sa meetings sec.	Centres Bulk In Secretary In Descrip with both	ol Information pment Usage (Hander: 0 rifuge 1: 24 (So nventory Beginning 7,375 Inventory DP Size formation h crews. Handlin Lost Time Incident	Irs): Desilter: Dids Removal) Used 2,336 Joints g BHA, workindents:	Receive 4, Weight	d (500 Geat, good	On Hance 9,5 Grade	Net 539 2 Thread



Geothermal Resource Group, Inc.

Well Name: 78B-32

Well ID: Forge 78B-32

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

Field: UTAHFORGE

Report No: 16								Report For	· 12-Jul-21
Operator:	University of Utal	h Rig:	Frontier Rig 1	6 Spud Date:	28-	Jun-21	Daily Cost / M	lud (\$):	
Measured Depth (ft): 6728	8 Last Casing:	11.750 at 2,99	0 Wellbore:	Original V	Vellbore	AFE No.	AFE (\$)	Actual (\$)
Vertical Depth (ft):	672	7 Next Casing:	7.000 at 8,50	0 RKB Elevation	on (ft):	30.40			
Proposed TD (ft):	9500	0 Last BOP Tes	t: 03-Jul-2	1 Job Referen	ce RKB (ft):				
Hole Made (ft) / Hrs	: 28 / 3.	5 Next BOP Tes	st: 24-Jul-2	1 Working Inte	rest:		Totals:		
Average ROP (ft/hr)	: 8.0	0		LOT (lbs/gal)	:	11.70	Well Cost (\$):		
Drilling Days (act./p	olan): 16/21 I	Flat Days (act./p	lan): 0/9	Total Days (ac	t./plan):	16/30	Days On Loca	ation:	16
Pers/Hrs: Opera	tor: 3 / 36	Contractor:	14 / 168	Service:	6 / 72	Other:	3 / 36	Total:	26 / 312

Safety Summary: No incidents or events reported. Conducted Crown Check, Safety Meeting.

Current Operations: Tripped in the hole with 8-3/4" core assembly to 6,728'.

Fill pipe and established circulation.

Cut core from 6,728' to 6,740'.

Tripped out of the hole from 6,740' to 1,300' at report time.

Planned Operations: Trip out of the hole with core assembly.

Make up 10-5/8" TCI bit. Trip in the hole to 6,740'.

Open 8-3/4" hole from 6,700' to 6,740' to 10-5/8"

Trip out of the hole.

Toolpusher: Steve Caldwell , Justin Bristol

Tel No.: 7132807438 Wellsite Supervisors: Virgil Welch , Brian Gresham

From	То	Elapsed	End MD(ft)	Code	Operations Description	Non-Proc
0:00	0:30	0.50		SAFE	Held safety meeting with all involved personal on picking up coring assembly.	110111100
0:30	3:00	2.50		3-34-3	Made up 8-3/4" coring assembly as followed. 8-3/4" x 4" core bit. Stabilizer 8-15/32" Core barrel 7-1/4" Stabilizer 8-15/32" Lower sub Upper sub Float sub X/O 10-5/8" roller reamer 1-stand 8" drill collars 5-stands HWDP	
3:00	4:30	1.50	6,700	3-34-1	Picked up 15 joints of 5.5" drill pipe from pipe rack and trip in the hole.	
4:30	8:00	3.50	6,700	3-6-3	Tripped in the hole with 8-3/4" core assembly. Filling pipe every 1,000'.	
8:00	8:30	0.50	6,700	3-4	Tag bottom while circulating @ 400 GPM, drop ball and slow pump to 300 GPM, be seated	all
8:30	10:00	1.50	6,728	3-4	Cut core from 6700' to 6728'	
10:00	15:30	5.50	6,728	3-4	POH with core @ controlled speed	
15:30	18:00	2.50	6,728	3-4	Laid down Reamer, X/O, Float sub. Break down core barrel and collect core. Recovered 12' of core.	
18:00	20:00	2.00	6,728	3-34-4	Run in the hole with 5-stands of 8" drill collars. Remove lifting sub that belonged to Schlumberger and replace with lifting subs that belong to Frontier. Rack 8" drill coll back in derrick.	
20:00	21:00	1.00	6,728	3-4	Made up 8-3/4" coring assembly as followed. 8-3/4" x 4" core bit. Stabilizer 8-15/32". Core barrel 7-1/4" (dressed with aluminum barrel). Stabilizer 8-15/32". Lower sub. Upper sub. Float sub. X/O. 5-stands HWDP.	
21:00	0:00	3.00	6,728	3-4	Tripped in the hole with 8-3/4" core assembly to 5,623' at report time . Filling pipe every 1,000'.	



Geothermal Resource Group, Inc.

Well ID: Forge 78B-32

Field: UTAHFORGE

Well Name: 78B-32 Sect: 32 Town: 26 Rng: 9W County: Beaver State: UT

Report For 12-Jul-21 Report No: 16

Held safety meeting with all involved personal on picking up coring assembly.

Made up 8-3/4" coring assembly.
Picked and racked back 5 stands of drill pipe.

Tripped in the hole with 8-3/4" core assembly.

Tag bottom while circulating @ 400 GPM, dropped ball and slowed pump to 300 GPM, ball seated.

Cut core from 6,700' to 6,728'.

Tripped out of the hole with core from 6,728'.

Tripped in the hole with 8" collars, removed Schlumberger lifter and replaced with rig lifter.

Made up 8-3/4" coring assembly.

Tripped in the hole with 8-3/4" core assembly.

								Co	mme	nts										
First core ru	n recove	red 12'	of core.																	
							Casi	ng/Tul	bular	Infor	matio	n								
Туре	Siz (in:		Top M (ft)	ID	Top TV (ft)	D B	ottom (ft)	MD Bo	ottom (ft)	TVD	Hole Section		OH Diam. (ins)		Nom. (lb:	-	t. Nominal Grade		_	OT s/gal)
FULL	10	3.000		0				416			S	URF	22	.000		65		K-55	5	0.6
FULL	1	1.750		0			2,	990				INT1	14	.750		54		J-55	5	11.70
								Mud	Inforr	natio	า									
							%								Ge			Ter	•	Mud
	PV Y				ES Sol						CI	Ca	CaCl	10	s 10	m 3	30m	In	Out	Loss
12-Jul-21 16		-																		
8.30 26	0	1	0	1	10	2	0).01	0	800	120)		1	1	1	89	99	
								Mud C	onsu	mable	es							_		
		Descrip	tion			Qty.		Cost			0.71		Descrip	tion			(Qty.	С	ost
Engineering	- EACH						1				n - OTI							1		
								\Worl		g Into	ormat	on								
No Run M	lake	Model	Diam		epth In	This Dist		Ava	O.P.	· WO	D DD	M Ta	raue W	Mu 4 =	-	ump	I Val	D D**	о ННР	JIF
	LLB1 F		8.75		6700	28	1.5	18.7	59.0			50	9	8	300 F	75	5. vei			70
Jets: 17 17				-				Cutter		-	Dull: [-	ar: S			Gge:		Pull:	
11 1 H&		C3843	8.75		6723	12	1		_			55	7	8	281	0	51			61
Jets: 17 17			17 17	17 O ı	ıt:	(Grade:	Cutter	:		Dull:	/	We	-	Brgs	s: (Gge:		Pull:	
BHA - No. 1						OTHE	R, FLO	AT, XC), 15 H	WDP	= 509.7	79			J					
							[Drilling	Para	mete	rs									
Depth	(ft)		ROP (ft	/hr)		WOB	(lbs)			RPM		Т	orque (f	t Ibs)		Flow	(gals/r	nin)	Pres	sure
From	То	A۷	/g	Max	A	vg	Max	(Avg		Иах	A	vg	Max		Avg	N	Max	(p	si)
6,700	6,728	3	25.0	59.	.0	22		30		0	50		10		12	30	9	400		75
Annular Ve	•				250.0	Drill I	Pipe:	175	5.0											
Comments	Core	d from 6	3700' to	6,728'.																
								neous	Drill			ters								
Hook Loads	` '		ff Botto	m Rot	ate:	217	Pick	Up:	225	Slaci	COff:		210 D	rag A	vg/Max	(:	5/	8		
Slow Circul		ata:												_						
	mp 1:		30 spn			0 psi		40 s _l			215 p			0 spn			11 psi			
	mp 2:		30 spn			0 psi		40 s			215 p			0 spn			11 psi			
	mp 3:		30 spn			0 psi	_	40 s _l			215 p		5	0 spn	n	3	11 psi			
Hours on B			Since	•		80.25	То		30.25	Jars		0								
Hours on C	asing/Li	ner:	Rotati	na:	6	3 <i>1</i>		Trip	ping:		61 <i>I</i>			Wear	· Bushi	ing Ins	stalled	i		



Geothermal Resource Group, Inc.

Well Name: 78B-32

Well ID: Forge 78B-32 Field: UTAHFORGE

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

Report No: 16 Report For 12-Jul-21 Mud Log Information

						Mud Log	Information	n				<u> </u>		
Depth	(ft)	TV	D (ft)	G	as (Uni	ts)	Ga	S	Drilling	Pore	Mud	Shale	R	OP
From	То	From	То	Avg	Max	at Depth	Connect.	Trip	Ехр.	Press	Dens.	Dens.	Shale	Sand
6,700	6,728	6,699	6,727	7										
Formation N	lame:													
Lithology:	1	00% Grar	nodiorite											
						Rig Ir	formation							
Equipment I	Problem	s: None	•											
Location Co	ndition:	Good	•											
Transport:		Recei	ved SDI dir	tools.										
					So	lids Con	trol Inform	ation						
Screen Size	s:	Тор	Middle 1	Middle 2	Botto	m Eq	uipment Usa	ge (Hrs	s):					
Shaker N	lo 1:	120	120	120	1	20 De	sander: 0		Desilter:	-	Degasse			
Shaker N	lo 2:	120	120	120	1	20 Ce	ntrifuge 1: 2	4 (Solid	s Removal)		Centrifu	ge 2: 24	(Solids Re	emoval)
Shaker N	lo 3:	120	120	120	1	20								
							Inventory							
		Item Type	9		U	nits	Beginning		Used	Receiv	ed	On Hand		Net
Rig Fuel							9,63	-	847			8,7	92	
							e Inventor	,						
DP Size	Join		Veight	Grade		Thread	DP Siz	e	Joints	Weight	t (Grade	Thr	ead
5.5"		258	24.7	S-135	5.5IF									
							Informatio	1						
Meetings/Dr	ills T	ime					ription							
Safety							oth crews. Ha			-			nication.	
First Aid Tre				al Treatme	ents:	(Lost Time	Incide	nts:	0 [Days Sin	ce LTI:		
Accident De														
BOP Tes	t	✓ Cro	wnamatic	Check										
						Weathe	Informatio			1				
Sky Condition		Clear					Visibility		10					
Air Tempera		4 degF					Bar. Pre		29.89					
Wind Speed	/ Dir : 6	/ SE					Wind Gu	sts:	2					



Geothermal Resource Group, Inc.

Well Name: 78B-32

Well ID: Forge 78B-32

Field: UTAHFORGE

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

Report No: 17 Report For 13-Jul-21 Operator: University of Utah Rig: Frontier Rig 16 Spud Date: 28-Jun-21 Daily Cost / Mud (\$): Measured Depth (ft): 6742 Last Casing: 11.750 at 2,990 Wellbore: Original Wellbore AFE No. AFE (\$) Actual (\$) Vertical Depth (ft): 6741 Next Casing: 7.000 at 8.500 RKB Elevation (ft): 30.40 ---Proposed TD (ft): 9500 Last BOP Test: 03-Jul-21 Job Reference RKB (ft): Hole Made (ft) / Hrs: 14 / 10.5 Next BOP Test: 24-Jul-21 Working Interest: Totals: Average ROP (ft/hr): 1.33 LOT (lbs/gal): 11.70 Well Cost (\$): 17/21 Flat Days (act./plan): 0/9 Total Days (act./plan): Drilling Days (act./plan): 17/30 Days On Location: 17 Pers/Hrs: Operator: 3 / 36 Contractor: 14 / 168 Service: 6 / 72 Other: 3 / 36 **Total**: 26 / 312

Safety Summary: No incidents or events reported. Conducted Crown Check, Safety Meeting.

Current Operations: Made up 10-5/8" directional assembly and tripped in the hole to 1,036'.

Slip and cut drilling line.

Trip in the hole from 1,036' to 3,100'. Shallow tested MWD tool @ 3,100'. Tripped in the hole from 3,100' to 4,100'. (Stage in hole and circulate every 1,000')

Planned Operations: Continue to trip in the hole to 6,742'.

Drill 10-5/8" hole section from 6,742'.

Toolpusher: Steve Caldwell , Justin Bristol

Wellsite Supervisors: Virgil Welch , Brian Gresham Tel No.: 7132807438

					Operations Summary
From	То	Elapsed	End MD(ft)	Code	Operations Description Non-Prod
0:00	1:00	1.00	6,728	3-4	Tripped in the hole with 8-3/4" core assembly to 6,728' . Filling pipe every 1,000'.
1:00	1:30	0.50	6,728	3-5-1	Filled pipe and established circulation. Record up and down weights. Tagged bottom while circulating @ 400 GPM, dropped ball and slowed pump to 300 GPM, ball seated.
1:30	2:30	1.00	6,740	3-4	Cut core from 6,728' to 6,740'. Core barrel jammed up at 6,738', drilled down to 6,740' with no change. Decision was made to pull out of the hole.
2:30	6:00	3.50	6,740	3-4	Tripped out with core assembly from 6,740' to 1,300'.
6:00	7:00	1.00	6,740	3-4	Tripped out with core assembly from 1,300' to BHA
7:00	8:00	1.00	6,740	3-34-4	Laid down core and coring assembly / Recovered 9.5' of core
8:00	9:00	1.00	6,740	3-34-3	Made up bit and bit sub / pick up reamer at 30' off the bit
9:00	14:30	5.50	6,740	3-6-3	RIH with clean out run to open hole to 10-5/8"
14:30	15:00	0.50	6,740	SERV	Serviuce rig and change tong dies in SD80
15:00	16:00	1.00	6,740	3-21	Open 8-3/4" core hole to 10-5/8" from 6,700' to 6,740'
16:00	16:30	0.50	6,742	3-2-1	Drilled 10-5/8" hole from 6,740' to 6,742'.
16:30	17:00	0.50	6,742	3-5-1	Circulated hole clean @ 6,742'.
17:00	20:00	3.00	6,742	3-6-4	Tripped out of the hole from 6,742' to BHA.
20:00	21:30	1.50	6,742	3-6-2	Racked back HWDP along with 8' drill collars. Broke out bit and laid out.
21:30	0:00	2.50	6,742	3-34-3	Picked up 1.15 deg bent motor 0.166 rev/gal. Scribe Motor. Make up dir assembly.

Management Summary

Tripped in the hole with 8-3/4" core assembly to 6,728'.

Filled pipe and established circulation.

Dropped ball.

Cut core from 6,728' to 6,740'.

Tripped out with core assembly from 6,740' to BHA.

Laid down core and coring assembly.

Made up 10-5/8" TCI bit and tripped in the hole to 6,700'.

Serviced rig.

Open 8-3/4" core hole to 10-5/8" from 6,700' to 6,740'.

Drilled 10-5/8" hole from 6,740' to 6,742'.

Circulated hole clean @ 6,742'

Tripped out of the hole from 6,742' to BHA.

Racked back HWDP along with 8' drill collars.

Laid out bit.

Picked up 1.15 deg bent motor 0.166 rev/gal. Scribe Motor. Make up drilling assembly.



Well ID: Forge 78B-32

Field: UTAHFORGE

Geothermal Resource Group, Inc.

Well Name: 78B-32

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

Report For 13-Jul-21 Report No: 17

							Co	mmen	its								
Core barrel j			drilled d	own to 6	6,740' wi	th no ch	nange. De	cision v	was made t	o pull o	out of the	hole.					
Recovered 9	9.5' of co	e.															
	0!-		T 14D	.	TVD.				nformatio		OU Di-		I \A/-	- A			ОТ
Type	Size (ins		Top MD (ft)		TVD (ft)	Botton (ft	n MD Bo	ttom IV	VD Hol Secti		OH Dia (ins)		lom. Wo (lbs)	•	lominal Grade		OT /gal)
FULL		.000	_ ` ,	0	,	(416	()		URF	. ,	.000		65	K-55		0.61
FULL	11	.750		0		2	2,990			INT1	14.	750		54	J-55		11.70
							Mud I	nforma	ation								
						%							Gels		Ten	np	Mud
Dens. Vis	PV Y	Filt.	Cake	pH/ES	Solids	Oil \	Nater Sa	ınd LG	S CI	Ca	CaCl	10s	10m	30m	In	Out	Loss
13-Jul-21 16	6:30 at D	epth 6,7	42 ft Mu	d Pits, T	ype: Lov	v Solids	Non-Dis	persed									
8.30 26	0	1 () 1	9.5	1	0	99 0	.01	0 800	120)	1	1	1	104	124	
							Mud C	onsum	nables								
	Item D	escripti	on		Qt	y.	Cost			Item	Descript	tion			Qty.	C	ost
caustic Soda	a - 50#Sk					1		En	ngineering -	EACH	l				1		
perdiem - O	THER					1											
						Bit/BF	IA/Work	string	Informat	ion							
				Depth	1 Th	is Run		D.P.				Mud	Pun	•			
		Model	Diam	In	Dis		Avg		WOB RP						el P. Drp		JIF
11 1 H&I		3843	8.750	672	3 2		2 12.0	25.0	14	55	7			-	58 25	5	80
Jets: 17 17					-	1	: Cutter:						Brgs: X			Pull: I	
	KER MX	(-1	10.625	674	-	_	1 2.0	5.0		61	11		12			270	959
Jets : 20 20				Out: 6			: Cutter:	1/3	B Dull: \	VT / N	O Wea	ar: G	Brgs: 0	Gge:	0	Pull:	ЗНА
BHA - No. 1	3 - BIT,	DC, RR,	DC, XO	, HWDP	= 845.7	3											
							Drilling										
Depth	` '		OP (ft/hr	•		B (lbs)			PM		orque (fi			w (gals	•	Pres	
From	To 6,740	Avg		lax	Avg	Ma		Avg	Max	1	vg 7	Max	Av		Max	(p:	•
6,728			0.0	25.0 250.	1-		16 175	55	55		/	•)	400	320		75
Annular Vel	iocity: i	Jriii Goii	ars:		2	I Pipe:	25	61	61		11	1	1	800	829		
0.740	6 7/2		2.0	5 O			20	01				- 1		OUU	029		
,	6,742	;	3.0	5.0			247	0	01				•				
Annular Ve		;		5.0 478	0 Dri l	l Pipe:	247			toro	•••						
Annular Vel	locity: I	Drill Coll	ars:	478.	0 Dri l	l Pipe: Viscell	aneous	Drillin	ıg Parame			20 Av			1.0		
Annular Vel	locity: I	Orill Coll		478.	0 Dri l	l Pipe:	aneous	Drillin				ag Avç			18		
Annular Vel Hook Loads Slow Circul	locity: I s (lbs): lation Da	Orill Coll Off	ars: Bottom	478.	0 Dri l	l Pipe: Viscell	aneous (Up:	Drillin 225	ng Parame Slack Off:	2	210 D r			5			
Annular Vel Hook Loads Slow Circul Pui	locity: I s (Ibs): lation Da mp 1:	Orill Coll Off ta:	Bottom 30 spm	478.	0 Dri ll	I Pipe: Miscell 7 Pick	aneous (Up: 40 sp	Drillin 225 S	ng Parame Slack Off: 215 p	osi 2	210 Dr	0 spm		5 311 p	si		
Hook Loads Slow Circul Pui	s (lbs): ation Da mp 1: mp 2:	Orill Coll Off ta:	Bottom 30 spm 30 spm	478.	0 Dri l : 21 110 ps 110 ps	I Pipe: Miscell 7 Pick	uneous Up: 40 sp 40 sp	Drillin 225 S	ng Parame Slack Off: 215 p	osi osi	210 Dr 5	0 spm 0 spm		311 p	si si		
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Hook Loads Slow Circul Pur Pur Hours on B Hours on C Depth From 6,728	locity: I s (lbs): lation Da mp 1: mp 2: mp 3: HA: asing/Lii (ft) To 6,742 Name:	Offita:	Bottom Bo spm Bo spm Bo spm Bo spm Bo spm Cotating TVD (ft) T	Rotate spection:	110 ps 110 ps 110 ps 110 ps 110 ps 64 /	I Pipe: Miscell 7 Pick i i i 25 T	40 sp 40 sp 40 sp 40 sp total: 8 Trip Mud Log	Drillin 225 S	ng Parame Slack Off: 215 p 215 p 215 p 215 p 3 p 3 p 3 p 3 p 3 p 4 p 3 p 3 p 4 p 3 p 3 p 4 p 4 p 5 p 5 p 6 p 6 p 7	psi psi psi 0	210 Dr 5 5 5 5	0 spm 0 spm 0 spm 0 spm Wear E	g/Max: Bushing	311 p 311 p 311 p 311 p	si si si ed		
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Hook Loads Slow Circul Pui Pui Hours on B Hours on C Depth From 6,728 Formation I	s (lbs): lation Da mp 1: mp 2: mp 3: HA: asing/Lin (ft) To 6,742 Name:	Offita:	Bottom Bo spm Bo spm Bo spm Bo spm Bo spm Botating VD (ft) T 27 6	Rotate spection: oo. 5,741	110 ps 110 ps 110 ps 110 ps 110 ps 64 /	I Pipe: Miscell 7 Pick i i i 25 T	40 sp 40 sp 40 sp otal: 8 Trip Mud Log ts) at Depth	Drillin 225 \$ om om om 1.25 ping: g Inform	g Parame Slack Off: 215 p 215 p 215 p 3 p 3 p 3 p 4 p 4 p 5 p 6 p 6 p 7 5 p 7 6 p 7	psi psi psi 0	210 Dr 5 5 5 5	0 spm 0 spm 0 spm 0 spm Wear E	g/Max: Bushing	311 p 311 p 311 p 311 p	si si si ed		
Hook Loads Slow Circul Pui Pui Hours on B Hours on C Depth From 6,728 Formation I Lithology:	s (lbs): ation Da mp 1: mp 2: mp 3: HA: asing/Li (ft) To 6,742 Name:	Offill Coll Offita:	Bottom Bo spm Bo spm Bo spm Bo spm TVD (ft) T 27 Bottom To bottom To bottom To bottom To bottom Bo spm Bo sp	Rotate spection: oo. 5,741	110 ps 110 ps 110 ps 110 ps 110 ps 64 /	I Pipe: Miscell 7 Pick i i i 25 T	40 sp 40 sp 40 sp otal: 8 Trip Mud Log ts) at Depth	Drillin 225 \$ om om om 1.25 ping: g Inform	g Parame Slack Off: 215 p 215 p 215 p 3 p 3 p 3 p 4 p 4 p 5 p 6 p 6 p 7 5 p 7 6 p 7	psi psi psi 0	210 Dr 5 5 5 5	0 spm 0 spm 0 spm 0 spm Wear E	g/Max: Bushing	311 p 311 p 311 p 311 p	si si si ed		
Hook Loads Slow Circul Pui Pui Hours on B Hours on C Depth From 6,728 Formation I Lithology:	s (lbs): ation Da mp 1: mp 2: mp 3: HA: asing/Li (ft) To 6,742 Name:	Offill Coll Offita: Grant Street Str	Bottom Bo spm Bo spm Bo spm Bo spm TVD (ft) T 27 Bottom To bottom To bottom To bottom To bottom Bo spm Bo sp	Rotate spection: o 7,741	0	I Pipe: Miscell 7 Pick i i i 25 T	40 sp 40 sp 40 sp otal: 8 Trip Mud Log ts) at Depth	Drillin 225 \$ om om om 1.25 ping: g Inform	g Parame Slack Off: 215 p 215 p 215 p 3 p 3 p 3 p 4 p 4 p 5 p 6 p 6 p 7 5 p 7 6 p 7	psi psi psi 0	210 Dr 5 5 5 5	0 spm 0 spm 0 spm 0 spm Wear E	g/Max: Bushing	311 p 311 p 311 p 311 p	si si si ed		



Geothermal Resource Group, Inc.

Well Name: 78B-32

Well ID: Forge 78B-32 Field: UTAHFORGE

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

Report No: 17	,								F	Report Fo	or 13-Jul-21
				Solids	Control	Information					
Screen Sizes:	Тор	Middle 1	Middle 2	Bottom	Equipr	nent Usage (Hr	rs):				
Shaker No 1:	120	120	120	120	Desan	der: 0	Desilter:	0	Degasser:	0	
Shaker No 2:	120	120	120	120	Centrif	iuge 1: 18 (Soli	ids Removal)	Centrifuge 2	2: 18 (Sol	ids Removal)
Shaker No 3:	120	120	120	120							
					Bulk Inv	entory					
	Item Type	е		Units	В	eginning	Used	Recei	ved On	Hand	Net
Rig Fuel						8,792	901			7,891	
				Dril	II Pipe II	nventory					
DP Size J	oints V	Weight	Grade	Threa	ad	DP Size	Joints	Weig	ht Gra	de	Thread
5.5"	258	24.7	S-135	5.5IF							
				Saf	fety Info	rmation					
Meetings/Drills	Time				Descripti	on					
Safety		vo 30 min Prerations.	re tour safet	y meetings w	with both	crews. Handling	BHA, worki	ng in the	heat, good co	ommunicat	ion. Forklift
First Aid Treatme	ents:	0 Medic	al Treatme	nts:	0 L	ost Time Incid	ents:	0	Days Since	LTI:	
Accident Descrip	otion: None	to report.									
■ BOP Test	✓ Cro	ownamatic	Check								
				Wea	ather Inf	ormation					
Sky Condition:	Cloudy					Visibility:	10				
Air Temperature:	: 70 degF					Bar. Pressure:	29.87				
Wind Speed/Dir:	4 / SE					Wind Gusts:	2				
Comments:	Light rain.										



Geothermal Resource Group, Inc.

Well ID: Forge 78B-32

Field: UTAHFORGE

Well Name: 78B-32 Sect: 32 Town: 26 Rng: 9W County: Beaver State: UT

Report No: 18 Report For 14-Jul-21

Operator:	University of Utah	Rig:	Frontier Rig 1	6 Spud Date:	28-	Jun-21	Daily Cost / M	ud (\$):	
Measured Depth (ft): 7613	Last Casing:	11.750 at 2,99	00 Wellbore:	Original V	Vellbore	AFE No.	AFE (\$)	Actual (\$)
Vertical Depth (ft):	7611	Next Casing:	7.000 at 8,50	0 RKB Elevation	n (ft):	30.40			
Proposed TD (ft):	9500	Last BOP Tes	t: 03-Jul-2	Job Reference	e RKB (ft):				
Hole Made (ft) / Hrs	: 871 / 17.75	Next BOP Tes	st: 24-Jul-2	21 Working Inter	est:		Totals:		
Average ROP (ft/hr)	49.07	7		LOT (lbs/gal):		11.70	Well Cost (\$):		
Drilling Days (act./p	olan): 18/21 F	lat Days (act./p	lan): 0/9	Total Days (act	./plan):	18/30	Days On Loca	ition:	18
Pers/Hrs: Opera	tor: 3/36 C	Contractor:	14 / 168	Service:	6 / 72	Other:	3 / 360	Total:	26 / 636

Safety Summary: No incidents or events reported. Conducted Crown Check, Safety Meeting.

Current Operations: Waiting on hydraulic hose for top drive to arrive.

Planned Operations: Install topdrive hydraulic service link hose.

Pull out of the hole from 6,599' to BHA.

Swap out motor and bit. Trip in the hole to 7,613'.

Continue to drill 10-5/8" hole section from 7,613'.

