Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 6 **Report For 01-Aug-17**

Operator:	University of Utah	**Rig:**	Kenai 10	**Spud Date:**	31-Jul-17	**Daily Cost / Mud ($):**			---
Measured Depth (ft):	342	**Drilling Days (act.):**	2	**Wellbore:**	Original Well Bore	**AFE No.**		**AFE ($)**	**Actual ($)**
Vertical Depth (ft):	342	**Drilling Days (plan):**	58	**RKB Elevation (ft):**	21.50	---		---	---
Proposed TD (ft):	7060	**Days On Location:**	6	**Last BOP Test:**		---		---	---
Hole Made (ft) / Hrs:	244 / 11.75	**Last Casing:**	13.375 at 338	**LOT (lbs/gal):**	11.90	**Totals:**		---	---
Average ROP (ft/hr):	20.77	**Next Casing:**	9.625 at 2,100	**Working Interest:**		**Well Cost ($):**			---

Pers/Hrs:	**Operator:**	2 / 48	**Contractor:**	12 / 288	**Service:**	6 / 120	**Other:**	0 / 0	**Total:**	20 / 456

SafetySummary: No incidents or events reported. 6 days since LTI. Conducted Safety Meeting.

Current Operations: 00:00 to 06:00 hrs: RIH with stab in sub on 4" DP. Made up cement head. Stabbed in and circulated. Held safety meeting. Resource Cementing cemented casing as follows. Pumped 20 bbls water ahead, 30 bbls sepiolite spacer, 5 bbl water, 13 bbl Sodium Silicate, 5 bbl water, 80 bbl lead cement at 13 ppg and 43 bbl tail cement at 15 ppg. Dropped plug and attempted to displace. Pressured to 3000 psi. unable to displace DP. CIP @05:00 hrs. POH dry. Found plug stuck in cement head.

Planned Operations: Wait on cement. Attempt to locate top of cement. Cut off casing and install well head. Nipple up BOP.

Toolpusher: Cal Sutton, Philip Hoffman

Wellsite Supervisors: Virgil Welch, Rod Bray **Tel No.:**

Operations Summary

From	To	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	11:00	11.00	313	3-2-1	Drilled 17-1/2 hole from 98 ' to 313' making drill collar connections	
11:00	12:00	1.00	313	3-10	Circulate and survey @ 327.5' Inc: 0.3 deg.	
12:00	12:45	0.75	313	3-2-1	Drilled 17-5" hole from 313' to 342' (TD).	
12:45	13:15	0.50	342	4-5-1	Circulate hole clean.	
13:15	14:15	1.00	342	4-27	Wipe hole and encountered no fill.	
14:15	15:15	1.00	342	4-5-1	Circulate hole clean and sweep hole.	
15:15	16:15	1.00	342	4-6-4	POH.	
16:15	18:00	1.75	342	4-34-4	Lay down shock sub, 3 each 17.5" stabilizers and the 17.5" bit.	
18:00	19:30	1.50	342	4-34-1	Picked up and stood back 3 stands of 4" drill pipe for the stab-in job.	
19:30	0:00	4.50	342	4-12-1	Held safety meeting. Rigged up to run casing. Made up shoe and stab in float collar. Ran 13-3/8" 54.5#, N80, BTC casing. 9 joints total length = 337.51. Rigged down casing tongs.	

Management Summary

Drilled 17-1/2" hole from 98' to 313' making drill collar connections. Circulate and survey @ 278' .3 deg. Drilled 17-5" hole from 313' to 342' (TD) with full mud returns. Circulate hole clean. Wipe hole and encountered no fill. POH. Rigged up to run casing. Ran 13-3/8" casing to 337'. Rigged down casing tongs.

Casing/Tubular Information

Type	Size (ins)	Top MD (ft)	Top TVD (ft)	Bottom MD (ft)	Bottom TVD (ft)	Hole Section	OH Diam. (ins)	Nom. Wgt. (lbs)	Nominal Grade	LOT (lbs/gal)
FULL	20.000	0	0	84		COND		53		
FULL	13.375	0		338		SURF		55	N-80	11.90

Mud Information

	Dens.	Vis	PV	YP	Filt.	Cake	pH/ES	Solids	% Oil	% Water	% Sand	LGS	Cl	Ca	CaCl	Gels 10s	Gels 10m	Gels 30m	Temp In	Temp Out	Mud Loss
01-Aug-17 15:00 at Depth 342 ft Return Flow Line, Type: Spud Mud																					
	8.80	55	22	10	13.3	3	9	3	0	97	0.5		100	40		11	22		100	109	0.0

Comments: Added Micro C at 4 ppb

Mud Consumables

Item Description	Qty.	Cost	Item Description	Qty.	Cost
API Gel - 100#SK	10	---	Cotton Seed - 50#SK	2	---
Micro C - 50#SK	40	---	PacReg - 50#SK	1	---
Pallet Wrap - OTHER	1	---	Saw Dust - 50#SK	1	---
Soda Ash - 50#SK	1	---			

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 6 **Report For 01-Aug-17**

Bit/BHA/Workstring Information

No Run		Make	Model	Diam	Depth In	This Run Dist	Hrs	R.O.P. Avg	Max	WOB	RPM	Torque	Mud Wt	Flow	Pump Press	J. Vel	P. Drp	HHP	JIF
1	1	HC	X3A	17.500	84	259	12	21.6		10	80		9	736	1024	252	498	214	843

Jets: 18 18 24 **Out:** 342 **Grade:** **Cutter:** 2 / 2 **Dull:** NO / NO **Wear:** A **Brgs:** 2 **Gge:** 0 **Pull:** TD

BHA - No. 1 - BIT, NBS, DCM, STAB, SHOCK, 2 DC, STAB, 2 DC, JAR, 2 DC = 273.36

Drilling Parameters

Depth (ft) From	To	ROP (ft/hr) Avg	Max	WOB (lbs) Avg	Max	RPM Avg	Max	Torque (ft lbs) Avg	Max	Flow (gals/min) Avg	Max	Pressure (psi)
98	342			5	10	70	80			736		1,024

Annular Velocity: **Drill Collars:** 73.3 **Drill Pipe:** 62.2

Miscellaneous Drilling Parameters

Hook Loads (lbs): **Off Bottom Rotate:** 52,000 **Pick Up:** 52,000 **Slack Off:** 52,000 **Drag Avg/Max:** /

Hours on BHA: **Since Inspection:** 12 **Total:** 12 **Jars:**

Survey Information

Survey Type	Meas. Depth	Inc.	Azimuth	TVD	Closure	Vertical Section	Coordinates N-S	E-W	D.L.S.
MSS	278.0	0.30	20.6	278.0	0.7	0.7	N 0.7	E 0.3	0.108

Mud Log Information

Depth (ft) From	To	TVD (ft) From	To	Gas (Units) Avg	Max	at Depth	Gas Connect.	Trip	Drilling Exp.	Pore Press	Mud Dens.	Shale Dens.	ROP Shale	Sand
98	340	98	340											

Formation Name: Alluvium

Lithology:

Rig Information

Equipment Problems:

Location Condition:

Transport:

Solids Control Information

Screen Sizes:	Top	Middle 1	Middle 2	Bottom	Equipment Usage (Hrs):	
Shaker No 1:	89	89	89		Desander:	11.5
Shaker No 2:	89	89	89			
Shaker No 3:	215	215	215			

Drill Pipe Inventory

DP Size	Joints	Weight	Grade	Thread	DP Size	Joints	Weight	Grade	Thread
4 TSDS	240		G-105	TSDS40	4 HWDP	15			3.5FH

Safety Information

Meetings/Drills	Time	Description
Safety	15	Held safety meting with both crews.

First Aid Treatments: **Medical Treatments:** **Lost Time Incidents:** **Days Since LTI:** 6

☐ **BOP Test** ☐ **Crownamatic Check**

Weather Information

Sky Condition: Sunny to partly cloudy **Visibility:** 10

Air Temperature: 96 degF **Bar. Pressure:**

Wind Speed/Dir: / **Wind Gusts:**

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
FLIFT	36K forklift		AHERN	32a1	---	27-Jul-17	
Notes:	Charged as dayrate						
LIGHTS	2 X Light towers		BnL	43e	---	27-Jul-17	

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 6

Report For 01-Aug-17

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
OTHER	2 x Trailers		BnL	43m	---	27-Jul-17	
OTHER	Mud cleaner		NOVB	32a1	---	31-Jul-17	
Notes:	Charged as dayrate						
OTHER	Automatic driller		NOVT	38d	---	31-Jul-17	
			Total Daily Rental Cost $:		---		

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 7 **Report For 02-Aug-17**

Operator:	University of Utah	**Rig:**	Kenai 10	**Spud Date:**	31-Jul-17	**Daily Cost / Mud ($):**			---
Measured Depth (ft):	342	**Drilling Days (act.):**	3	**Wellbore:**	Original Well Bore	**AFE No.**		**AFE ($)**	**Actual ($)**
Vertical Depth (ft):	342	**Drilling Days (plan):**	58	**RKB Elevation (ft):**	21.50	---		---	---
Proposed TD (ft):	7060	**Days On Location:**	7	**Last BOP Test:**		---		---	---
Hole Made (ft) / Hrs:	0 / 0.0	**Last Casing:**	13.375 at 338	**LOT (lbs/gal):**	11.90	**Totals:**		---	---
Average ROP (ft/hr):		**Next Casing:**	9.625 at 2,100	**Working Interest:**		**Well Cost ($):**			---

Pers/Hrs:	**Operator:**	2 / 72	**Contractor:**	12 / 432	**Service:**	3 / 156	**Other:**	0 / 0	**Total:**	17 / 660

SafetySummary: No incidents or events reported. 7 days since LTI. Conducted Safety Meeting.

Current Operations: 00:00 to 06:00 hrs: Nippled up BOP. Function tested. Pressure tested Blind Rams to 300 psi and 1,000 psi for 15 minutes, OK. Made up 12-1/4" BHA. RIH.

Planned Operations: RIH to top of cement. Pressure test BOPs. Drill out shoe track. Perform FIT test. Drill ahead as per program.

Toolpusher: Cal Sutton, Philip Hoffman

Wellsite Supervisors: Virgil Welch, Rod Bray **Tel No.:**

Operations Summary

From	To	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	2:00	2.00	342	4-6-3	RIH with 4" drill pipe and stab-in sub, make up cement head, stab-in and fill back side	
2:00	3:30	1.50	342	5-5-1	Circulated casing through stab-in while rigging up cementers and holding a JSA.	
3:30	5:00	1.50	342	5-12-2	Cemented casing as follows: Pumped 20 bbls water ahead, 30 bbls sepiolite spacer, 5 bbls water, 13 bbls Sodium Silicate, 5 bbls water, 83 bbls lead cement at 13 ppg and 43 bbsl tail cement at 15 ppg. Dropped plug and attempted to displace. Pressured to 3000 psi. Unable to displace DP. Unstung and POH dry. Found plug stuck in cement head. CIP @ 05:00. Had full returns during job.	
5:00	15:00	10.00	342	6-13	Wait on cement (NOTE: TOC settled to 4' below bottom of cellar. Filled with gravel to bottom of cellar).	
15:00	20:30	5.50	342	6-35	Cut off 13-3/8" casing and prepare for wellhead. Installed 13-5/8" 3M x 5M clamp-on well head. Energized lower seals and tested to 800 psi for 15 minutes. Energized upper seals and tested to 800 psi for 15 minutes. Tested well head to 750 psi for 15 minutes.	
20:30	0:00	3.50	342	6-14	Nipple up BOPE.	

Management Summary

RIH with 4" drill pipe and stab-in sub. Circulated casing through stab-in while rigging up cementers and holding the JSA. Cemented casing. CIP @ 05:00. Wait on cement. Cut off 13-3/8" casing and prepare for wellhead. Installed 13-5/8" 3M x 5M clamp-on well head and tested to 750 psi for 15 minutes. Started nippling up the BOPE.

Comments

TOC fell to 4' below bottom of cellar. Filled to bottom of cellar with gravel.

Casing/Tubular Information

Type	Size (ins)	Top MD (ft)	Top TVD (ft)	Bottom MD (ft)	Bottom TVD (ft)	Hole Section	OH Diam. (ins)	Nom. Wgt. (lbs)	Nominal Grade	LOT (lbs/gal)
FULL	20.000	0	0	84		COND		53		
FULL	13.375	0		338		SURF		55	N-80	11.90

Mud Information

Dens.	Vis	PV	YP	Filt.	Cake	pH/ES	Solids %	Oil %	Water %	Sand %	LGS	Cl	Ca	CaCl	Gels 10s	Gels 10m	Gels 30m	Temp In	Temp Out	Mud Loss
02-Aug-17 19:00 at Depth 342 ft Return Flow Line, Type: Spud Mud																				
8.70	37	8	8	15.4	2	9.4	3	0	97			80	20		2	10		94		

Comments: Micro C @ 2.5 ppb

Mud Consumables

Item Description	Qty.	Cost	Item Description	Qty.	Cost
BiCarb - 50#SK	4	---	Desco - 50#SK	1	---

Miscellaneous Drilling Parameters

Hook Loads (lbs):	**Off Bottom Rotate:**		**Pick Up:**		**Slack Off:**	**Drag Avg/Max:**	/
Hours on BHA:	**Since Inspection:**	12	**Total:**	12	**Jars:**		

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 7 **Report For 02-Aug-17**

Rig Information

Equipment Problems:

Location Condition:

Transport:

Solids Control Information

Screen Sizes:	Top	Middle 1	Middle 2	Bottom
Shaker No 1:	89	89	89	
Shaker No 2:	89	89	89	
Shaker No 3:	215	215	215	

Drill Pipe Inventory

DP Size	Joints	Weight	Grade	Thread	DP Size	Joints	Weight	Grade	Thread
4 TSDS	240		S-135	TSDS40	4 HWDP	15			4FH

Safety Information

Meetings/Drills	Time	Description
Safety	15	Held safety meeting with both crews. Held JSA before cement job.

First Aid Treatments: **Medical Treatments:** **Lost Time Incidents:** **Days Since LTI:** 7

☐ **BOP Test** ☐ **Crownamatic Check**

Weather Information

Sky Condition:	Clear to partly cloudy	**Visibility:**	10
Air Temperature:	96 degF	**Bar. Pressure:**	
Wind Speed/Dir:	15 / NNE	**Wind Gusts:**	

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
FLIFT	36K forklift		AHERN	32a1	---	27-Jul-17	
Notes:	Charged as dayrate						
LIGHTS	2 X Light towers		BnL	43e	---	27-Jul-17	
OTHER	2 x Trailers		BnL	43m	---	27-Jul-17	
OTHER	Mud cleaner		NOVB	32a1	---	31-Jul-17	
Notes:	Charged as dayrate						
OTHER	Automatic driller		NOVT	38d	---	31-Jul-17	
SURVEY	Survey tools		KnR	38h	---	31-Jul-17	
Notes:	4800 per month						
DC	Monel		KnR	38f1	---	31-Jul-17	
TOOLS	Drilling Jars		KnR	38f1	---	31-Jul-17	
Notes:	plus 1500 redress						
TOOLS	Shock sub		KnR	38f1	---	31-Jul-17	
Notes:	plus 1500 redress						
			Total Daily Rental Cost $:		---		

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 8 **Report For 03-Aug-17**

Operator:	University of Utah	**Rig:**	Kenai 10	**Spud Date:**	31-Jul-17	**Daily Cost / Mud ($):**			---
Measured Depth (ft):	532	**Drilling Days (act.):**	4	**Wellbore:**	Original Well Bore	**AFE No.**		**AFE ($)**	**Actual ($)**
Vertical Depth (ft):	532	**Drilling Days (plan):**	58	**RKB Elevation (ft):**	21.50	---		---	---
Proposed TD (ft):	7060	**Days On Location:**	8	**Last BOP Test:**	03-Aug-17	---		---	---
Hole Made (ft) / Hrs:	190 / 6.0	**Last Casing:**	13.375 at 338	**LOT (lbs/gal):**	11.90	**Totals:**		---	---
Average ROP (ft/hr):	31.67	**Next Casing:**	9.625 at 2,100	**Working Interest:**		**Well Cost ($):**			---

Pers/Hrs:	**Operator:**	2 / 24	**Contractor:**	12 / 144	**Service:**	3 / 36	**Other:**	0 / 0	**Total:**	17 / 204

SafetySummary: No incidents or events reported. 8 days since LTI. Conducted BOP Drill, BOP Test, Safety Meeting.

Current Operations: 00:00 to 06:00 hrs: Drilled 12-1/4" hole from 532' to 593'. Circulated for survey. Survey at 582' = 0.3 degrees 205.9 Azimuth. Drilled 12-1/4" hole from 593' to 782' with full mud returns.

Planned Operations: Drill ahead

Toolpusher: Cal Sutton, Philip Hoffman / Art Navarro

Wellsite Supervisors: Virgil Welch, Rod Bray **Tel No.:**

Operations Summary

From	To	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	2:30	2.50	342	6-14	Nippled up and function test BOP.	
2:30	3:30	1.00	342	6-15	Test blind rams to 300 psi for 5 min low pressure and 1000 psi for 5 min high pressure (test good)	
3:30	7:00	3.50	342	3-34-3	Pick up 12.25" BHA	
7:00	8:00	1.00	342	6-5-1	Circulate out contaminated mud	
8:00	12:00	4.00	342	6-15	Performed BOP test. All tests were 300 psi low and 1000 psi high. Test #1 = Pipe rams, kelly, mud cross valve 2, mud system. Test #2 = Pipe rams, mud cross valve1, casing. Test #3 Check valve, outer manifold, TIW. Test #4 = Middle manifold, kill valve 2. Test #5 = Annular, inner manifold. Tests were witnessed by J. Goddard, Utah DNR	
12:00	12:45	0.75	342	4-34-2	Lay down 3 stands of drill pipe in derrick and pick up 1ea 8" drill collar	
12:45	14:00	1.25	342	6-28	Tag cement @ 290', drill cement, float collar, cement in shoe joint, shoe	
14:00	15:30	1.50	360	3-2-1	Clean out from 338 to 342 and drill new hole from 342-360	
15:30	16:30	1.00	360	6-5-1	Circulate hole clean and spot pill for FIT	
16:30	17:30	1.00	360	6-46	FIT TEST. Maximum allowable mud weight 11.9 ppg	
17:30	19:00	1.50	360	8-8	Change out kellys, Laid down 4-1/4" square kelly and picked up 5-1/4" hex kelly.	
19:00	19:30	0.50	380	3-2-1	Drilled 12-1/4" hole from 360' to 380' with full mud returns.	
19:30	20:00	0.50	380	8-8	Repair rig air compressor.	
20:00	0:00	4.00	532	3-2-1	Drilled 12-1/4" hole from 380' to 532' with full mud returns.	

Management Summary

Finish nippling up BOP stack and function test BOP: Test blind rams to 300 psi for 5 min low pressure and 1,000 psi for 5 min high pressure (test good).
Pick up 12-1/4" BHA.
Circulate out contaminated mud.
Performed BOP test: All tests were 300 psi low and 1000 psi high.
-Test #1 = Pipe rams, kelly, mud cross valve 2, mud system.
- Test #2 = Pipe rams, mud cross valve1, casing.
- Test #3 Check valve, outer manifold, TIW.
- Test #4 = Middle manifold, kill valve 2.
- Test #5 = Annular, inner manifold.
Tests were witnessed by J. Goddard, Utah DNR.
Proceed to lay down 3 stands of drill pipe in derrick and pick up 1 ea 8" drill collar.
RIH and tag cement @ 290'. Proceed to drill cement, float collar, cement in shoe joint, shoe.
Clean out from 338' to 342' and drill new hole from 342' to 360'.
Circulate hole clean and spot pill for FIT.
Performed FIT TEST. Maximum allowable mud weight 11.9 ppg.
Change out kellys,
Laid down 4-1/4" square kelly and picked up 5-1/4" hex kelly.
Drilled 12-1/4" hole from 360'' to 380' with full mud returns.
Repair rig air compressor.
Drilled 12-1/4" hole from 380' to 532' with full mud returns.

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 8 **Report For 03-Aug-17**

Casing/Tubular Information

Type	Size (ins)	Top MD (ft)	Top TVD (ft)	Bottom MD (ft)	Bottom TVD (ft)	Hole Section	OH Diam. (ins)	Nom. Wgt. (lbs)	Nominal Grade	LOT (lbs/gal)
FULL	20.000	0	0	84		COND		53		
FULL	13.375	0		338		SURF		55	N-80	11.90

Mud Information

03-Aug-17 21:15 at Depth 426 ft Return Flow Line, Type: Spud Mud

Dens.	Vis	PV	YP	Filt.	Cake	pH/ES	Solids %	Oil %	Water %	Sand %	LGS	Cl	Ca	CaCl	Gels 10s	Gels 10m	Gels 30m	Temp In	Temp Out	Mud Loss
8.60	53	8	18	13.2	3	10.5	3	0	97	0.25		1000	40		12	22		107	108	0.0

Comments: Micro C = 2 ppb

Mud Consumables

Item Description	Qty.	Cost	Item Description	Qty.	Cost
API Gel - 100#SK	27	---	BiCarb - 50#SK	2	---
Desco - 50#SK	2	---	PacReg - 50#SK	1	---
Pallet Wrap - OTHER	1	---			

Bit/BHA/Workstring Information

No Run		Make	Model	Diam	Depth In	This Run Dist	This Run Hrs	R.O.P. Avg	R.O.P. Max	WOB	RPM	Torque	Mud Wt	Mud Flow	Pump Press	J. Vel	P. Drp	HHP	JIF
2	1	Smith	XR+	12.250	342	190	6	31.7	100.0	10	80		9	614	435	177	241	86	484

Jets: 22 22 22 **Out:** 2180 **Grade:** **Cutter:** 6 / 5 **Dull:** FC / NO **Wear:** A **Brgs:** 2 **Gge:** 0 **Pull:** TD

BHA - No. 2 - BIT, BS, DCM, STAB, SHOCK, 2 DC, STAB, 2 DC, JAR, 3 DC, 2 XO, 9 HWDP = 581.73

Drilling Parameters

Depth (ft) From	Depth (ft) To	ROP (ft/hr) Avg	ROP (ft/hr) Max	WOB (lbs) Avg	WOB (lbs) Max	RPM Avg	RPM Max	Torque (ft lbs) Avg	Torque (ft lbs) Max	Flow (gals/min) Avg	Flow (gals/min) Max	Pressure (psi)
342	532	30.0	75.0	10	20	80	85			614		435

Annular Velocity: **Drill Collars:** 170.0 **Drill Pipe:** 109.0

Miscellaneous Drilling Parameters

Hook Loads (lbs): **Off Bottom Rotate:** 60,000 **Pick Up:** 60,000 **Slack Off:** 60,000 **Drag Avg/Max:** /

Hours on BHA: **Since Inspection:** 18 **Total:** 18 **Jars:** 14

Hours on Casing/Liner: **Rotating:** 6 / **Tripping:** / ☐ **Wear Bushing Installed**

Mud Log Information

Depth (ft) From	Depth (ft) To	TVD (ft) From	TVD (ft) To	Gas (Units) Avg	Gas (Units) Max	Gas at Depth	Gas Connect.	Gas Trip	Drilling Exp.	Pore Press	Mud Dens.	Shale Dens.	ROP Shale	ROP Sand
342	532	342	532											

Formation Name:

Lithology: 100% Alluvium

Rig Information

Equipment Problems:

Location Condition:

Transport:

Solids Control Information

Screen Sizes:	Top	Middle 1	Middle 2	Bottom	Equipment Usage (Hrs):
Shaker No 1:	89	89	89		Desander: 6
Shaker No 2:	89	89	89		
Shaker No 3:	215	215	215		

Drill Pipe Inventory

DP Size	Joints	Weight	Grade	Thread	DP Size	Joints	Weight	Grade	Thread
4 TSDS	240	14.0	S-135	TSDS40	4 HWDP	15	28.0		TSDS40

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 8 **Report For 03-Aug-17**

Safety Information

Meetings/Drills	Time	Description
Safety	15	Held safety meeting with both crews
BOP		Performed BOP test: All tests were 300 psi low and 1000 psi high. - Test #1 = Pipe rams, kelly, mud cross valve 2, mud system. - Test #2 = Pipe rams, mud cross valve1, casing. - Test #3 Check valve, outer manifold, TIW. - Test #4 = Middle manifold, kill valve 2. - Test #5 = Annular, inner manifold. Tests were witnessed by J. Goddard, Utah DNR.

First Aid Treatments:	Medical Treatments:	Lost Time Incidents:	Days Since LTI: 8

☑ **BOP Test** ☐ **Crownamatic Check**

Weather Information

Sky Condition:	Clear to partly cloudy	**Visibility:**	10
Air Temperature:	94 degF	**Bar. Pressure:**	29.85
Wind Speed/Dir:	18 / SSW	**Wind Gusts:**	

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
FLIFT	36K forklift		AHERN	32a1	---	27-Jul-17	
Notes:	Charged as dayrate						
LIGHTS	2 X Light towers		BnL	43e	---	27-Jul-17	
OTHER	2 x Trailers		BnL	43m	---	27-Jul-17	
OTHER	Mud cleaner		NOVB	32a1	---	31-Jul-17	
Notes:	Charged as dayrate						
OTHER	Automatic driller		NOVT	38d	---	31-Jul-17	
SURVEY	Survey tools		KnR	38h	---	31-Jul-17	
Notes:	4800 per month						
DC	Monel		KnR	38f1	---	31-Jul-17	
TOOLS	Drilling Jars		KnR	38f1	---	31-Jul-17	
Notes:	plus 1500 redress						
TOOLS	Shock sub		KnR	38f1	---	31-Jul-17	
Notes:	plus 1500 redress						
OTHER	Well Head		GRG	46a	---	02-Aug-17	
MUDCOOLER	Gen for mud cooler		AHERN	38o	---	03-Aug-17	
Notes:	Not yet						
MUDCOOLER	Mud cooler		DRLCO	38o	---	03-Aug-17	
Notes:	Not yet						
			Total Daily Rental Cost $:		---		

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 9 **Report For 04-Aug-17**

Operator:	University of Utah	**Rig:**	Kenai 10	**Spud Date:**	31-Jul-17	**Daily Cost / Mud ($):**			---
Measured Depth (ft):	1512	**Drilling Days (act.):**	5	**Wellbore:**	Original Well Bore	**AFE No.**		**AFE ($)**	**Actual ($)**
Vertical Depth (ft):	1512	**Drilling Days (plan):**	58	**RKB Elevation (ft):**	21.50	---		---	---
Proposed TD (ft):	7060	**Days On Location:**	9	**Last BOP Test:**	03-Aug-17	---		---	---
Hole Made (ft) / Hrs:	980 / 19.5	**Last Casing:**	13.375 at 338	**LOT (lbs/gal):**	11.90	**Totals:**		---	---
Average ROP (ft/hr):	50.26	**Next Casing:**	9.625 at 2,100	**Working Interest:**		**Well Cost ($):**			---

Pers/Hrs:	**Operator:**	2 / 24	**Contractor:**	12 / 144	**Service:**	3 / 36	**Other:**	0 / 0	**Total:**	17 / 204

SafetySummary: No incidents or events reported. 9 days since LTI. Conducted Safety Meeting.

Current Operations: 00:00 to 06:00 hrs. Finished Survey at 1471. Wiped hole to shoe with no problems. Serviced rig. RIH to bottom with no fill. Drilled 12-1/4" hole from 1512' to 1617'

Planned Operations: Drill ahead to casing point

Toolpusher: Cal Sutton, Art Navarro

Wellsite Supervisors: Virgil Welch, Rod Bray **Tel No.:**

Operations Summary

From	To	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	1:30	1.50	593	3-2-1	Drill 12-1/4" " hole from 532' to 593'	
1:30	2:00	0.50	593	3-5-1	Circulate for survey	
2:00	2:30	0.50	593	3-10	Survey @ 582' 0.3 deg 205.9 azimuth	
2:30	8:00	5.50	909	3-2-1	Drill 12-1/4" hole from 593' to 909'	
8:00	8:30	0.50	909	3-5-1	Circulate for survey	
8:30	9:00	0.50	909	3-10	Survey @ 868' 0.4 deg 1.0 azimuth 83F temp inside heat shield	
9:00	10:00	1.00	979	3-2-1	Drill 12-1/4" hole from 909' to 979'	
10:00	10:45	0.75	979	8-8	Work on rotary table	X
10:45	15:00	4.25	1,227	3-2-1	Drill 12-1/4" hole from 979' to 1,227'	
15:00	15:30	0.50	1,227	3-5-1	Circulate for survey	
15:30	16:00	0.50	1,227	3-10	Survey @ 1,185' 1deg, 346 Azimuth, Temp 92F inside heat shield	
16:00	23:15	7.25	1,512	3-2-1	Drill 12-1/4" hole from 1227' to 1512' with full mud returns	
23:15	23:45	0.50	1,512	3-5-1	Pumped sweep and circulated for survey.	
23:45	0:00	0.25	1,512	3-10	Survey at 1,471' = 1 degree 347 Azimuth. Temp inside heat shield 92F Temp from MRT = 138F (Note pumps stopped at 23:45 hrs, tool on bottom 00:00 hrs, Start POH 00:05 hrs)	

Management Summary

Drill 12.25" hole from 532' to 593'. Circulate for survey. Survey @ 582' 0.3 deg 205.9 azimuth. Drill 12.25" hole from 593' to 909'. Circulate for survey. Survey @ 868' 0.4 deg 1.0 azimuth 83F temp inside heat shield. Drill 12.25" hole from 909' to 979'. Work on rotary table. Drill 12.25" hole from 979' to 1227'. Circulate for survey. Survey @ 1185' 1deg Azimuth 346 Temp inside heat shield 92F. Drill 12.25" hole from 1227' to 1512' with full mud returns. Pumped sweep and circulated for survey. Survey at 1471' = 1 degree 347 Azimuth. Temp inside heat shield 92F Temp from MRT = 138F (Note pumps stopped at 23:45 hrs, tool on bottom 00:00 hrs, Start POH 00:04 hrs)

Casing/Tubular Information

Type	Size (ins)	Top MD (ft)	Top TVD (ft)	Bottom MD (ft)	Bottom TVD (ft)	Hole Section	OH Diam. (ins)	Nom. Wgt. (lbs)	Nominal Grade	LOT (lbs/gal)
FULL	20.000	0	0	84		COND		53		
FULL	13.375	0		338		SURF		55	N-80	11.90

Mud Information

Dens.	Vis	PV	YP	Filt.	Cake	pH/ES	Solids %	Oil %	Water %	Sand %	LGS	Cl	Ca	CaCl	Gels 10s	Gels 10m	Gels 30m	Temp In	Temp Out	Mud Loss
04-Aug-17 21:15 at Depth 1,448 ft Return Flow Line, Type: Spud Mud																				
9.00	58	16	24	8.8	2	9.5	5	0	95	0.25	5	900	20		7	28		119	122	0.0

Comments: Micro C = 1.5 ppb

Mud Consumables

Item Description	Qty.	Cost	Item Description	Qty.	Cost
Cotton Seed - 50#SK	5	---	Desco - 25#SK	2	---
DMA/SPA - 50#SK	4	---	Micro C - 50#SK	20	---
PacReg - 50#SK	2	---	Pallet Wrap - OTHER	1	---

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 9 **Report For 04-Aug-17**

Bit/BHA/Workstring Information

No	Run	Make	Model	Diam	Depth In	This Run Dist	This Run Hrs	R.O.P. Avg	R.O.P. Max	WOB	RPM	Torque	Mud Wt	Mud Flow	Pump Press	J. Vel	P. Drp	HHP	JIF
2	1	Smith	XR+	12.250	342	1,170	25.5	45.9	100.0	15	80	480	9	613	580	177	251	90	504

Jets: 22 22 22 **Out:** 2180 **Grade:** **Cutter:** 6 / 5 **Dull:** FC / NO **Wear:** A **Brgs:** 2 **Gge:** 0 **Pull:** TD

BHA - No. 2 - BIT, BS, DCM, STAB, SHOCK, 2 DC, STAB, 2 DC, JAR, 3 DC, 2 XO, 9 HWDP = 581.73

Drilling Parameters

Depth (ft) From	Depth (ft) To	ROP (ft/hr) Avg	ROP (ft/hr) Max	WOB (lbs) Avg	WOB (lbs) Max	RPM Avg	RPM Max	Torque (ft lbs) Avg	Torque (ft lbs) Max	Flow (gals/min) Avg	Flow (gals/min) Max	Pressure (psi)
532	1,512	50.0	120.0	10	20	80	85	521		613		580

Annular Velocity: **Drill Collars:** 170.0 **Drill Pipe:** 109.0

Comments: Torque is from wildcat autodriller

Miscellaneous Drilling Parameters

Hook Loads (lbs): **Off Bottom Rotate:** 72,000 **Pick Up:** 72,000 **Slack Off:** 72,000 **Drag Avg/Max:** /

Hours on BHA: **Since Inspection:** 37.5 **Total:** 37.5 **Jars:** 33.5

Hours on Casing/Liner: **Rotating:** 25.5 / **Tripping:** / ☐ **Wear Bushing Installed**

Survey Information

Survey Type	Meas. Depth	Inc.	Azimuth	TVD	Closure	Vertical Section	Coordinates N-S	Coordinates E-W	D.L.S.
MSS	582.0	0.30	205.9	582.0	0.7	0.7	N 0.7	E 0.2	0.197
MSS	868.0	0.40	1.0	868.0	1.0	1.0	N 1.0	W 0.1	0.239
MSS	1,185.0	1.00	346.0	1,185.0	4.9	4.8	N 4.8	W 0.8	0.196
MSS	1,471.0	1.00	347.0	1,470.9	9.9	9.7	N 9.7	W 1.9	0.006

Mud Log Information

Depth (ft) From	Depth (ft) To	TVD (ft) From	TVD (ft) To	Gas (Units) Avg	Gas (Units) Max	Gas at Depth	Gas Connect.	Gas Trip	Drilling Exp.	Pore Press	Mud Dens.	Shale Dens.	ROP Shale	ROP Sand
532	1,510	532	1,510											

Formation Name:

Lithology: 100% Alluvium

Rig Information

Equipment Problems:

Location Condition:

Transport:

Solids Control Information

Screen Sizes:	Top	Middle 1	Middle 2	Bottom
Shaker No 1:	89	89	89	
Shaker No 2:	89	89	89	
Shaker No 3:	215	215	215	

Equipment Usage (Hrs): **Desander:** 24

Drill Pipe Inventory

DP Size	Joints	Weight	Grade	Thread	DP Size	Joints	Weight	Grade	Thread
4 TSDS	240	14.0	S-135	TSDS40	4 HWDP	15	28.0		TSDS40

Safety Information

Meetings/Drills	Time	Description
Safety	15	Held dsafety meeting with both crews

First Aid Treatments: **Medical Treatments:** **Lost Time Incidents:** **Days Since LTI:** 9

☐ **BOP Test** ☐ **Crownamatic Check**

Weather Information

Sky Condition: Clear to partly cloudy **Visibility:** 10

Air Temperature: 92 degF **Bar. Pressure:** 29.88

Wind Speed/Dir: 15 / NNW **Wind Gusts:**

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 9

Report For 04-Aug-17

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
FLIFT	36K forklift		AHERN	32a1	---	27-Jul-17	
Notes:	Charged as dayrate						
LIGHTS	2 X Light towers		BnL	43e	---	27-Jul-17	
OTHER	2 x Trailers		BnL	43m	---	27-Jul-17	
OTHER	Mud cleaner		NOVB	32a1	---	31-Jul-17	
Notes:	Charged as dayrate						
OTHER	Automatic driller		NOVT	38d	---	31-Jul-17	
SURVEY	Survey tools		KnR	38h	---	31-Jul-17	
Notes:	4800 per month						
DC	Monel		KnR	38f1	---	31-Jul-17	
TOOLS	Drilling Jars		KnR	38f1	---	31-Jul-17	
Notes:	plus 1500 redress						
TOOLS	Shock sub		KnR	38f1	---	31-Jul-17	
Notes:	plus 1500 redress						
OTHER	Well Head		GRG	46a	---	02-Aug-17	
MUDCOOLER	Gen for mud cooler		AHERN	38o	---	03-Aug-17	
Notes:	Not yet						
MUDCOOLER	Mud cooler		DRLCO	38o	---	03-Aug-17	
Notes:	Not yet						
OTHER	Mud office		Rollins	36b	---	04-Aug-17	
Notes:	60 day min. with deliver and return						
			Total Daily Rental Cost $:		---		

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 10 **Report For 05-Aug-17**

Operator:	University of Utah	**Rig:**	Kenai 10	**Spud Date:**	31-Jul-17	**Daily Cost / Mud ($):**			---
Measured Depth (ft):	1957	**Drilling Days (act.):**	6	**Wellbore:**	Original Well Bore	**AFE No.**		**AFE ($)**	**Actual ($)**
Vertical Depth (ft):	1957	**Drilling Days (plan):**	58	**RKB Elevation (ft):**	21.50	---		---	---
Proposed TD (ft):	7060	**Days On Location:**	10	**Last BOP Test:**	03-Aug-17	---		---	---
Hole Made (ft) / Hrs:	445 / 19.25	**Last Casing:**	13.375 at 338	**LOT (lbs/gal):**	11.90	**Totals:**		---	---
Average ROP (ft/hr):	23.12	**Next Casing:**	9.625 at 2,100	**Working Interest:**		**Well Cost ($):**			---

Pers/Hrs:	**Operator:**	2 / 24	**Contractor:**	12 / 144	**Service:**	3 / 36	**Other:**	0 / 0	**Total:**	17 / 204

SafetySummary: No incidents or events reported. 10 days since LTI. Conducted Safety Meeting.

Current Operations: 00:00 to 06:00 hrs: Drilled 12-1/4" hole from 1,909' to 2,070' with 90 RPM, 25K WOB and full mud returns.

Planned Operations: Drill ahead to casing point. Make wiper trip and condition hole for casing. POOH and run 9-5/8" casing.

Toolpusher: Cal Sutton, Art Navarro

Wellsite Supervisors: Virgil Welch, Rod Bray **Tel No.:**

Operations Summary

From	To	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	0:15	0.25	1,512	3-10	Survey at 1,471' = 1 degree 347 Azimuth. Temp inside heat shield 92F Temp from MRT = 138F (Note pumps stopped at 23:45 hrs, tool on bottom 00:00 hrs, Start POH 00:05 hrs)	
0:15	1:00	0.75	1,512	3-27	Wipe hole to shoe with no drag or problems	
1:00	1:30	0.50	1,512	8-7	Serviced Rig	
1:30	2:30	1.00	1,512	3-27	RIH after wiper with no problems	
2:30	14:30	12.00	1,830	3-2-1	Drill 12-1/4" hole from 1,512' to 1,830' utilizing 90 RPM and 25 K WOB	
14:30	15:00	0.50	1,830	3-5-1	Circulate and condition mud for survey	
15:00	15:45	0.75	1,830	3-10	Survey @ 1,789' = 1.3 Deg, 334 Azimuth Temp 83 inside heat sheald. MRT = 139F, time from stop pumping until tool on bottom 20 min, tool on bottom 5 min.	
15:45	19:30	3.75	1,909	3-2-1	Drilled 12-1/4" hole from 1,830' to 1,909' with 90 RPM and 25K WOB and full mud returns.	
19:30	20:30	1.00	1,909	8-8	Repair broken rotary chain.	X
20:30	0:00	3.50	1,957	3-2-1	Drilled 12-1/4" hole from 1,909' to 1,957' with 90 RPM, 25K WOB and full mud returns	

Management Summary

Performed directional surveys at 1,471' and 1,789'
Wiped hole to the shoe.
Drilled 12 1/4" hole from 1,512' to 1,957'
Rig repairs for one hour.

Casing/Tubular Information

Type	Size (ins)	Top MD (ft)	Top TVD (ft)	Bottom MD (ft)	Bottom TVD (ft)	Hole Section	OH Diam. (ins)	Nom. Wgt. (lbs)	Nominal Grade	LOT (lbs/gal)
FULL	20.000	0	0	84		COND		53		
FULL	13.375	0		338		SURF		55	N-80	11.90

Mud Information

05-Aug-17 21:15 at Depth 1,919 ft Return Flow Line, Type: Spud Mud

Dens.	Vis	PV	YP	Filt.	Cake	pH/ES	Solids %	Oil %	Water %	Sand %	LGS	Cl	Ca	CaCl	Gels 10s	Gels 10m	Gels 30m	Temp In	Temp Out	Mud Loss
9.10	52	16	24	8.8	2	9	6	0	94	0.25	6	800	40		4	18		125	129	0.0

Comments: Micro C = 1.5 ppb

Mud Consumables

Item Description	Qty.	Cost	Item Description	Qty.	Cost
Amberguard - 5GAL	2	---	API Gel - 100#SK	111	---
Benex - SACK	2	---	Cotton Seed - 50#SK	10	---
Defoam - 5GAL	1	---	Desco - 25#SK	1	---
DMA/SPA - 50#SK	5	---	Micro C - 50#SK	30	---
PacReg - 50#SK	5	---	Pallet Wrap - OTHER	2	---

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 10 **Report For 05-Aug-17**

Bit/BHA/Workstring Information

No Run		Make	Model	Diam	Depth In	This Run Dist	Hrs	R.O.P. Avg	Max	WOB	RPM	Torque	Mud Wt	Flow	Pump Press	J. Vel	P. Drp	HHP	JIF
2	1	Smith	XR+	12.250	342	1,615	44.75	36.1	50.0	25	90	525	9	613	680	177	254	91	510

Jets: 22 22 22 **Out:** 2180 **Grade:** **Cutter:** 6 / 5 **Dull:** FC / NO **Wear:** A **Brgs:** 2 **Gge:** 0 **Pull:** TD

BHA - No. 2 - BIT, BS, DCM, STAB, SHOCK, 2 DC, STAB, 2 DC, JAR, 3 DC, 2 XO, 9 HWDP = 581.73

Drilling Parameters

Depth (ft) From	To	ROP (ft/hr) Avg	Max	WOB (lbs) Avg	Max	RPM Avg	Max	Torque (ft lbs) Avg	Max	Flow (gals/min) Avg	Max	Pressure (psi)
1,512	1,909	22.0	50.0	20	25	80	90	525	553	613		680

Annular Velocity: **Drill Collars:** 170.0 **Drill Pipe:** 109.0

Miscellaneous Drilling Parameters

Hook Loads (lbs): **Off Bottom Rotate:** 79,000 **Pick Up:** 81,000 **Slack Off:** 77,000 **Drag Avg/Max:** 2000 /

Slow Circulation Data:

Pump 1: 51 spm 95 psi 52 spm 104 psi

Hours on BHA: **Since Inspection:** 57 **Total:** 57 **Jars:** 53

Hours on Casing/Liner: **Rotating:** 45 / **Tripping:** / ☐ **Wear Bushing Installed**

Survey Information

Survey Type	Meas. Depth	Inc.	Azimuth	TVD	Closure	Vertical Section	Coordinates N-S	E-W	D.L.S.
MSS	1,789.0	1.30	334.0	1,788.9	16.2	15.6	N 15.6	W 4.1	0.124

Mud Log Information

Depth (ft) From	To	TVD (ft) From	To	Gas (Units) Avg	Max	at Depth	Gas Connect.	Trip	Drilling Exp.	Pore Press	Mud Dens.	Shale Dens.	ROP Shale	Sand
1,510	1,950	1,510	1,950											

Formation Name:

Lithology: Mixed Alluvium and Tuff

Rig Information

Equipment Problems:

Location Condition:

Transport:

Solids Control Information

Screen Sizes:	Top	Middle 1	Middle 2	Bottom
Shaker No 1:	89	89	89	
Shaker No 2:	89	89	89	
Shaker No 3:	215	215	215	

Drill Pipe Inventory

DP Size	Joints	Weight	Grade	Thread	DP Size	Joints	Weight	Grade	Thread
4 TSDS	240	14.0	S-135	TSDS40	4 HWDP	15	28.0		TSDS40

Safety Information

Meetings/Drills	Time	Description
Safety	15	Held safety meeting with both crews

First Aid Treatments: **Medical Treatments:** **Lost Time Incidents:** **Days Since LTI:** 10

☐ **BOP Test** ☐ **Crownamatic Check**

Weather Information

Sky Condition:	Clear to partly cloudy	**Visibility:**	10
Air Temperature:	90 degF	**Bar. Pressure:**	29.81
Wind Speed/Dir:	10 / SSW	**Wind Gusts:**	

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 10

Report For 05-Aug-17

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
FLIFT	36K forklift		AHERN	32a1	---	27-Jul-17	
Notes:	Charged as dayrate						
LIGHTS	2 X Light towers		BnL	43e	---	27-Jul-17	
OTHER	2 x Trailers		BnL	43m	---	27-Jul-17	
OTHER	Mud cleaner		NOVB	32a1	---	31-Jul-17	
Notes:	Charged as dayrate						
OTHER	Automatic driller		NOVT	38d	---	31-Jul-17	
SURVEY	Survey tools		KnR	38h	---	31-Jul-17	
Notes:	4800 per month						
DC	Monel		KnR	38f1	---	31-Jul-17	
TOOLS	Drilling Jars		KnR	38f1	---	31-Jul-17	
Notes:	plus 1500 redress						
TOOLS	Shock sub		KnR	38f1	---	31-Jul-17	
Notes:	plus 1500 redress						
OTHER	Well Head		GRG	46a	---	02-Aug-17	
MUDCOOLER	Gen for mud cooler		AHERN	38o	---	03-Aug-17	
Notes:	Not yet						
MUDCOOLER	Mud cooler		DRLCO	38o	---	03-Aug-17	
Notes:	Not yet						
OTHER	Mud office		Rollins	36b	---	04-Aug-17	
Notes:	60 day min. with deliver and return						
			Total Daily Rental Cost $:		---		

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 11 **Report For 06-Aug-17**

Operator:	University of Utah	**Rig:**	Kenai 10	**Spud Date:**	31-Jul-17	**Daily Cost / Mud ($):**			---
Measured Depth (ft):	2180	**Drilling Days (act.):**	7	**Wellbore:**	Original Well Bore	**AFE No.**		**AFE ($)**	**Actual ($)**
Vertical Depth (ft):	2180	**Drilling Days (plan):**	58	**RKB Elevation (ft):**	21.50	---		---	---
Proposed TD (ft):	7060	**Days On Location:**	11	**Last BOP Test:**	03-Aug-17	---		---	---
Hole Made (ft) / Hrs:	223 / 15.5	**Last Casing:**	13.375 at 338	**LOT (lbs/gal):**	11.90	**Totals:**		---	---
Average ROP (ft/hr):	14.39	**Next Casing:**	9.625 at 2,100	**Working Interest:**		**Well Cost ($):**			---

Pers/Hrs:	**Operator:**	2 / 24	**Contractor:**	12 / 144	**Service:**	3 / 36	**Other:**	0 / 0	**Total:** 17 / 204

SafetySummary: No incidents or events reported. 11 days since LTI. Conducted Safety Meeting.

Current Operations: 00:00 to 06:00 hrs: Laid down 12-1/4" BHA. Held safety meeting. Rigged up to run casing. Run 9-5/8" casing

Planned Operations: Run 9-5/8" casing. Cement as per program. WOC.

Toolpusher: Cal Sutton, Art Navarro

Wellsite Supervisors: Virgil Welch, Rod Bray **Tel No.:**

Operations Summary

From	To	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	15:30	15.50	2,180	3-2-1	Drilled 12-1/4" hole from 1,957' to 2,180' with 90 RPM, 25K WOB and full mud returns. Drill rate dropped significantly @ 2,090' and even slower @ 2,140' indicating top of weathered granite @ 2,090' and granite @ 2,140'	
15:30	16:15	0.75	2,180	3-5-1	Circulate bottoms up twice	
16:15	17:00	0.75	2,180	3-10	Survey @ 2,138' 1.9 deg. 24.5 azimuth, temp inside heat shield 78F MRT after 42 min static 150F	
17:00	18:00	1.00	2,180	3-27	Wipe hole and strap drill pipe to the top of HWDP. No depth correction.	
18:00	19:00	1.00	2,180	3-27	RIH to bottom at 2,180' with no fill.	
19:00	20:00	1.00	2,180	4-5-1	Circulated and condition well for casing.	
20:00	21:30	1.50	2,180	4-6-4	POH to BHA.	
21:30	0:00	2.50	2,180	4-34-4	Laid down 12-1/4" BHA.	

Management Summary

Drilled 12-1/4" hole from 1,957' to 2,180' with full returns.
Survey at 2,138'.
Wiped hole to top of BHA with no fill or problems.
Circulated.
POOH to run casing.

Casing/Tubular Information

Type	Size (ins)	Top MD (ft)	Top TVD (ft)	Bottom MD (ft)	Bottom TVD (ft)	Hole Section	OH Diam. (ins)	Nom. Wgt. (lbs)	Nominal Grade	LOT (lbs/gal)
FULL	20.000	0	0	84		COND		53		
FULL	13.375	0		338		SURF		55	N-80	11.90

Mud Information

06-Aug-17 18:30 at Depth 2,180 ft Return Flow Line, Type: Spud Mud

Dens.	Vis	PV	YP	Filt.	Cake	pH/ES	Solids %	Oil %	Water %	Sand %	LGS	Cl	Ca	CaCl	Gels 10s	Gels 10m	Gels 30m	Temp In	Temp Out	Mud Loss
9.20	48	14	20	9.4	2	9	7	0	93	0.25	7	800	40		2	12		123	128	0.0

Comments: Micro C = 2 ppb

Mud Consumables

Item Description	Qty.	Cost	Item Description	Qty.	Cost
Altavert - 25#SK	1	---	API Gel - 100#SK	25	---
Benex - SACK	2	---	BiCarb - 50#SK	2	---
Cotton Seed - 50#SK	20	---	Defoam - 5GAL	1	---
DMA/SPA - 50#SK	2	---	Micro C - 50#SK	35	---
PacReg - 50#SK	2	---	Pallet Wrap - OTHER	1	---
Polyvis - 50#SK	2	---	Saw Dust - 50#SK	2	---
Soda Ash - 50#SK	1	---			

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 11 **Report For 06-Aug-17**

Bit/BHA/Workstring Information

No Run		Make	Model	Diam	Depth In	This Run Dist	Hrs	R.O.P. Avg	Max	WOB	RPM	Torque	Mud Wt	Flow	Pump Press	J. Vel	P. Drp	HHP	JIF
2	1	Smith	XR+	12.250	342	1,838	60.75	30.3	100.0	25	90	525	9	613	675	177	257	92	516

Jets: 22 22 22 **Out:** 2180 **Grade:** **Cutter:** 6 / 5 **Dull:** FC / NO **Wear:** A **Brgs:** 2 **Gge:** 0 **Pull:** TD

BHA - No. 2 - BIT, BS, DCM, STAB, SHOCK, 2 DC, STAB, 2 DC, JAR, 3 DC, 2 XO, 9 HWDP = 581.73

Drilling Parameters

Depth (ft) From	To	ROP (ft/hr) Avg	Max	WOB (lbs) Avg	Max	RPM Avg	Max	Torque (ft lbs) Avg	Max	Flow (gals/min) Avg	Max	Pressure (psi)
1,957	2,180	13.9	50.0	25		90		535	557	613		675

Annular Velocity: **Drill Collars:** 170.0 **Drill Pipe:** 109.0

Miscellaneous Drilling Parameters

Hook Loads (lbs): **Off Bottom Rotate:** 81,000 **Pick Up:** 83,000 **Slack Off:** 79,000 **Drag Avg/Max:** 2000 /

Hours on BHA: **Since Inspection:** 73 **Total:** 73 **Jars:** 69

Hours on Casing/Liner: **Rotating:** 61 / **Tripping:** / ☐ **Wear Bushing Installed**

Survey Information

Survey Type	Meas. Depth	Inc.	Azimuth	TVD	Closure	Vertical Section	Coordinates N-S	E-W	D.L.S.
MSS	2,138.0	1.90	24.5	2,137.7	24.7	24.4	N 24.4	W 3.5	0.421

Mud Log Information

Depth (ft) From	To	TVD (ft) From	To	Gas (Units) Avg	Max	at Depth	Gas Connect.	Trip	Drilling Exp.	Pore Press	Mud Dens.	Shale Dens.	ROP Shale	Sand
1,960	2,140	1,960	2,140											

Formation Name:

Lithology: Alluvium and Tuff

2,140	2,180	2,140	2,180											

Formation Name:

Lithology: Granite and Alluvium

Rig Information

Equipment Problems:

Location Condition:

Transport:

Solids Control Information

Screen Sizes:	Top	Middle 1	Middle 2	Bottom
Shaker No 1:	89	89	89	
Shaker No 2:	89	89	89	
Shaker No 3:	215	215	215	

Drill Pipe Inventory

DP Size	Joints	Weight	Grade	Thread	DP Size	Joints	Weight	Grade	Thread
4 TSDS	240	14.0	S-135	TSDS40	4 HWDP	15	28.0		TSDS40

Safety Information

Meetings/Drills	Time	Description
Safety	15	Held safety meeting with both crews

First Aid Treatments: **Medical Treatments:** **Lost Time Incidents:** **Days Since LTI:** 11

☐ **BOP Test** ☐ **Crownamatic Check**

Weather Information

Sky Condition:	Clear to partly cloudy with afternoon thunderstorn	**Visibility:**	10
Air Temperature:	87 degF	**Bar. Pressure:**	29.83
Wind Speed/Dir:	14 / S	**Wind Gusts:**	22

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 11

Report For 06-Aug-17

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
FLIFT	36K forklift		AHERN	32a1	---	27-Jul-17	
Notes:	Charged as dayrate						
LIGHTS	2 X Light towers		BnL	43e	---	27-Jul-17	
OTHER	2 x Trailers		BnL	43m	---	27-Jul-17	
OTHER	Mud cleaner		NOVB	32a1	---	31-Jul-17	
Notes:	Charged as dayrate						
OTHER	Automatic driller		NOVT	38d	---	31-Jul-17	
SURVEY	Survey tools		KnR	38h	---	31-Jul-17	
Notes:	4800 per month						
DC	Monel		KnR	38f1	---	31-Jul-17	
TOOLS	Drilling Jars		KnR	38f1	---	31-Jul-17	
Notes:	plus 1500 redress						
TOOLS	Shock sub		KnR	38f1	---	31-Jul-17	
Notes:	plus 1500 redress						
OTHER	Well Head		GRG	46a	---	02-Aug-17	
MUDCOOLER	Gen for mud cooler		AHERN	38o	---	03-Aug-17	
Notes:	Not yet						
MUDCOOLER	Mud cooler		DRLCO	38o	---	03-Aug-17	
Notes:	Not yet						
OTHER	Mud office		Rollins	36b	---	04-Aug-17	
Notes:	60 day min. with deliver and return						
			Total Daily Rental Cost $:		---		

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 12 **Report For 07-Aug-17**

Operator:	University of Utah	**Rig:**	Kenai 10	**Spud Date:**	31-Jul-17	**Daily Cost / Mud ($):**			---
Measured Depth (ft):	2180	**Drilling Days (act.):**	8	**Wellbore:**	Original Well Bore	**AFE No.**		**AFE ($)**	**Actual ($)**
Vertical Depth (ft):	2180	**Drilling Days (plan):**	58	**RKB Elevation (ft):**	21.50	---		---	---
Proposed TD (ft):	7060	**Days On Location:**	12	**Last BOP Test:**	03-Aug-17	---		---	---
Hole Made (ft) / Hrs:	0 / 0.0	**Last Casing:**	9.625 at 2,172	**LOT (lbs/gal):**	19.20	**Totals:**		---	---
Average ROP (ft/hr):		**Next Casing:**	7.000 at 6,900	**Working Interest:**		**Well Cost ($):**			---

Pers/Hrs:	**Operator:**	2 / 24	**Contractor:**	12 / 144	**Service:**	3 / 36	**Other:**	0 / 0	**Total:** 17 / 204

SafetySummary: No incidents or events reported. 12 days since LTI. Conducted Safety Meeting.

Current Operations: 00:00 to 06:00 hrs: Replace rotary table.

Planned Operations:
Nipple up BOP and test Blind rams.
Make up 8-3/4" BHA.
RIH and Test BOP.
Drill out shoe track.
Drill ahead.

Toolpusher: Cal Sutton, Art Navarro

Wellsite Supervisors: Virgil Welch, Rod Bray **Tel No.:**

Operations Summary

From	To	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	1:45	1.75	2,180	4-34-4	Laid down 12-1/4" BHA.	
1:45	2:15	0.50	2,180	4-98	Held safety meeting to run casing	
2:15	3:15	1.00	2,180	4-56	Rigged up to run casing	
3:15	8:00	4.75	2,180	4-12-1	Ran 9-5/8", 40#, K55, BTC casing as per casing program. Total = 56 joints, length 2,172.47.'	
8:00	10:00	2.00	2,180	5-5-1	Circulate casing while rigging down casing crew and rigging up cement crew	
10:00	11:00	1.00	2,180	4-98	Held safety and operational meeting with all parties involved with cementing	
11:00	12:45	1.75	2,180	5-12-2	Cement casing as per cement program in this report--Held JSA, Pressure test lines to 1500 psi, pump 30 bbls of fresh water @ 5 BPM, pump 20 bbl of RC MUD Clean @ 5 BPM, pump 13 bbls of Sodium Slicate spacer @ 3 BPM, pump 5 bbls of fresh water @ 5 BPM, pump 30 bbls of 10.5ppg Sepiolite spacer @ 5 BPM, mix and pump 228.7 bbls (1284 cu ft) of 13.5 ppg RC Thermalite HT lead cement w 30% silica flour, 10% micro slica, 0.5% CFL-115, followed by 23.4 bbls (131 cu ft) of 15.0 RC Thermalite HT tail cement w/30% silica flour, 10% micro Lite, 0.5% CPL-15 @ 5 BPM, shut down and dropped plug, displacement was 158. bbls (138 bbl mud and 20 bbl water). Displaced 100 bbls @ 8 BPM and slowed displacement to 1 BPM for the next 18 min until 118 bbl were displaced, while pumping 1 BPM returns came and went. We then shut down for 20 minuets (to allow for gelling) and checked fluid level in the wellbore until it stopped dropping. Then displaced the last 20 bbls at 2 BPM with 100% returns and bumped the plug with 750 psi over the 1100 psi pump pressure. Bled back the pressure and confirmed the floats were holding. CIP was 12:45 . The BOP stack was drained @ 1500 hours and there is solid cement to the wellhead	
12:45	20:00	7.25	2,180	5-13	Wait on cement NOTE: drain stack @ 1500 hours with cement still 3' below flow line and wash out stack	
20:00	20:30	0.50	2,180	6-35	Picked up BOP stack and cut off 9-5/8" casing.	
20:30	0:00	3.50	2,180	8-8	Replace rotary table, (due to bad bearings)	X

Management Summary

Ran 9-5/8" 40#, K55, BTC casing to 2,172'.
Circulated and conditioned well for cement.
Cemented casing with 228.7 bbls lead cement and 23.4 bbls tail cement.
- Had good cement returns to surface.
- CIP 12:45 hrs.

WOC.
Cut off 9-5/8" casing.
Repair rig 3-1/2 hrs.
- Replaced rotary table.