Toolpusher: Steve Caldwell , Justin Bristol

Wellsite Supervisors: Virgil Welch , Brian Gresham Tel No.: 7132807438

					Operations Summary	
From	То	Elapsed	End MD(ft)	Code	Operations Description N	Ion-Prod
0:00	2:00	2.00	6,742	3-34-3	Made up 10-5/8" directional assembly and trip in the hole to 1,036'.	
2:00	3:30	1.50	6,742	CUTDL	Slipped and cut drilling line.	
3:30	8:30	5.00	6,742	3-6-3	Tripped in the hole from 1,036' to 4,100'. Shallow test MWD tool @ 3,100' Filling pipe and breaking circulation every 1,000' from 3,100' to 6,742'. Once on bottom when filling pipe got pipe stuck. Work loose shortly afterwards	
8:30	10:30	2.00	6,946	3-2-3	Rotate drilling 10-5/8" hole from 6,742' to 6,946'	
10:30	11:00	0.50	6,970	3-2-3	Slide drilling 10-5/8" hole from 6,946' to 6,970'.	
11:00	13:00	2.00	7,158	3-2-3	Rotate drilling 10-5/8" hoe from 6,970' to 7,158'	
13:00	13:30	0.50	7,183	3-2-3	Slide drilling 10-5/8" hole from 7,158' to 7,183'	
13:30	15:45	2.25	7,316	3-2-3	Rotary drilling 10-5/.8" hole from 7,183' to 7,316' preforming step down test on WOB and RPM in an attempt to lower vibration on MWD	
15:45	16:00	0.25	7,316	SERV	Service Rig	
16:00	16:15	0.25	7,326	3-2-3	Rotate drilling 10-5/8" hoe from 7,316' to 7,326"	
16:15	17:00	0.75	7,350	3-2-3	Slide drilling 10-5/8" hole from 7,326' to 7,350'.	
17:00	18:00	1.00	7,424	3-2-3	Rotate drilling 10-5/8" hoe from 7,350' to 7,424'.	
18:00	20:30	2.50	7,613	3-2-3	Rotate drilling 10-5/8" hoe from 7,424' to 7,613'.	
20:30	21:00	0.50	7,613	OTHER	While drilling ahead at 7,613' differential pressure jumped from 350 psi to 1,199 psi. Killed mud pumps and picked up off bottom. Brought pumps back online at 830 GPM slacked back off to bottom. Differential pressure jumped up to 1,000 psi with 25k weight on bit and would not drill off. Killed mud pumps and picked up off bottom. Brought pumps back online at 830 GPM slacked back off to bottom. Differential pressure jumped up to 1,356 psi with 30k weight on bit and would not drill off. Decision was made to trip out of the hole.	
21:00	22:00	1.00	7,613	3-6-3	Tripped out of the hole from 7,613' to 6,559'.	
22:00	0:00	2.00	7,613	REPR	While tripping out of the hole service loop came into contact with top drive damaging the main hydraulic return line. Wait on hydraulic hose to arrive. Pump down the string to cool tools every hour at 300 gpm.	ı X

Management Summary

Made up 10-5/8" directional assembly and trip in the hole to 1,036'.

Slipped and cut drilling line.

Tripped in the hole from 1,036' to 6,742'.

Filled pipe and broke circulation every 1,000' from 3,100' to 6,742'.

Drilled 10-5/8" hole from 6,742' to 7,316'.

Serviced rig.

Drilled 10-5/8" hole from 7,316' to 7,613'.

Tripped out of the hole due to high mud motor differential pressure. POH from 7,613' to 6,559'.

Found damaged top drive hydraulic service link hose.

Wait on hydraulic hose for top drive to arrive.



Well ID: Forge 78B-32

Field: UTAHFORGE

Geothermal Resource Group, Inc.

Well Name: 78B-32

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

Report For 14-Jul-21 Report No: 18

Comments

While tripping out of the hole service loop came into contact with top drive damaging the main hydraulic return line. Waited on hydraulic hose to arrive.

Pump down the string to cool tools every 45 mins at 300 gpm max temperature observed at tools 245 deg.

					Casing/	Tubula	r Inform	ation								
Type	Size (ins)	Top MD (ft)	Top T (ft)		ttom MD (ft)	Bottom (ft		Hole Section		Diam. ins)		. Wgt. os)	Nom Gra			OT /gal)
FULL	16.0	000	0		416			SUF	RF	22.000		65		K-55		0.6
FULL	11.7	750	0		2,990			IN	T1	14.750		54		J-55		11.7
						ud Infor	mation									
					%						G	iels		Tem	р	Muc
Dens. Vis		Filt. Cake	pH/ES S					CI (Ca Ca	aCI 10	s 1	0m 3	30m	In (Out	Los
8.30 26		· · ·		2	0 98	•		700	120		1	1	1	113	112	
0.00 20	0 1	0 1	10				umables		120		'			110	112	
	Item De	scription		Qty.		ost	umabies		em Desc	rintion			0	ty.	C	ost
caustic Soc		Soription					Engineer			приоп				1		-
perdiem - C							Linginiooi	y,						•		
pordioiii	JIIILIX				t/BHA/W		na Infor	mation	1							
			Depth	This F		R.O.P.	ilg illioi	matioi	•	Mu	d	Pump				
No Run I	Make M	odel Diam	In	Dist			x WOB	RPM	Torque			•	J. Vel	P. Drp	ННР	JIF
13 1 NO			6742	871		9.7 105				8		2630	289	620	300	103
		12 12 13 13			ade: Cu			ull:		Wear:	Brg		Gge:		Pull:	
		MTR, STAB, N									9	· .	-9			
	2,			, , , , ,			ameters									
Depth	n (ft)	ROP (ft/h	r)	WOB (inig i ui	RPM	<u> </u>	Torqu	e (ft lbs)		Flow	(gals/m	in)	Pres	sure
From	To	•	_	Avg	Max	Avg	Ma	ıx	Avg	Max		Avg		ax	(ps	
6,742	7,613	75.0	110.0	65	70		45	45	13		18	83	0	850	•	
Annular V	elocity: Di	rill Collars:	478.0	Drill Pi	pe:	247.0										
Comments	s: Slide dı	rilling 10 E/0" h	ale from 6 9	946' to 6.9	יחדני											
		rilling 10-5/8" ho rilling 10-5/8" ho rilling 10-5/8" ho	ole from 7,1	158' to 7,1 326' to 7,3	83'. 850'.	oue Dril	ling Dor	amete	ro							
Hook I oad	Slide di	rilling 10-5/8" ho rilling 10-5/8" ho	ole from 7,1 ole from 7,3	158' to 7,1 326' to 7,3 Mis	83'. 850'. cellane					Drag A	va/Ma		5/1	0		
Hook Load	Slide di	rilling 10-5/8" he rilling 10-5/8" he Off Bottom	ole from 7,1 ole from 7,3	158' to 7,1 326' to 7,3 Mis	83'. 850'.		ling Par		e rs 265	Drag A	vg/Ma	ıx:	5/1	0		
Slow Circu	Slide di ds (Ibs): ulation Data	off Botton	ole from 7,3 ole from 7,3 n Rotate:	158' to 7,1 326' to 7,3 Mis 285	83'. 850'. cellaned Pick Up:	310	Slack (Off:	265					0		
Slow Circu Pu	Slide di ds (lbs): ulation Data ump 1:	off Botton 30 spm	ole from 7,3 ole from 7,3 n Rotate:	158' to 7,1 326' to 7,3 Mis 285	83'. 850'. cellaned Pick Up:	310 0 spm	Slack (Off: 215 psi	265	50 spr	n	3	11 psi	0		
Slow Circu Pu Pu	Slide di ds (lbs): ulation Data ump 1: ump 2:	Off Bottom 30 spm 30 spm	ole from 7,3 ole from 7,3 n Rotate:	158' to 7,1 326' to 7,3 Mis 285 10 psi	83'. 850'. cellaned Pick Up:	310 0 spm 0 spm	Slack	Off: 215 psi 215 psi	265	50 spr 50 spr	n n	3	11 psi 11 psi	0		
Slow Circu Pu Pu Pu	Slide draws dis (lbs): ulation Data ump 1: ump 2: ump 3:	Off Bottom a: 30 spm 30 spm 30 spm	ole from 7,3 ole from 7,3 n Rotate:	158' to 7,1 326' to 7,3 Mis 285 10 psi 10 psi	83'. 850'. cellaned Pick Up: 4 4	310 0 spm 0 spm 0 spm	Slack (Off: 215 psi 215 psi 215 psi	265	50 spr	n n	3	11 psi	0		
Slow Circu Pu Pu Pu Hours on I	Slide di ds (Ibs): ulation Data ump 1: ump 2: ump 3: BHA:	Off Bottom a: 30 spm 30 spm 30 spm Since In	n Rotate:	158' to 7,1 326' to 7,3 Mis 285 10 psi 10 psi 10 psi 93.75	83'. 850'. Cellaned Pick Up: 4 4 Total:	310 0 spm 0 spm 0 spm 93.75	Slack (Off: 215 psi 215 psi 215 psi (265	50 spr 50 spr 50 spr	n n	3 3	11 psi 11 psi 11 psi	0		
Slow Circu Pu Pu Pu Hours on I	Slide draws dis (lbs): ulation Data ump 1: ump 2: ump 3:	Off Bottom a: 30 spm 30 spm 30 spm Since In	n Rotate:	158' to 7,1 326' to 7,3 Mis 285 10 psi 10 psi	83'. 850'. Cellaned Pick Up: 4 4 4 Total:	310 0 spm 0 spm 0 spm 93.75	Jars:	Off: 215 psi 215 psi 215 psi (33 /	265	50 spr 50 spr 50 spr	n n	3	11 psi 11 psi 11 psi	0		
Slow Circu Pu Pu Pu Hours on I	Slide di ds (Ibs): ulation Data ump 1: ump 2: ump 3: BHA: Casing/Line	Off Bottom a: 30 spm 30 spm 30 spm Since Inter: Rotating	n Rotate:	158' to 7,1 326' to 7,3 Mis 285 10 psi 10 psi 10 psi 93.75	83'. 850'. Cellaned Pick Up: 4 4 4 Total:	310 0 spm 0 spm 0 spm 93.75	Slack (Off: 215 psi 215 psi 215 psi (33 /	265	50 spr 50 spr 50 spr	n n n	3 3 3 ning Ins	11 psi 11 psi 11 psi stalled	0		
Slow Circu Pu Pu Pu Hours on I	Slide do ds (lbs): ulation Data ump 1: ump 2: ump 3: BHA: Casing/Line	Off Bottom a: 30 spm 30 spm 30 spm Since In er: Rotating	oble from 7,3 oble from 7,3 n Rotate: 1 1 spection: g: 6	158' to 7,1 326' to 7,3 Mis 285 10 psi 10 psi 10 psi 93.75 6.5 /	83'. 850'. Cellaned Pick Up: 4 4 Total:	0 spm 0 spm 0 spm 93.75 Tripping	Jars:	Off: 215 psi 215 psi 215 psi (33 / 1	265	50 spr 50 spr 50 spr	n n n n n n n n n n n n n n n n n n n	3 3 ning Ins	11 psi 11 psi 11 psi stalled		c	
Slow Circu Pu Pu Pu Hours on I	Slide do ds (lbs): ulation Data ump 1: ump 2: ump 3: BHA: Casing/Line Survey Type	Off Bottom a: 30 spm 30 spm 30 spm Since In er: Rotating	n Rotate: 1 spection: p: 6	158' to 7,1 326' to 7,3 Mis 285 10 psi 10 psi 10 psi 93.75 6.5 /	83'. 850'. cellaned Pick Up: 4 4 Total: Sur	310 0 spm 0 spm 0 spm 93.75 Tripping	Jars: Closure	215 psi 215 psi 215 psi 215 psi (33 / 1	265	50 spr 50 spr 50 spr Wear	n n n n Bush	3 3 3 ning Instes	11 psi 11 psi 11 psi 11 psi	D.L.		
Slow Circu Pu Pu Pu Hours on I	Slide do dis (lbs): ulation Data ump 1: ump 2: ump 3: BHA: Casing/Line Survey Type MWD	Off Bottom a: 30 spm 30 spm 30 spm Since In er: Rotating Meas. Depth 6,675.0	n Rotate: 1 spection: g: 6	158' to 7,1 326' to 7,3 Mis 285 10 psi 10 psi 10 psi 93.75 6.5 /	83'. 850'. cellaned Pick Up: 4 4 Total: Sur	310 0 spm 0 spm 0 spm 93.75 Tripping vey Info	Jars: : 8 cormation Closure	215 psi 215 psi 215 psi 215 psi (33 / 1	265 ordertical ection -19.3	50 spr 50 spr 50 spr Wear	n n n n Coord	3 3 3 ning Instes E-	11 psi 11 psi 11 psi 11 psi stalled	D.L.	149	
Slow Circu Pu Pu Pu Hours on I	Slide do ds (lbs): ulation Data ump 1: ump 2: ump 3: BHA: Casing/Line Survey Type	Off Bottom a: 30 spm 30 spm 30 spm Since In er: Rotating	n Rotate: 1 spection: p: 6	158' to 7,1 326' to 7,3 Mis 285 10 psi 10 psi 10 psi 93.75 6.5 /	83'. 850'. cellaned Pick Up: 4 4 Total: Sur TV 6,6	310 0 spm 0 spm 0 spm 93.75 Tripping vey Info 73.7	Jars: 8 Closure 24.9 22.9	215 psi 215 psi 215 psi 215 psi (33 / 1 Vo So	265	50 spr 50 spr 50 spr Wear	n n n n Bush	3 3 3 ning Instes E-	11 psi 11 psi 11 psi 11 psi	D.L.		
Slow Circu Pu Pu Pu Hours on I Hours on 0	Slide draws Slide draws I state of the state	Off Bottom a: 30 spm 30 spm 30 spm Since In er: Rotating Meas. Depth 6,675.0 6,770.0	n Rotate: 1 spection: g: 6	158' to 7,1 326' to 7,3 Mis 285 10 psi 10 psi 10 psi 93.75 6.5 / Azimuth 44.2 26.0	83'. 850'. cellaned Pick Up: 4 4 Total: Sur TV 6,6 6,7	310 0 spm 0 spm 0 spm 93.75 Tripping vey Info 73.7	Jars: : 8 prmation Closure 24.9 22.9 formation	215 psi 215 psi 215 psi 215 psi 33 / 1 V So	ertical ection -19.3 -17.7	50 spr 50 spr 50 spr Wear	Bush Coord S 19.3	3 3 3 ning Ins	11 psi 11 psi 11 psi 11 psi stalled W 15.7 14.6	D.L. 1 0.4	149 112	
Slow Circu Pu Pu Hours on I Hours on O	Slide draws (lbs): Lalation Data Lump 1: Lump 2: Lump 3: BHA: Casing/Line Survey Type MWD MWD	Off Bottom a: 30 spm 30 spm 30 spm Since In er: Rotating Meas. Depth 6,675.0 6,770.0	n Rotate: 1 spection: g: 6 Inc. 1.18 1.25	158' to 7,1 326' to 7,3 Mis 285 10 psi 10 psi 10 psi 93.75 6.5 / Azimuth 44.2 26.0	83'. 850'. cellanec Pick Up: 4 4 Total: Sur TV 6,6 6,7 Mud	310 0 spm 0 spm 0 spm 93.75 Tripping vey Info 73.7 68.7 Log Info	Jars: : 8 ormation Closure 24.9 formation Gas	215 psi 215 psi 215 psi 215 psi (33 / 1 V So	ertical ection -19.3 -17.7	50 spr 50 spr 50 spr N-1 S S S	Bush Coord S 19.3	3 3 3 shing Instes E- W W	11 psi 11	D.L. 1 0.4	149 112 ROI	
Slow Circu Pu Pu Hours on I Hours on O	Slide draws Slide draws I state of the state	Off Bottom a: 30 spm 30 spm 30 spm Since In er: Rotating Meas. Depth 6,675.0 6,770.0 TVD (ft) From	n Rotate: 1 spection: p: 6 Inc. 1.18 1.25	158' to 7,1 326' to 7,3 Mis 285 10 psi 10 psi 10 psi 93.75 6.5 / Azimuth 44.2 26.0 Gas (83'. 850'. cellaned Pick Up: 4 4 Total: Sur 6,6 6,7 Mud (Units) (x at D)	310 0 spm 0 spm 0 spm 93.75 Tripping vey Info 73.7 68.7 Log Info	Jars: : 8 prmation Closure 24.9 22.9 formation	215 psi 215 psi 215 psi 215 psi (33 / 1 V So	ertical ection -19.3 -17.7	50 spr 50 spr 50 spr N-1 S S S	Bush Coord S 19.3	3 3 3 ning Ins	11 psi 11 psi 11 psi 11 psi stalled W 15.7 14.6	D.L. 1 0.4	149 112 ROI	
Pu Pu Pu Hours on I Hours on O	Slide do	Off Bottom a: 30 spm 30 spm 30 spm Since In er: Rotating Meas. Depth 6,675.0 6,770.0 TVD (ft) From	n Rotate: 1 spection: g: 6 Inc. 1.18 1.25	158' to 7,1 326' to 7,3 Mis 285 10 psi 10 psi 10 psi 93.75 6.5 / Azimuth 44.2 26.0	83'. 850'. cellanec Pick Up: 4 4 Total: Sur TV 6,6 6,7 Mud	310 0 spm 0 spm 0 spm 93.75 Tripping vey Info 73.7 68.7 Log Info	Jars: : 8 ormation Closure 24.9 formation Gas	215 psi 215 psi 215 psi 215 psi (33 / 1 V So	ertical ection -19.3 -17.7	50 spr 50 spr 50 spr N-1 S S S	Bush Coord S 19.3	3 3 3 shing Instes E- W W	11 psi 11	D.L. 1 0.4	149 112 ROI	Sano



Comments:

Light rain.

Daily Drilling Report

Geothermal Resource Group, Inc.

Well Name: 78B-32

Well ID: Forge 78B-32

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

Field: UTAHFORGE

Report No: 18									R	eport For	14-Jul-21
				R	ig Info	rmation					
Equipment Probl	ems: Leaki	ng house o	n top drive.								
Location Condition	on: Good										
Transport:	Recei	ived 7 loads	of water.								
				Solids	Contro	ol Information					
Screen Sizes:	Тор	Middle 1	Middle 2	Bottom	Equip	oment Usage (H	lrs):				
Shaker No 1:	120	120	120	120	Desa	nder: 0	Desilter:	0	Degasser:	0	
Shaker No 2:	120	120	120	120	Centr	rifuge 1: 24 (So	lids Removal)		Centrifuge 2:	24 (Solids	Removal)
Shaker No 3:	120	120	120	120							
					Bulk In	ventory					
	Item Typ	е		Units	E	Beginning	Used	Recei	ved On F	land	Net
Rig Fuel						7,891	2,344		2,700	8,247	356
						Inventory					
		Veight	Grade	Threa	ad	DP Size	Joints	Weig	ht Grad	e T	Thread
5.5	258	24.7	S-135	5.5IF							
				Sat	ety In	formation					
Meetings/Drills	Time				Descrip						
Safety						n crews. Handlin	•	g in the			١.
First Aid Treatme		-	al Treatme	nts:	0	Lost Time Incid	dents:	0	Days Since L	ГІ:	
Accident Descrip		to report.									
BOP Test	✓ Cro	ownamatic	Check								
				Wea	ther Ir	nformation					
Sky Condition:	Cloudy					Visibility:	10				
Air Temperature:	72 degF					Bar. Pressure	: 29.89				
Wind Speed/Dir:	6 / SE					Wind Gusts:	2				



Geothermal Resource Group, Inc.

Well Name: 78B-32

Well ID: Forge 78B-32

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

Field: UTAHFORGE

Report No: 19								Report For	15-Jul-21
Operator: Ur	niversity of Utah	Rig:	Frontier Rig 1	6 Spud Date:	28-	Jun-21	Daily Cost / M	ud (\$):	
Measured Depth (ft):	7613	Last Casing:	11.750 at 2,99	0 Wellbore:	Original V	Vellbore	AFE No.	AFE (\$)	Actual (\$)
Vertical Depth (ft):	7611	Next Casing:	7.000 at 8,50	0 RKB Elevatio	n (ft):	30.40			
Proposed TD (ft):	9500	Last BOP Test	:: 03-Jul-2	1 Job Referenc	e RKB (ft):				
Hole Made (ft) / Hrs:	0 / 9.5	Next BOP Tes	t: 24-Jul-2	1 Working Inter	est:		Totals:		
Average ROP (ft/hr):	0.0			LOT (lbs/gal):		11.70	Well Cost (\$):		
Drilling Days (act./plan	i): 19/21 F I	lat Days (act./pl	an): 0/9	Total Days (act	./plan):	19/30	Days On Loca	ition:	19
Pers/Hrs: Operator	: 3 / 36 C	ontractor:	14 / 168	Service:	6 / 72	Other:	3 / 36	Total:	26 / 312

Safety Summary: No incidents or events reported. Conducted Crown Check, Safety Meeting.

Current Operations: Tripped in the hole from 2,613' to 7,072'.

Filled pipe and broke circulation every 1,000'.

Took weight at 7,072'. Work string free with 90k in over-pull. Ream from 7,072' to 7,231'.

Ream from 7,231' to 7,613' as needed. **Planned Operations:**

Drilled 10-5/8" hole to 8,500'.

Steve Caldwell, Justin Bristol Toolpusher:

Wellsite Supervisors: Virgil Welch, Brian Gresham Tel No.: 7132807438

					Operations Summary	
From	То	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	8:00	8.00	7,613	REPR	Waited on hydraulic hose to arrive. Pumping down the string to cool tools every hour at 300 gpm.	Х
8:00	13:00	5.00	7,613	3-6-4	POH from 6,559' to 629'	
13:00	16:30	3.50	7,613	3-6-2	Racked back HWDP along with 8' drill collars. Laid out motor, bit, stabs. Motor took a high amount of torque to drain 45 kft/lbs. Bit had 3-plugged jets with pieces of rubber from the stator bit was also DBR'ed. Motor Stabilizer was 0.5" under-gauged Stabilizer above the motor was 0.75" under-gauged. Top Stabilizer was 1.25" under-gauged.	
16:30	22:30	6.00	7,613	3-34-3	Picked up new (Bico) motor 1.5 deg, 0.160 rev/gal. Picked up new 10-5/8" NOV bit. Picked up 1- Re-Run Roller Reamers 10-3/8" stab placed at 39.53'. Picked up new 10-1/2" spiral stab placed at 100.82'. Placed cubic sensors at 50.96', 132.86'. Made up and scribed tools. Tripped in the hole with BHA to 1,000'.	
22:30	23:30	1.00	7,613	3-6-3	Tripped in the hole from 1,000' to 2,613'.	
23:30	0:00	0.50	7,613	SERV	Serviced rig. Adjusted service loop.	

Management Summary

Waited on hydraulic hose to arrive.

Installed new top-drive service link hydraulic hose.

Tripped out of the hole from 6,559' to BHA.

Racked back HWDP along with 8' drill collars.

Laid out motor, bit, stabs.

Made up 10-5/8" directional assembly.

Tripped in the hole from 1,000' to 2,613'.

Serviced rig. Adjusted service loop.

Comments

Motor took a high amount of torque to drain 45 kft/lbs. Bit had 3-plugged jets with pieces of rubber from the stator bit was also DBR'ed.

Motor Stabilizer was 0.5" under-gauged

Stabilizer above the motor was 0.75" under-gauged.

Top Stabilizer was 1.25" under-gauged.

Total hours of NPT on report 8.0 HRS

Total hours of NPT on Frontier to date 56 HRS.



Well ID: Forge 78B-32

Field: UTAHFORGE

Geothermal Resource Group, Inc.

Well Name: 78B-32

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

Report No: 19				Casino	g/Tubular In	formation	1					· 15-Jul-2
	Size T ns)	op MD (ft)	Top TVD (ft)		D Bottom TV (ft)		e OH	l Diam. (ins)	Nom. Wg	t. Nom Gra		LOT (lbs/gal
	16.000	0	` '	41	6	S	URF	22.000	(6	55	K-55	0.
ULL	11.750	0		2,99	0	I	NT1	14.750	5	54	J-55	11.
					lud Informa	ition						
				%					Gels		Tem	p M u
Dens. Vis PV 15-Jul-21 16:00 at					er Sand LG n-Dispersed	S CI	Ca C	aCI 10s	s 10m	30m	ln (Out Los
8.30 26 0	1 0		10 2			0 700	120		1 1	1	86	87
	·			Mu	ud Consum	ables		·		·	·	·
	Description	n	Qt	ty. (Cost		Item Desc	cription		Q	ty.	Cost
Engineering - EAC	H			1		ner - EACH					1	-
perdiem - OTHER				1		icking - EA					1	
					Workstring	Informati	on					
No Run Make	Model	Diam D	•	is Run t Hrs A	R.O.P. Vg Max	WOB RPI	M Torque	Mud			D Drn	HHP JI
		10.625	6742 87		0.0 0.0	0	0 13	8	830 273		620	300 103
Jets: 12 12 12				Grade: C		-			Brgs: X			Pull: DMF
BHA - No. 14 - BI									Digo. A	Ogo. Z		i un. Divii
	.,	,			eous Drillin							
Hook Loads (lbs)	: Off	Bottom Ro		Pick Up		Black Off:	10.0	Drag Av	/ɑ/Max:	1		
Slow Circulation									3			
Pump 1:	3	0 spm	110 ps	i	40 spm	215 p	si	50 spm	1	311 psi		
Pump 2:	3	0 spm	110 ps	i	40 spm	215 p	si	50 spm	1	311 psi		
Pump 3:	3	0 spm	110 ps	i	40 spm	215 p	si	50 spm	1	311 psi		
				Su	rvey Inform	nation	<u> </u>		·	·		
Surve	y Mea	s.			<u> </u>		Vertical	C	Coordinate	s		
Туре	Dep	th Inc	. Azim	uth T	VD CI	osure	Section	N-S	3	E-W	D.L.	S.
MWD					,863.7	20.8	-15.7			W 13.6		221
MWD					,958.6	18.7	-13.9			W 12.5		186
MWD					,054.6	19.0	-14.3			W 12.5		754
MWD					,149.6	21.7	-17.1			W 13.5		533
MWD					,244.5	24.3	-19.7			W 14.2		579
MWD					,339.5	26.0	-21.4			W 14.8		592
MWD					,434.5	27.4	-22.7			W 15.4		079
MWD	7,53	31.0 0.9	95 20		,529.5	28.9	-24.1	\$ 2	24.1	W 16.0	0.	149
	_	110/5:	<u> </u>		Rig Informa	tion						
Equipment Proble			e on Service	юор.								
Location Condition			f 7ll '	4 40 5/0"	DDC hit							
Transport:	Kece	erved 2 load	s of 7" casing			[a wm c t a						
Saraan Sizaa	Ton	Middle 4	Middle		Control Inf							
Screen Sizes: Shaker No 1:	Top	Middle 1		Bottom	Desander:	it Usage (H · ∩	ırs): Desiltei	r. 0	Degass	ser: 0		
Shaker No 1:	120			120	Centrifuge						1 (Salid	s Remova
Shaker No 2:	120 120			120 120	Genunuge	; i. 24 (30	iius Relli0	vaij	Centriff	uge z . 2	+ (30110	s izeiliova
GHAREI NO 3.	120	120	120	120	Bulk Invente	orv						
	14 T	10		Units			Used	Rec	eived	On Han	d	Net
	ITEM IV			Units	Degii	····iy	UJEU	IVEC	C. V G G			1401
Ria Fuel	Item Typ	,,,				8.247				8	247	
Rig Fuel	item i yr			Dri	ill Pipe Inve	8,247 entory				8,:	247	
Rig Fuel DP Size Jo		Weight	Grade	Dri Thre	ill Pipe Inve	· .	Joints	Wei	aht	8,		Thread



Geothermal Resource Group, Inc.

Well ID: Forge 78B-32 Field: UTAHFORGE Well Name: 78B-32 Sect: 32 Town: 26 Rng: 9W County: Beaver State: UT

Report No: 19 Report For 15-Jul-21

Report No: 19	,						Report For 15-Jui-21
			Safety In	formation			
Meetings/Drills	Time		Descri	otion			
Safety	60	Two 30 min Pre tour safety meeting	ngs with bot	h crews. Handling BHA	, Workin	g at he	eights. Looking up while tripping pipe.
First Aid Treatme	ents:	0 Medical Treatments:	0	Lost Time Incidents:		0	Days Since LTI:
Accident Descrip	otion: N	lone to report.					
■ BOP Test	✓	Crownamatic Check					
		,	Weather I	nformation			
Sky Condition:	Cloudy	/		Visibility:	10		
Air Temperature	: 70 deg	jF		Bar. Pressure:	29.89		
Wind Speed/Dir:	8 / SE			Wind Gusts:	2		
Comments:	Light ra	ain with some wind.					



Geothermal Resource Group, Inc.

Well Name: 78B-32

Well ID: Forge 78B-32

Field: UTAHFORGE

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

Report No: 20								Report For	r 16-Jul-21
Operator:	University of Utal	h Rig:	Frontier Rig 1	6 Spud Date:	28-	Jun-21	Daily Cost / M	ud (\$):	
Measured Depth (ft): 8500	0 Last Casing:	11.750 at 2,99	0 Wellbore:	Original V	Vellbore	AFE No.	AFE (\$)	Actual (\$)
Vertical Depth (ft):	8498	8 Next Casing:	7.000 at 8,50	0 RKB Elevation	on (ft):	30.40			
Proposed TD (ft):	9500	0 Last BOP Tes	t: 03-Jul-2	1 Job Referen	e RKB (ft):				
Hole Made (ft) / Hrs	: 887 / 18.0	0 Next BOP Tes	st: 24-Jul-2	1 Working Inte	rest:		Totals:		
Average ROP (ft/hr)): 49.28	8		LOT (lbs/gal)	:	11.70	Well Cost (\$):		
Drilling Days (act./p	olan): 20/21 l	Flat Days (act./p	lan): 0/9	Total Days (ac	t./plan):	20/30	Days On Loca	ition:	20
Pers/Hrs: Opera	tor: 3 / 36	Contractor:	14 / 168	Service:	6 / 72	Other:	3 / 36	Total:	26 / 312

Safety Summary: No incidents or events reported. Conducted Crown Check, Safety Meeting.

Current Operations:

Tripped out of the hole from 4,000' to BHA with no issues. Racked back HWDP. Laid out 15X8" drill collars and all directional tools.

Planned Operations:

Finish laying out directional tools. Make up 8-3/4" coring assembly. Trip in the hole to 8,500'. Cut core from 8,500'.

Toolpusher: Steve Caldwell , Justin Bristol

Wellsite Supervisors: Virgil Welch , Brian Gresham Tel No.: 7132807438

From	То	Elapsed	End MD(ft)	Code	Operations Description No	on-Pro
0:00	0:30	0.50	7,613	3-6-3	Tripped in the hole from 2,613' to 3,145'.	
0:30	0:45	0.25	7,613	3-5-1	Broke circulation at 3,145' to cool tools. Shallow tested tools.	
0:45	1:15	0.50	7,613	3-6-3	Tripped in the hole from 3,145' to 4,129'.	
1:15	1:30	0.25	7,613	3-5-1	Broke circulation at 4,129' to cool tools. Max temp observed at MWD was 201 deg. Max temp at surface was 98 deg.	
1:30	2:00	0.50	7,613	3-6-3	Tripped in the hole from 4,129' to 5,078'.	
2:00	2:15	0.25	7,613	3-5-1	Broke circulation at 5,078' to cool tools. Max temp observed at MWD was 228 deg. Max temp at surface was 98 deg.	
2:15	2:30	0.25	7,613	3-6-3	Tripped in the hole from 5,078' to 6,025'.	
2:30	3:00	0.50	7,613	3-5-1	Broke circulation at 6,025' to cool tools. Max temp observed at MWD was 260 deg. Max temp at surface was 103 deg.	
3:00	3:30	0.50	7,613	3-6-3	Tripped in the hole from 6,025 to 6,974'.	
3:30	4:00	0.50	7,613	3-5-1	Broke circulation at 6,974' to cool tools. Max temp observed at MWD was 292 deg. Max temp at surface was 108 deg.	
4:00	4:15	0.25	7,613	3-6-3	Tripped in the hole from 6,974' to 7,072'.	
4:15	6:00	1.75	7,613	3-3	Took weight at 7,072'. Work string free with 90k in over-pull. Ream from 7,072' to 7,231'.	
6:00	8:00	2.00	7,613	3-3	Ream from 7,231' to 7,260'. Ran one stand from 7,260' to 7,340'. Ream from 7,260' to 7,613'.	
8:00	13:00	5.00	8,091	3-2-3	Rotate drilling 10-5/8" hole from 7,613' to 8,091' Conduct RPM step test @ 35,40,45,50 Conduct GPM step test at 700,800,900 GPM Best results were what we were running 50 RPM 800 GPM Conducted a water sweep test showing less ROP	•
13:00	13:45	0.75	8,111	3-2-3	Slid Drill from 8,091' to 8,111'.	
13:45	16:15	2.50	8,282	3-2-3	Rotate drilling 10-5/8" hole from 8,111' to 8,282'	
16:15	16:45	0.50	8,303	3-2-3	Slide drill from 8,282' to 8,303'.	
16:45	18:00	1.25	8,377	3-2-3	Rotate drill from 8,303' to 8,377'.	
18:00	18:30	0.50	8,395	3-2-3	Slide drill from 8,377' to 8,395'.	
18:30	20:00	1.50	8,500	3-2-3	Rotate drill from 8,395' to 8,500' (Core point).	
20:00	20:30	0.50	8,500	3-5-1	Circulate bottoms up at 8,500'.	
20:30	0:00	3.50	8,500	3-6-4	Tripped out of the hole from 8,500' to 4,000' with no issues.	
					Management Summary	



Geothermal Resource Group, Inc.

Well ID: Forge 78B-32

Field: UTAHFORGE

Well Name: 78B-32 Sect: 32 Town: 26 Rng: 9W County: Beaver State: UT

Report No: 20 Report For 16-Jul-21

Breaking circulation every 1,000' to cool tools.

Reamed from 7,707' to 7,613'.

Drilled 10-5/8" hole from 7,613' to 8,500' (Core point).

Circulated bottoms up at 8,500'.

Tripped out of the hole from 8,500' to 4,000'.

Cc	mn	1en	te
\mathbf{c}	,,,,,,,	ICII	ıισ

Slid Drill from 8,091' to 8,111'. Slide Drill from 8,282' to 8,303'. Slide Drill from 8,377' to 8,395'.

				Casing/	Tubular Info	rmation				
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	16.000	0		416		SURF	22.000	65	K-55	0.61
FULL	11.750	0		2.990		INT1	14.750	54	J-55	11.70

									IVIU	ia into	rmati	on								
									%							Gels		Te	mp	Mud
Dens.	Vis	PV	ΥP	Filt.	Cake	pH/ES	Solids	Oil	Water	Sand	LGS	CI	Ca	CaCl	10s	10m	30m	In	Out	Loss
16-Jul	-21 20):15 a	at Dep	th 8,500) ft Mu	d Pits, T	ype: Lov	v Soli	ds Non-	Dispers	sed									
8.30	26	0	1	0	1	11	2	0	98	0.01	0	700	120		1	1	1	118	130	

		Mud Cons	sumables		
Item Description	Qty.	Cost	Item Description	Qty.	Cost
caustic Soda - 50#SK	4		Engineering - EACH	1	
Other - EACH	1		perdiem - OTHER	1	

								ı	Bit/BH/	4/Work	string	Infor r	natior	1							
							Depth	This	Run	R.C	D.P.				N	/lud	Pump				
N	o R	un	Mal	ke	Mode	el Diam	In	Dist	Hrs	Avg	Max	WOB	RPM	Torque	Wt	Flow	Press	J. Vel	P. Drp	HHP	JIF
1	4	1 1	NOV		TCK83	10.62	7613	887	12	73.9	230.0	65	50	16	8	830	2750	289	620	300	1030
J	ets:	12	12	12	12 12	12 13	13 Out :		Grade:	Cutter	. /	Dι	all:	1	Wear:	Br	gs:	Gge:		Pull:	

DILA	NI. 45	DIT MANATO	OTAR A OTHER	MACNIEL	0.071.150	OTAB	NACNIEL	O OTLIED	DO VO	LIMPD	4040.00
BHA -	NO. 15 -	BII, MIMIR	, STAB, 2 OTHER	, MONEL	, 2 OTHER,	STAB,	MONEL,	2 OTHER,	DC, XO	, HWUP =	1049.30

					Drill	ing Paran	neters					
Depth	n (ft)	ROP	(ft/hr)	WOB	(lbs)	RI	PM	Torque	(ft lbs)	Flow (g	als/min)	Pressure
From	То	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	(psi)
7,613	8,500	73.9	230.0	65	70	50	53	16	18	800	830	2,750

Annular Velocity: Drill Collars: 478.0 Drill Pipe: 247.0

Comments: Slid Drill from 8,091' to 8,111'. Slide Drill from 8,282' to 8,303'. Slide Drill from 8,377' to 8,395'.

	Miscellaneous Drilling Parameters												
Hook Loads (lbs):	Off Bottom	Rotate: 302	Pick Up: 33	30 Slack Off:	250 Drag Av	g/Max: 15 / 20							
Slow Circulation Data:													
Pump 1:	30 spm	110 psi	40 spm	215 psi	50 spm	311 psi							
Pump 2:	30 spm	110 psi	40 spm	215 psi	50 spm	311 psi							
Pump 3:	30 spm	110 psi	40 spm	215 psi	50 spm	311 psi							
Hours on BHA:	Since Ins	spection: 105.75	Total: 105.7	5 Jars : 0)								
Hours on Casing/Liner:	Rotating	: 82.5 <i>l</i>	Trippin	g : 99 /	Wear	Bushing Installed							



Geothermal Resource Group, Inc.

Well Name: 78B-32

Well ID: Forge 78B-32

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

Field: UTAHFORGE

	iu. O I Ai ii	ONOL				Ject. 32	. TOWII.	20 Kilg.	944 00		4 F 40	
Report No: 20				Cumana	f					Repor	t For 16-	Jui-21
C	Mana			Survey	nformation		4:!	0	al! a.4.a.a			
Survey Type	Meas. Depth	Inc.	Azimuth	TVD	Closure		tical tion	N-S	dinates	w	D.L.S.	
MWD	7,639.0			7,637.5	30.5		-25.5	S 25.5		16.8	0.195	
MWD	7,830.0			7,828.4	34.5		-28.9	S 28.9		18.8	0.462	
MWD	7,030.0			7,923.4	37.2		-30.9	S 30.9		20.9	0.778	
MWD	8,020.0			8,018.4	40.1		-32.6	S 32.6		23.4	0.021	
MWD	8,116.0			8,114.3	40.1		-33.3	S 33.3		25.9	1.351	
MWD					43.3		-32.5	S 33.5			0.440	
	8,211.0			8,209.3				S 32.5 S 31.9		28.5		
MWD	8,306.0			8,304.2	44.5		-31.9			31.1	0.553	
MWD	8,402.0			8,400.2	46.0		-32.0	S 32.0		33.0	0.821	
MWD	8,428.0	1.39	249.8	8,426.2	46.4		-32.1	S 32.1	VV	33.5	2.002	
		(4)			Information							
Depth (ft)	TVD		Gas (l		Gas		Drilling	Pore	Mud	Shale		OP Operation
From To	From	То	Avg Max	at Depth	Connect.	Trip	Exp.	Press	Dens.	Dens.	Shale	Sand
7,613 8,500	7,612	8,498										
Formation Name:												
Lithology: 1	00% Grano	diorite										
				Rig Inf	ormation							
Equipment Problem	s: None to	report.										
Location Condition:												
Transport:	Receive	ed 8.75" cor	re bit along with	10-5/8" NOV	PDC bit. Re	ceived 2	-loads of 7	7" casing.,				
			:	Solids Cont	rol Informa	tion						
Screen Sizes:	Top I	Middle 1	Middle 2 Bo	ttom Equ	ipment Usaç	ge (Hrs):						
Shaker No 1:	120	120	120	120 Des	ander: 0	D	esilter:	0 D	egasse	r: 0		
Shaker No 2:	120	120	120	120 Cen	trifuge 1: 24	(Solids	Removal)	С	entrifug	je 2 : 24	(Solids Re	moval)
Shaker No 3:	120	120	120	120								
				Bulk	Inventory							
	Item Type			Units	Beginning	Us	ed	Receive	d (On Hand	ı	let
Rig Fuel					8,247	7				8,2	47	
				Drill Pipe	e Inventory							
DP Size Join	ts We	eight	Grade	Thread	DP Size) J	oints	Weight	G	irade	Thre	ad
5.5"	258	24.7 S-	135 5.	5IF								
			<u> </u>	Safety I	nformation							
Meetings/Drills T	ime			Descri								
Safety		30 min Pre	tour safety me		•	ndlina BH	IA. good o	communica	tion. Fo	rklift opei	rations.	
First Aid Treatments			I Treatments:		Lost Time				ays Sinc			
Accident Descriptio								, J,	, , , , , , , , , , , , , , , , , , , ,			
BOP Test		namatic C	heck									
	<u>V</u> 0.01	Tiumutio O	TICOK	Weather	Information	•						
Sky Condition:	Noudy			vveatrier			7					
	Cloudy				Visibility:		20.94					
	0 degF				Bar. Pres		29.84					
•	3 / SSE				Wind Gus	its:	2					
Comments: L	ight rain.											
ı												
ı												
l												
l												



Geothermal Resource Group, Inc.

Well Name: 78B-32

Well ID: Forge 78B-32

Field: UTAHFORGE

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

Report No: 21								Report For	17-Jul-21
Operator:	University of Utah	Rig:	Frontier Rig 16	Spud Date:	28-J	un-21	Daily Cost / M	ud (\$):	
Measured Depth (ft): 8530	Last Casing: 1	11.750 at 2,990	Wellbore:	Original We	ellbore	AFE No.	AFE (\$)	Actual (\$)
Vertical Depth (ft):	8528	Next Casing:	7.000 at 8,500	RKB Elevation	(ft):	30.40			
Proposed TD (ft):	9500	Last BOP Test	: 03-Jul-2	1 Job Reference	RKB (ft):				
Hole Made (ft) / Hrs	: 30 / 7.5	Next BOP Test	: 24-Jul-2	1 Working Intere	est:		Totals:		
Average ROP (ft/hr)	4.0)		LOT (lbs/gal):		11.70	Well Cost (\$):		
Drilling Days (act./p	olan): 21/21 F	lat Days (act./pla	an): 0/9	Total Days (act.	plan):	21/30	Days On Loca	ition:	21
Pers/Hrs: Opera	tor: 0/0 C	Contractor:	0/0	Service:	0/0	Other:	0/0	Total:	0/0

Safety Summary: No incidents or events reported. Conducted Crown Check, Safety Meeting.

Current Operations: Made up 8-3/4" core assembly.

Tripped in the hole with 8-3/4" core assembly to 6,495'.

Planned Operations: Trip in the hole with 8-3/4" core assembly to 8,530'.

Core from 8,530' to 8,560'.

Trip out of the hole with core assembly. Make up 10-5/8" reaming assembly.

Toolpusher: Steve Caldwell , Justin Bristol

Wellsite Supervisors: Virgil Welch , Brian Gresham Tel No.: 7132807438

					Operations Summary	
From	То	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	2:00	2.00	8,500	3-6-4	Tripped out of the hole from 4,000' to BHA with no issues.	
2:00	7:00	5.00	8,500	3-34-4	Racked back HWDP. Laid out 15-8" drill collars and all directional tools. Motor had approximately .5" of squat in bearing assembly. Kick pad was wore smooth. Roller reamer above the motor had heavy wear on all buttons, 2 of the rollers had bad bearings. Top Stabilizer was .75" under-gauged.	
7:00	8:30	1.50	8,500	3-4	Picked up 8-3/4" Coring assembly / RIH 5 HWDP	
8:30	9:00	0.50	8,500	3-4	Pick up 18 jts of 5.5" drill pipe to replace DCS and Directional Tools	
9:00	13:30	4.50	8,500	3-4	RIH to 8,500' filling pipe every 20 stands with 8-3/4" core head	
13:30	17:30	4.00	8,530	3-4	Drop ball and core from 8,500' to 8,530'. No over-pull observed when pulling off bottom.	
17:30	23:00	5.50	8,530	3-6-4	Tripped out of the hole from 8,530' with core assembly.	
23:00	0:00	1.00	8,530	3-4	Handled BHA. Laid out core barrel. Recovered 23.7' of core. 50% 2-3" in length with the other 50% 9-12" in length. Note: Inner barrel assembly was pushed up inside of core barrel approximately 3"	

Management Summary

Tripped out of the hole from 4,000' with BHA and no issues.

Racked back HWDP. Laid out 15X8" drill collars and all directional tools.

Picked up 8-3/4" Coring assembly.

Tripped in the hole to 8,500' filling pipe every 1,000'.

Cored from 8,500' to 8,530'.

Tripped out of the hole from 8,530' with core assembly.

Handled BHA. Laid out core barrel. Recovered 23.7' of core. 50% 2-3" in length with the other 50% 9-12" in length.

Comments

Drilling assembly motor had approximately .5" of squat in bearing assembly.

Kick pad was wore smooth.

Roller reamer above the motor had heavy wear on all buttons and 2 of the rollers had bad bearings.

Top Stabilizer was .75" under-gauged.

After core run laid out the core barrel.

Recovered 23.7' of core.

50% 2-3" in length with the other 50% 9-12" in length.

Note: The inner barrel assembly was pushed up inside of core barrel approximately 3".

	Casing/Tubular Information												
	Size	Top MD	Top TVD	Bottom MD	Bottom TVD	Hole	OH Diam.	Nom. Wgt.	Nominal	LOT			
Type	(ins)	(ft)	(ft)	(ft)	(ft)	Section	(ins)	(lbs)	Grade	(lbs/gal)			
FULL	16.000	0		416		SURF	22.000	65	K-55	0.61			
FULL	11.750	0		2,990		INT1	14.750	54	J-55	11.70			



Well ID: Forge 78B-32

Field: UTAHFORGE

Geothermal Resource Group, Inc.

Well Name: 78B-32

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

1 101	iu. OTATII	0.10_									,		olai	e. U i
Report No: 21											Rep	ort Fo	or 17-J	lul-21
				N	Mud Info	rmation								
				%						Gels		Ten	np	Mud
Dens. Vis PV YP	Filt.	Cake pH/	ES Solids	Oil Wat	er Sand	LGS C	Ca	CaCI	10s	10m	30m	In	Out	Loss
17-Jul-21 15:45 at De	epth 8,517	ft Mud Pits	s, Type: Low	v Solids No	n-Dispers	sed								
8.30 29 2	1 32	1	10 2	0 9	98 0.01	8	00 120		2	2	2	81	109	
				М	ud Cons	sumables	<u> </u>				'			
Item De	escription		Qt		Cost		Item E	escripti	on		(Qty.	С	ost
caustic Soda - 50#SK	-			2		Engineerir	g - EACH	-				1		
Other - EACH				1		perdiem -	OTHER					1		
polyvis - 5GAL				12		TORKeas	concentr	ate - 5GA	٨L			6		
· ,				Rit/RHA/	Workstr	ing Inforn	ation							
		De		s Run	R.O.P.		ution		Mud	Pump)			
No Run Make M	Model Di					ax WOB	RPM Tor	aue Wt		•		P. Dr	о ННР	JIF
			7613 887		73.9 230		50	400 111		00 2750	_		1	1
Jets: 12 12 12 12				Grade: C			I: WT/LT	Wea		Brgs: X			Pull:	
15 1 HALLB1 FC			3500	Grade. G	attor.	0/2 50	1. VV 1 / E 1	7704		J. 95. A	Ogc.			<u> </u>
Jets: 17 17 17 17				Grade: C	uttor	1/1 Du	I: WT/NO	Wea	r. C E	Brgs: 0	Gao:	0	Pull:	ВΠУ
BHA - No. 16 - COR								vvea	1. 3	orgs. ∪	Gge.	U	ruii.	DIIA
DIA-NO. 10- CON	DIT, 01AD	, COIL, 3	170, 2 0111											
Donth (ft)	POF) (ft/low)	WO		illing Pa	rameters	т.	/ £ 4	lba\	Flan	. /aala/a	mim\	Dres	
Depth (ft) From To		P (ft/hr) Max		B (lbs) Max	Avg	RPM Max		rque (ft	Max	Avg	gals/n () ۱	nin) /lax		sure si)
8,500 8,530	Avg 8.0		Avg		0	65 Wa	65	9 11	12		90	290	(μ	31) 10
Annular Velocity: D					197.0	03	03	11	12		90	290		10
Comments: Cored				l Pipe:	197.0									
Comments: Cored	110111 8,500	J 10 8,530 .												
						illing Para								
Hook Loads (lbs):		ottom Rota	ate: 27	3 Pick Up): 28	5 Slack O	f : 2	65 Dra	g Avg/	мах:	10 <i>l</i>	15		
Slow Circulation Dat			440		40						044 :			
Pump 1:		spm	110 psi		40 spm		l5 psi) spm		311 psi			
Pump 2:		spm	110 psi		40 spm		l5 psi) spm		311 psi			
Pump 3:		spm	110 psi		40 spm		l5 psi	50	spm		311 psi			
Hours on BHA:		-	tion: 109.7	75 Tota	l: 109.75		0							
Hours on Casing/Lin	ier: Rof	tating:	86.5 <i>l</i>		Tripping			_\	Vear B	ushing l	nstalled			
				Mu	d Log In	formation								
Depth (ft)	TVI	D (ft)	Ga	as (Units)		Gas	D	rilling	Pore	Mud	Shal		RO	
										Dama	. Dens	s. Sh	nale	Sand
From To	From	То	Avg	Max at	Depth C	Connect.	Trip	Ехр.	Press	Dens	. Della			
8,500 8,530			Avg	Max at	Depth (Connect.	Trip	Ехр.	Press	Dens	. Dens			
8,500 8,530 Formation Name:	From 8,498	8,528	Avg	Max at	Depth (Connect.	Trip	Ехр.	Press	Dens	. Della			
8,500 8,530 Formation Name:	From	8,528	Avg				Trip	Exp.	Press	Dens	. Della			
8,500 8,530 Formation Name:	From 8,498	8,528	Avg		Depth C		Trip	Ехр.	Press	Dens	. Della			
8,500 8,530 Formation Name:	From 8,498 00% Grand	8,528	Avg				Trip	Ехр.	Press	Dens	. Della			
8,500 8,530 Formation Name: Lithology: 1	8,498 00% Grand s: None to	8,528 odiorite	Avg				Trip	Exp.	Press	Dens	. Della			
8,500 8,530 Formation Name: Lithology: 1	## From 8,498 00% Grand	8,528 odiorite to report.	Avg		Rig Info	rmation		Exp.	Press	Dens	. Della			
8,500 8,530 Formation Name: Lithology: 1 Equipment Problems Location Condition:	## From 8,498 00% Grand	8,528 odiorite to report.	Avg	Back haul	Rig Infor	rmation	ls.	Exp.	Press	Dens	. Della			
8,500 8,530 Formation Name: Lithology: 1 Equipment Problems Location Condition:	8,498 00% Grand s: None to Good. Receiv	8,528 odiorite to report.	Avg	Back haul	Rig Information and the second	rmation	s.	Exp.	Press	Dens	. Della			
8,500 8,530 Formation Name: Lithology: 1 Equipment Problems Location Condition: Transport:	8,498 00% Grand s: None to Good. Receiv	8,528 odiorite to report.	Avg	Back haule	Rig Informed 1 load S Contro	rmation of 8" dir toc	is. ion e (Hrs):	ilter: 0		Degass				
8,500 8,530 Formation Name: Lithology: 1 Equipment Problems Location Condition: Transport: Screen Sizes:	8,498 00% Grand s: None to Good. Receiv	8,528 odiorite to report. yed 1-load o	Avg of 7" casing. Middle 2	Back hauld Solids Bottom	Rig Information Rig Informat	rmation of 8" dir too I Informat ment Usag	is. ion e (Hrs):	ilter: 0			er: ()	ids Rer	noval
8,500 8,530 Formation Name: Lithology: 1 Equipment Problems Location Condition: Transport: Screen Sizes: Shaker No 1:	From 8,498 00% Grand s: None to Good. Receiv Top 120	8,528 odiorite to report. /ed 1-load of Middle 1 120 120	Avg of 7" casing. Middle 2 120 120	Back hauld Solids Bottom 120	Rig Information Rig Informat	rmation of 8" dir too I Informat ment Usag nder: 0	is. ion e (Hrs):	ilter: 0		Degass	er: ()	ids Rer	noval
8,500 8,530 Formation Name: Lithology: 1 Equipment Problems Location Condition: Transport: Screen Sizes: Shaker No 1: Shaker No 2:	## From 8,498 00% Grand	8,528 odiorite to report. yed 1-load c Middle 1 120	Avg of 7" casing. Middle 2 120	Back hauld Solids Bottom 120	ed 1 load s Contro Equip Desan Centri	of 8" dir too I Informat ment Usag nder: 0 ifuge 1: 24	is. ion e (Hrs):	ilter: 0		Degass	er: ()	ids Rer	noval
8,500 8,530 Formation Name: Lithology: 1 Equipment Problems Location Condition: Transport: Screen Sizes: Shaker No 1: Shaker No 2: Shaker No 3:	From 8,498 00% Grand s: None to Good. Receiv Top 120 120 120	8,528 odiorite to report. /ed 1-load c Middle 1 120 120 120	Avg of 7" casing. Middle 2 120 120	Back hauld Solids Bottom 120 120	ed 1 load s Contro Equip Desan Centri	of 8" dir too I Informat ment Usag nder: 0 ifuge 1: 24	is. ion e (Hrs):	ilter: 0		Degass Centrifu	er: () 24 (Sol		noval)
8,500 8,530 Formation Name: Lithology: 1 Equipment Problems Location Condition: Transport: Screen Sizes: Shaker No 1: Shaker No 2: Shaker No 3:	## From 8,498 00% Grand	8,528 odiorite to report. /ed 1-load c Middle 1 120 120 120	Avg of 7" casing. Middle 2 120 120	Back hauld Solids Bottom 120	ed 1 load s Contro Equip Desan Centri	of 8" dir too I Informat ment Usag nder: 0 ifuge 1: 24	ls. ion e (Hrs): Des (Solids Re	ilter: 0		Degass Centrifu	er: (cuge 2: 2) 24 (Sol		•



Geothermal Resource Group, Inc.

Well Name: 78B-32

Well ID: Forge 78B-32

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

Field: UTAHFORGE Report For 17-Jul-21

Report No. 2	۷۱							Kepoi	1 FOI 17-Jul-21					
	Drill Pipe Inventory													
DP Size	Joints	Weight	Grade	Thread	DP Size	Joints	Weight	Grade	Thread					
5.5"	258	24.7	S-135	5.5IF										
				Safety Int	formation									
Meetings/Drills	Time			Descrip	tion									
Safety	60	Two 30 min	Pre tour safety	y meetings with both	ո crews. Handlinզ	g BHA, good o	communica	ation, Forklift oper	rations.					
First Aid Treati	ments:	0 Med	lical Treatmei	nts: 0	Lost Time Incid	lents:	0 D a	ays Since LTI:						
Accident Desc	ription: N	one to report.												
BOP Test	✓	Crownamati	c Check											
				Weather Ir	nformation									
Sky Condition:	: Partly	cloudy			Visibility:	10								
Air Temperatui	re: 75 deg	F			Bar. Pressure:	29.89								
Wind Speed/Di	ir: 7/SE				Wind Gusts:	2								



Geothermal Resource Group, Inc.

Well Name: 78B-32

Well ID: Forge 78B-32

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

Field: UTAHFORGE

Report No: 22								Report For	18-Jul-21
Operator:	University of Utal	h Rig:	Frontier Rig 1	6 Spud Date:	28-0	Jun-21	Daily Cost / M	ud (\$):	
Measured Depth (ft): 854	0 Last Casing:	11.750 at 2,99	0 Wellbore:	Original W	'ellbore	AFE No.	AFE (\$)	Actual (\$)
Vertical Depth (ft):	843	8 Next Casing:	7.000 at 8,50	0 RKB Elevation	n (ft):	30.40			
Proposed TD (ft):	950	0 Last BOP Tes	t: 03-Jul-2	1 Job Reference	e RKB (ft):				
Hole Made (ft) / Hrs	: 10 / 3.0	0 Next BOP Tes	st: 24-Jul-2	1 Working Inte	rest:		Totals:		
Average ROP (ft/hr)	3.3	3		LOT (lbs/gal)	:	11.70	Well Cost (\$):		
Drilling Days (act./p	olan): 22/21	Flat Days (act./p	lan): 0/9	Total Days (ac	t./plan):	22/30	Days On Loca	ition:	22
Pers/Hrs: Opera	tor: 3 / 36	Contractor:	14 / 168	Service:	6 / 72	Other:	3 / 36	Total:	26 / 312

Safety Summary: No incidents or events reported. Conducted Crown Check, Safety Meeting.

Current Operations: Tripped in the hole with 10-5/8" clean out assembly to 8,500'.

> Open 8-3/4" core hole to 10-5/8" from 8,500' to 8,514'. Rerun PDC bit failed. Circulate surface to surface strokes to cool well bore prior to logs. Tripped out of the hole with clean out assembly from 8,514' to 1,947'.

Planned Operations: Trip out of the hole from 1,947' to surface.

Rig up loggers.

Log well.

Steve Caldwell , Justin Bristol Toolpusher:

Wellsite Supervisors: Virgil Welch . Brian Gresham Tel No.: 7132807438

	Operations Summary												
From	То	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod							
0:00	2:30	2.50	8,530	3-4	Made up 8-3/4" core assembly.								
2:30	7:30	5.00	8,530	3-4	Tripped in the hole with 8-3/4" core assembly to 8,530'.								
7:30	10:30	3.00	8,540	3-4	Cored with 8-3/4" assembly from 8,530' to 8,540'. Core barrel jammed up at 8,540'.								
10:30	15:00	4.50	8,540	3-4	POH with coring assembly as per trip out schedule.								
15:00	16:00	1.00	8,540	WOW	Shut down for high winds and thunder storm.								
16:00	17:00	1.00	8,540	3-4	Continue to POH with coring assembly								
17:00	19:30	2.50	8,540	3-4	Laid down all coring tools. Recovered 8.7' of core.								
19:30	20:00	0.50	8,540	OTHER	Cleaned and cleared floor. Laid out and lifting subs for 8" drill collars for inspection along with crossover subs.								
20:00	21:00	1.00	8,540	3-34-3	Make up 10-5/8" clean out assembly.								
21:00	0:00	3.00	8,540	3-6-3	Tripped in the hole with 10-5/8" clean out assembly to 6,454'. Filled pipe every 3,000'.								

Management Summary

Made up 8-3/4" core assembly.

Tripped in the hole with 8-3/4" core assembly to 8,530'.