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 12 **Report For 07-Aug-17**

Casing/Tubular Information

Type	Size (ins)	Top MD (ft)	Top TVD (ft)	Bottom MD (ft)	Bottom TVD (ft)	Hole Section	OH Diam. (ins)	Nom. Wgt. (lbs)	Nominal Grade	LOT (lbs/gal)
FULL	20.000	0	0	84		COND		53		
FULL	13.375	0		338		SURF		55	N-80	11.90
FULL	9.625	0	0	2,172	2,173	INT1	18.000	40	K-55	19.20

Mud Information

07-Aug-17 13:30 at Depth 2,180 ft Return Flow Line, Type: Spud Mud

Dens.	Vis	PV	YP	Filt.	Cake	pH/ES	Solids %	Oil %	Water %	Sand %	LGS	Cl	Ca	CaCl	Gels 10s	Gels 10m	Gels 30m	Temp In	Temp Out	Mud Loss
9.10	39	10	8	9	2	9	5	0	95		5	750	20		2	6				0.0

Comments: Micro C = 2 ppb

Mud Consumables

Item Description	Qty.	Cost	Item Description	Qty.	Cost
BiCarb - 50#SK	4	---	Desco - 25#SK	2	---

Rig Information

Equipment Problems:

Location Condition:

Transport:

Solids Control Information

Screen Sizes:	Top	Middle 1	Middle 2	Bottom
Shaker No 1:	89	89	89	
Shaker No 2:	89	89	89	
Shaker No 3:	215	215	215	

Drill Pipe Inventory

DP Size	Joints	Weight	Grade	Thread	DP Size	Joints	Weight	Grade	Thread
4 TSDS	240	14.0	S-135	TSDS40	4 HWDP	15	28.0		TSDS40

Safety Information

Meetings/Drills	Time	Description
Safety	15	Held safety meeting with both crew. Held JSA for running casing and cementing casing

First Aid Treatments: **Medical Treatments:** **Lost Time Incidents:** **Days Since LTI:** 12

☐ **BOP Test** ☐ **Crownamatic Check**

Weather Information

Sky Condition:	Clear to cloudy.	**Visibility:**	10
Air Temperature:	86 degF	**Bar. Pressure:**	29.99
Wind Speed/Dir:	12 / SSW	**Wind Gusts:**	18

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
FLIFT	36K forklift		AHERN	32a1	---	27-Jul-17	
Notes:	Charged as dayrate						
LIGHTS	2 X Light towers		BnL	43e	---	27-Jul-17	
OTHER	2 x Trailers		BnL	43m	---	27-Jul-17	
OTHER	Mud cleaner		NOVB	32a1	---	31-Jul-17	
Notes:	Charged as dayrate						
OTHER	Automatic driller		NOVT	38d	---	31-Jul-17	
SURVEY	Survey tools		KnR	38h	---	31-Jul-17	
Notes:	4800 per month						
DC	Monel		KnR	38f1	---	31-Jul-17	
TOOLS	Drilling Jars		KnR	38f1	---	31-Jul-17	
Notes:	plus 1500 redress						

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 12

Report For 07-Aug-17

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
TOOLS	Shock sub		KnR	38f1	---	31-Jul-17	
Notes:	plus 1500 redress						
OTHER	Well Head		GRG	46a	---	02-Aug-17	
MUDCOOLER	Gen for mud cooler		AHERN	38o	---	03-Aug-17	
Notes:	Not yet						
MUDCOOLER	Mud cooler		DRLCO	38o	---	03-Aug-17	
Notes:	Not yet						
OTHER	Mud office		Rollins	36b	---	04-Aug-17	
Notes:	60 day min. with deliver and return						
OTHER	Restrooms		Rollins	43i	---	28-Jul-17	
Notes:	2 x 15 day (est)						
OTHER	Rain4rent tank		Rollins	43c	---	30-Jun-17	
Notes:	30 day (est)						
OTHER	Trash dumpster		Rollins	43j	---	30-Jun-17	
Notes:	30 day (est)						
			Total Daily Rental Cost $:		---		

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 13 **Report For 08-Aug-17**

Operator:	University of Utah	**Rig:**	Kenai 10	**Spud Date:**	31-Jul-17	**Daily Cost / Mud ($):**			---
Measured Depth (ft):	2340	**Drilling Days (act.):**	9	**Wellbore:**	Original Well Bore	**AFE No.**		**AFE ($)**	**Actual ($)**
Vertical Depth (ft):	2340	**Drilling Days (plan):**	58	**RKB Elevation (ft):**	21.50	---		---	---
Proposed TD (ft):	7060	**Days On Location:**	13	**Last BOP Test:**	08-Aug-17	---		---	---
Hole Made (ft) / Hrs:	160 / 5.5	**Last Casing:**	9.625 at 2,172	**LOT (lbs/gal):**	19.20	**Totals:**		---	---
Average ROP (ft/hr):	29.09	**Next Casing:**	7.000 at 6,900	**Working Interest:**		**Well Cost ($):**			---

Pers/Hrs:	**Operator:**	2 / 24	**Contractor:**	12 / 144	**Service:**	3 / 36	**Other:**	0 / 0	**Total:**	17 / 204

SafetySummary: No incidents or events reported. 13 days since LTI. Conducted BOP Drill, BOP Test, Safety Meeting.

Current Operations: 00:00 to 06:00 hrs: Drilled 8-3/4" hole with mud motor from 2,340' to 2,487' with full returns. Circulated for survey. Survey at 2398', 1.2 deg, 83.8 azimuth, MRT 152F

Planned Operations: Drill ahead as per program.

Toolpusher: Cal Sutton, Art Navarro

Wellsite Supervisors: Virgil Welch, Rod Bray **Tel No.:**

Operations Summary

From	To	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	8:00	8.00	2,180	8-8	Repair rig, replace rotary table.	X
8:00	9:30	1.50	2,180	6-14	Set down stack and hammer up wellhead bolts. Install flow line dresser sleeve, hook up choke line and kill lines	
9:30	10:00	0.50	2,180	6-15	Test Blind rams	
10:00	13:00	3.00	2,180	6-34-3	Strap and pick up 8-3/4" BHA	
13:00	14:00	1.00	2,180	6-6-3	RIH with drill pipe to float collar	
14:00	15:30	1.50	2,180	6-99	Run MRT survey and let set on bottom 30 min	
15:30	16:30	1.00	2,180	6-15	Test pipe rams and bag witnessed by Jim Goddard	
16:30	18:00	1.50	2,180	6-28	Drill float, cement and shoe	
18:00	18:30	0.50	2,185	3-2-2	Drilled 8-3/4" hole from 2,180' to 2,185'. Circulated.	
18:30	19:00	0.50	2,185	3-46	Performed FIT test. Pressured up to 1,025 psi or 1 psi per foot gradient.	
19:00	0:00	5.00	2,340	3-2-2	Drilled 8-3/4" hole with mud motor from 2,185' to 2,340', 20K WOB, 180 RPM and full returns.	

Management Summary

Replaced rotary table.
Nippled up BOP.
Made up 8-3/4" BHA and RIH.
Tested BOP's with DNR.
Drilled out shoe track and made 5' new hole.
Performed FIT test to 1 psi per foot gradient.
Drilled 8-3/4" hole with mud motor from 2,185' to 2,340' with full returns.

Casing/Tubular Information

Type	Size (ins)	Top MD (ft)	Top TVD (ft)	Bottom MD (ft)	Bottom TVD (ft)	Hole Section	OH Diam. (ins)	Nom. Wgt. (lbs)	Nominal Grade	LOT (lbs/gal)
FULL	20.000	0	0	84		COND		53		
FULL	13.375	0		338		SURF		55	N-80	11.90
FULL	9.625	0	0	2,172	2,173	INT1	18.000	40	K-55	19.20

Mud Information

Dens.	Vis	PV	YP	Filt.	Cake	pH/ES	Solids %	Oil %	Water %	Sand %	LGS	Cl	Ca	CaCl	Gels 10s	Gels 10m	Gels 30m	Temp In	Temp Out	Mud Loss
08-Aug-17 21:00 at Depth 2,220 ft Return Flow Line, Type: Spud Mud																				
9.40	44	12	16	12	2	10.5	6	0	94	0.35	6	750	20		5	9	16	121	124	

Comments: Micro C at 2 ppb

Mud Consumables

Item Description	Qty.	Cost	Item Description	Qty.	Cost
BiCarb - 50#SK	1	---	Saw Dust - 50#SK	3	---

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 13 **Report For 08-Aug-17**

Bit/BHA/Workstring Information

No Run		Make	Model	Diam	Depth In	This Run Dist	Hrs	R.O.P. Avg	Max	WOB	RPM	Torque	Mud Wt	Flow	Pump Press	J. Vel	P. Drp	HHP	JIF
3	1	Smith	FHi28	8.750	2180	160	7	22.9	60.0	20	200	523	8	500	1200	174	220	64	365

Jets: 20 20 20 **Out:** 3187 **Grade:** **Cutter:** 3 / 3 **Dull:** ER / NO **Wear:** A **Brgs:** E **Gge:** 0 **Pull:** DTF

BHA - No. 3 - BIT, MMTR, STAB, SHOCK, DCM, STAB, 6 DC, JAR, 2 DC, XO, 9 HWDP = 636.14

Drilling Parameters

Depth (ft) From	To	ROP (ft/hr) Avg	Max	WOB (lbs) Avg	Max	RPM Avg	Max	Torque (ft lbs) Avg	Max	Flow (gals/min) Avg	Max	Pressure (psi)
2,180	2,340	30.0	45.0	20	25	180		535	557	510		1,055

Annular Velocity: **Drill Collars:** 380.0 **Drill Pipe:** 308.0

Miscellaneous Drilling Parameters

Hook Loads (lbs): **Off Bottom Rotate:** 70,000 **Pick Up:** 73,000 **Slack Off:** 68,000 **Drag Avg/Max:** 3000 /

Hours on BHA: **Since Inspection:** 5.5 **Total:** 5.5 **Jars:** 5.5

Hours on Casing/Liner: **Rotating:** 5.5 / **Tripping:** 1 / ☐ **Wear Bushing Installed**

Mud Log Information

Depth (ft) From	To	TVD (ft) From	To	Gas (Units) Avg	Max	Gas at Depth	Gas Connect.	Trip	Drilling Exp.	Pore Press	Mud Dens.	Shale Dens.	ROP Shale	Sand
2,180	2,340	2,180	2,340											

Formation Name:

Lithology: Granite

Rig Information

Equipment Problems:

Location Condition:

Transport:

Solids Control Information

Screen Sizes:	Top	Middle 1	Middle 2	Bottom	Equipment Usage (Hrs):	
Shaker No 1:	145	145	115	115	Desilter:	6
Shaker No 2:	145	145	115	115		
Shaker No 3:	215	215	215			

Drill Pipe Inventory

DP Size	Joints	Weight	Grade	Thread	DP Size	Joints	Weight	Grade	Thread
4 TSDS	240	14.0	S-135	TSDS40	4 HWDP	15	28.0		TSDS40

Safety Information

Meetings/Drills	Time	Description
Safety	15	Held safety meeting with both crews
BOP		Tested all BOP's with DNR to 300 psi low and 1,000 psi high

First Aid Treatments: **Medical Treatments:** **Lost Time Incidents:** **Days Since LTI:** 13

☑ **BOP Test** ☐ **Crownamatic Check**

Weather Information

Sky Condition:	Clear to partly cloudy	**Visibility:**	10
Air Temperature:	90 degF	**Bar. Pressure:**	29.96
Wind Speed/Dir:	12 / SSW	**Wind Gusts:**	18

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
FLIFT	36K forklift		AHERN	32a1	---	27-Jul-17	
Notes:	Charged as dayrate						
LIGHTS	2 X Light towers		BnL	43e	---	27-Jul-17	
OTHER	2 x Trailers		BnL	43m	---	27-Jul-17	
OTHER	Mud cleaner		NOVB	32a1	---	31-Jul-17	

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
Notes:	Charged as dayrate						
OTHER	Automatic driller		NOVT	38d	---	31-Jul-17	
SURVEY	Survey tools		KnR	38h	---	31-Jul-17	
Notes:	4800 per month						
DC	8" Monel		KnR	38f1	---	31-Jul-17	06-Aug-17
TOOLS	8" Drilling Jars		KnR	38f1	---	31-Jul-17	06-Aug-17
Notes:	plus 1500 redress						
TOOLS	8" Shock sub		KnR	38f1	---	31-Jul-17	06-Aug-17
Notes:	plus 1500 redress						
OTHER	Well Head		GRG	46a	---	02-Aug-17	
MUDCOOLER	Gen for mud cooler		AHERN	38o	---	03-Aug-17	
Notes:	Not yet						
MUDCOOLER	Mud cooler		DRLCO	38o	---	03-Aug-17	
Notes:	Not yet						
OTHER	Mud office		Rollins	36b	---	04-Aug-17	
Notes:	60 day min. with deliver and return						
OTHER	Restrooms		Rollins	43i	---	28-Jul-17	
Notes:	2 x 15 day (est)						
OTHER	Rain4rent tank		Rollins	43c	---	30-Jun-17	
Notes:	30 day (est)						
OTHER	Trash dumpster		Rollins	43j	---	30-Jun-17	
Notes:	30 day (est)						
JARS	6-1/2" jars		KnR	38f1	---	08-Aug-17	
Notes:	Plus 1500 redress						
DC	6-1/2 Monel		KnR	38f1	---	08-Aug-17	
TOOLS	6-1/2" Shock sub		KnR	38f1	---	08-Aug-17	
Notes:	Plus 1500 redress						
			Total Daily Rental Cost $:		---		

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 14 **Report For 09-Aug-17**

Operator:	University of Utah	**Rig:**	Kenai 10	**Spud Date:**	31-Jul-17	**Daily Cost / Mud ($):**			---
Measured Depth (ft):	2994	**Drilling Days (act.):**	10	**Wellbore:**	Original Well Bore	**AFE No.**		**AFE ($)**	**Actual ($)**
Vertical Depth (ft):	2994	**Drilling Days (plan):**	58	**RKB Elevation (ft):**	21.50	---		---	---
Proposed TD (ft):	7060	**Days On Location:**	14	**Last BOP Test:**	08-Aug-17	---		---	---
Hole Made (ft) / Hrs:	654 / 21.75	**Last Casing:**	9.625 at 2,172	**LOT (lbs/gal):**	19.20	**Totals:**		---	---
Average ROP (ft/hr):	30.07	**Next Casing:**	7.000 at 6,900	**Working Interest:**		**Well Cost ($):**			---

Pers/Hrs: **Operator:** 2 / 24 **Contractor:** 12 / 133 **Service:** 3 / 36 **Other:** 0 / 0 **Total:** 17 / 193

SafetySummary: No incidents or events reported. 14 days since LTI. Conducted Safety Meeting.

Current Operations: 00:00 to 06:00 hrs: Drilled ahead from 2994' to 3145', Circulate and survey

Planned Operations: Drill ahead as per program.

Toolpusher: Cal Sutton, Art Navarro

Wellsite Supervisors: Virgil Welch, Rod Bray **Tel No.:**

Operations Summary

From	To	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	5:00	5.00	2,487	3-2-2	Drilled 8-3/4" hole with mud motor from 2,340' to 2,487' with full returns	
5:00	5:30	0.50	2,487	3-5-1	Circulate for survey	
5:30	6:00	0.50	2,487	3-10	Survey at 2,398', 1.2 deg, 83.8 Azimuth, 77F in heat shield, MRT 152F.	
6:00	17:00	11.00	2,836	3-2-2	Drilled 8-3/4" hole with motor from 2,487' to 2836' with full returns	
17:00	17:30	0.50	2,836	3-5-1	Circulate for survey	
17:30	18:15	0.75	2,836	3-10	Survey @ 2,768', 0.7 deg., 8.7 Azimuth, 92F in heat shield, MRT 161F	
18:15	0:00	5.75	2,994	3-2-2	Drilled 8-3/4" hole with motor from 2,836' to 2,994' with full returns	

Management Summary

Drilled 8-3/4" hole from 2,340' to 2,994' surveying and running MRT's every 10 singles (+-300')

Casing/Tubular Information

Type	Size (ins)	Top MD (ft)	Top TVD (ft)	Bottom MD (ft)	Bottom TVD (ft)	Hole Section	OH Diam. (ins)	Nom. Wgt. (lbs)	Nominal Grade	LOT (lbs/gal)
FULL	20.000	0	0	84		COND		53		
FULL	13.375	0		338		SURF		55	N-80	11.90
FULL	9.625	0	0	2,172	2,173	INT1	18.000	40	K-55	19.20

Mud Information

Dens.	Vis	PV	YP	Filt.	Cake	pH/ES	Solids %	Oil %	Water %	Sand %	LGS	Cl	Ca	CaCl	Gels 10s	Gels 10m	Gels 30m	Temp In	Temp Out	Mud Loss
09-Aug-17 20:00 at Depth 2,788 ft Return Flow Line, Type: Spud Mud																				
9.20	42	12	17	10	1	10.2	5	0	95	0.25		750	20		5	11	18	137	142	

Mud Consumables

Item Description	Qty.	Cost	Item Description	Qty.	Cost
Benex - OTHER	1	---	Caustic - 50#SK	1	---
Micro c - 50#SK	30	---	Pac HV - 50#SK	2	---
Pallets -	1	---	Polyvisc - 5GAL	2	---

Bit/BHA/Workstring Information

No Run	Make	Model	Diam	Depth In	This Run Dist	This Run Hrs	R.O.P. Avg	R.O.P. Max	WOB	RPM	Torque	Mud Wt	Mud Flow	Pump Press	J. Vel	P. Drp	HHP	JIF
3 1	Smith	FHi28	8.750	2180	805	29	27.8	59.0	25	200	529	9	499	1650	174	246	72	409

Jets: 20 20 20 **Out:** 3187 **Grade:** **Cutter:** 3 / 3 **Dull:** ER / NO **Wear:** A **Brgs:** E **Gge:** 0 **Pull:** DTF

BHA - No. 3 - BIT, MMTR, STAB, SHOCK, DCM, STAB, 6 DC, JAR, 2 DC, XO, 9 HWDP = 636.14

Drilling Parameters

Depth (ft) From	Depth (ft) To	ROP (ft/hr) Avg	ROP (ft/hr) Max	WOB (lbs) Avg	WOB (lbs) Max	RPM Avg	RPM Max	Torque (ft lbs) Avg	Torque (ft lbs) Max	Flow (gals/min) Avg	Flow (gals/min) Max	Pressure (psi)
2,340	2,994	28.5	59.0	20	30	194	204	520	557	499	499	1,650

Annular Velocity: **Drill Collars:** 394.0 **Drill Pipe:** 202.0

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 14 **Report For 09-Aug-17**

Miscellaneous Drilling Parameters

Hook Loads (lbs): **Off Bottom Rotate:** 85,000 **Pick Up:** 90,000 **Slack Off:** 80,000 **Drag Avg/Max:** 5000 /

Slow Circulation Data:

Pump 1:	60 spm	300 psi
Pump 2:	60 spm	300 psi

Hours on BHA: **Since Inspection:** 29.5 **Total:** 29.5 **Jars:** 29.5

Hours on Casing/Liner: **Rotating:** 29.5 / **Tripping:** 25 / ☐ **Wear Bushing Installed**

Survey Information

Survey Type	Meas. Depth	Inc.	Azimuth	TVD	Closure	Vertical Section	Coordinates N-S	Coordinates E-W	D.L.S.
MSS	2,398.0	1.20	83.8	2,397.7	28.7	28.7	N 28.7	E 1.0	0.635
MSS	2,768.0	0.70	8.7	2,767.6	31.7	31.3	N 31.3	E 5.2	0.331

Mud Log Information

Depth (ft) From	Depth (ft) To	TVD (ft) From	TVD (ft) To	Gas (Units) Avg	Gas (Units) Max	Gas (Units) at Depth	Gas Connect.	Gas Trip	Drilling Exp.	Pore Press	Mud Dens.	Shale Dens.	ROP Shale	ROP Sand
2,340	2,994	2,340	2,994											

Formation Name: Granite

Lithology:

Rig Information

Equipment Problems:

Location Condition:

Transport:

Solids Control Information

Screen Sizes:	Top	Middle 1	Middle 2	Bottom
Shaker No 1:	145	145	115	115
Shaker No 2:	145	145	115	115
Shaker No 3:	215	215	215	

Drill Pipe Inventory

DP Size	Joints	Weight	Grade	Thread	DP Size	Joints	Weight	Grade	Thread
4 TSDS	240	14.0	S-135	TSDS40	4 HWDP	15	28.0		TSDS40

Safety Information

Meetings/Drills	Time	Description
Safety	15	Held JSA w/ both crews

First Aid Treatments: **Medical Treatments:** **Lost Time Incidents:** **Days Since LTI:** 14

☐ **BOP Test** ☐ **Crownamatic Check**

Weather Information

Sky Condition:	Clear to partly cloudy	**Visibility:**	10
Air Temperature:	80 degF	**Bar. Pressure:**	29.96
Wind Speed/Dir:	10 / SSW	**Wind Gusts:**	12

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
FLIFT	36K forklift		AHERN	32a1	---	27-Jul-17	
Notes:	Charged as dayrate						
LIGHTS	2 X Light towers		BnL	43e	---	27-Jul-17	
OTHER	2 x Trailers		BnL	43m	---	27-Jul-17	
OTHER	Mud cleaner		NOVB	32a1	---	31-Jul-17	
Notes:	Charged as dayrate						
OTHER	Automatic driller		NOVT	38d	---	31-Jul-17	
SURVEY	Survey tools		KnR	38h	---	31-Jul-17	
Notes:	4800 per month						

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 14

Report For 09-Aug-17

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
OTHER	Well Head		GRG	46a	---	02-Aug-17	
MUDCOOLER	Gen for mud cooler		AHERN	38o	---	03-Aug-17	
Notes:	Not yet						
MUDCOOLER	Mud cooler		DRLCO	38o	---	03-Aug-17	
Notes:	Not yet						
OTHER	Mud office		Rollins	36b	---	04-Aug-17	
Notes:	60 day min. with deliver and return						
OTHER	Restrooms		Rollins	43i	---	28-Jul-17	
Notes:	2 x 15 day (est)						
OTHER	Rain4rent tank		Rollins	43c	---	30-Jun-17	
Notes:	30 day (est)						
OTHER	Trash dumpster		Rollins	43j	---	30-Jun-17	
Notes:	30 day (est)						
JARS	6-1/2" jars		KnR	38f1	---	08-Aug-17	
Notes:	Plus 1500 redress						
DC	6-1/2 Monel		KnR	38f1	---	08-Aug-17	
TOOLS	6-1/2" Shock sub		KnR	38f1	---	08-Aug-17	
Notes:	Plus 1500 redress						
			Total Daily Rental Cost $:		---		

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 15 **Report For 10-Aug-17**

Operator:	University of Utah	**Rig:**	Kenai 10	**Spud Date:**	31-Jul-17	**Daily Cost / Mud ($):**			---
Measured Depth (ft):	3187	**Drilling Days (act.):**	11	**Wellbore:**	Original Well Bore	**AFE No.**		**AFE ($)**	**Actual ($)**
Vertical Depth (ft):	3187	**Drilling Days (plan):**	58	**RKB Elevation (ft):**	21.50	---		---	---
Proposed TD (ft):	7060	**Days On Location:**	15	**Last BOP Test:**	08-Aug-17	---		---	---
Hole Made (ft) / Hrs:	193 / 11.0	**Last Casing:**	9.625 at 2,172	**LOT (lbs/gal):**	19.20	**Totals:**		---	---
Average ROP (ft/hr):	17.55	**Next Casing:**	7.000 at 6,900	**Working Interest:**		**Well Cost ($):**			---

Pers/Hrs: **Operator:** 2 / 24 **Contractor:** 12 / 144 **Service:** 3 / 36 **Other:** 0 / 0 **Total:** 17 / 204

SafetySummary: No incidents or events reported. 15 days since LTI. Conducted Safety Meeting.

Current Operations:
00:00 to 06:00 hrs: Wait on fishing tools.
Made up 8" magnet.
RIH with 8" magnet.
Circulated at shoe.
RIH with 8" magnet.

Planned Operations:
Recover broken piece of sleeve stabilizer.
Drill ahead as per program.

Toolpusher: Phillip Hoffman, Art Navarro

Wellsite Supervisors: Virgil Welch, Rod Bray **Tel No.:**

Operations Summary

From	To	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	5:30	5.50	3,154	3-2-2	Drilled 8-3/4" hole with motor from 2,994' to 3,154' with full returns	
5:30	6:15	0.75	3,154	3-5-1	Circulate and condition mud	
6:15	7:00	0.75	3,154	3-10	Survey @ 3,085' 1.2 deg, 311.6 Azimuth, Temp 74F inside heat shield, MRT 174 F	
7:00	8:30	1.50	3,187	3-2-2	Drilled 8-3/4" hole with motor from 3,154' to 3,187', bit torquing and stuck string at the bit	
8:30	9:00	0.50	3,187	3-33	String stuck at bit, Jar bit loose at 135,000 over string weight	X
9:00	11:00	2.00	3,187	3-6-4	POH with drill pipe	X
11:00	13:00	2.00	3,187	3-6-2	POH with BHA --Bit is pretty much green but both stabilizers over 1" out of gauge. Sleeve stabilizer on mud motor had lost 9" x 6" piece of body. Laid down motor.	X
13:00	13:30	0.50	3,187	8-7	Service rig (not down time)	
13:30	0:00	10.50	3,187	7-32	Waited on fishing tools.	X

Management Summary

Continue drilling 8-3/4" hole with mud motor from 2,994' to 3,187'.
Survey at 3,085' 1.2 deg, 311.6 Azimuth, 74F inside heat shield, MRT 174F.
Had tight hole at 3,187', work string and jarred free.
POH and found broken sleeve Stabilizer on mud motor.
Wait on fishing tools.

Casing/Tubular Information

Type	Size (ins)	Top MD (ft)	Top TVD (ft)	Bottom MD (ft)	Bottom TVD (ft)	Hole Section	OH Diam. (ins)	Nom. Wgt. (lbs)	Nominal Grade	LOT (lbs/gal)
FULL	20.000	0	0	84		COND		53		
FULL	13.375	0		338		SURF		55	N-80	11.90
FULL	9.625	0	0	2,172	2,173	INT1	18.000	40	K-55	19.20

Mud Information

Dens.	Vis	PV	YP	Filt.	Cake	pH/ES	Solids %	Oil %	Water %	Sand %	LGS	Cl	Ca	CaCl	Gels 10s	Gels 10m	Gels 30m	Temp In	Temp Out	Mud Loss
10-Aug-17 19:00 at Depth 3,187 ft Return Flow Line, Type: Spud Mud																				
9.50	40	12	16	10	1	10	6	0	94	0.25	6	750	20		6	13	20			0.0

Comments: Micro C = 2 ppb

Mud Consumables

Item Description	Qty.	Cost	Item Description	Qty.	Cost
API Gel - 100#SK	4	---	Defoam - 5GAL	2	---
Micro C - 50#SK	4	---	PacReg - 50#SK	5	---
Polyvis - 5GAL	1	---			

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 15 **Report For 10-Aug-17**

Bit/BHA/Workstring Information

No Run		Make	Model	Diam	Depth In	This Run Dist	Hrs	R.O.P. Avg	Max	WOB	RPM	Torque	Mud Wt	Flow	Pump Press	J. Vel	P. Drp	HHP	JIF
3	1	Smith	FHi28	8.750	2180	998	36	27.7	60.0	25	200	535	9	499	1650	174	249	72	413

Jets: 20 20 20 **Out:** 3187 **Grade:** **Cutter:** 3 / 3 **Dull:** ER / NO **Wear:** A **Brgs:** E **Gge:** 0 **Pull:** DTF

BHA - No. 3 - BIT, MMTR, STAB, SHOCK, DCM, STAB, 6 DC, JAR, 2 DC, XO, 9 HWDP = 636.14

Drilling Parameters

Depth (ft) From	To	ROP (ft/hr) Avg	Max	WOB (lbs) Avg	Max	RPM Avg	Max	Torque (ft lbs) Avg	Max	Flow (gals/min) Avg	Max	Pressure (psi)
2,994	3,187	27.0	50.0	20	30	194	204	525	557	499		1,650

Annular Velocity: **Drill Collars:** 394.0 **Drill Pipe:** 202.0

Miscellaneous Drilling Parameters

Hook Loads (lbs): **Off Bottom Rotate:** 86,000 **Pick Up:** 91,000 **Slack Off:** 81,000 **Drag Avg/Max:** 5000 / 5000

Hours on BHA: **Since Inspection:** 36.5 **Total:** 36.5 **Jars:** 36.5

Hours on Casing/Liner: **Rotating:** 36.5 / **Tripping:** 29 / ☐ **Wear Bushing Installed**

Survey Information

Survey Type	Meas. Depth	Inc.	Azimuth	TVD	Closure	Vertical Section	Coordinates N-S	E-W	D.L.S.
MMS	3,085.0	1.20	311.6	3,084.6	35.6	35.4	N 35.4	E 3.0	0.318

Mud Log Information

Depth (ft) From	To	TVD (ft) From	To	Gas (Units) Avg	Max	at Depth	Gas Connect.	Trip	Drilling Exp.	Pore Press	Mud Dens.	Shale Dens.	ROP Shale	Sand
2,994	3,187	2,994	3,187											

Formation Name:

Lithology: Granite

Rig Information

Equipment Problems:

Location Condition:

Transport:

Solids Control Information

Screen Sizes:	Top	Middle 1	Middle 2	Bottom	Equipment Usage (Hrs):	
Shaker No 1:	145	145	145	145	Desilter:	7
Shaker No 2:	145	145	145	145		
Shaker No 3:	215	215	215			

Drill Pipe Inventory

DP Size	Joints	Weight	Grade	Thread	DP Size	Joints	Weight	Grade	Thread
4 TSDS	240	14.0	S-135	TSDS40	4 HWDP	15	28.0		TSDS40

Safety Information

Meetings/Drills	Time	Description
Safety	15	Held safety meeting with both crews

First Aid Treatments: **Medical Treatments:** **Lost Time Incidents:** **Days Since LTI:** 15

☐ **BOP Test** ☐ **Crownamatic Check**

Weather Information

Sky Condition:	Clear	**Visibility:**	10
Air Temperature:	92 degF	**Bar. Pressure:**	29.9
Wind Speed/Dir:	11 / WSW	**Wind Gusts:**	25

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
FLIFT	36K forklift		AHERN	32a1	---	27-Jul-17	

Notes: Charged as dayrate

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 15

Report For 10-Aug-17

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
LIGHTS	2 X Light towers		BnL	43e	---	27-Jul-17	
OTHER	2 x Trailers		BnL	43m	---	27-Jul-17	
OTHER	Mud cleaner		NOVB	32a1	---	31-Jul-17	
Notes:	Charged as dayrate						
OTHER	Automatic driller		NOVT	38d	---	31-Jul-17	
SURVEY	Survey tools		KnR	38h	---	31-Jul-17	
Notes:	4800 per month						
OTHER	Well Head		GRG	46a	---	02-Aug-17	
MUDCOOLER	Gen for mud cooler		AHERN	38o	---	03-Aug-17	
Notes:	Not yet						
MUDCOOLER	Mud cooler		DRLCO	38o	---	03-Aug-17	
Notes:	Not yet						
OTHER	Mud office		Rollins	36b	---	04-Aug-17	
Notes:	60 day min. with deliver and return						
OTHER	Restrooms		Rollins	43i	---	28-Jul-17	
Notes:	2 x 15 day (est)						
OTHER	Rain4rent tank		Rollins	43c	---	30-Jun-17	
Notes:	30 day (est)						
OTHER	Trash dumpster		Rollins	43j	---	30-Jun-17	
Notes:	30 day (est)						
JARS	6-1/2" jars		KnR	38f1	---	08-Aug-17	
Notes:	Plus 1500 redress						
DC	6-1/2 Monel		KnR	38f1	---	08-Aug-17	
TOOLS	6-1/2" Shock sub		KnR	38f1	---	08-Aug-17	
Notes:	Plus 1500 redress						
			Total Daily Rental Cost $:		---		

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 16 **Report For 11-Aug-17**

Operator:	University of Utah	**Rig:**	Kenai 10	**Spud Date:**	31-Jul-17	**Daily Cost / Mud ($):**			---
Measured Depth (ft):	3238	**Drilling Days (act.):**	12	**Wellbore:**	Original Well Bore	**AFE No.**		**AFE ($)**	**Actual ($)**
Vertical Depth (ft):	3238	**Drilling Days (plan):**	58	**RKB Elevation (ft):**	21.50	---		---	---
Proposed TD (ft):	7060	**Days On Location:**	16	**Last BOP Test:**	08-Aug-17	---		---	---
Hole Made (ft) / Hrs:	51 / 3.75	**Last Casing:**	9.625 at 2,172	**LOT (lbs/gal):**	19.20	**Totals:**		---	---
Average ROP (ft/hr):	13.6	**Next Casing:**	7.000 at 6,900	**Working Interest:**		**Well Cost ($):**			---

Pers/Hrs:	**Operator:**	2 / 24	**Contractor:**	12 / 144	**Service:**	3 / 36	**Other:**	0 / 0	**Total:**	17 / 204

SafetySummary: No incidents or events reported. 16 days since LTI. Conducted Safety Meeting.

Current Operations: 00:00 to 06:00 hrs: Drilled 8-3/4" hole with mud motor from 3,238' to 3,281'.
POH for new bit.

Planned Operations: RIH to bottom. Drill ahead as per program

Toolpusher: Phillip Hoffman, Art Navarro

Wellsite Supervisors: Virgil Welch, Rod Bray **Tel No.:**

Operations Summary

From	To	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	2:30	2.50	3,187	7-32	Waited on fishing tools	X
2:30	3:30	1.00	3,187	7-34-3	Made up 8" magnet and RIH with BHA	X
3:30	5:00	1.50	3,187	7-6-3	RIH to shoe	X
5:00	5:30	0.50	3,187	7-5-1	Circulated and cooler well at shoe	X
5:30	6:15	0.75	3,187	7-6-3	RIH to 3,187 with magnet	X
6:15	7:00	0.75	3,187	7-52	Circulated and worked magnet over junk	X
7:00	8:30	1.50	3,187	7-6-4	POH with magnet	X
8:30	9:30	1.00	3,187	7-6-2	POH with BHA. No recovery	X
9:30	11:00	1.50	3,187	7-34-3	Changed 8" magnet to cut lip guide type.	X
11:00	13:00	2.00	3,187	7-6-3	RIH with Magnet run #2 to bottom at 3,187'	X
13:00	13:30	0.50	3,187	7-52	Worked over junk at 3,187'	X
13:30	15:00	1.50	3,187	7-6-4	POH with magnet run #2	X
15:00	16:00	1.00	3,187	7-6-2	POH with BHA. Recovered 1" x 1" piece of junk on magnet.	X
16:00	18:30	2.50	3,187	7-34-3	Picked up new mud motor and 2 x string stbs. Made up RR bit #3. RIH BHA.	X
18:30	19:15	0.75	3,187	7-6-3	RIH with 8-3/4" to shoe	X
19:15	19:45	0.50	3,187	7-5-1	Circulated at shoe 2,172', put magnet in shaker ditch	
19:45	20:15	0.50	3,187	7-6-3	RIH to bottom at 3,187'	
20:15	21:15	1.00	3,190	3-2-2	Drilled on junk from 3,187' to 3,190'	
21:15	0:00	2.75	3,238	3-2-2	Drilled 8-3/4" hole with mud motor from 3,190' to 3,238' with full returns	

Management Summary

Waited on fishing tools.
Made 8" magnet run with no recovery.
Changed magnets to cut lip style.
Made 8" magnet run #2 and recovered 1" x 1" piece of steel.
Picked up re-run bit #3 and BHA.
RIH to bottom.
Drilled 8-3/4" hole from 3,187' to 3,238'

Casing/Tubular Information

Type	Size (ins)	Top MD (ft)	Top TVD (ft)	Bottom MD (ft)	Bottom TVD (ft)	Hole Section	OH Diam. (ins)	Nom. Wgt. (lbs)	Nominal Grade	LOT (lbs/gal)
FULL	20.000	0	0	84		COND		53		
FULL	13.375	0		338		SURF		55	N-80	11.90
FULL	9.625	0	0	2,172	2,173	INT1	18.000	40	K-55	19.20

Mud Information

Dens.	Vis	PV	YP	Filt.	Cake	pH/ES	Solids %	Oil %	Water %	Sand %	LGS	Cl	Ca	CaCl	Gels 10s	Gels 10m	Gels 30m	Temp In	Temp Out	Mud Loss
11-Aug-17 19:00 at Depth 3,187 ft Return Flow Line, Type: Spud Mud																				
9.50	37	10	15	10	1	10	6	0	94	0.4	6	750	20		4	9	15	125	129	0.0

Comments: Micro C at 2 ppb

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 16 **Report For 11-Aug-17**

Mud Consumables

Item Description	Qty.	Cost	Item Description	Qty.	Cost
XGD Xanthan Gum - 50#SK	1	---			

Bit/BHA/Workstring Information

No Run		Make	Model	Diam	Depth In	This Run Dist	Hrs	R.O.P. Avg	Max	WOB	RPM	Torque	Mud Wt	Flow	Pump Press	J. Vel	P. Drp	HHP	JIF
3	2	Smith	FHi28	8.750	3187	51	3.75	13.6	30.0	25	200	525	10	525	1650				

Jets: 20 20 20 **Out:** 3281 **Grade:** **Cutter:** 3 / 3 **Dull:** ER / NO **Wear:** A **Brgs:** E **Gge:** 0 **Pull:** BHA

BHA - No. 4 - BIT, MMTR, STAB, SHOCK, DCM, STAB, 6 DC, JAR, 2 DC, XO, 9 HWDP = 637.82

Drilling Parameters

Depth (ft) From	To	ROP (ft/hr) Avg	Max	WOB (lbs) Avg	Max	RPM Avg	Max	Torque (ft lbs) Avg	Max	Flow (gals/min) Avg	Max	Pressure (psi)
3,187	3,238	14.0	30.0	20	25	202	212	525	550	525		1,650

Annular Velocity: **Drill Collars:** 417.0 **Drill Pipe:** 213.0

Miscellaneous Drilling Parameters

Hook Loads (lbs): **Off Bottom Rotate:** 105,000 **Pick Up:** 110,000 **Slack Off:** 95,000 **Drag Avg/Max:** 5000 /

Hours on BHA: **Since Inspection:** 40.25 **Total:** 40.25 **Jars:** 40.25

Hours on Casing/Liner: **Rotating:** 40.25 / **Tripping:** 40.5 / ☐ **Wear Bushing Installed**

Mud Log Information

Depth (ft) From	To	TVD (ft) From	To	Gas (Units) Avg	Max	at Depth	Gas Connect.	Trip	Drilling Exp.	Pore Press	Mud Dens.	Shale Dens.	ROP Shale	Sand
3,187	3,238	3,187	3,238											

Formation Name:

Lithology: Granite

Rig Information

Equipment Problems:

Location Condition:

Transport:

Solids Control Information

Screen Sizes:	Top	Middle 1	Middle 2	Bottom
Shaker No 1:	145	145	145	145
Shaker No 2:	145	145	145	145
Shaker No 3:	215	215	215	

Drill Pipe Inventory

DP Size	Joints	Weight	Grade	Thread	DP Size	Joints	Weight	Grade	Thread
4 TSDS	240	14.0	S-135	TSDS40	4 HWDP	15	28.0		TSDS40

Safety Information

Meetings/Drills	Time	Description
Safety	15	Held safety meeting with both crews

First Aid Treatments: **Medical Treatments:** **Lost Time Incidents:** **Days Since LTI:** 16

☐ **BOP Test** ☐ **Crownamatic Check**

Weather Information

Sky Condition: Clear to partly cloudy **Visibility:** 10

Air Temperature: 91 degF **Bar. Pressure:** 29.84

Wind Speed/Dir: 12 / S **Wind Gusts:** 20

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
FLIFT	36K forklift		AHERN	32a1	---	27-Jul-17	
Notes:	Charged as dayrate						
LIGHTS	2 X Light towers		BnL	43e	---	27-Jul-17	

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 16

Report For 11-Aug-17

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
OTHER	2 x Trailers		BnL	43m	---	27-Jul-17	
OTHER	Mud cleaner		NOVB	32a1	---	31-Jul-17	
Notes:	Charged as dayrate						
OTHER	Automatic driller		NOVT	38d	---	31-Jul-17	
SURVEY	Survey tools		KnR	38h	---	31-Jul-17	
Notes:	4800 per month						
OTHER	Well Head		GRG	46a	---	02-Aug-17	
MUDCOOLER	Gen for mud cooler		AHERN	38o	---	03-Aug-17	
Notes:	Not yet						
MUDCOOLER	Mud cooler		DRLCO	38o	---	03-Aug-17	
Notes:	Not yet						
OTHER	Mud office		Rollins	36b	---	04-Aug-17	
Notes:	60 day min. with deliver and return						
OTHER	Restrooms		Rollins	43i	---	28-Jul-17	
Notes:	2 x 15 day (est)						
OTHER	Rain4rent tank		Rollins	43c	---	30-Jun-17	
Notes:	30 day (est)						
OTHER	Trash dumpster		Rollins	43j	---	30-Jun-17	
Notes:	30 day (est)						
JARS	6-1/2" jars		KnR	38f1	---	08-Aug-17	
Notes:	Plus 1500 redress						
DC	6-1/2 Monel		KnR	38f1	---	08-Aug-17	
TOOLS	6-1/2" Shock sub		KnR	38f1	---	08-Aug-17	
Notes:	Plus 1500 redress						
			Total Daily Rental Cost $:		---		

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 17 **Report For 12-Aug-17**

Operator:	University of Utah	**Rig:**	Kenai 10	**Spud Date:**	31-Jul-17	**Daily Cost / Mud ($):**			---
Measured Depth (ft):	3505	**Drilling Days (act.):**	13	**Wellbore:**	Original Well Bore	**AFE No.**		**AFE ($)**	**Actual ($)**
Vertical Depth (ft):	3505	**Drilling Days (plan):**	58	**RKB Elevation (ft):**	21.50	---		---	---
Proposed TD (ft):	7060	**Days On Location:**	17	**Last BOP Test:**	08-Aug-17	---		---	---
Hole Made (ft) / Hrs:	267 / 21.0	**Last Casing:**	9.625 at 2,172	**LOT (lbs/gal):**	19.20	**Totals:**		---	---
Average ROP (ft/hr):	12.71	**Next Casing:**	7.000 at 6,900	**Working Interest:**		**Well Cost ($):**			---

Pers/Hrs:	**Operator:**	2 / 24	**Contractor:**	12 / 144	**Service:**	3 / 36	**Other:**	0 / 0	**Total:**	17 / 204

SafetySummary: No incidents or events reported. 17 days since LTI. Conducted Crown Check, Safety Meeting.

Current Operations: 00:00 to 06:00 hrs: Drilled 8-3/4" hole with mud motor from 3,505' to 3,589' with full returns.

Planned Operations: Drill ahead as per program.

Toolpusher: Phillip Hoffman, Art Navarro

Wellsite Supervisors: Randy Baldwin, Brian Watson **Tel No.:**

Operations Summary

From	To	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	2:00	2.00	3,281	3-2-2	Drilled 8-3/4" hole from 3,238' to 3,281' with full returns.	
2:00	2:30	0.50	3,281	3-5-1	Pumped sweep and circulated.	
2:30	4:00	1.50	3,281	3-6-4	POH to BHA.	
4:00	5:00	1.00	3,281	3-6-2	POH with BHA. Change out bit and two stabs.	
5:00	5:30	0.50	3,281	8-7	Service rig.	
5:30	8:00	2.50	3,281	3-6-3	RIH with drill pipe. Fill pipe at 2,173'.	
8:00	9:00	1.00	3,281	3-6-3	RIH with drill pipe to 3,281'	
9:00	18:00	9.00	3,448	3-2-2	Drilled 8-3/4" hole with mud motor from 3,281' to 3,448' with full returns.	
18:00	19:00	1.00	3,448	3-5-1	Circulate for survey. Set back kelly.	
19:00	20:00	1.00	3,448	3-10	Survey @ 3,380', 1.2 deg., 123.4 Azimuth, 88F in heat shield, MRT 173F after 52 min. static.	
20:00	0:00	4.00	3,505	3-2-2	Drilled 8-3/4" hole with mud motor from 3,448' to 3,505' with full returns.	

Management Summary

Drilled 8-3/4" hole from 3,238' to 3,281' with full returns.
POH. Changed out bit and stabilizers.
RIH. with new bit and drilled 8-3/4" hole from 3,281' to 3,505 with fulll returns.

Casing/Tubular Information

Type	Size (ins)	Top MD (ft)	Top TVD (ft)	Bottom MD (ft)	Bottom TVD (ft)	Hole Section	OH Diam. (ins)	Nom. Wgt. (lbs)	Nominal Grade	LOT (lbs/gal)
FULL	20.000	0	0	84		COND		53		
FULL	13.375	0		338		SURF		55	N-80	11.90
FULL	9.625	0	0	2,172	2,173	INT1	18.000	40	K-55	19.20

Mud Information

Dens.	Vis	PV	YP	Filt.	Cake	pH/ES	Solids %	Oil %	Water %	Sand %	LGS	Cl	Ca	CaCl	Gels 10s	Gels 10m	Gels 30m	Temp In	Temp Out	Mud Loss
12-Aug-17 18:30 at Depth 3,449 ft Return Flow Line, Type: Spud Mud																				
9.50	43	13	16	9	1	10.6	7	0	93	0.5		800	20		7	13	21	133	136	

Mud Consumables

Item Description	Qty.	Cost	Item Description	Qty.	Cost
Caustic Soda - 50#SK	2	---	Cotton Seed - 50#SK	6	---
Micro C - 50#SK	30	---	Pallet Wrap - OTHER	3	---
Polyvis - 5GAL	2	---	Saw Dust - 50#SK	9	---
XGD Xanthan Gum - 50#SK	5	---			

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 17 **Report For 12-Aug-17**

Bit/BHA/Workstring Information

No	Run	Make	Model	Diam	Depth In	This Run Dist	This Run Hrs	R.O.P. Avg	R.O.P. Max	WOB	RPM	Torque	Mud Wt	Mud Flow	Pump Press	J. Vel	P. Drp	HHP	JIF
3	2	Smith	FHi28	8.750	3187	94	5.75	16.3	30.0	20	200	165	10	535	1650	187	296	92	491
Jets: 20 20 20					**Out:** 3281		**Grade:**	**Cutter:**	3 / 3	**Dull:**	ER / NO		**Wear:** A		**Brgs:** E	**Gge:** 0		**Pull:** BHA	
4	1	HC	VGD-30D	8.750	3281	224	15	14.9	30.0	20	200	160	10	535	1635	187	296	92	491
Jets: 20 20 20					**Out:** 3961		**Grade:**	**Cutter:**	3 / 5	**Dull:**	NO / CT		**Wear:** G		**Brgs:** E	**Gge:** 0		**Pull:** TQ	

BHA - No. 5 - BIT, MMTR, STAB, SHOCK, DCM, STAB, 6 DC, JAR, 2 DC, XO, 9 HWDP = 643.84

Drilling Parameters

Depth (ft) From	Depth (ft) To	ROP (ft/hr) Avg	ROP (ft/hr) Max	WOB (lbs) Avg	WOB (lbs) Max	RPM Avg	RPM Max	Torque (ft lbs) Avg	Torque (ft lbs) Max	Flow (gals/min) Avg	Flow (gals/min) Max	Pressure (psi)
3,238	3,505	14.0	20.0	20	26	199	202	565	570	508	508	1,700

Annular Velocity: **Drill Collars:** 412.8 **Drill Pipe:** 205.6

Miscellaneous Drilling Parameters

Hook Loads (lbs): **Off Bottom Rotate:** 105,000 **Pick Up:** 110,000 **Slack Off:** 95,000 **Drag Avg/Max:** 5000 /

Slow Circulation Data:

Pump 2: 51 spm 411 psi

Hours on BHA: **Since Inspection:** 55.25 **Total:** 55.25 **Jars:** 55.25

Hours on Casing/Liner: **Rotating:** 55.25 / **Tripping:** 45 / ☐ **Wear Bushing Installed**

Survey Information

Survey Type	Meas. Depth	Inc.	Azimuth	TVD	Closure	Vertical Section	Coordinates N-S	Coordinates E-W	D.L.S.
MMS	3,380.0	1.20	123.4	3,379.6	35.9	35.8	N 35.8	E 3.3	0.811

Mud Log Information

Depth (ft) From	Depth (ft) To	TVD (ft) From	TVD (ft) To	Gas (Units) Avg	Gas (Units) Max	Gas at Depth	Gas Connect.	Gas Trip	Drilling Exp.	Pore Press	Mud Dens.	Shale Dens.	ROP Shale	ROP Sand
3,238	3,505	3,238	3,505											

Formation Name: Gneiss

Lithology:

Rig Information

Equipment Problems:

Location Condition:

Transport:

Solids Control Information

Screen Sizes:	Top	Middle 1	Middle 2	Bottom	Equipment Usage (Hrs):	
Shaker No 1:	145	145	145	145	Desilter:	24
Shaker No 2:	145	145	145	145		
Shaker No 3:	215	215	215			

Drill Pipe Inventory

DP Size	Joints	Weight	Grade	Thread	DP Size	Joints	Weight	Grade	Thread
4 TSDS	240	14.0	S-135	TSDS40	4 HWDP	15	28.0		TSDS40

Safety Information

Meetings/Drills	Time	Description
Safety	15	Held safety meeting with both crews.

First Aid Treatments: **Medical Treatments:** **Lost Time Incidents:** **Days Since LTI:** 17

☐ **BOP Test** ☑ **Crownamatic Check**

Weather Information

Sky Condition: Clear **Visibility:** 10

Air Temperature: 65 degF **Bar. Pressure:** 29.9

Wind Speed/Dir: 13 / SSW **Wind Gusts:**

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 17

Report For 12-Aug-17

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
FLIFT	36K forklift		AHERN	32a1	---	27-Jul-17	
Notes:	Charged as dayrate						
LIGHTS	2 X Light towers		BnL	43e	---	27-Jul-17	
OTHER	2 x Trailers		BnL	43m	---	27-Jul-17	
OTHER	Mud cleaner		NOVB	32a1	---	31-Jul-17	
Notes:	Charged as dayrate						
OTHER	Automatic driller		NOVT	38d	---	31-Jul-17	
SURVEY	Survey tools		KnR	38h	---	31-Jul-17	
Notes:	4800 per month						
OTHER	Well Head		GRG	46a	---	02-Aug-17	
MUDCOOLER	Gen for mud cooler		AHERN	38o	---	03-Aug-17	
Notes:	Not yet						
MUDCOOLER	Mud cooler		DRLCO	38o	---	03-Aug-17	
Notes:	Not yet						
OTHER	Mud office		Rollins	36b	---	04-Aug-17	
Notes:	60 day min. with deliver and return						
OTHER	Restrooms		Rollins	43i	---	28-Jul-17	
Notes:	2 x 15 day (est)						
OTHER	Rain4rent tank		Rollins	43c	---	30-Jun-17	
Notes:	30 day (est)						
OTHER	Trash dumpster		Rollins	43j	---	30-Jun-17	
Notes:	30 day (est)						
JARS	6-1/2" jars		KnR	38f1	---	08-Aug-17	
Notes:	Plus 1500 redress						
DC	6-1/2 Monel		KnR	38f1	---	08-Aug-17	
TOOLS	6-1/2" Shock sub		KnR	38f1	---	08-Aug-17	
Notes:	Plus 1500 redress						
			Total Daily Rental Cost $:		---		

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 18 **Report For 13-Aug-17**

Operator:	University of Utah	**Rig:**	Kenai 10	**Spud Date:**	31-Jul-17	**Daily Cost / Mud ($):**			---
Measured Depth (ft):	3793	**Drilling Days (act.):**	14	**Wellbore:**	Original Well Bore	**AFE No.**		**AFE ($)**	**Actual ($)**
Vertical Depth (ft):	3793	**Drilling Days (plan):**	58	**RKB Elevation (ft):**	21.50	---		---	---
Proposed TD (ft):	7060	**Days On Location:**	18	**Last BOP Test:**	13-Aug-17	---		---	---
Hole Made (ft) / Hrs:	288 / 22.5	**Last Casing:**	9.625 at 2,172	**LOT (lbs/gal):**	19.20	**Totals:**		---	---
Average ROP (ft/hr):	12.8	**Next Casing:**	7.000 at 6,900	**Working Interest:**		**Well Cost ($):**			---

Pers/Hrs: **Operator:** 2 / 24 **Contractor:** 12 / 144 **Service:** 3 / 36 **Other:** 0 / 0 **Total:** 17 / 204

SafetySummary: No incidents or events reported. 18 days since LTI. Conducted BOP Drill, BOP Test, Crown Check, Safety Meeting.

Current Operations: 00:00 to 06:00 hrs: Drilled 8-3/4" hole with motor from 3,793' to 3870' with full returns.

Planned Operations: Drill ahead as per program.

Toolpusher: Phillip Hoffman, Art Navarro

Wellsite Supervisors: Randy Baldwin, Brian Watson **Tel No.:**

Operations Summary

From	To	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	20:00	20.00	3,765	3-2-2	Drilled 8-3/4" hole with mud motor from 3,508' to 3,765' with full returns.	
20:00	20:30	0.50	3,765	3-5-1	Circulate for survey.	
20:30	21:30	1.00	3,765	3-10	Survey @ 3,697', 1.7 deg., 220. Azimuth, 94F in heat shield, MRT N/A, broken while removing from tool. 56 min. static.	
21:30	0:00	2.50	3,793	3-2-2	Drilled 8-3/4" hole with motor from 3,765' to 3,793' with full returns.	

Management Summary

Drilled 8-3/4" hole with mud motor from 3,508' to 3,793' with full returns.
Survey @ 3,697', 1.7 deg.

Casing/Tubular Information

Type	Size (ins)	Top MD (ft)	Top TVD (ft)	Bottom MD (ft)	Bottom TVD (ft)	Hole Section	OH Diam. (ins)	Nom. Wgt. (lbs)	Nominal Grade	LOT (lbs/gal)
FULL	20.000	0	0	84		COND		53		
FULL	13.375	0		338		SURF		55	N-80	11.90
FULL	9.625	0	0	2,172	2,173	INT1	18.000	40	K-55	19.20

Mud Information

Dens.	Vis	PV	YP	Filt.	Cake	pH/ES	Solids %	Oil %	Water %	Sand %	LGS	Cl	Ca	CaCl	Gels 10s	Gels 10m	Gels 30m	Temp In	Temp Out	Mud Loss
13-Aug-17 19:00 at Depth 3,757 ft Return Flow Line, Type: Spud Mud																				
9.40	45	15	20	8	1	10.2	6		94	0.35		800	20		8	16	23	137	143	

Mud Consumables

Item Description	Qty.	Cost	Item Description	Qty.	Cost
Micro C - 50#SK	25	---	PacReg - 50#SK	1	---
Pallet Wrap - OTHER	1	---			

Bit/BHA/Workstring Information

No Run	Make	Model	Diam	Depth In	This Run Dist	This Run Hrs	R.O.P. Avg	R.O.P. Max	WOB	RPM	Torque	Mud Wt	Mud Flow	Pump Press	J. Vel	P. Drp	HHP	JIF
4 1	HC	VGD-30D	8.750	3281	512	37.5	13.7	25.0	25,	190	550	9	504	1830	176	260	76	431

Jets: 20 20 20 **Out:** 3961 **Grade:** **Cutter:** 3 / 5 **Dull:** NO / CT **Wear:** G **Brgs:** E **Gge:** 0 **Pull:** TQ

BHA - No. 5 - BIT, MMTR, STAB, SHOCK, DCM, STAB, 6 DC, JAR, 2 DC, XO, 9 HWDP = 643.84

Drilling Parameters

Depth (ft) From	Depth (ft) To	ROP (ft/hr) Avg	ROP (ft/hr) Max	WOB (lbs) Avg	WOB (lbs) Max	RPM Avg	RPM Max	Torque (ft lbs) Avg	Torque (ft lbs) Max	Flow (gals/min) Avg	Flow (gals/min) Max	Pressure (psi)
3,505	3,793	13.0	24.0	20,000	28,000	186	192	520	575	504	506	1,830

Annular Velocity: **Drill Collars:** 409.6 **Drill Pipe:** 204.0

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 18 **Report For 13-Aug-17**

Miscellaneous Drilling Parameters

Hook Loads (lbs): **Off Bottom Rotate:** 107,000 **Pick Up:** 110,000 **Slack Off:** 100,000 **Drag Avg/Max:** 5000 /

Slow Circulation Data:

Pump 1:	51 spm	412 psi
Pump 2:	51 spm	432 psi

Hours on BHA: **Since Inspection:** 77.25 **Total:** 77.25 **Jars:** 77.25

Hours on Casing/Liner: **Rotating:** 77.25 / **Tripping:** 46 / ☐ **Wear Bushing Installed**

Survey Information

Survey Type	Meas. Depth	Inc.	Azimuth	TVD	Closure	Vertical Section	Coordinates N-S	Coordinates E-W	D.L.S.
MMS	3,697.0	1.70	220.0	3,696.5	30.5	30.4	N 30.4	E 3.0	0.691

Mud Log Information

Depth (ft) From	Depth (ft) To	TVD (ft) From	TVD (ft) To	Gas (Units) Avg	Gas (Units) Max	Gas (Units) at Depth	Gas Connect.	Gas Trip	Drilling Exp.	Pore Press	Mud Dens.	Shale Dens.	ROP Shale	ROP Sand
3,505	3,793	3,505	3,793											

Formation Name: Gneiss

Lithology:

Rig Information

Equipment Problems:

Location Condition:

Transport:

Solids Control Information

Screen Sizes:	Top	Middle 1	Middle 2	Bottom
Shaker No 1:	145	145	145	145
Shaker No 2:	145	145	145	145
Shaker No 3:	255	255	255	

Equipment Usage (Hrs): **Desilter:** 24

Drill Pipe Inventory

DP Size	Joints	Weight	Grade	Thread	DP Size	Joints	Weight	Grade	Thread
4 TSDS	240	14.0	S-135	TSDS40	4 HWDP	15	28.0		TSDS40

Safety Information

Meetings/Drills	Time	Description
Safety	15	Held safety meeting with both crews.
BOP	4	Drill while drilling.

First Aid Treatments: **Medical Treatments:** **Lost Time Incidents:** **Days Since LTI:** 18

☑ **BOP Test** ☑ **Crownamatic Check**

Weather Information

Sky Condition:	Clear	**Visibility:**	10
Air Temperature:	66 degF	**Bar. Pressure:**	29.8
Wind Speed/Dir:	12 / S	**Wind Gusts:**	

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
FLIFT	36K forklift		AHERN	32a1	---	27-Jul-17	
Notes:	Charged as dayrate						
LIGHTS	2 X Light towers		BnL	43e	---	27-Jul-17	
OTHER	2 x Trailers		BnL	43m	---	27-Jul-17	
OTHER	Mud cleaner		NOVB	32a1	---	31-Jul-17	
Notes:	Charged as dayrate						
OTHER	Automatic driller		NOVT	38d	---	31-Jul-17	
SURVEY	Survey tools		KnR	38h	---	31-Jul-17	
Notes:	4800 per month						

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 18

Report For 13-Aug-17

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
OTHER	Well Head		GRG	46a	---	02-Aug-17	
MUDCOOLER	Gen for mud cooler		AHERN	38o	---	03-Aug-17	
Notes:	Not yet						
MUDCOOLER	Mud cooler		DRLCO	38o	---	03-Aug-17	
Notes:	Not yet						
OTHER	Mud office		Rollins	36b	---	04-Aug-17	
Notes:	60 day min. with deliver and return						
OTHER	Restrooms		Rollins	43i	---	28-Jul-17	
Notes:	2 x 15 day (est)						
OTHER	Rain4rent tank		Rollins	43c	---	30-Jun-17	
Notes:	30 day (est)						
OTHER	Trash dumpster		Rollins	43j	---	30-Jun-17	
Notes:	30 day (est)						
JARS	6-1/2" jars		KnR	38f1	---	08-Aug-17	
Notes:	Plus 1500 redress						
DC	6-1/2 Monel		KnR	38f1	---	08-Aug-17	
TOOLS	6-1/2" Shock sub		KnR	38f1	---	08-Aug-17	
Notes:	Plus 1500 redress						
			Total Daily Rental Cost $:		---		

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 19 **Report For 14-Aug-17**

Operator:	University of Utah	**Rig:**	Kenai 10	**Spud Date:**	31-Jul-17	**Daily Cost / Mud ($):**			---
Measured Depth (ft):	3971	**Drilling Days (act.):**	15	**Wellbore:**	Original Well Bore	**AFE No.**		**AFE ($)**	**Actual ($)**
Vertical Depth (ft):	3971	**Drilling Days (plan):**	58	**RKB Elevation (ft):**	21.50	---		---	---
Proposed TD (ft):	7060	**Days On Location:**	19	**Last BOP Test:**	13-Aug-17	---		---	---
Hole Made (ft) / Hrs:	178 / 18.0	**Last Casing:**	9.625 at 2,172	**LOT (lbs/gal):**	19.20	**Totals:**		---	---
Average ROP (ft/hr):	9.89	**Next Casing:**	7.000 at 6,900	**Working Interest:**		**Well Cost ($):**			---

Pers/Hrs:	**Operator:**	2 / 24	**Contractor:**	12 / 144	**Service:**	3 / 36	**Other:**	0 / 0	**Total:** 17 / 204

SafetySummary: No incidents or events reported. 19 days since LTI. Conducted Crown Check, Safety Meeting.