Cored with 8-3/4" assembly from 8,530' to 8,540'. Core barrel jammed up at 8,540'.

Pulled out of the hole with coring assembly as per trip out schedule.

Shut down for high winds and thunder storm.

Continue Pulling out of the hole with coring assembly as per trip out schedule.

Laid down all coring tools.

Cleaned and cleared floor.

Make up 10-5/8" clean out assembly.

Tripped in the hole with 10-5/8" clean out assembly to 6,454'.

Comments

Core barrel jammed at 8,540'. Recovered 8.7' of core on run #4.

	Casing/Tubular Information											
	Size	Top MD	Top TVD	Bottom MD	Bottom TVD	Hole	OH Diam.	Nom. Wgt.	Nominal	LOT		
Type	(ins)	(ft)	(ft)	(ft)	(ft)	Section	(ins)	(lbs)	Grade	(lbs/gal)		
FULL	16.000	0		416		SURF	22.000	65	K-55	0.61		
FULL	11.750	0		2,990		INT1	14.750	54	J-55	11.70		



Daily Drilling Report Well ID: Forge 78B-32

Geothermal Resource Group, Inc.

Well Name: 78B-32

Field: UTAHFORGE

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

									%	Mud I	nform	nation						O - '				
Dens.	Vie	PV	ΥP	Filt.	Cake	pH/ES	Solids	Oil		ater Sa	nd I	GS	CI	Са	CaC	:1 10)s	Gels 10m	30m	Ten In	າp Out	Mud Loss
					0 ft Mud	•							<u> </u>						•••••		Jui	
8.30	39	2	2	34			2		0		01	0	800	120			2	2	2	98	109	
									ı	Mud Co	nsur	nable	s									
		Iter	n Desc	riptio	n		Q	ty.		Cost			ľ	tem D	escri	ption				Qty.	C	ost
causti	c Soda	a - 50‡	#SK					1		-	E	nginee	ring - E	ACH						1		
	- EAC							1		-			- OTH							1		
polyvi	s - 5G	AL						5		-			se con		te - 5	GAL				2		
										/Work		g Info	rmatio	n								
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	u n M 2 NO		Mod TCK83		Diam 10.625	In 854		t H	irs	Avg	IVIAX	WOE	RPIV	i ioro	lue	VVL	riow	Pres	s J. ve	l P. Drp	חחר	JIF
					13 13	_		Gra	ide:	Cutter:		Г)ull:	1	w	ear:	Br	gs:	Gge:		Pull:	
			FC384		8.750	850	0 3	30	4	7.5	12.0			5	11	Jui I	300	_	6 54	ı		
Jets:	17 1	7 17	17 17	17	17 17	Out: 8	530	Gra	ide:	Cutter:	1/	1 [ull: W	T/NO	W	ear: S	Br	gs: 0	Gge:	0	Pull: I	ЗНА
15 2	2 HA	LLB1	FC384	3	8.750	853	0 1	10	3	3.3	7.0				12	8	300	1	6 54	22	4	7
Jets:	17 17	7 17	17 17	17	17 17	Out: 8	540	Gra	ide:	Cutter:	2/	3 [ull: W	T/NO	W	ear: S	Br	gs: 0	Gge:	0	Pull: I	ЗНА
BHA -	- No. 1	8 - B	IT, BS,	15 H\	WDP = 4	469.42																
										rilling	Para	meter	s									
	Depth				P (ft/hr)			OB (II				RPM			•	(ft lbs			v (gals/		Pres	
Fro		To		Avg		ax	Avg	0	Max		Avg		ах	Ανς		Ma		Avg		Max	(p:	
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Allilu	iai ve	locity	: Drill	Cona	115.	130.		II Pip		neous		na Da	ramot	orc								
Hook	Load	s (lbs)	١٠	Off	Bottom	Rotate		73 P				Slack		26	5 I	Orag A	Va/N	lax.	5./	10		
		` '	Data:		Jottom	rtotato.				, p.	200	Gidoit	•			J.ug,		.ux.	0,	10		
	Pu	mp 1:		30	0 spm		110 ps	si		40 sp	m		215 ps	i		50 sp	m		311 psi			
	Pu	mp 2:		30	0 spm		110 ps	si		40 sp	m		215 ps	i		50 sp	m		311 psi			
	Pu	mp 3:		30	0 spm		110 ps	si		40 sp	m		215 ps	i		50 sp	m		311 psi			
Hours	s on B	HA:		Si	ince Ins	pection	ı: 112.	.75	Tot	al: 112	2.75	Jars:		0								
Hours	on C	asing	/Liner:	R	otating:		89.5 <i>I</i>				ping:		29 <i>I</i>			Wea	r Bu	shing	Installe	d		
										Rig In	form	ation										
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	tion C	onditi		Good		4																
Trans	port:			None	to repo	rt.			e a li a	la Can	tual l	-f	ation									
Scree	n Size)e:	т	ор	Middl	o 1 Mi	ddle 2		ttom	ls Con			ation ige (Hr	·c/·								
	naker l		- 1'	120		20	120	Б	120			r: 0	ige (m	Desi	lter:	0)egas:	er.	0		
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Sh												8,79)1	1	,154					7,637		
Sh Rig Fu	ıel									rill Pip	e Inv	entor	у									
Rig Fu					Weight	(arade		Th	read		DP Si	ze	Join	ts	W	eight		Grade		Threa	ıd
Rig Fu	uel Size	J	oints	\	vveigni																	
Rig Fu		_	oints 258			.7 S-13	5	5.	5IF													
Rig Fu	Size	_				.7 S-13	5	5.	5IF													
Rig Fu	Size	_				.7 S-13	5	5.	5IF													



Geothermal Resource Group, Inc.

Well ID: Forge 78B-32 Well Name: 78B-32

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

Report No: 22	2							Report For 18-Jul-2	21					
	Safety Information													
Meetings/Drills	Time			Descri	ption									
Safety	60	Two 3	0 min Pre tour safety meeting	gs with bot	th crews. Handling Bh	IA, working	g in hig	jh winds.						
First Aid Treatme	ents:	0	Medical Treatments:	0	Lost Time Incident	s:	0	Days Since LTI:						
Accident Descrip	otion: N	lone to r	eport.											
BOP Test	✓	Crown	amatic Check											
	·		V	Veather I	nformation									
Sky Condition:	Cloudy	/			Visibility:	8								
Air Temperature	: -70 de	gF			Bar. Pressure:	29.89								
Wind Speed/Dir:	10 / SE	Ε			Wind Gusts:	4								
Comments:	Heavy	rain dur	ring the day. shut down for 1	hour due t	to high winds.									
1														



Geothermal Resource Group, Inc.

Well Name: 78B-32

Well ID: Forge 78B-32

Field: UTAHFORGE

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

Report No: 23								Report For	19-Jul-21
Operator:	University of Utah	Rig: F	rontier Rig 16	Spud Date:	28-	Jun-21	Daily Cost / M	ud (\$):	
Measured Depth (ft)): 8540	Last Casing: 11	1.750 at 2,990	Wellbore:	Original W	/ellbore	AFE No.	AFE (\$)	Actual (\$)
Vertical Depth (ft):	8438	Next Casing: 7	7.000 at 8,500	RKB Elevation	(ft):	30.40			
Proposed TD (ft):	9500	Last BOP Test:	03-Jul-2	1 Job Reference	RKB (ft):				
Hole Made (ft) / Hrs	0 / 7.25	Next BOP Test:	24-Jul-2	1 Working Intere	st:		Totals:		
Average ROP (ft/hr)	: 0.0)		LOT (lbs/gal):		11.70	Well Cost (\$):		
Drilling Days (act./p	olan): 23/21 F	lat Days (act./plan	1): 0/9	Total Days (act./	plan):	23/30	Days On Loca	tion:	23
Pers/Hrs: Opera	tor: 3 / 36 C	Contractor:	14 / 168	Service:	3 / 36	Other:	3 / 36	Total:	23 / 276

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

Current Operations: Slipped and cut drilling line.

Tripped in the hole with 10-5/8" clean out assembly from 2,900' to 8,514'.

Opened 8-3/4" core hole to 10-5/8" from 8,514' to 8,540'.

Circulated surface to surface strokes to cool well bore prior to logs.

Planned Operations: Trip out of the hole to surface.

Rig up loggers. Log well. Rig down loggers.

Toolpusher: Steve Caldwell , Justin Bristol

Wellsite Supervisors: Virgil Welch , Brian Gresham Tel No.: 7132807438

From To Elapsed En 0:00 1:15 1.25 1:15 2:00 0.75	8,540 8,540		Operations Description Non Tripped in the hole with 10-5/8" clean out assembly to 8,500'. Filled pipe and broke circulation.	n-Prod
	·			
1.15 2.00 0.75	8,540		. mea bibe and an energy on energy on	
1.13 2.00 0.73		3-21	Open 8-3/4" core hole to 10-5/8" from 8,500' to 8,514'. ROP dropped off from 50 ft/hr to 5 f/thr.	
2:00 3:00 1.00	8,540	3-5-1	Circulated surface to surface strokes to cool well bore prior to logs.	
3:00 6:00 3.00	8,540	3-6-4	Tripped out of the hole with 10-5/8" clean out assembly from 8,514' to 1,947'.	
6:00 7:00 1.00	8,540	3-6-4	Tripped out of the hole with clean out assembly from 1,947' to surface	
7:00 15:00 8.00	8,540	LOG	Rigged up and ran Sonic Scanner and borehole formation Imager / max temperature was 321 F @ 8,520' / good log / lay down tools.	
15:00 20:30 5.50	8,540	LOG	Rig up and run Triple-Combo / Max BHT was 354 F / Logging upwards	
20:30 21:00 0.50	8,540	LOG	Laid down logging tools.	
21:00 21:30 0.50	8,540	3-6-1	Make up 10-5/8" clean out assembly with TCl bit.	
21:30 23:00 1.50	8,540	3-6-3	Tripped in the hole with 10-5/8" clean out assembly to 2,900'.	
23:00 0:00 1.00	8,540	CUTDL	Slipped and cut drilling line.	

Management Summary

Tripped in the hole with 10-5/8" rerun PDC bit on clean out assembly to 8,500'.

Open 8-3/4" core hole to 10-5/8" from 8,500' to 8,514'. Bit DBR,ed.

Circulate surface to surface strokes to cool well bore prior to logs.

Tripped out of the hole with 10-5/8" clean out assembly from 8,514' to surface.

Rigged up and ran Sonic Scanner and Borehole Formation Imager. Max bottom hole BHT was 321 deg F.

Rigged down logging tools.

Rigged up and ran Triple-Combo / Max BHT was 354 deg F / Logged upwards.

Rigged down loggers.

Ran in the hole with 10-5/8" rerun TCI bit on clean out assembly to 2,900'.

Comments

Open 8-3/4" core hole to 10-5/8" from 8,500' to 8,514'. ROP dropped off from 50 ft/hr to 5 f/tht. Decision was made to complete opening the hole on cool down run with a TCI bit.

	Casing/Tubular Information											
	Size	Top MD	Top TVD	Bottom MD	Bottom TVD	Hole	OH Diam.	Nom. Wgt.	Nominal	LOT		
Type	(ins)	(ft)	(ft)	(ft)	(ft)	Section	(ins)	(lbs)	Grade	(lbs/gal)		
FULL	16.000	0		416		SURF	22.000	65	K-55	0.61		
FULL	11.750	0		2,990		INT1	14.750	54	J-55	11.70		



Daily Drilling Report Well ID: Forge 78B-32

Geothermal Resource Group, Inc.

Well Name: 78B-32

Field: UTAHFORGE

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

Dens. Vis Dens. Vis Density Filt Cake pH/ES Solid Solid Water Sand LGS CI Ca CaC 10s 10m 30m In Out Los	Roport No. 20	port No: 23 Report For 19-Jul-21																
Dens. Vis. PV VP Filt. Cake pH/ES Solids Oil Water Sand LGS Ci Ca CaCi 10s 10m 30m In Out Lot							Mud I	nform	ation									
1						%								Gels		Ten	ıp	Mud
Reg	Dens. Vis PV	YP Filt.	Cake	pH/ES	Solids	Oil W	ater Sa	nd LO	GS C	1	Ca	CaCl	10s	10m	30m	In	Out	Loss
No Run	19-Jul-21 11:00 a	at Depth 8,5	40 ft Mu	d Pits, Ty	pe: Low	Solids I	Non-Disp	persed										
Regineering - EACH	8.30 36 2	2 34	4 1	10	2	0	98 0	.01	0 8	300	120		2	2	2	98	105	
This Run							Mud Co	onsun	nables									
Parish P		<u> </u>	on		Qty	<i>'</i>	Cost				tem De	scripti	on			Qty.	С	ost
No Run	Engineering - EAG	CH				1	-	O1	ther - E	ACH						1		
No Run	perdiem - OTHER					1	-											
No Run Make Mode Diam In Dist Hrs Avg Max WOB RPM Torque Wt Flow Press J. Vel P. Dry HHP JI JI 2 BAKER MX-1 10.625 8415 Vel V					ı	Bit/BH	A/Work	string	Infor	natio	n							
12 2				Depth	This	Run	R.C							Pum)			
Second		Model	Diam			Hrs	Avg	Max	WOB	RPN	Torq	ue Wt	Flov	w Press	J. Vel	P. Drp	HHP	JIF
14 2 NOV	12 2 BAKER	MX-1	10.625	8415														
Set 12						Grade:	Cutter:				1	Wear	r: E					
BhA - No. 19 - BIT, BS, 15 HWDP = 469.42 Since Inject Inje	14 2 NOV	TCK83	10.625	8500	14	1	14.0	75.0	25	5	5 1	6	8 82	20 1200	285	605	289	1005
Hook Loads (lbs):	Jets: 12 12 12	12 12 12	13 13	Out: 8	514	Grade:	Cutter:	3/8	8 D ı	ıll: R	O/WT	Wear	r:S	Brgs: 0	Gge:	20	Pull:	LOG
Hook Loads (lbs):	BHA - No. 19 - E	IT, BS, 15 H	WDP =	469.42														
Pump 1:					M	liscella	neous	Drillir	ng Par	amet	ers							
Pump 1: 30 spm 110 psi 40 spm 215 psi 50 spm 311 psi 40 spm	Hook Loads (lbs): Off	Bottom	Rotate:	271	Pick	Up:	285	Slack C	Off:	265	Dra	g Avg	/Max:	10 /	15		
Pump 2: 30 spm 110 psi 40 spm 215 psi 50 spm 311 psi 40 spm 40 spm 215 psi 50 spm 311 psi 40 spm 40 spm 215 psi 50 spm 311 psi 40 spm 40 spm 215 psi 50 spm 311 psi 40 spm 40 spm 215 psi 50 spm 311 psi 40 spm 40 spm 40 spm 215 psi 50 spm 311 psi 40 spm 40 spm </th <th>Slow Circulation</th> <th>Data:</th> <th></th>	Slow Circulation	Data:																
Pump 3: 30 spm 110 psi 40 spm 215 psi 50 spm 311 psi Hours on BHA: Since Inspection: 113.75 Total: 113.75 Jars: 0 Hours on Casing/Liner: Rotating: 90.5 / Tripping: 141 / Description Wear Bushing Installed Equipment Problems: None to report, Location Condition: Good Transport: None Solids Control Information Screen Sizes: Toy Middle 1 Middle 2 Bottom Equipment Usage (Hrs): Shaker No 1: 120 120 120 120 120 120 Desander: 0 Desider: 0 Degasser: 0 Degasser: 0 Centrifuge 1: 24 (Solids Removal) Centrifuge 2: 24 (Solids Removal) Centrifuge 2: 24 (Solids Removal) Centrifuge 2: 24 (Solids Removal) Net Shaker No 3: 120 120 120 120 120 120 120 120 120 120	Pump 1:	3	30 spm				40 sp	m				50	spm		311 psi			
Hours on BHA: Since Inspection: 113.75 Total: 113.75 Jars: 0	Pump 2:	3	30 spm		110 psi		40 sp	m				50	spm		311 psi			
Hours on Casing/Liner: Rotating: 90.5 / Tripping: 141 /	Pump 3:	3	30 spm		110 psi		40 sp	m	2	215 ps	si	50	spm		311 psi			
Rig Information Rig Inform	Hours on BHA:	;	Since Ins	spection	: 113.7	5 To	tal: 11	3.75	Jars:		0							
Equipment Problems: None to report,	Hours on Casing	/Liner: F	Rotating	:	90.5 <i>1</i>		Trip	ping:	14	11		V	Vear B	ushing I	nstalled	t		
Location Condition: Good. Transport: None. Solids Control Information Screen Sizes: Top Middle 1 Middle 2 M							Rig Ir	nforma	ation									
Transport: None. Solids Control Information Screen Sizes: Top Middle 1 Middle 2 Bottom Equipment Usage (Hrs): Shaker No 1: 120 120 120 120 Desander: 0 Desilter: 0 Degasser: 0 Shaker No 2: 120 120 120 120 Centrifuge 1: 24 (Solids Removal) Centrifuge 2: 24 (Solids Removal) Shaker No 3: 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120	Equipment Prob	lems: Non	e to repo	rt,														
Solids Control Information Screen Sizes: Top Middle 1 Middle 2 Bottom Equipment Usage (Hrs): Shaker No 1: 120 120 120 120 Desander: 0 Desilter: 0 Degasser: 0 Shaker No 2: 120 120 120 120 Centrifuge 1: 24 (Solids Removal) Centrifuge 2: 24 (Solids Removal) Shaker No 3: 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 12	Location Conditi	on: Goo	d.															
Screen Sizes: Top Middle 1 Middle 2 Bottom Equipment Usage (Hrs): Shaker No 1: 120 120 120 Desander: 0 Desilter: 0 Degasser: 0 Shaker No 2: 120 120 120 120 Centrifuge 1: 24 (Solids Removal) Centrifuge 2: 24 (Solids Removal) Shaker No 3: 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120	Transport:	Non	e.															
Shaker No 1: 120 120 120 120 Desander: 0 Desilter: 0 Degasser: 0 Shaker No 2: 120 120 120 120 Centrifuge 1: 24 (Solids Removal) Centrifuge 2: 24 (Solids Removal) Bulk Inventory Bulk Inventory Rig Fuel Units Beginning Used Received On Hand Net 7,637 940 0 6,697 -9						Soli	ds Con	trol In	forma	tion								
Shaker No 2: 120 120 120 120 Centrifuge 1: 24 (Solids Removal) Centrifuge 2: 24 (Solids Removal) Shaker No 3: 120 120 120 Bulk Inventory Item Type Units Beginning Used Received On Hand Net Rig Fuel 7,637 940 0 6,697 -9	Screen Sizes:	Тор	Middl	e 1 Mic	ddle 2	Botton	n Eq	uipme	nt Usa	ge (Hr	rs):							
Shaker No 3: 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 <th>Shaker No 1:</th> <th>120</th> <th>)</th> <th>120</th> <th>120</th> <th>12</th> <th>0 De</th> <th>sande</th> <th>r: 0</th> <th></th> <th>Desilt</th> <th>er: 0</th> <th></th> <th>Degass</th> <th>er: (</th> <th>)</th> <th></th> <th></th>	Shaker No 1:	120)	120	120	12	0 De	sande	r: 0		Desilt	er: 0		Degass	er: ()		
Shaker No 3: 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 <th>Shaker No 2:</th> <th>120</th> <th>) 1</th> <th>120</th> <th>120</th> <th>12</th> <th>0 Ce</th> <th>ntrifug</th> <th>je 1: 24</th> <th>1 (Soli</th> <th>ids Rem</th> <th>noval)</th> <th></th> <th>Centrifu</th> <th>ıge 2: 2</th> <th>24 (Soli</th> <th>ds Ren</th> <th>noval)</th>	Shaker No 2:	120) 1	120	120	12	0 Ce	ntrifug	je 1: 24	1 (Soli	ids Rem	noval)		Centrifu	ıge 2: 2	24 (Soli	ds Ren	noval)
Bulk Inventory Item Type Units Beginning Used Received On Hand Net Rig Fuel 7,637 940 0 6,697 -9	Shaker No 3:	120) -	120	120	12	0			•		,				•		,
Item Type Units Beginning Used Received On Hand Net Rig Fuel 7,637 940 0 6,697 -9							Bulk	Inven	tory									
Rig Fuel 7,637 940 0 6,697 -9		Item Ty	pe			Un					Used		Receiv	/ed	On Ha	nd	N	et
	Rig Fuel								7,637	7		940		0	6	5,697		-940
							Drill Pi	oe Inv	entory	,								
DP Size Joints Weight Grade Thread DP Size Joints Weight Grade Thread	DP Size J	oints	Weight	G	rade						Joint	S	Weigh	nt	Grade		Threa	ad
5.5" 258 24.7 S-135 5.5IF	5.5"	258	24	.7 S-13	5	5.5IF												
Safety Information							Safety	Inforn	nation									
Meetings/Drills Time Description	Meetings/Drills	Time																
Safety 60 Two 30 min Pre tour safety meetings with both crews. Rigging up loggers. Handling BHA. Working in weather.		60 T	wo 30 m	in Pre tou	ur safety	meeting	gs with b	oth cre	ws. Ric	ging (up logge	ers. Hai	ndling l	BHA. Wo	rking in	weathe	r.	
First Aid Treatments: 0 Medical Treatments: 0 Lost Time Incidents: 0 Days Since LTI:																		
Accident Description: None to report.			e to repo	rt.										. ,				
BOP Test Crownamatic Check			•		ck													
Weather Information			,		-	V	Veathe	r Infor	matio	า								
Sky Condition: Cloudy Visibility: 7	Sky Condition:	Cloudy						_				7						
Tidivility:	-																	
	•																	
Air Temperature:68 degFBar. Pressure:29.96								771	Out									
		g																



Geothermal Resource Group, Inc.

Well Name: 78B-32

Well ID: Forge 78B-32

Field: UTAHFORGE

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

Report No: 24								Report For	20-Jul-21
Operator:	University of Utah	Rig:	Frontier Rig 1	6 Spud Date:	28-	Jun-21	Daily Cost / M	ud (\$):	
Measured Depth (ft)	: 8540	Last Casing:	11.750 at 2,99	0 Wellbore:	Original W	/ellbore	AFE No.	AFE (\$)	Actual (\$)
Vertical Depth (ft):	8438	Next Casing:	7.000 at 8,50	0 RKB Elevation	ո (ft)։	30.40			
Proposed TD (ft):	9500	Last BOP Tes	t: 03-Jul-2	Job Reference	RKB (ft):				
Hole Made (ft) / Hrs:	0 / 9.5	Next BOP Tes	st: 24-Jul-2	1 Working Inter	est:		Totals:		
Average ROP (ft/hr)	: 0.0)		LOT (lbs/gal):		11.70	Well Cost (\$):		
Drilling Days (act./p	lan): 24/21 F	lat Days (act./p	lan): 0/9	Total Days (act.	/plan):	24/30	Days On Loca	ition:	24
Pers/Hrs: Opera	tor: 3 / 36 C	Contractor:	14 / 168	Service:	6 / 72	Other:	3 / 36	Total:	26 / 312

Safety Summary: No incidents or events reported. Conducted Crown Check, Safety Meeting.

Current Operations: Tripped in the hole with 10-5/8" clean out assembly to 8,540'.

Drilled 10-5/8" hole from 8,540' to 8,545'.

Circulated surface to surface strokes to clean the well bore prior to running casing.

Pull out of the hole laying down 5.5" drill pipe from 8,545' to 6,300'.

Planned Operations: Lay out 5.5" drill string.

Rig up and run 7" casing.

Toolpusher: Steve Caldwell , Justin Bristol

Wellsite Supervisors: Virgil Welch , Brian Gresham Tel No.: 7132807438

					Operations Summary	
From	То	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	1:00	1.00	8,540	CUTDL	Slipped and cut drilling line.	
1:00	4:00	3.00	8,540	3-6-3	Tripped in the hole with 10-5/8" clean out assembly from 2,900' to 8,514'. Filled pipe and broke circulation. Filled pipe every 3,000'. Strapped all drill pipe while running in the hole.	
4:00	5:00	1.00	8,540	OPEN	Opened 8-3/4" core hole to 10-5/8" from 8,514' to 8,540'.	
5:00	6:00	1.00	8,540	3-5-1	Circulated surface to surface strokes to cool well bore prior to logs.	
6:00	10:00	4.00	8,540	3-6-4	Tripped out of the hole for Schlumberger logs.	
10:00	21:30	11.50	8,540	LOG	Rigged up Schlumberger . Ran UBI log. Rigged down loggers.	
21:30	22:00	0.50	8,540	3-6-1	Made up 10-5/8" clean out assembly with TCI bit.	
22:00	0:00	2.00	8,540	3-6-3	Tripped in the hole with 10-5/8" clean out assembly to 4,657'. Filled pipe very 3,000'.	

Management Summary

Slipped and cut drilling line.

Tripped in the hole with 10-5/8" clean out assembly from 2,900' to 8,514'.

Opened 8-3/4" core hole to 10-5/8" from 8,514' to 8,540'.

Circulated surface to surface strokes to cool well bore prior to logs.

Tripped out of the hole for Schlumberger logs.

Rigged up Schlumberger .

Ran UBI log.

Rigged down loggers.

Made up 10-5/8" clean out assembly with TCI bit.

Tripped in the hole with 10-5/8" clean out assembly to 4,657'

Comments

Strapped all drill pipe on trip in and compared to tally. Tally was good.

Five foot was drilled to fit casing and provide 13' of rat hole.

				Casing/	Tubular Info	rmation				
Туре	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	16.000	0		416		SURF	22.000	65	K-55	0.61
FULL	11.750	0		2,990		INT1	14.750	54	J-55	11.70



Geothermal Resource Group, Inc.

Well Name: 78B-32

Well ID: Forge 78B-32

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

Field: UTAHFORGF Report No: 24 Report For 20-Jul-21 **Mud Information** Gels Temp Mud 10m Filt. Cake pH/ES Solids Oil Water Sand LGS Ca CaCI 10s 30m Out Loss PV In 20-Jul-21 11:00 at Depth 8,540 ft Mud Pits, Type: Low Solids Non-Dispersed 8.30 0.01 800 120 2 2 2 98 105 **Mud Consumables Item Description** Qty. Cost **Item Description** Qty. Cost Engineering - EACH Other - EACH perdiem - OTHER **Bit/BHA/Workstring Information** This Run R.O.P. Mud Pump Depth No Run Make Model Diam ln Dist Hrs Max WOB RPM Torque Wt Flow Press J. Vel P. Drp HHP Avg 12 2 BAKER MX-1 10.625 8415 26 26.0 23 8 800 1300 279 578 270 959 75.0 50 13 Jets: 20 20 20 Out: Grade: Cutter: Dull: Wear: Gge: Pull: Brgs: 12 3 BAKER MX-1 10.625 8540 Wear: Jets: 20 20 20 Out: Grade: Cutter: / Dull: Brgs: Gge: Pull: **BHA -** No. 20 - BIT, BS, 15 HWDP = 469.42 Miscellaneous Drilling Parameters Hook Loads (lbs): Off Bottom Rotate: 271 Pick Up: 285 Slack Off: Drag Avg/Max: 5 / 10 **Slow Circulation Data:** 30 spm 110 psi 40 spm 215 psi 50 spm 311 psi Pump 1: Pump 2: 30 spm 110 psi 40 spm 215 psi 50 spm 311 psi Pump 3: 30 spm 110 psi 40 spm 215 psi 50 spm 311 psi Hours on BHA: Since Inspection: 114.75 **Total:** 114.75 Jars: Hours on Casing/Liner: Rotating: 92.51 Tripping: 149 *I* Wear Bushing Installed **Rig Information Equipment Problems:** None to report. **Location Condition:** Good Transport: Back hauled 8" dir tools. Solids Control Information Screen Sizes: Top Middle 1 Middle 2 **Bottom Equipment Usage (Hrs):** Shaker No 1: Desander: 0 Degasser: 120 120 120 120 Desilter: 0 Shaker No 2: 120 120 120 120 Centrifuge 1: 18 (Solids Removal) Centrifuge 2: 18 (Solids Removal) Shaker No 3: 120 120 120 120 **Bulk Inventory** Item Type Units Beginning Used Received On Hand Net Rig Fuel 6,697 3,702 10.399 **Drill Pipe Inventory** DP Size Joints Weight Grade DP Size Joints Weight Grade Thread Thread 24.7 S-135 5.5" 258 5.5IF Safety Information Meetings/Drills Time Description Safety Two 30 min Pre tour safety meetings with both crews. Rigging up loggers. Forklift operations. Working in weather. **First Aid Treatments:** 0 Medical Treatments: 0 Lost Time Incidents: 0 Days Since LTI: **Accident Description:** None to report. BOP Test ✓ Crownamatic Check Weather Information **Sky Condition:** Cloudy Visibility: 8 Air Temperature: 72 degF Bar. Pressure: 29.98 Wind Speed/Dir: 7 / SE Wind Gusts: 3 Comments: Light rain during the day.



Geothermal Resource Group, Inc.

Well Name: 78B-32

Well ID: Forge 78B-32
Field: UTAHFORGF

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

Report No: 25							Report For	21-Jul-21
Operator:	University of Utah	Rig:	Frontier Rig 16	Spud Date:	28-Jun-21	Daily Cost / Mu	d (\$):	
Measured Depth (ft)	: 8545	Last Casing:	7.000 at 8,532	Wellbore:	Original Wellbore	AFE No.	AFE (\$)	Actual (\$)
Vertical Depth (ft):	8543	Next Casing:		RKB Elevation	n (ft): 30.40			
Proposed TD (ft):	9500	Last BOP Test:	: 03-Jul-21	Job Reference	e RKB (ft):			
Hole Made (ft) / Hrs	5 / 2.5	Next BOP Test	: 24-Jul-21	Working Inter	est:	Totals:		
Average BOD (ft/br)	. 20					Wall Cost (\$):		

 Average ROP (ft/hr):
 2.0
 Well Cost (\$):
 --

 Drilling Days (act./plan):
 25/21
 Flat Days (act./plan):
 0/9
 Total Days (act./plan):
 25/30
 Days On Location:
 25

 Pers/Hrs:
 Operator:
 4 / 36
 Contractor:
 14 / 168
 Service:
 8 / 96
 Other:
 4 / 36
 Total:
 30 / 336

Safety Summary: No incidents or events reported. Conducted Crown Check, Safety Meeting.

Current Operations: Running 7" casing to 2,514'.

Planned Operations: Run 7" casing to set depth of 8,531'.

Toolpusher: Steve Caldwell , Justin Bristol

Wellsite Supervisors: Virgil Welch , Brian Gresham Tel No.: 7132807438

					Operations Summary	
From	То	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	2:00	2.00	8,540	3-6-3	Tripped in the hole with 10-5/8" clean out assembly to 8,540'. Filled pipe very 3,000'.	
2:00	2:30	0.50	8,540	3-2-1	Drilled 10-5/8" hole from 8,540' to 8,545'. Note: Five foot was drilled to fit casing and provide 13' of rat hole.	
2:30	3:30	1.00	8,540	3-5-1	Circulated surface to surface strokes to clean the wellbore prior to running casing.	
3:30	6:00	2.50	8,540	3-34-2	Pull out of the hole laying down 5.5" drill pipe from 8,545' to 6,300'.	
6:00	14:00	8.00	8,540	3-34-2	Pull out of the hole laying down 5.5" drill pipe from 6,300' to HWDP, Lay down HW	DP
14:00	17:00	3.00	8,540	4-12-1	Changed out IBOP valve for CRT. Install saver sub. Laid down all handling tools.	
17:00	18:00	1.00	8,540	OTHER	Removed 5.5" ram blocks. Installed Frontiers 5" ram blocks back into double gate.	
18:00	21:00	3.00	8,540	OTHER	Load racks with 7" casing. Cleaned threads on casing and prep to run.	
21:00	23:30	2.50	8,540	4-12-1	Held detailed safety meeting with all involved personal. Rigged up Wyoming Casin Service. Rigged up Silixa. Loaded out floor with Silixa centralizes.	g
23:30	0:00	0.50	8,540	4-12-1	Ran 7", 41#, T-110SS, Tenaris casing as followed. 7"- float shoe. 2-joints of 7", 41#, T-110SS. 7"- float collar at report time. Note: Casing was ran with torque turn system. All joints were torqued to manufactures recommendation of 17,070 FT/LBS.	

Management Summary

Tripped in the hole with 10-5/8" clean out assembly to 8,540'.

Drilled 10-5/8" hole from 8,540' to 8,545'.

Circulated surface to surface strokes to clean the wellbore prior to running casing.

Pulled out of the hole laying down 5.5" drill pipe.

Laid out all BHA.

Changed out IBOP valve for CRT. Install saver sub. Laid down all handling tools.

Removed 5.5" ram blocks. Installed Frontiers 5" ram blocks into double gate.

Load racks with 7" casing. Cleaned threads on casing and prepared to $\bar{\text{run}}$.

Held detailed safety meeting with all involved personal. Rigged up Wyoming Casing Service. Rigged up Silixa.

Loaded out floor with Silixa centralizes.

Ran 7", 41#, T-110SS, Tenaris casing.

Comments

Five foot was drilled to fit casing and provide 13' of rat hole.

BHA on fiber optics was placed to be landed at 8,389' top of third full joint.

All 7" casing joints were torqued to manufactures optimum recommendation of 17,070 FT/LBS.

				Casing/	Γubular Infoι	rmation				
Туре	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	16.000	0		416		SURF	22.000	65	K-55	0.61
FULL	11.750	0		2,990		INT1	14.750	54	J-55	11.70
FULL	7.000	0		8,532		PROD		41		



Geothermal Resource Group, Inc.

Well Name: 78B-32

Well ID: Forge 78B-32

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

Field: UTAHFORGE

Repo	ort No	: 25	5															Rej	ort Fo	r 21-	Jul-21
									Mud I	nform	ation										
								%									Gels		Ten	•	Mud
Dens.		PV		Filt.			Solids					CI	Са	CaCl	10	s	10m	30m	In	Out	Loss
							Type: Lo														
8.30	38	2	2	34	1	10	2	0		.01		800	12			2	2	2	98	105	
									Mud C	onsur	nables										
			n Des	criptic	n		Q		Cost				tem De	escrip	tion				Qty.	С	ost
_	neering		CH					1			el - 100								10		
	C - 50							17		O	ther - E	ACH							1		
perdi	em - O	THER	· · · · · · · ·					1				-									
									A/Work		Infor	matio	n								
No D	N	laka	Ma	اماما	Diam	Dept		is Run		D.P.	WOR	DDM	LTava	\	Mu		Pump		I D D	цць	
No R	un IV 2 BAI	lake	Mo MX-1		Diam 10.625	In 84 ²	Dis	t Hrs	Avg	wax	WOB	RPIN	Torq	ue v	Vt r	low	Press	J. ve	l P. Drp	ННР	JIF
			IVIX-I		10.025		10 2		Cutter	. ,		ull:	,	\A/a		D.,		Cası		D. III.	
	20 20 3 BAI		MV 1		10.625	Out: 854	10	5 0.5		25.0			, 5	We	8 8		gs: 1800	Gge: 286	607	Pull:	1007
	20 20		IVIX-I		10.023									_	ar: S			_		Pull:	
			IT DC	15 🗆	WDP =	Out:	0040	Grade:	Cutter:	2/	ט ט	ull: W	1/01	vve	ar. o	DI	gs: 0	Gge:	U	Pull:	טו
אוום	-140. 2	.U - L	, DO	, 1311	VVDI -	403.42			Dia li	nform	ation										
Faui	nmont	Droh	lome:	None	to repo	ort .			Kig ii	HOHIII	alion										
	tion C			Good		/I L.															
	sport:	onani	on.			4 loads	of 5.5" o	Irill pipo													
ITAII	sport.			Dack	Hauleu	4 10aus	5015.5		ids Cor	trol lr	oform	otion									
Scro	en Size)e:	-	Гор	Midd	lo 1 M	liddle 2	Bottor			nt Usa		·c/·								
	haker l			120		120	120	12		sande		ge (m	ع. Desil	tor:	0		egass	or.	0		
	haker l			120		120	120	12	-		ge 1: 1	2 (Sali					_		0 12 (Soli	de Rar	noval)
	haker l			120		120	120	12		mu	JC 1. 1	2 (5011	us itei	ilovai,			GIILIII	ige z.	12 (5011	us itei	iiovai)
0.	iakei	10 0.		120		120	120	12		(Inven	tory										
			lte	т Тур	16			Ur	nits		inning		Used		Red	eive	d	On Ha	nd	N	et
Rig F	uel		110	y p				0.	1110	Dog	9,40	4		898	1101	,0140	<u>u</u>		8,506	.,	<u> </u>
									Drill Pi	pe Inv											
DP	Size	J	loints		Weight		Grade		hread		DP Siz		Joint	s	We	ight		Grade		Thre	ad
	5.5"	_		58		.7 S-1	35	5.5IF						_		<u> </u>					
									Safety	Inforr	nation	1									
Meet	ings/D	rills	Time	e						ription		-									
Safet			(wo 30 m	in Pre t	our safet	y meetin		•		ying do	own dri	II pipe	. Forl	dift o	peratio	ns. Rig	ging up	and ru	ınning
	Aid Tr				0 N		Treatme	nts:		0 Los	st Time	Incide	ents:) D	ays Siı	nce LTI	:		
	dent D				to repo																
∐ В	OP Te	st		✓ Cr	ownam	atic Ch	eck														
								1	Neathe												
_	Condit			tly clou	ıdy						sibility			8	-						
	emper			degF						_	ar. Pres			29.98	_						
	Spee									W	ind Gu	sts:		2							
Com	ments	:	Ligh	nt rain	during t	ne day.															



Operator:

Pers/Hrs:

Report No: 26

Daily Drilling Report

University of Utah Rig:

Geothermal Resource Group, Inc.

3 / 36 **Total**:

Well Name: 78B-32

28 / 336

Well ID: Forge 78B-32

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

8 / 96 Other:

Field: UTAHFORGF

Frontier Rig 16 Spud Date: 28-Jun-21 Daily Cost / Mud (\$): ---

 Measured Depth (ft):
 8545
 Last Casing:
 7.000 at 8,532
 Wellbore:
 Original Wellbore
 AFE No.
 AFE (\$)
 Actual (\$)

 Vertical Depth (ft):
 8543
 Next Casing:
 RKB Elevation (ft):
 30.40
 -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --

 Hole Made (ft) / Hrs:
 0 / 0.0
 Next BOP Test:
 24-Jul-21
 Working Interest:
 Totals:
 -- --

 Average ROP (ft/hr):
 Well Cost (\$):
 -- Drilling Days (act./plan):
 26/21
 Flat Days (act./plan):
 0/9
 Total Days (act./plan):
 26/30
 Days On Location:
 26

14 / 168 Service:

Safety Summary: No incidents or events reported. Conducted Crown Check, Safety Meeting.

Current Operations: Pulled out of the hole with 7" casing from 5,477' to 1,212' removing damaged fiber optic cable'.

Planned Operations: Continue pulling 7" casing and fiber optic cable.

3 / 36 Contractor:

Toolpusher: Steve Caldwell , Justin Bristol

Operator:

Wellsite Supervisors: Virgil Welch, Brian Gresham Tel No.: 7132807438

wellsite 3	upei viso	is. Viigii	Welch, bha	iii Oresiiaiii	lei No 7 132007430	
					Operations Summary	
From	То	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	6:00	6.00	8,540	4-12-1	Run 7", 41#, T-110SS, Tenaris casing from 94' to 2,514'. Note: BHA on fiber optics was placed at 8,389' top of third full joint. Stopped and	
					tested continuity every 15 joints while running casing. All joints were torqued to manufactures optimum recommendation of 17,070 FT/LBS.	
6:00	15:00	9.00	8,540	4-12-1	Run 7", 41#, T-110SS, Tenaris casing from 2,514'. to 6,178'.	
15:00	15:30	0.50	8,540	4-12-1	Stopped to test fibers AT 6,178'. Breakage in fiber optic cable detected; decision we made to continue running in hole with remaining intact fiber/casing and monitor for cable quality.	
15:30	16:00	0.50	8,540	4-12-1	Ran 7", 41#, T-110SS, Tenaris casing from 6,178' to 6,517'.	
16:00	18:30	2.50	8,540	4-12-1	Stopped at joint 6,517' to run Fiber optic tests- the measured fiber length shortened by approximately 500ft on the fibers. Meeting was held to decide plan moving forth the decision was made to run 5 more joints in the hole and assess the fiber quality afterwards.	;
18:30	19:15	0.75	8,540	4-12-1	Ran 7", 41#, T-110SS, Tenaris casing from 6,517' to 6,753'.	
19:15	20:30	1.25	8,540	4-12-1	Tested fibers; fibers shortened by 500ft. The decision was made to pull casing out hole.	of
20:30	0:00	3.50	8,540	4-99	Pull out of the hole with 7" casing from 6,753' to 5,447'. Note: While pulling the first joint of 7" casing fiber optic got cut pulling through the bushings.	

Management Summary

Ran 7", 41#, T-110SS, Tenaris casing with fiber optic cable from 94' to 6,178' testing cable approximately every 650'.

When testing fiber optic cable at 6,178' breakage in fiber optic cable was detected approximately 800' up from cable BHA.

Continued running in the hole with the 7"casing from 6,178' to 6,517'. Retest cable and OTDR tests results indicated continuity fiber length had shortened by approximately additional 500 ft.

Ran 7" casing from 6,517' to 6,753'. Cable test indicated fiber optic cable continuity had shortened by another 500 ft.

During conference call decision was made to pull the casing out of hole.

Pulled out of the hole with 7" casing removing fiber optic cable from 6,753' to 5,447' at report time.

Comments

Tested out fiber optic cable every 15 joints while running 7" casing.

Tested fibers at 6,178'. Breakage in fiber optic cable detected.

Decision was made to continue running in hole with remaining intact fiber/casing and monitor for cable quality.

Tested fibers at 6.517'.

The measured fiber length shortened by approximately 500ft on the fibers.

Meeting was held to decide plan moving forward, Decision was made to run 5 more joints in the hole to 6,753' and assess the fiber quality.

Test indicated fibers had shortened another 500 ft. Decision was made to pull the casing out of hole to determine cause of continuing cable failure.



Geothermal Resource Group, Inc.

Well ID: Forge 78B-32

Field: UTAHFORGF

Well Name: 78B-32

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

Report No: 26 Report For 22-Jul-21 Casing/Tubular Information Size Top MD Top TVD Bottom MD Bottom TVD OH Diam. Nom. Wgt. Nominal Hole LOT Type (ins) Section (ins) (lbs) Grade (lbs/gal) **FULL** 16.000 0 416 SURF 22.000 65 K-55 0.61 0 2,990 **FULL** 11.750 INT1 14.750 54 J-55 11.70 7.000 0 8,532 **PROD** 41 **FULL Mud Information** Gels Temp Mud Cake pH/ES Solids Oil Water Sand LGS 10m ΥP Filt. CI CaCI 10s 30m Out Loss PV Ca In 22-Jul-21 11:00 at Depth 8,540 ft Mud Pits, Type: Low Solids Non-Dispersed 8.30 98 0.01 800 120 2 2 2 105 98 **Mud Consumables Item Description** Qty. Cost **Item Description** Qty. Cost Barite - 100#SK 80 Engineering - EACH 1 Gel - 100#SK 4 Other - EACH pallets - OTHER 2 perdiem - OTHER 1 polyvis - 5GAL **Bit/BHA/Workstring Information** Depth This Run Mud Pump Flow Press J. Vel P. Drp HHP No Run Make Model Diam Dist Hrs Max WOB RPM Torque Wt In Avg 12 2 BAKER MX-1 10.625 8415 28 3 9.3 Jets: 20 20 20 Out: 8417 Grade: Cutter: Dull: Wear: Gge: Pull: Brgs: **Rig Information Equipment Problems:** None to report. **Location Condition:** Good. Transport: Back hauled 4 loads of 5.5" pipe. **Solids Control Information** Тор Screen Sizes: Middle 1 Middle 2 **Bottom** Equipment Usage (Hrs): Shaker No 1: 120 120 120 120 Desander: 0 Desilter: 0 Degasser: Shaker No 2: 120 120 120 120 Centrifuge 1: 8 (Solids Removal) Centrifuge 2: 8 (Solids Removal) Shaker No 3: 120 120 120 120 **Bulk Inventory** Beginning Item Type Units Used Received On Hand Net Rig Fuel 8.506 8.506 **Drill Pipe Inventory DP Size** Joints Weight Grade Thread **DP Size** Joints Weight Grade Thread 5.5" 258 24.7 S-135 5.5IF **Safety Information** Meetings/Drills Time Description 60 Two 30 min Pre tour safety meetings with both crews. Running 7" casing. Laying out 7" casing. Safety 0 Medical Treatments: 0 Lost Time Incidents: 0 Days Since LTI: **First Aid Treatments:** Accident Description: None to report. BOP Test ✓ Crownamatic Check **Weather Information Sky Condition:** Cloudy Visibility: 10 Air Temperature: 68 degF Bar. Pressure: 29.89 Wind Speed/Dir: Wind Gusts: 5 / SE 2 Comments: Light rain



Geothermal Resource Group, Inc.

Well ID: Forge 78B-32

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

Field: UTAHFORGE

	_			
Report	For	23-	Ju	1-21

Well Name: 78B-32

Report No: 27								Report For	23-Jul-21
Operator:	University of Utal	n Rig: Fr	ontier Rig 16	6 Spud Date:	28-	Jun-21	Daily Cost / M	ud (\$):	
Measured Depth (ft): 8545	Last Casing: 7.	000 at 8,532	2 Wellbore:	Original V	Vellbore	AFE No.	AFE (\$)	Actual (\$)
Vertical Depth (ft):	8543	Next Casing:		RKB Elevation	n (ft):	30.40			
Proposed TD (ft):	9500	Last BOP Test:	03-Jul-2	1 Job Reference	e RKB (ft):				
Hole Made (ft) / Hrs	: 0 / 0.0	Next BOP Test:	24-Jul-2	1 Working Inte	rest:		Totals:		
Average ROP (ft/hr):						Well Cost (\$):		
Drilling Days (act./	olan): 27/21 l	Flat Days (act./plan)	: 0/9	Total Days (act	t./plan):	27/30	Days On Loca	ition:	27
Pers/Hrs: Opera	itor: 3 / 36	Contractor:	14 / 168	Service:	8 / 96	Other:	3 / 36	Total:	28 / 336
0-6-6-0	NI - 11-14	4 4		0-1-0-6-4-1	A 4!				

Safety Summary: No incidents or events reported. Conducted Crown Check, Safety Meeting.

Current Operations: Ran 7", 41#, T-110SS, Tenaris casing from 2,380' to 3,722'. Install splice on fiber-optic cable at 3,722'.

Planned Operations: Run 7" casing to set depth of 8,531'.

Circulate to cool well bore prior to cement job.

Toolpusher: Steve Caldwell, Justin Bristol

Virgil Welch, Brian Gresham Tel No.: 7132807438 Wellsite Supervisors:

Operations Summary

From	То	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	6:00	6.00	8,540	4-99	Pulled out of the hole with 7" casing from 5,477' to 1,212'. Note: Fiber-optic cable was broke from 3,017' down to 1,212' in multiple place ranging from 40' to 160' foot sections.	
6:00	7:30	1.50	8,540	4-99	Pulled out of hole with 7" casing from 1212' to 120' NOTE: Fiber optic had no breaks from 1212' to 120'	
7:30	10:00	2.50	8,540	WOO	Waited on Orders while Silixa measured and determines usable length of fiber op Determined 3,686' of usable fiber-optic.	tic.
10:00	18:00	8.00	8,540	WOE	Silixa shipping a 5,000' cable from Montana to splice / Continue wiring 3,686' piec BHA	e to
18:00	20:00	2.00	8,540	4-12-1	Ran 7", 41#, T-110SS, Tenaris casing from 94' to 685'. Note: BHA on fiber optics was placed at 8,389' top of third full joint. All joints were torqued to manufactures optimum recommendation of 17,070 FT/LBS. Pumped through shoe track to verify no blockage. Remaining joints were not filled.	3
20:00	20:30	0.50	8,540	4-99	Performed continuity test on fiber optics at 6,85'. Test was good.	
20:30	21:45	1.25	8,540	4-12-1	Ran 7", 41#, T-110SS, Tenaris casing from 685' to 1,376'. Note: All joints were torqued to manufactures optimum recommendation of 17,070 FT/LBS. Ran all 15-joints without filling.)
21:45	22:00	0.25	8,540	4-99	Performed continuity test on fiber optics at 1,376'. Test was good.	
22:00	23:15	1.25	8,540	4-12-1	Ran 7", 41#, T-110SS, Tenaris casing from 1,376' to 2,060'. Note: All joints were torqued to manufactures optimum recommendation of 17,070 FT/LBS. Ran all 15-joints without filling.)
23:15	23:30	0.25	8,540	4-98	Performed continuity test on fiber optics at 2,060'. Test was good.	
23:30	0:00	0.50	8,540	4-12-1	Ran 7", 41#, T-110SS, Tenaris casing from 2,060' to 2,380'. Note: All joints were torqued to manufactures optimum recommendation of 17,070 FT/LBS. Ran all 15-joints without filling.)

Management Summary

Pulled out of the hole with 7" casing from 5,477' to 120'.

Multiple breaks in fiber-optic cable from 3,017' to 1,212'.

Removed Silixa Fiber-optic BHA from casing.

Waited on Orders while Silixa measured usable length of fiber-optic cable. Determined 3,686' of usable fiber-optic cable.

Installed fiber-optic BHA on casing.

Ran 7", 41#, T-110SS, Tenaris casing from 94' to 2,380.

Performed continuity test on fiber optics every 15-joints while running 7" casing.

Comments

Fiber-optic cable was broke from 3,017' up to 1,212' in multiple places ranging from 40' to 160' sections.

Silixa shipped 5,000' of fiber-optic cable from Montana.

Cable arrived on location at 0030 hrs on 7-24-2021.



Geothermal Resource Group, Inc.

Well Name: 78B-32 Sect: 32 Town: 26 Rng: 9W County: Beaver State: UT

Field: UTAHFORGE

Report No	: 27															Rep	ort F	or 23-	Jul-21
						Casi	ng/	Tubular	nfor	matio	n					•			
Type		ize ns)	Top MI (ft)) .	Fop TVD (ft)	Bottom (ft)	MD	Bottom 7 (ft)	ΓVD	Hol Secti		OH Dia (ins)			. Wgt. bs)		minal rade		₋OT s/gal)
FULL		16.000	•	0	` '	.	416			S	URF	22.	000		65		K-5	-	0.61
FULL		11.750		0		2,	990				INT1	14.	750		54	l I	J-5	5	11.70
FULL		7.000		0		8,	532			Pl	ROD				41				
	<u>'</u>			<u>'</u>			Mι	ıd Inform	natio	n						·		'	
						%								G	els		Tei	np	Mud
	PV			•	ES Solids					CI	Ca	CaCl	10:	s 1	0m	30m	ln	Out	Loss
23-Jul-21 11	:00 at	Depth 8	5,540 ft M			w Solids N	Non-												
8.30 38	2	2	34	1	10 2	0	98		0	800	120)		2	2	2	98	105	
								d Consu	nabl	es									
		Descri	otion		Q	ty.	Co	ost				Descript	ion			(Qty.		Cost
Engineering		Н				1				- EACH							1		
perdiem - O	THER					1				ng - EA							1		
								us Drilli			ters	_	_						
Hook Loads			Off Botto	n Rota	ate:	Pick I	Up:		Slac	k Off:		Dr	ag A	vg/Ma	ax:				
Slow Circul		Data:	00		440			0		045			^	.		144!			
	mp 1:		30 spm		110 ps			0 spm		215 p			0 spn			311 psi 311 psi			
	mp 2:		30 spm		110 ps			0 spm		215 p			0 spm			•			
Hours on B	mp 3:		30 spm		110 ps			0 spm	1	215 p	0	3	0 spm	1	•	311 psi			
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Equipment	Droble	ma: N	one to rer	ort			KI	g illioilli	atioi	<u>I</u>									
Location Co			one to rep ood.	ort.															
Transport:	Jiiditio			d rema	aining 5.5"	drill nine l	Racl	c hauled re	ıllar r	aamare	alon	a with cu	hic sc	neore	•				
Transport.			ack riadic	u reme	aning 5.5			Control I				g with cu	510 30	,113013	·.				
Screen Size		Top) Mid	dle 1	Middle 2	Bottom		Equipme											
Shaker N			20	120	120	120		Desande				silter: ()	De	gasse	er ()		
Shaker N			20	120	120	120							•		-9		-		
Shaker N			20	120	120	120													
								Bulk Inver	itory										
		Item '	Туре			Uni			innin	g	Use	ed	Rec	eived	ı	On Ha	nd	N	let
Rig Fuel			-						7,7	791		621				7	7,170		
						;	Safe	ety Infor	mati	on									
Meetings/D	rills	Time					D	escriptio	1										
Safety		60	Two 30 placeme		e tour safe	ty meeting	gs w	ith both cr	ews.	Laying	out 7"	casing. F	Runni	ng 7"	casing	ı. hand	and bo	ody	
First Aid Tr	eatme	nts:	0	Medic	al Treatme	ents:		0 Lo :	st Tin	ne Inci	dents	:	0	Da	ys Sin	ce LTI			
Accident De	escript	ion: N	one to rep	ort.															
BOP Tes	st	✓	Crowna	natic (Check														
						V	Veat	ther Info	rmat	ion									
Sky Conditi	ion:	Cloudy	•					Vi	sibili	ty:		10							
Air Tempera	ature:	70 deg	F					В	ar. Pr	essure	:	29.89							
Wind Speed	d/Dir:	8 / SE						W	ind G	Busts:		2							
Air Tempera	ature:	70 deg						Vi Ba	sibili ar. Pr	ty: essure	:	29.89							



Geothermal Resource Group, Inc.

Well ID: Forge 78B-32

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

Field: UTAHFORGE Sect: 32 Town: 26 Rng: 9

Well Name: 78B-32

Report No. 20								Report For	27-0ui-2 i
Operator:	University of Utah	Rig: Fro	ontier Rig 16	Spud Date:	28-	Jun-21	Daily Cost / M	ud (\$):	
Measured Depth (ft): 8545	Last Casing: 7.0	000 at 8,509	Wellbore:	Original W	Vellbore	AFE No.	AFE (\$)	Actual (\$)
Vertical Depth (ft):	8543	Next Casing:		RKB Elevation	(ft):	30.40			
Proposed TD (ft):	9500	Last BOP Test:	03-Jul-21	Job Reference	RKB (ft):				
Hole Made (ft) / Hrs	0 / 0.0	Next BOP Test:	24-Jul-21	Working Interes	est:		Totals:		
Average ROP (ft/hr)	:						Well Cost (\$):		
Drilling Days (act./p	olan): 28/21 F	lat Days (act./plan):	: 0/9	Total Days (act.	/plan):	28/30	Days On Loca	ition:	28
Pers/Hrs: Opera	tor: 3 / 36 C	Contractor:	14 / 168 S	Service:	14 / 168	Other:	2 / 24	Total:	33 / 396
1									

Safety Summary: No incidents or events reported. Conducted Crown Check, Safety Meeting.

Current Operations: Circulated at 16 bbl's per min to cool well bore.

Cemented 7" casing in place with 126 bbl's of cement to surface.

Planned Operations: Wait on cement.

Toolpusher: Steve Caldwell , Justin Bristol

Wellsite Supervisors: Virgil Welch , Brian Gresham Tel No.: 7132807438

Operat	liana	Cum	
()norai	none	Sumr	narv

From	То	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	0:45	0.75	8,540	4-12-1	Ran 7", 41#, T-110SS, Tenaris casing from 2,380' to 2,742'.	
					Note: All joints were torqued to manufactures optimum recommendation of 17,070 FT/LBS. Ran all 15-joints without filling.	
0:45	1:00	0.25	8,540	4-99	Performed continuity test on fiber optics at 2,742'. Test was good.	
1:00	2:00	1.00	8,540	4-12-1	Ran 7", 41#, T-110SS, Tenaris casing from 2,742' to 3,428'. Note: All joints were torqued to manufactures optimum recommendation of 17,070 FT/LBS. Ran all 15-joints without filling.	
2:00	2:15	0.25	8,545	4-99	Performed continuity test on fiber optics at 3,428'. Test was good.	
2:15	2:30	0.25		4-12-1	Ran 7", 41#, T-110SS, Tenaris casing from 3,428' to 3,722'. Note: All joints were torqued to manufactures optimum recommendation of 17,070	
					FT/LBS. Ran all 15-joints without filling.	
2:30	9:00	6.50	8,545	4-99	Installed new spool of fiber-optic cable on to unit. Ran fiber-optic cable to rig floor. Spliced on new fiber-optic cable at 3,722'.	
9:00	10:00	1.00	8,545	4-12-1	Ran 7", 41#, T-110SS, Tenaris casing from 3,711' to 4,117'. Note: All joints were torqued to manufactures optimum recommendation of 17,070 FT/LBS. Ran all 15-joints without filling.	
10:00	10:30	0.50	8,545	4-99	Performed continuity test on fiber optics at 4,117'. Test was good.	
10:30	11:30	1.00	8,545	4-12-1	Ran 7", 41#, T-110SS, Tenaris casing from 4,117' to 4,803'. Note: All joints were torqued to manufactures optimum recommendation of 17,070 FT/LBS. Ran all 15-joints without filling.	
11:30	12:00	0.50	8,545	4-99	Performed continuity test on fiber optics at 4,803'. Test was good.	
12:00	13:00	1.00	8,545	4-12-1	Ran 7", 41#, T-110SS, Tenaris casing from 4,803' to 5,480'. Note: All joints were torqued to manufactures optimum recommendation of 17,070 FT/LBS. Ran all 15-joints without filling.	
13:00	13:30	0.50	8,545	4-99	Performed continuity test on fiber optics at 5,480'. Test was good.	
13:30	15:00	1.50	8,545	4-12-1	Ran 7", 41#, T-110SS, Tenaris casing from 5,480' to 6,161'. Note: All joints were torqued to manufactures optimum recommendation of 17,070 FT/LBS. Ran all 15-joints without filling.	
15:00	15:15	0.25	8,545	4-99	Performed continuity test on fiber optics at 6,161'. Test was good.	
15:15	16:00	0.75	8,545	4-12-1	Run 7", 41#, T-110SS, Tenaris casing from 6,161' to 6,614'. Note: All joints were torqued to manufactures optimum recommendation of 17,070 FT/LBS. Ran all 15-joints without filling.	
16:00	16:15	0.25	8,545	4-99	Performed continuity test on fiber optics at 6,614'. Test was good.	