Current Operations: 00:00 to 06:00 hrs: Drilled 8-3/4" hole with motor from 3,961' to 4,044' with full returns. Circulated. Ran wireline survey. Survey line broke. POH.

Planned Operations: Retrive wireline survey. Trip in the hole and possible re-survey. Continue drilling as per program.

Toolpusher: Phillip Hoffman, Art Navarro

Wellsite Supervisors: Randy Baldwin, Brian Watson **Tel No.:**

Operations Summary

From	To	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	12:00	12.00	3,961	3-2-2	Drilled 8-3/4" hole with mud motor from 3,793' to 3,961' with full returns. Wt 25/30K, 193 RPM, Torque 540/565. Encounter torque downhole.	
12:00	12:30	0.50	3,961	3-5-1	Circulate bottoms up.	
12:30	14:00	1.50	3,961	3-6-4	POH to BHA.	
14:00	15:00	1.00	3,961	3-6-2	POH with BHA. Lay down bit.	
15:00	15:30	0.50	3,961	8-7	Service rig.	
15:30	18:00	2.50	3,961	3-34-3	Picked up new bit and laid down two string stab and picked up two new string stabs. RIH BHA.	
18:00	20:00	2.00	3,961	3-6-3	RIH with drill pipe to 3,777'. Filled pipe at 2,280'.	
20:00	20:30	0.50	3,961	3-6-3	Tagged at 3,777', 40K. Laid down eight singles.	
20:30	23:00	2.50	3,961	3-3	Reamed from 3,777' to 3.961'. Full guage stabs hanging up. Tight at 3,796, 3,801', 3,807, 3,859', 3,866'. Jared loose at 3,907'. Hard reaming from 3,909' to 3,961'. Bit wt 1-4K, RPM 100 with rotary. Torque 350-600 FT/PDS.	
23:00	0:00	1.00	3,971	3-2-2	Drilled 8-3/4" hole from 3,961' to 3,971' with mud motor with full returns.	

Management Summary

Drilled 8-3/4" hole with mud motor from 3,793' to 3,961' with full returns.
POH.
Changed out bit and stabilizers.
RIH and tagged at 3,777'.
Reamed from 3,777' to 3.961'.
Continue to drill 8-3/4" hole from 3,961' to 3,971' with mud motor with full returns.

Casing/Tubular Information

Type	Size (ins)	Top MD (ft)	Top TVD (ft)	Bottom MD (ft)	Bottom TVD (ft)	Hole Section	OH Diam. (ins)	Nom. Wgt. (lbs)	Nominal Grade	LOT (lbs/gal)
FULL	20.000	0	0	84		COND		53		
FULL	13.375	0		338		SURF		55	N-80	11.90
FULL	9.625	0	0	2,172	2,173	INT1	18.000	40	K-55	19.20

Mud Information

Dens.	Vis	PV	YP	Filt.	Cake	pH/ES	Solids %	Oil %	Water %	Sand %	LGS	Cl	Ca	CaCl	Gels 10s	Gels 10m	Gels 30m	Temp In	Temp Out	Mud Loss
14-Aug-17 19:00 at Depth 3,961 ft Return Flow Line, Type: Spud Mud																				
9.30	46	16	19	7.8	1	10.3	6		94	0.25		700	20		9	17	26	139	149	

Comments: LCM content: 1 % at 2 PBB. micro-c.

Mud Consumables

Item Description	Qty.	Cost	Item Description	Qty.	Cost
Micro C - 50#SK	10	---	XGD Xanthan Gum - 50#SK	3	---

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 19 **Report For 14-Aug-17**

Bit/BHA/Workstring Information

No Run		Make	Model	Diam	Depth In	This Run Dist	Hrs	R.O.P. Avg	Max	WOB	RPM	Torque	Mud Wt	Flow	Pump Press	J. Vel	P. Drp	HHP	JIF
4	1	HC	VGD-30D	8.750	3281	680	49.5	13.7	40.0	25,	190	540	9	510	1900	178	266	79	441
Jets: 20 20 20					**Out:** 3961		**Grade:**	**Cutter:**	3 / 5	**Dull:**	NO / CT		**Wear:** G		**Brgs:** E	**Gge:** 0		**Pull:** TQ	
5	1	HC	KM624	8.750	3961	10	1	10.0	30.0	20	190	550	9	512	1770	165	230	69	412
Jets: 18 18 18 18					**Out:** 4044		**Grade:**	**Cutter:**	0 / 0	**Dull:**	NO / NO		**Wear:** A		**Brgs:** E	**Gge:** 0		**Pull:** OTH	

BHA - No. 6 - BIT, MMTR, STAB, SHOCK, DCM, STAB, 6 DC, JAR, 2 DC, XO, 9 HWDP = 636.55

Drilling Parameters

Depth (ft) From	To	ROP (ft/hr) Avg	Max	WOB (lbs) Avg	Max	RPM Avg	Max	Torque (ft lbs) Avg	Max	Flow (gals/min) Avg	Max	Pressure (psi)
3,793	3,961	10.0	20.0	25,000	30,000	188	193	540	565	510	512	1,900
Annular Velocity:	**Drill Collars:**	414.5	**Drill Pipe:**	206.4								
3,961	3,971	12.0	17.0	15,000	20,000	190	194	540	560	508	512	1,770
Annular Velocity:	**Drill Collars:**	412.8	**Drill Pipe:**	205.6								

Miscellaneous Drilling Parameters

Hook Loads (lbs): **Off Bottom Rotate:** 110,000 **Pick Up:** 115,000 **Slack Off:** 105,000 **Drag Avg/Max:** 5000 /

Hours on BHA: **Since Inspection:** 90.25 **Total:** 90.25 **Jars:** 90.25

Hours on Casing/Liner: **Rotating:** 92.25 / **Tripping:** 50.5 / ☐ **Wear Bushing Installed**

Mud Log Information

Depth (ft) From	To	TVD (ft) From	To	Gas (Units) Avg	Max	at Depth	Gas Connect.	Trip	Drilling Exp.	Pore Press	Mud Dens.	Shale Dens.	ROP Shale	Sand
3,961	3,971	3,961	3,971											

Formation Name: Gneiss

Lithology:

Rig Information

Equipment Problems: Rotary torque sensor not working.

Location Condition:

Transport:

Solids Control Information

Screen Sizes:	Top	Middle 1	Middle 2	Bottom	Equipment Usage (Hrs):	
Shaker No 1:	145	145	145	145	**Desilter:**	24
Shaker No 2:	145	145	145	145		
Shaker No 3:	255	255	255			

Drill Pipe Inventory

DP Size	Joints	Weight	Grade	Thread	DP Size	Joints	Weight	Grade	Thread
4 TSDS	240	14.0	S-135	TSDS40	4 HWDP	15	28.0		TSDS40

Safety Information

Meetings/Drills	Time	Description
Safety	15	Held safety meeting with both crews

First Aid Treatments: **Medical Treatments:** **Lost Time Incidents:** **Days Since LTI:** 19

☐ **BOP Test** ☑ **Crownamatic Check**

Weather Information

Sky Condition:	Cloudy	**Visibility:**	12
Air Temperature:	59 degF	**Bar. Pressure:**	29.7
Wind Speed/Dir:	16 / NNW	**Wind Gusts:**	

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
FLIFT	36K forklift		AHERN	32a1	---	27-Jul-17	

Notes: Charged as dayrate

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 19

Report For 14-Aug-17

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
LIGHTS	2 X Light towers		BnL	43e	---	27-Jul-17	
OTHER	2 x Trailers		BnL	43m	---	27-Jul-17	
OTHER	Mud cleaner		NOVB	32a1	---	31-Jul-17	
Notes:	Charged as dayrate						
OTHER	Automatic driller		NOVT	38d	---	31-Jul-17	
SURVEY	Survey tools		KnR	38h	---	31-Jul-17	
Notes:	4800 per month						
OTHER	Well Head		GRG	46a	---	02-Aug-17	
MUDCOOLER	Gen for mud cooler		AHERN	38o	---	03-Aug-17	
Notes:	Not yet						
MUDCOOLER	Mud cooler		DRLCO	38o	---	03-Aug-17	
Notes:	Not yet						
OTHER	Mud office		Rollins	36b	---	04-Aug-17	
Notes:	60 day min. with deliver and return						
OTHER	Restrooms		Rollins	43i	---	28-Jul-17	
Notes:	2 x 15 day (est)						
OTHER	Rain4rent tank		Rollins	43c	---	30-Jun-17	
Notes:	30 day (est)						
OTHER	Trash dumpster		Rollins	43j	---	30-Jun-17	
Notes:	30 day (est)						
JARS	6-1/2" jars		KnR	38f1	---	08-Aug-17	
Notes:	Plus 1500 redress						
DC	6-1/2 Monel		KnR	38f1	---	08-Aug-17	
TOOLS	6-1/2" Shock sub		KnR	38f1	---	08-Aug-17	
Notes:	Plus 1500 redress						
			Total Daily Rental Cost $:		---		

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 20 **Report For 15-Aug-17**

Operator:	University of Utah	**Rig:**	Kenai 10	**Spud Date:**	31-Jul-17	**Daily Cost / Mud ($):**			---
Measured Depth (ft):	4233	**Drilling Days (act.):**	16	**Wellbore:**	Original Well Bore	**AFE No.**		**AFE ($)**	**Actual ($)**
Vertical Depth (ft):	4233	**Drilling Days (plan):**	58	**RKB Elevation (ft):**	21.50	---		---	---
Proposed TD (ft):	7060	**Days On Location:**	20	**Last BOP Test:**	13-Aug-17	---		---	---
Hole Made (ft) / Hrs:	262 / 16.0	**Last Casing:**	9.625 at 2,172	**LOT (lbs/gal):**	19.20	**Totals:**		---	---
Average ROP (ft/hr):	16.38	**Next Casing:**	7.000 at 6,900	**Working Interest:**		**Well Cost ($):**			---

Pers/Hrs:	**Operator:**	2 / 24	**Contractor:**	12 / 144	**Service:**	3 / 36	**Other:**	0 / 0	**Total:**	17 / 204

SafetySummary: No incidents or events reported. 20 days since LTI. Conducted Crown Check, Safety Meeting.

Current Operations: 00:00 to 06:00 hrs: Drilled 8-3/4" hole with mud motor from 4,233' to 4,317" with full returns.

Planned Operations: Drill ahead as per program.

Toolpusher: Phillip Hoffman, Art Navarro

Wellsite Supervisors: Randy Baldwin, Brian Watson **Tel No.:**

Operations Summary

From	To	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	4:30	4.50	4,044	3-2-2	Drilled 8-3/4" hole with mud motor from 3,971' to 4,044' with full returns.	
4:30	5:00	0.50	4,044	3-5-1	Circulate bottoms up.	
5:00	5:30	0.50	4,044	8-8	Survey-broke the wire. Tool dropped down the drill pipe from surface.	X
5:30	6:30	1.00	4,044	8-8	POH to BHA.	X
6:30	7:30	1.00	4,044	8-8	POH BHA, retrive survey tool and replace totco ring. Check stabs and the bit. Survey 3.5 deg., 251 Azimuth, 81F in heat shield, MRT 186F.	X
7:30	9:00	1.50	4,044	8-8	RIH BHA to the jars and picked up three 6-7/8" steel drill collors and RIH BHA.	X
9:00	11:30	2.50	4,044	8-8	RIH drill pipe to 4,044'. Filled pipe @ 2,173'.	X
11:30	12:00	0.50	4,044	8-8	Circulate bottoms up.	X
12:00	12:30	0.50	4,044	3-10	Survey @ 3,976', 3.8 deg., 253.9 Azimuth, 83F in heat shield, MRT 172F after 14 minutes static.	
12:30	0:00	11.50	4,233	3-2-2	Drilled 8-3/4" hole with mud motor from 4,044' to 4,233' with full returns. Started mud cooler at 19:00 hrs at 4,148'.	

Management Summary

Drilled 8-3/4" hole with motor from 3,961' to 4,044' with full returns.
Ran wireline survey and survey line broke, POH and proceed to retrieve survey tool. Started mud cooler at 19:00 hrs at 4,148'.
RIH and ran survey.
Continue to drill 8-3/4" hole with mud motor from 4,044' to 4,233' with full returns.

Comments

Started mud cooler at 19:00 hrs at 4,148'.

Casing/Tubular Information

Type	Size (ins)	Top MD (ft)	Top TVD (ft)	Bottom MD (ft)	Bottom TVD (ft)	Hole Section	OH Diam. (ins)	Nom. Wgt. (lbs)	Nominal Grade	LOT (lbs/gal)
FULL	20.000	0	0	84		COND		53		
FULL	13.375	0		338		SURF		55	N-80	11.90
FULL	9.625	0	0	2,172	2,173	INT1	18.000	40	K-55	19.20

Mud Information

Dens.	Vis	PV	YP	Filt.	Cake	pH/ES	Solids	% Oil	% Water	% Sand	LGS	Cl	Ca	CaCl	Gels 10s	Gels 10m	Gels 30m	Temp In	Temp Out	Mud Loss
15-Aug-17 18:00 at Depth 4,127 ft Return Flow Line, Type: Low Solids Non-Dispersed																				
9.10	43	10	14	8.6	2	9.5	6		94	0.25	6	600	40		8	12	18	146	152	

Comments: 1 % LCM=2PPB Micro-C.

Mud Consumables

Item Description	Qty.	Cost	Item Description	Qty.	Cost
Amberguard - 5GAL	2	---	API Gel - 100#SK	6	---
Caustic Soda - 50#SK	1	---	Defoam - 5GAL	1	---
Micro C - 50#SK	21	---	PacReg - 50#SK	1	---
Saw Dust - 50#SK	1	---	XGD Xanthan Gum - 50#SK	3	---

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 20 **Report For 15-Aug-17**

Bit/BHA/Workstring Information

No	Run	Make	Model	Diam	Depth In	This Run Dist	This Run Hrs	R.O.P. Avg	R.O.P. Max	WOB	RPM	Torque	Mud Wt	Mud Flow	Pump Press	J. Vel	P. Drp	HHP	JIF
5	1	HC	KM624	8.750	3961	73	5.5	13.3	27.5	20,	192	540	9	508	1800	164	226	67	405
Jets: 18 18 18 18					**Out:** 4044		**Grade:**	**Cutter:**	0 / 0	**Dull:**	NO / NO		**Wear:** A		**Brgs:** E	**Gge:** 0		**Pull:** OTH	
5	2	HC	KM624	8.750	4044	189	11.5	16.4	30.0	25	192	550	9	506	1760	163	217	64	389
Jets: 18 18 18 18					**Out:** 4392		**Grade:**	**Cutter:**	0 / 0	**Dull:**	NO / NO		**Wear:** A		**Brgs:** E	**Gge:** 1		**Pull:** BHA	

BHA - No. 7 - BIT, MMTR, STAB, SHOCK, DCM, STAB, 9 DC, JAR, 2 DC, XO, 9 HWDP = 730.56

Drilling Parameters

Depth (ft) From	Depth (ft) To	ROP (ft/hr) Avg	ROP (ft/hr) Max	WOB (lbs) Avg	WOB (lbs) Max	RPM Avg	RPM Max	Torque (ft lbs) Avg	Torque (ft lbs) Max	Flow (gals/min) Avg	Flow (gals/min) Max	Pressure (psi)
3,971	4,233	15.0	37.0	20,000	28,000	190	192	540	560	500	508	1,800

Annular Velocity: **Drill Collars:** 395.3 **Drill Pipe:** 202.4

Miscellaneous Drilling Parameters

Hook Loads (lbs): **Off Bottom Rotate:** 120,000 **Pick Up:** 125,000 **Slack Off:** 112,000 **Drag Avg/Max:** 5000 /

Slow Circulation Data:

Pump 1: 51 spm 425 psi

Pump 2: 51 spm 432 psi

Hours on BHA: **Since Inspection:** 106.25 **Total:** 106.25 **Jars:** 106.25

Hours on Casing/Liner: **Rotating:** 108.25 / **Tripping:** 56.5 / ☐ **Wear Bushing Installed**

Survey Information

Survey Type	Meas. Depth	Inc.	Azimuth	TVD	Closure	Vertical Section	Coordinates N-S	Coordinates E-W	D.L.S.
MMS	3,976.0	3.80	253.9	3,975.2	26.0	24.6	N 24.6	W 8.5	0.921

Mud Log Information

Depth (ft) From	Depth (ft) To	TVD (ft) From	TVD (ft) To	Gas (Units) Avg	Gas (Units) Max	Gas at Depth	Gas Connect.	Gas Trip	Drilling Exp.	Pore Press	Mud Dens.	Shale Dens.	ROP Shale	ROP Sand
3,973	4,233	3,973	4,233											

Formation Name: Granodiorite

Lithology:

Rig Information

Equipment Problems: Rental rotary torque sensor stopped working.

Location Condition:

Transport:

Solids Control Information

Screen Sizes:	Top	Middle 1	Middle 2	Bottom	Equipment Usage (Hrs):
Shaker No 1:	145	145	145	145	**Desilter:** 24
Shaker No 2:	145	145	145	145	**Centrifuge 1:** 18 (Solids Removal)
Shaker No 3:	255	255	255		

Drill Pipe Inventory

DP Size	Joints	Weight	Grade	Thread	DP Size	Joints	Weight	Grade	Thread
4 TSDS	240	14.0	S-135	TSDS40	4 HWDP	15	28.0		TSDS40

Safety Information

Meetings/Drills	Time	Description
Safety	15	Held safety meeting with both crews,

First Aid Treatments: **Medical Treatments:** **Lost Time Incidents:** **Days Since LTI:** 20

☐ **BOP Test** ☑ **Crownamatic Check**

Weather Information

Sky Condition: Cloudy **Visibility:** 10

Air Temperature: 57 degF **Bar. Pressure:** 29.8

Wind Speed/Dir: 22 / NNW **Wind Gusts:**

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 20

Report For 15-Aug-17

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
FLIFT	36K forklift		AHERN	32a1	---	27-Jul-17	
Notes:	Charged as dayrate						
LIGHTS	2 X Light towers		BnL	43e	---	27-Jul-17	
OTHER	2 x Trailers		BnL	43m	---	27-Jul-17	
OTHER	Mud cleaner		NOVB	32a1	---	31-Jul-17	
Notes:	Charged as dayrate						
OTHER	Automatic driller		NOVT	38d	---	31-Jul-17	
SURVEY	Survey tools		KnR	38h	---	31-Jul-17	
Notes:	4800 per month						
OTHER	Well Head		GRG	46a	---	02-Aug-17	
MUDCOOLER	Gen for mud cooler		AHERN	38o	---	03-Aug-17	
Notes:	start 8/15						
MUDCOOLER	Mud cooler		DRLCO	38o	---	03-Aug-17	
Notes:	start 8/15						
OTHER	Mud office		Rollins	36b	---	04-Aug-17	
Notes:	60 day min. with deliver and return						
OTHER	Restrooms		Rollins	43i	---	28-Jul-17	
Notes:	2 x 15 day (est)						
OTHER	Rain4rent tank		Rollins	43c	---	30-Jun-17	
Notes:	30 day (est)						
OTHER	Trash dumpster		Rollins	43j	---	30-Jun-17	
Notes:	30 day (est)						
JARS	6-1/2" jars		KnR	38f1	---	08-Aug-17	
Notes:	Plus 1500 redress						
DC	6-1/2 Monel		KnR	38f1	---	08-Aug-17	
TOOLS	6-1/2" Shock sub		KnR	38f1	---	08-Aug-17	
Notes:	Plus 1500 redress						
OTHER	Centrifuge		NOVB	38g	---	15-Aug-17	
Notes:	Centrifuge 300/day						
			Total Daily Rental Cost $:		---		

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 21 **Report For 16-Aug-17**

Operator:	University of Utah	**Rig:**	Kenai 10	**Spud Date:**	31-Jul-17	**Daily Cost / Mud ($):**			---
Measured Depth (ft):	4402	**Drilling Days (act.):**	17	**Wellbore:**	Original Well Bore	**AFE No.**		**AFE ($)**	**Actual ($)**
Vertical Depth (ft):	4402	**Drilling Days (plan):**	58	**RKB Elevation (ft):**	21.50	---		---	---
Proposed TD (ft):	7060	**Days On Location:**	21	**Last BOP Test:**	13-Aug-17	---		---	---
Hole Made (ft) / Hrs:	169 / 22.0	**Last Casing:**	9.625 at 2,172	**LOT (lbs/gal):**	19.20	**Totals:**		---	---
Average ROP (ft/hr):	7.68	**Next Casing:**	7.000 at 6,900	**Working Interest:**		**Well Cost ($):**			---

Pers/Hrs:	**Operator:**	2 / 24	**Contractor:**	12 / 144	**Service:**	3 / 36	**Other:**	0 / 0	**Total:**	17 / 204

SafetySummary: No incidents or events reported. 21 days since LTI. Conducted Crown Check, Safety Meeting.

Current Operations: 00:00 to 06:00: Drilled 8-3/4" hole with mud motor from 4,402' to 4,432' with full returns.

Planned Operations: Drill ahead as per program.

Toolpusher: Phillip Hoffman, Art Navarro

Wellsite Supervisors: Randy Baldwin, Brian Watson **Tel No.:**

Operations Summary

From	To	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	0:30	0.50	4,233	8-7	Service rig.	
0:30	9:00	8.50	4,360	3-2-2	Drilled 8-3/4" hole with mud motor from 4,233' to 4,360' with full circulation.	
9:00	9:30	0.50	4,360	3-5-1	Circulate for survey.	
9:30	10:00	0.50	4,360	3-10	Survey at 4,292', 6.3 deg. Inc, 255.8 Azimuth, 76F in heat shield. MRT 157F, 14 minutes static.	
10:00	12:30	2.50	4,392	3-2-2	Drilled 8-3/4" hole with mud motor from 4,360' to 4,392' with full circulation.	
12:30	13:00	0.50	4,392	3-5-1	Circulate bottoms up.	
13:00	15:00	2.00	4,392	3-6-4	POH to BHA.	
15:00	16:30	1.50	4,392	3-6-2	POH with BHA. Check stabs and bit. Top stab is only out 1/32. 2nd stab is in gauge, and bit is out 1/32 with 2 chipped cutters, other than that it looks good.	
16:30	19:30	3.00	4,392	3-6-1	RIH BHA, Change out shock-sub and pickup one new 8-3/4" string stab bored for a float and moved the float to the string stab. NOTE: rig short one lift sub.	
19:30	20:00	0.50	4,392	3-6-3	RIH changed out two HWDP with two new ones. Worn down hard band.	
20:00	22:30	2.50	4,392	3-6-3	RIH with drill pipe. Fill at 2,196'.	
22:30	0:00	1.50	4,402	3-2-2	Drilled 8-3/4" hole with mud motor from 4,392' to 4,402' with full circulation.	

Management Summary

Drilled 8-3/4" hole with mud motor from 4,233' to 4,392' with full returns.
Survey at 4,292', 6.3 deg.Inc, 255.8 Azimuth. POH.
- Added an additional stabilizer.
- Changed out shock sub.

RIH.
Continue to drilled 8-3/4" hole with mud motor from 4,392' to 4,402' with full returns.
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Casing/Tubular Information

Type	Size (ins)	Top MD (ft)	Top TVD (ft)	Bottom MD (ft)	Bottom TVD (ft)	Hole Section	OH Diam. (ins)	Nom. Wgt. (lbs)	Nominal Grade	LOT (lbs/gal)
FULL	20.000	0	0	84		COND		53		
FULL	13.375	0		338		SURF		55	N-80	11.90
FULL	9.625	0	0	2,172	2,173	INT1	18.000	40	K-55	19.20

Mud Information

Dens.	Vis	PV	YP	Filt.	Cake	pH/ES	Solids %	Oil %	Water %	Sand %	LGS	Cl	Ca	CaCl	Gels 10s	Gels 10m	Gels 30m	Temp In	Temp Out	Mud Loss
16-Aug-17 18:00 at Depth 4,392 ft Return Flow Line, Type: Low Solids Non-Dispersed																				
9.00	43	8	12	8.6	2	9.2	5		95	0.25	5	550	40		6	10	15	111	114	

Comments: 1 % LCM=2 PPB Micro-C.

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 21 **Report For 16-Aug-17**

Mud Consumables

Item Description	Qty.	Cost	Item Description	Qty.	Cost
Benex - SACK	2	---	Cotton Seed - 50#SK	5	---
Micro C - 50#SK	20	---	PacReg - 50#SK	1	---
Pallet Wrap - OTHER	1	---	Saw Dust - 50#SK	5	---
XGD Xanthan Gum - 50#SK	2	---			

Bit/BHA/Workstring Information

No	Run	Make	Model	Diam	Depth In	This Run Dist	This Run Hrs	R.O.P. Avg	R.O.P. Max	WOB	RPM	Torque	Mud Wt	Mud Flow	Pump Press	J. Vel	P. Drp	HHP	JIF
5	2	HC	KM624	8.750	4044	348	22.5	15.5	37.0	24,	190		9	508	1800	164	217	64	388
Jets: 18 18 18 18					**Out:** 4392		**Grade:**	**Cutter:**	0 / 0	**Dull:**	NO / NO		**Wear:** A		**Brgs:** E	**Gge:** 1		**Pull:** BHA	
5	3	HC	KM624	8.750	4392	10	2	5.0	6.0	10	190		9	508	1800	164	217	64	388
Jets: 18 18 18 18					**Out:** 4630		**Grade:**	**Cutter:**	4 / 6	**Dull:**	BT / CT		**Wear:** G		**Brgs:** E	**Gge:** 2		**Pull:** BHA	

BHA - No. 8 - BIT, MMTR, STAB, SHOCK, STAB, DCM, STAB, 9 DC, JAR, 2 DC, XO, 9 HWDP = 736.24

Drilling Parameters

Depth (ft) From	Depth (ft) To	ROP (ft/hr) Avg	ROP (ft/hr) Max	WOB (lbs) Avg	WOB (lbs) Max	RPM Avg	RPM Max	Torque (ft lbs) Avg	Torque (ft lbs) Max	Flow (gals/min) Avg	Flow (gals/min) Max	Pressure (psi)
4,233	4,392	14.0	37.0	22,000	28,000	190	195			506	510	1,806

Annular Velocity: Drill Collars: 400.1 **Drill Pipe:** 204.8

Comments: POH, inclination climbing.

4,392	4,402	5.0	6.0	10,000	10,000	192	195			505	510	1,782

Annular Velocity: Drill Collars: 399.3 **Drill Pipe:** 204.4

Miscellaneous Drilling Parameters

Hook Loads (lbs): Off Bottom Rotate: 115,000 **Pick Up:** 120,000 **Slack Off:** 111,000 **Drag Avg/Max:** 5000 /

Slow Circulation Data:

Pump 1: 47 spm 397 psi

Hours on BHA: Since Inspection: 117.25 **Total:** 117.25 **Jars:** 117.25

Hours on Casing/Liner: Rotating: 119.25 / **Tripping:** 63.5 / ☐ **Wear Bushing Installed**

Survey Information

Survey Type	Meas. Depth	Inc.	Azimuth	TVD	Closure	Vertical Section	Coordinates N-S	Coordinates E-W	D.L.S.
MMS	4,293.0	6.30	255.8	4,290.9	39.5	17.4	N 17.4	W 35.5	0.790

Mud Log Information

Depth (ft) From	Depth (ft) To	TVD (ft) From	TVD (ft) To	Gas (Units) Avg	Gas (Units) Max	Gas (Units) at Depth	Gas Connect.	Gas Trip	Drilling Exp.	Pore Press	Mud Dens.	Shale Dens.	ROP Shale	ROP Sand
4,233	4,402	4,233	4,402											

Formation Name:

Lithology: Granite

Rig Information

Equipment Problems: Rental rotary torque sensor not working. Rig short one drill collor lift sub.

Location Condition:

Transport:

Solids Control Information

Screen Sizes:	Top	Middle 1	Middle 2	Bottom	Equipment Usage (Hrs):
Shaker No 1:	145	145	145	145	**Desilter:** 24
Shaker No 2:	145	145	145	145	**Centrifuge 1:** 24 (Solids Removal)
Shaker No 3:	255	255	255		

Drill Pipe Inventory

DP Size	Joints	Weight	Grade	Thread	DP Size	Joints	Weight	Grade	Thread
4 TSDS	240	14.0	S-135	TSDS40	4 HWDP	15	28.0		TSDS40

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 21 **Report For 16-Aug-17**

Safety Information

Meetings/Drills	Time	Description
Safety	15	Held safety meeting with both crews.

First Aid Treatments: **Medical Treatments:** **Lost Time Incidents:** **Days Since LTI:** 21

☐ **BOP Test** ☑ **Crownamatic Check**

Weather Information

Sky Condition:	Clear	**Visibility:**	10
Air Temperature:	58 degF	**Bar. Pressure:**	29.9
Wind Speed/Dir:	7 / W	**Wind Gusts:**	

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
FLIFT	36K forklift		AHERN	32a1	---	27-Jul-17	
Notes:	Charged as dayrate						
LIGHTS	2 X Light towers		BnL	43e	---	27-Jul-17	
OTHER	2 x Trailers		BnL	43m	---	27-Jul-17	
OTHER	Mud cleaner		NOVB	32a1	---	31-Jul-17	
Notes:	Charged as dayrate						
OTHER	Automatic driller		NOVT	38d	---	31-Jul-17	
SURVEY	Survey tools		KnR	38h	---	31-Jul-17	
Notes:	4800 per month						
OTHER	Well Head		GRG	46a	---	02-Aug-17	
MUDCOOLER	Gen for mud cooler		AHERN	38o	---	03-Aug-17	
Notes:	start 8/15						
MUDCOOLER	Mud cooler		DRLCO	38o	---	03-Aug-17	
Notes:	start 8/15						
OTHER	Mud office		Rollins	36b	---	04-Aug-17	
Notes:	60 day min. with deliver and return						
OTHER	Restrooms		Rollins	43i	---	28-Jul-17	
Notes:	2 x 15 day (est)						
OTHER	Rain4rent tank		Rollins	43c	---	30-Jun-17	
Notes:	30 day (est)						
OTHER	Trash dumpster		Rollins	43j	---	30-Jun-17	
Notes:	30 day (est)						
JARS	6-1/2" jars		KnR	38f1	---	08-Aug-17	
Notes:	Plus 1500 redress						
DC	6-1/2 Monel		KnR	38f1	---	08-Aug-17	
TOOLS	6-1/2" Shock sub		KnR	38f1	---	08-Aug-17	16-Aug-17
Notes:	Plus 1500 redress						
OTHER	Centrifuge		NOVB	38g	---	15-Aug-17	
Notes:	Centrifuge 300/day						
TOOLS	6-1/2" shock sub	123456	KnR	38f1	---	16-Aug-17	
Notes:	Plus 1500 redress.						
			Total Daily Rental Cost $:		---		

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 22 **Report For 17-Aug-17**

Operator:	University of Utah	**Rig:**	Kenai 10	**Spud Date:**	31-Jul-17	**Daily Cost / Mud ($):**			---
Measured Depth (ft):	4593	**Drilling Days (act.):**	18	**Wellbore:**	Original Well Bore	**AFE No.**		**AFE ($)**	**Actual ($)**
Vertical Depth (ft):	4593	**Drilling Days (plan):**	58	**RKB Elevation (ft):**	21.50	---		---	---
Proposed TD (ft):	7060	**Days On Location:**	22	**Last BOP Test:**	13-Aug-17	---		---	---
Hole Made (ft) / Hrs:	191 / 23.0	**Last Casing:**	9.625 at 2,172	**LOT (lbs/gal):**	19.20	**Totals:**		---	---
Average ROP (ft/hr):	8.3	**Next Casing:**	7.000 at 6,900	**Working Interest:**		**Well Cost ($):**			---

Pers/Hrs: **Operator:** 2 / 24 **Contractor:** 12 / 144 **Service:** 3 / 36 **Other:** 0 / 0 **Total:** 17 / 204

SafetySummary: No incidents or events reported. 22 days since LTI. Conducted BOP Drill, Crown Check, Safety Meeting.

Current Operations: 00:00 to 06:00: Drilled 8-3/4" hole with mud motor from 4,593' to 4,630' with full returns.

Planned Operations: Run Survey. POH. change bit.
Possibly pick up directional tools to correct inclination.

Toolpusher: Phillip Hoffman, Art Navarro

Wellsite Supervisors: Randy Baldwin, Brian Watson **Tel No.:**

Operations Summary

From	To	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	14:30	14.50	4,512	3-2-2	Drilled 8-3/4" hole with mud motor from 4,402' to 4,512' with full returns.	
14:30	15:00	0.50	4,512	8-8	Repair rotary chain.	X
15:00	23:00	8.00	4,588	3-2-2	Drilled 8-3/4" hole with mud motor from 4,512' to 4,588' with full returns.	
23:00	23:30	0.50	4,588	8-7	Sercice rig.	
23:30	0:00	0.50	4,593	3-2-2	Drilled 8-3/4" hole with mud motor from 4,588' to 4,593' with full returns.	

Management Summary

Drilled 8-3/4" hole with mud motor from 4,402' to 4,593' with full returns.

Casing/Tubular Information

Type	Size (ins)	Top MD (ft)	Top TVD (ft)	Bottom MD (ft)	Bottom TVD (ft)	Hole Section	OH Diam. (ins)	Nom. Wgt. (lbs)	Nominal Grade	LOT (lbs/gal)
FULL	20.000	0	0	84		COND		53		
FULL	13.375	0		338		SURF		55	N-80	11.90
FULL	9.625	0	0	2,172	2,173	INT1	18.000	40	K-55	19.20

Mud Information

17-Aug-17 18:00 at Depth 4,552 ft Return Flow Line, Type: Low Solids Non-Dispersed

Dens.	Vis	PV	YP	Filt.	Cake	pH/ES	Solids %	Oil	Water	Sand	LGS	Cl	Ca	CaCl	Gels 10s	Gels 10m	Gels 30m	Temp In	Temp Out	Mud Loss
8.80	38	8	10	8	2	9	5		95	0.1	5	500	40		4	8	10	107	116	

Comments: .75 % LCM =1.5 PPB micro-c.

Mud Consumables

Item Description	Qty.	Cost	Item Description	Qty.	Cost
Amberguard - 5GAL	1	---	Benex - SACK	2	---
Caustic Soda - 50#SK	1	---	Cotton Seed - 50#SK	5	---
Micro C - 50#SK	24	---	PacReg - 50#SK	2	---
Polyvis - 5GAL	1	---	Saw Dust - 50#SK	2	---
XGD Xanthan Gum - 50#SK	2	---			

Bit/BHA/Workstring Information

No Run	Make	Model	Diam	Depth In	This Run Dist	This Run Hrs	R.O.P. Avg	R.O.P. Max	WOB	RPM	Torque	Mud Wt	Mud Flow	Pump Press	J. Vel	P. Drp	HHP	JIF
5 3	HC	KM624	8.750	4392	201	25.5	7.9	14.0	9	190		9	508	1780	164	217	64	388

Jets: 18 18 18 18 **Out:** 4630 **Grade:** **Cutter:** 4 / 6 **Dull:** BT / CT **Wear:** G **Brgs:** E **Gge:** 2 **Pull:** BHA

BHA - No. 8 - BIT, MMTR, STAB, SHOCK, STAB, DCM, STAB, 9 DC, JAR, 2 DC, XO, 9 HWDP = 736.24

Drilling Parameters

Depth (ft) From	Depth (ft) To	ROP (ft/hr) Avg	ROP (ft/hr) Max	WOB (lbs) Avg	WOB (lbs) Max	RPM Avg	RPM Max	Torque (ft lbs) Avg	Torque (ft lbs) Max	Flow (gals/min) Avg	Flow (gals/min) Max	Pressure (psi)
4,402	4,593	9.0	14.0	20,000	25,000	190	192			508	510	1,780

Annular Velocity: **Drill Collars:** 401.6 **Drill Pipe:** 205.6

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 22 **Report For 17-Aug-17**

Miscellaneous Drilling Parameters

Hook Loads (lbs): **Off Bottom Rotate:** 120,000 **Pick Up:** 126,000 **Slack Off:** 118,000 **Drag Avg/Max:** 5000 /

Slow Circulation Data:

Pump 2: 52 spm 365 psi

Hours on BHA: **Since Inspection:** 140.75 **Total:** 140.75 **Jars:** 140.75

Hours on Casing/Liner: **Rotating:** 142.25 / **Tripping:** 63.5 / ☐ **Wear Bushing Installed**

Mud Log Information

Depth (ft) From	Depth (ft) To	TVD (ft) From	TVD (ft) To	Gas (Units) Avg	Gas (Units) Max	Gas (Units) at Depth	Gas Connect.	Gas Trip	Drilling Exp.	Pore Press	Mud Dens.	Shale Dens.	ROP Shale	ROP Sand
4,402	4,593	4,402	4,593											

Formation Name:

Lithology: Granite

Rig Information

Equipment Problems:

Location Condition:

Transport:

Solids Control Information

Screen Sizes:	Top	Middle 1	Middle 2	Bottom	Equipment Usage (Hrs):	
Shaker No 1:	145	145	145	145	Desilter:	24
Shaker No 2:	145	145	145	145	Centrifuge 1:	12 (Solids Removal)
Shaker No 3:	255	255	255			

Drill Pipe Inventory

DP Size	Joints	Weight	Grade	Thread	DP Size	Joints	Weight	Grade	Thread
4 TSDS	240	14.0	S-135	TSDS40	4 HWDP	15	28.0		TSDS40

Safety Information

Meetings/Drills	Time	Description
Safety	15	Held safety meeting with both crews.
BOP	4	

First Aid Treatments: **Medical Treatments:** **Lost Time Incidents:** **Days Since LTI:** 22

☐ **BOP Test** ☑ **Crownamatic Check**

Weather Information

Sky Condition: Clear **Visibility:** 10

Air Temperature: 61 degF **Bar. Pressure:** 29.9

Wind Speed/Dir: 8 / S **Wind Gusts:**

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
FLIFT	36K forklift		AHERN	32a1	---	27-Jul-17	
Notes:	Charged as dayrate						
LIGHTS	2 X Light towers		BnL	43e	---	27-Jul-17	
OTHER	2 x Trailers		BnL	43m	---	27-Jul-17	
OTHER	Mud cleaner		NOVB	32a1	---	31-Jul-17	
Notes:	Charged as dayrate						
OTHER	Automatic driller		NOVT	38d	---	31-Jul-17	
SURVEY	Survey tools		KnR	38h	---	31-Jul-17	
Notes:	4800 per month						
OTHER	Well Head		GRG	46a	---	02-Aug-17	
MUDCOOLER	Gen for mud cooler		AHERN	38o	---	03-Aug-17	
Notes:	start 8/15						
MUDCOOLER	Mud cooler		DRLCO	38o	---	03-Aug-17	
Notes:	start 8/15						

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 22

Report For 17-Aug-17

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
OTHER	Mud office		Rollins	36b	---	04-Aug-17	
Notes:	60 day min. with deliver and return						
OTHER	Restrooms		Rollins	43i	---	28-Jul-17	
Notes:	2 x 15 day (est)						
OTHER	Rain4rent tank		Rollins	43c	---	30-Jun-17	
Notes:	30 day (est)						
OTHER	Trash dumpster		Rollins	43j	---	30-Jun-17	
Notes:	30 day (est)						
JARS	6-1/2" jars		KnR	38f1	---	08-Aug-17	
Notes:	Plus 1500 redress						
DC	6-1/2 Monel		KnR	38f1	---	08-Aug-17	
OTHER	Centrifuge		NOVB	38g	---	15-Aug-17	
Notes:	Centrifuge 300/day						
TOOLS	6-1/2" shock sub	1455355	KnR	38f1	---	16-Aug-17	
Notes:	Plus 1500 redress.						
			Total Daily Rental Cost $:		---		

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 23 **Report For 18-Aug-17**

Operator:	University of Utah	**Rig:**	Kenai 10	**Spud Date:**	31-Jul-17	**Daily Cost / Mud ($):**			---
Measured Depth (ft):	4671	**Drilling Days (act.):**	19	**Wellbore:**	Original Well Bore	**AFE No.**		**AFE ($)**	**Actual ($)**
Vertical Depth (ft):	4671	**Drilling Days (plan):**	58	**RKB Elevation (ft):**	21.50	---		---	---
Proposed TD (ft):	7060	**Days On Location:**	23	**Last BOP Test:**	13-Aug-17	---		---	---
Hole Made (ft) / Hrs:	78 / 19.0	**Last Casing:**	9.625 at 2,172	**LOT (lbs/gal):**	19.20	**Totals:**		---	---
Average ROP (ft/hr):	4.11	**Next Casing:**	7.000 at 6,900	**Working Interest:**		**Well Cost ($):**			---

Pers/Hrs: **Operator:** 2 / 24 **Contractor:** 12 / 144 **Service:** 6 / 72 **Other:** 0 / 0 **Total:** 20 / 240

SafetySummary: No incidents or events reported. 23 days since LTI. Conducted Crown Check, Safety Meeting.

Current Operations: 00:00 to 06:00: Directionally drilled 8-3/4" hole from 4,671' to 4,727' with full returns.

Planned Operations: Drill ahead as per program.

Toolpusher: Phillip Hoffman, Cal Sutton

Wellsite Supervisors: Randy Baldwin, Brian Watson **Tel No.:**

Operations Summary

From	To	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	6:00	6.00	4,630	3-2-2	Drilled 8-3/4" hole with mud motor from 4,593' to 4,630' with full circulation.	
6:00	6:30	0.50	4,630	3-5-1	Circulate for survey.	
6:30	7:30	1.00	4,630	3-10	Survey at 4,562', inc. 6.8, 253.8 Azimuth, 81 F in heat shield. MRT 176F, 16 minutes static.	
7:30	9:00	1.50	4,630	3-6-4	POH to BHA at 736'.	
9:00	11:30	2.50	4,630	3-6-2	POH with BHA, layed down bit, motor, monel dc, shock sub and three stab's	
11:30	12:00	0.50	4,630	8-7	Service rig.	
12:00	14:30	2.50	4,630	3-34-3	Make up directional tools. Picked up motor, bit, one stab., shock sub, UBHO and two NM DC's. Orient tools.	
14:30	15:30	1.00	4,630	3-6-1	RIH BHA to 496'. Break circulation and test tools.	
15:30	16:00	0.50	4,630	3-6-3	RIH drill pipe to 1,064' Break circulation and test tools.	
16:00	17:00	1.00	4,630	3-6-3	RIH drill pipe to 2,293'. Break circulation and test tools.	
17:00	18:00	1.00	4,630	3-6-3	RIH drill pipe to 3,786'. Break circulation and test tools.	
18:00	19:00	1.00	4,630	3-6-3	RIH drill pipe to 4,595'	
19:00	19:30	0.50	4,630	3-3	Ream from 4,595' to 4,630'. WT. 5000, RPM 187.	
19:30	22:00	2.50	4,653	3-2-2	Drilled 8-3/4" hole with mud motor from 4,630' to 4,653' with full returns. WT 20,000, RPM 187	
22:00	23:30	1.50	4,668	3-2-3	Slide from 4,653' to 4,668' WT 20,000, RPM 186.	
23:30	0:00	0.50	4,671	3-2-2	Drilled 8-3/4" hole with mud motor from 4,668' to 4,671'.	

Management Summary

Drilled 8-3/4" hole with mud motor from 4,593' to 4,630' with full returns.
Ran survey at 4562'. 6.8 deg Inc.
Decided to pull bit out of the hole, because of hole increasing angle.
Pick up new PDC bit and directional tools.
Staged in hole.
Continue to directional drill 8-3/4" hole from 4,630' to 4,671' with full returns.

Casing/Tubular Information

Type	Size (ins)	Top MD (ft)	Top TVD (ft)	Bottom MD (ft)	Bottom TVD (ft)	Hole Section	OH Diam. (ins)	Nom. Wgt. (lbs)	Nominal Grade	LOT (lbs/gal)
FULL	20.000	0	0	84		COND		53		
FULL	13.375	0		338		SURF		55	N-80	11.90
FULL	9.625	0	0	2,172	2,173	INT1	18.000	40	K-55	19.20

Mud Information

Dens.	Vis	PV	YP	Filt.	Cake	pH/ES	% Solids	% Oil	% Water	% Sand	% LGS	Cl	Ca	CaCl	Gels 10s	Gels 10m	Gels 30m	Temp In	Temp Out	Mud Loss
18-Aug-17 18:00 at Depth 4,630 ft Return Flow Line, Type: Low Solids Non-Dispersed																				
8.80	42	8	11	8.4	2	9	5		95	0.1	5	700	40		5	8	12	104	115	

Comments: 1 % LCM=2PPB Micro-C

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 23 **Report For 18-Aug-17**

Mud Consumables

Item Description	Qty.	Cost	Item Description	Qty.	Cost
Cotton Seed - 50#SK	7	---	Micro C - 50#SK	29	---
PacReg - 50#SK	2	---	Pallet Wrap - OTHER	1	---
Saw Dust - 50#SK	10	---	XGD Xanthan Gum - 50#SK	2	---

Bit/BHA/Workstring Information

No Run	Make	Model	Diam	Depth In	This Run Dist	This Run Hrs	R.O.P. Avg	R.O.P. Max	WOB	RPM	Torque	Mud Wt	Mud Flow	Pump Press	J. Vel	P. Drp	HHP	JIF
5 3	HC	KM624	8.750	4392	238	50.5	4.7	32.0	20,	190		9	508	1780	164	217	64	388
Jets: 18 18 18 18				**Out:** 4630		**Grade:**	**Cutter:**	4 / 6	**Dull:**	BT / CT		**Wear:** G	**Brgs:** E	**Gge:** 2			**Pull:** BHA	
6 1	Smith	Z713	8.750	4630	41	4.5	9.1	13.0	20	190		9	500	1900	177	252	73	412
Jets: 13 13 13 13 13 13 13				**Out:** 4875		**Grade:**	**Cutter:**	1 / 1	**Dull:**	BT / CT		**Wear:** N	**Brgs:** X	**Gge:** 0			**Pull:** BHA	

BHA - No. 9 - BIT, MMTR, STAB, SHOCK, XO, OTHER, 2 DCM, XO, 9 DC, JAR, 2 DC, XO, 9 HWDP = 768.69

Drilling Parameters

Depth (ft) From	Depth (ft) To	ROP (ft/hr) Avg	ROP (ft/hr) Max	WOB (lbs) Avg	WOB (lbs) Max	RPM Avg	RPM Max	Torque (ft lbs) Avg	Torque (ft lbs) Max	Flow (gals/min) Avg	Flow (gals/min) Max	Pressure (psi)
4,593	4,630	5.0	6.0	10,000	13,000	190	192			508	510	1,780

Annular Velocity: Drill Collars: 401.6 **Drill Pipe:** 205.6

Comments: POH for directional tools.

4,630	4,671	9.0	15.0	18,000	20,000	187	190			508	510	1,840

Annular Velocity: Drill Collars: 401.6 **Drill Pipe:** 205.6

Comments: PDC bit

Miscellaneous Drilling Parameters

Hook Loads (lbs): Off Bottom Rotate: 115,000 **Pick Up:** 125,000 **Slack Off:** 105,000 **Drag Avg/Max:** 5000 /

Slow Circulation Data:

Pump 1: 51 spm 360 psi

Pump 2: 51 spm 392 psi

Hours on BHA: Since Inspection: 4.5 **Total:** 4.5 **Jars:** 151.25

Hours on Casing/Liner: Rotating: 152.75 / **Tripping:** 72 / ☐ **Wear Bushing Installed**

Survey Information

Survey Type	Meas. Depth	Inc.	Azimuth	TVD	Closure	Vertical Section	Coordinates N-S	Coordinates E-W	D.L.S.
MMS	4,569.0	6.80	253.8	4,565.1	66.5	9.2	N 9.2	W 65.8	0.199

Mud Log Information

Depth (ft) From	Depth (ft) To	TVD (ft) From	TVD (ft) To	Gas (Units) Avg	Gas (Units) Max	Gas at Depth	Gas Connect.	Gas Trip	Drilling Exp.	Pore Press	Mud Dens.	Shale Dens.	ROP Shale	ROP Sand
4,630	4,671	4,630	4,671											

Formation Name:

Lithology: Granite

Rig Information

Equipment Problems: Rental rotary torque sensor not working.

Location Condition:

Transport:

Solids Control Information

Screen Sizes:	Top	Middle 1	Middle 2	Bottom	Equipment Usage (Hrs):	
Shaker No 1:	145	145	145	145	Desilter:	24
Shaker No 2:	145	145	145	145	Centrifuge 1:	3 (Solids Removal)
Shaker No 3:	255	255	255			

Drill Pipe Inventory

DP Size	Joints	Weight	Grade	Thread	DP Size	Joints	Weight	Grade	Thread
4 TSDS	240	14.0	S-135	TSDS40	4 HWDP	15	28.0		TSDS40

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 23 **Report For 18-Aug-17**

Safety Information

Meetings/Drills	Time	Description
Safety	15	Held safety meeting with both crews.

First Aid Treatments: **Medical Treatments:** **Lost Time Incidents:** **Days Since LTI:** 23

☐ **BOP Test** ☑ **Crownamatic Check**

Weather Information

Sky Condition:	Clear	**Visibility:**	10
Air Temperature:	62 degF	**Bar. Pressure:**	29.9
Wind Speed/Dir:	0 / SW	**Wind Gusts:**	

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
FLIFT	36K forklift		AHERN	32a1	---	27-Jul-17	
Notes:	Charged as dayrate						
LIGHTS	2 X Light towers		BnL	43e	---	27-Jul-17	
OTHER	2 x Trailers		BnL	43m	---	27-Jul-17	
OTHER	Mud cleaner		NOVB	32a1	---	31-Jul-17	
Notes:	Charged as dayrate						
OTHER	Automatic driller		NOVT	38d	---	31-Jul-17	
SURVEY	Survey tools		KnR	38h	---	31-Jul-17	
Notes:	4800 per month						
OTHER	Well Head		GRG	46a	---	02-Aug-17	
MUDCOOLER	Gen for mud cooler		AHERN	38o	---	03-Aug-17	
Notes:	start 8/15						
MUDCOOLER	Mud cooler		DRLCO	38o	---	03-Aug-17	
Notes:	start 8/15						
OTHER	Mud office		Rollins	36b	---	04-Aug-17	
Notes:	60 day min. with deliver and return						
OTHER	Restrooms		Rollins	43i	---	28-Jul-17	
Notes:	2 x 15 day (est)						
OTHER	Rain4rent tank		Rollins	43c	---	30-Jun-17	
Notes:	30 day (est)						
OTHER	Trash dumpster		Rollins	43j	---	30-Jun-17	
Notes:	30 day (est)						
JARS	6-1/2" jars		KnR	38f1	---	08-Aug-17	
Notes:	Plus 1500 redress						
DC	6-1/2 Monel		KnR	38f1	---	08-Aug-17	
OTHER	Centrifuge		NOVB	38g	---	15-Aug-17	
Notes:	Centrifuge 300/day						
TOOLS	6-1/2" shock sub	1455355	KnR	38f1	---	16-Aug-17	
Notes:	Plus 1500 redress.						
			Total Daily Rental Cost $:		---		

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 24 **Report For 19-Aug-17**

Operator:	University of Utah	**Rig:**	Kenai 10	**Spud Date:**	31-Jul-17	**Daily Cost / Mud ($):**			---
Measured Depth (ft):	4855	**Drilling Days (act.):**	20	**Wellbore:**	Original Well Bore	**AFE No.**		**AFE ($)**	**Actual ($)**
Vertical Depth (ft):	4855	**Drilling Days (plan):**	58	**RKB Elevation (ft):**	21.50	---		---	---
Proposed TD (ft):	7060	**Days On Location:**	24	**Last BOP Test:**	13-Aug-17	---		---	---
Hole Made (ft) / Hrs:	184 / 24.0	**Last Casing:**	9.625 at 2,172	**LOT (lbs/gal):**	19.20	**Totals:**		---	---
Average ROP (ft/hr):	7.67	**Next Casing:**	7.000 at 6,900	**Working Interest:**		**Well Cost ($):**			---

Pers/Hrs: **Operator:** 2 / 24 **Contractor:** 12 / 144 **Service:** 6 / 72 **Other:** 0 / 0 **Total:** 20 / 240

SafetySummary: No incidents or events reported. 24 days since LTI. Conducted Crown Check, Safety Meeting.

Current Operations: 00:00 to 06:00: Directionally drilled 8-3/4" hole from 4,855' to 4,875' with full returns. ROP slowed. POH for new bit...

Planned Operations: Change out bit and continue to drill ahead.

Toolpusher: Phillip Hoffman, Cal Sutton

Wellsite Supervisors: Randy Baldwin, Brian Watson **Tel No.:**

Operations Summary

From	To	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	4:00	4.00	4,717	3-2-2	Drilled 8-3/4" hole with mud motor from 4,671' to 4,717' with full circulation.	
4:00	6:00	2.00	4,727	3-2-3	Slide from 4,717' to 4,727'. WOB 25K, RPM 143, ROP 10' avg.	
6:00	12:00	6.00	4,781	3-2-2	Rotate from 4,727 to 4,781' with full returns.	
12:00	14:00	2.00	4,796	3-2-3	Slide from 4,781' to 4,796'. WOB 38K, RPM 114, ROP 11' avg.	
14:00	16:00	2.00	4,811	3-2-2	Rotate from 4,796' to 4,811' with full returns.	
16:00	18:30	2.50	4,826	3-2-3	Slide from 4'811' to 4,826'. WOB 34K, RPM 116, ROP 8' avg.	
18:30	22:00	3.50	4,843	3-2-2	Rotate from 4'826' to 4,843' with full returns.	
22:00	0:00	2.00	4,855	3-2-3	Slide from 4,843' to 4,855'. WOB 35K, RPM 116, ROP 7' avg.	

Management Summary

Directionally drilled 8-3/4" hole from 4,671' to 4,855' with full circulation.

Casing/Tubular Information

Type	Size (ins)	Top MD (ft)	Top TVD (ft)	Bottom MD (ft)	Bottom TVD (ft)	Hole Section	OH Diam. (ins)	Nom. Wgt. (lbs)	Nominal Grade	LOT (lbs/gal)
FULL	20.000	0	0	84		COND		53		
FULL	13.375	0		338		SURF		55	N-80	11.90
FULL	9.625	0	0	2,172	2,173	INT1	18.000	40	K-55	19.20

Mud Information

19-Aug-17 18:30 at Depth 4,824 ft Return Flow Line, Type: Low Solids Non-Dispersed

Dens.	Vis	PV	YP	Filt.	Cake	pH/ES	Solids	Oil %	Water %	Sand	LGS	Cl	Ca	CaCl	Gels 10s	Gels 10m	Gels 30m	Temp In	Temp Out	Mud Loss
8.80	40	8	12	8.4	1	9	5		95	0.2	5	700	20		4	8	10	103	113	

Comments: 1.25% LCM=2.5PPB Micro-C

Mud Consumables

Item Description	Qty.	Cost	Item Description	Qty.	Cost
Benex - SACK	1	---	Caustic Soda - 50#SK	2	---
Micro C - 50#SK	41	---	Pallet Wrap - OTHER	2	---
Polyvis - 5GAL	1	---	XGD Xanthan Gum - 50#SK	1	---

Bit/BHA/Workstring Information

No	Run	Make	Model	Diam	Depth In	This Run Dist	This Run Hrs	R.O.P. Avg	R.O.P. Max	WOB	RPM	Torque	Mud Wt	Mud Flow	Pump Press	J. Vel	P. Drp	HHP	JIF
6	1	Smith	Z713	8.750	4630	225	28.5	7.9	14.0	20,	114		9	394	1510	139	155	36	253

Jets: 13 13 13 13 13 13 13 **Out:** 4875 **Grade:** **Cutter:** 1 / 1 **Dull:** BT / CT **Wear:** N **Brgs:** X **Gge:** 0 **Pull:** BHA

BHA - No. 9 - BIT, MMTR, STAB, SHOCK, XO, OTHER, 2 DCM, XO, 9 DC, JAR, 2 DC, XO, 9 HWDP = 768.69

Drilling Parameters

Depth (ft) From	Depth (ft) To	ROP (ft/hr) Avg	ROP (ft/hr) Max	WOB (lbs) Avg	WOB (lbs) Max	RPM Avg	RPM Max	Torque (ft lbs) Avg	Torque (ft lbs) Max	Flow (gals/min) Avg	Flow (gals/min) Max	Pressure (psi)
4,671	4,855	8.0	11.0	20,000	35,000	114	119			394	398	1,510

Annular Velocity: **Drill Collars:** 311.5 **Drill Pipe:** 159.5

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 24 **Report For 19-Aug-17**

Miscellaneous Drilling Parameters

Hook Loads (lbs): **Off Bottom Rotate:** 12,000 **Pick Up:** 135,000 **Slack Off:** 117,000 **Drag Avg/Max:** 5000 /

Slow Circulation Data:

Pump 1:	51 spm	360 psi
Pump 2:	51 spm	370 psi

Hours on BHA: **Since Inspection:** 28.5 **Total:** 28.5 **Jars:** 175.25

Hours on Casing/Liner: **Rotating:** 176.75 / **Tripping:** 72 / ☐ **Wear Bushing Installed**

Survey Information

Survey Type	Meas. Depth	Inc.	Azimuth	TVD	Closure	Vertical Section	Coordinates N-S	Coordinates E-W	D.L.S.
MWD	4,603.0	7.56	272.3	4,598.9	70.5	8.7	N 8.7	W 70.0	7.132
MWD	4,667.0	6.90	275.8	4,662.3	78.6	9.3	N 9.3	W 78.0	1.240
MWD	4,739.0	6.95	272.2	4,733.8	87.3	9.9	N 9.9	W 86.7	0.613
MWD	4,771.0	6.90	272.0	4,765.6	91.1	10.0	N 10.0	W 90.5	0.177
MWD	4,803.0	7.21	271.5	4,797.3	95.0	10.1	N 10.1	W 94.5	0.990

Mud Log Information

Depth (ft) From	Depth (ft) To	TVD (ft) From	TVD (ft) To	Gas (Units) Avg	Gas (Units) Max	Gas (Units) at Depth	Gas Connect.	Gas Trip	Drilling Exp.	Pore Press	Mud Dens.	Shale Dens.	ROP Shale	ROP Sand
4,671	4,855	4,671	4,855											

Formation Name:

Lithology: Granite

Rig Information

Equipment Problems: Rental rotary torque not working.

Location Condition:

Transport:

Solids Control Information

Screen Sizes:	**Top**	**Middle 1**	**Middle 2**	**Bottom**	**Equipment Usage (Hrs):**	
Shaker No 1:	145	145	145	145	**Desilter:**	24
Shaker No 2:	145	145	145	145	**Centrifuge 1:**	3 (Solids Removal)
Shaker No 3:	255	255	255			

Drill Pipe Inventory

DP Size	Joints	Weight	Grade	Thread	DP Size	Joints	Weight	Grade	Thread
4 TSDS	240	14.0	S-135	TSDS40	4 HWDP	15	28.0		TSDS40

Safety Information

Meetings/Drills	Time	Description
Safety	15	Held safety meetings with both crews.

First Aid Treatments: **Medical Treatments:** **Lost Time Incidents:** **Days Since LTI:** 24

☐ **BOP Test** ☑ **Crownamatic Check**

Weather Information

Sky Condition:	Clear	**Visibility:**	10
Air Temperature:	62 degF	**Bar. Pressure:**	29.9
Wind Speed/Dir:	3 / NW	**Wind Gusts:**	

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
FLIFT	36K forklift		AHERN	32a1	---	27-Jul-17	
Notes:	Charged as dayrate						
LIGHTS	2 X Light towers		BnL	43e	---	27-Jul-17	
OTHER	2 x Trailers		BnL	43m	---	27-Jul-17	
OTHER	Mud cleaner		NOVB	32a1	---	31-Jul-17	
Notes:	Charged as dayrate						

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 24

Report For 19-Aug-17

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
OTHER	Automatic driller		NOVT	38d	---	31-Jul-17	
SURVEY	Survey tools		KnR	38h	---	31-Jul-17	
Notes:	4800 per month						
OTHER	Well Head		GRG	46a	---	02-Aug-17	
MUDCOOLER	Gen for mud cooler		AHERN	38o	---	03-Aug-17	
Notes:	start 8/15						
MUDCOOLER	Mud cooler		DRLCO	38o	---	03-Aug-17	
Notes:	start 8/15						
OTHER	Mud office		Rollins	36b	---	04-Aug-17	
Notes:	60 day min. with deliver and return						
OTHER	Restrooms		Rollins	43i	---	28-Jul-17	
Notes:	2 x 15 day (est)						
OTHER	Rain4rent tank		Rollins	43c	---	30-Jun-17	
Notes:	30 day (est)						
OTHER	Trash dumpster		Rollins	43j	---	30-Jun-17	
Notes:	30 day (est)						
JARS	6-1/2" jars		KnR	38f1	---	08-Aug-17	
Notes:	Plus 1500 redress						
OTHER	Centrifuge		NOVB	38g	---	15-Aug-17	
Notes:	Centrifuge 300/day						
TOOLS	6-1/2" shock sub	1455355	KnR	38f1	---	16-Aug-17	
Notes:	Plus 1500 redress.						
			Total Daily Rental Cost $:		---		

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 25 **Report For 20-Aug-17**

Operator:	University of Utah	**Rig:**	Kenai 10	**Spud Date:**	31-Jul-17	**Daily Cost / Mud ($):**			---
Measured Depth (ft):	4937	**Drilling Days (act.):**	21	**Wellbore:**	Original Well Bore	**AFE No.**		**AFE ($)**	**Actual ($)**
Vertical Depth (ft):	4937	**Drilling Days (plan):**	58	**RKB Elevation (ft):**	21.50	---		---	---
Proposed TD (ft):	7060	**Days On Location:**	25	**Last BOP Test:**	13-Aug-17	---		---	---
Hole Made (ft) / Hrs:	82 / 20.0	**Last Casing:**	9.625 at 2,172	**LOT (lbs/gal):**	19.20	**Totals:**		---	---
Average ROP (ft/hr):	4.1	**Next Casing:**	7.000 at 6,900	**Working Interest:**		**Well Cost ($):**			---

Pers/Hrs:	**Operator:**	2 / 24	**Contractor:**	12 / 144	**Service:**	6 / 72	**Other:**	0 / 0	**Total:** 20 / 240

SafetySummary: No incidents or events reported. 25 days since LTI. Conducted Crown Check, Safety Meeting.

Current Operations: 00:00 to 06:00: Directionally drilled 8-3/4" hole from from 4,937' to 4,985' with full returns. Surveyed at 4,865' 6.68 Inc. Surveyed at 4,897' 5.85 Inc.

Planned Operations: Drill ahead as per program.

Toolpusher: Phillip Hoffman, Cal Sutton

Wellsite Supervisors: Randy Baldwin, Brian Watson **Tel No.:**

Operations Summary

From	To	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	1:30	1.50	4,863	3-2-3	Slide from 4,855' to 4,863'. WOB 34K, RPM 116, ROP 7' avg.	
1:30	3:00	1.50	4,875	3-2-2	Drilled 8-3/4" hole with mud motor from 4,863' to 4,875' with full circulation.	
3:00	4:00	1.00	4,875	3-5-1	Circulate and survey.	
4:00	7:30	3.50	4,875	3-6-4	POH to BHA at 496'.	
7:30	8:30	1.00	4,875	3-6-2	POH BHA,	
8:30	9:30	1.00	4,875	3-34-4	Laid down bit and motor.	
9:30	11:00	1.50	4,875	3-34-3	Pick up new motor and bit, adjust bent housing to 1.83 degree. Scribe tools.	
11:00	12:00	1.00	4,875	3-6-1	RIH bit, motor and two monel dc's to 112'. Test tools, good test.	
12:00	12:30	0.50	4,875	3-6-1	RIH BHA to 278'. Test tools. Good test.	
12:30	13:00	0.50	4,875	3-6-1	RIH BHA to 387'. Test tools. Good test.	
13:00	14:00	1.00	4,875	3-6-1	RIH BHA to 495'.	
14:00	16:00	2.00	4,875	3-6-3	RIH drill pipe to 4,875'. Filled pipe at 2163'.	
16:00	17:00	1.00	4,885	3-2-3	Slide from 4,875' to 4,885'. WT. 30K, RPM 114, ROP 10'.	
17:00	19:30	2.50	4,905	3-2-2	Rotate from 4,885' to 4,905' with full returns.	
19:30	21:00	1.50	4,910	3-2-3	Slide from 4,905' to 4,910'. WOB 37K, RPM 130, ROP 9'.	
21:00	23:30	2.50	4,937	3-2-2	Rotate from 4,910' to 4,937, with full returns. ROP 11'	
23:30	0:00	0.50	4,937	8-7	Service rig.	

Management Summary

Drilled 8-3/4" hole with mud motor from 4,855' to 4,875' with full returns.
ROP slowed and decided to POH.
Changed out bit and mud motor and adjusted bent housing to 1.83 degree.
RIH.
Continue to directional dril 8-3/4" hole from 4,875' to 4,937' with full returns.

Casing/Tubular Information

Type	Size (ins)	Top MD (ft)	Top TVD (ft)	Bottom MD (ft)	Bottom TVD (ft)	Hole Section	OH Diam. (ins)	Nom. Wgt. (lbs)	Nominal Grade	LOT (lbs/gal)
FULL	20.000	0	0	84		COND		53		
FULL	13.375	0		338		SURF		55	N-80	11.90
FULL	9.625	0	0	2,172	2,173	INT1	18.000	40	K-55	19.20

Mud Information

20-Aug-17 18:00 at Depth 4,897 ft Return Flow Line, Type: Low Solids Non-Dispersed

Dens.	Vis	PV	YP	Filt.	Cake	pH/ES	Solids	% Oil	% Water	% Sand	LGS	Cl	Ca	CaCl	Gels 10s	Gels 10m	Gels 30m	Temp In	Temp Out	Mud Loss
8.80	40	8	13	9.6	1	9	5		95	0.1	5	700	20		3	5	8	107	117	

Comments: .65% LCM=1.3 PPB Micro-C

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 25 **Report For 20-Aug-17**

Mud Consumables

Item Description	Qty.	Cost	Item Description	Qty.	Cost
Amberguard - 5GAL	1	---	Benex - SACK	1	---
Defoam - 5GAL	1	---	Micro C - 50#SK	20	---
PacReg - 50#SK	1	---	Pallet Wrap - OTHER	1	---
Torkease - 5GAL	2	---	XGD Xanthan Gum - 50#SK	2	---

Bit/BHA/Workstring Information

No Run		Make	Model	Diam	Depth In	This Run Dist	Hrs	R.O.P. Avg	Max	WOB	RPM	Torque	Mud Wt	Flow	Pump Press	J. Vel	P. Drp	HHP	JIF
6	1	Smith	Z713	8.750	4630	255	31.5	8.1	14.0	20,	114		9	394	1780	139	155	36	253
Jets: 13 13 13 13 13 13 13					**Out:** 4875		**Grade:**	**Cutter:**	1 / 1	**Dull:**	BT / CT		**Wear:** N		**Brgs:** X	**Gge:** 0		**Pull:** BHA	
7	1	HC	VG-44CD	8.750	4875	62	7.5	8.3	11.0	20,	160		9	447	1740	108	92	24	220
Jets: 24 24 24					**Out:** 5477		**Grade:**	**Cutter:**	8 / 8	**Dull:**	LT / BT		**Wear:** A		**Brgs:** E	**Gge:** 0.25		**Pull:** BHA	

BHA - No. 10 - BIT, MMTR, STAB, SHOCK, XO, MWD, 2 DCM, XO, 9 DC, JAR, 2 DC, XO, 9 HWDP = 767.25

Drilling Parameters

Depth (ft) From	To	ROP (ft/hr) Avg	Max	WOB (lbs) Avg	Max	RPM Avg	Max	Torque (ft lbs) Avg	Max	Flow (gals/min) Avg	Max	Pressure (psi)
4,937	4,875	8.0	11.0	20,000	37,000	160	170			447	450	1,740

Annular Velocity: **Drill Collars:** 353.4 **Drill Pipe:** 180.9

Miscellaneous Drilling Parameters

Hook Loads (lbs): **Off Bottom Rotate:** 125,000 **Pick Up:** 135,000 **Slack Off:** 120,000 **Drag Avg/Max:** 5000 /

Slow Circulation Data:

Pump 2: 51 spm 374 psi

Hours on BHA: **Since Inspection:** 38 **Total:** 38 **Jars:** 184.75

Hours on Casing/Liner: **Rotating:** 186.25 / **Tripping:** 78.5 / ☐ **Wear Bushing Installed**

Survey Information

Survey Type	Meas. Depth	Inc.	Azimuth	TVD	Closure	Vertical Section	Coordinates N-S	E-W	D.L.S.
MWD	4,833.0	7.16	274.3	4,827.1	98.8	10.3	N 10.3	W 98.2	1.183
MWD	4,865.0	6.68	276.4	4,858.9	102.6	10.7	N 10.7	W 102.1	1.697
MWD	4,897.0	5.85	277.3	4,890.7	106.1	11.1	N 11.1	W 105.5	2.615

Mud Log Information

Depth (ft) From	To	TVD (ft) From	To	Gas (Units) Avg	Max	at Depth	Gas Connect.	Trip	Drilling Exp.	Pore Press	Mud Dens.	Shale Dens.	ROP Shale	Sand
4,875	4,937	4,875	4,937											

Formation Name:

Lithology: Granite

Rig Information

Equipment Problems:

Location Condition:

Transport:

Solids Control Information

Screen Sizes:	Top	Middle 1	Middle 2	Bottom	Equipment Usage (Hrs):
Shaker No 1:	145	145	145	145	**Desilter:** 24
Shaker No 2:	145	145	145	145	**Centrifuge 1:** 3 (Solids Removal)
Shaker No 3:	255	255	255		

Drill Pipe Inventory

DP Size	Joints	Weight	Grade	Thread	DP Size	Joints	Weight	Grade	Thread
4 TSDS	240	14.0	S-135	TSDS40	4 HWDP	15	28.0		TSDS40

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 25 **Report For 20-Aug-17**

Safety Information

Meetings/Drills	Time	Description
Safety	15	Held safety meeting with both crews,

First Aid Treatments: **Medical Treatments:** **Lost Time Incidents:** **Days Since LTI:** 25

☐ **BOP Test** ☑ **Crownamatic Check**

Weather Information

Sky Condition:	Partly cloudy	**Visibility:**	10
Air Temperature:	62 degF	**Bar. Pressure:**	29.9
Wind Speed/Dir:	10 / SW	**Wind Gusts:**	

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
FLIFT	36K forklift		AHERN	32a1	---	27-Jul-17	
Notes:	Charged as dayrate						
LIGHTS	2 X Light towers		BnL	43e	---	27-Jul-17	
OTHER	2 x Trailers		BnL	43m	---	27-Jul-17	
OTHER	Mud cleaner		NOVB	32a1	---	31-Jul-17	
Notes:	Charged as dayrate						
OTHER	Automatic driller		NOVT	38d	---	31-Jul-17	
SURVEY	Survey tools		KnR	38h	---	31-Jul-17	
Notes:	4800 per month						
OTHER	Well Head		GRG	46a	---	02-Aug-17	
MUDCOOLER	Gen for mud cooler		AHERN	38o	---	03-Aug-17	
Notes:	start 8/15						
MUDCOOLER	Mud cooler		DRLCO	38o	---	03-Aug-17	
Notes:	start 8/15						
OTHER	Mud office		Rollins	36b	---	04-Aug-17	
Notes:	60 day min. with deliver and return						
OTHER	Restrooms		Rollins	43i	---	28-Jul-17	
Notes:	2 x 15 day (est)						
OTHER	Rain4rent tank		Rollins	43c	---	30-Jun-17	
Notes:	30 day (est)						
OTHER	Trash dumpster		Rollins	43j	---	30-Jun-17	
Notes:	30 day (est)						
JARS	6-1/2" jars		KnR	38f1	---	08-Aug-17	
Notes:	Plus 1500 redress						
OTHER	Centrifuge		NOVB	38g	---	15-Aug-17	
Notes:	Centrifuge 300/day						
TOOLS	6-1/2" shock sub	1455355	KnR	38f1	---	16-Aug-17	
Notes:	Plus 1500 redress.						
			Total Daily Rental Cost $:		---		

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 26 **Report For 21-Aug-17**

Operator:	University of Utah	**Rig:**	Kenai 10	**Spud Date:**	31-Jul-17	**Daily Cost / Mud ($):**			---
Measured Depth (ft):	5108	**Drilling Days (act.):**	22	**Wellbore:**	Original Well Bore	**AFE No.**		**AFE ($)**	**Actual ($)**
Vertical Depth (ft):	5108	**Drilling Days (plan):**	58	**RKB Elevation (ft):**	21.50	---		---	---
Proposed TD (ft):	7060	**Days On Location:**	26	**Last BOP Test:**	13-Aug-17	---		---	---
Hole Made (ft) / Hrs:	171 / 24.0	**Last Casing:**	9.625 at 2,172	**LOT (lbs/gal):**	19.20	**Totals:**		---	---
Average ROP (ft/hr):	7.13	**Next Casing:**	7.000 at 6,900	**Working Interest:**		**Well Cost ($):**			---

Pers/Hrs: **Operator:** 2 / 24 **Contractor:** 12 / 144 **Service:** 6 / 72 **Other:** 0 / 0 **Total:** 20 / 240

SafetySummary: No incidents or events reported. 26 days since LTI. Conducted Crown Check, Safety Meeting.

Current Operations: 00:00 to 06:00: Directionally drilled 8-3/4" hole from 5,108' to 5,150' with full returns.
Ran survey at 5,055'. 2.11 deg Inc.

Planned Operations: Drill ahead as per program.

Toolpusher: Phillip Hoffman, Cal Sutton

Wellsite Supervisors: Randy Baldwin, Brian Watson **Tel No.:**

Operations Summary

From	To	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	1:30	1.50	4,947	3-2-3	Slide from 4,937' to 4,947'. WOB 35K, RPM 170, ROP 9' avg.	
1:30	4:30	3.00	4,969	3-2-2	Rotate from 4,947' to 4,969' with full returns.	
4:30	6:30	2.00	4,977	3-2-3	Slide from 4,969' to 4,977'. WOB 35K, RPM 115, ROP 9' avg.	
6:30	9:30	3.00	5,000	3-2-2	Rotate from 4,977' to 5,000' with full returns.	
9:30	11:30	2.00	5,010	3-2-3	Slide from 5,000' to 5,010'. WOB 34K, RPM 114, ROP 8' avg.	
11:30	14:30	3.00	5,032	3-2-2	Rotate from 5,010' to 5,032' with full returns.	
14:30	16:30	2.00	5,042	3-2-3	Slide from 5,032' to 5,042'. WOB 34K, RPM 121, ROP 9' avg.	
16:30	19:30	3.00	5,064	3-2-2	Rotate from 5,042' to 5,064' with full returns.	
19:30	21:30	2.00	5,072	3-2-3	Slide from 5,064' to 5,072'. WOB 38K, RPM 120, ROP 8' avg.	
21:30	0:00	2.50	5,108	3-2-2	Rotate from 5,072' to 5,108' with full returns.	

Management Summary

Directionally drilled 8-3/4" hole from 4,937' to 5,108' with full returns.
Survey at 5,024'. 2.99 deg Inc.

Casing/Tubular Information

Type	Size (ins)	Top MD (ft)	Top TVD (ft)	Bottom MD (ft)	Bottom TVD (ft)	Hole Section	OH Diam. (ins)	Nom. Wgt. (lbs)	Nominal Grade	LOT (lbs/gal)
FULL	20.000	0	0	84		COND		53		
FULL	13.375	0		338		SURF		55	N-80	11.90
FULL	9.625	0	0	2,172	2,173	INT1	18.000	40	K-55	19.20

Mud Information

Dens.	Vis	PV	YP	Filt.	Cake	pH/ES	Solids %	Oil %	Water %	Sand %	LGS	Cl	Ca	CaCl	Gels 10s	Gels 10m	Gels 30m	Temp In	Temp Out	Mud Loss
21-Aug-17 18:00 at Depth 5,073 ft Return Flow Line, Type: Low Solids Non-Dispersed																				
8.80	38	10	14	8.8	1	9	5		95	0.25	5	650	80		3	8	11	105	115	

Comments: 1.25% LCM=2.5 PPB Micro-C

Mud Consumables

Item Description	Qty.	Cost	Item Description	Qty.	Cost
Amberguard - 5GAL	1	---	Benex - SACK	1	---
Caustic Soda - 50#SK	1	---	Defoam - 5GAL	2	---
Micro C - 50#SK	40	---	PacReg - 50#SK	1	---
Pallet Wrap - OTHER	1	---			

Bit/BHA/Workstring Information

No	Run	Make	Model	Diam	Depth In	This Run Dist	This Run Hrs	R.O.P. Avg	R.O.P. Max	WOB	RPM	Torque	Mud Wt	Pump Flow	Pump Press	J. Vel	P. Drp	HHP	JIF
7	1	HC	VG-44CD	8.750	4875	233	30.5	7.6	11.0	25,	150	125	9	430	1650	104	85	21	204

Jets: 24 24 24 **Out:** 5477 **Grade:** **Cutter:** 8 / 8 **Dull:** LT / BT **Wear:** A **Brgs:** E **Gge:** 0.25 **Pull:** BHA

BHA - No. 10 - BIT, MMTR, STAB, SHOCK, XO, MWD, 2 DCM, XO, 9 DC, JAR, 2 DC, XO, 9 HWDP = 767.25

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 26 **Report For 21-Aug-17**

Drilling Parameters

Depth (ft) From	Depth (ft) To	ROP (ft/hr) Avg	ROP (ft/hr) Max	WOB (lbs) Avg	WOB (lbs) Max	RPM Avg	RPM Max	Torque (ft lbs) Avg	Torque (ft lbs) Max	Flow (gals/min) Avg	Flow (gals/min) Max	Pressure (psi)
4,937	5,108	7.0	11.0	25,000	35,000	120	170	165	170	420	450	1,650

Annular Velocity: Drill Collars: 332.1 **Drill Pipe:** 170.0

Comments: Torque is psi not foot pounds.

Miscellaneous Drilling Parameters

Hook Loads (lbs): Off Bottom Rotate: 125,000 **Pick Up:** 135,000 **Slack Off:** 120,000 **Drag Avg/Max:** 5000 /

Slow Circulation Data:

Pump 2: 51 spm 420 psi

Hours on BHA: Since Inspection: 61 **Total:** 61 **Jars:** 207.75

Hours on Casing/Liner: Rotating: 209.25 / **Tripping:** 79.5 / ☐ **Wear Bushing Installed**

Survey Information

Survey Type	Meas. Depth	Inc.	Azimuth	TVD	Closure	Vertical Section	Coordinates N-S	Coordinates E-W	D.L.S.
MWD	4,928.0	5.27	278.1	4,921.5	109.1	11.5	N 11.5	W 108.5	1.887
MWD	4,960.0	4.62	273.9	4,953.4	111.9	11.8	N 11.8	W 111.2	2.326
MWD	4,992.0	3.82	265.8	4,985.3	114.2	11.8	N 11.8	W 113.6	3.110
MWD	5,024.0	2.99	260.4	5,017.3	116.1	11.6	N 11.6	W 115.5	2.781

Mud Log Information

Depth (ft) From	Depth (ft) To	TVD (ft) From	TVD (ft) To	Gas (Units) Avg	Gas (Units) Max	Gas (Units) at Depth	Gas Connect.	Gas Trip	Drilling Exp.	Pore Press	Mud Dens.	Shale Dens.	ROP Shale	ROP Sand
4,937	5,108	4,937	5,108											

Formation Name:

Lithology: Granite

Rig Information

Equipment Problems:

Location Condition:

Transport:

Solids Control Information

Screen Sizes:	Top	Middle 1	Middle 2	Bottom	Equipment Usage (Hrs):	
Shaker No 1:	145	145	145	145	Desilter:	24
Shaker No 2:	145	145	145	145	Centrifuge 1:	2 (Solids Removal)
Shaker No 3:	255	255	255			

Drill Pipe Inventory

DP Size	Joints	Weight	Grade	Thread	DP Size	Joints	Weight	Grade	Thread
4 TSDS	240	14.0	S-135	TSDS40	4 HWDP	15	28.0		TSDS40

Safety Information

Meetings/Drills	Time	Description
Safety	15	Held safety meetings with both crews.

First Aid Treatments: Medical Treatments: Lost Time Incidents: Days Since LTI: 26

☐ **BOP Test** ☑ **Crownamatic Check**

Weather Information

Sky Condition: Mostly cloudy **Visibility:** 10

Air Temperature: 62 degF **Bar. Pressure:** 30

Wind Speed/Dir: 13 / SSW **Wind Gusts:**

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
FLIFT	36K forklift		AHERN	32a1	---	27-Jul-17	

Notes: Charged as dayrate

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 26

Report For 21-Aug-17

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
LIGHTS	2 X Light towers		BnL	43e	---	27-Jul-17	
OTHER	2 x Trailers		BnL	43m	---	27-Jul-17	
OTHER	Mud cleaner		NOVB	32a1	---	31-Jul-17	
Notes:	Charged as dayrate						
OTHER	Automatic driller		NOVT	38d	---	31-Jul-17	
SURVEY	Survey tools		KnR	38h	---	31-Jul-17	
Notes:	4800 per month						
OTHER	Well Head		GRG	46a	---	02-Aug-17	
MUDCOOLER	Gen for mud cooler		AHERN	38o	---	03-Aug-17	
Notes:	start 8/15						
MUDCOOLER	Mud cooler		DRLCO	38o	---	03-Aug-17	
Notes:	start 8/15						
OTHER	Mud office		Rollins	36b	---	04-Aug-17	
Notes:	60 day min. with deliver and return						
OTHER	Restrooms		Rollins	43i	---	28-Jul-17	
Notes:	2 x 15 day (est)						
OTHER	Rain4rent tank		Rollins	43c	---	30-Jun-17	
Notes:	30 day (est)						
OTHER	Trash dumpster		Rollins	43j	---	30-Jun-17	
Notes:	30 day (est)						
JARS	6-1/2" jars		KnR	38f1	---	08-Aug-17	
Notes:	Plus 1500 redress						
OTHER	Centrifuge		NOVB	38g	---	15-Aug-17	
Notes:	Centrifuge 300/day						
TOOLS	6-1/2" shock sub	1455355	KnR	38f1	---	16-Aug-17	
Notes:	Plus 1500 redress.						
			Total Daily Rental Cost $:		---		

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 27 **Report For 22-Aug-17**

Operator:	University of Utah	**Rig:**	Kenai 10	**Spud Date:**	31-Jul-17	**Daily Cost / Mud ($):**			---
Measured Depth (ft):	5273	**Drilling Days (act.):**	23	**Wellbore:**	Original Well Bore	**AFE No.**		**AFE ($)**	**Actual ($)**
Vertical Depth (ft):	5273	**Drilling Days (plan):**	58	**RKB Elevation (ft):**	21.50	---		---	---
Proposed TD (ft):	7060	**Days On Location:**	27	**Last BOP Test:**	13-Aug-17	---		---	---
Hole Made (ft) / Hrs:	165 / 24.0	**Last Casing:**	9.625 at 2,172	**LOT (lbs/gal):**	19.20	**Totals:**		---	---
Average ROP (ft/hr):	6.88	**Next Casing:**	7.000 at 6,900	**Working Interest:**		**Well Cost ($):**			---

Pers/Hrs: **Operator:** 2 / 24 **Contractor:** 12 / 144 **Service:** 6 / 72 **Other:** 0 / 0 **Total:** 20 / 240

SafetySummary: No incidents or events reported. 27 days since LTI. Conducted Crown Check, Safety Meeting.

Current Operations: 00:00 to 06:00: Directionally drilled 8-3/4" hole from 5.273' to 5,315' with full returns.
Ran survey at 5,214'. 1.49 deg Inc.

Planned Operations: Drill ahead as per program.

Toolpusher: Phillip Hoffman, Cal Sutton

Wellsite Supervisors: Randy Baldwin, Brian Watson **Tel No.:**

Operations Summary

From	To	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	7:30	7.50	5,159	3-2-2	Drilled 8-3/4" hole with mud motor from 5,108' to 5,159' with full circulation.	
7:30	9:00	1.50	5,167	3-2-3	Slide from 5,159' to 5,167'. WOB 35K, RPM 116, ROP 6' avg.	
9:00	16:30	7.50	5,223	3-2-2	Rotate from 5,167' to 5,223' with full circulation.	
16:30	17:30	1.00	5,229	3-2-3	Slide from 5,223' to 5,229'. WOB 35K, RPM 118, ROP 6' avg.	
17:30	21:00	3.50	5,255	3-2-2	Rotate from 5,229' to 5,255' with full circulation	
21:00	22:00	1.00	5,261	3-2-3	Slide from 5,255' to 5,261'. WOB 35K, RPM 124, ROP 6' avg.	
22:00	0:00	2.00	5,273	3-2-2	Rotate from 5,261' to 5,273' with full circulation. WOB 30K, RPM 164, ROP 7' avg.	

Management Summary

Directionally drilled 8-3/4" hole from 5.108' to 5,273' with full returns.
Survey at 5,183'. 1.63 deg Inc.

Casing/Tubular Information

Type	Size (ins)	Top MD (ft)	Top TVD (ft)	Bottom MD (ft)	Bottom TVD (ft)	Hole Section	OH Diam. (ins)	Nom. Wgt. (lbs)	Nominal Grade	LOT (lbs/gal)
FULL	20.000	0	0	84		COND		53		
FULL	13.375	0		338		SURF		55	N-80	11.90
FULL	9.625	0	0	2,172	2,173	INT1	18.000	40	K-55	19.20

Mud Information

22-Aug-17 18:00 at Depth 5,235 ft Return Flow Line, Type: Low Solids Non-Dispersed

Dens.	Vis	PV	YP	Filt.	Cake	pH/ES	Solids %	Oil %	Water %	Sand %	LGS	Cl	Ca	CaCl	Gels 10s	Gels 10m	Gels 30m	Temp In	Temp Out	Mud Loss
8.60	39	8	14	9.2	1	8.5	4		96	0.1	4	650	60		3	5	9	107	117	

Comments: .75% LCM=1.5 PPB Micro-C.

Mud Consumables

Item Description	Qty.	Cost	Item Description	Qty.	Cost
Amberguard - 5GAL	1	---	Benex - SACK	1	---
Caustic Soda - 50#SK	1	---	Defoam - 5GAL	1	---
Micro C - 50#SK	27	---	PacReg - 50#SK	2	---
Pallet Wrap - OTHER	1	---			

Bit/BHA/Workstring Information

No	Run	Make	Model	Diam	Depth In	This Run Dist	This Run Hrs	R.O.P. Avg	R.O.P. Max	WOB	RPM	Torque	Wt	Mud Flow	Pump Press	J. Vel	P. Drp	HHP	JIF
7	1	HC	VG-44CD	8.750	4875	398	53.5	7.4	14.0	25,	164	135	9	450	1520	109	91	24	218

Jets: 24 24 24 **Out:** 5477 **Grade:** **Cutter:** 8 / 8 **Dull:** LT / BT **Wear:** A **Brgs:** E **Gge:** 0.25 **Pull:** BHA

BHA - No. 10 - BIT, MMTR, STAB, SHOCK, XO, MWD, 2 DCM, XO, 9 DC, JAR, 2 DC, XO, 9 HWDP = 767.25

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 27 **Report For 22-Aug-17**

Drilling Parameters

Depth (ft) From	Depth (ft) To	ROP (ft/hr) Avg	ROP (ft/hr) Max	WOB (lbs) Avg	WOB (lbs) Max	RPM Avg	RPM Max	Torque (ft lbs) Avg	Torque (ft lbs) Max	Flow (gals/min) Avg	Flow (gals/min) Max	Pressure (psi)
5,108	5,273	7,000.0	14,000.0	25,000	30,000	118	164	120	160	447	450	1,520

Annular Velocity: Drill Collars: 353.4 **Drill Pipe:** 180.9

Comments: Torque is psi.

Miscellaneous Drilling Parameters

Hook Loads (lbs): Off Bottom Rotate: 150,000 **Pick Up:** 165,000 **Slack Off:** 145,000 **Drag Avg/Max:** 5000 /

Slow Circulation Data:

Pump 1: 52 spm 390 psi

Hours on BHA: Since Inspection: 84 **Total:** 84 **Jars:** 230.75

Hours on Casing/Liner: Rotating: 232.5 / **Tripping:** 79.5 / ☐ **Wear Bushing Installed**

Survey Information

Survey Type	Meas. Depth	Inc.	Azimuth	TVD	Closure	Vertical Section	Coordinates N-S	Coordinates E-W	D.L.S.
MWD	5,055.0	2.11	250.5	5,048.2	117.4	11.2	N 11.2	W 116.8	3.160
MWD	5,087.0	1.54	251.5	5,080.2	118.3	10.9	N 10.9	W 117.8	1.784
MWD	5,119.0	1.76	267.3	5,112.2	119.2	10.8	N 10.8	W 118.7	1.574
MWD	5,151.0	1.76	281.9	5,144.2	120.1	10.8	N 10.8	W 119.6	1.396
MWD	5,183.0	1.63	296.0	5,176.2	121.1	11.1	N 11.1	W 120.5	1.359

Mud Log Information

Depth (ft) From	Depth (ft) To	TVD (ft) From	TVD (ft) To	Gas (Units) Avg	Gas (Units) Max	Gas (Units) at Depth	Gas Connect.	Gas Trip	Drilling Exp.	Pore Press	Mud Dens.	Shale Dens.	ROP Shale	ROP Sand
5,108	5,273	5,108	5,273											

Formation Name:

Lithology: Granite

Rig Information

Equipment Problems:

Location Condition:

Transport:

Solids Control Information

Screen Sizes:	Top	Middle 1	Middle 2	Bottom	Equipment Usage (Hrs):
Shaker No 1:	145	145	145	145	Desilter: 24
Shaker No 2:	145	145	145	145	Centrifuge 1: 24 (Solids Removal)
Shaker No 3:	255	255	255		

Drill Pipe Inventory

DP Size	Joints	Weight	Grade	Thread	DP Size	Joints	Weight	Grade	Thread
4 TSDS	240	14.0	S-135	TSDS40	4 HWDP	15	28.0		TSDS40

Safety Information

Meetings/Drills	Time	Description
Safety	15	Held safety meeting with both crews.

First Aid Treatments: **Medical Treatments:** **Lost Time Incidents:** **Days Since LTI:** 27

☐ **BOP Test** ☑ **Crownamatic Check**

Weather Information

Sky Condition: Clear **Visibility:** 10

Air Temperature: 58 degF **Bar. Pressure:** 30

Wind Speed/Dir: 3 / SE **Wind Gusts:**

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
FLIFT	36K forklift		AHERN	32a1	---	27-Jul-17	

Notes: Charged as dayrate

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 27

Report For 22-Aug-17

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
LIGHTS	2 X Light towers		BnL	43e	---	27-Jul-17	
OTHER	2 x Trailers		BnL	43m	---	27-Jul-17	
OTHER	Mud cleaner		NOVB	32a1	---	31-Jul-17	
Notes:	Charged as dayrate						
OTHER	Automatic driller		NOVT	38d	---	31-Jul-17	
SURVEY	Survey tools		KnR	38h	---	31-Jul-17	
Notes:	4800 per month						
OTHER	Well Head		GRG	46a	---	02-Aug-17	
MUDCOOLER	Gen for mud cooler		AHERN	38o	---	03-Aug-17	
Notes:	start 8/15						
MUDCOOLER	Mud cooler		DRLCO	38o	---	03-Aug-17	
Notes:	start 8/15						
OTHER	Mud office		Rollins	36b	---	04-Aug-17	
Notes:	60 day min. with deliver and return						
OTHER	Restrooms		Rollins	43i	---	28-Jul-17	
Notes:	2 x 15 day (est)						
OTHER	Rain4rent tank		Rollins	43c	---	30-Jun-17	
Notes:	30 day (est)						
OTHER	Trash dumpster		Rollins	43j	---	30-Jun-17	
Notes:	30 day (est)						
JARS	6-1/2" jars		KnR	38f1	---	08-Aug-17	
Notes:	Plus 1500 redress						
OTHER	Centrifuge		NOVB	38g	---	15-Aug-17	
Notes:	Centrifuge 300/day						
TOOLS	6-1/2" shock sub	1455355	KnR	38f1	---	16-Aug-17	
Notes:	Plus 1500 redress.						
			Total Daily Rental Cost $:		---		

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 28 **Report For 23-Aug-17**

Operator:	University of Utah	**Rig:**	Kenai 10	**Spud Date:**	31-Jul-17	**Daily Cost / Mud ($):**			---
Measured Depth (ft):	5440	**Drilling Days (act.):**	24	**Wellbore:**	Original Well Bore	**AFE No.**		**AFE ($)**	**Actual ($)**
Vertical Depth (ft):	5440	**Drilling Days (plan):**	58	**RKB Elevation (ft):**	21.50	---		---	---
Proposed TD (ft):	7060	**Days On Location:**	28	**Last BOP Test:**	13-Aug-17	---		---	---
Hole Made (ft) / Hrs:	167 / 23.5	**Last Casing:**	9.625 at 2,172	**LOT (lbs/gal):**	19.20	**Totals:**		---	---
Average ROP (ft/hr):	7.11	**Next Casing:**	7.000 at 6,900	**Working Interest:**		**Well Cost ($):**			---

Pers/Hrs: **Operator:** 2 / 24 **Contractor:** 12 / 144 **Service:** 5 / 60 **Other:** 0 / 0 **Total:** 19 / 228

SafetySummary: No incidents or events reported. 28 days since LTI. Conducted Safety Meeting.

Current Operations: 00:00 to 06:00: Drilled 8-3/4" hole from 5,440' to 5,477' with full returns.
Surveyed at 5,405'. 0.6 deg Inc.

Planned Operations: POH for new bit and lay down directional tools.

Toolpusher: Cal Sutton, John Rogers

Wellsite Supervisors: Randy Baldwin, Brian Watson **Tel No.:**

Operations Summary

From	To	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	14:30	14.50	5,382	3-2-2	Directionally drilled 8-3/4" hole from 5,273' to 5,382' with full circulation. WOB 30K.	
14:30	16:00	1.50	5,392	3-2-3	Slide from 5,382' to 5,392'. WOB 40K, RPM 120, ROP 6' avg.	
16:00	19:30	3.50	5,413	3-2-2	Rotate from 5,392' to 5,413' with full circulation.	
19:30	21:00	1.50	5,421	3-2-3	Slide from 5,413' to 5,421'. WOB 40K, ROM 118, ROP 7' avg.	
21:00	23:30	2.50	5,440	3-2-2	Rotate from 5,421' to 5,440' with full circulation.	
23:30	0:00	0.50	5,440	8-7	Service rig.	

Management Summary

Directionally drilled 8-3/4" hole with from 5,273' to 5,440' with full returns.
Surveyed at 5,373'. 1.27 deg Inc.

Casing/Tubular Information

Type	Size (ins)	Top MD (ft)	Top TVD (ft)	Bottom MD (ft)	Bottom TVD (ft)	Hole Section	OH Diam. (ins)	Nom. Wgt. (lbs)	Nominal Grade	LOT (lbs/gal)
FULL	20.000	0	0	84		COND		53		
FULL	13.375	0		338		SURF		55	N-80	11.90
FULL	9.625	0	0	2,172	2,173	INT1	18.000	40	K-55	19.20

Mud Information

23-Aug-17 18:00 at Depth 5,410 ft Return Flow Line, Type: Low Solids Non-Dispersed

Dens.	Vis	PV	YP	Filt.	Cake	pH/ES	Solids	% Oil	% Water	% Sand	LGS	Cl	Ca	CaCl	Gels 10s	Gels 10m	Gels 30m	Temp In	Temp Out	Mud Loss
8.60	40	8	13	8.8	1	9	4		96	0.1	4	550	40		2	4	9	107	117	

Comments: .85% LCM=1.7 PPB Micro-C

Mud Consumables

Item Description	Qty.	Cost	Item Description	Qty.	Cost
Amberguard - 5GAL	1	---	Caustic Soda - 50#SK	1	---
Defoam - 5GAL	1	---	Micro C - 50#SK	33	---
PacReg - 50#SK	2	---	Pallet Wrap - OTHER	1	---

Bit/BHA/Workstring Information

No Run	Make	Model	Diam	Depth In	This Run Dist	This Run Hrs	R.O.P. Avg	R.O.P. Max	WOB	RPM	Torque	Mud Wt	Mud Flow	Pump Press	J. Vel	P. Drp	HHP	JIF
7 1	HC	VG-44CD	8.750	4875	565	76	7.4	20.0	28,	150	140	9	430	1680	104	83	21	199

Jets: 24 24 24 **Out:** 5477 **Grade:** **Cutter:** 8 / 8 **Dull:** LT / BT **Wear:** A **Brgs:** E **Gge:** 0.25 **Pull:** BHA

BHA - No. 10 - BIT, MMTR, STAB, SHOCK, XO, MWD, 2 DCM, XO, 9 DC, JAR, 2 DC, XO, 9 HWDP = 767.25

Drilling Parameters

Depth (ft) From	Depth (ft) To	ROP (ft/hr) Avg	ROP (ft/hr) Max	WOB (lbs) Avg	WOB (lbs) Max	RPM Avg	RPM Max	Torque (ft lbs) Avg	Torque (ft lbs) Max	Flow (gals/min) Avg	Flow (gals/min) Max	Pressure (psi)
5,273	5,440	7.0	15.0	30,000	35,000	130	170	130	142	420	450	1,680

Annular Velocity: **Drill Collars:** 332.1 **Drill Pipe:** 170.0

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 28 **Report For 23-Aug-17**

Miscellaneous Drilling Parameters

Hook Loads (lbs): **Off Bottom Rotate:** 150,000 **Pick Up:** 174,000 **Slack Off:** 140,000 **Drag Avg/Max:** 5000 /

Slow Circulation Data:

Pump 2: 48 spm 397 psi

Hours on BHA: **Since Inspection:** 106.5 **Total:** 106.5 **Jars:** 253.25

Hours on Casing/Liner: **Rotating:** 255 / **Tripping:** 79.5 / ☐ **Wear Bushing Installed**

Survey Information

Survey Type	Meas. Depth	Inc.	Azimuth	TVD	Closure	Vertical Section	Coordinates N-S	Coordinates E-W	D.L.S.
MWD	5,214.0	1.49	296.0	5,207.2	121.8	11.5	N 11.5	W 121.3	0.452
MWD	5,246.0	1.01	277.5	5,239.2	122.5	11.7	N 11.7	W 122.0	1.940
MWD	5,278.0	1.01	251.7	5,271.2	123.1	11.7	N 11.7	W 122.5	1.410
MWD	5,310.0	1.49	241.8	5,303.2	123.7	11.4	N 11.4	W 123.1	1.639
MWD	5,341.0	1.63	243.5	5,334.1	124.4	11.0	N 11.0	W 123.9	0.475
MWD	5,373.0	1.27	231.4	5,366.1	125.0	10.6	N 10.6	W 124.6	1.472

Mud Log Information

Depth (ft) From	Depth (ft) To	TVD (ft) From	TVD (ft) To	Gas (Units) Avg	Gas (Units) Max	Gas (Units) at Depth	Gas Connect.	Gas Trip	Drilling Exp.	Pore Press	Mud Dens.	Shale Dens.	ROP Shale	ROP Sand
5,273	5,440	5,273	5,440											

Formation Name:

Lithology: Granite

Rig Information

Equipment Problems:

Location Condition:

Transport:

Solids Control Information

Screen Sizes:	Top	Middle 1	Middle 2	Bottom	Equipment Usage (Hrs):	
Shaker No 1:	145	145	145	145	Desilter:	24
Shaker No 2:	145	145	145	145	Centrifuge 1:	12 (Solids Removal)
Shaker No 3:	255	255	255			

Drill Pipe Inventory

DP Size	Joints	Weight	Grade	Thread	DP Size	Joints	Weight	Grade	Thread
4 TSDS	240	14.0	S-135	TSDS40	4 HWDP	15	28.0		TSDS40

Safety Information

Meetings/Drills	Time	Description
Safety	15	Held safety meetings with both crews.

First Aid Treatments: **Medical Treatments:** **Lost Time Incidents:** **Days Since LTI:** 28

☐ **BOP Test** ☐ **Crownamatic Check**

Weather Information

Sky Condition: Partly cloudy **Visibility:** 10

Air Temperature: 60 degF **Bar. Pressure:**

Wind Speed/Dir: 4 / SW **Wind Gusts:**

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
FLIFT	36K forklift		AHERN	32a1	---	27-Jul-17	
Notes:	Charged as dayrate						
LIGHTS	2 X Light towers		BnL	43e	---	27-Jul-17	
OTHER	2 x Trailers		BnL	43m	---	27-Jul-17	
OTHER	Mud cleaner		NOVB	32a1	---	31-Jul-17	
Notes:	Charged as dayrate						

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 28

Report For 23-Aug-17

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
OTHER	Automatic driller		NOVT	38d	---	31-Jul-17	
SURVEY	Survey tools		KnR	38h	---	31-Jul-17	
Notes:	4800 per month						
OTHER	Well Head		GRG	46a	---	02-Aug-17	
MUDCOOLER	Gen for mud cooler		AHERN	38o	---	03-Aug-17	
Notes:	start 8/15						
MUDCOOLER	Mud cooler		DRLCO	38o	---	03-Aug-17	
Notes:	start 8/15						
OTHER	Mud office		Rollins	36b	---	04-Aug-17	
Notes:	60 day min. with deliver and return						
OTHER	Restrooms		Rollins	43i	---	28-Jul-17	
Notes:	2 x 15 day (est)						
OTHER	Rain4rent tank		Rollins	43c	---	30-Jun-17	
Notes:	30 day (est)						
OTHER	Trash dumpster		Rollins	43j	---	30-Jun-17	
Notes:	30 day (est)						
JARS	6-1/2" jars		KnR	38f1	---	08-Aug-17	
Notes:	Plus 1500 redress						
OTHER	Centrifuge		NOVB	38g	---	15-Aug-17	
Notes:	Centrifuge 300/day						
TOOLS	6-1/2" shock sub	1455355	KnR	38f1	---	16-Aug-17	
Notes:	Plus 1500 redress.						
			Total Daily Rental Cost $:		---		

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 29 **Report For 24-Aug-17**

Operator:	University of Utah	**Rig:**	Kenai 10	**Spud Date:**	31-Jul-17	**Daily Cost / Mud ($):**			---
Measured Depth (ft):	5477	**Drilling Days (act.):**	25	**Wellbore:**	Original Well Bore	**AFE No.**		**AFE ($)**	**Actual ($)**
Vertical Depth (ft):	5477	**Drilling Days (plan):**	58	**RKB Elevation (ft):**	21.50	---		---	---
Proposed TD (ft):	7060	**Days On Location:**	29	**Last BOP Test:**	13-Aug-17	---		---	---
Hole Made (ft) / Hrs:	37 / 15.5	**Last Casing:**	9.625 at 2,172	**LOT (lbs/gal):**	19.20	**Totals:**		---	---
Average ROP (ft/hr):	2.39	**Next Casing:**	7.000 at 6,900	**Working Interest:**		**Well Cost ($):**			---

Pers/Hrs:	**Operator:**	2 / 24	**Contractor:**	12 / 144	**Service:**	5 / 60	**Other:**	0 / 0	**Total:**	19 / 228

SafetySummary: No incidents or events reported. 29 days since LTI. Conducted Crown Check, Safety Meeting.

Current Operations: 00:00 to 06:00: RIH from 4'845' to 4.917'. Tagged up at 4,917'. Reamed from 4,915' to 5,359'.

Planned Operations: Finish reaming to bottom. Drill ahead.

Toolpusher: Cal Sutton, John Rogers

Wellsite Supervisors: Randy Baldwin, Brian Watson **Tel No.:**

Operations Summary

From	To	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	6:00	6.00	5,477	3-2-2	Drilled 8-3/4" hole with mud motor from 5,440' to 5,477' with full circulation.	
6:00	6:30	0.50	5,477	3-5-1	Circulate and survey.	
6:30	10:30	4.00	5,477	3-6-4	POH to BHA at 495" Checking for tubular wear.	
10:30	11:30	1.00	5,477	3-6-2	POH BHA to 112'.	
11:30	13:30	2.00	5,477	3-34-4	Laid down bit, straighten AKO on motor and laid down. Laid down two monel dc's, shock sub and one stab.	
13:30	14:00	0.50	5,477	8-7	Service rig.	
14:00	17:00	3.00	5,477	3-34-3	Pickup BHA # 11, monel dc, stab., near bit roller reamer and bit, stab,shock sub, stab.	
17:00	17:30	0.50	5,477	3-6-1	RIH BHA to 272'. Change out the jars.	
17:30	18:30	1.00	5,477	3-6-3	RIH drill pipe to 2,135'	
18:30	19:30	1.00	5,477	9-99	Replace rotary chain ideler and tighten the chain.	X
19:30	21:30	2.00	5,477	3-6-3	RIH drill pipe to 3,936', tag with 25K.	
21:30	22:30	1.00	5,477	3-3	Kelly up, reamed 3,930' to 3,953', WOB 5K, RPM 70. Wash from 3,953' to 3,994'	
22:30	23:30	1.00	5,477	3-6-3	RIH drill pipe from 3,953' to 4,845'. Replaced two joints hardband slick on one side.	
23:30	0:00	0.50	5,477	3-5-1	Circulate at 4'845'. Temp peaked at 116F.	

Management Summary

Directionally drilled 8-3/4" hole from 5,440' to 5,477' with full returns.
POOH and lay down directional tools.
Made up new bit and locked up reaming assembly.
RIH to 3,936' and tagged up with 25K.
Proceed to ream from 3,930' to 3,953'.
Washed from 3,953' to 3,994'.
Continue to RIH to 4,845'.

Casing/Tubular Information

Type	Size (ins)	Top MD (ft)	Top TVD (ft)	Bottom MD (ft)	Bottom TVD (ft)	Hole Section	OH Diam. (ins)	Nom. Wgt. (lbs)	Nominal Grade	LOT (lbs/gal)
FULL	20.000	0	0	84		COND		53		
FULL	13.375	0		338		SURF		55	N-80	11.90
FULL	9.625	0	0	2,172	2,173	INT1	18.000	40	K-55	19.20

Mud Information

Dens.	Vis	PV	YP	Filt.	Cake	pH/ES	% Solids	% Oil	% Water	% Sand	LGS	Cl	Ca	CaCl	Gels 10s	Gels 10m	Gels 30m	Temp In	Temp Out	Mud Loss
24-Aug-17 19:00 at Depth 5,477 ft Return Flow Line, Type: Low Solids Non-Dispersed																				
8.60	42	10	15	8	1		4		96	0.1	3.6	600	80		3	5	9		90	

Comments: .85%=1.7 PPB Micro-C

Mud Consumables

Item Description	Qty.	Cost	Item Description	Qty.	Cost
Micro C - 50#SK	25	---	PacReg - 50#SK	3	---

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 29 **Report For 24-Aug-17**

Bit/BHA/Workstring Information

No Run		Make	Model	Diam	Depth In	This Run Dist	Hrs	R.O.P. Avg	Max	WOB	RPM	Torque	Mud Wt	Flow	Pump Press	J. Vel	P. Drp	HHP	JIF
7	1	HC	VG-44CD	8.750	4875	602	82	7.3	14.0	30,	130	130	9	430	1680	104	83	21	199
Jets: 24 24 24					**Out:** 5477	**Grade:**		**Cutter:**	8 / 8	**Dull:**	LT / BT		**Wear:** A		**Brgs:** E	**Gge:**	0.25	**Pull:** BHA	
8	1	Smith	F37HYOD	8.750	5477														
Jets: 20 20 20					**Out:** 5708	**Grade:**		**Cutter:**	5 / 6	**Dull:**	WT / ER		**Wear:** A		**Brgs:** E	**Gge:**	0	**Pull:** HR	

BHA - No. 11 - BIT, RR, DCM, STAB, SHOCK, STAB, DC, STAB, 8 DC, JAR, 2 DC, XO, 9 HWDP = 713.13

Drilling Parameters

Depth (ft) From	To	ROP (ft/hr) Avg	Max	WOB (lbs) Avg	Max	RPM Avg	Max	Torque (ft lbs) Avg	Max	Flow (gals/min) Avg	Max	Pressure (psi)
5,440	5,477	7.0	10.0	26,000	30,000	130	140	130	140	430	450	1,680

Annular Velocity: **Drill Collars:** 340.0 **Drill Pipe:** 174.0

Miscellaneous Drilling Parameters

Hook Loads (lbs): **Off Bottom Rotate:** 150,000 **Pick Up:** 174,000 **Slack Off:** 140,000 **Drag Avg/Max:** 5000 /

Slow Circulation Data:

Pump 2: 48 spm 397 psi

Hours on BHA: **Since Inspection:** 112.5 **Total:** 112.5 **Jars:** 259.25

Hours on Casing/Liner: **Rotating:** 261 / **Tripping:** 89.5 / ☐ **Wear Bushing Installed**

Survey Information

Survey Type	Meas. Depth	Inc.	Azimuth	TVD	Closure	Vertical Section	Coordinates N-S	E-W	D.L.S.
MWD	5,405.0	0.62	203.2	5,398.1	125.3	10.2	N 10.2	W 124.9	2.438

Mud Log Information

Depth (ft) From	To	TVD (ft) From	To	Gas (Units) Avg	Max	at Depth	Gas Connect.	Trip	Drilling Exp.	Pore Press	Mud Dens.	Shale Dens.	ROP Shale	Sand
5,440	5,477	5,440	5,477											

Formation Name:

Lithology: Granodiorite

Rig Information

Equipment Problems:

Location Condition:

Transport:

Solids Control Information

Screen Sizes:	Top	Middle 1	Middle 2	Bottom	Equipment Usage (Hrs):	
Shaker No 1:	145	145	145	145	**Desilter:**	24
Shaker No 2:	145	145	145	145	**Centrifuge 1:**	8 (Solids Removal)
Shaker No 3:	255	255	255			

Drill Pipe Inventory

DP Size	Joints	Weight	Grade	Thread	DP Size	Joints	Weight	Grade	Thread
4 TSDS	240	14.0	S-135	TSDS40	4 HWDP	15	28.0		TSDS40

Safety Information

Meetings/Drills	Time	Description
Safety	15	Held safety meeting crews with both crews.

First Aid Treatments: **Medical Treatments:** **Lost Time Incidents:** **Days Since LTI:** 29

☐ **BOP Test** ☑ **Crownamatic Check**

Weather Information

Sky Condition:	clear	**Visibility:**	10
Air Temperature:	60 degF	**Bar. Pressure:**	29.8
Wind Speed/Dir:	15 / S	**Wind Gusts:**	

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 29

Report For 24-Aug-17

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
FLIFT	36K forklift		AHERN	32a1	---	27-Jul-17	
Notes:	Charged as dayrate						
LIGHTS	2 X Light towers		BnL	43e	---	27-Jul-17	
OTHER	2 x Trailers		BnL	43m	---	27-Jul-17	
OTHER	Mud cleaner		NOVB	32a1	---	31-Jul-17	
Notes:	Charged as dayrate						
OTHER	Automatic driller		NOVT	38d	---	31-Jul-17	
SURVEY	Survey tools		KnR	38h	---	31-Jul-17	
Notes:	4800 per month						
OTHER	Well Head		GRG	46a	---	02-Aug-17	
MUDCOOLER	Gen for mud cooler		AHERN	38o	---	03-Aug-17	
Notes:	start 8/15						
MUDCOOLER	Mud cooler		DRLCO	38o	---	03-Aug-17	
Notes:	start 8/15						
OTHER	Mud office		Rollins	36b	---	04-Aug-17	
Notes:	60 day min. with deliver and return						
OTHER	Restrooms		Rollins	43i	---	28-Jul-17	
Notes:	2 x 15 day (est)						
OTHER	Rain4rent tank		Rollins	43c	---	30-Jun-17	
Notes:	30 day (est)						
OTHER	Trash dumpster		Rollins	43j	---	30-Jun-17	
Notes:	30 day (est)						
JARS	6-1/2" jars		KnR	38f1	---	08-Aug-17	
Notes:	Plus 1500 redress						
OTHER	Centrifuge		NOVB	38g	---	15-Aug-17	
Notes:	Centrifuge 300/day						
TOOLS	6-1/2" shock sub	1455355	KnR	38f1	---	16-Aug-17	
Notes:	Plus 1500 redress.						
			Total Daily Rental Cost $:		---		

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 30 **Report For 25-Aug-17**

Operator:	University of Utah	**Rig:**	Kenai 10	**Spud Date:**	31-Jul-17	**Daily Cost / Mud ($):**			---
Measured Depth (ft):	5606	**Drilling Days (act.):**	26	**Wellbore:**	Original Well Bore	**AFE No.**		**AFE ($)**	**Actual ($)**
Vertical Depth (ft):	5606	**Drilling Days (plan):**	58	**RKB Elevation (ft):**	21.50	---		---	---
Proposed TD (ft):	7060	**Days On Location:**	30	**Last BOP Test:**	13-Aug-17	---		---	---
Hole Made (ft) / Hrs:	129 / 16.0	**Last Casing:**	9.625 at 2,172	**LOT (lbs/gal):**	19.20	**Totals:**		---	---
Average ROP (ft/hr):	8.06	**Next Casing:**	7.000 at 6,900	**Working Interest:**		**Well Cost ($):**			---

Pers/Hrs: **Operator:** 2 / 24 **Contractor:** 12 / 72 **Service:** 3 / 36 **Other:** 0 / 0 **Total:** 17 / 132

SafetySummary: No incidents or events reported. 30 days since LTI. Conducted Crown Check, Safety Meeting.

Current Operations: 00:00 to 06:00: Drilled from 5,606' to 5,650' with full returns.

Planned Operations: Drill ahead as per program.

Toolpusher: Cal Sutton, John Rogers

Wellsite Supervisors: Randy Baldwin, Brian Watson **Tel No.:**

Operations Summary

From	To	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	0:30	0.50	5,477	3-6-3	RIH drill pipe from 4,845' to 4,917' and tag with 25K.	
0:30	8:00	7.50	5,477	3-3	Ream from 4,905' to 5,477'. WOB 3-7K. RPM 80, GPM 448, TQ 120-150.	
8:00	20:30	12.50	5,582	3-2-1	Drill 8-3/4" hole from 5,477' to 5,582'. WOB 28K, RPM 90, TQ 174-200.	
20:30	21:00	0.50	5,477	8-7	Service rig.	
21:00	0:00	3.00	5,606	3-2-1	Drill 8-3/4" hole from 5,582' to 5,606' WOB 29K.	

Management Summary

RIH from 4'845' to 4.917'. Tagged up at 4,917'. Reamed from 4,915' to 5,477'. Drill 8-3/4" hole from 5,477' to 5,606' with full returns.