Well ID: Forge 78B-32

Field: UTAHFORGE

Geothermal Resource Group, Inc.

Well Name: 78B-32

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

Report No: 28 Report For 24-Jul-21

					Operations Summary	
From	То	Elapsed	End MD(ft)	Code	Operations Description Non-Pro	od
16:15	17:00	0.75	8,545	4-12-1	Run 7", 41#, T-110SS, Tenaris casing from 6,614' to 7,070'. Note: Floats failed at 6,795' while running casing gained 81k in hook load. All joints were torqued to manufactures optimum recommendation of 17,070 FT/LBS. Ran all 15-joints without filling.	
17:00	17:30	0.50	8,545	4-99	Performed continuity test on fiber optics at 7,070'. Test indicated one of the five fiber-optic had failed at 4,000' from surface. Decision was made to run in one joint to 7,106' and circulate bottoms up.	
17:30	19:00	1.50	8,545	3-5-1	Circulated bottoms up at 7,106'. Max surface flow temperature was 99 degrees Fahrenheit. Static temperature reading at 6,966' with fiber-optic cable was 359 degrees Fahrenheit.	
19:00	19:45	0.75	8,545	4-12-1	Run 7", 41#, T-110SS, Tenaris casing from 7,070' to 7,812'. Note: All joints were torqued to manufactures optimum recommendation of 17,070 FT/LBS. Ran all 15-joints without filling.	
19:45	20:00	0.25	8,545	4-99	Performed continuity test on fiber optics at 7,812'. Test indicated all five fiber-optic cables failed from 4,500' to 7,812'. Static temperature was 240 degrees Fahrenheit at 4,500'.	
20:00	21:15	1.25	8,545	4-12-1	Ran 7", 41#, T-110SS, Tenaris casing from 7,812' to set depth of 8,508'. Shoe set at 8,508' KB. Float collar at 8,414' KB. Note: All joints were torqued to manufactures optimum recommendation of 17,070 FT/LBS. Ran all 15-joints without filling. Thread locked last 3 joints in the hole below landing joint.	
21:15	21:30	0.25	8,545	4-99	Performed continuity test on fiber optics at 8,508'. Test indicated all five fiber-optic cables failed from 3,933' to 8508'. Static temperature was 208 degrees Fahrenheit at 3,933'.	
21:30	22:30	1.00	8,545	4-99	Rigged down CRT tool. Rigged up cement head. Broke circulation.	
22:30	0:00	1.50	8,545	3-5-1	Circulated at 16 bbl's per min to cool well bore. Mixed and pumped 4ppb Micro C while circulating. Cleaned and cleared floor while circulating.	

Management Summary

Ran 7", 41#, T-110SS, Tenaris casing from 2,380' to 3,722'.

Installed new spool of fiber-optic cable on unit. Ran fiber-optic cable to rig floor.

Spliced on new fiber-optic cable at 3,722'.

Ran 7", 41#, T-110SS, Tenaris casing from 3,711' to set depth of 8,508'. Rigged down CRT tool.

Rigged up cement head.

Broke circulation.

Circulated at 16 bbl's per min to cool well bore.

Mixed and pumped 4ppb Micro C while circulating.

Cleaned and cleared floor while circulating.

Comments

Splice on new fiber-optic cable at 3,722'.

Performed continuity test on fiber optics every 15 joints while running casing.

Floats failed at 6,795' while running empty casing.

Performed continuity test on fiber optics at 7,070'.

Test indicated one of the five fiber-optic had failed at 4,000' from surface.

Performed continuity test on fiber optics at 7,812'.

Test indicated all five fiber-optic cables failed from 4,500' to 7,812'.

Static temperature was 240 degrees Fahrenheit at 4,500'.

Performed continuity test on fiber optics at 8,508'.

Test indicated all five fiber-optic cables failed from 3,933' to 8508'.

Static temperature was 208 degrees Fahrenheit at 3,933'.



Geothermal Resource Group, Inc.

Well ID: Forge 78B-32

Field: UTAHFORGF

Well Name: 78B-32

Sect: 32 Town: 26 Rng: 9W County: Beaver State: UT Report No: 28 Report For 24-Jul-21 Casing/Tubular Information Size Top MD Top TVD Bottom MD Bottom TVD OH Diam. Nom. Wgt. Nominal LOT Grade Type (ins) Section (ins) (lbs) (lbs/gal) **FULL** 16.000 0 416 SURF 22.000 65 K-55 0.61 11.750 0 2.990 14.750 **FULL** INT1 54 J-55 11.70 7.000 0 8,509 41 **FULL Mud Information** Gels Temp Mud Cake pH/ES Solids Oil Water Sand LGS CaCI 10m 30m ΥP Filt. CI Ca 10s In Out Loss 24-Jul-21 11:00 at Depth 8,540 ft Mud Pits, Type: Low Solids Non-Dispersed 8.30 98 0.01 800 120 2 2 2 98 105 **Mud Consumables Item Description** Qty. Cost **Item Description** Qty. Cost Engineering - EACH Other - EACH perdiem - OTHER **Miscellaneous Drilling Parameters** Slack Off: Hook Loads (lbs): Off Bottom Rotate: Pick Up: Drag Avg/Max: **Slow Circulation Data:** Pump 1: 30 spm 110 psi 40 spm 215 psi 50 spm 311 psi Pump 2: 30 spm 110 psi 40 spm 215 psi 50 spm 311 psi Pump 3: 30 spm 110 psi 40 spm 215 psi 50 spm 311 psi Hours on BHA: Since Inspection: 114.75 **Total:** 114.75 Jars: Hours on Casing/Liner: Rotating: 92.51 Tripping: 197 *I* Wear Bushing Installed **Rig Information** Equipment Problems: None to report. **Location Condition:** Good. Transport: Received all 3.5" drill pipe anlong with handling tools and BHA. **Solids Control Information** Screen Sizes: Top Middle 1 Middle 2 **Bottom** Equipment Usage (Hrs): Shaker No 1: 120 Desander: 0 Desilter: 0 Degasser: 0 120 120 120 Shaker No 2: 120 120 120 120 Shaker No 3: 120 120 120 120 **Bulk Inventory** Item Type On Hand Units Beginning Used Received Net Rig Fuel 7.170 7.170 **Safety Information** Meetings/Drills Time Description Safety Two 30 min Pre tour safety meetings with both crews. Running 7" casing, hand and body placement. Cementing. 0 Lost Time Incidents: 0 Days Since LTI: **First Aid Treatments:** 0 Medical Treatments: **Accident Description:** None to report. ✓ Crownamatic Check BOP Test **Weather Information Sky Condition:** Cloudy Visibility: 10 Air Temperature: 68 degF Bar. Pressure: 28.97 Wind Speed/Dir: 10 / SE Wind Gusts: 2



Geothermal Resource Group, Inc.

Well Name: 78B-32

Well ID: Forge 78B-32

Field: UTAHFORGE

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

Report No: 29							Report For	25-Jul-21
Operator:	University of Utah	n Rig :	rontier Rig 1	6 Spud Date:	28-Jun-21	Daily Cost / M	lud (\$):	
Measured Depth (fi	t): 8545	5 Last Casing:	7.000 at 8,50	9 Wellbore:	Original Wellbore	AFE No.	AFE (\$)	Actual (\$)
Vertical Depth (ft):	8543	Next Casing:		RKB Elevation	n (ft): 30.40			
Proposed TD (ft):	9500	Last BOP Test:	03-Jul-2	1 Job Reference	RKB (ft):			
Hole Made (ft) / Hrs	0 / 0.0	Next BOP Test:	24-Jul-2	1 Working Inter	est:	Totals:		
Average ROP (ft/hr	·):					Well Cost (\$):		
Drilling Days (act./	plan): 29/21 F	Flat Days (act./pla	n): 0/9	Total Days (act.	/plan): 29/30	Days On Loca	ation:	29
Pers/Hrs: Opera	ator: 3 / 36 (Contractor:	14 / 168	Service:	6 / 72 Other	: 3/36	Total:	26 / 312

Safety Summary: No incidents or events reported. Conducted Crown Check, Safety Meeting.

Current Operations: Waited on cement.

Bled back 4 bbl's from casing to cement truck. Slacked off casing and monitored for 5 mins.

Removed cement head and lines. Cut Silixa fiber-optic cable.

Raised rotating head extension and made rough cut on 7" casing.

Planned Operations: Finish nippling down 13-5/8 BOPE. Install the 7" 10K wellhead, nipple up and test the 7-1/16" 10K BOP's.

Toolpusher: Steve Caldwell , Justin Bristol

Wellsite Supervisors: Virgil Welch , Brian Gresham Tel No.: 7132807438

					Operations Summary	
From	То	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	2:30	2.50	8,545	3-5-1	Circulated at 16 bbl's per min to cool well bore. Mixed and pumped 4ppb Micro C while circulating. Cleaned and cleared floor while circulating.	
2:30	6:00	3.50	8,545	5-12-2	Held safety meeting with all involved personal. Swapped lines to cement truck. Pumped cement as followed. Fill lines, pressure tested lines to 5,500 psi. Pumped 100 bbls of fresh water spacer@ 5 bpm. Pumped 20 bbls of RC Mud cleaner spacer @ 5 bpm. Pumped 10 bbls of fresh water spacer @ 5 bpm. Mixed and pumped 809 bbls of 12.7 ppg RC ThermaLite-HT cement @ 8 bpm. Note: Last 80 bbls of cement has 1.3% of retarder. Dropped top plug and displace with 273 bbls of fresh water. Bumped plug with 500 psi over circulating pressure a 3385 psi. CIP at 06:16 HRS on 7-25-2021.	
6:00	12:00	6.00	8,545	3-13	Waited on cement while holding between 2800 psi and 3000 psi pressure on insid casing. Cement fell to 95' below KB.	e of
12:00	13:00	1.00	8,545	5-12-2	Mixed and pump 6 bbls of neat cement filling annulus from 95' to surface / CIP 13	:00
13:00	0:00	11.00	8,545	3-13	Waited on cement. Monitored cement samples while waiting on cement. Monitored temperature at 3,998' with Silixa fiber-optic cable. Monitored casing pressure with Resources Cementing. Bleeding pressure Note: Temperature at 4,200' monitored with Silixa cable at 197 degrees fahrenheit 1100 hrs final temp at 0000 hrs reached 208 degrees fahrenheit.	t. at

Management Summary

Circulated at 16 bbl's per min to cool well bore.

Held safety meeting with all involved personal. Swapped lines to cement truck.

Pumped cement as per pump schedule.

Waited on cement .

Cement fell to 95' below KB.

Mixed and pump 6 bbl's of neat cement while waiting on cement.

Comments

Bumped plug with 3385 psi, (500 psi over displacement pressure). CIP at 06:16 HRS on 7-25-2021.

Had 126 bbl's of good cement to surface.

Held pressure on casing and bled back as necessary for thermal expansion.

Cement fell to 95' below KB.

Topped out with 6 bbls of neat cement. CIP at 13:00 7-25-2021. WOC.



Geothermal Resource Group, Inc.

Well ID: Forge 78B-32

Field: UTAHFORGE

Well Name: 78B-32 Sect: 32 Town: 26 Rng: 9W County: Beaver State: UT

Report No: 29 Report For 25-Jul-21 Casing/Tubular Information Size Top MD Top TVD Bottom MD Bottom TVD OH Diam. Nom. Wgt. Nominal LOT Grade Type (ins) Section (ins) (lbs) (lbs/gal) **FULL** 16.000 0 416 SURF 22.000 65 K-55 0.61 11.750 0 2,990 14.750 J-55 11.70 **FULL** INT1 54 7.000 0 0 8,509 8,507 **PROD** 41 T-110S **FULL Mud Information** Gels Temp Mud Cake pH/ES Solids Oil Water Sand LGS CI CaCI 10m 30m Out PV ΥP Filt. Ca 10s Loss In 25-Jul-21 11:00 at Depth 8,540 ft Mud Pits, Type: Low Solids Non-Dispersed 8.30 98 0.01 800 120 2 2 2 98 105 Mud Consumables **Item Description** Qty. Cost **Item Description** Qty. Cost Engineering - EACH Micro C - 50#SK 100 Other - EACH perdiem - OTHER **Rig Information Equipment Problems:** None to report. **Location Condition:** Good. Transport: None to report. Solids Control Information **Screen Sizes:** Top Middle 1 Middle 2 **Bottom** Equipment Usage (Hrs): Shaker No 1: Desander: 0 Desilter: 0 Degasser: 120 120 120 120 Shaker No 2: 120 120 120 120 Shaker No 3: 120 120 120 120 **Bulk Inventory** Received Item Type Units **Beginning** Used On Hand Net Rig Fuel **Safety Information** Meetings/Drills Time Description Safety Two 30 min Pre tour safety meetings with both crews.Pumping Cement. Nippling down BOP. forklift operations. 0 Medical Treatments: 0 Lost Time Incidents: 0 Days Since LTI: First Aid Treatments: **Accident Description:** None to report. **BOP Test** ✓ Crownamatic Check **Weather Information Sky Condition:** Partly cloudy Visibility: 10 Air Temperature: Bar. Pressure: 29.89 75 degF Wind Speed/Dir: 10 / SE Wind Gusts: 2



Geothermal Resource Group, Inc.

Well Name: 78B-32

Well ID: Forge 78B-32

Field: UTAHFORGE

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

Report No: 30								Report For	26-Jul-21
Operator:	University of Utal	n Rig: Fro	ontier Rig 1	6 Spud Date:	28-	Jun-21	Daily Cost / M	ud (\$):	
Measured Depth (ft): 854	Last Casing: 7.0	000 at 8,50	9 Wellbore:	Original W	Vellbore	AFE No.	AFE (\$)	Actual (\$)
Vertical Depth (ft):	854	Next Casing:		RKB Elevation	n (ft):	30.40			
Proposed TD (ft):	9500	Last BOP Test:	03-Jul-2	1 Job Referenc	e RKB (ft):				
Hole Made (ft) / Hrs	: 0/0.0	Next BOP Test:	24-Jul-2	1 Working Inter	est:		Totals:		
Average ROP (ft/hr):						Well Cost (\$):		
Drilling Days (act./p	olan): 30/21 l	Flat Days (act./plan)	: 0/9	Total Days (act	./plan):	30/30	Days On Loca	ition:	30
Pers/Hrs: Opera	tor: 3 / 36	Contractor:	14 / 168	Service:	6 / 72	Other:	3 / 36	Total:	26 / 312
Safatu Summanu	Na incidente er ev	anta ranartad Candu	atad Craus	Charle Cafate M	aatina				

Safety Summary: No incidents or events reported. Conducted Crown Check, Safety Meeting.

Current Operations: Tested casing along with BOPE.

Made up 5-3/4" TCl clean out assembly. Picked up 4-3/4" drill collars to 900'.

Picked up 3.5" drill pipe from 900' to 1,500' at report time.

Planned Operations: Trip in the hole with 5-3/4" clean out assembly to top of float collar.

Slip and cut drilling line.

Test annular along with pipe rams.

Drill out shoe track.

Clean out cement to 8,545'.

Perform xLOT.

Pull out of the hole and pick up 5 3/4" Directional Drilling Assembly.

Toolpusher: Steve Caldwell , Justin Bristol

Wellsite Supervisors: Virgil Welch , Brian Gresham Tel No.: 7132807438

Operations Summary	
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From	То	Elapsed	End MD(ft)	Code	Operations Description No	on-Proc
0:00	3:00	3.00	8,545	3-13	Waited on cement. Monitored cement samples while waiting on cement. Monitored temperature at 3,998' with Silixa fiber-optic cable. Monitored casing pressure with Resources Cementing. Bleeding pressure as needed to maintain 2,700 psi on float collar.	ı
3:00	6:00	3.00	8,545	6-14	Bled back 4 bbl's from casing to cement truck. Slacked off casing and monitored for 5 mins. Removed cement head and lines. Cut Silixa fiber-optic cable. Raised rotating head extension and made rough cut on 7" casing. Laid out rotating head. Raised annular and made rough cut on 7" casing. Laid out annular.	
6:00	12:00	6.00	8,545	6-14	Remove double gate BOP and strip out fiber optic / Remove Drilling spool and strip out fiber optic / Extension spool 11"3000 X 13-5/8" 5000 and 7" cemented together / cut extension spool in half and chip out cement in lower half of spool while protecting the fiber optic.	
12:00	13:00	1.00	8,545	6-14	Rig up power tongs underneath substructure and back out landing joint removing the casing collar with it.	
13:00	14:00	1.00	8,545	6-14	Installed 7" riser nipple on the well head and torqued the well head to 17,070 ft/lbs to the 7" casing.	
14:00	15:00	1.00	8,545	6-14	Removed the riser nipple and install well head side valves with companion flanges	
15:00	21:30	6.50	8,545	6-14	Installed drilling spool w/ 2ea 2" 10K valves and 1- 2" 10K check valve on the kill side with a 2" 1502, and 1ea 4"10K manual valve and a 4" 10K hydraulic valve on the choke side / Installed 7-1/16" 10 K double gate BOP, Installed 7-16" 10K X 7-1/16" 15K crossover spool / installed 7-1/16" 10K annular BOP w/ 7-1/16" 15K lower flange and 7-1/16" 10K upper flange / installing 7-1/16" 10K riser nipple. Installed turn buckles. Function test BOP.	
21:30	23:00	1.50	8,545	3-15	Rigged up pump truck to well head. Attempted to test truck prior to starting test. Unable to get a good test on the pump truck. Pressure leaking at the truck losing approximately 600 psi every 30 mins.	
23:00	0:00	1.00	8,545	3-15	Removed Pason transducer from stand-pipe and installed on 2" 10K valve on well head to monitor casing pressure. Tested casing along with inside choke valve and ou side kill check valve to 300 psi. held for 5 mins. good test. All test charted out on Pason.	ıt



Geothermal Resource Group, Inc.

Well ID: Forge 78B-32

Field: UTAHFORGE

Well Name: 78B-32 Sect: 32 Town: 26 Rng: 9W County: Beaver State: UT

Report No: 30 Report For 26-Jul-21

Waited on cement.

Bled back 4 bbl's from casing to cement truck.

Slacked off casing and monitored for 5 mins.

Removed cement head and lines.

Cut Silixa fiber-optic cable 30' above rig floor.

Removed BOPE.

Rig up power tongs underneath substructure and back out landing joint.

Installed 7" 10k wellhead and torqued to 17,070 ft/lbs.

Set in and nippled up 7-1/16" 10K BOP's.

Tested casing to 300 psi low.

Comments

Cement at surface after 6 bbl top job.

Spacer spool on BOP had to be cut off due to being cemented up.

Unable to test BOP'S with cement pump truck due to pressure leaking at the truck and losing approximately 600 psi or 12% every 30 mins. Tested BOP'S with rig pump. Removed Pason transducer from stand-pipe and installed on 2" 10K valve on well head to monitor casing pressure during BOP test. All test were charted out on the Pason and witnessed by GRG supervisor.

during BOP	test. All t	est were	charted out	t on the Paso	n and witness											
					Casing/											
Туре	Siz (ins		Top MD (ft)	Top TVD (ft)	Bottom MD (ft)		n TVD t)	Hole Secti		OH Diar (ins)	n.	Nom. Wg (lbs)		ominal Grade		LOT os/gal)
FULL	16	000.6	0		416			S	URF	22.0	000	6	35	K-5	5	0.61
FULL	11	.750	0		2,990			-	INT1	14.7	750	5	54	J-5	5	11.70
FULL	7	7.000	0	0	8,509		8,507	PI	ROD			4	11	T-1109	3	
						ud Info	rmatio	n								
					%							Gels		Tei	mp	Mud
Dens. Vis			•		Oil Water			CI	Ca	CaCl	10s	10m	30m	ln	Out	Loss
	1:00 at D	epth 8,5	40 ft Mud F	its, Type: Lo	w Solids Non-	Dispers	sed									
8.30 26	1	1	0 1	11 1	0 99		0	700	120			1 1	1	98	105	
							sumabl	es								
		escripti	on	Q	•	ost				Descripti	on			Qty.		Cost
caustic Sod		(2			ering -						1		
Other - EAC	:H				1			m - OTI	HER					1		
					Ri	ig Info	rmatio	<u> </u>								
Equipment			e to report.													
Location C	ondition	: God	od.													
Transport:		Nor	e to report.													
					Solids											
Screen Size		Тор	Middle 1		Bottom		ment U									
Shaker		120			120	Desar	nder:	0	Des	silter: 0		Degass	ser:	0		
Shaker		120			120											
Shaker	No 3:	120	120	120	120											
							ventory									
5		Item Ty	pe		Units	В	Beginnir		Use		Rec	eived	On H		1	Net
Rig Fuel								187		382				9,805		
DD Ci	la!	.4-	VA/a i aula 4	Ounds			Invento		1-:	4-	\A/~:		Cuada		Thu	
DP Size	Joir		Weight	Grade	Threa	ıa	DP S	oize	Joi	nts	Wei	gnt	Grade)	Thre	ead .
3.5"		317	13.3	S-135	3.5IF	-4 I C	1°									
Ma atimana /D	-:!!- 7	·!				_	ormati	on								
Meetings/D	riiis i	ime	20 min l	Dra taur aafat		escript		linnlina	down	DOD for	ldift o	narationa	Draggi	ıra taatiı	~~	
Safety					ty meetings w										ıg.	
First Aid Tr				ical Treatme	ents:	U	Lost Tir	ne inci	aents:		0	Days Si	ince L I	1:		
Accident D	•		e to report.	o Chacle												
BOP Te	ST	✓ C	rownamati	ССпеск												



Geothermal Resource Group, Inc.

Well Name: 78B-32

Field: UTAHFORGE

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

Report No: 30 Report For 26-Jul-21

	weather information										
Sky Condition:	Partly Cloudy	Visibility:	10								
Air Temperature:	73 degF	Bar. Pressure:	29.89								
Wind Speed/Dir:	6 / SE	Wind Gusts:	3								



Geothermal Resource Group, Inc.

Well Name: 78B-32

Well ID: Forge 78B-32

Field: UTAHFORGE

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

Report No: 31							Report For	r 27-Jul-21
Operator:	University of Utah	Rig: Fi	rontier Rig 1	6 Spud Date:	28-Jun-	21 Daily Cost / I	Mud (\$):	
Measured Depth (ft)	: 8545	Last Casing: 7	.000 at 8,50	9 Wellbore:	Original Wellbo	ore AFE No.	AFE (\$)	Actual (\$)
Vertical Depth (ft):	8543	Next Casing:		RKB Elevation	n (ft): 30.	40		
Proposed TD (ft):	9500	Last BOP Test:	27-Jul-2	1 Job Reference	RKB (ft):			
Hole Made (ft) / Hrs	0 / 12.0	Next BOP Test:	28-Aug-2	1 Working Inter	est:	Totals:		
Average ROP (ft/hr)	: 0.0)				Well Cost (\$)	:	
Drilling Days (act./p	lan): 31/21 F	lat Days (act./plan): 0/9	Total Days (act.	/plan): 31/	30 Days On Loc	ation:	31
Pers/Hrs: Opera	tor: 3 / 36 C	Contractor:	14 / 168	Service:	3 / 36 Oth	er: 3 / 36	Total:	23 / 276

Safety Summary: No incidents or events reported. Conducted BOP Test, Crown Check, Safety Meeting.

Current Operations: Circulated bottoms up Prior to testing casing.

Tested pipe rams along with annular 300 psi low to 5,200 psi high.

Drilled out cement and shoe track from 8,364" to 8,508'.

Drilled 5-3/4" hole from 8,545' to 8,555'. Rigged up Resource cementing pump truck. Troubleshoot pressure gage on truck. Slipped and cut drilling line.

Planned Operations: Perform xLOT.

Trip out of the hole from 8,482'.

Make up 5-3/4" directional assembly.

Trip in the hole to 8,555'.

Drill 5-3/4" hole section from 8,555'.

Toolpusher: Steve Caldwell , Justin Bristol

Wellsite Supervisors: Virgil Welch , Brian Gresham Tel No.: 7132807438

TTOMOREO C	uperviso	13. vg	i vvcion , bne	ar Groomani	Operations Summary
From	То	Elapsed	End MD(ft)	Code	Operations Summary Operations Description Non-Pr
0:00	3:00	3.00	8,545		Tested casing along with inside choke valve and out side kill check valve to 5,200 psi. held for 30 mins. good test. Tested outside valve on mud-cross along with inside kill valve to 300 psi low, 5200 high. Held low test for 5 mins held high test for 10 mins. Tested 3 outside valves on the choke to 300 psi low, 5200 high. Held low test for 5 mins held high test for 10 mins. Tested 3 middle valves on the choke to 300 psi low 5200 high. Held low test for 5 mins held high test for 10 mins. Tested 3 inside valves on choke to 300 psi low 5200 high. Held low test for 5 mins held high test for 10 mins. All test charted out on Pason.
3:00	5:30	2.50	8,545	3-34-3	Picked up 4 3/4" drill collar. Make up 5-3/4" TCl bit. Picked up 29 joints of 4-3/4" drill collars. Tripped in the hole to 900'.
5:30	7:15	1.75	8,545	3-34-1	Picked up 3.5" drill pipe from 900' to 2,003' @07:15 noticed a slip die missing from rented slips.
7:15	9:00	1.75	8,545	3-97	Open doors on BOP and search for slip die
9:00	12:00	3.00	8,545	3-6-4	Tripped out of the hole with drill pipe from 2,003' with BOP doors open looking for lost slip die.
12:00	14:00	2.00	8,545	6-14	Once at top of drill collars close blind ram doors, Rigged up slings to lift BOP while pulling drill collars. Pick stack up 1 foot and chained off to sub substructure and block between wellhead and BOP Release pick up slings
14:00	15:00	1.00	8,545	3-6-2	Pulled out of the hole with 10 stands of drill collars to bit looking for slip die.
15:00	16:00	1.00	8,545	6-14	Remove BOP hanging system and Nipple BOP back up / Pull last stand of collars / no markings on bit to indicate slip die had passed / close blind rams and function pipe rams and Annular BOP / nothing fell on top of blind rams.
16:00	16:30	0.50	8,545	3-6-1	RIH w/ bit and drill collars to 900'.
16:30	0:00	7.50	8,545	3-6-3	Picked up 3.5" drill pipe and run in the hole to 8,400'.

Management Summary

Tested casing along with inside choke valve and out side kill check valve to 300 psi low and 5200 psi high.

Held low test for 5 mins - good test.

Held high test for 30 mins - good test.

Picked up 4 3/4" drill collars.

Made up 5-3/4" TCI bit.



Geothermal Resource Group, Inc.

Well ID: Forge 78B-32

Field: UTAHFORGE

Well Name: 78B-32 Sect: 32 Town: 26 Rng: 9W County: Beaver State: UT

Report No: 31 Report For 27-Jul-21

Picked up 29 joints of 4-3/4" drill collars.

Tripped in the hole to 900'.

Picked up 3 1/2" drill pipe from 900' to 2,003'. Found one 3 1/2" slip insert die missing.

Tripped out of the hole with drill pipe from 2,003' with BOP doors open looking for lost slip die.

Rigged up slings to lift BOP while pulling drill collars.

Picked up stack 1 foot and chained off to sub substructure.

Pulled out of the hole with 10 stands of drill collars to bit looking for slip die with no results.

Remove BOP hanging system and Nippled BOP back up.

Pulled last stand of collars / no markings on bit to indicate slip die had passed.

Closed blind rams and function pipe rams and Annular BOP / no indication of die on top of blind rams.

Ran in hole with bit and drill collars to 900'.

Picked up 3.5" drill pipe and ran in the hole to 8,400'.

Comments

At 07:15 noticed a slip die missing from rented slips. Unable to find it on floor or in cellar.

Pulled out of the hole looking for slip die.