Casing/Tubular Information

Type	Size (ins)	Top MD (ft)	Top TVD (ft)	Bottom MD (ft)	Bottom TVD (ft)	Hole Section	OH Diam. (ins)	Nom. Wgt. (lbs)	Nominal Grade	LOT (lbs/gal)
FULL	20.000	0	0	84		COND		53		
FULL	13.375	0		338		SURF		55	N-80	11.90
FULL	9.625	0	0	2,172	2,173	INT1	18.000	40	K-55	19.20

Mud Information

25-Aug-17 19:00 at Depth 5,570 ft Return Flow Line, Type: Low Solids Non-Dispersed

Dens.	Vis	PV	YP	Filt.	Cake	pH/ES	Solids	% Oil	% Water	% Sand	LGS	Cl	Ca	CaCl	Gels 10s	Gels 10m	Gels 30m	Temp In	Temp Out	Mud Loss
8.60	37	8	12	8	1	8.8	4		96	0.1	3.8	650	80		2	4	6	108	119	

Comments: .85% Micro-C=1.7 PPB

Mud Consumables

Item Description	Qty.	Cost	Item Description	Qty.	Cost
Amberguard - 5GAL	1	---	Cotton Seed - 50#SK	1	---
Defoam - 5GAL	1	---	Micro C - 50#SK	35	---
PacReg - 50#SK	1	---	Pallet Wrap - OTHER	1	---
Polyvis - 5GAL	6	---	Saw Dust - 50#SK	2	---
Torkease - 5GAL	1	---			

Bit/BHA/Workstring Information

No	Run	Make	Model	Diam	Depth In	This Run Dist	This Run Hrs	R.O.P. Avg	R.O.P. Max	WOB	RPM	Torque	Mud Wt	Mud Flow	Pump Press	J. Vel	P. Drp	HHP	JIF
8	1	Smith	F37HYOD	8.750	5477	129	15.5	8.3	16.0	30	80	150	9	460	1300	160	198	53	328

Jets: 20 20 20 **Out:** 5708 **Grade:** **Cutter:** 5 / 6 **Dull:** WT / ER **Wear:** A **Brgs:** E **Gge:** 0 **Pull:** HR

BHA - No. 11 - BIT, RR, DCM, STAB, SHOCK, STAB, DC, STAB, 8 DC, JAR, 2 DC, XO, 9 HWDP = 713.13

Drilling Parameters

Depth (ft) From	Depth (ft) To	ROP (ft/hr) Avg	ROP (ft/hr) Max	WOB (lbs) Avg	WOB (lbs) Max	RPM Avg	RPM Max	Torque (ft lbs) Avg	Torque (ft lbs) Max	Flow (gals/min) Avg	Flow (gals/min) Max	Pressure (psi)
5,477	5,606	9.0	14.0	25,000	29,000	60	90	140	170	447	476	1,310

Annular Velocity: **Drill Collars:** 353.4 **Drill Pipe:** 180.9

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 30 **Report For 25-Aug-17**

Miscellaneous Drilling Parameters

Hook Loads (lbs): **Off Bottom Rotate:** 150,000 **Pick Up:** 175,000 **Slack Off:** 140,000 **Drag Avg/Max:** 5000 /

Slow Circulation Data:

Pump 2: 48 spm 328 psi

Hours on BHA: **Since Inspection:** 135.5 **Total:** 135.5 **Jars:** 15.5

Hours on Casing/Liner: **Rotating:** 284 / **Tripping:** 90 / ☐ **Wear Bushing Installed**

Mud Log Information

Depth (ft) From	Depth (ft) To	TVD (ft) From	TVD (ft) To	Gas (Units) Avg	Gas (Units) Max	Gas (Units) at Depth	Gas Connect.	Gas Trip	Drilling Exp.	Pore Press	Mud Dens.	Shale Dens.	ROP Shale	ROP Sand
5,477	5,606	5,477	5,606											

Formation Name:

Lithology: Granodiorite

Rig Information

Equipment Problems:

Location Condition:

Transport:

Solids Control Information

Screen Sizes:	Top	Middle 1	Middle 2	Bottom	Equipment Usage (Hrs):	
Shaker No 1:	145	145	145	145	Desilter:	24
Shaker No 2:	145	145	145	145	Centrifuge 1:	16 (Solids Removal)
Shaker No 3:	255	255	255			

Drill Pipe Inventory

DP Size	Joints	Weight	Grade	Thread	DP Size	Joints	Weight	Grade	Thread
4 TSDS	240	14.0	S-135	TSDS40	4 HWDP	15	28.0		TSDS40

Safety Information

Meetings/Drills	Time	Description
Safety	15	Held safety meetings with both crews

First Aid Treatments: **Medical Treatments:** **Lost Time Incidents:** **Days Since LTI:** 30

☐ **BOP Test** ☑ **Crownamatic Check**

Weather Information

Sky Condition:	Clear	**Visibility:**	10
Air Temperature:	61 degF	**Bar. Pressure:**	29.9
Wind Speed/Dir:	11 / SSW	**Wind Gusts:**	

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
FLIFT	36K forklift		AHERN	32a1	---	27-Jul-17	
Notes:	Charged as dayrate						
LIGHTS	2 X Light towers		BnL	43e	---	27-Jul-17	
OTHER	2 x Trailers		BnL	43m	---	27-Jul-17	
OTHER	Mud cleaner		NOVB	32a1	---	31-Jul-17	
Notes:	Charged as dayrate						
OTHER	Automatic driller		NOVT	38d	---	31-Jul-17	
SURVEY	Survey tools		KnR	38h	---	31-Jul-17	
Notes:	4800 per month						
OTHER	Well Head		GRG	46a	---	02-Aug-17	
MUDCOOLER	Gen for mud cooler		AHERN	38o	---	03-Aug-17	
Notes:	start 8/15						
MUDCOOLER	Mud cooler		DRLCO	38o	---	03-Aug-17	
Notes:	start 8/15						
OTHER	Mud office		Rollins	36b	---	04-Aug-17	

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 30

Report For 25-Aug-17

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
Notes:	60 day min. with deliver and return						
OTHER	Restrooms		Rollins	43i	---	28-Jul-17	
Notes:	2 x 15 day (est)						
OTHER	Rain4rent tank		Rollins	43c	---	30-Jun-17	
Notes:	30 day (est)						
OTHER	Trash dumpster		Rollins	43j	---	30-Jun-17	
Notes:	30 day (est)						
JARS	6-1/2" jars		KnR	38f1	---	08-Aug-17	
Notes:	Plus 1500 redress						
OTHER	Centrifuge		NOVB	38g	---	15-Aug-17	
Notes:	Centrifuge 300/day						
TOOLS	6-1/2" shock sub	1455355	KnR	38f1	---	16-Aug-17	
Notes:	Plus 1500 redress.						
			Total Daily Rental Cost $:		---		

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 31 **Report For 26-Aug-17**

Operator:	University of Utah	**Rig:**	Kenai 10	**Spud Date:**	31-Jul-17	**Daily Cost / Mud ($):**			---
Measured Depth (ft):	5708	**Drilling Days (act.):**	27	**Wellbore:**	Original Well Bore	**AFE No.**		**AFE ($)**	**Actual ($)**
Vertical Depth (ft):	5701	**Drilling Days (plan):**	58	**RKB Elevation (ft):**	21.50	---		---	---
Proposed TD (ft):	7060	**Days On Location:**	31	**Last BOP Test:**	13-Aug-17	---		---	---
Hole Made (ft) / Hrs:	102 / 19.5	**Last Casing:**	9.625 at 2,172	**LOT (lbs/gal):**	19.20	**Totals:**		---	---
Average ROP (ft/hr):	5.23	**Next Casing:**	7.000 at 6,900	**Working Interest:**		**Well Cost ($):**			---

Pers/Hrs: **Operator:** 2 / 24 **Contractor:** 12 / 144 **Service:** 3 / 36 **Other:** 0 / 0 **Total:** 17 / 204

SafetySummary: No incidents or events reported. 31 days since LTI. Conducted Crown Check, Safety Meeting.

Current Operations: 00:00 to 06:00 hrs: Made up new BHA and RIH. Laid down 3 joints slick HWDP, replaced same. RIH to shoe. Slipped and cut drilling line 60'. RIH.

Planned Operations: Ream to bottom. Drill ahead as per program.

Toolpusher: Cal Sutton, John Rogers

Wellsite Supervisors: Randy Baldwin/Fred Wilson, Brian Watson/Rod Bray **Tel No.:**

Operations Summary

From	To	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	16:00	16.00	5,708	3-2-1	Drilled 8-3/4" hole from 5,606' to 5,708' with full returns. 30K WOB and 90 RPM.	
16:00	16:30	0.50	5,708	3-5-1	Circulated for survey	
16:30	17:00	0.50	5,708	3-10	Survey at 5,679' = Inc 0.7 Deg, 136.6 Azimuth, MRT = 158F, Static 19 min.	
17:00	17:30	0.50	5,708	3-5-1	Circulated bottoms up for trip.	
17:30	20:00	2.50	5,708	3-6-4	Pulled out of hole for bit and BHA change	
20:00	21:00	1.00	5,708	3-6-2	POH with BHA.	
21:00	22:30	1.50	5,708	3-34-4	Laid down 3 stabs, roller reamer and shock sub. Stabs were 1" under gauge. Reamer was 1/2" under gauge. Bit was full gauge.	
22:30	0:00	1.50	5,708	3-34-3	Measured and picked up new BHA with mud motor. Picked up 2 x new 8-3/4" stabs and one used 8-1/2 stab, new shock sub, new mud motor and new bit.	

Management Summary

Drilled 8-3/4" hole from 5,606' to 5,708' with full returns. Survey at 5,679' Inc 0.7 Deg. Pulled out of hole for bit change. Changed BHA. Picked up mud motor BHA.

Casing/Tubular Information

Type	Size (ins)	Top MD (ft)	Top TVD (ft)	Bottom MD (ft)	Bottom TVD (ft)	Hole Section	OH Diam. (ins)	Nom. Wgt. (lbs)	Nominal Grade	LOT (lbs/gal)
FULL	20.000	0	0	84		COND		53		
FULL	13.375	0		338		SURF		55	N-80	11.90
FULL	9.625	0	0	2,172	2,173	INT1	18.000	40	K-55	19.20

Mud Information

26-Aug-17 18:30 at Depth 5,708 ft Return Flow Line, Type: Low Solids Non-Dispersed

Dens.	Vis	PV	YP	Filt.	Cake	pH/ES	Solids %	Oil %	Water %	Sand %	LGS	Cl	Ca	CaCl	Gels 10s	Gels 10m	Gels 30m	Temp In	Temp Out	Mud Loss
8.60	37	7	12	7.8	1	8.5	4	0	96	0.1	3.8	700	80		2	3	4	110	121	0.0

Comments: Micro C = 0.9% 1.85 ppb

Mud Consumables

Item Description	Qty.	Cost	Item Description	Qty.	Cost
Cotton Seed - 50#SK	1	---	Defoam - 5GAL	1	---
Micro C - 50#SK	40	---	PacReg - 50#SK	2	---
Pallet Wrap - OTHER	1	---	Polyvis - 5GAL	2	---
Saw Dust - 50#SK	1	---	Soda Ash - 50#SK	1	---

Bit/BHA/Workstring Information

No	Run	Make	Model	Diam	Depth In	This Run Dist	This Run Hrs	R.O.P. Avg	R.O.P. Max	WOB	RPM	Torque	Mud Wt	Mud Flow	Pump Press	J. Vel	P. Drp	HHP	JIF
8	1	Smith	F37HYOD	8.750	5477	231	31.5	7.3	10.0	30	90	155	9	450	1350	157	189	50	314

Jets: 20 20 20 **Out:** 5708 **Grade:** **Cutter:** 5 / 6 **Dull:** WT / ER **Wear:** A **Brgs:** E **Gge:** 0 **Pull:** HR

BHA - No. 12 - BIT, MMTR, STAB, SHOCK, STAB, DCM, STAB, 9 DC, JAR, 2 DC, XO, 9 HWDP = 737.69

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 31 **Report For 26-Aug-17**

Drilling Parameters

Depth (ft) From	Depth (ft) To	ROP (ft/hr) Avg	ROP (ft/hr) Max	WOB (lbs) Avg	WOB (lbs) Max	RPM Avg	RPM Max	Torque (ft lbs) Avg	Torque (ft lbs) Max	Flow (gals/min) Avg	Flow (gals/min) Max	Pressure (psi)
5,606	5,708	6.3	10.0	30		90		148	166	450		1,350

Annular Velocity: Drill Collars: 353.4 **Drill Pipe:** 181.0

Miscellaneous Drilling Parameters

Hook Loads (lbs): Off Bottom Rotate: 153,000 **Pick Up:** 180,000 **Slack Off:** 140,000 **Drag Avg/Max:** 22000 / 27000

Slow Circulation Data:

Pump 1: 47 spm 311 psi

Pump 2: 48 spm 328 psi

Hours on BHA: Since Inspection: 151.5 **Total:** 151.5 **Jars:** 31.5

Hours on Casing/Liner: Rotating: 297 / **Tripping:** 96 / ☐ **Wear Bushing Installed**

Survey Information

Survey Type	Meas. Depth	Inc.	Azimuth	TVD	Closure	Vertical Section	Coordinates N-S	Coordinates E-W	D.L.S.
MSS	5,679.0	0.70	136.6	5,672.1	124.6	7.6	N 7.6	W 124.3	0.266

Mud Log Information

Depth (ft) From	Depth (ft) To	TVD (ft) From	TVD (ft) To	Gas (Units) Avg	Gas (Units) Max	Gas at Depth	Gas Connect.	Gas Trip	Drilling Exp.	Pore Press	Mud Dens.	Shale Dens.	ROP Shale	ROP Sand
5,600	5,708	5,593	5,701											

Formation Name:

Lithology: 100% Granodiorite

Rig Information

Equipment Problems:

Location Condition:

Transport:

Solids Control Information

Screen Sizes:	Top	Middle 1	Middle 2	Bottom	Equipment Usage (Hrs):	
Shaker No 1:	145	145	145	145	Desilter:	24
Shaker No 2:	145	145	145	145	Centrifuge 1:	16 (Solids Removal)
Shaker No 3:	255	255	255			

Drill Pipe Inventory

DP Size	Joints	Weight	Grade	Thread	DP Size	Joints	Weight	Grade	Thread
4 TSDS	240	14.0	S-135	TSDS40	4 HWDP	15	28.0		TSDS40

Safety Information

Meetings/Drills	Time	Description
Safety	15	Held safety meeting with both crews

First Aid Treatments: Medical Treatments: Lost Time Incidents: Days Since LTI: 31

☐ **BOP Test** ☑ **Crownamatic Check**

Weather Information

Sky Condition: Clear **Visibility:** 10

Air Temperature: 69 degF **Bar. Pressure:** 29.98

Wind Speed/Dir: 7 / NNE **Wind Gusts:**

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
FLIFT	36K forklift		AHERN	32a1	---	27-Jul-17	
Notes:	Charged as dayrate						
LIGHTS	2 X Light towers		BnL	43e	---	27-Jul-17	
OTHER	2 x Trailers		BnL	43m	---	27-Jul-17	
OTHER	Mud cleaner		NOVB	32a1	---	31-Jul-17	
Notes:	Charged as dayrate						

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 31

Report For 26-Aug-17

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
OTHER	Automatic driller		NOVT	38d	---	31-Jul-17	
SURVEY	Survey tools		KnR	38h	---	31-Jul-17	
Notes:	4800 per month						
OTHER	Well Head		GRG	46a	---	02-Aug-17	
MUDCOOLER	Gen for mud cooler		AHERN	38o	---	03-Aug-17	
Notes:	start 8/15						
MUDCOOLER	Mud cooler		DRLCO	38o	---	03-Aug-17	
Notes:	start 8/15						
OTHER	Mud office		Rollins	36b	---	04-Aug-17	
Notes:	60 day min. with deliver and return						
OTHER	Restrooms		Rollins	43i	---	28-Jul-17	
Notes:	2 x 15 day (est)						
OTHER	Rain4rent tank		Rollins	43c	---	30-Jun-17	
Notes:	30 day (est)						
OTHER	Trash dumpster		Rollins	43j	---	30-Jun-17	
Notes:	30 day (est)						
JARS	6-1/2" jars		KnR	38f1	---	08-Aug-17	
Notes:	Plus 1500 redress						
OTHER	Centrifuge		NOVB	38g	---	15-Aug-17	
Notes:	Centrifuge 300/day						
TOOLS	6-1/2" shock sub	1455355	KnR	38f1	---	16-Aug-17	
Notes:	Plus 1500 redress.						
			Total Daily Rental Cost $:		---		

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 32 **Report For 27-Aug-17**

Operator:	University of Utah	**Rig:**	Kenai 10	**Spud Date:**	31-Jul-17	**Daily Cost / Mud ($):**			---
Measured Depth (ft):	5839	**Drilling Days (act.):**	28	**Wellbore:**	Original Well Bore	**AFE No.**		**AFE ($)**	**Actual ($)**
Vertical Depth (ft):	5832	**Drilling Days (plan):**	58	**RKB Elevation (ft):**	21.50	---		---	---
Proposed TD (ft):	7060	**Days On Location:**	32	**Last BOP Test:**	13-Aug-17	---		---	---
Hole Made (ft) / Hrs:	131 / 19.5	**Last Casing:**	9.625 at 2,172	**LOT (lbs/gal):**	19.20	**Totals:**		---	---
Average ROP (ft/hr):	6.72	**Next Casing:**	7.000 at 6,900	**Working Interest:**		**Well Cost ($):**			---

Pers/Hrs:	**Operator:**	2 / 24	**Contractor:**	12 / 144	**Service:**	3 / 36	**Other:**	0 / 0	**Total:**	17 / 204

SafetySummary: No incidents or events reported. 32 days since LTI. Conducted Crown Check, Safety Meeting.

Current Operations: 00:00 to 06:00 hrs: Drilled 8-3/4" hole with mud motor from 5,839' to 5,885' with full returns.

Planned Operations: Drill ahead as per program

Toolpusher: Cal Sutton, John Rogers

Wellsite Supervisors: Fred Wilson, Rod Bray **Tel No.:**

Operations Summary

From	To	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	2:00	2.00	5,708	3-34-3	Made up mud motor BHA	
2:00	3:15	1.25	5,708	3-6-1	RIH with BHA. Laid down 3 slick joints HWDP replaced same.	
3:15	4:00	0.75	5,708	3-6-3	RIH to shoe	
4:00	4:30	0.50	5,708	3-5-1	Filled pipe and break circulation at shoe	
4:30	5:30	1.00	5,708	3-99	Slipped and cut drilling line 60'	
5:30	8:00	2.50	5,708	3-6-3	RIH to 5,660''	
8:00	8:30	0.50	5,708	3-3	Reamed from 5,660' to bottom ar 5,708'.	
8:30	22:30	14.00	5,830	3-2-2	Drilled 8-3/4" hole with mud motor from 5,708' to 5,830' with full returns. 35K WOB 40 RPM. (160 RPM with motor) Performed drill off tests.	
22:30	23:00	0.50	5,830	3-99	Serviced rig (not down time)	
23:00	0:00	1.00	5,839	3-2-2	Drilled 8-3/4" hole with mud motor from 5,830' to 5,839' with full returns. 35K WOB 40 RPM (160 RPM with motor)	

Management Summary

Made up new BHA. RIH to shoe. Slipped and cut drilling line 60'.
RIH to 5,660'. Reamed from 5,660' to bottom at 5,708'
Drilled 8-3/4" hole from 5,708' to 5,839' with full returns.

RIH to 5,660' and reamed from 5,660' to bottom at 5,708'.
Continue to drill 8-3/4" hole with mud motor from 5,708' to 5,839' with full returns.

Casing/Tubular Information

Type	Size (ins)	Top MD (ft)	Top TVD (ft)	Bottom MD (ft)	Bottom TVD (ft)	Hole Section	OH Diam. (ins)	Nom. Wgt. (lbs)	Nominal Grade	LOT (lbs/gal)
FULL	20.000	0	0	84		COND		53		
FULL	13.375	0		338		SURF		55	N-80	11.90
FULL	9.625	0	0	2,172	2,173	INT1	18.000	40	K-55	19.20

Mud Information

Dens.	Vis	PV	YP	Filt.	Cake	pH/ES	Solids %	Oil %	Water %	Sand %	LGS	Cl	Ca	CaCl	Gels 10s	Gels 10m	Gels 30m	Temp In	Temp Out	Mud Loss
27-Aug-17 18:00 at Depth 5,793 ft Return Flow Line, Type: Low Solids Non-Dispersed																				
8.60	36	8	13	7.8	1	8.4	4	0	96	0.1	3.9	700	120		2	3	5	115	126	0.0

Comments: Micro C = .75% or 1.75 ppb

Mud Consumables

Item Description	Qty.	Cost	Item Description	Qty.	Cost
Cotton Seed - 50#SK	1	---	Defoam - 5GAL	1	---
Lime - 50#SK	1	---	Micro C - 50#SK	25	---
PacReg - 50#SK	1	---	Pallet Wrap - OTHER	1	---
Polyvis - 5GAL	2	---	Saw Dust - 50#SK	1	---
XGD Xanthan Gum - 50#SK	1	---			

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 32 **Report For 27-Aug-17**

Bit/BHA/Workstring Information

No Run		Make	Model	Diam	Depth In	This Run Dist	Hrs	R.O.P. Avg	Max	WOB	RPM	Torque	Mud Wt	Flow	Pump Press	J. Vel	P. Drp	HHP	JIF
9	1	HC	HRMPS4	8.750	5708	131	15	8.7	14.0	35	160	150	9	414	1395	178	244	59	328

Jets: 18 18 18 **Out:** 6177 **Grade:** **Cutter:** 8 / 8 **Dull:** LT / BC **Wear:** A **Brgs:** E **Gge:** 4 **Pull:** DTF

BHA - No. 12 - BIT, MMTR, STAB, SHOCK, STAB, DCM, STAB, 9 DC, JAR, 2 DC, XO, 9 HWDP = 737.69

Drilling Parameters

Depth (ft) From	To	ROP (ft/hr) Avg	Max	WOB (lbs) Avg	Max	RPM Avg	Max	Torque (ft lbs) Avg	Max	Flow (gals/min) Avg	Max	Pressure (psi)
5,708	5,839	8.7	14.0	35	40	35	40	140	161	414		1,395

Annular Velocity: **Drill Collars:** 327.3 **Drill Pipe:** 167.5

Miscellaneous Drilling Parameters

Hook Loads (lbs): **Off Bottom Rotate:** 156,000 **Pick Up:** 180,000 **Slack Off:** 145,000 **Drag Avg/Max:** 24000 / 26000

Slow Circulation Data:

Pump 1: 47 spm 390 psi

Pump 2: 48 spm 414 psi

Hours on BHA: **Since Inspection:** 166.5 **Total:** 166.5 **Jars:** 46.5

Hours on Casing/Liner: **Rotating:** 312 / **Tripping:** 102.5 / ☐ **Wear Bushing Installed**

Mud Log Information

Depth (ft) From	To	TVD (ft) From	To	Gas (Units) Avg	Max	at Depth	Gas Connect.	Trip	Drilling Exp.	Pore Press	Mud Dens.	Shale Dens.	ROP Shale	Sand
5,708	5,839	5,701	5,832											

Formation Name:

Lithology: 100% Granodiorite

Rig Information

Equipment Problems:

Location Condition:

Transport:

Solids Control Information

Screen Sizes:	Top	Middle 1	Middle 2	Bottom	Equipment Usage (Hrs):	
Shaker No 1:	145	145	145	145	Desilter:	16
Shaker No 2:	145	145	145	145	Centrifuge 1:	8 (Solids Removal)
Shaker No 3:	255	255	255			

Drill Pipe Inventory

DP Size	Joints	Weight	Grade	Thread	DP Size	Joints	Weight	Grade	Thread
4 TSDS	240	14.0	S-135	TSDS40	4 HWDP	15	28.0		TSDS40

Safety Information

Meetings/Drills	Time	Description
Safety	15	Held safety meeting with both crews

First Aid Treatments: **Medical Treatments:** **Lost Time Incidents:** **Days Since LTI:** 32

☐ **BOP Test** ☑ **Crownamatic Check**

Weather Information

Sky Condition: Clear **Visibility:** 10

Air Temperature: 70 degF **Bar. Pressure:** 29.96

Wind Speed/Dir: 4 / WNW **Wind Gusts:**

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
FLIFT	36K forklift		AHERN	32a1	---	27-Jul-17	
Notes:	Charged as dayrate						
LIGHTS	2 X Light towers		BnL	43e	---	27-Jul-17	

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 32

Report For 27-Aug-17

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
OTHER	2 x Trailers		BnL	43m	---	27-Jul-17	
OTHER	Mud cleaner		NOVB	32a1	---	31-Jul-17	
Notes:	Charged as dayrate						
OTHER	Automatic driller		NOVT	38d	---	31-Jul-17	
SURVEY	Survey tools		KnR	38h	---	31-Jul-17	
Notes:	4800 per month						
OTHER	Well Head		GRG	46a	---	02-Aug-17	
MUDCOOLER	Gen for mud cooler		AHERN	38o	---	03-Aug-17	
Notes:	start 8/15						
MUDCOOLER	Mud cooler		DRLCO	38o	---	03-Aug-17	
Notes:	start 8/15						
OTHER	Mud office		Rollins	36b	---	04-Aug-17	
Notes:	60 day min. with deliver and return						
OTHER	Restrooms		Rollins	43i	---	28-Jul-17	
Notes:	2 x 15 day (est)						
OTHER	Rain4rent tank		Rollins	43c	---	30-Jun-17	
Notes:	30 day (est)						
OTHER	Trash dumpster		Rollins	43j	---	30-Jun-17	
Notes:	30 day (est)						
JARS	6-1/2" jars		KnR	38f1	---	08-Aug-17	
Notes:	Plus 1500 redress						
OTHER	Centrifuge		NOVB	38g	---	15-Aug-17	
Notes:	Centrifuge 300/day						
TOOLS	6-1/2" shock sub	1455355	KnR	38f1	---	16-Aug-17	
Notes:	Plus 1500 redress.						
			Total Daily Rental Cost $:		---		

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 33 **Report For 28-Aug-17**

Operator:	University of Utah	**Rig:**	Kenai 10	**Spud Date:**	31-Jul-17	**Daily Cost / Mud ($):**			---
Measured Depth (ft):	6023	**Drilling Days (act.):**	29	**Wellbore:**	Original Well Bore	**AFE No.**		**AFE ($)**	**Actual ($)**
Vertical Depth (ft):	6016	**Drilling Days (plan):**	58	**RKB Elevation (ft):**	21.50	---		---	---
Proposed TD (ft):	7060	**Days On Location:**	33	**Last BOP Test:**	13-Aug-17	---		---	---
Hole Made (ft) / Hrs:	184 / 23.0	**Last Casing:**	9.625 at 2,172	**LOT (lbs/gal):**	19.20	**Totals:**		---	---
Average ROP (ft/hr):	8.0	**Next Casing:**	7.000 at 6,900	**Working Interest:**		**Well Cost ($):**			---

Pers/Hrs: **Operator:** 2 / 24 **Contractor:** 12 / 144 **Service:** 3 / 36 **Other:** 0 / 0 **Total:** 17 / 204

SafetySummary: No incidents or events reported. 33 days since LTI. Conducted Crown Check, Safety Meeting.

Current Operations: 00:00 to 06:00 hrs: Drilled 8-3/4" hole with mud motor from 6,023' to 6,062' with full returns.

Planned Operations: Drill ahead until dull bit. POH for bit. Inspect BHA.

Toolpusher: Cal Sutton, John Rogers

Wellsite Supervisors: Fred Wilson, Rod Bray **Tel No.:**

Operations Summary

From	To	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	13:30	13.50	5,955	3-2-2	Drilled 8-3/4" hole with mud motor from 5,839' to 5,955' with full returns. 35K WOB 30 RPM (150 RPM with motor) Rotary torque 150 psi to 175 psi. Flow line temp in 112F and 124F out. Mud cooler on.	
13:30	14:00	0.50	5,955	3-5-1	Circulated for survey. Flow line temp in 112F and 124F out. Mud cooler on	
14:00	14:30	0.50	5,955	3-10	Survey at 5,872' = Inc 1.5 Deg, 316.2 Azimuth, MRT 160F. Static 19 min.	
14:30	0:00	9.50	6,023	3-2-2	Drilled 8-3/4" hole with mud motor from 5,955' to 6,023' with full rertuns. 35K WOB 40 RPM (160 RPM with motor) Rotary torque 150 psi to 170 psi. Mud cooler on. Flow line temp in 110F out 123F.	

Management Summary

Drilled 8-3/4" hole with mud motor from 5,839' to 5,955' with full returns. Survey at 5,872' = Inc 1.5 Deg, 316.2 Azimuth, MRT = 160F. Drilled 8-3/4" hole with mud motor from 5,955' to 6,023' with full returns.

Comments

Mud cooler temp in = 112.9F Temp out = 104.7F Mud cooler on 24 hrs
Note: Cooling tower start depth was at 4140' on 8/15/17

Casing/Tubular Information

Type	Size (ins)	Top MD (ft)	Top TVD (ft)	Bottom MD (ft)	Bottom TVD (ft)	Hole Section	OH Diam. (ins)	Nom. Wgt. (lbs)	Nominal Grade	LOT (lbs/gal)
FULL	20.000	0	0	84		COND		53		
FULL	13.375	0		338		SURF		55	N-80	11.90
FULL	9.625	0	0	2,172	2,173	INT1	18.000	40	K-55	19.20

Mud Information

28-Aug-17 18:00 at Depth 5,980 ft Return Flow Line, Type: Low Solids Non-Dispersed

Dens.	Vis	PV	YP	Filt.	Cake	pH/ES	Solids	% Oil	% Water	% Sand	LGS	Cl	Ca	CaCl	Gels 10s	Gels 10m	Gels 30m	Temp In	Temp Out	Mud Loss
8.60	35	7	11	7.8	1	7.8	4	0	96	0.1	3.8	750	120		3	3	4	113	124	0.0

Comments: Micro C = .75% or 1.5 ppb

Mud Consumables

Item Description	Qty.	Cost	Item Description	Qty.	Cost
Amberguard - 5GAL	1	---	Caustic Soda - 50#SK	1	---
Lime - 50#SK	1	---	Micro C - 50#SK	40	---
PacReg - 50#SK	2	---	Pallet Wrap - OTHER	1	---
Polyvis - 5GAL	2	---	XGD Xanthan Gum - 50#SK	1	---

Bit/BHA/Workstring Information

No	Run	Make	Model	Diam	Depth In	This Run Dist	This Run Hrs	R.O.P. Avg	R.O.P. Max	WOB	RPM	Torque	Mud Wt	Mud Flow	Pump Press	J. Vel	P. Drp	HHP	JIF
9	1	HC	HRMPS4	8.750	5708	315	38	8.3	12.0	35	150	160	9	414	1375	178	244	59	328

Jets: 18 18 18 **Out:** 6177 **Grade:** **Cutter:** 8 / 8 **Dull:** LT / BC **Wear:** A **Brgs:** E **Gge:** 4 **Pull:** DTF

BHA - No. 12 - BIT, MMTR, STAB, SHOCK, STAB, DCM, STAB, 9 DC, JAR, 2 DC, XO, 9 HWDP = 737.69

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 33 **Report For 28-Aug-17**

Drilling Parameters

Depth (ft) From	Depth (ft) To	ROP (ft/hr) Avg	ROP (ft/hr) Max	WOB (lbs) Avg	WOB (lbs) Max	RPM Avg	RPM Max	Torque (ft lbs) Avg	Torque (ft lbs) Max	Flow (gals/min) Avg	Flow (gals/min) Max	Pressure (psi)
5,839	6,023	8.0	12.0	35		150	160	150	175	414		1,375

Annular Velocity: Drill Collars: 327.3 **Drill Pipe:** 167.5

Comments: Mud cooler temp in 112.9F out 104.7F

Miscellaneous Drilling Parameters

Hook Loads (lbs): Off Bottom Rotate: 157,000 **Pick Up:** 175,000 **Slack Off:** 140,000 **Drag Avg/Max:** 18000 / 20000

Slow Circulation Data:

Pump 1: 47 spm 404 psi

Pump 2: 48 spm 420 psi

Hours on BHA: Since Inspection: 189.5 **Total:** 189.5 **Jars:** 69.5

Hours on Casing/Liner: Rotating: 335 / **Tripping:** 102.5 / ☐ **Wear Bushing Installed**

Survey Information

Survey Type	Meas. Depth	Inc.	Azimuth	TVD	Closure	Vertical Section	Coordinates N-S	Coordinates E-W	D.L.S.
MSS	5,872.0	1.50	316.2	5,865.1	125.6	8.6	N 8.6	W 125.3	1.140

Mud Log Information

Depth (ft) From	Depth (ft) To	TVD (ft) From	TVD (ft) To	Gas (Units) Avg	Gas (Units) Max	Gas at Depth	Gas Connect.	Gas Trip	Drilling Exp.	Pore Press	Mud Dens.	Shale Dens.	ROP Shale	ROP Sand
5,839	5,940	5,833	5,933											
Formation Name:														
Lithology:	100% Granodiorite													
5,940	5,950	5,933	5,943											
Formation Name:														
Lithology:	90% Granodiorite, 10% Diorite													
5,950	5,970	5,943	5,963											
Formation Name:														
Lithology:	100% Granodiorite													
5,970	6,020	5,963	6,013											
Formation Name:														
Lithology:	70-90% Granodiorite, 10-30% Quartz Monzonite													

Rig Information

Equipment Problems:

Location Condition:

Transport:

Solids Control Information

Screen Sizes:	Top	Middle 1	Middle 2	Bottom	Equipment Usage (Hrs):
Shaker No 1:	145	145	145	145	**Desilter:** 24
Shaker No 2:	145	145	145	145	**Centrifuge 1:** 24 (Solids Removal)
Shaker No 3:	255	255	255		

Drill Pipe Inventory

DP Size	Joints	Weight	Grade	Thread	DP Size	Joints	Weight	Grade	Thread
4 TSDS	240	14.0	S-135	TSDS40	4 HWDP	15	28.0		TSDS40

Safety Information

Meetings/Drills	Time	Description
Safety	15	Held safety meeting with both crews

First Aid Treatments: **Medical Treatments:** **Lost Time Incidents:** **Days Since LTI:** 33

☐ **BOP Test** ☑ **Crownamatic Check**

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 33 **Report For 28-Aug-17**

Weather Information

Sky Condition:	clear	**Visibility:**	10
Air Temperature:	76 degF	**Bar. Pressure:**	29.91
Wind Speed/Dir:	4 / S	**Wind Gusts:**	

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
FLIFT	36K forklift		AHERN	32a1	---	27-Jul-17	
Notes:	Charged as dayrate						
LIGHTS	2 X Light towers		BnL	43e	---	27-Jul-17	
OTHER	2 x Trailers		BnL	43m	---	27-Jul-17	
OTHER	Mud cleaner		NOVB	32a1	---	31-Jul-17	
Notes:	Charged as dayrate						
OTHER	Automatic driller		NOVT	38d	---	31-Jul-17	
SURVEY	Survey tools		KnR	38h	---	31-Jul-17	
Notes:	4800 per month						
OTHER	Well Head		GRG	46a	---	02-Aug-17	
MUDCOOLER	Gen for mud cooler		AHERN	38o	---	03-Aug-17	
Notes:	start 8/15						
MUDCOOLER	Mud cooler		DRLCO	38o	---	03-Aug-17	
Notes:	start 8/15						
OTHER	Mud office		Rollins	36b	---	04-Aug-17	
Notes:	60 day min. with deliver and return						
OTHER	Restrooms		Rollins	43i	---	28-Jul-17	
Notes:	2 x 15 day (est)						
OTHER	Rain4rent tank		Rollins	43c	---	30-Jun-17	
Notes:	30 day (est)						
OTHER	Trash dumpster		Rollins	43j	---	30-Jun-17	
Notes:	30 day (est)						
JARS	6-1/2" jars		KnR	38f1	---	08-Aug-17	
Notes:	Plus 1500 redress						
OTHER	Centrifuge		NOVB	38g	---	15-Aug-17	
Notes:	Centrifuge 300/day						
TOOLS	6-1/2" shock sub	1455355	KnR	38f1	---	16-Aug-17	
Notes:	Plus 1500 redress.						
			Total Daily Rental Cost $:		---		

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 34 **Report For 29-Aug-17**

Operator:	University of Utah	**Rig:**	Kenai 10	**Spud Date:**	31-Jul-17	**Daily Cost / Mud ($):**			---
Measured Depth (ft):	6177	**Drilling Days (act.):**	30	**Wellbore:**	Original Well Bore	**AFE No.**		**AFE ($)**	**Actual ($)**
Vertical Depth (ft):	6170	**Drilling Days (plan):**	58	**RKB Elevation (ft):**	21.50	---		---	---
Proposed TD (ft):	7060	**Days On Location:**	34	**Last BOP Test:**	13-Aug-17	---		---	---
Hole Made (ft) / Hrs:	154 / 16.0	**Last Casing:**	9.625 at 2,172	**LOT (lbs/gal):**	19.20	**Totals:**		---	---
Average ROP (ft/hr):	9.63	**Next Casing:**	7.000 at 6,900	**Working Interest:**		**Well Cost ($):**			---

Pers/Hrs: **Operator:** 2 / 24 **Contractor:** 12 / 144 **Service:** 3 / 6 **Other:** 0 / 0 **Total:** 17 / 174

SafetySummary: No incidents or events reported. 34 days since LTI. Conducted Crown Check, Safety Meeting.

Current Operations: 00:00 to 06:00 hrs: Magna-Glowed and Inspected BHA. Re-faced shoulders on DC's on rack. Laid down 6 joints slick HWDP.

Planned Operations: RIH with new BHA. Drill ahead as per program

Toolpusher: Cal Sutton, John Rogers

Wellsite Supervisors: Fred Wilson, Rod Bray **Tel No.:**

Operations Summary

From	To	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	16:00	16.00	6,177	3-2-2	Drilled 8-3/4" hole with mud motor from 6,023' to 6,177' with full returns. 35K WOB 40 RPM (160 RPM with motor) Rotary torque 170 psi to 220 psi. Mud cooler on. Flow line temp in 111F out 123F. (Note: Trip necessary due to mud motor plugging and stalling.)	
16:00	17:30	1.50	6,177	3-10	Survey at 6,062', Inc 1.80, Az 346.6, MRT 180F. Static 75 min. (Note: Survey was taken after short wiper to 5766'.)	
17:30	20:30	3.00	6,177	9-6-4	POH to change mud motor and bit.	X
20:30	22:00	1.50	6,177	9-6-2	POH with BHA	X
22:00	0:00	2.00	6,177	9-34-4	Laid down 3 stabs, shock sub, monel and motor. Mud motor was parted at service break.Top stab 1/4" under gauge, middle stab 1/16" under gauge and bottom stab 1/32" under gauge. Bit was 1/2" under gauge.	X

Management Summary

Drilled 8-3/4" hole with mud motor from 6,023' to 6,177'.
Survey at 6,062' = Inc 1.8 deg, Az 346.6, MRT 180F. static 75 min.
POH for mud motor and bit.

Comments

Mud cooler temp in = 112.9F Temp out = 104.7F Mud cooler on 24 hrs

Casing/Tubular Information

Type	Size (ins)	Top MD (ft)	Top TVD (ft)	Bottom MD (ft)	Bottom TVD (ft)	Hole Section	OH Diam. (ins)	Nom. Wgt. (lbs)	Nominal Grade	LOT (lbs/gal)
FULL	20.000	0	0	84		COND		53		
FULL	13.375	0		338		SURF		55	N-80	11.90
FULL	9.625	0	0	2,172	2,173	INT1	18.000	40	K-55	19.20

Mud Information

Dens.	Vis	PV	YP	Filt.	Cake	pH/ES	Solids %	Oil %	Water %	Sand %	LGS	Cl	Ca	CaCl	Gels 10s	Gels 10m	Gels 30m	Temp In	Temp Out	Mud Loss
29-Aug-17 18:00 at Depth 6,177 ft Return Flow Line, Type: Low Solids Non-Dispersed																				
8.60	35	7	14	7.6	1	8.4	4	0	96	0.2	3.8	750	120		2	3	5	114	125	0.0

Comments: Micro C = .85% or 1.7 ppb

Mud Consumables

Item Description	Qty.	Cost	Item Description	Qty.	Cost
Altavert - 25#SK	1	---	Amberguard - 5GAL	1	---
Caustic Soda - 50#SK	1	---	Lime - 50#SK	1	---
Micro C - 50#SK	40	---	Pallet Wrap - OTHER	1	---
Polyvis - 5GAL	5	---	Torkease - 5GAL	2	---
Walnut - 50#SK	3	---	XGD Xanthan Gum - 50#SK	2	---

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 34 **Report For 29-Aug-17**

Bit/BHA/Workstring Information

No Run		Make	Model	Diam	Depth In	This Run Dist	Hrs	R.O.P. Avg	Max	WOB	RPM	Torque	Mud Wt	Flow	Pump Press	J. Vel	P. Drp	HHP	JIF
9	1	HC	HRMPS4	8.750	5708	469	54	8.7	15.0	35	160	200	9	414	1395	178	244	59	328

Jets: 18 18 18 **Out:** 6177 **Grade:** **Cutter:** 8 / 8 **Dull:** LT / BC **Wear:** A **Brgs:** E **Gge:** 4 **Pull:** DTF

BHA - No. 12 - BIT, MMTR, STAB, SHOCK, STAB, DCM, STAB, 9 DC, JAR, 2 DC, XO, 9 HWDP = 737.69

Drilling Parameters

Depth (ft) From	To	ROP (ft/hr) Avg	Max	WOB (lbs) Avg	Max	RPM Avg	Max	Torque (ft lbs) Avg	Max	Flow (gals/min) Avg	Max	Pressure (psi)
6,023	6,177	9.6	15.0	35		155	160	170	220	414		1,395

Annular Velocity: **Drill Collars:** 327.3 **Drill Pipe:** 167.5

Comments: Mud cooler on

Miscellaneous Drilling Parameters

Hook Loads (lbs): **Off Bottom Rotate:** 150,000 **Pick Up:** 178,000 **Slack Off:** 140,000 **Drag Avg/Max:** 28000 / 30000

Slow Circulation Data:

Pump 1: 47 spm 365 psi

Pump 2: 48 spm 372 psi

Hours on BHA: **Since Inspection:** 205.5 **Total:** 205.5 **Jars:** 85.5

Hours on Casing/Liner: **Rotating:** 351 / **Tripping:** 110.5 / ☐ **Wear Bushing Installed**

Survey Information

Survey Type	Meas. Depth	Inc.	Azimuth	TVD	Closure	Vertical Section	Coordinates N-S	E-W	D.L.S.
MSS	6,062.0	1.80	346.6	6,055.0	128.4	13.3	N 13.3	W 127.7	0.480

Mud Log Information

Depth (ft) From	To	TVD (ft) From	To	Gas (Units) Avg	Max	at Depth	Gas Connect.	Trip	Drilling Exp.	Pore Press	Mud Dens.	Shale Dens.	ROP Shale	Sand
6,020	6,177	6,013	6,170											

Formation Name:

Lithology: 100% Granodiorite

Rig Information

Equipment Problems:

Location Condition:

Transport:

Solids Control Information

Screen Sizes:	Top	Middle 1	Middle 2	Bottom	Equipment Usage (Hrs):	
Shaker No 1:	145	145	145	145	Desilter:	22
Shaker No 2:	145	145	145	145	Centrifuge 1:	22 (Solids Removal)
Shaker No 3:	255	255	255			

Drill Pipe Inventory

DP Size	Joints	Weight	Grade	Thread	DP Size	Joints	Weight	Grade	Thread
4 TSDS	240	14.0	S-135	TSDS40	4 HWDP	30	28.0		TSDS40

Safety Information

Meetings/Drills	Time	Description
Safety	15	Held safety meeting with both crews

First Aid Treatments: **Medical Treatments:** **Lost Time Incidents:** **Days Since LTI:** 34

☐ **BOP Test** ☑ **Crownamatic Check**

Weather Information

Sky Condition: Clear **Visibility:** 10

Air Temperature: 66 degF **Bar. Pressure:** 29.91

Wind Speed/Dir: 4 / SW **Wind Gusts:**

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 34

Report For 29-Aug-17

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
FLIFT	36K forklift		AHERN	32a1	---	27-Jul-17	
Notes:	Charged as dayrate						
LIGHTS	2 X Light towers		BnL	43e	---	27-Jul-17	
OTHER	2 x Trailers		BnL	43m	---	27-Jul-17	
OTHER	Mud cleaner		NOVB	32a1	---	31-Jul-17	
Notes:	Charged as dayrate						
OTHER	Automatic driller		NOVT	38d	---	31-Jul-17	
SURVEY	Survey tools		KnR	38h	---	31-Jul-17	
Notes:	4800 per month						
OTHER	Well Head		GRG	46a	---	02-Aug-17	
MUDCOOLER	Gen for mud cooler		AHERN	38o	---	03-Aug-17	
Notes:	start 8/15						
MUDCOOLER	Mud cooler		DRLCO	38o	---	03-Aug-17	
Notes:	start 8/15						
OTHER	Mud office		Rollins	36b	---	04-Aug-17	
Notes:	60 day min. with deliver and return						
OTHER	Restrooms		Rollins	43i	---	28-Jul-17	
Notes:	2 x 15 day (est)						
OTHER	Rain4rent tank		Rollins	43c	---	30-Jun-17	
Notes:	30 day (est)						
OTHER	Trash dumpster		Rollins	43j	---	30-Jun-17	
Notes:	30 day (est)						
JARS	6-1/2" jars		KnR	38f1	---	08-Aug-17	
Notes:	Plus 1500 redress						
OTHER	Centrifuge		NOVB	38g	---	15-Aug-17	
Notes:	Centrifuge 300/day						
TOOLS	6-1/2" shock sub	1455355	KnR	38f1	---	16-Aug-17	
Notes:	Plus 1500 redress.						
			Total Daily Rental Cost $:		---		

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 35 **Report For 30-Aug-17**

Operator:	University of Utah	**Rig:**	Kenai 10	**Spud Date:**	31-Jul-17	**Daily Cost / Mud ($):**			---
Measured Depth (ft):	6232	**Drilling Days (act.):**	31	**Wellbore:**	Original Well Bore	**AFE No.**		**AFE ($)**	**Actual ($)**
Vertical Depth (ft):	6225	**Drilling Days (plan):**	58	**RKB Elevation (ft):**	21.50	---		---	---
Proposed TD (ft):	7060	**Days On Location:**	35	**Last BOP Test:**	13-Aug-17	---		---	---
Hole Made (ft) / Hrs:	55 / 5.5	**Last Casing:**	9.625 at 2,172	**LOT (lbs/gal):**	19.20	**Totals:**		---	---
Average ROP (ft/hr):	10.0	**Next Casing:**	7.000 at 6,900	**Working Interest:**		**Well Cost ($):**			---

Pers/Hrs: **Operator:** 2 / 24 **Contractor:** 12 / 144 **Service:** 3 / 36 **Other:** 0 / 0 **Total:** 17 / 204

SafetySummary: No incidents or events reported. 35 days since LTI. Conducted Crown Check, Safety Meeting.

Current Operations: 00:00 to 06:00 hrs: Drilled 8-3/4" hole from 6,232' to 6,310' with full returns.

Planned Operations: Drill ahead as per program

Toolpusher: Cal Sutton, John Rogers

Wellsite Supervisors: Fred Wilson, Rod Bray **Tel No.:**

Operations Summary

From	To	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	3:00	3.00	6,177	9-8	Magna Glowed monel and shock sub on rack. Made up new bit, mud motor and stabs.	X
3:00	10:30	7.50	6,177	9-8	Magna Glow DC's. Found shoulders on DC in need of re-facing. Laid down DC and re-faced on rack, Laid down 6 joints slick HWDP. Picked up DC's and replaced HWDP.	X
10:30	15:00	4.50	6,177	9-6-1	RIH with new BHA to 6,090'. Filled pipe and broke circulation at 2,172' & 4,162'.	X
15:00	18:30	3.50	6,177	9-6-3	Reamed from 6,090' to bottom at 6,177''. Flow line temp 117F in 130F out. Mud cooler on.	X
18:30	0:00	5.50	6,232	3-2-2	Drilled 8-3/4" hole with mud motor from 6,177' to 6,232' with full returns. 35K WOB 40 RPM (160 RPM with motor) Flow line temp 117F in 131F out. Mud cooler on.	

Management Summary

Made up new BHA. Magna Glow inspected BHA. RIH to 6,090'. Reamed from 6,090' to bottom at 6,177'.
Drilled 8-3/4" hole with mud motor from 6,177' to 6,232' with full returns.

Comments

Mud cooler temp in = 117.9F Temp out = 108.8F Mud cooler on 24 hrs

Casing/Tubular Information

Type	Size (ins)	Top MD (ft)	Top TVD (ft)	Bottom MD (ft)	Bottom TVD (ft)	Hole Section	OH Diam. (ins)	Nom. Wgt. (lbs)	Nominal Grade	LOT (lbs/gal)
FULL	20.000	0	0	84		COND		53		
FULL	13.375	0		338		SURF		55	N-80	11.90
FULL	9.625	0	0	2,172	2,173	INT1	18.000	40	K-55	19.20

Mud Information

30-Aug-17 18:00 at Depth 6,177 ft Return Flow Line, Type: Low Solids Non-Dispersed

Dens.	Vis	PV	YP	Filt.	Cake	pH/ES	Solids %	Oil %	Water %	Sand %	LGS	Cl	Ca	CaCl	Gels 10s	Gels 10m	Gels 30m	Temp In	Temp Out	Mud Loss
8.50	35	8	11	7.6	1	8.7	3	0	97	0.2	2.9	800	80		3	4	6	114	125	0.0

Comments: Micro C = .85% or 1.7 ppb

Mud Consumables

Item Description	Qty.	Cost	Item Description	Qty.	Cost
Caustic Soda - 50#SK	1	---	Polyvis - 5GAL	1	---
XGD Xanthan Gum - 50#SK	3	---			

Bit/BHA/Workstring Information

No Run	Make	Model	Diam	Depth In	This Run Dist	This Run Hrs	R.O.P. Avg	R.O.P. Max	WOB	RPM	Torque	Mud Wt	Mud Flow	Pump Press	J. Vel	P. Drp	HHP	JIF
10 1	Smith	F67ODR	8.750	6177	55	5.5	10.0	15.0	35	160	160	9	414	1340	178	241	58	325

Jets: 18 18 18 **Out:** 6552 **Grade:** **Cutter:** 4 / 5 **Dull:** FC / CT **Wear:** A **Brgs:** E **Gge:** 0 **Pull:** OTH

BHA - No. 13 - BIT, MMTR, STAB, SHOCK, STAB, DCM, STAB, 9 DC, JAR, 2 DC, XO, 9 HWDP = 732.64

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 35 **Report For 30-Aug-17**

Drilling Parameters

Depth (ft) From	Depth (ft) To	ROP (ft/hr) Avg	ROP (ft/hr) Max	WOB (lbs) Avg	WOB (lbs) Max	RPM Avg	RPM Max	Torque (ft lbs) Avg	Torque (ft lbs) Max	Flow (gals/min) Avg	Flow (gals/min) Max	Pressure (psi)
6,177	6,232	10.0	15.0	35		160		150	167	414		1,340

Annular Velocity: Drill Collars: 336.5 **Drill Pipe:** 167.5

Comments: Mud cooler Temp 117.9F in 108.8F out Mud cooler on.

Miscellaneous Drilling Parameters

Hook Loads (lbs): Off Bottom Rotate: 140,000 **Pick Up:** 157,000 **Slack Off:** 130,000 **Drag Avg/Max:** 17000 / 20000

Slow Circulation Data:

Pump 1: 47 spm 342 psi

Pump 2: 48 spm 352 psi

Hours on BHA: Since Inspection: 5.5 **Total:** 211 **Jars:** 91

Hours on Casing/Liner: Rotating: 356.5 / **Tripping:** 126.5 / ☐ **Wear Bushing Installed**

Mud Log Information

Depth (ft) From	Depth (ft) To	TVD (ft) From	TVD (ft) To	Gas (Units) Avg	Gas (Units) Max	Gas (Units) at Depth	Gas Connect.	Gas Trip	Drilling Exp.	Pore Press	Mud Dens.	Shale Dens.	ROP Shale	ROP Sand
6,177	6,232	6,170	6,225											

Formation Name:

Lithology: 100% Granodiorite

Rig Information

Equipment Problems:

Location Condition:

Transport:

Solids Control Information

Screen Sizes:	Top	Middle 1	Middle 2	Bottom	Equipment Usage (Hrs):	
Shaker No 1:	145	145	145	145	Desilter:	6
Shaker No 2:	145	145	145	145	Centrifuge 1:	6 (Solids Removal)
Shaker No 3:	255	255	255			

Drill Pipe Inventory

DP Size	Joints	Weight	Grade	Thread	DP Size	Joints	Weight	Grade	Thread
4 TSDS	240	14.0	S-135	TSDS40	4 HWDP	30	28.0		TSDS40

Safety Information

Meetings/Drills	Time	Description
Safety	15	Held safety meeting with both crews

First Aid Treatments: Medical Treatments: Lost Time Incidents: Days Since LTI: 35

☐ **BOP Test** ☑ **Crownamatic Check**

Weather Information

Sky Condition:	Partly cloudy	**Visibility:**	10
Air Temperature:	65 degF	**Bar. Pressure:**	29.92
Wind Speed/Dir:	5 / S	**Wind Gusts:**	

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
FLIFT	36K forklift		AHERN	32a1	---	27-Jul-17	
Notes:	Charged as dayrate						
LIGHTS	2 X Light towers		BnL	43e	---	27-Jul-17	
OTHER	2 x Trailers		BnL	43m	---	27-Jul-17	
OTHER	Mud cleaner		NOVB	32a1	---	31-Jul-17	
Notes:	Charged as dayrate						
OTHER	Automatic driller		NOVT	38d	---	31-Jul-17	
SURVEY	Survey tools		KnR	38h	---	31-Jul-17	

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
Notes:	4800 per month						
OTHER	Well Head		GRG	46a	---	02-Aug-17	
MUDCOOLER	Gen for mud cooler		AHERN	38o	---	03-Aug-17	
Notes:	start 8/15						
MUDCOOLER	Mud cooler		DRLCO	38o	---	03-Aug-17	
Notes:	start 8/15						
OTHER	Mud office		Rollins	36b	---	04-Aug-17	
Notes:	60 day min. with deliver and return						
OTHER	Restrooms		Rollins	43i	---	28-Jul-17	
Notes:	2 x 15 day (est)						
OTHER	Rain4rent tank		Rollins	43c	---	30-Jun-17	
Notes:	30 day (est)						
OTHER	Trash dumpster		Rollins	43j	---	30-Jun-17	
Notes:	30 day (est)						
JARS	6-1/2" jars		KnR	38f1	---	08-Aug-17	
Notes:	Plus 1500 redress						
OTHER	Centrifuge		NOVB	38g	---	15-Aug-17	
Notes:	Centrifuge 300/day						
TOOLS	6-1/2" shock sub	1455355	KnR	38f1	---	16-Aug-17	
Notes:	Plus 1500 redress.						
			Total Daily Rental Cost $:		---		

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 36 **Report For 31-Aug-17**

Operator:	University of Utah	**Rig:**	Kenai 10	**Spud Date:**	31-Jul-17	**Daily Cost / Mud ($):**			---
Measured Depth (ft):	6507	**Drilling Days (act.):**	32	**Wellbore:**	Original Well Bore	**AFE No.**		**AFE ($)**	**Actual ($)**
Vertical Depth (ft):	6500	**Drilling Days (plan):**	58	**RKB Elevation (ft):**	21.50	---		---	---
Proposed TD (ft):	7060	**Days On Location:**	36	**Last BOP Test:**	13-Aug-17	---		---	---
Hole Made (ft) / Hrs:	275 / 23.0	**Last Casing:**	9.625 at 2,172	**LOT (lbs/gal):**	19.20	**Totals:**		---	---
Average ROP (ft/hr):	11.96	**Next Casing:**	7.000 at 6,900	**Working Interest:**		**Well Cost ($):**			---

Pers/Hrs:	**Operator:**	2 / 24	**Contractor:**	12 / 144	**Service:**	3 / 36	**Other:**	0 / 0	**Total:**	17 / 204

SafetySummary: No incidents or events reported. 36 days since LTI. Conducted Crown Check, Safety Meeting.

Current Operations: 00:00 to 06:00 hrs: Drilled 8-3/4" hole with mud motor from 6,507' to 6,552' with full returns. Had increased rotary torque, rotary stalled and lost 100 psi pump pressure. Circ for survey, flow line temp 119F in 133F out. Survey at 6,478', Inc 2.5 deg, Az 334.9, MRT 170F. Static 26 min. POH to check tools.

Planned Operations: POH and check tools. Pick up directional tools if required.

Toolpusher: Philip Hoffman, Billy Harris

Wellsite Supervisors: Fred Wilson, Rod Bray **Tel No.:**

Operations Summary

From	To	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	16:30	16.50	6,427	3-2-2	Drilled 8-3/4" hole with mud motor from 6,232' to 6,427' with full returns. 35K WOB 40 RPM (160 RPM with motor). Rotary torque 130 to 155 psi. Flow line temp 119F in 130F out. Mud cooler on.	
16:30	17:00	0.50	6,427	3-5-1	Circulated for survey. Flow line temp 119F in 131F out	
17:00	17:30	0.50	6,427	3-10	Survey at 6,345' = Inc 2.4 deg, Az 350.0, MRT 168F, Static 15 min.	
17:30	0:00	6.50	6,507	3-2-2	Drilled 8-3/4" hole with mud motor from 6,427' to 6,507' with full returns. 35K WOB 40 RPM (160 RPM with motor). Rotary torque 137 to 154 psi. Flow line temp 120F in 131F out. Mud cooler on.	

Management Summary

Drilled 8-3/4" hole with mud motor from 6,232' to 6,507' with full returns.
Survey at 6,345' = Inc 2.4 deg, Az 350.0, MRT 168F, Static 15 min.

Comments

Mud cooler temp in = 119.7F Temp out = 107.5F Mud cooler on 24 hrs

Casing/Tubular Information

Type	Size (ins)	Top MD (ft)	Top TVD (ft)	Bottom MD (ft)	Bottom TVD (ft)	Hole Section	OH Diam. (ins)	Nom. Wgt. (lbs)	Nominal Grade	LOT (lbs/gal)
FULL	20.000	0	0	84		COND		53		
FULL	13.375	0		338		SURF		55	N-80	11.90
FULL	9.625	0	0	2,172	2,173	INT1	18.000	40	K-55	19.20

Mud Information

31-Aug-17 19:00 at Depth 6,434 ft Return Flow Line, Type: Low Solids Non-Dispersed

Dens.	Vis	PV	YP	Filt.	Cake	pH/ES	Solids %	Oil %	Water %	Sand %	LGS	Cl	Ca	CaCl	Gels 10s	Gels 10m	Gels 30m	Temp In	Temp Out	Mud Loss
8.40	37	7	14	7.6	1	8.7	3	0	97	0.25	2.9	800	80		3	5	6	118	130	0.0

Comments: Micro C = .85% or 1.7 ppb

Mud Consumables

Item Description	Qty.	Cost	Item Description	Qty.	Cost
Amberguard - 5GAL	1	---	Caustic Soda - 50#SK	1	---
Lime - 50#SK	1	---	Micro C - 50#SK	40	---
Pallet Wrap - OTHER	1	---	Polyvis - 5GAL	1	---
Torkease - 5GAL	1	---	Walnut - 50#SK	1	---
XGD Xanthan Gum - 50#SK	4	---			

Bit/BHA/Workstring Information

No	Run	Make	Model	Diam	Depth In	This Run Dist	This Run Hrs	R.O.P. Avg	R.O.P. Max	WOB	RPM	Torque	Mud Wt	Mud Flow	Pump Press	J. Vel	P. Drp	HHP	JIF
10	1	Smith	F67ODR	8.750	6177	330	28.5	11.6	17.0	35	160	150	8	414	1330	178	239	58	321

Jets: 18 18 18 **Out:** 6552 **Grade:** **Cutter:** 4 / 5 **Dull:** FC / CT **Wear:** A **Brgs:** E **Gge:** 0 **Pull:** OTH

BHA - No. 13 - BIT, MMTR, STAB, SHOCK, STAB, DCM, STAB, 9 DC, JAR, 2 DC, XO, 9 HWDP = 732.64

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 36 **Report For 31-Aug-17**

Drilling Parameters

Depth (ft) From	Depth (ft) To	ROP (ft/hr) Avg	ROP (ft/hr) Max	WOB (lbs) Avg	WOB (lbs) Max	RPM Avg	RPM Max	Torque (ft lbs) Avg	Torque (ft lbs) Max	Flow (gals/min) Avg	Flow (gals/min) Max	Pressure (psi)
6,232	6,507	11.6	17.0	35		160		150	160	414		1,330

Annular Velocity: Drill Collars: 336.5 **Drill Pipe:** 167.5

Comments: Mud cooler Temp 119.7F in 107.5F out Mud cooler on.

Miscellaneous Drilling Parameters

Hook Loads (lbs): Off Bottom Rotate: 145,000 **Pick Up:** 165,000 **Slack Off:** 130,000 **Drag Avg/Max:** 20000 / 22000

Slow Circulation Data:

Pump 1: 47 spm 323 psi

Pump 2: 48 spm 342 psi

Hours on BHA: Since Inspection: 28.5 **Total:** 234 **Jars:** 114

Hours on Casing/Liner: Rotating: 379.5 / **Tripping:** 126.5 / ☐ **Wear Bushing Installed**

Survey Information

Survey Type	Meas. Depth	Inc.	Azimuth	TVD	Closure	Vertical Section	Coordinates N-S	Coordinates E-W	D.L.S.
MSS	6,345.0	2.40	350.0	6,337.8	131.9	23.4	N 23.4	W 129.8	0.216

Mud Log Information

Depth (ft) From	Depth (ft) To	TVD (ft) From	TVD (ft) To	Gas (Units) Avg	Gas (Units) Max	Gas at Depth	Gas Connect.	Gas Trip	Drilling Exp.	Pore Press	Mud Dens.	Shale Dens.	ROP Shale	ROP Sand
6,230	6,270	6,223	6,263											
Formation Name:														
Lithology:	80-90% Granodiorite, 10-20% Diorite													
6,270	6,350	6,263	6,343											
Formation Name:														
Lithology:	100% Granodiorite													
6,350	6,400	6,343	6,393											
Formation Name:														
Lithology:	40-80% Granodiorite, 20-60% Granite													
6,400	6,500	6,393	6,493											
Formation Name:														
Lithology:	100% Granodiorite													

Rig Information

Equipment Problems:

Location Condition:

Transport:

Solids Control Information

Screen Sizes:	Top	Middle 1	Middle 2	Bottom	Equipment Usage (Hrs):	
Shaker No 1:	145	145	145	145	Desilter:	24
Shaker No 2:	145	145	145	145		
Shaker No 3:	255	255	255			

Drill Pipe Inventory

DP Size	Joints	Weight	Grade	Thread	DP Size	Joints	Weight	Grade	Thread
4 TSDS	240	14.0	S-135	TSDS40	4 HWDP	30	28.0		TSDS40

Safety Information

Meetings/Drills	Time	Description
Safety	15	Held safety meeting with both crews

First Aid Treatments: **Medical Treatments:** **Lost Time Incidents:** **Days Since LTI:** 36

☐ **BOP Test** ☑ **Crownamatic Check**

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 36 **Report For 31-Aug-17**

Weather Information

Sky Condition:	Clear	**Visibility:**	10
Air Temperature:	65 degF	**Bar. Pressure:**	29.98
Wind Speed/Dir:	5 / N	**Wind Gusts:**	

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
FLIFT	36K forklift		AHERN	32a1	---	27-Jul-17	
Notes:	Charged as dayrate						
LIGHTS	2 X Light towers		BnL	43e	---	27-Jul-17	
OTHER	2 x Trailers		BnL	43m	---	27-Jul-17	
OTHER	Mud cleaner		NOVB	32a1	---	31-Jul-17	
Notes:	Charged as dayrate						
OTHER	Automatic driller		NOVT	38d	---	31-Jul-17	
SURVEY	Survey tools		KnR	38h	---	31-Jul-17	
Notes:	4800 per month						
OTHER	Well Head		GRG	46a	---	02-Aug-17	
MUDCOOLER	Gen for mud cooler		AHERN	38o	---	03-Aug-17	
Notes:	start 8/15						
MUDCOOLER	Mud cooler		DRLCO	38o	---	03-Aug-17	
Notes:	start 8/15						
OTHER	Mud office		Rollins	36b	---	04-Aug-17	
Notes:	60 day min. with deliver and return						
OTHER	Restrooms		Rollins	43i	---	28-Jul-17	
Notes:	2 x 15 day (est)						
OTHER	Rain4rent tank		Rollins	43c	---	30-Jun-17	
Notes:	30 day (est)						
OTHER	Trash dumpster		Rollins	43j	---	30-Jun-17	
Notes:	30 day (est)						
JARS	6-1/2" jars		KnR	38f1	---	08-Aug-17	
Notes:	Plus 1500 redress						
OTHER	Centrifuge		NOVB	38g	---	15-Aug-17	
Notes:	Centrifuge 300/day						
TOOLS	6-1/2" shock sub	1455355	KnR	38f1	---	16-Aug-17	
Notes:	Plus 1500 redress.						
			Total Daily Rental Cost $:		---		

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 37 **Report For 01-Sep-17**

Operator:	University of Utah	**Rig:**	Kenai 10	**Spud Date:**	31-Jul-17	**Daily Cost / Mud ($):**			---
Measured Depth (ft):	6584	**Drilling Days (act.):**	33	**Wellbore:**	Original Well Bore	**AFE No.**		**AFE ($)**	**Actual ($)**
Vertical Depth (ft):	6577	**Drilling Days (plan):**	58	**RKB Elevation (ft):**	21.50	---		---	---
Proposed TD (ft):	7060	**Days On Location:**	37	**Last BOP Test:**	13-Aug-17	---		---	---
Hole Made (ft) / Hrs:	77 / 9.5	**Last Casing:**	9.625 at 2,172	**LOT (lbs/gal):**	19.20	**Totals:**		---	---
Average ROP (ft/hr):	8.11	**Next Casing:**	7.000 at 6,900	**Working Interest:**		**Well Cost ($):**			---

Pers/Hrs: **Operator:** 2 / 24 **Contractor:** 12 / 144 **Service:** 3 / 36 **Other:** 0 / 0 **Total:** 17 / 204

SafetySummary: No incidents or events reported. 37 days since LTI. Conducted Crown Check, Safety Meeting.

Current Operations: 00:00 to 06:00 hrs: Drilled 8-3/4" hole with mud motor from 6,584' to 6,648' with full returns.Flow line temp 124F in 137F out.

Planned Operations: Drill to 6800'. Survey and POH. Run PT survey.

Toolpusher: Philip Hoffman, Billy Harris

Wellsite Supervisors: Fred Wilson, Rod Bray **Tel No.:**

Operations Summary

From	To	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	3:30	3.50	6,552	3-2-2	Drilled 8-3/4" hole with mud motor from 6,507' to 6,552' with full returns. Had increased rotary torque, rotary stalled and lost 170 psi pump pressure.	
3:30	4:00	0.50	6,552	3-5-1	Circulated for survey. Flow line temp 119F in 133F out.	
4:00	4:30	0.50	6,552	3-10	Survey at 6,478', Inc 2.5 deg, Az 334.9, MRT 170F. Static 26 min.	
4:30	8:00	3.50	6,552	5-6-4	POH to check tools.	X
8:00	9:30	1.50	6,552	3-6-2	POH with BHA checking tools for washout. Found jars washed out.	X
9:30	12:00	2.50	6,552	5-34-3	Checked mud motor ok. Picked up RR #6 Sting blade PDC bit, changed bottom stab. Picked up new jars.	X
12:00	13:00	1.00	6,552	5-6-1	RIH with BHA	X
13:00	18:00	5.00	6,552	5-6-3	RIH with new BHA. Filled pipe and break circulation at 2,382' and 4,572'	X
18:00	19:30	1.50	6,552	3-3	Reamed from 6,511' to bottom at 6,552'.	X
19:30	0:00	4.50	6,584	3-2-2	Drilled 8-3/4" hole with mud motor from 6,552' to 6,584' with full returns. Performed Drill Off Tests. 35K WOB 40 RPM (188 RPM with motor). Rotary torque 132 to 151 psi. Flow line temp 121F in 135F out. Mud cooler on.	

Management Summary

Drilled 8-3/4" hole with mud motor from 6,507' to 6,552'. Had high torque and lost 170 psi pump pressure. Survey at 6,478', Inc 2.5 deg, Az 334.9, MRT 170F. Static 26 min. POH to check tools. Found jars washed out at mandrel. Changed out jars, one stabilizer and bit. RIH with new BHA. Drilled 8-3/4" hole with mud motor from 6,552' to 6,584' with full returns.

Comments

Mud cooler temp in = 119.7F Temp out = 110.4F Mud cooler on 24 hrs

Casing/Tubular Information

Type	Size (ins)	Top MD (ft)	Top TVD (ft)	Bottom MD (ft)	Bottom TVD (ft)	Hole Section	OH Diam. (ins)	Nom. Wgt. (lbs)	Nominal Grade	LOT (lbs/gal)
FULL	20.000	0	0	84		COND		53		
FULL	13.375	0		338		SURF		55	N-80	11.90
FULL	9.625	0	0	2,172	2,173	INT1	18.000	40	K-55	19.20

Mud Information

Dens.	Vis	PV	YP	Filt.	Cake	pH/ES	Solids %	Oil %	Water %	Sand %	LGS	Cl	Ca	CaCl	Gels 10s	Gels 10m	Gels 30m	Temp In	Temp Out	Mud Loss
01-Sep-17 18:00 at Depth 6,552 ft Return Flow Line, Type: Low Solids Non-Dispersed																				
8.40	38	8	15	7.8	1	8.5	3	0	97	0.25	2.9	700	80		3	6	7	110	124	0.0

Comments: Micro C = .85% or 1.7 ppb

Mud Consumables

Item Description	Qty.	Cost	Item Description	Qty.	Cost
Lime - 50#SK	1	---	Micro C - 50#SK	20	---
Polyvis - 5GAL	1	---	Torkease - 5GAL	1	---
XGD Xanthan Gum - 50#SK	1	---			

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 37 **Report For 01-Sep-17**

Bit/BHA/Workstring Information

No Run		Make	Model	Diam	Depth In	This Run Dist	Hrs	R.O.P. Avg	Max	WOB	RPM	Torque	Mud Wt	Flow	Pump Press	J. Vel	P. Drp	HHP	JIF
6	2	Smith	Z713	8.750	6552	32	4.5	7.1	12.0	35	188	140	8	512	1800	181	246	74	403

Jets: 13 13 13 13 13 13 13 **Out:** 6800 **Grade:** **Cutter:** 2 / 3 **Dull:** CT / BT **Wear:** A **Brgs:** X **Gge:** 0 **Pull:** CP

10	1	Smith	F67ODR	8.750	6177	375	32	11.7	15.0	35	160	160	8	414	1330	178	239	58	321

Jets: 18 18 18 **Out:** 6552 **Grade:** **Cutter:** 4 / 5 **Dull:** FC / CT **Wear:** A **Brgs:** E **Gge:** 0 **Pull:** OTH

BHA - No. 13 - BIT, MMTR, STAB, SHOCK, STAB, DCM, STAB, 9 DC, JAR, 2 DC, XO, 9 HWDP = 732.64

Drilling Parameters

Depth (ft) From	To	ROP (ft/hr) Avg	Max	WOB (lbs) Avg	Max	RPM Avg	Max	Torque (ft lbs) Avg	Max	Flow (gals/min) Avg	Max	Pressure (psi)
6,507	6,552	12.8	15.0	35		160		158	170	414		1,330

Annular Velocity: **Drill Collars:** 327.3 **Drill Pipe:** 167.5

Comments: Mud cooler Temp 119.7F in 107.5F out Mud cooler on.

6,552	6,584	7.0	12.0	35		188		132	144	512		1,800

Annular Velocity: **Drill Collars:** 404.8 **Drill Pipe:** 207.2

Comments: Mud cooler Temp 119.7F in 110.4F out Mud cooler on.

Miscellaneous Drilling Parameters

Hook Loads (lbs): **Off Bottom Rotate:** 145,000 **Pick Up:** 165,000 **Slack Off:** 128,000 **Drag Avg/Max:** 20000 / 25000

Slow Circulation Data:

Pump 1: 47 spm 323 psi

Pump 2: 48 spm 364 psi

Hours on BHA: **Since Inspection:** 37.5 **Total:** 243 **Jars:** 4.5

Hours on Casing/Liner: **Rotating:** 388.5 / **Tripping:** 136.5 / ☐ **Wear Bushing Installed**

Survey Information

Survey Type	Meas. Depth	Inc.	Azimuth	TVD	Closure	Vertical Section	Coordinates N-S	E-W	D.L.S.
MSS	6,478.0	2.50	334.9	6,470.7	134.6	28.8	N 28.8	W 131.5	0.490

Mud Log Information

Depth (ft) From	To	TVD (ft) From	To	Gas (Units) Avg	Max	at Depth	Gas Connect.	Trip	Drilling Exp.	Pore Press	Mud Dens.	Shale Dens.	ROP Shale	Sand
6,507	6,584	6,500	6,577											

Formation Name:

Lithology: 100% Granodiorite

Rig Information

Equipment Problems:

Location Condition:

Transport:

Solids Control Information

Screen Sizes:	Top	Middle 1	Middle 2	Bottom	Equipment Usage (Hrs):
Shaker No 1:	145	145	145	145	Desilter: 6
Shaker No 2:	145	145	145	145	Centrifuge 1: 4 (Solids Removal)
Shaker No 3:	255	255	255		

Drill Pipe Inventory

DP Size	Joints	Weight	Grade	Thread	DP Size	Joints	Weight	Grade	Thread
4 TSDS	240	14.0	S-135	TSDS40	4 HWDP	30	28.0		TSDS40

Safety Information

Meetings/Drills	Time	Description
Safety	15	Held safety meeting with both crews

First Aid Treatments: **Medical Treatments:** **Lost Time Incidents:** **Days Since LTI:** 37

☐ **BOP Test** ☑ **Crownamatic Check**

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 37 **Report For 01-Sep-17**

Weather Information

Sky Condition:	Clear	**Visibility:**	10
Air Temperature:	70 degF	**Bar. Pressure:**	29.98
Wind Speed/Dir:	10 / NNW	**Wind Gusts:**	

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
FLIFT	36K forklift		AHERN	32a1	---	27-Jul-17	
Notes:	Charged as dayrate						
LIGHTS	2 X Light towers		BnL	43e	---	27-Jul-17	
OTHER	2 x Trailers		BnL	43m	---	27-Jul-17	
OTHER	Mud cleaner		NOVB	32a1	---	31-Jul-17	
Notes:	Charged as dayrate						
OTHER	Automatic driller		NOVT	38d	---	31-Jul-17	
SURVEY	Survey tools		KnR	38h	---	31-Jul-17	
Notes:	4800 per month						
OTHER	Well Head		GRG	46a	---	02-Aug-17	
MUDCOOLER	Gen for mud cooler		AHERN	38o	---	03-Aug-17	
Notes:	start 8/15						
MUDCOOLER	Mud cooler		DRLCO	38o	---	03-Aug-17	
Notes:	start 8/15						
OTHER	Mud office		Rollins	36b	---	04-Aug-17	
Notes:	60 day min. with deliver and return						
OTHER	Restrooms		Rollins	43i	---	28-Jul-17	
Notes:	2 x 15 day (est)						
OTHER	Rain4rent tank		Rollins	43c	---	30-Jun-17	
Notes:	30 day (est)						
OTHER	Trash dumpster		Rollins	43j	---	30-Jun-17	
Notes:	30 day (est)						
JARS	6-1/2" jars		KnR	38f1	---	08-Aug-17	
Notes:	Plus 1500 redress						
OTHER	Centrifuge		NOVB	38g	---	15-Aug-17	
Notes:	Centrifuge 300/day						
TOOLS	6-1/2" shock sub	1455355	KnR	38f1	---	16-Aug-17	
Notes:	Plus 1500 redress.						
			Total Daily Rental Cost $:		---		

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 38 **Report For 02-Sep-17**

Operator:	University of Utah	**Rig:**	Kenai 10	**Spud Date:**	31-Jul-17	**Daily Cost / Mud ($):**			---
Measured Depth (ft):	6792	**Drilling Days (act.):**	34	**Wellbore:**	Original Well Bore	**AFE No.**		**AFE ($)**	**Actual ($)**
Vertical Depth (ft):	6785	**Drilling Days (plan):**	58	**RKB Elevation (ft):**	21.50	---		---	---
Proposed TD (ft):	7060	**Days On Location:**	38	**Last BOP Test:**	13-Aug-17	---		---	---
Hole Made (ft) / Hrs:	208 / 23.0	**Last Casing:**	9.625 at 2,172	**LOT (lbs/gal):**	19.20	**Totals:**		---	---
Average ROP (ft/hr):	9.04	**Next Casing:**	7.000 at 6,900	**Working Interest:**		**Well Cost ($):**			---

Pers/Hrs:	**Operator:**	2 / 24	**Contractor:**	12 / 144	**Service:**	3 / 36	**Other:**	0 / 0	**Total:**	17 / 204

SafetySummary: No incidents or events reported. 38 days since LTI. Conducted Crown Check, Safety Meeting.

Current Operations: 00:00 to 06:00 hrs: Drilled 8-3/4" hole with mud motor from 6,792' to 6,800' with full returns. Flow line temp 124F in 137F out. Circulated for survey.
Survey at 6,730' Inc 3.8 deg, Az 274.1, MRT 177F, Static 20 min. POH to run P/T survey.

Planned Operations: Run P/T surveys as directed.

Toolpusher: Philip Hoffman, Billy Harris

Wellsite Supervisors: Fred Wilson, Rod Bray **Tel No.:**

Operations Summary

From	To	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	9:00	9.00	6,679	3-2-2	Drilled 8-3/4" hole with mud motor from 6,584' to 6,679' with full returns. 35K WOB 40 RPM (182 RPM with motor). Rotary torque 155 to 166 psi. Flow line temp 122F in 135F out. Mud cooler on.	
9:00	9:30	0.50	6,679	3-5-1	Circulated for survey	
9:30	10:00	0.50	6,679	3-10	Survey at 6,056' Inc 2.6 deg, Az 287.3, MRT 177F Static 22 min.	
10:00	0:00	14.00	6,792	3-2-2	Drilled 8-3/4" hole with mud motor from 6,679' to 6,792' with full returns. 35K WOB 40 RPM (182 RPM with motor). Rotary torque 155 to 166 psi. Flow line temp 124F in 137F out. Mud cooler on.	

Management Summary

Drilled 8-3/4" hole with mud motor from 6,584' to 6,792' with full returns.
Survey at 6,605' = Inc 2.6 deg, Az 287.3, MRT 177F, Static 22 min.

Comments

Mud cooler temp in = 125.2F Temp out = 114.2F Mud cooler on 24 hrs

Casing/Tubular Information

Type	Size (ins)	Top MD (ft)	Top TVD (ft)	Bottom MD (ft)	Bottom TVD (ft)	Hole Section	OH Diam. (ins)	Nom. Wgt. (lbs)	Nominal Grade	LOT (lbs/gal)
FULL	20.000	0	0	84		COND		53		
FULL	13.375	0		338		SURF		55	N-80	11.90
FULL	9.625	0	0	2,172	2,173	INT1	18.000	40	K-55	19.20

Mud Information

02-Sep-17 18:30 at Depth 6,744 ft Return Flow Line, Type: Low Solids Non-Dispersed

Dens.	Vis	PV	YP	Filt.	Cake	pH/ES	Solids %	Oil %	Water %	Sand %	LGS	Cl	Ca	CaCl	Gels 10s	Gels 10m	Gels 30m	Temp In	Temp Out	Mud Loss
8.40	35	6	13	7.8	1	8.3	3	0	97	0.15	2.9	700	160		3	5	6	124	138	0.0

Comments: Micro C at .90% or 1.8 ppb

Mud Consumables

Item Description	Qty.	Cost	Item Description	Qty.	Cost
Amberguard - 5GAL	1	---	Caustic Soda - 50#SK	2	---
Defoam - 5GAL	2	---	Lime - 50#SK	1	---
Micro C - 50#SK	40	---	Pallet Wrap - OTHER	1	---
Polyvis - 5GAL	1	---	Saw Dust - 50#SK	1	---
Walnut - 50#SK	3	---	XGD Xanthan Gum - 50#SK	5	---

Bit/BHA/Workstring Information

No	Run	Make	Model	Diam	Depth In	This Run Dist	This Run Hrs	R.O.P. Avg	R.O.P. Max	WOB	RPM	Torque	Mud Wt	Mud Flow	Pump Press	J. Vel	P. Drp	HHP	JIF
6	2	Smith	Z713	8.750	6552	240	27.5	8.7	15.0	35	182	160	8	492	1683	174	227	65	372

Jets: 13 13 13 13 13 13 13 **Out:** 6800 **Grade:** **Cutter:** 2 / 3 **Dull:** CT / BT **Wear:** A **Brgs:** X **Gge:** 0 **Pull:** CP

BHA - No. 14 - BIT, MMTR, STAB, SHOCK, STAB, DCM, STAB, 9 DC, JAR, 2 DC, XO, 9 HWDP = 730.91

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 38 **Report For 02-Sep-17**

Drilling Parameters

Depth (ft) From	Depth (ft) To	ROP (ft/hr) Avg	ROP (ft/hr) Max	WOB (lbs) Avg	WOB (lbs) Max	RPM Avg	RPM Max	Torque (ft lbs) Avg	Torque (ft lbs) Max	Flow (gals/min) Avg	Flow (gals/min) Max	Pressure (psi)
6,584	6,792	9.0	15.0	35		182		152	167	492		1,683

Annular Velocity: Drill Collars: 389.0 **Drill Pipe:** 199.1

Comments: Mud cooler Temp 125.4F in 114.2F out Mud cooler on.

Miscellaneous Drilling Parameters

Hook Loads (lbs): Off Bottom Rotate: 147,000 **Pick Up:** 178,000 **Slack Off:** 130,000 **Drag Avg/Max:** 25000 / 31000

Slow Circulation Data:

Pump 1: 47 spm 301 psi

Pump 2: 48 spm 325 psi

Hours on BHA: Since Inspection: 60.5 **Total:** 266 **Jars:** 27.5

Hours on Casing/Liner: Rotating: 411.5 / **Tripping:** 136.5 / ☐ **Wear Bushing Installed**

Survey Information

Survey Type	Meas. Depth	Inc.	Azimuth	TVD	Closure	Vertical Section	Coordinates N-S	Coordinates E-W	D.L.S.
MSS	6,605.0	2.60	287.3	6,597.6	139.2	32.2	N 32.2	W 135.4	1.622

Mud Log Information

Depth (ft) From	Depth (ft) To	TVD (ft) From	TVD (ft) To	Gas (Units) Avg	Gas (Units) Max	Gas at Depth	Gas Connect.	Gas Trip	Drilling Exp.	Pore Press	Mud Dens.	Shale Dens.	ROP Shale	ROP Sand
6,584	6,792	6,577	6,785											

Formation Name:

Lithology: 100% Granodiorite

Rig Information

Equipment Problems:

Location Condition:

Transport:

Solids Control Information

Screen Sizes:	Top	Middle 1	Middle 2	Bottom
Shaker No 1:	145	145	145	145
Shaker No 2:	145	145	145	145
Shaker No 3:	255	255	255	

Equipment Usage (Hrs):

Desilter: 24

Centrifuge 1: 20 (Solids Removal)

Drill Pipe Inventory

DP Size	Joints	Weight	Grade	Thread	DP Size	Joints	Weight	Grade	Thread
4 TSDS	240	14.0	S-135	TSDS40	4 HWDP	30	28.0		TSDS40

Safety Information

Meetings/Drills	Time	Description
Safety	15	Held safety meeting with both crews

First Aid Treatments: **Medical Treatments:** **Lost Time Incidents:** **Days Since LTI:** 38

☐ **BOP Test** ☑ **Crownamatic Check**

Weather Information

Sky Condition: clear **Visibility:** 10

Air Temperature: 65 degF **Bar. Pressure:** 30.01

Wind Speed/Dir: 5 / SSW **Wind Gusts:**

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
FLIFT	36K forklift		AHERN	32a1	---	27-Jul-17	
Notes:	Charged as dayrate						
LIGHTS	2 X Light towers		BnL	43e	---	27-Jul-17	
OTHER	2 x Trailers		BnL	43m	---	27-Jul-17	

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 38

Report For 02-Sep-17

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
OTHER	Mud cleaner		NOVB	32a1	---	31-Jul-17	
Notes:	Charged as dayrate						
OTHER	Automatic driller		NOVT	38d	---	31-Jul-17	
SURVEY	Survey tools		KnR	38h	---	31-Jul-17	
Notes:	4800 per month						
OTHER	Well Head		GRG	46a	---	02-Aug-17	
MUDCOOLER	Gen for mud cooler		AHERN	38o	---	03-Aug-17	
Notes:	start 8/15						
MUDCOOLER	Mud cooler		DRLCO	38o	---	03-Aug-17	
Notes:	start 8/15						
OTHER	Mud office		Rollins	36b	---	04-Aug-17	
Notes:	60 day min. with deliver and return						
OTHER	Restrooms		Rollins	43i	---	28-Jul-17	
Notes:	2 x 15 day (est)						
OTHER	Rain4rent tank		Rollins	43c	---	30-Jun-17	
Notes:	30 day (est)						
OTHER	Trash dumpster		Rollins	43j	---	30-Jun-17	
Notes:	30 day (est)						
JARS	6-1/2" jars		KnR	38f1	---	08-Aug-17	
Notes:	Plus 1500 redress						
OTHER	Centrifuge		NOVB	38g	---	15-Aug-17	
Notes:	Centrifuge 300/day						
TOOLS	6-1/2" shock sub	1455355	KnR	38f1	---	16-Aug-17	
Notes:	Plus 1500 redress.						
			Total Daily Rental Cost $:		---		

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 39 **Report For 03-Sep-17**

Operator:	University of Utah	**Rig:**	Kenai 10	**Spud Date:**	31-Jul-17	**Daily Cost / Mud ($):**	---				
Measured Depth (ft):	6800	**Drilling Days (act.):**	35	**Wellbore:**	Original Well Bore	**AFE No.**		**AFE ($)**		**Actual ($)**	
Vertical Depth (ft):	6793	**Drilling Days (plan):**	58	**RKB Elevation (ft):**	21.50	---		---		---	
Proposed TD (ft):	7060	**Days On Location:**	39	**Last BOP Test:**	13-Aug-17	---		---		---	
Hole Made (ft) / Hrs:	8 / 6.5	**Last Casing:**	9.625 at 2,172	**LOT (lbs/gal):**	19.20	**Totals:**		---		---	
Average ROP (ft/hr):	1.23	**Next Casing:**	7.000 at 6,900	**Working Interest:**		**Well Cost ($):**				---	
Pers/Hrs:	**Operator:** 2 / 24	**Contractor:**	12 / 144	**Service:**	3 / 36	**Other:**	0 / 0	**Total:**	17 / 204		

SafetySummary: No incidents or events reported. 39 days since LTI. Conducted Crown Check, Safety Meeting.

Current Operations: 00:00 to 06:00 hrs: Ran P/T survey. Maximum bottom hole temp: Run #4 = 327F at 01:30 hrs (24 hrs after last circulation) Rigged down loggers. Laid down mud motor, monel, shock sub and stabs. Held safety meeting. Pick up core barrel and tools

Planned Operations: RIH with coring assembly. Core from 6,800' to 6,830' as per program

Toolpusher: Philip Hoffman, Billy Harris

Wellsite Supervisors: Fred Wilson, Rod Bray **Tel No.:**

Operations Summary

From	To	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	1:00	1.00	6,800	3-2-2	Drilled 8-3/4" hole with mud motor from 6,792' to 6,800' with full returns. 35K WOB 40 RPM (182 RPM with motor). Rotary torque 155 to 166 psi. Flow line temp 124F in 137F out. Mud cooler on.	
1:00	2:00	1.00	6,800	3-5-1	Circulated and pumped sweep for survey.	
2:00	2:30	0.50	6,800	3-10	Survey at 6,730' Inc 3.8 deg, Az 274.10, MRT 177F, Static 20 min.	
2:30	5:30	3.00	6,800	3-6-4	POH to run P/T surveys	
5:30	8:00	2.50	6,800	3-6-2	POH with BHA. Break bit and adjust mud motor. Stand back motor. Bit was full gauge. Bottom stab 1/32" under, middle stab 1/16" under, top stab 1/8" under gauge	
8:00	9:00	1.00	6,800	3-58	Held safety meeting with loggers. Rigged up lubricator. Started running survey 08:50 hrs.	
9:00	0:00	15.00	6,800	3-58	Ran P/T surveys as directed. Maximum bottom hole temp: Run #1 = 276F at 09:50 hrs Run #2 = 292F at 13:58 hrs Run #3 = 304F at 19:30 hrs	

Management Summary

Drilled 8-3/4" hole with mud motor from 6,792' to 6,800' with full returns.
Survey at 6,730' Inc 3.8 deg, Az 274.1, MRT 177F Static 20 min.
POH.
Ran P/T surveys as directed.

Comments

PT RUN	TIME	TEMP
1	09:55	276.5
2	13:54	292.4
3	19:30	304.8
4	01:35	327.4

Note: Times are approximate

Casing/Tubular Information

Type	Size (ins)	Top MD (ft)	Top TVD (ft)	Bottom MD (ft)	Bottom TVD (ft)	Hole Section	OH Diam. (ins)	Nom. Wgt. (lbs)	Nominal Grade	LOT (lbs/gal)
FULL	20.000	0	0	84		COND		53		
FULL	13.375	0		338		SURF		55	N-80	11.90
FULL	9.625	0	0	2,172	2,173	INT1	18.000	40	K-55	19.20

Mud Information

Dens.	Vis	PV	YP	Filt.	Cake	pH/ES	Solids %	Oil %	Water %	Sand %	LGS	Cl	Ca	CaCl	Gels 10s	Gels 10m	Gels 30m	Temp In	Temp Out	Mud Loss
03-Sep-17 20:30 at Depth 6,800 ft Return Flow Line, Type: Low Solids Non-Dispersed																				
8.50	38	8	17	7.8	1	8.4	3	0	97	0.2		700	120		4	6	7			0.0

Comments: Micro C at .90% or 1.8 ppb

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 39 **Report For 03-Sep-17**

Mud Consumables

Item Description	Qty.	Cost	Item Description	Qty.	Cost
Amberguard - 5GAL	1	---	Micro C - 50#SK	15	---
Polyvis - 5GAL	1	---	Walnut - 50#SK	2	---
XGD Xanthan Gum - 50#SK	2	---			

Bit/BHA/Workstring Information

No Run		Make	Model	Diam	Depth In	This Run Dist	Hrs	R.O.P. Avg	Max	WOB	RPM	Torque	Mud Wt	Flow	Pump Press	J. Vel	P. Drp	HHP	JIF
6	2	Smith	Z713	8.750	6552	248	28.5	8.7	15.0	35	182	160	8	492	1683	174	227	65	372

Jets: 13 13 13 13 13 13 13 **Out:** 6800 **Grade:** **Cutter:** 2 / 3 **Dull:** CT / BT **Wear:** A **Brgs:** X **Gge:** 0 **Pull:** CP

BHA - No. 14 - BIT, MMTR, STAB, SHOCK, STAB, DCM, STAB, 9 DC, JAR, 2 DC, XO, 9 HWDP = 730.91

Drilling Parameters

Depth (ft) From	To	ROP (ft/hr) Avg	Max	WOB (lbs) Avg	Max	RPM Avg	Max	Torque (ft lbs) Avg	Max	Flow (gals/min) Avg	Max	Pressure (psi)
6,792	6,800	8.0		35		182		160		492		1,680

Annular Velocity: **Drill Collars:** 399.8 **Drill Pipe:** 199.1

Comments: Mud cooler Temp 125.4F in 114.2F out Mud cooler on.

Miscellaneous Drilling Parameters

Hook Loads (lbs): **Off Bottom Rotate:** 147,000 **Pick Up:** 178,000 **Slack Off:** 130,000 **Drag Avg/Max:** 25000 / 31000

Slow Circulation Data:

Pump 1: 47 spm 301 psi

Pump 2: 48 spm 325 psi

Hours on BHA: **Since Inspection:** 61.5 **Total:** 267 **Jars:** 28.5

Hours on Casing/Liner: **Rotating:** 412.5 / **Tripping:** 141 / ☐ **Wear Bushing Installed**

Survey Information

Survey Type	Meas. Depth	Inc.	Azimuth	TVD	Closure	Vertical Section	Coordinates N-S	E-W	D.L.S.
MSS	6,730.0	3.80	274.1	6,722.4	146.1	33.3	N 33.3	W 142.2	1.120

Rig Information

Equipment Problems:

Location Condition:

Transport:

Solids Control Information

Screen Sizes:	Top	Middle 1	Middle 2	Bottom
Shaker No 1:	145	145	145	145
Shaker No 2:	145	145	145	145
Shaker No 3:	255	255	255	

Drill Pipe Inventory

DP Size	Joints	Weight	Grade	Thread	DP Size	Joints	Weight	Grade	Thread
4 TSDS	240	14.0	S-135	TSDS40	4 HWDP	30	28.0		TSDS40

Safety Information

Meetings/Drills	Time	Description
Safety	15	Held safety meeting with both crews

First Aid Treatments: **Medical Treatments:** **Lost Time Incidents:** **Days Since LTI:** 39

☐ **BOP Test** ☑ **Crownamatic Check**

Weather Information

Sky Condition: Clear **Visibility:** 10

Air Temperature: 69 degF **Bar. Pressure:** 29.99

Wind Speed/Dir: 8 / SW **Wind Gusts:**

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 39

Report For 03-Sep-17

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
FLIFT	36K forklift		AHERN	32a1	---	27-Jul-17	
Notes:	Charged as dayrate						
LIGHTS	2 X Light towers		BnL	43e	---	27-Jul-17	
OTHER	2 x Trailers		BnL	43m	---	27-Jul-17	
OTHER	Mud cleaner		NOVB	32a1	---	31-Jul-17	
Notes:	Charged as dayrate						
OTHER	Automatic driller		NOVT	38d	---	31-Jul-17	
SURVEY	Survey tools		KnR	38h	---	31-Jul-17	
Notes:	4800 per month						
OTHER	Well Head		GRG	46a	---	02-Aug-17	
MUDCOOLER	Gen for mud cooler		AHERN	38o	---	03-Aug-17	
Notes:	start 8/15						
MUDCOOLER	Mud cooler		DRLCO	38o	---	03-Aug-17	
Notes:	start 8/15						
OTHER	Mud office		Rollins	36b	---	04-Aug-17	
Notes:	60 day min. with deliver and return						
OTHER	Restrooms		Rollins	43i	---	28-Jul-17	
Notes:	2 x 15 day (est)						
OTHER	Rain4rent tank		Rollins	43c	---	30-Jun-17	
Notes:	30 day (est)						
OTHER	Trash dumpster		Rollins	43j	---	30-Jun-17	
Notes:	30 day (est)						
JARS	6-1/2" jars		KnR	38f1	---	08-Aug-17	
Notes:	Plus 1500 redress						
OTHER	Centrifuge		NOVB	38g	---	15-Aug-17	
Notes:	Centrifuge 300/day						
TOOLS	6-1/2" shock sub	1455355	KnR	38f1	---	16-Aug-17	
Notes:	Plus 1500 redress.						
			Total Daily Rental Cost $:		---		

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 40 **Report For 04-Sep-17**

Operator:	University of Utah	**Rig:**	Kenai 10	**Spud Date:**	31-Jul-17	**Daily Cost / Mud ($):**			---
Measured Depth (ft):	6811	**Drilling Days (act.):**	36	**Wellbore:**	Original Well Bore	**AFE No.**		**AFE ($)**	**Actual ($)**
Vertical Depth (ft):	6804	**Drilling Days (plan):**	58	**RKB Elevation (ft):**	21.50	---		---	---
Proposed TD (ft):	7060	**Days On Location:**	40	**Last BOP Test:**	13-Aug-17	---		---	---
Hole Made (ft) / Hrs:	11 / 0.0	**Last Casing:**	9.625 at 2,172	**LOT (lbs/gal):**	19.20	**Totals:**		---	---
Average ROP (ft/hr):		**Next Casing:**	7.000 at 6,900	**Working Interest:**		**Well Cost ($):**			---

Pers/Hrs: **Operator:** 2 / 24 **Contractor:** 12 / 144 **Service:** 5 / 60 **Other:** 0 / 0 **Total:** 19 / 228

SafetySummary: No incidents or events reported. 40 days since LTI. Conducted Crown Check, Safety Meeting.

Current Operations: 00:00 to 06:00 hrs: Cored from 6,811' to 6,812.9'. Core became jammed, unable to make progress.
POH and found the pin on bottom of top outer barrel had broken off leaving the core bit a stabilizer and the bottom section of the outer barrel in the hole.
Recovered 8.2' of core from the inner core tube.

Planned Operations: POH recover core if possible.
Lay down coring tools.
Make up directional assembly and RIH to ream core run.

Toolpusher: Philip Hoffman, Billy Harris

Wellsite Supervisors: Fred Wilson, Rod Bray **Tel No.:**

Operations Summary

From	To	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	3:00	3.00	6,800	3-58	Ran P/T survey. Maximum bottom hole temp: Run #4 = 327F at 01:30 hrs (24 hrs after last circulation) Rigged down loggers.	
3:00	8:30	5.50	6,800	10-343	Held safety meeting. Picked up coring tools, made up outer core barrels and installed inner core tubes. Picked up coring jars.	
8:30	9:30	1.00	6,800	10-6-1	RIH with DC.	
9:30	15:00	5.50	6,800	10-6-3	RIH with coring assembly. Filled pipe and circulated at 2,071' and 4,549'.	
15:00	16:00	1.00	6,800	10-6-3	Washed down from 6,709' to bottom at 6,800'. Picked up pup joints to space out.	
16:00	0:00	8.00	6,811	10-4	Cored from 6,800' to 6,811' with full returns. 14K WOB 90 RPM Torque 170/280 psi Flow line temp 101F in 121F out. Mud cooler on.	

Management Summary

Ran P/T survey. Maximum bottom hole temp: Run #4 = 327F at 01:30 hrs (24 hrs after last circulation) Made up coring assembly RIH.
Cored from 6,800 to 6,811' with full returns.

Casing/Tubular Information

Type	Size (ins)	Top MD (ft)	Top TVD (ft)	Bottom MD (ft)	Bottom TVD (ft)	Hole Section	OH Diam. (ins)	Nom. Wgt. (lbs)	Nominal Grade	LOT (lbs/gal)
FULL	20.000	0	0	84		COND		53		
FULL	13.375	0		338		SURF		55	N-80	11.90
FULL	9.625	0	0	2,172	2,173	INT1	18.000	40	K-55	19.20

Mud Information

04-Sep-17 18:00 at Depth 6,802 ft Return Flow Line, Type: Low Solids Non-Dispersed

Dens.	Vis	PV	YP	Filt.	Cake	pH/ES	Solids %	Oil %	Water %	Sand %	LGS	Cl	Ca	CaCl	Gels 10s	Gels 10m	Gels 30m	Temp In	Temp Out	Mud Loss
8.40	36	7	14	7.8	1	8.2	3	0	97	0.2	2.9	700	180		3	5	6	103	122	0.0

Comments: Micro C at .85% or 1.7 ppb

Mud Consumables

Item Description	Qty.	Cost	Item Description	Qty.	Cost
Amberguard - 5GAL	1	---			

Bit/BHA/Workstring Information

No	Run	Make	Model	Diam	Depth In	This Run Dist	This Run Hrs	R.O.P. Avg	R.O.P. Max	WOB	RPM	Torque	Wt	Mud Flow	Pump Press	J. Vel	P. Drp	HHP	JIF
11	1	CORPR	Diamond	8.500	6800	11	8	1.4	2.0	14	85	210	8	209	500				

Jets: **Out:** 6812.9 **Grade:** **Cutter:** 2 / 2 **Dull:** NO / NO **Wear:** A **Brgs:** X **Gge:** 0 **Pull:** TW

BHA - No. 15 - CORBIT, STAB, CORE, STAB, CORE, STAB, TOPHD, CIRC, FLOAT, XO, JAR, XO, 9 DC, XO = 356.47

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 40 **Report For 04-Sep-17**

Drilling Parameters

Depth (ft) From	Depth (ft) To	ROP (ft/hr) Avg	ROP (ft/hr) Max	WOB (lbs) Avg	WOB (lbs) Max	RPM Avg	RPM Max	Torque (ft lbs) Avg	Torque (ft lbs) Max	Flow (gals/min) Avg	Flow (gals/min) Max	Pressure (psi)
6,800	6,811	1.3	2.0	12	20	80	90	170	280	209		500

Annular Velocity: **Drill Collars:** 191.9 **Drill Pipe:** 70.9

Comments: Flow line temp 101F in 121F out. Mud cooler on.

Miscellaneous Drilling Parameters

Hook Loads (lbs): **Off Bottom Rotate:** 137,000 **Pick Up:** 152,000 **Slack Off:** 125,000 **Drag Avg/Max:** 150000 / 160000

Slow Circulation Data:

Pump 2: 48 spm 500 psi

Hours on BHA: **Since Inspection:** 69.5 **Total:** 275 **Jars:** 28.5

Hours on Casing/Liner: **Rotating:** 420.5 / **Tripping:** 147.5 / ☐ **Wear Bushing Installed**

Rig Information

Equipment Problems:

Location Condition:

Transport:

Solids Control Information

Screen Sizes:	Top	Middle 1	Middle 2	Bottom	Equipment Usage (Hrs):	
Shaker No 1:	145	145	145	145	Desilter:	8
Shaker No 2:	145	145	145	145	Centrifuge 1:	8 (Solids Removal)
Shaker No 3:	255	255	255			

Drill Pipe Inventory

DP Size	Joints	Weight	Grade	Thread	DP Size	Joints	Weight	Grade	Thread
4 TSDS	240	14.0	S-135	TSDS40	4 HWDP	30	28.0		TSDS40

Safety Information

Meetings/Drills	Time	Description
Safety	15	Held safety meeting with both crews

First Aid Treatments: **Medical Treatments:** **Lost Time Incidents:** **Days Since LTI:** 40

☐ **BOP Test** ☑ **Crownamatic Check**

Weather Information

Sky Condition:	Clear	**Visibility:**	10
Air Temperature:	70 degF	**Bar. Pressure:**	29.93
Wind Speed/Dir:	4 / N	**Wind Gusts:**	

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
FLIFT	36K forklift		AHERN	32a1	---	27-Jul-17	
Notes:	Charged as dayrate						
LIGHTS	2 X Light towers		BnL	43e	---	27-Jul-17	
OTHER	2 x Trailers		BnL	43m	---	27-Jul-17	
OTHER	Mud cleaner		NOVB	32a1	---	31-Jul-17	
Notes:	Charged as dayrate						
OTHER	Automatic driller		NOVT	38d	---	31-Jul-17	
SURVEY	Survey tools		KnR	38h	---	31-Jul-17	
Notes:	4800 per month						
OTHER	Well Head		GRG	46a	---	02-Aug-17	
MUDCOOLER	Gen for mud cooler		AHERN	38o	---	03-Aug-17	
Notes:	start 8/15						
MUDCOOLER	Mud cooler		DRLCO	38o	---	03-Aug-17	
Notes:	start 8/15						
OTHER	Mud office		Rollins	36b	---	04-Aug-17	

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
Notes:	60 day min. with deliver and return						
OTHER	Restrooms		Rollins	43i	---	28-Jul-17	
Notes:	2 x 15 day (est)						
OTHER	Rain4rent tank		Rollins	43c	---	30-Jun-17	
Notes:	30 day (est)						
OTHER	Trash dumpster		Rollins	43j	---	30-Jun-17	
Notes:	30 day (est)						
JARS	6-1/2" jars		KnR	38f1	---	08-Aug-17	
Notes:	Plus 1500 redress						
OTHER	Centrifuge		NOVB	38g	---	15-Aug-17	
Notes:	Centrifuge 300/day						
TOOLS	6-1/2" shock sub	1455355	KnR	38f1	---	16-Aug-17	
Notes:	Plus 1500 redress.						
			Total Daily Rental Cost $:		---		

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 41 **Report For 05-Sep-17**

Operator:	University of Utah	**Rig:**	Kenai 10	**Spud Date:**	31-Jul-17	**Daily Cost / Mud ($):**			---
Measured Depth (ft):	6812	**Drilling Days (act.):**	37	**Wellbore:**	Original Well Bore	**AFE No.**		**AFE ($)**	**Actual ($)**
Vertical Depth (ft):	6805	**Drilling Days (plan):**	58	**RKB Elevation (ft):**	21.50	---		---	---
Proposed TD (ft):	7060	**Days On Location:**	41	**Last BOP Test:**	13-Aug-17	---		---	---
Hole Made (ft) / Hrs:	1 / 0.0	**Last Casing:**	9.625 at 2,172	**LOT (lbs/gal):**	19.20	**Totals:**		---	---
Average ROP (ft/hr):		**Next Casing:**	7.000 at 6,900	**Working Interest:**		**Well Cost ($):**			---

Pers/Hrs:	**Operator:**	2 / 24	**Contractor:**	12 / 144	**Service:**	5 / 60	**Other:**	0 / 0	**Total:**	19 / 228

SafetySummary: No incidents or events reported. 41 days since LTI. Conducted Crown Check, Safety Meeting.

Current Operations: 00:00 to 06:00 hrs: RIH with Spear on fishing BHA. Work spear into fish at 6,791' and engage fish. Pulled fish off bottom with 20K over pull. Had 20 to 40K drag from 6,812 to 6,800' bit depth. POH with fishing tools.

Planned Operations: POH with fishing tools. If fish is recovered, RIH with directional BHA.

Toolpusher: Philip Hoffman, Billy Harris

Wellsite Supervisors: Fred Wilson, Rod Bray **Tel No.:**

Operations Summary

From	To	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	2:00	2.00	6,812	10-4	Cored from 6,811' to 6,812.9'. Core became jammed, unable to make progress. No over pull picking up.	
2:00	5:30	3.50	6,812	10-6-4	POH with coring assembly	X
5:30	7:00	1.50	6,812	10-6-2	POH with DC. Found outer core barrel parted at pin of middle stab. Length left in hole 21.30'. Top of fish @ 6791.6'.	X
7:00	8:00	1.00	6,812	10-344	Laid down coring tools. Recovered 8.2 feet of core from inner core tube.	X
8:00	8:30	0.50	6,812	10-99	Service rig. (not down time)	
8:30	22:30	14.00	6,812	10-32	Wait on fishing tools.	X
22:30	0:00	1.50	6,812	10-343	Unload and measure fishing tools. Made up Spear, bumper sub and fishing jars.	X

Management Summary

Cored from 6,811' to 6,812.9'. Core became jammed, unable to make progress. POH. Found core barrel parted. Recovered 8.2 feet of core. Wait on fishing tools. Made up fishing tools.

Casing/Tubular Information

Type	Size (ins)	Top MD (ft)	Top TVD (ft)	Bottom MD (ft)	Bottom TVD (ft)	Hole Section	OH Diam. (ins)	Nom. Wgt. (lbs)	Nominal Grade	LOT (lbs/gal)
FULL	20.000	0	0	84		COND		53		
FULL	13.375	0		338		SURF		55	N-80	11.90
FULL	9.625	0	0	2,172	2,173	INT1	18.000	40	K-55	19.20

Mud Information

05-Sep-17 18:00 at Depth 6,812 ft Return Flow Line, Type: Low Solids Non-Dispersed

Dens.	Vis	PV	YP	Filt.	Cake	pH/ES	Solids %	Oil %	Water %	Sand %	LGS	Cl	Ca	CaCl	Gels 10s	Gels 10m	Gels 30m	Temp In	Temp Out	Mud Loss
8.40	36	7	14	7.8	1	8.2	3	0	97	0.2	2.9	700	180		3	5	6			0.0

Comments: Micro C at .85% or 1,7 ppb

Mud Consumables

Item Description	Qty.	Cost	Item Description	Qty.	Cost
Caustic Soda - 50#SK	1	---	Micro C - 50#SK	5	---
Saw Dust - 50#SK	2	---	Torkease - 5GAL	1	---

Bit/BHA/Workstring Information

No	Run	Make	Model	Diam	Depth In	This Run Dist	This Run Hrs	R.O.P. Avg	R.O.P. Max	WOB	RPM	Torque	Mud Wt	Mud Flow	Pump Press	J. Vel	P. Drp	HHP	JIF
11	1	CORPR	Diamond	8.500	6800	13	10	1.3	2.0	14	85	190	8	209	500				

Jets: **Out:** 6812.9 **Grade:** **Cutter:** 2 / 2 **Dull:** NO / NO **Wear:** A **Brgs:** X **Gge:** 0 **Pull:** TW

BHA - No. 16 - SPEAR, EXT, 2 XO, BMPSUB, JAR, 9 DC, XO, 9 HWDP = 587.30

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 41 **Report For 05-Sep-17**

Drilling Parameters

Depth (ft) From	Depth (ft) To	ROP (ft/hr) Avg	ROP (ft/hr) Max	WOB (lbs) Avg	WOB (lbs) Max	RPM Avg	RPM Max	Torque (ft lbs) Avg	Torque (ft lbs) Max	Flow (gals/min) Avg	Flow (gals/min) Max	Pressure (psi)
6,811	6,812	0.5		14		70	90	170	280	209		500

Annular Velocity: Drill Collars: 191.9 **Drill Pipe:** 91.1

Comments: Coring. Mud cooler on.

Miscellaneous Drilling Parameters

Hook Loads (lbs): Off Bottom Rotate: 137,000 **Pick Up:** 152,000 **Slack Off:** 125,000 **Drag Avg/Max:** 15000 / 16000

Hours on BHA: Since Inspection: 71.5 **Total:** 277 **Jars:** 30.5

Hours on Casing/Liner: Rotating: 422.5 / **Tripping:** 153.5 / ☐ **Wear Bushing Installed**

Rig Information

Equipment Problems:

Location Condition:

Transport:

Solids Control Information

Screen Sizes:	Top	Middle 1	Middle 2	Bottom
Shaker No 1:	145	145	145	145
Shaker No 2:	145	145	145	145
Shaker No 3:	255	255	255	

Drill Pipe Inventory

DP Size	Joints	Weight	Grade	Thread	DP Size	Joints	Weight	Grade	Thread
4 TSDS	240	14.0	S-135	TSDS40	4 HWDP	30	28.0		TSDS40

Safety Information

Meetings/Drills	Time	Description
Safety	15	Held safety meeting with both crews

First Aid Treatments: Medical Treatments: Lost Time Incidents: Days Since LTI: 41

☐ **BOP Test** ☑ **Crownamatic Check**

Weather Information

Sky Condition: Clear **Visibility:** 10

Air Temperature: 70 degF **Bar. Pressure:** 29.93

Wind Speed/Dir: 13 / SSW **Wind Gusts:**

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
FLIFT	36K forklift		AHERN	32a1	---	27-Jul-17	
Notes:	Charged as dayrate						
LIGHTS	2 X Light towers		BnL	43e	---	27-Jul-17	
OTHER	2 x Trailers		BnL	43m	---	27-Jul-17	
OTHER	Mud cleaner		NOVB	32a1	---	31-Jul-17	
Notes:	Charged as dayrate						
OTHER	Automatic driller		NOVT	38d	---	31-Jul-17	
SURVEY	Survey tools		KnR	38h	---	31-Jul-17	
Notes:	4800 per month						
OTHER	Well Head		GRG	46a	---	02-Aug-17	
MUDCOOLER	Gen for mud cooler		AHERN	38o	---	03-Aug-17	
Notes:	start 8/15						
MUDCOOLER	Mud cooler		DRLCO	38o	---	03-Aug-17	
Notes:	start 8/15						
OTHER	Mud office		Rollins	36b	---	04-Aug-17	
Notes:	60 day min. with deliver and return						
OTHER	Restrooms		Rollins	43i	---	28-Jul-17	

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 41

Report For 05-Sep-17

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
Notes:	2 x 15 day (est)						
OTHER	Rain4rent tank		Rollins	43c	---	30-Jun-17	
Notes:	30 day (est)						
OTHER	Trash dumpster		Rollins	43j	---	30-Jun-17	
Notes:	30 day (est)						
JARS	6-1/2" jars		KnR	38f1	---	08-Aug-17	
Notes:	Plus 1500 redress						
OTHER	Centrifuge		NOVB	38g	---	15-Aug-17	
Notes:	Centrifuge 300/day						
TOOLS	6-1/2" shock sub	1455355	KnR	38f1	---	16-Aug-17	
Notes:	Plus 1500 redress.						
			Total Daily Rental Cost $:		---		

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 42 **Report For 06-Sep-17**

Operator:	University of Utah	**Rig:**	Kenai 10	**Spud Date:**	31-Jul-17	**Daily Cost / Mud ($):**			---
Measured Depth (ft):	6812	**Drilling Days (act.):**	38	**Wellbore:**	Original Well Bore	**AFE No.**		**AFE ($)**	**Actual ($)**
Vertical Depth (ft):	6805	**Drilling Days (plan):**	58	**RKB Elevation (ft):**	21.50	---		---	---
Proposed TD (ft):	7060	**Days On Location:**	42	**Last BOP Test:**	13-Aug-17	---		---	---
Hole Made (ft) / Hrs:	0 / 9.0	**Last Casing:**	9.625 at 2,172	**LOT (lbs/gal):**	19.20	**Totals:**		---	---
Average ROP (ft/hr):	0.0	**Next Casing:**	7.000 at 6,900	**Working Interest:**		**Well Cost ($):**			---

Pers/Hrs:	**Operator:**	2 / 24	**Contractor:**	12 / 144	**Service:**	3 / 36	**Other:**	0 / 0	**Total:**	17 / 204

SafetySummary: No incidents or events reported. 42 days since LTI. Conducted Safety Meeting.

Current Operations: 00:00 to 06:00 hrs: Reamed from 6,766 to bottom at 6,812'. Directionally drilled 8-3/4" hole from 6,812' to 6,830'. Flow line temp 115F in 134F out. Mud cooler on.

Planned Operations: Drill ahead with directional assembly lowering inclination.

Toolpusher: Philip Hoffman, Billy Harris

Wellsite Supervisors: Fred Wilson, Rod Bray **Tel No.:**

Operations Summary

From	To	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	1:00	1.00	6,812	7-6-1	RIH with DC.	X
1:00	4:30	3.50	6,812	7-6-3	RIH with fishing tools.	X
4:30	5:00	0.50	6,812	7-19	Worked over and engaged fish at 6,791'. Pulled fish off bottom with 20K over pull. Had 20 to 40K drag from 6,812 to 6,800' bit depth.	X
5:00	8:00	3.00	6,812	7-6-4	POH with fish.	X
8:00	9:00	1.00	6,812	7-6-2	POH with DC.	X
9:00	11:00	2.00	6,812	7-34-4	Made complete recovery of core barrel. Laid down fish and fishing tools. Recovered additional 26" core.	X
11:00	14:00	3.00	6,812	3-34-3	Measured and picked up directional BHA. Picked up new shock sub. Surface tested MWD.	
14:00	15:00	1.00	6,812	3-6-3	RIH with directional BHA to 2192'	
15:00	16:00	1.00	6,812	3-5-1	Circulated and tested MWD. Cooled tools.	
16:00	0:00	8.00	6,812	3-6-3	RIH with directional BHA. Circulated and cooled tools at 3,145', 4,098', 5,007', 5,916' and 6.766'	

Management Summary

RIH with fishing tools. Engaged fish at 6,791'. POH with fish. Laid down fish and fishing tools. Recovered additional 26" core. Made up directional BHA. Staged in the hole circulating to cool MWD as required.

Casing/Tubular Information

Type	Size (ins)	Top MD (ft)	Top TVD (ft)	Bottom MD (ft)	Bottom TVD (ft)	Hole Section	OH Diam. (ins)	Nom. Wgt. (lbs)	Nominal Grade	LOT (lbs/gal)
FULL	20.000	0	0	84		COND		53		
FULL	13.375	0		338		SURF		55	N-80	11.90
FULL	9.625	0	0	2,172	2,173	INT1	18.000	40	K-55	19.20

Mud Information

Dens.	Vis	PV	YP	Filt.	Cake	pH/ES	Solids %	Oil %	Water %	Sand %	LGS	Cl	Ca	CaCl	Gels 10s	Gels 10m	Gels 30m	Temp In	Temp Out	Mud Loss
06-Sep-17 18:30 at Depth 6,813 ft Return Flow Line, Type: Low Solids Non-Dispersed																				
8.40	38	9	14	78	1	8.1	3	0	97	0.2	2.9	700	200		3	5	6			0.0

Comments: Micro C at .85% or 1.7 ppb

Mud Consumables

Item Description	Qty.	Cost	Item Description	Qty.	Cost
Pallet Wrap - OTHER	2	---	Saw Dust - 50#SK	4	---

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 42 **Report For 06-Sep-17**

Bit/BHA/Workstring Information

No Run		Make	Model	Diam	Depth In	This Run Dist	Hrs	R.O.P. Avg	Max	WOB	RPM	Torque	Mud Wt	Flow	Pump Press	J. Vel	P. Drp	HHP	JIF
11	1	CORPR	Diamond	8.500	6800	13	10	1.3	2.0	14	85	190	8	209	500				
Jets:					**Out:** 6812.9		**Grade:**	**Cutter:**	2 / 2	**Dull:**	NO / NO		**Wear:** A		**Brgs:** X	**Gge:**	0	**Pull:** TW	
12	1	HC	MXBPS6E	8.750	6812														
Jets: 18 18 18					**Out:** 7200		**Grade:**	**Cutter:**	6 / 7	**Dull:**	FC / CT		**Wear:** A		**Brgs:** E	**Gge:**	0	**Pull:** HR	

BHA - No. 17 - BIT, MMTR, STAB, SHOCK, XO, MWD, 2 DCM, XO, 9 DC, JAR, 2 DC, XO, 9 HWDP = 763.16

Miscellaneous Drilling Parameters

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

Hours on BHA: **Since Inspection:** 71.5 **Total:** 277 **Jars:** 30.5

Hours on Casing/Liner: **Rotating:** 422.5 / **Tripping:** 172.5 / ☐ **Wear Bushing Installed**

Rig Information

Equipment Problems:

Location Condition:

Transport:

Solids Control Information

Screen Sizes:	Top	Middle 1	Middle 2	Bottom
Shaker No 1:	145	145	145	145
Shaker No 2:	145	145	145	145
Shaker No 3:	255	255	255	

Drill Pipe Inventory

DP Size	Joints	Weight	Grade	Thread	DP Size	Joints	Weight	Grade	Thread
4 TSDS	240	14.0	S-135	TSDS40	4 HWDP	30	28.0		TSDS40

Safety Information

Meetings/Drills	Time	Description
Safety	15	Held safety meeting with both crews

First Aid Treatments: **Medical Treatments:** **Lost Time Incidents:** **Days Since LTI:** 42

☐ **BOP Test** ☐ **Crownamatic Check**

Weather Information

Sky Condition:	Clear	**Visibility:**	10
Air Temperature:	70 degF	**Bar. Pressure:**	29.91
Wind Speed/Dir:	12 / SSW	**Wind Gusts:**	

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
FLIFT	36K forklift		AHERN	32a1	---	27-Jul-17	
Notes:	Charged as dayrate						
LIGHTS	2 X Light towers		BnL	43e	---	27-Jul-17	
OTHER	2 x Trailers		BnL	43m	---	27-Jul-17	
OTHER	Mud cleaner		NOVB	32a1	---	31-Jul-17	
Notes:	Charged as dayrate						
OTHER	Automatic driller		NOVT	38d	---	31-Jul-17	
SURVEY	Survey tools		KnR	38h	---	31-Jul-17	
Notes:	4800 per month						
OTHER	Well Head		GRG	46a	---	02-Aug-17	
MUDCOOLER	Gen for mud cooler		AHERN	38o	---	03-Aug-17	
Notes:	start 8/15						
MUDCOOLER	Mud cooler		DRLCO	38o	---	03-Aug-17	
Notes:	start 8/15						
OTHER	Mud office		Rollins	36b	---	04-Aug-17	

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
Notes:	60 day min. with deliver and return						
OTHER	Restrooms		Rollins	43i	---	28-Jul-17	
Notes:	2 x 15 day (est)						
OTHER	Rain4rent tank		Rollins	43c	---	30-Jun-17	
Notes:	30 day (est)						
OTHER	Trash dumpster		Rollins	43j	---	30-Jun-17	
Notes:	30 day (est)						
JARS	6-1/2" jars		KnR	38f1	---	08-Aug-17	
Notes:	Plus 1500 redress						
OTHER	Centrifuge		NOVB	38g	---	15-Aug-17	
Notes:	Centrifuge 300/day						
TOOLS	6-1/2" shock sub	1455355	KnR	38f1	---	16-Aug-17	
Notes:	Plus 1500 redress.						
			Total Daily Rental Cost $:		---		

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 43 **Report For 07-Sep-17**

Operator:	University of Utah	**Rig:**	Kenai 10	**Spud Date:**	31-Jul-17	**Daily Cost / Mud ($):**			---
Measured Depth (ft):	7008	**Drilling Days (act.):**	39	**Wellbore:**	Original Well Bore	**AFE No.**		**AFE ($)**	**Actual ($)**
Vertical Depth (ft):	7000	**Drilling Days (plan):**	58	**RKB Elevation (ft):**	21.50	---		---	---
Proposed TD (ft):	7060	**Days On Location:**	43	**Last BOP Test:**	13-Aug-17	---		---	---
Hole Made (ft) / Hrs:	196 / 19.5	**Last Casing:**	9.625 at 2,172	**LOT (lbs/gal):**	19.20	**Totals:**		---	---
Average ROP (ft/hr):	10.05	**Next Casing:**	7.000 at 6,900	**Working Interest:**		**Well Cost ($):**			---

Pers/Hrs:	**Operator:**	2 / 24	**Contractor:**	12 / 144	**Service:**	3 / 36	**Other:**	0 / 0	**Total:**	17 / 204

SafetySummary: No incidents or events reported. 43 days since LTI. Conducted Crown Check, Safety Meeting.

Current Operations: 00:00 to 06:00 hrs: Directionally drilled 8-3/4" hole, rotating and sliding from 7,008' to 7,065' with full returns.