No ma	lo markings on bit to indicate slip die had dropped down the hole.														
	Casing/Tubular Information														
Тур	e	Size (ins)	Top MD (ft)	Top TVD (ft)	Bottom MD (ft)	Bottom TVI (ft)) Hol Secti		OH Diam (ins)	. N	lom. Wgt (lbs)		minal rade		LOT s/gal)
FULL															
FULL	7.11														
FULL	JLL 7.000 0 0 8,509 8,507 PROD 41 T-110S														
					Mι	ıd Informat	ion								
					%						Gels		Ten	np	Mud
Dens.	Vis F	PV YP	Filt. Cake p	H/ES Solids	Oil Water	Sand LGS	CI	Ca	CaCl	10s	10m	30m	In	Out	Loss
27-Jul-	-21 11:0	00 at Depth	8,540 ft Mud	Pits, Type: Lo	w Solids Non-	Dispersed									
8.30	26	0 1	0 1	11 1	0 99	0.01	700	120		1	1	1	98	105	
					Mud	d Consuma	bles								
		Itam Dasci	intion	0	ty Co	net .		Itom I	Description	n			Otv		^oet

		Wida Cons	Sulliables		
Item Description	Qty.	Cost	Item Description	Qty.	Cost
Engineering - EACH	1		Other - EACH	1	
perdiem - OTHER	1				

Rig Informatio

Equipment Problems: Rental slips from Weatherford missing die segment.

Location Condition: Good.

Transport: Received 5-3/4" mill, junk basket,5-3/4" magnet.

	Solids Control Information												
Screen Sizes:	Screen Sizes: Top Middle 1 Middle 2 Bottom Equipment Usage (Hrs):												
Shaker No 1:	175	175	175	175	Desander: 0	Desilter:	0	Degasser:	0				
Shaker No 2:	175	175	175	175									
Shaker No 3:	175	175	175	175									
	Rulk Inventory												

	Item	Туре		Unit	s	Beginning	Used	Received	On Hand	N	let
Rig Fuel						9,805			9,805		
				D	rill Pipe	Inventory					

				Drill Pipe	Inventory				
DP Size	Joints	Weight	Grade	Thread	DP Size	Joints	Weight	Grade	Thread
3.5"	317	13.3	S-135	3.5IF					

			•	Safety In	formation						
Meetings/Drills Time Description											
Safety	60	Two 30) min Pre tour safety meeting	s with bot	h crews Nippling down BOP.	. Picking u	p BHA. Picking up 3.5" drill pipe.				
First Aid Treatme	ents:	0	Medical Treatments:	0	Lost Time Incidents:	0	Days Since LTI:				
Accident Descrip	Accident Description: None to report.										
✓ BOP Test ✓ Crownamatic Check											



Geothermal Resource Group, Inc.

Well Name: 78B-32

Field: UTAHFORGE

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

Report No: 31 Report For 27-Jul-21

	vveatner	Intormation		
Sky Condition:	Partly Cloudy	Visibility:	10	
Air Temperature:	75 degF	Bar. Pressure:	29.89	
Wind Speed/Dir:	6 / SE	Wind Gusts:	2	



Geothermal Resource Group, Inc.

Well Name: 78B-32

Well ID: Forge 78B-32

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

Report For 28-Jul-21

Report No. 32								Report For	20-Jui-2 i
Operator:	University of Utal	n Rig:	Frontier Rig 1	6 Spud Date:	28-	Jun-21	Daily Cost / M	ud (\$):	
Measured Depth (ft)): 8950	Last Casing:	7.000 at 8,50	9 Wellbore:	Original W	/ellbore	AFE No.	AFE (\$)	Actual (\$)
Vertical Depth (ft):	8947	7 Next Casing:		RKB Elevation	n (ft):	30.40			
Proposed TD (ft):	9500	Last BOP Test:	: 27-Jul-2	1 Job Reference	e RKB (ft):				
Hole Made (ft) / Hrs	405 / 13.5	Next BOP Test	: 24-Jul-2	1 Working Inter	est:		Totals:		
Average ROP (ft/hr)	: 30.0	0		LOT (lbs/gal):		15.00	Well Cost (\$):		
Drilling Days (act./p	lan): 32/21 l	Flat Days (act./pla	in): 0/9	Total Days (act.	./plan):	32/30	Days On Loca	ition:	32
Pers/Hrs: Opera	tor: 3 / 36	Contractor:	14 / 168	Service:	3 / 36	Other:	3 / 36	Total:	23 / 276

Safety Summary: No incidents or events reported. Conducted Crown Check, Safety Meeting.

Current Operations: Drilled from 8,950 to 9,500' at report time.

Planned Operations: Circulate hole clean.

Trip out of the hole. Lay out drill collars.

Trip in the hole with 3.5" drill pipe.

Rig up logger and log.

Toolpusher: Steve Caldwell , Justin Bristol

Wellsite Supervisors: Virgil Welch , Brian Gresham Tel No.: 7132807438

	Operations Summary												
From	То	Elapsed	End MD(ft)	Code	Operations Description No	on-Prod							
0:00	0:30	0.50	8,545	03-051	Circulated bottoms up Prior to testing.								
0:30	1:45	1.25	8,545	3-15	Tested pipe rams to 300 psi low, 5200 high. Held low test for 5 mins held high test fo 10 mins. Good test. Tested annular to 300 psi low, 5200 high. Held low test for 5 mins held high test for 10 mins. Good test.	r							
1:45	2:30	0.75	8,545	3-28	Drilled out cement and shoe track from 8,364" to 8,508'. Good cement in shoe. Observed 1' of good cement outside of the shoe. Cleaned out rat hole from 8,508' to 8,545'. Note: Float collar did not take any weight while drilling out. Note: Pumped 2-5 gallon buckets of Poly Vis along with 25 pounds of torkease mixed in 40 bbl's of water.	I							
2:30	3:30	1.00	8,555	3-99	Drilled 5-3/4" hole from 8,545' to 8,555'.								
3:30	4:00	0.50	8,555	3-5-1	Circulated bottoms up prior to performing XLOT.								
4:00	5:00	1.00	8,555	OTHER	Rigged up Resource cementing pump truck. Troubleshoot pressure gage on truck.								
5:00	6:00	1.00	8,555	CUTDL	Slipped and cut drilling line.								
6:00	8:00	2.00	8,555	3-46	Conducted xLOT with Resource bleed back was 2.5 bbl with both low and high rates								
8:00	11:30	3.50	8,555	3-6-4	Pulled out of the hole and lay down bit.								
11:30	12:00	0.50	8,555	SERV	Serviced Rig.								
12:00	14:00	2.00	8,555	3-34-3	Picked up 5-3/4" directional drilling assembly. NOTE: hole took 25 bbls of fluid to fill while picking up tools avg loss is 12.5 bbl/hour	X							
14:00	20:00	6.00	8,555	3-6-3	Tripped in the hole with drill pipe filling pipe at 4,000' 6,000'. Staged in the hole every 50' from 7,000' to 8,150'. Washed down from 8,150' to 8,555' to keep tools under 345 degrees. Max temperature observed was 345 degrees at MWD. Note: Lost connection with MWD once on bottom. Recycled pump 3 times and was able to regained communication with MWD.								
20:00	20:30	0.50	8,615	3-2-3	Drilled 5-3/4" hole from 8,555' to 8,615'.								
20:30	21:30	1.00	8,654	3-2-3	Slide Drilled 5-3/4" from 8,615' to 8,654'.								
21:30	22:00	0.50	8,709	3-2-3	Drilled 5-3/4" hole from 8,654' to 8,709'.								
22:00	22:30	0.50	8,742	3-2-3	Slide Drilled 5-3/4" from 8,709' to 8,742'.								
22:30	0:00	1.50	8,950	3-2-3	Drilled 5-3/4" hole from 8,742' to 8,950'.								

Management Summary

Circulated bottoms up prior to testing.

Tested pipe rams to 300 psi low, 5200 high. Held low test for 5 mins held high test for 10 mins. Both test good.

Tested annular to 300 psi low, 5200 high. Held low test for 5 mins held high test for 10 mins. Both test good.

Drilled out cement and shoe track from 8,364" to 8,508'.

Drilled 5-3/4" hole from 8,545' to 8,555'.

Circulated bottoms up prior to performing xLOT.



Well ID: Forge 78B-32

Field: UTAHFORGE

Geothermal Resource Group, Inc.

Well Name: 78B-32

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

Report No: 32 Report For 28-Jul-21

Rigged up Resource cementing pump truck.

Troubleshoot pressure gage on truck.

Slipped and cut drilling line.

Conducted xLOT with Resource cementing pump truck.

Pulled out of the hole and lay down bit.

Serviced Rig.

Picked up 5-3/4" directional drilling assembly.

Tripped in the hole with drill pipe filling pipe at 4,000' 6,000'.

Staged in the hole every 500' from 7,000' to 8,150'.

Washed down from 8,150' to 8,555' to keep tools under 345 degrees.

Drilled 5-3/4" hole from 8,555' to 8,950'.

Comments

Float collar did not take any weight while drilling out.

Pumped 2-5 gallon buckets of Poly Vis along with 25 pounds of Torkease mixed in 40 bbl's of water while drilling 10' rat hole.

Lost connection with MWD once on bottom. Recycled pump 3 times and was able to regained communication with MWD.

Performed WOB step test at 8,555'

Slide drilled 5-3/4" from 8,615' to 8,654'.

Slide drilled 5-3/4" from 8,709' to 8,742'.

Performed RPM step test at 8,835'.

	Casing/Tubular Information													
Туре	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	16.000	0		416		SURF	22.000	65	K-55	0.61				
FULL	11.750	0		2,990		INT1	14.750	54	J-55	11.70				
FULL	7.000	0	0	8,509	8,507	PROD	10.625	41	T-110S	15.00				

	Mud Information																	
								%						Gels		Te	mp	Mud
Dens.	Vis	PV	ΥP	Filt.	Cake	pH/ES Solids	Oil	Water San	d LGS	CI	Ca	CaCl	10s	10m	30m	ln	Out	Loss
20 111	24.2	1.00	ot Dor	th 0 62	C ft Mu	d Dita. Typo: Lo	44 Cali	da Non Diana	rood									

28-Jul-21 21:00 at Depth 8,626 ft Mud Pits, Type: Low Solids Non-Dispersed 8.30 99 0.01 700 120 100 1 82 11

Mud Consumables													
Item Description	Qty.	Cost	Item Description	Qty.	Cost								
AIUMINUM sTEARATE - 50#SK	2		caustic Soda - 50#SK	1									
Engineering - EACH	1		MicA - 50#SK	5									
Other - EACH	1		perdiem - OTHER	1									
polyvis - 5GAL	2		TORKease concentrate - 5GAL	1									
Trucking - EACH	1												

	Bit/BHA/Workstring Information																		
Depth This Run R.O.P. Mud Pump																			
No I	Rur	Make	Model	Diam	In	Dist	Hrs	Avg	Max	WOB	RPM	Torque	∍ Wt	Flow	Press	J. Vel	P. Drp	HHP	JIF
16	1	BAKER	STX	5.750	8545	10	1	10.0	18.0	16	45	4	8	300	1360	129	124	22	166
Jets	: 1	8 18 18			Out: 855	5	Grade:	Cutter:	1/	1 Du	ılı: WT	/NO	Wear:	S Br	gs : 0	Gge:	0	Pull: E	ЗНА
17	1	REED	TKC63	5.750	8555	395	3.5	112.9	278.0	30	30	5	8	300	2760)			
Jets	Jets: Out: Grade: Cutter: / Dull: / Wear: Brgs: Gge: Pull:																		

BHA - No. 22 - BIT, MMTR, 2 MONEL, OTHER, MONEL, 30 DC = 1020.17

	Drilling Parameters													
Depth	(ft)	ROP (f	ft/hr)	WOB (lbs)	RP	М	Torque	(ft lbs)	Flow (ga	ls/min)	Pressure		
From	То	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	(psi)		
8,555	8,950	200.0	268.0	30	30	30	50	5	6	280	300	2,760		
Annular Ve	Annular Velocity: Drill Collars: 681.0 Drill Pipe: 321.0													

Annular Velocity: Drill Collars: 681.0 **Drill Pipe:**

Slide Drilled 5-3/4" from 8,615' to 8,654'. Comments:

Slide Drilled 5-3/4" from 8,709' to 8,742'.



Geothermal Resource Group, Inc.

Field: UTAHFORGE

Well Name: 78B-32 Sect: 32 Town: 26 Rng: 9W County: Beaver State: UT

Report No:														
	32				N4:	-U D	-:!!!: D	4				Repo	rt For 28	-Jul-21
Hook Loods (III		Off Bott	om Doto	.			rilling Paran			wa a Arra/M	-	210		
Hook Loads (II Slow Circulation			om Rotat	te:	1/8 P	ick Up: 1	85 Slack Off		170 D	rag Avg/M	ax:	3/8		
			n	110	noi	40 anm	21/	noi	5	0 onm	2	11 psi		
Pump		30 spr				40 spm		psi		0 spm				
Pump		30 spr		110		40 spm		psi		0 spm		11 psi		
Pump		30 spr		110		40 spm		psi	5	0 spm	3	11 psi		
Hours on BHA			Inspecti		4.5		.5 Jars:	0						
Hours on Casi	ng/Line	r: Rotat	ing:	4.5	/ 0	Trippi				Wear Bus	hing In	stalled		
						Survey li	nformation							
	rvey	Meas.						Vert			dinates -			
-	/pe	Depth	Inc.		muth	TVD	Closure	Sec		N-S	1	-W	D.L.S.	
	WD	8,558.0	2.78		264.5	8,556.1	50.4		-33.0	S 33.0		38.1	1.136	
	ND	8,653.0	2.31		307.2	8,651.0	52.8		-32.1	S 32.1		42.0	2.006	
	WD	8,743.0	0.99		21.4	8,741.0	52.7		-30.2	S 30.2		43.1	2.501	
M\	WD	8,843.0	0.92		283.7	8,841.0	52.5	-	-29.2	S 29.2	W	43.6	1.438	
						Mud Log I	nformation							
Depth (ft)		TVD (f			Gas (U		Gas		Drilling	Pore	Mud	Shale		OP
	o	From	То	Avg	Max	at Depth	Connect. T	rip	Ехр.	Press	Dens.	Dens.	Shale	Sand
	3,950	8,552	8,947											
Formation Nar	ne:													
Lithology:	10	0% Granodi	orite											
Lithology:	10	0% Granodi	orite			Rig Info	ormation							
						Rig Info	ormation							
	blems					Rig Info	ormation							
Equipment Pro	blems	None to re	eport	slips fro	om Wea		ormation							
Equipment Pro Location Cond Transport:	blems	None to r	eport	slips fro		atherford.		on						
Equipment Pro Location Cond Transport:	blems	None to re Good. Received	eport new 3.5"			atherford. Solids Contr	ol Informatio							
Equipment Pro Location Cond Transport: Screen Sizes:	bblems:	None to re Good. Received	eport new 3.5"	Middle 2	2 Bo	atherford. Solids Contr ttom Equi	ol Informatio	(Hrs):	esilter:	0 D	Jegasse	r: 0		
Equipment Pro Location Cond Transport: Screen Sizes: Shaker No	oblems: lition:	None to regord. Received Top Mi 175	eport new 3.5" ddle 1 175	Middle 2	2 Bo	atherford. Solids Contr ttom Equi 175 Desa	ol Information pment Usage under: 0	(Hrs): De	esilter:		egasse		(Solids R	emoval
Equipment Pro Location Cond Transport: Screen Sizes: Shaker No	bblems: lition: 1:	None to region Good. Received Top Mi 175 175	eport new 3.5" ddle 1 175 175	Middle 2 175 175	2 Bo	atherford. Solids Contr ttom Equi 175 Desa	ol Informatio	(Hrs): De			_		(Solids Re	emoval
Equipment Pro Location Cond Transport: Screen Sizes: Shaker No	bblems: lition: 1:	None to regord. Received Top Mi 175	eport new 3.5" ddle 1 175	Middle 2	2 Bo	atherford. Solids Contr ttom Equi 175 Desa 175 Cent	ol Information pment Usage under: 0 rifuge 1: 12 ((Hrs): De			_		(Solids Re	emoval
Equipment Pro Location Cond Transport: Screen Sizes: Shaker No	bblems: lition: 1: 2: 3:	None to region of the second o	eport new 3.5" ddle 1 175 175	Middle 2 175 175	2 Bo	atherford. Solids Contr ttom Equi 175 Desa 175 Cent 175 Bulk Ir	ol Information pment Usage ander: 0 rifuge 1: 12 ((Hrs): De Solids F	Removal)	С	entrifuç	ge 2 : 12		,
Equipment Pro Location Cond Transport: Screen Sizes: Shaker No Shaker No	bblems: lition: 1: 2: 3:	None to region Good. Received Top Mi 175 175	eport new 3.5" ddle 1 175 175	Middle 2 175 175	2 Bo	atherford. Solids Contr ttom Equi 175 Desa 175 Cent 175 Bulk Ir	ol Information pment Usage ander: 0 rifuge 1: 12 (inventory Beginning	(Hrs): De	Removal)		entrifuç	ge 2: 12	ı	emoval _j
Equipment Pro Location Cond Transport: Screen Sizes: Shaker No Shaker No	bblems: lition: 1: 2: 3:	None to region of the second o	eport new 3.5" ddle 1 175 175	Middle 2 175 175	2 Bo	atherford. Solids Contr ttom Equi 175 Desa 175 Cent 175 Bulk In	ol Information pment Usage ander: 0 rifuge 1: 12 (inventory Beginning 9,123	(Hrs): De Solids F	Removal)	С	entrifuç	ge 2: 12		,
Equipment Pro Location Cond Transport: Screen Sizes: Shaker No Shaker No Shaker No	oblems: lition: 1: 2: 3:	None to region Good. Received Top Mi 175 175 175 175	eport new 3.5" ddle 1 175 175 175	Middle : 175 175 175	2 Bo	atherford. Solids Contr ttom Equi 175 Desa 175 Cent 175 Bulk In Units	ol Information pment Usage ander: 0 rifuge 1: 12 (inventory Beginning 9,123	(Hrs): De Solids F	Removal)	Received	d	On Hanc	23	Net
Equipment Pro Location Cond Transport: Screen Sizes: Shaker No Shaker No Shaker No	oblems: lition: 1: 2: 3: It	None to region Good. Received Top Mi 175 175 175 Weight Type	eport new 3.5" ddle 1 175 175 175	Middle : 175 175 175 Grade	8 Bo	atherford. Solids Contr ttom Equi 175 Desa 175 Cent 175 Bulk In Units Drill Pipe Thread	ol Information pment Usage ander: 0 rifuge 1: 12 (inventory Beginning 9,123	(Hrs): De Solids F	Removal)	С	d	ge 2: 12	ı	Net
Equipment Pro Location Cond Transport: Screen Sizes: Shaker No Shaker No Shaker No	oblems: lition: 1: 2: 3: It	None to region Good. Received Top Mi 175 175 175 175	eport new 3.5" ddle 1 175 175 175	Middle : 175 175 175 Grade	8 Bo	atherford. Solids Contr ttom Equi 175 Desa 175 Cent 175 Bulk In Units Drill Pipe Thread	ol Information pment Usage ander: 0 rifuge 1: 12 (conventory Beginning 9,123 Pinventory DP Size	(Hrs): De Solids F	Removal)	Received	d	On Hanc	23	Net
Equipment Pro Location Cond Transport: Screen Sizes: Shaker No Shaker No Shaker No Rig Fuel DP Size 3.5"	oblems: lition: 1: 2: 3: It	None to region of the control of the	eport new 3.5" ddle 1 175 175 175	Middle : 175 175 175 Grade	8 Bo	atherford. Solids Contritom Equi 175 Desa 175 Cent 175 Bulk In Units Drill Pipe Thread 5IF Safety In	ol Information pment Usage ander: 0 rifuge 1: 12 (conventory Beginning 9,123 Inventory DP Size formation	(Hrs): De Solids F	Removal)	Received	d	On Hanc	23	Net
Equipment Pro Location Cond Transport: Screen Sizes: Shaker No Shaker No Shaker No Rig Fuel DP Size 3.5"	oblems: lition: 1: 2: 3: It	None to region of the control of the	eport new 3.5" ddle 1 175 175 175 175 175 Spht 13.3 S-	Middle 2 175 175 175 175 Grade	\$2 Bo	atherford. Solids Contritom Equi 175 Desa 175 Cent 175 Bulk In Units Drill Pipe Thread 5IF Safety In Descrip	ol Information pment Usage ander: 0 rifuge 1: 12 (inventory Beginning 9,123 Inventory DP Size Information otion	(Hrs): De Solids F Us	ed pints	Received Weight	d	On Hanc	23	Net
Equipment Pro Location Cond Transport: Screen Sizes: Shaker No Shaker No Shaker No Shaker No Shaker No Meetings/Drills Safety	Joints Tin	None to region of the control of the	eport new 3.5" ddle 1 175 175 175 175 20ht 13.3 S-	Middle 2 175 175 175 175 Grade 135	2 Bo 5 5 5 3 3.	atherford. Solids Contritom Equi 175 Desa 175 Cent 175 Bulk In Units Drill Pipe Thread 5IF Safety In Descripetings with both	ol Information pment Usage ander: 0 rifuge 1: 12 (inventory Beginning 9,123 Inventory DP Size Information ption h crews. Makin	(Hrs): De Solids F Us Jo	ed bints HA. Tripp	Received Weight	d (On Hance 9,1	23	Net
Equipment Pro Location Cond Transport: Screen Sizes: Shaker No Shaker No Shaker No Shaker No Meetings/Drills Safety First Aid Treat	Joints Joints Tin	None to region of the control of the	eport new 3.5" ddle 1 175 175 175 175 0 min Pre Medica	Middle 2 175 175 175 175 Grade 135	2 Bo 5 5 5 3 3.	atherford. Solids Contritom Equi 175 Desa 175 Cent 175 Bulk In Units Drill Pipe Thread 5IF Safety In Descripetings with both	ol Information pment Usage ander: 0 rifuge 1: 12 (inventory Beginning 9,123 Inventory DP Size Information otion	(Hrs): De Solids F Us Jo	ed bints HA. Tripp	Received Weight	d	On Hance 9,1	23	Net
Equipment Pro Location Cond Transport: Screen Sizes: Shaker No Shaker No Shaker No Shaker No Meetings/Drills Safety First Aid Treat Accident Desc	Joints Joints Tin	None to region of the control of the	eport new 3.5" ddle 1 175 175 175 175 O min Pre Medica eport.	Middle 2 175 175 175 Grade 135	2 Bo 5 5 5 3 3.	atherford. Solids Contritom Equi 175 Desa 175 Cent 175 Bulk In Units Drill Pipe Thread 5IF Safety In Descripetings with both	ol Information pment Usage ander: 0 rifuge 1: 12 (inventory Beginning 9,123 Inventory DP Size Information ption h crews. Makin	(Hrs): De Solids F Us Jo	ed bints HA. Tripp	Received Weight	d (On Hance 9,1	23	Net
Equipment Pro Location Cond Transport: Screen Sizes: Shaker No Shaker No Shaker No Shaker No Meetings/Drills Safety First Aid Treat	Joints Joints Tin	None to region of the control of the	eport new 3.5" ddle 1 175 175 175 175 O min Pre Medica eport.	Middle 2 175 175 175 Grade 135	2 Bo 5 5 5 3 3.	atherford. Solids Contritom Equi 175 Desa 175 Cent 175 Bulk In Units Drill Pipe Thread 5IF Safety In Descripetings with bot	ol Information pment Usage ander: 0 rifuge 1: 12 (conventory Beginning 9,123 Inventory DP Size Information potion h crews. Makin Lost Time In	(Hrs): De Solids F Us Jo	ed bints HA. Tripp	Received Weight	d (On Hance 9,1	23	Net
Equipment Pro Location Cond Transport: Screen Sizes: Shaker No Shaker No Shaker No Shaker No Meetings/Drills Safety First Aid Treat Accident Desc	Joints Joints Tin	None to region of the control of the	eport new 3.5" ddle 1 175 175 175 175 O min Pre Medica eport.	Middle 2 175 175 175 Grade 135	2 Bo 5 5 5 3 3.	atherford. Solids Contritom Equi 175 Desa 175 Cent 175 Bulk In Units Drill Pipe Thread 5IF Safety In Descripetings with bot	ol Information pment Usage ander: 0 rifuge 1: 12 (inventory Beginning 9,123 Inventory DP Size Information ption h crews. Makin	(Hrs): De Solids F Us Jo	ed bints HA. Tripp	Received Weight	d (On Hance 9,1	23	Net
Equipment Pro Location Cond Transport: Screen Sizes: Shaker No Shaker No Shaker No Shaker No Meetings/Drills Safety First Aid Treat Accident Desc BOP Test	Joints Joints Tin ments:	None to region of the control of the	eport new 3.5" ddle 1 175 175 175 175 O min Pre Medica eport.	Middle 2 175 175 175 Grade 135	2 Bo 5 5 5 3 3.	atherford. Solids Contritom Equi 175 Desa 175 Cent 175 Bulk In Units Drill Pipe Thread 5IF Safety In Descripetings with bot	ol Information pment Usage ander: 0 rifuge 1: 12 (conventory Beginning 9,123 Inventory DP Size Information potion h crews. Makin Lost Time In	(Hrs): De Solids F Us Jo	ed bints HA. Tripp	Received Weight	d (On Hance 9,1	23	Net
Equipment Pro Location Cond Transport: Screen Sizes: Shaker No Shaker No Shaker No Shaker No Meetings/Drills Safety First Aid Treat Accident Desc	Joints Joints Tin ments: ription:	None to re Good. Received Top Mi 175 175 175 175 em Type Weig 117 ne 60 Two 30 0 None to re Crown	eport new 3.5" ddle 1 175 175 175 175 O min Pre Medica eport.	Middle 2 175 175 175 Grade 135	2 Bo 5 5 5 3 3.	atherford. Solids Contritom Equi 175 Desa 175 Cent 175 Bulk In Units Drill Pipe Thread 5IF Safety In Descripetings with bot	ol Informatio pment Usage ander: 0 rifuge 1: 12 (inventory Beginning 9,123 Inventory DP Size formation btion h crews. Makin Lost Time In	(Hrs): De Solids F Us Jo	ed bints HA. Tripp	Received Weight	d (On Hance 9,1	23	Net



Toolpusher:

Daily Drilling Report

Geothermal Resource Group, Inc.

Well Name: 78B-32

Well ID: Forge 78B-32

Field: UTAHFORGE

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

Report No: 33							Report For	[·] 29-Jul-21
Operator:	University of Utah	Rig: Fro	ontier Rig 16	6 Spud Date:	28-Jun-21	Daily Cost / M	ud (\$):	
Measured Depth (ft	9500	Last Casing: 7.	000 at 8,509	9 Wellbore : Ori	ginal Wellbore	AFE No.	AFE (\$)	Actual (\$)
Vertical Depth (ft):	9497	Next Casing:		RKB Elevation (ft)	: 30.40			
Proposed TD (ft):	9500	Last BOP Test:	27-Jul-2	1 Job Reference RK	(B (ft):			
Hole Made (ft) / Hrs	550 / 19.0	Next BOP Test:	24-Jul-2	1 Working Interest:		Totals:		
Average ROP (ft/hr): 28.95	5		LOT (lbs/gal):	15.00	Well Cost (\$):		
Drilling Days (act./p	olan): 33/21 F	lat Days (act./plan)	: 0/9	Total Days (act./pla	n): 33/30	Days On Loca	ition:	33
Pers/Hrs: Opera	tor: 3 / 36 C	Contractor:	14 / 168	Service:	3 / 36 Other:	3 / 36	Total:	23 / 276

Safety Summary: No incidents or events reported. Conducted Crown Check, Safety Meeting.

Current Operations: Rigged up and ran Triple-Combo. Logged up from 9532' to 8530' wire line depth. Max BHT was 416 F. POH with logging

tools and rigged down logging equipment.

Tripped in the hole with 5-3/4" slick assembly to 5,000' at report time.

Planned Operations: Trip in the hole to 6,000'.

Lay out 3.5" drill pipe to BHA.

Trip in the hole with remaining drill pipe and lay out same.

Lay out BHA.