Planned Operations: Drill ahead as per program.

Toolpusher: Cal Sutton, John Rogers

Wellsite Supervisors: Fred Wilson, Rod Bray **Tel No.:**

Operations Summary

From	To	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	4:30	4.50	6,812	3-3	Reamed from 6,766' to 6,812'. Used caution near bottom to avoid bit damage on core stump.	
4:30	5:30	1.00	6,823	3-2-2	Rotate from 6,812' to 6,823' with full returns. 25K WOB 160 RPM, ROP 11' hr,	
5:30	6:30	1.00	6,831	3-2-3	Slide from 6,823' to 6,831'. 35K WOB, 124 RPM, ROP 8' per hr. average	
6:30	10:00	3.50	6,870	3-2-2	Rotate from 6,831' to 6,870' with full returns. 25K WOB, 160 RPM, ROP 11' hr.	
10:00	11:00	1.00	6,880	3-2-3	Slide from 6,870' to 6,880'. 35K WOB, 124 RPM, ROP 10' per hr average	
11:00	13:00	2.00	6,902	3-2-2	Rotate from 6,880' to 6,902' with full returns. 25K WOB, 160 RPM, ROP 11' hr.	
13:00	14:30	1.50	6,912	3-2-3	Slide from 6,902' to 6,912' 35K WOB, 124 RPM, ROP 7' per hr average	
14:30	17:30	3.00	6,941	3-2-2	Rotate from 6,912' to 6,941' with full returns. 25K WOB, 160 RPM, ROP 10' hr	
17:30	19:00	1.50	6,952	3-2-3	Slide from 6,941' to 6,952' 35K WOB, 124 RPM, ROP 7' per hr average	
19:00	0:00	5.00	7,008	3-2-2	Rotate from 6,952' to 7,008' with full returns. 25K WOB, 160 RPM, ROP 11' hr. Rotary torque 120 to 134 psi.	

Management Summary

Reamed from 6,766' to bottom at 6,812'. Directionally drilled 8-3/4" hole, rotating and sliding from 6,812' to 7,008' with full returns.

Comments

Flow line temp 117F in, 134F out
Mud cooler temp 119.3F in 109.1 out , 10.2F drop.

Casing/Tubular Information

Type	Size (ins)	Top MD (ft)	Top TVD (ft)	Bottom MD (ft)	Bottom TVD (ft)	Hole Section	OH Diam. (ins)	Nom. Wgt. (lbs)	Nominal Grade	LOT (lbs/gal)
FULL	20.000	0	0	84		COND		53		
FULL	13.375	0		338		SURF		55	N-80	11.90
FULL	9.625	0	0	2,172	2,173	INT1	18.000	40	K-55	19.20

Mud Information

Dens.	Vis	PV	YP	Filt.	Cake	pH/ES	Solids %	Oil %	Water %	Sand %	LGS	Cl	Ca	CaCl	Gels 10s	Gels 10m	Gels 30m	Temp In	Temp Out	Mud Loss
07-Sep-17 18:30 at Depth 6,937 ft Return Flow Line, Type: Low Solids Non-Dispersed																				
8.50	35	6	11	8.2	1	8.3	4	0	96	0.25	2.9	650	240		2	4	5	116	132	0.0

Comments: Micro C at .9% or 1.8 ppb

Mud Consumables

Item Description	Qty.	Cost	Item Description	Qty.	Cost
Amberguard - 5GAL	2	---	Caustic Soda - 50#SK	1	---
Defoam - 5GAL	3	---	Lime - 50#SK	1	---
Micro C - 50#SK	40	---	Pallet Wrap - OTHER	2	---
Polyvis - 5GAL	1	---	Saw Dust - 50#SK	2	---
Walnut - 50#SK	1	---	XGD Xanthan Gum - 50#SK	8	---

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 43 **Report For 07-Sep-17**

Bit/BHA/Workstring Information

No Run		Make	Model	Diam	Depth In	This Run Dist	Hrs	R.O.P. Avg	Max	WOB	RPM	Torque	Mud Wt	Flow	Pump Press	J. Vel	P. Drp	HHP	JIF
12	1	HC	MXBPS68	8.750	6812	196	19.5	10.1	16.0	30	124	127	9	430	1560	185	260	65	350

Jets: 18 18 18 **Out:** 7200 **Grade:** **Cutter:** 6 / 7 **Dull:** FC / CT **Wear:** A **Brgs:** E **Gge:** 0 **Pull:** HR

BHA - No. 17 - BIT, MMTR, STAB, SHOCK, XO, MWD, 2 DCM, XO, 9 DC, JAR, 2 DC, XO, 9 HWDP = 763.16

Drilling Parameters

Depth (ft) From	To	ROP (ft/hr) Avg	Max	WOB (lbs) Avg	Max	RPM Avg	Max	Torque (ft lbs) Avg	Max	Flow (gals/min) Avg	Max	Pressure (psi)
6,812	7,008	10.0	16.0	25	35	124	160	120	137	430		1,560

Annular Velocity: **Drill Collars:** 349.5 **Drill Pipe:** 174.0

Comments: Flow line temp 117F in, 134F out Mud cooler temp 119.3F in 109.1 out ,

Miscellaneous Drilling Parameters

Hook Loads (lbs): **Off Bottom Rotate:** 152,000 **Pick Up:** 165,000 **Slack Off:** 140,000 **Drag Avg/Max:** 13000 / 15000

Slow Circulation Data:

Pump 1: 46 spm 492 psi

Pump 2: 47 spm 448 psi

Hours on BHA: **Since Inspection:** 95.5 **Total:** 301 **Jars:** 54.5

Hours on Casing/Liner: **Rotating:** 446.5 / **Tripping:** 172.5 / ☐ **Wear Bushing Installed**

Survey Information

Survey Type	Meas. Depth	Inc.	Azimuth	TVD	Closure	Vertical Section	Coordinates N-S	E-W	D.L.S.
MWD	6,767.0	3.87	279.5	6,759.3	148.5	33.6	N 33.6	W 144.7	0.999
MWD	6,798.0	4.18	276.4	6,790.2	150.7	33.9	N 33.9	W 146.8	1.229
MWD	6,830.0	3.69	281.1	6,822.2	152.9	34.2	N 34.2	W 149.0	1.838
MWD	6,862.0	3.12	280.6	6,854.1	154.8	34.6	N 34.6	W 150.9	1.784
MWD	6,894.0	2.24	277.2	6,886.1	156.3	34.8	N 34.8	W 152.4	2.794
MWD	6,926.0	1.58	265.0	6,918.1	157.3	34.9	N 34.9	W 153.4	2.408

Mud Log Information

Depth (ft) From	To	TVD (ft) From	To	Gas (Units) Avg	Max	at Depth	Gas Connect.	Trip	Drilling Exp.	Pore Press	Mud Dens.	Shale Dens.	ROP Shale	Sand
6,812	7,008	6,805	7,000											

Formation Name:

Lithology: 100% Granodiorite

Rig Information

Equipment Problems:

Location Condition:

Transport:

Solids Control Information

Screen Sizes:	Top	Middle 1	Middle 2	Bottom	Equipment Usage (Hrs):	
Shaker No 1:	145	145	145	145	Desilter:	20
Shaker No 2:	145	145	145	145	Centrifuge 1:	22 (Solids Removal)
Shaker No 3:	255	255	255			

Drill Pipe Inventory

DP Size	Joints	Weight	Grade	Thread	DP Size	Joints	Weight	Grade	Thread
4 TSDS	240	14.0	S-135	TSDS40	4 HWDP	30	28.0		TSDS40

Safety Information

Meetings/Drills	Time	Description
Safety	15	Held safety meeting with both crews

First Aid Treatments: **Medical Treatments:** **Lost Time Incidents:** **Days Since LTI:** 43

☐ **BOP Test** ☑ **Crownamatic Check**

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 43

Report For 07-Sep-17

Weather Information

Sky Condition:	Clear	**Visibility:**	10
Air Temperature:	68 degF	**Bar. Pressure:**	29.88
Wind Speed/Dir:	5 / SSW	**Wind Gusts:**	

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
FLIFT	36K forklift		AHERN	32a1	---	27-Jul-17	
Notes:	Charged as dayrate						
LIGHTS	2 X Light towers		BnL	43e	---	27-Jul-17	
OTHER	2 x Trailers		BnL	43m	---	27-Jul-17	
OTHER	Mud cleaner		NOVB	32a1	---	31-Jul-17	
Notes:	Charged as dayrate						
OTHER	Automatic driller		NOVT	38d	---	31-Jul-17	
SURVEY	Survey tools		KnR	38h	---	31-Jul-17	
Notes:	4800 per month						
OTHER	Well Head		GRG	46a	---	02-Aug-17	
MUDCOOLER	Gen for mud cooler		AHERN	38o	---	03-Aug-17	
Notes:	start 8/15						
MUDCOOLER	Mud cooler		DRLCO	38o	---	03-Aug-17	
Notes:	start 8/15						
OTHER	Mud office		Rollins	36b	---	04-Aug-17	
Notes:	60 day min. with deliver and return						
OTHER	Restrooms		Rollins	43i	---	28-Jul-17	
Notes:	2 x 15 day (est)						
OTHER	Rain4rent tank		Rollins	43c	---	30-Jun-17	
Notes:	30 day (est)						
OTHER	Trash dumpster		Rollins	43j	---	30-Jun-17	
Notes:	30 day (est)						
JARS	6-1/2" jars		KnR	38f1	---	08-Aug-17	
Notes:	Plus 1500 redress						
OTHER	Centrifuge		NOVB	38g	---	15-Aug-17	
Notes:	Centrifuge 300/day						
TOOLS	6-1/2" shock sub	1455355	KnR	38f1	---	16-Aug-17	
Notes:	Plus 1500 redress.						
			Total Daily Rental Cost $:		---		

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 44 **Report For 08-Sep-17**

Operator:	University of Utah	**Rig:**	Kenai 10	**Spud Date:**	31-Jul-17	**Daily Cost / Mud ($):**			---
Measured Depth (ft):	7200	**Drilling Days (act.):**	40	**Wellbore:**	Original Well Bore	**AFE No.**		**AFE ($)**	**Actual ($)**
Vertical Depth (ft):	7192	**Drilling Days (plan):**	58	**RKB Elevation (ft):**	21.50	---		---	---
Proposed TD (ft):	7060	**Days On Location:**	44	**Last BOP Test:**	13-Aug-17	---		---	---
Hole Made (ft) / Hrs:	192 / 23.0	**Last Casing:**	9.625 at 2,172	**LOT (lbs/gal):**	19.20	**Totals:**		---	---
Average ROP (ft/hr):	8.35	**Next Casing:**	7.000 at 6,900	**Working Interest:**		**Well Cost ($):**			---

Pers/Hrs: **Operator:** 2 / 24 **Contractor:** 12 / 144 **Service:** 3 / 36 **Other:** 0 / 0 **Total:** 17 / 204

SafetySummary: No incidents or events reported. 44 days since LTI. Conducted Crown Check, Safety Meeting.

Current Operations: 00:00 to 06:00 hrs: Continued POH and laid down MWD tools and mud motor. Mud motor had external wear.

Planned Operations: Make up new mud motor and BHA. RIH and circulate to cool motor. Ream to bottom. Drill ahead to 7500'.

Toolpusher: Cal Sutton, John Rogers

Wellsite Supervisors: Fred Wilson, Rod Bray **Tel No.:**

Operations Summary

From	To	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	21:00	21.00	7,200	3-2-2	Drilled 8-3/4" hole with mud motor from 7,008' to 7,200' with full returns. 25/30K WOB 160 RPM, Torque 130/150 psi. Flow line temp 119F in, 135F out	
21:00	22:00	1.00	7,200	3-5-1	Circulated and pumped sweep for trip.	
22:00	0:00	2.00	7,200	3-6-4	POH for new Bit and BHA.	

Management Summary

Drilled 8-3/4" hole with mud motor from 7,008' to 7,200' with full returns. Circulated. POH for Bit and BHA.

Comments

Flow line temp 117F in, 134F out
Mud cooler temp 121.3F in 109.6F out , 11.7F drop.

Casing/Tubular Information

Type	Size (ins)	Top MD (ft)	Top TVD (ft)	Bottom MD (ft)	Bottom TVD (ft)	Hole Section	OH Diam. (ins)	Nom. Wgt. (lbs)	Nominal Grade	LOT (lbs/gal)
FULL	20.000	0	0	84		COND		53		
FULL	13.375	0		338		SURF		55	N-80	11.90
FULL	9.625	0	0	2,172	2,173	INT1	18.000	40	K-55	19.20

Mud Information

08-Sep-17 18:00 at Depth 7,162 ft Return Flow Line, Type: Low Solids Non-Dispersed

Dens.	Vis	PV	YP	Filt.	Cake	pH/ES	Solids %	Oil %	Water %	Sand %	LGS	Cl	Ca	CaCl	Gels 10s	Gels 10m	Gels 30m	Temp In	Temp Out	Mud Loss
8.40	35	6	13	8.8	1	8.2	3	0	97	0.15	2.9	600	320		2	4	5	117	133	0.0

Comments: Micro C at .90% or 1.8 ppb

Mud Consumables

Item Description	Qty.	Cost	Item Description	Qty.	Cost
Amberguard - 5GAL	1	---	Defoam - 5GAL	3	---
Lime - 50#SK	1	---	Micro C - 50#SK	40	---
Pallet Wrap - OTHER	2	---	Saw Dust - 50#SK	2	---
Walnut - 50#SK	3	---	XGD Xanthan Gum - 50#SK	7	---

Bit/BHA/Workstring Information

No	Run	Make	Model	Diam	Depth In	This Run Dist	This Run Hrs	R.O.P. Avg	R.O.P. Max	WOB	RPM	Torque	Wt	Mud Flow	Pump Press	J. Vel	P. Drp	HHP	JIF
12	1	HC	MXBPS68	8.750	6812	388	40.5	9.6	15.0	25	160	133	8	430	1530	185	257	65	346

Jets: 18 18 18 **Out:** 7200 **Grade:** **Cutter:** 6 / 7 **Dull:** FC / CT **Wear:** A **Brgs:** E **Gge:** 0 **Pull:** HR

BHA - No. 17 - BIT, MMTR, STAB, SHOCK, XO, MWD, 2 DCM, XO, 9 DC, JAR, 2 DC, XO, 9 HWDP = 763.16

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 44 **Report For 08-Sep-17**

Drilling Parameters

Depth (ft) From	Depth (ft) To	ROP (ft/hr) Avg	ROP (ft/hr) Max	WOB (lbs) Avg	WOB (lbs) Max	RPM Avg	RPM Max	Torque (ft lbs) Avg	Torque (ft lbs) Max	Flow (gals/min) Avg	Flow (gals/min) Max	Pressure (psi)
7,008	7,200	9.1	15.0	25	30	160		130	150	430		1,525

Annular Velocity: Drill Collars: 349.5 **Drill Pipe:** 174.0

Comments: Flow line temp 119F in, 135F out Mud cooler temp 121.3F in 109.6 out ,

Miscellaneous Drilling Parameters

Hook Loads (lbs): Off Bottom Rotate: 154,000 **Pick Up:** 176,000 **Slack Off:** 144,000 **Drag Avg/Max:** 22000 / 24000

Slow Circulation Data:

Pump 1: 48 spm 448 psi

Pump 2: 48 spm 453 psi

Hours on BHA: Since Inspection: 116.5 **Total:** 322 **Jars:** 0

Hours on Casing/Liner: Rotating: 467.5 / **Tripping:** 175.5 / ☐ **Wear Bushing Installed**

Survey Information

Survey Type	Meas. Depth	Inc.	Azimuth	TVD	Closure	Vertical Section	Coordinates N-S	Coordinates E-W	D.L.S.
MWD	6,989.0	0.92	260.8	6,981.0	158.6	34.7	N 34.7	W 154.8	1.057
MWD	7,021.0	1.14	281.2	7,013.0	159.2	34.7	N 34.7	W 155.3	1.325
MWD	7,053.0	1.10	295.1	7,045.0	159.8	34.9	N 34.9	W 155.9	0.856
MWD	7,084.0	1.19	276.1	7,076.0	160.4	35.1	N 35.1	W 156.5	1.252
MWD	7,116.0	1.14	274.9	7,108.0	161.1	35.1	N 35.1	W 157.2	0.175

Mud Log Information

Depth (ft) From	Depth (ft) To	TVD (ft) From	TVD (ft) To	Gas (Units) Avg	Gas (Units) Max	Gas (Units) at Depth	Gas Connect.	Gas Trip	Drilling Exp.	Pore Press	Mud Dens.	Shale Dens.	ROP Shale	ROP Sand
7,008	7,200	7,000	7,192											

Formation Name:

Lithology: 100% Granodiorite

Rig Information

Equipment Problems:

Location Condition:

Transport:

Solids Control Information

Screen Sizes:	Top	Middle 1	Middle 2	Bottom	Equipment Usage (Hrs):
Shaker No 1:	145	145	145	145	Desilter: 24
Shaker No 2:	145	145	145	145	Centrifuge 1: 12 (Solids Removal)
Shaker No 3:	255	255	255		

Drill Pipe Inventory

DP Size	Joints	Weight	Grade	Thread	DP Size	Joints	Weight	Grade	Thread
4 TSDS	240	14.0	S-135	TSDS40	4 HWDP	30	28.0		TSDS40

Safety Information

Meetings/Drills	Time	Description
Safety	15	Held safety meeting with both crews

First Aid Treatments: **Medical Treatments:** **Lost Time Incidents:** **Days Since LTI:** 44

☐ **BOP Test** ☑ **Crownamatic Check**

Weather Information

Sky Condition: Clear **Visibility:** 10

Air Temperature: 61 degF **Bar. Pressure:** 29.95

Wind Speed/Dir: 9 / SSW **Wind Gusts:**

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 44

Report For 08-Sep-17

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
FLIFT	36K forklift		AHERN	32a1	---	27-Jul-17	
Notes:	Charged as dayrate						
LIGHTS	2 X Light towers		BnL	43e	---	27-Jul-17	
OTHER	2 x Trailers		BnL	43m	---	27-Jul-17	
OTHER	Mud cleaner		NOVB	32a1	---	31-Jul-17	
Notes:	Charged as dayrate						
OTHER	Automatic driller		NOVT	38d	---	31-Jul-17	
SURVEY	Survey tools		KnR	38h	---	31-Jul-17	
Notes:	4800 per month						
OTHER	Well Head		GRG	46a	---	02-Aug-17	
MUDCOOLER	Gen for mud cooler		AHERN	38o	---	03-Aug-17	
Notes:	start 8/15						
MUDCOOLER	Mud cooler		DRLCO	38o	---	03-Aug-17	
Notes:	start 8/15						
OTHER	Mud office		Rollins	36b	---	04-Aug-17	
Notes:	60 day min. with deliver and return						
OTHER	Restrooms		Rollins	43i	---	28-Jul-17	
Notes:	2 x 15 day (est)						
OTHER	Rain4rent tank		Rollins	43c	---	30-Jun-17	
Notes:	30 day (est)						
OTHER	Trash dumpster		Rollins	43j	---	30-Jun-17	
Notes:	30 day (est)						
JARS	6-1/2" jars		KnR	38f1	---	08-Aug-17	
Notes:	Plus 1500 redress						
OTHER	Centrifuge		NOVB	38g	---	15-Aug-17	
Notes:	Centrifuge 300/day						
TOOLS	6-1/2" shock sub	1455355	KnR	38f1	---	16-Aug-17	
Notes:	Plus 1500 redress.						
			Total Daily Rental Cost $:		---		

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 45 **Report For 09-Sep-17**

Operator:	University of Utah	**Rig:**	Kenai 10	**Spud Date:**	31-Jul-17	**Daily Cost / Mud ($):**			---
Measured Depth (ft):	7200	**Drilling Days (act.):**	41	**Wellbore:**	Original Well Bore	**AFE No.**		**AFE ($)**	**Actual ($)**
Vertical Depth (ft):	7192	**Drilling Days (plan):**	58	**RKB Elevation (ft):**	21.50	---		---	---
Proposed TD (ft):	7060	**Days On Location:**	45	**Last BOP Test:**	13-Aug-17	---		---	---
Hole Made (ft) / Hrs:	0 / 10.5	**Last Casing:**	9.625 at 2,172	**LOT (lbs/gal):**	19.20	**Totals:**		---	---
Average ROP (ft/hr):	0.0	**Next Casing:**	7.000 at 6,900	**Working Interest:**		**Well Cost ($):**			---

Pers/Hrs:	**Operator:**	2 / 24	**Contractor:**	12 / 144	**Service:**	3 / 36	**Other:**	0 / 0	**Total:**	17 / 204

SafetySummary: No incidents or events reported. 45 days since LTI. Conducted Safety Meeting.

Current Operations: 00:00 to 06:00 hrs: Staged in hole from 5,688' to 6,848'. Tagged tight spot. Reamed from 6,848' to 6.930'.

Planned Operations: Ream to bottom. Drill ahead to 7,540'.

Toolpusher: Cal Sutton, John Rogers

Wellsite Supervisors: Fred Wilson, Rod Bray/Randy Baldwin **Tel No.:**

Operations Summary

From	To	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	5:30	5.50	7,200	3-6-2	POH and laid down the directional assembly. Broke out bit. Bit in gauge. Mud motor had external wear.	
5:30	6:00	0.50	7,200	3-99	Serviced rig. (Not down time).	
6:00	14:00	8.00	7,200	3-32	Waited on new mud motor.	X
14:00	19:00	5.00	7,200	3-34-3	Made up and RIH with new bit on mud motor with .79 degree bend and locked up drilling assembly. Changed out drilling jars.	
19:00	0:00	5.00	7,200	3-6-3	Staged in hole to 5,688'. Cooled well and tools at 2,162', 3,210', 4,163', 5,211' and 5,688'.	

Management Summary

POH and laid down bit and directional assembly. Mud motor had external wear. Waited on new mud motor. Made up and RIH with new bit and mud motor and locked up drilling assembly. Staged in hole to 5,688'. Cooled well and tools at 2,162', 3,210', 4,163', 5,211' and 5,688'.

Comments

Flow line temp 118F in, 135F out
Mud cooler temp 118.7F in 108.4F out , 10.3F drop.

Casing/Tubular Information

Type	Size (ins)	Top MD (ft)	Top TVD (ft)	Bottom MD (ft)	Bottom TVD (ft)	Hole Section	OH Diam. (ins)	Nom. Wgt. (lbs)	Nominal Grade	LOT (lbs/gal)
FULL	20.000	0	0	84		COND		53		
FULL	13.375	0		338		SURF		55	N-80	11.90
FULL	9.625	0	0	2,172	2,173	INT1	18.000	40	K-55	19.20

Mud Information

Dens.	Vis	PV	YP	Filt.	Cake	pH/ES	Solids %	Oil %	Water %	Sand %	LGS	Cl	Ca	CaCl	Gels 10s	Gels 10m	Gels 30m	Temp In	Temp Out	Mud Loss
09-Sep-17 17:30 at Depth 7,200 ft Return Flow Line, Type: Low Solids Non-Dispersed																				
8.40	35	6	14	8.8	1	8.2	3	0	97	0.2		600	200		3	5	6			0.0

Mud Consumables

Item Description	Qty.	Cost	Item Description	Qty.	Cost
Barite - 100#SK	10	---	Lime - 50#SK	1	---
Micro C - 50#SK	5	---	Pallet Wrap - OTHER	1	---
Saw Dust - 50#SK	3	---	Soda Ash - 50#SK	1	---
Walnut - 50#SK	3	---			

Bit/BHA/Workstring Information

No	Run	Make	Model	Diam	Depth In	This Run Dist	This Run Hrs	R.O.P. Avg	R.O.P. Max	WOB	RPM	Torque	Wt	Mud Flow	Pump Press	J. Vel	P. Drp	HHP	JIF
12	1	HC	MXBPS66	8.750	6812	388	40.5	0.0	0.0	0	0	0	8	0	0				
Jets: 18 18 18					**Out:** 7200		**Grade:**	**Cutter:**	6 / 7	**Dull:**	FC / CT		**Wear:** A		**Brgs:** E	**Gge:** 0		**Pull:** HR	
13	1	HC	HR-P68D	8.750	7200	0	0	0.0	0.0	0	0	0	8	435	1370	187	263	67	354
Jets: 18 18 18					**Out:** 7440		**Grade:**	**Cutter:**	3 / 4	**Dull:**	WT / NO		**Wear:** G		**Brgs:** E	**Gge:** 0		**Pull:** OTH	

BHA - No. 18 - BIT, MMTR, STAB, SHOCK, STAB, DCM, STAB, 9 DC, JAR, 2 DC, XO, 9 HWDP = 734.98

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 45 **Report For 09-Sep-17**

Miscellaneous Drilling Parameters

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

Slow Circulation Data:

Pump 1:	47 spm	138 psi
Pump 2:	48 spm	138 psi

Hours on BHA: **Since Inspection:** 119.5 **Total:** 325 **Jars:** 3

Hours on Casing/Liner: **Rotating:** 467.5 / **Tripping:** 181.5 / ☐ **Wear Bushing Installed**

Rig Information

Equipment Problems:

Location Condition:

Transport:

Solids Control Information

Screen Sizes:	**Top**	**Middle 1**	**Middle 2**	**Bottom**	**Equipment Usage (Hrs):**	
Shaker No 1:	145	145	145	145	**Desilter:**	24
Shaker No 2:	145	145	145	145	**Centrifuge 1:**	4 (Solids Removal)
Shaker No 3:	255	255	255			

Drill Pipe Inventory

DP Size	Joints	Weight	Grade	Thread	DP Size	Joints	Weight	Grade	Thread
4 TSDS	240	14.0	S-135	TSDS40	4 HWDP	30	28.0		TSDS40

Safety Information

Meetings/Drills	Time	Description
Safety	15	Held pre-tour safety meetings with both crews.

First Aid Treatments: **Medical Treatments:** **Lost Time Incidents:** **Days Since LTI:** 45

☐ **BOP Test** ☐ **Crownamatic Check**

Weather Information

Sky Condition:	Partly Cloudy	**Visibility:**	10
Air Temperature:	83 degF	**Bar. Pressure:**	
Wind Speed/Dir:	8 / W	**Wind Gusts:**	

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
FLIFT	36K forklift		AHERN	32a1	---	27-Jul-17	
Notes:	Charged as dayrate						
LIGHTS	2 X Light towers		BnL	43e	---	27-Jul-17	
OTHER	2 x Trailers		BnL	43m	---	27-Jul-17	
OTHER	Mud cleaner		NOVB	32a1	---	31-Jul-17	
Notes:	Charged as dayrate						
OTHER	Automatic driller		NOVT	38d	---	31-Jul-17	
SURVEY	Survey tools		KnR	38h	---	31-Jul-17	
Notes:	4800 per month						
OTHER	Well Head		GRG	46a	---	02-Aug-17	
MUDCOOLER	Gen for mud cooler		AHERN	38o	---	03-Aug-17	
Notes:	start 8/15						
MUDCOOLER	Mud cooler		DRLCO	38o	---	03-Aug-17	
Notes:	start 8/15						
OTHER	Mud office		Rollins	36b	---	04-Aug-17	
Notes:	60 day min. with deliver and return						
OTHER	Restrooms		Rollins	43i	---	28-Jul-17	
Notes:	2 x 15 day (est)						
OTHER	Rain4rent tank		Rollins	43c	---	30-Jun-17	
Notes:	30 day (est)						

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 45

Report For 09-Sep-17

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
OTHER	Trash dumpster		Rollins	43j	---	30-Jun-17	
Notes:	30 day (est)						
JARS	6-1/2" jars		KnR	38f1	---	08-Aug-17	
Notes:	Plus 1500 redress						
OTHER	Centrifuge		NOVB	38g	---	15-Aug-17	
Notes:	Centrifuge 300/day						
TOOLS	6-1/2" shock sub	1455355	KnR	38f1	---	16-Aug-17	
Notes:	Plus 1500 redress.						
			Total Daily Rental Cost $:		---		

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 46 **Report For 10-Sep-17**

Operator:	University of Utah	**Rig:**	Kenai 10	**Spud Date:**	31-Jul-17	**Daily Cost / Mud ($):**			---
Measured Depth (ft):	7393	**Drilling Days (act.):**	42	**Wellbore:**	Original Well Bore	**AFE No.**		**AFE ($)**	**Actual ($)**
Vertical Depth (ft):	7385	**Drilling Days (plan):**	58	**RKB Elevation (ft):**	21.50	---		---	---
Proposed TD (ft):	7060	**Days On Location:**	46	**Last BOP Test:**	13-Aug-17	---		---	---
Hole Made (ft) / Hrs:	193 / 15.5	**Last Casing:**	9.625 at 2,172	**LOT (lbs/gal):**	19.20	**Totals:**		---	---
Average ROP (ft/hr):	12.45	**Next Casing:**	7.000 at 6,900	**Working Interest:**		**Well Cost ($):**			---

Pers/Hrs:	**Operator:**	2 / 24	**Contractor:**	12 / 144	**Service:**	3 / 36	**Other:**	0 / 0	**Total:** 17 / 204

SafetySummary: No incidents or events reported. 46 days since LTI. Conducted BOP Drill, Safety Meeting.

Current Operations: 00:00 to 06:00 hrs: Drilled 8-3/4" hole from 7,393' to 7,440' with full returns.
Pumped sweep and made short trip to 6,452' RIH to bottom and pumped sweep and circulate hole clean.

Planned Operations: Run survey at 7.357'. Strap out of hole.
Make up coring assembly.
RIH and core from 7,440' to 7,460'.

Toolpusher: Cal Sutton, John Rogers

Wellsite Supervisors: Fred Wilson, Randy Baldwin **Tel No.:**

Operations Summary

From	To	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	3:30	3.50	7,200	3-6-3	Staged in hole from 5,688' to 6,848'. Cooled well and tools at 6,164' and 6.641'. Tagged tight spot at 6.848'. (The directional correction slide at was started at 6823')	
3:30	12:00	8.50	7,200	3-3	Reamed 8-3/4" hole from 6,848' to 7,200'.	
12:00	0:00	12.00	7,393	3-2-2	Drilled 8-3/4" hole with mud motor from 7,200' to 7,393' with full returns. 30/35K WOB 160 RPM, Flow line temp 120F in, 137F out	

Management Summary

Staged in hole from 5,688' to 6,848'. Tagged tight spot at 6.848' and reamed from 6,848' to 7,200'.
'Drilled 8-3/4" hole with mud motor from 7,200' to 7,393' with full return
Continue to drill 8-3/4" hole with mud motor from 7,200' to 7,393' with full returns.

Comments

Flow line temp 120F in, 137F out
Mud cooler temp 119.7F in 109.4F out , 10.3F drop.
Note: (The previous directional correction slide at was started at 6823')

Casing/Tubular Information

Type	Size (ins)	Top MD (ft)	Top TVD (ft)	Bottom MD (ft)	Bottom TVD (ft)	Hole Section	OH Diam. (ins)	Nom. Wgt. (lbs)	Nominal Grade	LOT (lbs/gal)
FULL	20.000	0	0	84		COND		53		
FULL	13.375	0		338		SURF		55	N-80	11.90
FULL	9.625	0	0	2,172	2,173	INT1	18.000	40	K-55	19.20

Mud Information

								%								Gels			Temp		Mud
Dens.	Vis	PV	YP	Filt.	Cake	pH/ES	Solids	Oil	Water	Sand	LGS	Cl	Ca	CaCl	10s	10m	30m	In	Out	Loss
10-Sep-17 17:30 at Depth 7,292 ft Return Flow Line, Type: Low Solids Non-Dispersed																				
8.50	34	5	12	9.2	1	8.1	3.5	0	96.5	0.25		550	280		2	3	4	121	137	0.0

Mud Consumables

Item Description	Qty.	Cost	Item Description	Qty.	Cost
Altavert - 25#SK	1	---	Amberguard - 5GAL	2	---
Caustic Soda - 50#SK	1	---	Defoam - 5GAL	1	---
Freight - TON	1	---	Micro C - 50#SK	30	---
Pallet Wrap - OTHER	1	---	Saw Dust - 50#SK	5	---
Soda Ash - 50#SK	1	---	Torkease - 5GAL	3	---
XGD Xanthan Gum - 50#SK	3	---			

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 46 **Report For 10-Sep-17**

Bit/BHA/Workstring Information

No Run		Make	Model	Diam	Depth In	This Run Dist	Hrs	R.O.P. Avg	Max	WOB	RPM	Torque	Mud Wt	Flow	Pump Press	J. Vel	P. Drp	HHP	JIF
13	1	HC	HR-P68D	8.750	7200	193	12	16.1	30.0	30	160	145	9	435	1700	187	267	68	358

Jets: 18 18 18 **Out:** 7440 **Grade:** **Cutter:** 3 / 4 **Dull:** WT / NO **Wear:** G **Brgs:** E **Gge:** 0 **Pull:** OTH

BHA - No. 18 - BIT, MMTR, STAB, SHOCK, STAB, DCM, STAB, 9 DC, JAR, 2 DC, XO, 9 HWDP = 734.98

Drilling Parameters

Depth (ft) From	To	ROP (ft/hr) Avg	Max	WOB (lbs) Avg	Max	RPM Avg	Max	Torque (ft lbs) Avg	Max	Flow (gals/min) Avg	Max	Pressure (psi)
7,200	7,393	16.0	30.0	30	35	160	160	137	150	435	435	1,670

Annular Velocity: **Drill Collars:** 353.5 **Drill Pipe:** 176.0

Comments: Temp in 120F, Temp out 137F. Mud cooler on.

Miscellaneous Drilling Parameters

Hook Loads (lbs): **Off Bottom Rotate:** 155,000 **Pick Up:** 180,000 **Slack Off:** 143,000 **Drag Avg/Max:** 25000 / 27000

Slow Circulation Data:

Pump 1: 47 spm 363 psi

Pump 2: 48 spm 440 psi

Hours on BHA: **Since Inspection:** 140 **Total:** 345.5 **Jars:** 23.5

Hours on Casing/Liner: **Rotating:** 491.5 / **Tripping:** 185 / ☐ **Wear Bushing Installed**

Survey Information

Survey Type	Meas. Depth	Inc.	Azimuth	TVD	Closure	Vertical Section	Coordinates N-S	E-W	D.L.S.
MWD	7,357.0	1.80	274.0	7,348.9	167.2	35.6	N 35.6	W 163.3	0.274

Mud Log Information

Depth (ft) From	To	TVD (ft) From	To	Gas (Units) Avg	Max	at Depth	Gas Connect.	Trip	Drilling Exp.	Pore Press	Mud Dens.	Shale Dens.	ROP Shale	Sand
7,200	7,300	7,192	7,292											

Formation Name:

Lithology: 0-100% Granodiorite, 0-100% Granite.

7,300	7,393	7,292	7,385											

Formation Name:

Lithology: 100% Granite.

Rig Information

Equipment Problems:

Location Condition:

Transport:

Solids Control Information

Screen Sizes:	Top	Middle 1	Middle 2	Bottom	Equipment Usage (Hrs):	
Shaker No 1:	145	145	145	145	Desilter:	24
Shaker No 2:	145	145	145	145	Centrifuge 1:	18 (Solids Removal)
Shaker No 3:	255	255	255			

Drill Pipe Inventory

DP Size	Joints	Weight	Grade	Thread	DP Size	Joints	Weight	Grade	Thread
4 TSDS	240	14.0	S-135	TSDS40	4 HWDP	30	28.0		TSDS40

Safety Information

Meetings/Drills	Time	Description
Safety	15	Pre-tour safety meetings with both crews.
BOP	2	With night crew.

First Aid Treatments: **Medical Treatments:** **Lost Time Incidents:** **Days Since LTI:** 46

☐ **BOP Test** ☐ **Crownamatic Check**

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 46

Report For 10-Sep-17

Weather Information

Sky Condition:	Clear	**Visibility:**	
Air Temperature:	91 degF	**Bar. Pressure:**	
Wind Speed/Dir:	0 /	**Wind Gusts:**	

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
FLIFT	36K forklift		AHERN	32a1	---	27-Jul-17	
Notes:	Charged as dayrate						
LIGHTS	2 X Light towers		BnL	43e	---	27-Jul-17	
OTHER	2 x Trailers		BnL	43m	---	27-Jul-17	
OTHER	Mud cleaner		NOVB	32a1	---	31-Jul-17	
Notes:	Charged as dayrate						
OTHER	Automatic driller		NOVT	38d	---	31-Jul-17	
SURVEY	Survey tools		KnR	38h	---	31-Jul-17	
Notes:	4800 per month						
OTHER	Well Head		GRG	46a	---	02-Aug-17	
MUDCOOLER	Gen for mud cooler		AHERN	38o	---	03-Aug-17	
Notes:	start 8/15						
MUDCOOLER	Mud cooler		DRLCO	38o	---	03-Aug-17	
Notes:	start 8/15						
OTHER	Mud office		Rollins	36b	---	04-Aug-17	
Notes:	60 day min. with deliver and return						
OTHER	Restrooms		Rollins	43i	---	28-Jul-17	
Notes:	2 x 15 day (est)						
OTHER	Rain4rent tank		Rollins	43c	---	30-Jun-17	
Notes:	30 day (est)						
OTHER	Trash dumpster		Rollins	43j	---	30-Jun-17	
Notes:	30 day (est)						
JARS	6-1/2" jars		KnR	38f1	---	08-Aug-17	
Notes:	Plus 1500 redress						
OTHER	Centrifuge		NOVB	38g	---	15-Aug-17	
Notes:	Centrifuge 300/day						
TOOLS	6-1/2" shock sub	1455355	KnR	38f1	---	16-Aug-17	
Notes:	Plus 1500 redress.						
			Total Daily Rental Cost $:		---		

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 47 **Report For 11-Sep-17**

Operator:	University of Utah	**Rig:**	Kenai 10	**Spud Date:**	31-Jul-17	**Daily Cost / Mud ($):**			---
Measured Depth (ft):	7440	**Drilling Days (act.):**	43	**Wellbore:**	Original Well Bore	**AFE No.**		**AFE ($)**	**Actual ($)**
Vertical Depth (ft):	7392	**Drilling Days (plan):**	58	**RKB Elevation (ft):**	21.50	---		---	---
Proposed TD (ft):	7060	**Days On Location:**	47	**Last BOP Test:**	13-Aug-17	---		---	---
Hole Made (ft) / Hrs:	47 / 21.5	**Last Casing:**	9.625 at 2,172	**LOT (lbs/gal):**	19.20	**Totals:**		---	---
Average ROP (ft/hr):	2.19	**Next Casing:**	7.000 at 6,900	**Working Interest:**		**Well Cost ($):**			---

Pers/Hrs:	**Operator:**	2 / 24	**Contractor:**	12 / 144	**Service:**	7 / 96	**Other:**	0 / 0	**Total:**	21 / 264

SafetySummary: No incidents or events reported. 47 days since LTI. Conducted Safety Meeting.

Current Operations: 00:00 to 06:00 hrs: RIH with coring assembly from 5,426' to 7,440' and cored from 7,440' to 7,447'.

Planned Operations: Core to 7,460'. POH. Lay down core and coring assembly.

Toolpusher: Cal Sutton, John Rogers

Wellsite Supervisors: Fred Wilson, Randy Baldwin **Tel No.:**

Operations Summary

From	To	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	3:00	3.00	7,440	3-2-2	Drilled 8-3/4" hole with mud motor from 7,393' to 7,440' with full returns. 30/35K WOB 160 RPM, Flow line temp 120F in, 137F out	
3:00	4:00	1.00	7,440	3-5-1	Pumped sweep and circulated hole clean.	
4:00	4:30	0.50	7,440	3-6-4	Made wiper trip, POH up to 6,452'.	
4:30	5:00	0.50	7,440	3-6-3	RIH back to bottom. No tight spots.	
5:00	6:00	1.00	7,440	3-5-1	Pumped sweep and circulated hole clean.	
6:00	6:30	0.50	7,440	3-10	Ran survey at 7,358'. Inc. 1.8 deg. Azm 274 deg MRT 181 deg F.	
6:30	11:00	4.50	7,440	3-6-4	POH with drill pipe to 735'. Strapped out of hole. Strap was correct.	
11:00	13:30	2.50	7,440	3-6-2	POH and stood back BHA. Laid down jars. Broke out bit.	
13:30	17:30	4.00	7,440	3-6-1	Made up and RIH with coring BHA.	
17:30	0:00	6.50	7,440	3-6-3	RIH with drill pipe to 7,069'. Circulated and cooled well and tools at 2,150', 3,146', 4,059', 4,970', and 5,426'.	

Management Summary

Drilled 8-3/4" hole with mud motor from 7,393' to 7,440' with full returns.
Made short trip up to 6,452'.
RIH to bottom, found no tight spots and POH.
Made up and RIH with coring assmebly to 7,069'.
Circulated and cooled well and tools at 2,150', 3,146', 4,059', 4,970', and 5,426'.

Comments

Survey at 7,358'. Inc. 1.8. Azm 274 MRT 181F.
Cooling tower on: In temp 125 F, Out temp 104 F.

Casing/Tubular Information

Type	Size (ins)	Top MD (ft)	Top TVD (ft)	Bottom MD (ft)	Bottom TVD (ft)	Hole Section	OH Diam. (ins)	Nom. Wgt. (lbs)	Nominal Grade	LOT (lbs/gal)
FULL	20.000	0	0	84		COND		53		
FULL	13.375	0		338		SURF		55	N-80	11.90
FULL	9.625	0	0	2,172	2,173	INT1	18.000	40	K-55	19.20

Mud Information

Dens.	Vis	PV	YP	Filt.	Cake	pH/ES	Solids %	Oil %	Water %	Sand %	LGS	Cl	Ca	CaCl	Gels 10s	Gels 10m	Gels 30m	Temp In	Temp Out	Mud Loss
11-Sep-17 17:30 at Depth 7,440 ft Return Flow Line, Type: Low Solids Non-Dispersed																				
8.50	34	6	13	9.2	1	8.3	3.5	0	96.5	0.25		550	260		3	4	6			0.0

Mud Consumables

Item Description	Qty.	Cost	Item Description	Qty.	Cost
Caustic Soda - 50#SK	2	---	Micro C - 50#SK	15	---
Pallet Wrap - OTHER	1	---	Saw Dust - 50#SK	5	---
Walnut - 50#SK	1	---	XGD Xanthan Gum - 50#SK	2	---

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 47 **Report For 11-Sep-17**

Bit/BHA/Workstring Information

No Run		Make	Model	Diam	Depth In	This Run Dist	Hrs	R.O.P. Avg	Max	WOB	RPM	Torque	Mud Wt	Flow	Pump Press	J. Vel	P. Drp	HHP	JIF
13	1	HC	HR-P68D	8.750	7200	240	15	16.0	20.0	30	160	145	9	435	1700	187	267	68	358

Jets: 18 18 18 **Out:** 7440 **Grade:** **Cutter:** 3 / 4 **Dull:** WT / NO **Wear:** G **Brgs:** E **Gge:** 0 **Pull:** OTH

BHA - No. 19 - CORBIT, STAB, CORE, STAB, TOPHD, CIRC, TOPHD, CIRC, FLOAT, XO, RR, JAR, XO, 9 DC, XO = 347.04

Drilling Parameters

Depth (ft) From	To	ROP (ft/hr) Avg	Max	WOB (lbs) Avg	Max	RPM Avg	Max	Torque (ft lbs) Avg	Max	Flow (gals/min) Avg	Max	Pressure (psi)
7,393	7,440	14.0	20.0	30	35	160	160	140	145	435	435	1,700

Annular Velocity: **Drill Collars:** 353.5 **Drill Pipe:** 176.0

Comments: Cooling tower on: In temp 125 F, Out temp 104 F.

Miscellaneous Drilling Parameters

Hook Loads (lbs): **Off Bottom Rotate:** 157,000 **Pick Up:** 181,000 **Slack Off:** 145,000 **Drag Avg/Max:** 23000 / 25000

Hours on BHA: **Since Inspection:** 143 **Total:** 348.5 **Jars:** 26.5

Hours on Casing/Liner: **Rotating:** 494.5 / **Tripping:** 195 / ☐ **Wear Bushing Installed**

Mud Log Information

Depth (ft) From	To	TVD (ft) From	To	Gas (Units) Avg	Max	at Depth	Gas Connect.	Trip	Drilling Exp.	Pore Press	Mud Dens.	Shale Dens.	ROP Shale	Sand
7,300	7,440	7,292	7,432											

Formation Name:

Lithology: 100% Granite.

Rig Information

Equipment Problems:

Location Condition:

Transport:

Solids Control Information

Screen Sizes:	Top	Middle 1	Middle 2	Bottom
Shaker No 1:	145	145	145	145
Shaker No 2:	145	145	145	145
Shaker No 3:	255	255	255	

Equipment Usage (Hrs): **Desilter:** 24 **Degasser:** 5

Drill Pipe Inventory

DP Size	Joints	Weight	Grade	Thread	DP Size	Joints	Weight	Grade	Thread
4 TSDS	240	14.0	S-135	TSDS40	4 HWDP	30	28.0		TSDS40

Safety Information

Meetings/Drills	Time	Description
Safety	15	Pre-tour safety meetings with both crews.

First Aid Treatments: **Medical Treatments:** **Lost Time Incidents:** **Days Since LTI:** 47

☐ **BOP Test** ☐ **Crownamatic Check**

Weather Information

Sky Condition: Clear **Visibility:**

Air Temperature: 90 degF **Bar. Pressure:**

Wind Speed/Dir: 0 / **Wind Gusts:**

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
FLIFT	36K forklift		AHERN	32a1	---	27-Jul-17	
Notes:	Charged as dayrate						
LIGHTS	2 X Light towers		BnL	43e	---	27-Jul-17	
OTHER	2 x Trailers		BnL	43m	---	27-Jul-17	
OTHER	Mud cleaner		NOVB	32a1	---	31-Jul-17	

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 47

Report For 11-Sep-17

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
Notes:	Charged as dayrate						
OTHER	Automatic driller		NOVT	38d	---	31-Jul-17	
SURVEY	Survey tools		KnR	38h	---	31-Jul-17	
Notes:	4800 per month						
OTHER	Well Head		GRG	46a	---	02-Aug-17	
MUDCOOLER	Gen for mud cooler		AHERN	38o	---	03-Aug-17	
Notes:	start 8/15						
MUDCOOLER	Mud cooler		DRLCO	38o	---	03-Aug-17	
Notes:	start 8/15						
OTHER	Mud office		Rollins	36b	---	04-Aug-17	
Notes:	60 day min. with deliver and return						
OTHER	Restrooms		Rollins	43i	---	28-Jul-17	
Notes:	2 x 15 day (est)						
OTHER	Rain4rent tank		Rollins	43c	---	30-Jun-17	
Notes:	30 day (est)						
OTHER	Trash dumpster		Rollins	43j	---	30-Jun-17	
Notes:	30 day (est)						
JARS	6-1/2" jars		KnR	38f1	---	08-Aug-17	
Notes:	Plus 1500 redress						
OTHER	Centrifuge		NOVB	38g	---	15-Aug-17	
Notes:	Centrifuge 300/day						
TOOLS	6-1/2" shock sub	1455355	KnR	38f1	---	16-Aug-17	
Notes:	Plus 1500 redress.						
			Total Daily Rental Cost $:		---		

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 48 **Report For 12-Sep-17**

Operator:	University of Utah	**Rig:**	Kenai 10	**Spud Date:**	31-Jul-17	**Daily Cost / Mud ($):**			---
Measured Depth (ft):	7460	**Drilling Days (act.):**	44	**Wellbore:**	Original Well Bore	**AFE No.**		**AFE ($)**	**Actual ($)**
Vertical Depth (ft):	7452	**Drilling Days (plan):**	58	**RKB Elevation (ft):**	21.50	---		---	---
Proposed TD (ft):	7060	**Days On Location:**	48	**Last BOP Test:**	13-Aug-17	---		---	---
Hole Made (ft) / Hrs:	20 / 5.5	**Last Casing:**	9.625 at 2,172	**LOT (lbs/gal):**	19.20	**Totals:**		---	---
Average ROP (ft/hr):	3.64	**Next Casing:**	7.000 at 6,900	**Working Interest:**		**Well Cost ($):**			---

Pers/Hrs: **Operator:** 2 / 24 **Contractor:** 12 / 144 **Service:** 7 / 96 **Other:** 0 / 0 **Total:** 21 / 264

SafetySummary: No incidents or events reported. 48 days since LTI. Conducted Safety Meeting.

Current Operations: 00:00 to 06:00 hrs: POH with BHA. L/D coring assembly. Made up and RIH with 8-3/4" bit and BHA to 3,171'.

Planned Operations: Finish RIH to bottom.
Ream from 7,440' to 7,460'.
Drill from 7,460' to 7,560'.

Toolpusher: Cal Sutton, John Rogers

Wellsite Supervisors: Fred Wilson, Randy Baldwin **Tel No.:**

Operations Summary

From	To	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	1:30	1.50	7,440	3-6-3	RIH with coring assembly from 5,426' to 7,440'. Cooled well and tools at 7410'.	
1:30	19:30	18.00	7,460	3-4	Cored from 7,440' to 7,460'. Temp in 112F. Temp out 136F.	
19:30	20:00	0.50	7,460	3-5-1	Circulated bottoms up.	
20:00	0:00	4.00	7,460	3-6-4	POH with drill pipe to 339'.	

Management Summary

RIH with coring assembly from 5,426' to 7,440'.
Cored from 7,440' to 7,460'.
Circulated bottoms up.
POH with drill pipe to 339'.

Comments

Temp in 112F. Temp out 136F.
Retrieved 12.09' of core.

Casing/Tubular Information

Type	Size (ins)	Top MD (ft)	Top TVD (ft)	Bottom MD (ft)	Bottom TVD (ft)	Hole Section	OH Diam. (ins)	Nom. Wgt. (lbs)	Nominal Grade	LOT (lbs/gal)
FULL	20.000	0	0	84		COND		53		
FULL	13.375	0		338		SURF		55	N-80	11.90
FULL	9.625	0	0	2,172	2,173	INT1	18.000	40	K-55	19.20

Mud Information

Dens.	Vis	PV	YP	Filt.	Cake	pH/ES	Solids %	Oil %	Water %	Sand %	LGS	Cl	Ca	CaCl	Gels 10s	Gels 10m	Gels 30m	Temp In	Temp Out	Mud Loss
12-Sep-17 17:00 at Depth 7,452 ft Return Flow Line, Type: Low Solids Non-Dispersed																				
8.60	36	6	16	9.8	1	8.2	4	0	96	0.15		550	320		3	4	6	112	126	0.0

Mud Consumables

Item Description	Qty.	Cost	Item Description	Qty.	Cost
Amberguard - 5GAL	3	---	Caustic Soda - 50#SK	2	---
Defoam - 5GAL	2	---	Torkease DRY - 50#SK	3	---
Walnut - 50#SK	1	---	XGD Xanthan Gum - 50#SK	10	---

Bit/BHA/Workstring Information

No Run	Make	Model	Diam	Depth In	This Run Dist	This Run Hrs	R.O.P. Avg	R.O.P. Max	WOB	RPM	Torque	Mud Wt	Mud Flow	Pump Press	J. Vel	P. Drp	HHP	JIF
14 1	CORPR	Diamond	8.500	7440	20	16.2	1.2	1.5	14	75	170	9	200	360				

Jets: **Out:** 7460 **Grade:** **Cutter:** 0 / 0 **Dull:** NO / NO **Wear:** A **Brgs:** E **Gge:** 0 **Pull:** OTH

BHA - No. 19 - CORBIT, STAB, CORE, STAB, TOPHD, CIRC, TOPHD, CIRC, FLOAT, XO, RR, JAR, XO, 9 DC, XO = 347.04

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 48 **Report For 12-Sep-17**

Drilling Parameters

Depth (ft) From	Depth (ft) To	ROP (ft/hr) Avg	ROP (ft/hr) Max	WOB (lbs) Avg	WOB (lbs) Max	RPM Avg	RPM Max	Torque (ft lbs) Avg	Torque (ft lbs) Max	Flow (gals/min) Avg	Flow (gals/min) Max	Pressure (psi)
7,440	7,460	1.2	1.5	8	12	60	65	135	150	200	200	337

Annular Velocity: **Drill Collars:** 158.1 **Drill Pipe:** 64.0

Comments: Cored with 8.5" bit. Mud cooler on.

Miscellaneous Drilling Parameters

Hook Loads (lbs): **Off Bottom Rotate:** 150,000 **Pick Up:** 170,000 **Slack Off:** 140,000 **Drag Avg/Max:** 20000 / 22000

Hours on BHA: **Since Inspection:** 161 **Total:** 366.5 **Jars:** 26.5

Hours on Casing/Liner: **Rotating:** 512.5 / **Tripping:** 200 / ☐ **Wear Bushing Installed**

Rig Information

Equipment Problems:

Location Condition:

Transport:

Solids Control Information

Screen Sizes:	Top	Middle 1	Middle 2	Bottom	Equipment Usage (Hrs):
Shaker No 1:	145	145	145	145	Desilter: 24
Shaker No 2:	145	145	145	145	Centrifuge 1: 24 (Solids Removal)
Shaker No 3:	255	255	255		

Drill Pipe Inventory

DP Size	Joints	Weight	Grade	Thread	DP Size	Joints	Weight	Grade	Thread
4 TSDS	240	14.0	S-135	TSDS40	4 HWDP	30	28.0		TSDS40

Safety Information

Meetings/Drills	Time	Description
Safety	15	Pre-tour safety meetings with both crews.

First Aid Treatments: **Medical Treatments:** **Lost Time Incidents:** **Days Since LTI:** 48

☐ **BOP Test** ☐ **Crownamatic Check**

Weather Information

Sky Condition: Clear **Visibility:**

Air Temperature: 89 degF **Bar. Pressure:**

Wind Speed/Dir: 5 / E **Wind Gusts:**

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
FLIFT	36K forklift		AHERN	32a1	---	27-Jul-17	
Notes:	Charged as dayrate						
LIGHTS	2 X Light towers		BnL	43e	---	27-Jul-17	
OTHER	2 x Trailers		BnL	43m	---	27-Jul-17	
OTHER	Mud cleaner		NOVB	32a1	---	31-Jul-17	
Notes:	Charged as dayrate						
OTHER	Automatic driller		NOVT	38d	---	31-Jul-17	
SURVEY	Survey tools		KnR	38h	---	31-Jul-17	
Notes:	4800 per month						
OTHER	Well Head		GRG	46a	---	02-Aug-17	
MUDCOOLER	Gen for mud cooler		AHERN	38o	---	03-Aug-17	
Notes:	start 8/15						
MUDCOOLER	Mud cooler		DRLCO	38o	---	03-Aug-17	
Notes:	start 8/15						
OTHER	Mud office		Rollins	36b	---	04-Aug-17	
Notes:	60 day min. with deliver and return						
OTHER	Restrooms		Rollins	43i	---	28-Jul-17	

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
Notes:	2 x 15 day (est)						
OTHER	Rain4rent tank		Rollins	43c	---	30-Jun-17	
Notes:	30 day (est)						
OTHER	Trash dumpster		Rollins	43j	---	30-Jun-17	
Notes:	30 day (est)						
JARS	6-1/2" jars		KnR	38f1	---	08-Aug-17	
Notes:	Plus 1500 redress						
OTHER	Centrifuge		NOVB	38g	---	15-Aug-17	
Notes:	Centrifuge 300/day						
TOOLS	6-1/2" shock sub	1455355	KnR	38f1	---	16-Aug-17	
Notes:	Plus 1500 redress.						
			Total Daily Rental Cost $:		---		

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 49 **Report For 13-Sep-17**

Operator:	University of Utah	**Rig:**	Kenai 10	**Spud Date:**	31-Jul-17	**Daily Cost / Mud ($):**			---
Measured Depth (ft):	7536	**Drilling Days (act.):**	45	**Wellbore:**	Original Well Bore	**AFE No.**		**AFE ($)**	**Actual ($)**
Vertical Depth (ft):	7528	**Drilling Days (plan):**	58	**RKB Elevation (ft):**	21.50	---		---	---
Proposed TD (ft):	7060	**Days On Location:**	49	**Last BOP Test:**	13-Aug-17	---		---	---
Hole Made (ft) / Hrs:	76 / 21.0	**Last Casing:**	9.625 at 2,172	**LOT (lbs/gal):**	19.20	**Totals:**		---	---
Average ROP (ft/hr):	3.62	**Next Casing:**	7.000 at 6,900	**Working Interest:**		**Well Cost ($):**			---

Pers/Hrs:	**Operator:**	2 / 24	**Contractor:**	12 / 144	**Service:**	7 / 84	**Other:**	0 / 0	**Total:**	21 / 252

SafetySummary: No incidents or events reported. 49 days since LTI. Conducted Safety Meeting.

Current Operations: 00:00 to 06:00 hrs: Finished POH with BHA looking for wash-out. Broke out bit. Found 1-1/2"X2" piece of rubber in bit. L/D bit and BHA. RIH with open ended drill pipe to 3,051'.

Planned Operations: RIH to bottom. Cool well for logs.

Toolpusher: Cal Sutton, John Rogers

Wellsite Supervisors: Fred Wilson, Randy Baldwin **Tel No.:**

Operations Summary

From	To	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	2:00	2.00	7,460	3-34-4	POH with BHA. from 339'. L/D core and coring tools.	
2:00	4:00	2.00	7,460	3-6-1	Made up and RIH with 8-3/4" bit and BHA to 734'.	
4:00	13:00	9.00	7,460	3-6-3	RIH with drill pipe to 7,340'. Cooled well and tools at 2,164', 3,117', 4,069', 5,022', 5,499', 5,975', 6,452', 6,928', and 7,340'.	
13:00	14:00	1.00	7,460	3-3	Reamed from 7,440, to 7,460'.	
14:00	20:00	6.00	7,536	3-2-2	Drilled 8-3/4" hole from 7,460' to 7,536' with full returns. Had a 300 psi pressure drop.	
20:00	23:00	3.00	7,536	3-6-4	POH with drill pipe looking for wash-out.	X
23:00	0:00	1.00	7,536	3-6-2	POH with BHA to 270' looking for wash-out. Found 1-1/2"X2" piece of rubber in bit. L/D	X

Management Summary

POH from 339' to surface and L/D core and coring tools.
MU and staged in hole with 8-3/4" bit and drilling assembly to 7,440'.
Reamed from 7,440, to 7,460'.
Drilled 8-3/4" hole from 7,460' to 7,536' with full returns.
Had a 300 psi pressure drop. POH to 270' looking for wash-out.

Comments

Temp in 120F, Temp out 139F.