Nipple down 7-1/16" 10K BOP's. Steve Caldwell , Justin Bristol

Wellsite Supervisors: Virgil Welch , Brian Gresham Tel No.: 7132807438

Operations Summary											
То	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod						
0:30	0.50	8,995	3-2-3	Drilled 5-3/4" hole from 8,950' to 8,995'.							
1:00	0.50	9,031	3-2-3	Slide Drilled 5-3/4" from 8,995' to 9,031'.							
2:00	1.00	9,184	3-2-3	Drilled 5-3/4" hole from 9,031' to 9,184'.							
3:00	1.00	9,225	3-2-3	Slide Drilled 5-3/4" from 9,184' to 9,225'.							
4:00	1.00	9,225	3-2-3	Drilled 5-3/4" hole from 9,225' to 9,373'.							
5:00	1.00	9,225	3-2-3	Slide Drilled 5-3/4" from 9,373' to 9,406'.							
6:00	1.00	9,225	3-2-3	Drilled 5-3/4" hole from 9,406' to 9,500'.							
7:00	1.00	9,225	3-5-1	Circulated hole clean at TD.							
12:00	5.00	9,225	3-6-4	Tripped out of the hole from 9,500' to BHA. Laid down directional tools.							
13:00	1.00	9,225	3-34-4	Lay down all directional tools							
13:30	0.50	9,225	SERV	Serviced Rig.							
14:00	0.50	9,225	3-6-1	Tripped in the hole w/ same bit, BS w/ a float and all DCS							
17:30	3.50	9,225	3-6-3	RIH filling pipe @ 4,000' 8,000' and bottom							
20:00	2.50	9,225	3-5-1	Circulated to cool well bore while waiting on loggers.							
0:00	4.00	9,225	3-6-4	Tripped out of the hole from 9,500' to surface with no issues.							
	0:30 1:00 2:00 3:00 4:00 5:00 6:00 7:00 12:00 13:30 14:00 17:30 20:00	0:30 0.50 1:00 0.50 2:00 1.00 3:00 1.00 4:00 1.00 5:00 1.00 7:00 1.00 12:00 5.00 13:00 1.00 13:30 0.50 14:00 0.50 17:30 3.50 20:00 2.50	0:30 0.50 8,995 1:00 0.50 9,031 2:00 1.00 9,184 3:00 1.00 9,225 4:00 1.00 9,225 5:00 1.00 9,225 6:00 1.00 9,225 7:00 1.00 9,225 12:00 5.00 9,225 13:00 1.00 9,225 13:30 0.50 9,225 14:00 0.50 9,225 17:30 3.50 9,225 20:00 2.50 9,225	0:30 0.50 8,995 3-2-3 1:00 0.50 9,031 3-2-3 2:00 1.00 9,184 3-2-3 3:00 1.00 9,225 3-2-3 4:00 1.00 9,225 3-2-3 5:00 1.00 9,225 3-2-3 6:00 1.00 9,225 3-2-3 7:00 1.00 9,225 3-5-1 12:00 5.00 9,225 3-6-4 13:00 1.00 9,225 3-34-4 13:30 0.50 9,225 SERV 14:00 0.50 9,225 3-6-1 17:30 3.50 9,225 3-6-3 20:00 2.50 9,225 3-5-1	To Elapsed End MD(ft) Code Operations Description 0:30 0.50 8,995 3-2-3 Drilled 5-3/4" hole from 8,950' to 8,995'. 1:00 0.50 9,031 3-2-3 Slide Drilled 5-3/4" from 8,995' to 9,031'. 2:00 1.00 9,184 3-2-3 Drilled 5-3/4" hole from 9,031' to 9,184'. 3:00 1.00 9,225 3-2-3 Slide Drilled 5-3/4" from 9,184' to 9,225'. 4:00 1.00 9,225 3-2-3 Drilled 5-3/4" hole from 9,225' to 9,373'. 5:00 1.00 9,225 3-2-3 Slide Drilled 5-3/4" from 9,373' to 9,406'. 6:00 1.00 9,225 3-2-3 Drilled 5-3/4" hole from 9,406' to 9,500'. 7:00 1.00 9,225 3-2-3 Drilled 5-3/4" hole from 9,406' to 9,500'. 7:00 1.00 9,225 3-5-1 Circulated hole clean at TD. 12:00 5.00 9,225 3-6-4 Tripped out of the hole from 9,500' to BHA. Laid down directional tools. 13:30 0.50 9,225 SERV Serviced Rig. 14:00						

Management Summary

Drilled 5-3/4" hole from 8,950' to 9,500'.

Circulated hole clean at TD.

Tripped out of the hole from 9,500' to BHA.

Laid down directional tools.

Serviced Rig.

Tripped in the hole with 5-3/4" PDC bit to 9,500'.

Circulated to cool well bore while waiting on loggers.

Tripped out of the hole from 9,500' to surface.

Comments

Slide Drilled 5-3/4" from 8,995' to 9,031'.

Slide Drilled 5-3/4" from 9,184' to 9,225'.

Slide Drilled 5-3/4" from 9,373' to 9,406'.



Geothermal Resource Group, Inc.

Well Name: 78B-32

Well ID: Forge 78B-32

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

Field: UTAHFORGE

Report No:	33								2 10WII		.9			ort Fo		
					Casing	/Tubula	r Inform	ation								
Туре	Size (ins)	Top MD (ft)	Top T (ft)		Sottom MD (ft)		TVD	Hole Section	OH D		Nom. V (lbs	_		ninal ade		OT s/gal)
FULL	16.000	0			416	•		SURI		2.000	•	65		K-55	Ì	0.6
FULL	11.750	0			2,990)		INT	1 1	4.750		54		J-55		11.7
FULL	7.000	0		0	8,509) (3,507	PROD) 1	0.625		41	Т	-110S		15.0
						ud Infor	mation			·						
					%						Gel			Tem	•	Mud
			-		Oil Wate			CI C	a CaC	I 10s	10r	n 3	0m	In	Out	Loss
	:15 at Depth															
8.30 26	0 1	0 1	10	2	0 98		-		20		1	1	1	84	97	
	Itam Dagari	intion		Ottv		d Cons	umables		m Dogori	ntion				14.,	<u> </u>	ost
Barite - 100#	Item Descri	ipuon		Qty.	. C		Bicarb -		m Descri	puon				lty. 9	<u> </u>	บรเ
caustic Soda					2			ring - EA	СН					1		
Other - EACH					1		pallets -		011					2		
perdiem - OT					1		polyvis -							3		
•	oncentrate - 5	5GAI			2		polyvio	OOME								
1011100000		, o, i.e		В	Bit/BHA/W	/orkstri	na Infor	mation								
			Depth	This		R.O.P.				Mud	Pı	ump				
No Run Ma	ake Mode	l Diam	In	Dist	Hrs A	vg Ma	x WOB	RPM 1	Torque	Wt Fl	ow Pr	ess .	J. Vel	P. Drp	ННР	JIF
17 1 REE	D TKC63	5.750	8555	945	9.5 9	9.5 230	.0 30	30	5	8	300 2	760				
Jets:			Out:	(Grade: Cu	tter:	/ D	ull: /	/ W	ear:	Brgs:	G	ige:		Pull:	
BHA - No. 22	2 - BIT, MMT	R, 2 MONEL	, OTHER	, MONE	L, 30 DC =	: 1020.17										
					Dril	ling Par	ameter	S								
Depth (ROP (ft/hr)		WOB	(lbs)		RPM		Torque			•	gals/m	•		sure
From		Avg Ma		Avg	Max	Avg	M		Avg	Max		Avg	_	lax		si)
8,950	9,500		30.0	30	32		30	50	5		6	290)	300	2	2,760
	ocity: Drill (d 5-3/4" from	612.0		Pipe:	327.0										
Comments:	Slide Drille	d 5-3/4" from d 5-3/4" from d 5-3/4" from	9,184' to	9,225'.												
			0,0.0.10		iscellane	ous Dril	ling Pa	rameter	'S							
Hook Loads	(lbs):	Off Bottom F	Rotate:		Pick Up:		Slack			Drag Av	g/Max:	:	5 <i>l</i> 1	10		
Slow Circula	` '										•					
	np 1:	30 spm	1	10 psi	4	l0 spm		215 psi		50 spm		31	l1 psi			
Pun	np 2:	30 spm	1	10 psi	4	l0 spm		215 psi		50 spm		31	l1 psi			
Pun	np 3:	30 spm	1	10 psi	4	l0 spm		215 psi		50 spm		31	l1 psi			
Hours on Bl	IA:	Since Insp	pection:	10.5	Total:	10.5	Jars:	0								
Hours on Ca	sing/Liner:	Rotating:	1	0.5/6		Tripping	:	24 <i>l</i>		Wear	Bushir	ng Ins	talled			
					Mud	Log Inf	ormatic	n								
Depth		TVD (ft)			(Units)		Gas		Drilling			lud	Shale		RO	
From		om To		/g N	lax at D	epth C	onnect.	Trip	Exp.	Pres	s De	ens.	Dens	. Sh	ale	Sand
8,950		8,947 9,4	497													
Formation N																
Lithology:	100%	Granodiorite					4*									
					R	ig Infor	mation									
Eaulines	Juahlana - '															
Equipment I		None to repor														
Equipment I Location Co Transport:	ndition: (None to repor Good. None to repor														



Geothermal Resource Group, Inc.

Well ID: Forge 78B-32

Field: UTAHFORGE

Well Name: 78B-32 Sect: 32 Town: 26 Rng: 9W County: Beaver State: UT

Report No: 33 Report For 29-Jul-21													
Solids Control Information													
Screen Sizes:	Тор	Middle 1	Middle 2	Bottom	Equip	ment Usage (Hi	rs):						
Shaker No 1:	175	175	175	175	Desa	nder: 0	Desilter:	0	Degas	ser: 0			
Shaker No 2:	175	175	175	175	Centr	ifuge 1: 12 (Sol	ids Remova	l)	Centri	ifuge 2: 12 (So	ids Removal)		
Shaker No 3:	175	175	175	175									
Bulk Inventory													
Item Type Units Beginning Used Received On Hand Net													
Rig Fuel 8,323 8,323													
				Dril	l Pipe	Inventory							
DP Size Jo	ints \	Veight	Grade	Threa	ıd	DP Size	Joints	Weig	ht	Grade	Thread		
3.5"	317	13.3	S-135	3.5IF									
				Saf	ety In	ormation							
Meetings/Drills	Time				escrip	tion							
Safety	60 Tw	o 30 min Pi	re tour safet	y meetings w	ith both	າ crews. Making ເ	ıp BHA. Trip	ping in th	ne hole.				
First Aid Treatmen	nts:	0 Medic	al Treatme	nts:	0	Lost Time Incid	ents:	0	Days S	Since LTI:			
Accident Descript	ion: None	to report.											
■ BOP Test	✓ Cro	wnamatic	Check										
				Wea	ther Ir	formation							
Sky Condition:	Partly Clou	ıdy				Visibility:	10)					
Air Temperature:	70 degF					Bar. Pressure:	29.89)					
Wind Speed/Dir:	5 / SE					Wind Gusts:	2	2					



Geothermal Resource Group, Inc.

Well Name: 78B-32

Well ID: Forge 78B-32

Field: UTAHFORGE

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

Report No: 34								Report For	30-Jul-21
Operator:	University of Utah	Rig: F	rontier Rig 1	6 Spud Date:	28-	Jun-21	Daily Cost / M	ud (\$):	
Measured Depth (ft)	9500	Last Casing:	7.000 at 8,50	9 Wellbore:	Original W	/ellbore	AFE No.	AFE (\$)	Actual (\$)
Vertical Depth (ft):	9497	Next Casing:		RKB Elevation	(ft):	30.40			
Proposed TD (ft):	9500	Last BOP Test:	27-Jul-2	1 Job Reference	RKB (ft):				
Hole Made (ft) / Hrs:	0 / 3.75	Next BOP Test:	24-Jul-2	1 Working Intere	st:		Totals:		
Average ROP (ft/hr)	: 0.0			LOT (lbs/gal):		15.00	Well Cost (\$):		
Drilling Days (act./p	lan): 34/21 F	lat Days (act./plar	n): 0/9	Total Days (act.	plan):	34/30	Days On Loca	ition:	34
Pers/Hrs: Opera	tor: 3/36 C	ontractor:	14 / 168	Service:	3 / 36	Other:	2 / 24	Total:	22 / 264

Safety Summary: No incidents or events reported. Conducted Crown Check, Safety Meeting.

Current Operations: Nipple down 7-1/16" 10K BOP's. Install master valve with 3" 10k spool on top.

Planned Operations: Clean pits and release rig. Toolpusher: Steve Caldwell , Justin Bristol

Wellsite Supervisors: Virgil Welch, Brian Gresham Tel No.: 7132807438

	Operations Summary										
From	То	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod					
0:00	4:00	4.00	9,225	LOG	Rigged up and run Triple-Combo / Max BHT was 416 F / Logging upwards Note: worked past ledge at 8,555'.						
4:00	6:00	2.00	9,225	3-6-3	Tripped in the hole with 5-3/4" slick assembly to 5,000'.						
6:00	10:30	4.50	9,225	3-34-2	Laid down 3.5" drill pipe to top of drill collars.						
10:30	12:15	1.75	9,225	3-6-3	Tripped in the hole with 3-1/2" drill pipe and slick assembly to 5,500'.						
12:15	15:30	3.25	9,225	3-34-2	Laid down 3-1/2" drill pipe to the top of the drill collars.						
15:30	18:00	2.50	9,225	3-34-4	Laid down 4-3/4" drill collars.						
18:00	19:00	1.00	9,225	SAFE	Shut down and test night tour for Covid-19 due to 3 guys on daylights testing positi Night driller tested positive for Covid-19. Resume operations.	ive.					
19:00	0:00	5.00	9,225	6-99	Nippled down 7-1/16" 10K BOP's.						

Management Summary

Rigged up and run Triple-Combo / Max BHT was 416 F.

Tripped in the hole with 5-3/4" slick assembly to 5,000'.

Laid down 3.5" drill pipe to top of drill collars.

Tripped in the hole with 3-1/2" drill pipe and slick assembly to 5,500'.

Laid down 3-1/2" drill pipe to the top of the drill collars.

Laid down 4-3/4" drill collars.

Shut down and tested night tour for Covid-19 due to 3 guys on daylights testing positive. Night driller tested positive for Covid-19. Resume operations shorthanded.

Nipple down 7-1/16" 10K BOP's.

Comments

Shorthanded due to 4 of Frontier's employees testing positive for Covid-19: 3 on daylights and one on nights along with mud engineer for a total of 5 people.

GRG site supervisor notified service contractors that had been on location over the past week of the Covid-19 positive test on the rig site.

Weatherized top section of casing by poring 8 gals of vegetable oil down 7" casing. 7" well head was noticed to be down 8" and setting on top of the 11.75" well head.

	Casing/Tubular Information												
	Size	Top MD	Top TVD	Bottom MD	Bottom TVD	Hole	OH Diam.	Nom. Wgt.	Nominal	LOT			
Type	(ins)	(ft)	(ft)	(ft)	(ft)	Section	(ins)	(lbs)	Grade	(lbs/gal)			
FULL	16.000	0		416		SURF	22.000	65	K-55	0.61			
FULL	11.750	0		2,990		INT1	14.750	54	J-55	11.70			
FULL	7.000	0	0	8,509	8,507	PROD	10.625	41	T-110S	15.00			

Mud Consumables										
Item Description	Qty.	Cost	Qty.	Cost						
Barite - 100#SK	50		Engineering - EACH	1						
Other - EACH	1		pallets - OTHER	2						
perdiem - OTHER	1		Trucking - EACH	1						



Report No: 34

Daily Drilling Report

Geothermal Resource Group, Inc. Well Name: 78B-32

Well ID: Forge 78B-32

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

Field: UTAHFORGE Report For 30-Jul-21

		·			E	Bit/BHA	\/Work	string	g Inforn	nation								
				Depth		Run).P.				Mı	ıd	Pump				
No Run I	Make	Model	l Diam	In	Dist	Hrs	Avg	Max	WOB	RPM	Torque	Wt	Flow	Press	J. Vel	P. Drp	HHP	JII
17 1 RE	EED	TKC63	5.750	8555	945	9.5	130.0		30	30		8	300		291	627	110	37
Jets : 12 1				Out : 9		Grade:			3 Du	II: WT	/CT \	Wear: S	Brg	s: X	Gge : 0		Pull: T	D
BHA - No. 2	22 - B	BIT, MMTF	R, 2 MONE	L, OTHE	R, MONE	EL, 30 D	C = 102	0.17										
					M	iscella	neous	Drilli	ng Para	mete	rs							
Hook Load	ds (lbs): (Off Bottom	n Rotate:		Pick l	Jp:		Slack O	ff:		Drag A	Avg/Ma	ax:	1			
Slow Circu	ulation	Data:																
Pι	ump 1:		30 spm		110 psi		40 sp	m		15 psi		50 sp	m	3	311 psi			
Pι	ump 2:		30 spm		110 psi		40 sp	m	2	15 psi		50 sp	m	3	311 psi			
Pι	ump 3:		30 spm		110 psi		40 sp	m	2	15 psi		50 sp	m	3	311 psi			
Hours on BHA: Since Inspec		spection	: 10.	5 To 1	tal:	10.5	Jars:	C)									
Hours on (Casing	J/Liner:	Rotating	j:	10.5 / 6		Trip	ping:	40) /		Wea	ır Busl	ning In	stalled			
							Survey	Infor	mation									
	Surv	•	leas.								ertical		Coord	linates	;			
	Тур		epth	Inc.	Azimut		TVD	_	Closure	Se	ection		-S		-W	D.L		
	MWE		3,938.0	2.76	282		8,935.9	_	54.6		-28.6	S	28.6	V	/ 46.6		937	
	MWE		9,033.0	1.05	250		9,030.9	_	57.1		-28.3		28.3	V	/ 49.6		056	
	MWE		9,127.0	2.40	258		9,124.8	_	59.9		-29.0		29.0	V	/ 52.4		457	
	MWE		9,222.0	1.31	284		9,219.8	_	62.6		-29.1		29.1	V	/ 55.4		416	
	MWE		9,317.0	3.73	270		9,314.7	_	66.1		-28.9		28.9	V	/ 59.5		614	
	MWE		9,412.0	3.96	251	.0	9,409.5	5	72.2		-29.9	S	29.9	V	/ 65.7	1.3	360	
	MWE	9	9,444.0	3.91	235	5.5	9,441.4	l	74.4		-30.9	S	30.9	V	/ 67.6	3.	322	
	MWE	9	9,500.0	3.91	235	5.5	9,497.3	3	78.1		-33.1	S	33.1	V	70.8	0.0	000	
							Rig Ir	nform	ation									
Equipment	t Probl	lems: N	one to repo	ort.														
Location C	Conditi	i on: G	iood.															
Transport:		N	one to repo	ort.														
						Solid	ds Con	trol Ir	nformat	ion								
			o Midd	lle 1 Mi	ddle 2	Bottom	Eq	uipme	ent Usag	e (Hrs):							
Screen Siz	zes:	Top											De	gasse	er: 0			
Screen Siz Shaker		-	175	175	175	175		sande	r: 0		Desilter	: 0						
	No 1:	1		175 175	175 175		De	sande			Desilter	: 0						
Shaker	No 1: No 2:	1	175			175	De	sande			Desilter	: 0						
Shaker Shaker	No 1: No 2:	1	175	175	175	175 175	5 De	sande	er: 0		Desilter	: 0						
Shaker Shaker	No 1: No 2:	1	175 175	175	175	175 175	De Bulk	Inven	er: 0		Desilter Jsed		ceived	l	On Han	d	Net	
Shaker Shaker Shaker	No 1: No 2:	1 1	175 175	175	175	175 175 175 Uni	De De Bulk	Inven Beg	ntory inning 7,532	l		Re	!	l		d 332	Net	
Shaker Shaker Shaker	No 1: No 2:	1 1	175 175 Type	175 175	175	175 175 175 Uni	De De Bulk	Inven Beg	er: 0	l	Jsed	Re	!	I			Net	
Shaker Shaker Shaker	No 1: No 2: No 3:	1 1	175 175	175 175	175	175 175 175 Uni	De De Bulk	Inven Beg	ntory inning 7,532	L	Jsed	Re	!				Net	
Shaker Shaker Shaker Rig Fuel	No 1: No 2: No 3:	1 1 1 Item	175 175 Type Weight	175 175	175 175	175 175 175 Uni	Bulk	Inven Beg	ntory inning 7,532 ventory	L	Jsed 1,20	Re	ceived		6,			
Shaker Shaker Shaker Rig Fuel	No 1: No 2: No 3:	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	175 175 Type Weight	175 175	175 175	175 175 175 Uni E Th	De De Bulk Bulk ts Drill Pi	Inven Beg	ntory inning 7,532 ventory	L	Jsed 1,20	Re	ceived		6,			
Shaker Shaker Shaker Rig Fuel DP Size	No 1: No 2: No 3:	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	175 175 Type Weight	175 175	175 175	175 175 175 Uni E Th	Bulkits Drill Piperad Safety	Inven Beg	ntory inning 7,532 ventory DP Size	L	Jsed 1,20	Re	ceived		6,			
Shaker Shaker Shaker Rig Fuel DP Size 3.5	No 1: No 2: No 3:	Item -	175 175 Type Weight	175 175 : G 3.3 S-13	175 175	178 178 178 Uni	Bulkits Drill Piperad Safety Description	Beg De Inv	er: 0 intory inning 7,532 rentory DP Size mation	L	Jsed 1,200 Joints	Re 0	ceived		6, Grade	332	Thread	i
Shaker Shaker Shaker Rig Fuel DP Size 3.5 Meetings/E Safety	No 1: No 2: No 3:	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Type Weight 13	175 175 : G 3.3 S-13	175 175 Grade 5	175 175 175 Uni Tr 3.5IF	Bulkits Prill Piperad Safety Descips with be	De Inven	er: 0 intory inning 7,532 rentory DP Size mation	L I	Jsed 1,200 Joints	Re 0	ceived	ill colla	6, Grade	332	Thread	i
Shaker Shaker Shaker Rig Fuel DP Size 3.5 Meetings/E Safety First Aid T	No 1: No 2: No 3: Jorills	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Type Weight 13	175 175 3.3 S-13	175 175 Grade 5	175 175 175 Uni Tr 3.5IF	Bulkits Prill Piperad Safety Descips with be	De Inven	ntory inning 7,532 ventory DP Size mation news. Lay	L I	Jsed 1,200 Joints	Re 0	ceived	ill colla	6, Grade rs. Nipp	332	Thread	i
Shaker Shaker Shaker Rig Fuel DP Size 3.5 Meetings/E Safety First Aid T	No 1: No 2: No 3: Jorills Creatmo	Item - Item - Ioints 317 Time 60 ents: otion: N	Type Weight 13 Two 30 m 0 M	175 175 3.3 S-13 nin Pre to Medical T	175 175 irade 5 ur safety reatment	175 175 175 Uni Tr 3.5IF	Bulkits Prill Piperad Safety Descips with be	De Inven	ntory inning 7,532 ventory DP Size mation news. Lay	L I	Jsed 1,200 Joints	Re 0	ceived	ill colla	6, Grade rs. Nipp	332	Thread	i
Shaker Shaker Shaker Rig Fuel DP Size 3.5 Meetings/E Safety First Aid T Accident E	No 1: No 2: No 3: Jorills Creatmo	Item - Item - Ioints 317 Time 60 ents: otion: N	Type Weight 13 Two 30 m 0 M one to repo	175 175 3.3 S-13 nin Pre to Medical T	175 175 irade 5 ur safety reatment	175 175 175 Uni	Bulk ts Drill Pip pread Safety Desc ps with b	Beg De Invention Information Control C	ntory inning 7,532 ventory DP Size mation news. Lay	ing out	Jsed 1,200 Joints	Re 0	ceived	ill colla	6, Grade rs. Nipp	332	Thread	i
Shaker Shaker Shaker Shaker Rig Fuel DP Size 3.5 Meetings/I Safety First Aid T Accident I BOP Te	No 1: No 2: No 3: Drills Treatme	Item - Item - Ioints 317 Time 60 ents: otion: N	Type Weight 13 Two 30 m 0 M one to repo	175 175 3.3 S-13 nin Pre to Medical T	175 175 irade 5 ur safety reatment	175 175 175 Uni	Bulk ts Drill Pip pread Safety Desc ps with b	Invention Beg	er: 0 intory inning 7,532 rentory DP Size mation n ews. Lay	ing out	Jsed 1,200 Joints drill pipents:	Re 0	ceived	ill colla	6, Grade rs. Nipp	332	Thread	i
Shaker Shaker Rig Fuel DP Size 3.5 Meetings/E Safety First Aid T Accident E BOP Te	No 1: No 2: No 3: Drills Treatmo	Item - Item -	Type Weight 13 Two 30 m 0 M one to repo	175 175 3.3 S-13 nin Pre to Medical T	175 175 irade 5 ur safety reatment	175 175 175 Uni	Bulk ts Drill Pip pread Safety Desc ps with b	Inven Beg De Inv Inforr ription oth cre D Los	er: 0 Intory Inning 7,532 Ventory DP Size Mation Interpolation Sews. Lay St Time I	ing out	Jsed 1,200 Joints drill pipents:	Reo W	ceived	ill colla	6, Grade rs. Nipp	332	Thread	i
Shaker Shaker Shaker Shaker Rig Fuel DP Size 3.5 Meetings/I Safety First Aid T Accident I BOP Te	PNo 1: No 2: No 3: No 3: Drills Drills Creatmo Descripest	Item	Type Weight 13 Two 30 m 0 M one to repo	175 175 3.3 S-13 nin Pre to Medical T	175 175 irade 5 ur safety reatment	175 175 175 Uni	Bulk ts Drill Pip pread Safety Desc ps with b	Invention Beg De Invention Information Control Control Via Ba	ntory inning 7,532 rentory DP Size mation n ews. Lay st Time I	ing out	Jsed 1,200 Joints drill pipents:	Reo W	ceived	ill colla	6, Grade rs. Nipp	332	Thread	i



Geothermal Resource Group, Inc.

Well Name: 78B-32

		Field: UT	AHFORG	E			Sect: 32 Town:	26 Rng: 9W C	ounty: Beaver	State: UT		
Report No	o: 35	,							Report Fo	r 31-Jul-21		
Operator:	University of Utah Rig:				Frontier Rig 16	Spud Date:	28-Jun-2	1 Daily Cost / N	Daily Cost / Mud (\$):			
Measured D	Depth	(ft):	9500	Last Casing:	7.000 at 8,509	Wellbore:	Original Wellbo	re AFE No.	AFE (\$)	Actual (\$)		
Vertical Dep	pth (ft)):	9497	Next Casing:		RKB Elevati	on (ft): 30.4	0				
Proposed T	D (ft):		9500	Last BOP Tes	st: 27-Jul-2	Job Referen	ce RKB (ft):					
Hole Made	(ft) / H	rs:	0 / 0.0	Next BOP Tes	st: 24-Jul-21	Working Inte	erest:	Totals:				
Average RC	OP (ft/l	nr):				LOT (lbs/gal): 15.0	0 Well Cost (\$)				
Drilling Days (act./plan): 35/21 Flat Days (act./pla					olan): 0/9	Total Days (ad	ct./plan): 35/3	0 Days On Loc	ation:	35		
Pers/Hrs:	Ope	rator:	0/0 C	ontractor:	0/0	Service:	0 / 0 Othe	r: 0/0	Total:	0/0		
Safety Sum	mary:	No incid	ents or eve	nts reported.								
Current Op	eratio	ns: Ri	gging down	. FINAL REPO	RT.							
Planned Op	eratio	ns: M	ove rig to ya	ard								
Toolpusher	:	St	eve Caldwe	ell , Justin Bristo	ol							
Wellsite Su	pervis	ors: Vi	rgil Welch ,	Brian Gresham	l			Tel No.: 71	32807438			
					Operati	ons Summar	у					
From	То	Elapse	d End MI	D(ft) Code		C	perations Descri	ption		Non-Prod		
0:00	6:00	6.0	00 9,	225 6-99	Continued nip	pling down 7-1	/16" 10K BOP's. In	stalled master va	lve with 3" 10k	spool		
					on top.	rized top coetic	on of casing by po	ing 9 gala of yag	atable oil down	7"		
					casing.	inzed top section	on or casing by por	ing 6 gais or veg	etable oil down	,		
6:00	0:00) 18.0	00 9,	225 OTHER		ads of rental eq	uipment 3.5" pipe,	loaded out 2 load	ls of cooling tow	ers		
					to drill cool, lo	aded out mud İ	ogging shack, load	led out centrifuge	tank, clean cell	ar		
							Rig released from	Day rate @ midn	ight on 7/31/201	2		
D: 1		10.4.100.0.4			Manage	ment Summa	ry					
Rig release	d on /	/31/2021 a	at midnight									
						omments						
			ad 6 negati	ve COVID test.	Early afternoon	on 8/1/2021 Fro	ontier decided to s	op the rig move a	and send everyo	ne home		
for 2 weeks	anu q	uarantine			Coolna/Tu	hular Inform	ntion .					
		Size	Top MD	Top TVD	Bottom MD Bo	bular Informa	Hole OH Dia	am. Nom. Wgt	. Nominal	LOT		
Type		ins)	(ft)	(ft)	(ft)		ection (ins		Grade	(lbs/gal)		
FULL		16.000	C)	416		SURF 22	.000 6	5 K-55	0.61		
FULL		11.750	C)	2,990		INT1 14	.750 5	4 J-55	11.70		
FULL		7.000	C	0	8,509	8,507	PROD 10	.625 4	S25 41 T-110S 15.0			
					Bit/BHA/Wor	kstring Inforr	nation					
BHA - No. 2	22 - E	IT, MMTR	, 2 MONEL	, OTHER, MON	IEL, 30 DC = 10	20.17						
					Rig I	nformation						
Equipment	Prob	lems:										
Location C	onditi	on:										
Transport:												
					Safety	Information						
First Aid T	reatm	ents:	Me	dical Treatme	nts:	Lost Time	Incidents:	Days Si	nce LTI:			
BOP Te	est		Crownama	tic Check								