Casing/Tubular Information

Type	Size (ins)	Top MD (ft)	Top TVD (ft)	Bottom MD (ft)	Bottom TVD (ft)	Hole Section	OH Diam. (ins)	Nom. Wgt. (lbs)	Nominal Grade	LOT (lbs/gal)
FULL	20.000	0	0	84		COND		53		
FULL	13.375	0		338		SURF		55	N-80	11.90
FULL	9.625	0	0	2,172	2,173	INT1	18.000	40	K-55	19.20

Mud Information

Dens.	Vis	PV	YP	Filt.	Cake	pH/ES	Solids %	Oil %	Water %	Sand %	LGS	Cl	Ca	CaCl	Gels 10s	Gels 10m	Gels 30m	Temp In	Temp Out	Mud Loss
13-Sep-17 17:00 at Depth 7,507 ft Return Flow Line, Type: Low Solids Non-Dispersed																				
8.60	35	6	13	10.2	1	8.6	4	0	96	0.15		550	280		2	3	5	120	139	0.0

Mud Consumables

Item Description	Qty.	Cost	Item Description	Qty.	Cost
Amberguard - 5GAL	1	---	Caustic Soda - 50#SK	2	---
Defoam - 5GAL	1	---	Micro C - 50#SK	20	---
Pallet Wrap - OTHER	1	---	Saw Dust - 50#SK	2	---
Walnut - 50#SK	1	---	XGD Xanthan Gum - 50#SK	3	---

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 49 **Report For 13-Sep-17**

Bit/BHA/Workstring Information

No Run		Make	Model	Diam	Depth In	This Run Dist	Hrs	R.O.P. Avg	Max	WOB	RPM	Torque	Mud Wt	Flow	Pump Press	J. Vel	P. Drp	HHP	JIF
13	2	HC	HR-P68D	8.750	7460	76	5.5	13.8	19.0	30	160	145	9	435	1720	187	270	68	363
Jets: 18 18 18					**Out:** 7536		**Grade:**	**Cutter:**	4 / 5	**Dull:**	WT / NO		**Wear:** A		**Brgs:** E	**Gge:** 1		**Pull:** WO	
14	1	CORPR	Diamond	8.500	7440	76	5.5	13.8	19.0	30	160	145	9	435	1720				
Jets:					**Out:** 7460		**Grade:**	**Cutter:**	0 / 0	**Dull:**	NO / NO		**Wear:** A		**Brgs:** E	**Gge:** 0		**Pull:** OTH	

BHA - No. 20 - BIT, MMTR, STAB, SHOCK, STAB, DCM, STAB, 9 DC, JAR, 2 DC, XO, 9 HWDP = 734.98

Drilling Parameters

Depth (ft) From	To	ROP (ft/hr) Avg	Max	WOB (lbs) Avg	Max	RPM Avg	Max	Torque (ft lbs) Avg	Max	Flow (gals/min) Avg	Max	Pressure (psi)
7,460	7,536	14.0	19.0	30	30	160	160	145	153	435	435	1,720

Annular Velocity: **Drill Collars:** 399.5 **Drill Pipe:** 189.5

Comments: Mud cooler on.

Miscellaneous Drilling Parameters

Hook Loads (lbs): **Off Bottom Rotate:** 153,000 **Pick Up:** 180,000 **Slack Off:** 145,000 **Drag Avg/Max:** 27000 / 29000

Hours on BHA: **Since Inspection:** 166.5 **Total:** 372 **Jars:** 32

Hours on Casing/Liner: **Rotating:** 519 / **Tripping:** 210 / ☐ **Wear Bushing Installed**

Mud Log Information

Depth (ft) From	To	TVD (ft) From	To	Gas (Units) Avg	Max	at Depth	Gas Connect.	Trip	Drilling Exp.	Pore Press	Mud Dens.	Shale Dens.	ROP Shale	Sand
7,440	7,460	7,432	7,452											
Formation Name:														
Lithology:	Core													
7,470	7,490	7,462	7,482											
Formation Name:														
Lithology:	100% Granite													
7,490	7,530	7,482	7,530											
Formation Name:														
Lithology:	100% Granodiorite													

Rig Information

Equipment Problems:

Location Condition:

Transport:

Solids Control Information

Screen Sizes:	Top	Middle 1	Middle 2	Bottom	**Equipment Usage (Hrs):**	
Shaker No 1:	145	145	145	145	**Desilter:**	24
Shaker No 2:	145	145	145	145	**Centrifuge 1:**	18 (Solids Removal)
Shaker No 3:	255	255	255			

Drill Pipe Inventory

DP Size	Joints	Weight	Grade	Thread	DP Size	Joints	Weight	Grade	Thread
4 TSDS	240	14.0	S-135	TSDS40	4 HWDP	30	28.0		TSDS40

Safety Information

Meetings/Drills	Time	Description
Safety	15	Pre-tour safety meeting with both crews.

First Aid Treatments: **Medical Treatments:** **Lost Time Incidents:** **Days Since LTI:** 49

☐ **BOP Test** ☐ **Crownamatic Check**

Weather Information

Sky Condition: Partly cloudy **Visibility:**

Air Temperature: 88 degF **Bar. Pressure:**

Wind Speed/Dir: 0 / **Wind Gusts:**

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 49

Report For 13-Sep-17

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
FLIFT	36K forklift		AHERN	32a1	---	27-Jul-17	
Notes:	Charged as dayrate						
LIGHTS	2 X Light towers		BnL	43e	---	27-Jul-17	
OTHER	2 x Trailers		BnL	43m	---	27-Jul-17	
OTHER	Mud cleaner		NOVB	32a1	---	31-Jul-17	
Notes:	Charged as dayrate						
OTHER	Automatic driller		NOVT	38d	---	31-Jul-17	
SURVEY	Survey tools		KnR	38h	---	31-Jul-17	
Notes:	4800 per month						
OTHER	Well Head		GRG	46a	---	02-Aug-17	
MUDCOOLER	Gen for mud cooler		AHERN	38o	---	03-Aug-17	
Notes:	start 8/15						
MUDCOOLER	Mud cooler		DRLCO	38o	---	03-Aug-17	
Notes:	start 8/15						
OTHER	Mud office		Rollins	36b	---	04-Aug-17	
Notes:	60 day min. with deliver and return						
OTHER	Restrooms		Rollins	43i	---	28-Jul-17	
Notes:	2 x 15 day (est)						
OTHER	Rain4rent tank		Rollins	43c	---	30-Jun-17	
Notes:	30 day (est)						
OTHER	Trash dumpster		Rollins	43j	---	30-Jun-17	
Notes:	30 day (est)						
JARS	6-1/2" jars		KnR	38f1	---	08-Aug-17	
Notes:	Plus 1500 redress						
OTHER	Centrifuge		NOVB	38g	---	15-Aug-17	
Notes:	Centrifuge 300/day						
TOOLS	6-1/2" shock sub	1455355	KnR	38f1	---	16-Aug-17	
Notes:	Plus 1500 redress.						
			Total Daily Rental Cost $:		---		

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 50 **Report For 14-Sep-17**

Operator:	University of Utah	**Rig:**	Kenai 10	**Spud Date:**	31-Jul-17	**Daily Cost / Mud ($):**			---
Measured Depth (ft):	7536	**Drilling Days (act.):**	46	**Wellbore:**	Original Well Bore	**AFE No.**		**AFE ($)**	**Actual ($)**
Vertical Depth (ft):	7528	**Drilling Days (plan):**	58	**RKB Elevation (ft):**	21.50	---		---	---
Proposed TD (ft):	7060	**Days On Location:**	50	**Last BOP Test:**	13-Aug-17	---		---	---
Hole Made (ft) / Hrs:	0 / 0.5	**Last Casing:**	9.625 at 2,172	**LOT (lbs/gal):**	19.20	**Totals:**		---	---
Average ROP (ft/hr):	0.0	**Next Casing:**	7.000 at 6,900	**Working Interest:**		**Well Cost ($):**			---

Pers/Hrs:	**Operator:**	3 / 36	**Contractor:**	12 / 144	**Service:**	8 / 96	**Other:**	0 / 0	**Total:** 23 / 276

SafetySummary: No incidents or events reported. 50 days since LTI. Conducted Safety Meeting.

Current Operations: 00:00 to 06:00 hrs: Finished POH from 1,226'.
Held safety meeting with Schlumberger.
Rigged up and RIH and log with sonic scanner and FMI image logs.

Planned Operations: Finish logging well. RIH with OEDP and set bottom hole cement plug.

Toolpusher: Cal Sutton, John Rogers

Wellsite Supervisors: Fred Wilson/Virgil Welch, Randy Baldwin **Tel No.:**

Operations Summary

From	To	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	0:30	0.50	7,536	3-6-2	POH with BHA from 270'. Broke out bit. Found 1-1/2"X2" piece of rubber in bit, No visible wash-out.	X
0:30	4:00	3.50	7,536	3-34-4	L/D drill collars, mud motor, monel, jars, shock sub and stabilizers.	X
4:00	11:00	7.00	7,536	10-6-3	RIH with open ended drill pipe to 7,516'. cooled well at 3,009', 4,192', 5,907' and 6,765',	
11:00	12:00	1.00	7,536	10-5-1	Circulated and cooled well. Change of plan. Logging tools not arriving until later.	X
12:00	15:00	3.00	7,536	10-6-4	POH to 2,100'.	X
15:00	16:00	1.00	7,536	8-99	Changed out kelly and kelly bushings.	X
16:00	19:30	3.50	7,536	10-6-3	RIH to 7,536'	X
19:30	22:00	2.50	7,536	10-5-1	Circulated and cooled well.	X
22:00	0:00	2.00	7,536	10-6-4	POH to 1,226'.	X

Management Summary

POH with BHA from 270'.
Broke out bit & L/D BHA.
RIH with open ended drill pipe to 7,516'.
Change of plans & POH to shoe.
Changed out kelly and kelly bushings.
RIH to 7,536' & Cooled hole.
POH to 1,226'.

Comments

Mud Temp in 139F. Mud Temp out 156F. Generator for mud cooler threw a belt. Be repaired 9-15-17. Mud cooler on 8 hrs. Found 1-1/2"X2" piece of rubber in bit, No visible wash-out.

Casing/Tubular Information

Type	Size (ins)	Top MD (ft)	Top TVD (ft)	Bottom MD (ft)	Bottom TVD (ft)	Hole Section	OH Diam. (ins)	Nom. Wgt. (lbs)	Nominal Grade	LOT (lbs/gal)
FULL	20.000	0	0	84		COND		53		
FULL	13.375	0		338		SURF		55	N-80	11.90
FULL	9.625	0	0	2,172	2,173	INT1	18.000	40	K-55	19.20

Mud Information

Dens.	Vis	PV	YP	Filt.	Cake	pH/ES	Solids %	Oil %	Water %	Sand %	LGS	Cl	Ca	CaCl	Gels 10s	Gels 10m	Gels 30m	Temp In	Temp Out	Mud Loss
14-Sep-17 18:00 at Depth 7,536 ft Return Flow Line, Type: Low Solids Non-Dispersed																				
8.60	34	5	13	10.2	1	8.5	4	0	96	0.15		550	320		2	3	4	139	150	0.0

Mud Consumables

Item Description	Qty.	Cost	Item Description	Qty.	Cost
Micro C - 50#SK	5	---	Pallet Wrap - OTHER	1	---
XGD Xanthan Gum - 50#SK	2	---			

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 50 **Report For 14-Sep-17**

Bit/BHA/Workstring Information

No Run		Make	Model	Diam	Depth In	This Run Dist	Hrs	R.O.P. Avg	Max	WOB	RPM	Torque	Mud Wt	Flow	Pump Press	J. Vel	P. Drp	HHP	JIF
13	2	HC	HR-P68D	8.750	7460	76	5.5	0.0	0.0	0	0	0	9	0	0				

Jets: 18 18 18 **Out:** 7536 **Grade: Cutter:** 4 / 5 **Dull:** WT / NO **Wear:** A **Brgs:** E **Gge:** 1 **Pull:** WO

BHA - No. 20 - BIT, MMTR, STAB, SHOCK, STAB, DCM, STAB, 9 DC, JAR, 2 DC, XO, 9 HWDP = 734.98

Miscellaneous Drilling Parameters

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

Hours on BHA: **Since Inspection:** 166.5 **Total:** 372 **Jars:** 32

Hours on Casing/Liner: **Rotating:** 519 / **Tripping:** 222 / ☐ **Wear Bushing Installed**

Rig Information

Equipment Problems:

Location Condition:

Transport:

Solids Control Information

Screen Sizes:	Top	Middle 1	Middle 2	Bottom	Equipment Usage (Hrs):	
Shaker No 1:	145	145	145	145	Desilter:	24
Shaker No 2:	145	145	145	145	Centrifuge 1:	24 (Solids Removal)
Shaker No 3:	255	255	255			

Drill Pipe Inventory

DP Size	Joints	Weight	Grade	Thread	DP Size	Joints	Weight	Grade	Thread
4 TSDS	240	14.0	S-135	TSDS40	4 HWDP	30	28.0		TSDS40

Safety Information

Meetings/Drills	Time	Description
Safety	15	Pre-tour safety meeting with both crews.

First Aid Treatments: **Medical Treatments:** **Lost Time Incidents:** **Days Since LTI:** 50

☐ **BOP Test** ☐ **Crownamatic Check**

Weather Information

Sky Condition: Cloudy/ Rainy **Visibility:**

Air Temperature: 83 degF **Bar. Pressure:**

Wind Speed/Dir: 10 / NE **Wind Gusts:**

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
FLIFT	36K forklift		AHERN	32a1	---	27-Jul-17	
Notes:	Charged as dayrate						
LIGHTS	2 X Light towers		BnL	43e	---	27-Jul-17	
OTHER	2 x Trailers		BnL	43m	---	27-Jul-17	
OTHER	Mud cleaner		NOVB	32a1	---	31-Jul-17	
Notes:	Charged as dayrate						
OTHER	Automatic driller		NOVT	38d	---	31-Jul-17	
SURVEY	Survey tools		KnR	38h	---	31-Jul-17	
Notes:	4800 per month						
OTHER	Well Head		GRG	46a	---	02-Aug-17	
MUDCOOLER	Gen for mud cooler		AHERN	38o	---	03-Aug-17	
Notes:	start 8/15						
MUDCOOLER	Mud cooler		DRLCO	38o	---	03-Aug-17	
Notes:	start 8/15						
OTHER	Mud office		Rollins	36b	---	04-Aug-17	
Notes:	60 day min. with deliver and return						
OTHER	Restrooms		Rollins	43i	---	28-Jul-17	

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 50

Report For 14-Sep-17

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
Notes:	2 x 15 day (est)						
OTHER	Rain4rent tank		Rollins	43c	---	30-Jun-17	
Notes:	30 day (est)						
OTHER	Trash dumpster		Rollins	43j	---	30-Jun-17	
Notes:	30 day (est)						
JARS	6-1/2" jars		KnR	38f1	---	08-Aug-17	
Notes:	Plus 1500 redress						
OTHER	Centrifuge		NOVB	38g	---	15-Aug-17	
Notes:	Centrifuge 300/day						
TOOLS	6-1/2" shock sub	1455355	KnR	38f1	---	16-Aug-17	
Notes:	Plus 1500 redress.						
			Total Daily Rental Cost $:		---		

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 51 **Report For 15-Sep-17**

Operator:	University of Utah	**Rig:**	Kenai 10	**Spud Date:**	31-Jul-17	**Daily Cost / Mud ($):**			---
Measured Depth (ft):	7536	**Drilling Days (act.):**	47	**Wellbore:**	Original Well Bore	**AFE No.**		**AFE ($)**	**Actual ($)**
Vertical Depth (ft):	7528	**Drilling Days (plan):**	58	**RKB Elevation (ft):**	21.50	---		---	---
Proposed TD (ft):	7060	**Days On Location:**	51	**Last BOP Test:**	13-Aug-17	---		---	---
Hole Made (ft) / Hrs:	0 / 0.0	**Last Casing:**	7.000 at 7,375			**Totals:**		---	---
Average ROP (ft/hr):		**Next Casing:**		**Working Interest:**		**Well Cost ($):**			---

Pers/Hrs:	**Operator:**	2 / 24	**Contractor:**	12 / 144	**Service:**	10 / 120	**Other:**	0 / 0	**Total:**	24 / 288

SafetySummary: No incidents or events reported. 51 days since LTI. Conducted Safety Meeting.

Current Operations: 00:00 to 06:00 hrs: Plugged back with gravel from 7,525' to 7,455'.

Planned Operations: Plug back to 7,390'. Run and cement 7" 29# casing.

Toolpusher: Cal Sutton, John Rogers

Wellsite Supervisors: Virgil Welch, Randy Baldwin **Tel No.:**

Operations Summary

From	To	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	0:30	0.50	7,536	10-6-4	POH with OEDP from 1,226'.	X
0:30	9:00	8.50	7,536	10-11	PJSM with Schlumberger. Rigged up and ran Sonic and Image logs.	
9:00	13:00	4.00	7,536	10-11	Run Triple combo Logs. Rigged down logging equipment.	
13:00	17:00	4.00	7,536	5-6-3	RIH with OEDP to 7,535'.	
17:00	19:30	2.50	7,536	5-5-1	Circulated and cooled hole.	
19:30	21:00	1.50	7,536	5-99	PJSM with Resource Cementing. Rigged up cement equipment. Pumped 60 bbls of water, followed by 5 bbls of 13 ppg cement, 8 bbls of water, 71 bbls of water. Pulled up 10' and reversed out approx 3 bbls of cement.	
21:00	23:00	2.00	7,536	5-5-1	Circulated hole while rigging up to dump gravel.	
23:00	23:30	0.50	7,536	5-6-4	POH from 7,525' to 7,485'.	
23:30	0:00	0.50	7,536	5-99	Dumped gravel with mud down drill pipe.	

Management Summary

POH with open end drill pipe from 1,226'.
Ran E Logs to 7,536'.
RIH with open end drill pipe to 7,535'.
Cooled hole and pumped 5 bbl cement plug.
Reversed out 3 bbls. (10' left in hole).
Started dumping gravel down drill pipe.

Comments

Temp in 116F, Temp out 144F.

Casing/Tubular Information

Type	Size (ins)	Top MD (ft)	Top TVD (ft)	Bottom MD (ft)	Bottom TVD (ft)	Hole Section	OH Diam. (ins)	Nom. Wgt. (lbs)	Nominal Grade	LOT (lbs/gal)
FULL	20.000	0	0	84		COND		53		
FULL	13.375	0		338		SURF		55	N-80	11.90
FULL	9.625	0	0	2,172	2,173	INT1	18.000	40	K-55	19.20
FULL	7.000	-3	0	7,375	7,372	PROD	8.750	29	L-80	

Mud Information

Dens.	Vis	PV	YP	Filt.	Cake	pH/ES	Solids %	Oil %	Water %	Sand %	LGS	Cl	Ca	CaCl	Gels 10s	Gels 10m	Gels 30m	Temp In	Temp Out	Mud Loss
15-Sep-17 18:30 at Depth 7,536 ft Return Flow Line, Type: Low Solids Non-Dispersed																				
8.60	33	5	10	12	1	8.4	4	0	96	0.15		500	200		2	3	4	116	144	0.0

Comments: Mud cooler on.

Mud Consumables

Item Description	Qty.	Cost	Item Description	Qty.	Cost
Amberguard - 5GAL	1	---	Caustic Soda - 50#SK	1	---
Defoam - 5GAL	1	---			

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 51 **Report For 15-Sep-17**

Miscellaneous Drilling Parameters

Hook Loads (lbs):	**Off Bottom Rotate:**	**Pick Up:**	**Slack Off:**	**Drag Avg/Max:** /
Hours on BHA:	**Since Inspection:** 0	**Total:** 0	**Jars:** 0	
Hours on Casing/Liner:	**Rotating:** 519 /	**Tripping:** 227 /	☐ **Wear Bushing Installed**	

Rig Information

Equipment Problems:

Location Condition:

Transport:

Solids Control Information

Screen Sizes:	**Top**	**Middle 1**	**Middle 2**	**Bottom**	**Equipment Usage (Hrs):**
Shaker No 1:	145	145	145	145	**Desilter:** 24
Shaker No 2:	145	145	145	145	**Centrifuge 1:** 3 (Solids Removal)
Shaker No 3:	255	255	255		

Drill Pipe Inventory

DP Size	Joints	Weight	Grade	Thread	DP Size	Joints	Weight	Grade	Thread
4 TSDS	240	14.0	S-135	TSDS40	4 HWDP	30	28.0		TSDS40

Safety Information

Meetings/Drills	Time	Description
Safety	45	Pre-tour safety meetings with both crews. PJSMs with Schlumberger and Resource.

First Aid Treatments: **Medical Treatments:** **Lost Time Incidents:** **Days Since LTI:** 51

☐ **BOP Test** ☐ **Crownamatic Check**

Weather Information

Sky Condition:	Partly Cloudy	**Visibility:**	
Air Temperature:	78 degF	**Bar. Pressure:**	
Wind Speed/Dir:	5 / NE	**Wind Gusts:**	

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
FLIFT	36K forklift		AHERN	32a1	---	27-Jul-17	
Notes:	Charged as dayrate						
LIGHTS	2 X Light towers		BnL	43e	---	27-Jul-17	
OTHER	2 x Trailers		BnL	43m	---	27-Jul-17	
OTHER	Mud cleaner		NOVB	32a1	---	31-Jul-17	
Notes:	Charged as dayrate						
OTHER	Automatic driller		NOVT	38d	---	31-Jul-17	
SURVEY	Survey tools		KnR	38h	---	31-Jul-17	
Notes:	4800 per month						
OTHER	Well Head		GRG	46a	---	02-Aug-17	
MUDCOOLER	Gen for mud cooler		AHERN	38o	---	03-Aug-17	
Notes:	start 8/15						
MUDCOOLER	Mud cooler		DRLCO	38o	---	03-Aug-17	
Notes:	start 8/15						
OTHER	Mud office		Rollins	36b	---	04-Aug-17	
Notes:	60 day min. with deliver and return						
OTHER	Restrooms		Rollins	43i	---	28-Jul-17	
Notes:	2 x 15 day (est)						
OTHER	Rain4rent tank		Rollins	43c	---	30-Jun-17	
Notes:	30 day (est)						
OTHER	Trash dumpster		Rollins	43j	---	30-Jun-17	
Notes:	30 day (est)						
JARS	6-1/2" jars		KnR	38f1	---	08-Aug-17	15-Sep-17

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
Notes:	Plus 1500 redress						
OTHER	Centrifuge		NOVB	38g	---	15-Aug-17	
Notes:	Centrifuge 300/day						
TOOLS	6-1/2" shock sub	1455355	KnR	38f1	---	16-Aug-17	15-Sep-17
Notes:	Plus 1500 redress.						
			Total Daily Rental Cost $:		---		

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 52 **Report For 16-Sep-17**

Operator:	University of Utah	**Rig:**	Kenai 10	**Spud Date:**	31-Jul-17	**Daily Cost / Mud ($):**			---
Measured Depth (ft):	7536	**Drilling Days (act.):**	48	**Wellbore:**	Original Well Bore	**AFE No.**		**AFE ($)**	**Actual ($)**
Vertical Depth (ft):	7528	**Drilling Days (plan):**	58	**RKB Elevation (ft):**	21.50	---		---	---
Proposed TD (ft):	7060	**Days On Location:**	52	**Last BOP Test:**	13-Aug-17	---		---	---
Hole Made (ft) / Hrs:	0 / 0.0	**Last Casing:**	7.000 at 7,375			**Totals:**		---	---
Average ROP (ft/hr):		**Next Casing:**		**Working Interest:**		**Well Cost ($):**			---

Pers/Hrs:	**Operator:**	2 / 24	**Contractor:**	12 / 144	**Service:**	14 / 168	**Other:**	0 / 0	**Total:**	28 / 336

SafetySummary: No incidents or events reported. 52 days since LTI. Conducted Safety Meeting.

Current Operations: 00:00 to 06:00 hrs: Finished running casing to 7.378'. Mixed and pumped 284 bbls of lead cement and 28 bbls of tail cement.

Planned Operations: Displace cement and inflate ECP.
WOC.
Nipple down 13-5/8" BOP.

Toolpusher: Cal Sutton, John Rogers

Wellsite Supervisors: Virgil Welch, Randy Baldwin **Tel No.:**

Operations Summary

From	To	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	10:00	10.00	7,536	5-99	Dumped gravel with mud down drill pipe. Tagged at 7,386'.	
10:00	13:00	3.00	7,536	4-6-4	POH with drill pipe.	
13:00	13:30	0.50	7,536	4-99	Changed out 4" pipe rams to 7" casing rams.	
13:30	14:00	0.50	7,536	4-56	PJSM and rigged up casing running equipment.	
14:00	0:00	10.00	7,536	4-12-1	Ran 7" 29# L80 BTC casing to 6,298'.	

Management Summary

Dumped gravel with mud down drill pipe.
Tagged at 7,382' and POH.
Ran 7" 29# L80 BTC casing to 6,298'.

Comments

Temp in 85F Temp out 107F.

Casing/Tubular Information

Type	Size (ins)	Top MD (ft)	Top TVD (ft)	Bottom MD (ft)	Bottom TVD (ft)	Hole Section	OH Diam. (ins)	Nom. Wgt. (lbs)	Nominal Grade	LOT (lbs/gal)
FULL	20.000	0	0	84		COND		53		
FULL	13.375	0		338		SURF		55	N-80	11.90
FULL	9.625	0	0	2,172	2,173	INT1	18.000	40	K-55	19.20
FULL	7.000	-3	0	7,375	7,372	PROD	8.750	29	L-80	

Mud Information

16-Sep-17 21:30 at Depth 7,535 ft Return Flow Line, Type: Low Solids Non-Dispersed

Dens.	Vis	PV	YP	Filt.	Cake	pH/ES	Solids %	Oil %	Water %	Sand %	LGS	Cl	Ca	CaCl	Gels 10s	Gels 10m	Gels 30m	Temp In	Temp Out	Mud Loss
8.50	33	6	11	12	1	8.2	3.5	0	96.5	0.1		500	240		3	4	4	80		0.0

Mud Consumables

Item Description	Qty.	Cost	Item Description	Qty.	Cost
Trucking Return chemicals -	1	---			

Miscellaneous Drilling Parameters

Hook Loads (lbs):	**Off Bottom Rotate:**	143,000	**Pick Up:**	147,000	**Slack Off:**	**Drag Avg/Max:**	/
Hours on BHA:	**Since Inspection:**	0	**Total:**	0	**Jars:**	0	
Hours on Casing/Liner:	**Rotating:**	519 /	**Tripping:**	230 /	☐ **Wear Bushing Installed**		

Rig Information

Equipment Problems:

Location Condition:

Transport:

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 52 **Report For 16-Sep-17**

Solids Control Information

Screen Sizes:	Top	Middle 1	Middle 2	Bottom	Equipment Usage (Hrs):	
Shaker No 1:	145	145	145	145	Desilter:	24
Shaker No 2:	145	145	145	145		
Shaker No 3:	255	255	255			

Drill Pipe Inventory

DP Size	Joints	Weight	Grade	Thread	DP Size	Joints	Weight	Grade	Thread
4 TSDS	240	14.0	S-135	TSDS40	4 HWDP	30	28.0		TSDS40

Safety Information

Meetings/Drills	Time	Description
Safety	30	Pre-tour safety meetings with both crews. PJSM with B&L.

First Aid Treatments: **Medical Treatments:** **Lost Time Incidents:** **Days Since LTI:** 52

☐ **BOP Test** ☐ **Crownamatic Check**

Weather Information

Sky Condition:	Clear	**Visibility:**	
Air Temperature:	79 degF	**Bar. Pressure:**	
Wind Speed/Dir:	0 /	**Wind Gusts:**	

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
FLIFT	36K forklift		AHERN	32a1	---	27-Jul-17	
Notes:	Charged as dayrate						
LIGHTS	2 X Light towers		BnL	43e	---	27-Jul-17	
OTHER	2 x Trailers		BnL	43m	---	27-Jul-17	
OTHER	Mud cleaner		NOVB	32a1	---	31-Jul-17	
Notes:	Charged as dayrate						
OTHER	Automatic driller		NOVT	38d	---	31-Jul-17	
SURVEY	Survey tools		KnR	38h	---	31-Jul-17	
Notes:	4800 per month						
OTHER	Well Head		GRG	46a	---	02-Aug-17	
MUDCOOLER	Gen for mud cooler		AHERN	38o	---	03-Aug-17	
Notes:	start 8/15						
MUDCOOLER	Mud cooler		DRLCO	38o	---	03-Aug-17	
Notes:	start 8/15						
OTHER	Mud office		Rollins	36b	---	04-Aug-17	
Notes:	60 day min. with deliver and return						
OTHER	Restrooms		Rollins	43i	---	28-Jul-17	
Notes:	2 x 15 day (est)						
OTHER	Rain4rent tank		Rollins	43c	---	30-Jun-17	
Notes:	30 day (est)						
OTHER	Trash dumpster		Rollins	43j	---	30-Jun-17	
Notes:	30 day (est)						
OTHER	Centrifuge		NOVB	38g	---	15-Aug-17	
Notes:	Centrifuge 300/day						
			Total Daily Rental Cost $:		---		

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 53 **Report For 17-Sep-17**

Operator:	University of Utah	**Rig:**	Kenai 10	**Spud Date:**	31-Jul-17	**Daily Cost / Mud ($):**			---
Measured Depth (ft):	7536	**Drilling Days (act.):**	49	**Wellbore:**	Original Well Bore	**AFE No.**		**AFE ($)**	**Actual ($)**
Vertical Depth (ft):	7528	**Drilling Days (plan):**	58	**RKB Elevation (ft):**	21.50	---		---	---
Proposed TD (ft):	7060	**Days On Location:**	53	**Last BOP Test:**	13-Aug-17	---		---	---
Hole Made (ft) / Hrs:	0 / 0.0	**Last Casing:**	7.000 at 7,375			**Totals:**		---	---
Average ROP (ft/hr):		**Next Casing:**		**Working Interest:**		**Well Cost ($):**			---

Pers/Hrs:	**Operator:**	2 / 24	**Contractor:**	12 / 144	**Service:**	10 / 120	**Other:**	0 / 0	**Total:**	24 / 288

SafetySummary: No incidents or events reported. 53 days since LTI. Conducted Safety Meeting.

Current Operations: 00:00 to 06:00 hrs: Welded on 7-1/16 10K wellhead.

Planned Operations: Nipple up 7-1/16 5K BOPs. Test same.

Toolpusher: Phillip Hoffman, Billy Harris

Wellsite Supervisors: Virgil Welch, Randy Baldwin **Tel No.:**

Operations Summary

From	To	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	1:30	1.50	7,536	4-12-1	Ran 7" 29# BTC casing from 6,298' to 7,378'.	
1:30	3:30	2.00	7,536	5-5-1	Circulated and cooled hole. Rigged down casing equipment.	
3:30	4:00	0.50	7,536	5-56	Rigged up cementers.	
4:00	7:00	3.00	7,536	5-12-2	Pumped 284 bbls of foamed lead cement, 28 bbls of tail cement, Dropped plug. 5 bbls of cement and 266 bbls of water. bumped plug. Inflated ECP. Pumped 5 bbls of cap cement. CIP 06:59. Approx 60 bbls of cement returns.	
7:00	16:00	9.00	7,536	5-13	Waited on cement.	
16:00	22:00	6.00	7,536	6-14	Nipple down and set out BOPs.	
22:00	0:00	2.00	7,536	6-35	Cut and dressed 7" casing.	

Management Summary

Ran 7" 29# BTC casing from 6,298' to 7,378'. Pumped and displaced N2 cement job.
Inflated ECP.
Pumped cap cement.
- CIP 06:59.
- Approx 60 bbls of cement returns.
Nippled down BOPs.

Casing/Tubular Information

Type	Size (ins)	Top MD (ft)	Top TVD (ft)	Bottom MD (ft)	Bottom TVD (ft)	Hole Section	OH Diam. (ins)	Nom. Wgt. (lbs)	Nominal Grade	LOT (lbs/gal)
FULL	20.000	0	0	84		COND		53		
FULL	13.375	0		338		SURF		55	N-80	11.90
FULL	9.625	0	0	2,172	2,173	INT1	18.000	40	K-55	19.20
FULL	7.000	-3	0	7,375	7,372	PROD	8.750	29	L-80	

Mud Information

Dens.	Vis	PV	YP	Filt.	Cake	pH/ES	Solids %	Oil %	Water %	Sand %	LGS	Cl	Ca	CaCl	Gels 10s	Gels 10m	Gels 30m	Temp In	Temp Out	Mud Loss
17-Sep-17 21:30 at Depth 7,535 ft Return Flow Line, Type: Low Solids Non-Dispersed																				
8.50	33	6	11	12	1	8.2	3.5	0	96.5	0.1		500	240		3	4	4			0.0

Mud Consumables

Item Description	Qty.	Cost	Item Description	Qty.	Cost
Saw Dust - 50#SK	1	---			

Miscellaneous Drilling Parameters

Hook Loads (lbs):	**Off Bottom Rotate:**		**Pick Up:**		**Slack Off:**		**Drag Avg/Max:**	/	
Hours on BHA:	**Since Inspection:**	0	**Total:**	0	**Jars:**	0			
Hours on Casing/Liner:	**Rotating:**	519 /	**Tripping:**	230 /	☐ **Wear Bushing Installed**				

Rig Information

Equipment Problems:

Location Condition:

Transport:

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 53 **Report For 17-Sep-17**

Solids Control Information

Screen Sizes:	Top	Middle 1	Middle 2	Bottom	Equipment Usage (Hrs):	
Shaker No 1:	145	145	145	145	Desilter:	0
Shaker No 2:	145	145	145	145		
Shaker No 3:	255	255	255			

Drill Pipe Inventory

DP Size	Joints	Weight	Grade	Thread	DP Size	Joints	Weight	Grade	Thread
4 TSDS	252	14.0	S-135	TSDS40	4 HWDP	30	28.0		TSDS40

Safety Information

Meetings/Drills	Time	Description
Safety	25	Pre-tour safety meeting with both crews. PJSM with Resource Cementing

First Aid Treatments: **Medical Treatments:** **Lost Time Incidents:** **Days Since LTI:** 53

☐ **BOP Test** ☐ **Crownamatic Check**

Weather Information

Sky Condition:	Partly coludy	**Visibility:**	
Air Temperature:	79 degF	**Bar. Pressure:**	
Wind Speed/Dir:	5 / NE	**Wind Gusts:**	

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
FLIFT	36K forklift		AHERN	32a1	---	27-Jul-17	
Notes:	Charged as dayrate						
LIGHTS	2 X Light towers		BnL	43e	---	27-Jul-17	
OTHER	2 x Trailers		BnL	43m	---	27-Jul-17	
OTHER	Mud cleaner		NOVB	32a1	---	31-Jul-17	
Notes:	Charged as dayrate						
OTHER	Automatic driller		NOVT	38d	---	31-Jul-17	
SURVEY	Survey tools		KnR	38h	---	31-Jul-17	
Notes:	4800 per month						
OTHER	Well Head		GRG	46a	---	02-Aug-17	
MUDCOOLER	Gen for mud cooler		AHERN	38o	---	03-Aug-17	
Notes:	start 8/15						
MUDCOOLER	Mud cooler		DRLCO	38o	---	03-Aug-17	
Notes:	start 8/15						
OTHER	Mud office		Rollins	36b	---	04-Aug-17	
Notes:	60 day min. with deliver and return						
OTHER	Restrooms		Rollins	43i	---	28-Jul-17	
Notes:	2 x 15 day (est)						
OTHER	Rain4rent tank		Rollins	43c	---	30-Jun-17	
Notes:	30 day (est)						
OTHER	Trash dumpster		Rollins	43j	---	30-Jun-17	
Notes:	30 day (est)						
OTHER	Centrifuge		NOVB	38g	---	15-Aug-17	
Notes:	Centrifuge 300/day						
			Total Daily Rental Cost $:		---		

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 54 **Report For 18-Sep-17**

Operator:	University of Utah	**Rig:**	Kenai 10	**Spud Date:**	31-Jul-17	**Daily Cost / Mud ($):**			---
Measured Depth (ft):	7536	**Drilling Days (act.):**	50	**Wellbore:**	Original Well Bore	**AFE No.**		**AFE ($)**	**Actual ($)**
Vertical Depth (ft):	7528	**Drilling Days (plan):**	58	**RKB Elevation (ft):**	21.50	---		---	---
Proposed TD (ft):	7060	**Days On Location:**	54	**Last BOP Test:**	13-Aug-17	---		---	---
Hole Made (ft) / Hrs:	0 / 0.0	**Last Casing:**	7.000 at 7,375			**Totals:**		---	---
Average ROP (ft/hr):		**Next Casing:**		**Working Interest:**		**Well Cost ($):**			---

Pers/Hrs:	**Operator:**	2 / 24	**Contractor:**	12 / 144	**Service:**	10 / 120	**Other:**	0 / 0	**Total:**	24 / 288

SafetySummary: No incidents or events reported. 54 days since LTI. Conducted Safety Meeting.

Current Operations: 00:00 to 06:00 hrs: Attempted to POH with test plug. Test plug wouldn't fit through bottom of riser. Picked up riser, removed test plug. RIH with 6" bit and BHA to 3,000'.

Planned Operations: Drill out shoe track to 5' above shoe. POH.
Run CBL log.

Toolpusher: Phillip Hoffman, Billy Harris

Wellsite Supervisors: Virgil Welch, Randy Baldwin **Tel No.:**

Operations Summary

From	To	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	8:00	8.00	7,536	6-35	Weld on well head, tested well head and had 3 pin hole leaks on the inside, while cooling fabricate riser to fit	
8:00	12:00	4.00	7,536	6-35	After well head cooled grind inside weld back out and welded a root pass and secondary welds above and below. Tested with nitrogen while hot to 1750 psi between welds. Test good	
12:00	18:00	6.00	7,536	6-14	Let well head cool and install test plug in well head, When bolting on master valve discovered bolts 1&3/4" too short. Over 1/2 nut on each end. Will replace with right studs after CBL, Install master valve, Cross over spool from 5K to 10K, 5K drilling spool, 5K double gate, 5K annular, pitcher nipple	
18:00	21:00	3.00	7,536	6-14	Set in and nippled up10k master valve, x-over spool, 5k mudcross, double gate and bag. Installed riser and pitcher nipple, dresser sleeve and accumulator lines.	
21:00	0:00	3.00	7,536	6-15	Tested blind rams, pipe rams, bag and choke valves to 300 psi low and 1,000 psi high. Test waived by UDNR, Jim Goddard.	

Management Summary

Welded on 7-1/16" 10k wellhead.
Installed test plug.
Nippled up 7-1/16 5k BOPE.
- Tested same.

Casing/Tubular Information

Type	Size (ins)	Top MD (ft)	Top TVD (ft)	Bottom MD (ft)	Bottom TVD (ft)	Hole Section	OH Diam. (ins)	Nom. Wgt. (lbs)	Nominal Grade	LOT (lbs/gal)
FULL	20.000	0	0	84		COND		53		
FULL	13.375	0		338		SURF		55	N-80	11.90
FULL	9.625	0	0	2,172	2,173	INT1	18.000	40	K-55	19.20
FULL	7.000	-3	0	7,375	7,372	PROD	8.750	29	L-80	

Mud Information

Dens.	Vis	PV	YP	Filt.	Cake	pH/ES	% Solids	% Oil	% Water	% Sand	LGS	Cl	Ca	CaCl	Gels 10s	Gels 10m	Gels 30m	Temp In	Temp Out	Mud Loss
18-Sep-17 18:30 at Depth 7,535 ft Return Flow Line, Type: Low Solids Non-Dispersed																				
8.60	37	8	23	12	1	8	4	0	96	0.1		500	240		3	5	7			0.0

Mud Consumables

Item Description	Qty.	Cost	Item Description	Qty.	Cost
Saw Dust - 50#SK	11	---			

Miscellaneous Drilling Parameters

Hook Loads (lbs):	**Off Bottom Rotate:**		**Pick Up:**		**Slack Off:**		**Drag Avg/Max:**	/	
Hours on BHA:	**Since Inspection:**	0	**Total:**	0	**Jars:**	0			
Hours on Casing/Liner:	**Rotating:**	519 /	**Tripping:**	230 /	☐ **Wear Bushing Installed**				

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 54 **Report For 18-Sep-17**

Rig Information

Equipment Problems:

Location Condition:

Transport:

Solids Control Information

Screen Sizes:	Top	Middle 1	Middle 2	Bottom	Equipment Usage (Hrs):	
Shaker No 1:	145	145	145	145	Desilter:	0
Shaker No 2:	145	145	145	145		
Shaker No 3:	255	255	255			

Drill Pipe Inventory

DP Size	Joints	Weight	Grade	Thread	DP Size	Joints	Weight	Grade	Thread
4 TSDS	252	14.0	S-135	TSDS40	4 HWDP	30	28.0		TSDS40

Safety Information

Meetings/Drills	Time	Description
Safety	30	Pre-tour safety meeting with both crews. PJSM with Resource Cementing.

First Aid Treatments: **Medical Treatments:** **Lost Time Incidents:** **Days Since LTI:** 54

☐ **BOP Test** ☐ **Crownamatic Check**

Weather Information

Sky Condition:	Clear	**Visibility:**	
Air Temperature:	80 degF	**Bar. Pressure:**	
Wind Speed/Dir:	15 / SW	**Wind Gusts:**	

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
FLIFT	36K forklift		AHERN	32a1	---	27-Jul-17	
Notes:	Charged as dayrate						
LIGHTS	2 X Light towers		BnL	43e	---	27-Jul-17	
OTHER	2 x Trailers		BnL	43m	---	27-Jul-17	
OTHER	Mud cleaner		NOVB	32a1	---	31-Jul-17	
Notes:	Charged as dayrate						
OTHER	Automatic driller		NOVT	38d	---	31-Jul-17	
SURVEY	Survey tools		KnR	38h	---	31-Jul-17	
Notes:	4800 per month						
OTHER	Well Head		GRG	46a	---	02-Aug-17	
MUDCOOLER	Gen for mud cooler		AHERN	38o	---	03-Aug-17	
Notes:	start 8/15						
MUDCOOLER	Mud cooler		DRLCO	38o	---	03-Aug-17	
Notes:	start 8/15						
OTHER	Mud office		Rollins	36b	---	04-Aug-17	
Notes:	60 day min. with deliver and return						
OTHER	Restrooms		Rollins	43i	---	28-Jul-17	
Notes:	2 x 15 day (est)						
OTHER	Rain4rent tank		Rollins	43c	---	30-Jun-17	
Notes:	30 day (est)						
OTHER	Trash dumpster		Rollins	43j	---	30-Jun-17	
Notes:	30 day (est)						
OTHER	Centrifuge		NOVB	38g	---	15-Aug-17	
Notes:	Centrifuge 300/day						
			Total Daily Rental Cost $:		---		

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 55 **Report For 19-Sep-17**

Operator:	University of Utah	**Rig:**	Kenai 10	**Spud Date:**	31-Jul-17	**Daily Cost / Mud ($):**			---
Measured Depth (ft):	7536	**Drilling Days (act.):**	51	**Wellbore:**	Original Well Bore	**AFE No.**		**AFE ($)**	**Actual ($)**
Vertical Depth (ft):	7528	**Drilling Days (plan):**	58	**RKB Elevation (ft):**	21.50	---		---	---
Proposed TD (ft):	7060	**Days On Location:**	55	**Last BOP Test:**	13-Aug-17	---		---	---
Hole Made (ft) / Hrs:	0 / 0.0	**Last Casing:**	7.000 at 7,375			**Totals:**		---	---
Average ROP (ft/hr):		**Next Casing:**		**Working Interest:**		**Well Cost ($):**			---

Pers/Hrs: **Operator:** 2 / 24 **Contractor:** 12 / 144 **Service:** 6 / 72 **Other:** 0 / 0 **Total:** 20 / 240

SafetySummary: No incidents or events reported. 55 days since LTI. Conducted Safety Meeting.

Current Operations: 00:00 to 06:00 hrs: Finished running CBL log.

Planned Operations: Pressure test casing and master valve to 5000 psi. RIH and clean out shoe and cement. POH. RIH OEDP. Clean out sand.

Toolpusher: Phillip Hoffman, Billy Harris

Wellsite Supervisors: Virgil Welch, Randy Baldwin **Tel No.:**

Operations Summary

From	To	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	3:00	3.00	7,536	6-15	Attempt to Pull test plug from well head, the plug would not pass through the bottom flange of the Weatherford Pitcher nipple, picked up Riser and remover test plug, re-install riser	X
3:00	4:00	1.00	7,536	10-6-1	Pick up 6" bit, scraper, bit sub, 3 ea 4&3/4" drill collars, 3 ea HWDP	
4:00	6:00	2.00	7,536	10-6-3	RIH with drill pipe to 3000'	
6:00	9:00	3.00	7,536	10-6-3	RIH with drill pipe from 3000' to 6290', tag cement stringer @ 6290'	
9:00	13:30	4.50	7,536	10-99	Clean out cement stringers, while working pipe out of the derrick from 6290' to 7292', drill floppy plug, landing collar and float collar to 7295'	
13:30	14:30	1.00	7,536	10-99	Clean out cement from 7295' to 7364'	
14:30	15:30	1.00	7,536	10-5-1	Circulate hole clean for CBL	
15:30	18:30	3.00	7,536	10-6-4	POH from 7364' to 189'.	
18:30	19:00	0.50	7,536	10-6-2	POH with BHA. L/D scraper and bit.	
19:00	0:00	5.00	7,536	11-11	PJSM with Schluberger. Rigged up and ran CBL logs with 1000 psi surface pressure on casing.	

Management Summary

RIH with 6" bit and BHA and tagged cement at 6,290'.
Clean out cement to 7292'.
Drilled out plug, landing collar and float collar at 7,295'.
POH.
Ran CBL logs with 1,000 psi on casing.

Casing/Tubular Information

Type	Size (ins)	Top MD (ft)	Top TVD (ft)	Bottom MD (ft)	Bottom TVD (ft)	Hole Section	OH Diam. (ins)	Nom. Wgt. (lbs)	Nominal Grade	LOT (lbs/gal)
FULL	20.000	0	0	84		COND		53		
FULL	13.375	0		338		SURF		55	N-80	11.90
FULL	9.625	0	0	2,172	2,173	INT1	18.000	40	K-55	19.20
FULL	7.000	-3	0	7,375	7,372	PROD	8.750	29	L-80	

Mud Information

Dens.	Vis	PV	YP	Filt.	Cake	pH/ES	Solids %	Oil %	Water %	Sand %	LGS	Cl	Ca	CaCl	Gels 10s	Gels 10m	Gels 30m	Temp In	Temp Out	Mud Loss
19-Sep-17 16:30 at Depth 7,535 ft Return Flow Line, Type: Low Solids Non-Dispersed																				
8.40	32	4	7	12	1	10	2	0	98	0.25		500	80		2	3	3	143	153	

Mud Consumables

Item Description	Qty.	Cost	Item Description	Qty.	Cost
Amberguard - 5GAL	1	---	BiCarb - 50#SK	3	---
XGD Xanthan Gum - 50#SK	5	---			

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 55 **Report For 19-Sep-17**

Bit/BHA/Workstring Information

No Run		Make	Model	Diam	Depth In	This Run Dist	Hrs	R.O.P. Avg	Max	WOB	RPM	Torque	Mud Wt	Flow	Pump Press	J. Vel	P. Drp	HHP	JIF
15	1	HC	SL121P	6.000	6920	444	6	74.0	100.0	12	60	135	9	435	700	59	27	7	113

Jets: 32 32 32 **Out:** 7364 **Grade:** **Cutter:** 1 / 1 **Dull:** WT / NO **Wear:** A **Brgs:** E **Gge:** 0 **Pull:** OTH

BHA - No. 21 - BIT, SCRAP, BS, 3 DCS, 3 HWDP = 187.95

Miscellaneous Drilling Parameters

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

Hours on BHA: **Since Inspection:** 5.5 **Total:** 5.5 **Jars:** 0

Hours on Casing/Liner: **Rotating:** 519 / **Tripping:** 238 / ☐ **Wear Bushing Installed**

Rig Information

Equipment Problems:

Location Condition:

Transport:

Solids Control Information

Screen Sizes:	Top	Middle 1	Middle 2	Bottom	Equipment Usage (Hrs):
Shaker No 1:	145	145	145	145	Desilter: 0
Shaker No 2:	145	145	145	145	
Shaker No 3:	255	255	255		

Drill Pipe Inventory

DP Size	Joints	Weight	Grade	Thread	DP Size	Joints	Weight	Grade	Thread
4 TSDS	252	14.0	S-135	TSDS40	4 HWDP	30	28.0		TSDS40

Safety Information

Meetings/Drills	Time	Description
Safety	30	Pre-tour safety meetings with both crews. PJSM with Schlumberger.

First Aid Treatments: **Medical Treatments:** **Lost Time Incidents:** **Days Since LTI:** 55

☐ **BOP Test** ☐ **Crownamatic Check**

Weather Information

Sky Condition: Partly clear **Visibility:**

Air Temperature: 78 degF **Bar. Pressure:**

Wind Speed/Dir: 15 / S **Wind Gusts:**

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
FLIFT	36K forklift		AHERN	32a1	---	27-Jul-17	
Notes:	Charged as dayrate						
LIGHTS	2 X Light towers		BnL	43e	---	27-Jul-17	
OTHER	2 x Trailers		BnL	43m	---	27-Jul-17	
OTHER	Mud cleaner		NOVB	32a1	---	31-Jul-17	
Notes:	Charged as dayrate						
OTHER	Automatic driller		NOVT	38d	---	31-Jul-17	
SURVEY	Survey tools		KnR	38h	---	31-Jul-17	
Notes:	4800 per month						
OTHER	Well Head		GRG	46a	---	02-Aug-17	18-Sep-17
MUDCOOLER	Gen for mud cooler		AHERN	38o	---	03-Aug-17	
Notes:	start 8/15						
MUDCOOLER	Mud cooler		DRLCO	38o	---	03-Aug-17	
Notes:	start 8/15						
OTHER	Mud office		Rollins	36b	---	04-Aug-17	
Notes:	60 day min. with deliver and return						
OTHER	Restrooms		Rollins	43i	---	28-Jul-17	

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 55

Report For 19-Sep-17

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
Notes:	2 x 15 day (est)						
OTHER	Rain4rent tank		Rollins	43c	---	30-Jun-17	
Notes:	30 day (est)						
OTHER	Trash dumpster		Rollins	43j	---	30-Jun-17	
Notes:	30 day (est)						
OTHER	Centrifuge		NOVB	38g	---	15-Aug-17	
Notes:	Centrifuge 300/day						
			Total Daily Rental Cost $:		---		

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 56 **Report For 20-Sep-17**

Operator:	University of Utah	**Rig:**	Kenai 10	**Spud Date:**	31-Jul-17	**Daily Cost / Mud ($):**			---
Measured Depth (ft):	7536	**Drilling Days (act.):**	52	**Wellbore:**	Original Well Bore	**AFE No.**		**AFE ($)**	**Actual ($)**
Vertical Depth (ft):	7528	**Drilling Days (plan):**	58	**RKB Elevation (ft):**	21.50	---		---	---
Proposed TD (ft):	7060	**Days On Location:**	56	**Last BOP Test:**	13-Aug-17	---		---	---
Hole Made (ft) / Hrs:	0 / 0.0	**Last Casing:**	7.000 at 7,375			**Totals:**		---	---
Average ROP (ft/hr):		**Next Casing:**		**Working Interest:**		**Well Cost ($):**			---

Pers/Hrs: **Operator:** 2 / 24 **Contractor:** 12 / 144 **Service:** 6 / 72 **Other:** 0 / 0 **Total:** 20 / 240

SafetySummary: No incidents or events reported. 56 days since LTI. Conducted Safety Meeting.

Current Operations: 00:00 to 06:00 hrs: RIH with OEDP to 3,522'.

Planned Operations: Clean out gravel.POH.
RIH with packer and temperature tools.
Perform permeability evaluation.

Toolpusher: Phillip Hoffman, Billy Harris

Wellsite Supervisors: Virgil Welch, Randy Baldwin **Tel No.:**

Operations Summary

From	To	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	3:30	3.50	7,536	11-11	Complete running of CBL under pressure with Schlumberger	
3:30	5:00	1.50	7,536	11-344	Rig down Schlumberger and Pressure control equipment	
5:00	6:00	1.00	7,536	6-35	Install riser and flow line, rig up cementer to side outlet on well head	
6:00	9:00	3.00	7,536	6-15	Pressure test surface equipment and lines several times to 5000 psi, clear air from lines by filling hole through test line and out flow line, close master valve, test master valve, well head and casing to 5000 psi for 10 min, test good	
9:00	15:00	6.00	7,536	6-6-3	Pick up bit with no nozzles, 3 DCS, 3 HWDP and RIH to 7,364'	
15:00	19:30	4.50	7,536	6-28	Drill out cement and shoe, clean out gravel from 7,374' to 7,525'	
19:30	21:00	1.50	7,536	6-5-1	Pumped sweeps and circulated hole clean	
21:00	0:00	3.00	7,536	6-6-4	POH with drill pipe to 800'.	

Management Summary

Ran CBL log.
Tested casing and master valve to 5000 psi.
RIH with 6" bit and drill out cement and shoe, clean out gravel from 7,374' to 7,525'
POH.

Casing/Tubular Information

Type	Size (ins)	Top MD (ft)	Top TVD (ft)	Bottom MD (ft)	Bottom TVD (ft)	Hole Section	OH Diam. (ins)	Nom. Wgt. (lbs)	Nominal Grade	LOT (lbs/gal)
FULL	20.000	0	0	84		COND		53		
FULL	13.375	0		338		SURF		55	N-80	11.90
FULL	9.625	0	0	2,172	2,173	INT1	18.000	40	K-55	19.20
FULL	7.000	-3	0	7,375	7,372	PROD	8.750	29	L-80	

Bit/BHA/Workstring Information

No Run	Make	Model	Diam	Depth In	This Run Dist	This Run Hrs	R.O.P. Avg	R.O.P. Max	WOB	RPM	Torque	Mud Wt	Mud Flow	Pump Press	J. Vel	P. Drp	HHP	JIF
15 2	HC	SL121P	6.000	7364	325	4	81.2	90.0	7,000	60	158	8	450	1700	61	28	7	120

Jets: 32 32 32 **Out:** 7525 **Grade:** **Cutter:** 1 / 1 **Dull:** WT / NO **Wear:** A **Brgs:** E **Gge:** 0 **Pull:** TD

BHA - No. 22 - BIT, SCRAP, BS, 3 DCS, 3 HWDP = 187.95

Miscellaneous Drilling Parameters

Hook Loads (lbs): **Off Bottom Rotate:** 110,000 **Pick Up:** 122,000 **Slack Off:** 105,000 **Drag Avg/Max:** 12000 / 14000

Hours on BHA: **Since Inspection:** 7.5 **Total:** 7.5 **Jars:** 2

Hours on Casing/Liner: **Rotating:** 521 / **Tripping:** 246 / ☐ **Wear Bushing Installed**

Rig Information

Equipment Problems:

Location Condition:

Transport:

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 56 **Report For 20-Sep-17**

Solids Control Information

Screen Sizes:	Top	Middle 1	Middle 2	Bottom
Shaker No 1:	145	145	145	145
Shaker No 2:	145	145	145	145
Shaker No 3:	255	255	255	

Drill Pipe Inventory

DP Size	Joints	Weight	Grade	Thread	DP Size	Joints	Weight	Grade	Thread
4 TSDS	252	14.0	S-135	TSDS40	4 HWDP	30	28.0		TSDS40

Safety Information

Meetings/Drills	Time	Description
Safety	15	Pre-tour safety meetings with both crews.

First Aid Treatments: **Medical Treatments:** **Lost Time Incidents:** **Days Since LTI:** 56

☐ **BOP Test** ☐ **Crownamatic Check**

Weather Information

Sky Condition:	Clear	**Visibility:**	
Air Temperature:	78 degF	**Bar. Pressure:**	
Wind Speed/Dir:	15 / S	**Wind Gusts:**	

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
FLIFT	36K forklift		AHERN	32a1	---	27-Jul-17	
Notes:	Charged as dayrate						
LIGHTS	2 X Light towers		BnL	43e	---	27-Jul-17	
OTHER	2 x Trailers		BnL	43m	---	27-Jul-17	
OTHER	Mud cleaner		NOVB	32a1	---	31-Jul-17	
Notes:	Charged as dayrate						
OTHER	Automatic driller		NOVT	38d	---	31-Jul-17	
SURVEY	Survey tools		KnR	38h	---	31-Jul-17	
Notes:	4800 per month						
MUDCOOLER	Gen for mud cooler		AHERN	38o	---	03-Aug-17	
Notes:	start 8/15						
MUDCOOLER	Mud cooler		DRLCO	38o	---	03-Aug-17	
Notes:	start 8/15						
OTHER	Mud office		Rollins	36b	---	04-Aug-17	
Notes:	60 day min. with deliver and return						
OTHER	Restrooms		Rollins	43i	---	28-Jul-17	
Notes:	2 x 15 day (est)						
OTHER	Rain4rent tank		Rollins	43c	---	30-Jun-17	
Notes:	30 day (est)						
OTHER	Trash dumpster		Rollins	43j	---	30-Jun-17	
Notes:	30 day (est)						
OTHER	Centrifuge		NOVB	38g	---	15-Aug-17	
Notes:	Centrifuge 300/day						
			Total Daily Rental Cost $:		---		

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 57 **Report For 21-Sep-17**

Operator:	University of Utah	**Rig:**	Kenai 10	**Spud Date:**	31-Jul-17	**Daily Cost / Mud ($):**			---
Measured Depth (ft):	7536	**Drilling Days (act.):**	53	**Wellbore:**	Original Well Bore	**AFE No.**		**AFE ($)**	**Actual ($)**
Vertical Depth (ft):	7528	**Drilling Days (plan):**	58	**RKB Elevation (ft):**	21.50	---		---	---
Proposed TD (ft):	7060	**Days On Location:**	57	**Last BOP Test:**	13-Aug-17	---		---	---
Hole Made (ft) / Hrs:	0 / 0.0	**Last Casing:**	7.000 at 7,375			**Totals:**		---	---
Average ROP (ft/hr):		**Next Casing:**		**Working Interest:**		**Well Cost ($):**			---

Pers/Hrs:	**Operator:**	2 / 24	**Contractor:**	12 / 144	**Service:**	5 / 60	**Other:**	2 / 24	**Total:**	21 / 252

SafetySummary: No incidents or events reported. 57 days since LTI. Conducted Safety Meeting.

Current Operations: 00:00 to 06:00 hrs: RIH to 7,434'. Tested drill pipe to 8,000 psi. RIH with sinker bar and burst rupture disk.

Planned Operations: Set packer.
Perform wellbore permeability evaluation.

Toolpusher: John Rogers, Daniel Lovell

Wellsite Supervisors: Virgil Welch, Randy Baldwin **Tel No.:**

Operations Summary

From	To	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	0:30	0.50	7,536	6-6-4	POH from 800' to surface	
0:30	2:00	1.50	7,536	6-34-4	Laid down, 3 HWDP, 3 DCS, bit	
2:00	9:00	7.00	7,536	6-6-3	RIH open ended to 7,495'.	
9:00	9:30	0.50	7,536	6-99	Rigged up to reverse circulate with open ended drill pipe.	
9:30	11:00	1.50	7,536	6-5-1	Reverse circulated down to 7,515 and tag gravel, wash gravel from 7,515 to 7,525' (PBTD).	
11:00	12:00	1.00	7,536	6-5-1	Reverse circulate out gravel at 7,525'	
12:00	13:30	1.50	7,536	6-5-1	Picked up kelly and circulated mud conventional method with 4 bottoms up, Changed over to water with 504 bbls.	
13:30	17:00	3.50	7,536	6-6-4	POH to surface with open ended drill pipe. L/D 1 joint.	
17:00	17:30	0.50	7,536	8-7	Rig service.	
17:30	19:00	1.50	7,536	11-6-1	Made up and RIH with packer and PT tools to 195'.	
19:00	20:00	1.00	7,536	11-6-3	RIH with drill pipe to 1,100' filling pipe with water.	
20:00	21:00	1.00	7,536	11-99	Wait on weather. High winds pushing blocks against back off derrick. Lighting strikes in the area.	
21:00	0:00	3.00	7,536	11-6-3	RIH with drill pipe filling with water to 4,959'.	

Management Summary

RIH open ended to 7,495' and reverse circulated down to 7,515 and tag gravel, wash gravel from 7,515 to 7,525' (PBTD).
Changed hole over to water.
POH.
Made up and RIH with packer and PT tools to 4,959'.

Casing/Tubular Information

Type	Size (ins)	Top MD (ft)	Top TVD (ft)	Bottom MD (ft)	Bottom TVD (ft)	Hole Section	OH Diam. (ins)	Nom. Wgt. (lbs)	Nominal Grade	LOT (lbs/gal)
FULL	20.000	0	0	84		COND		53		
FULL	13.375	0		338		SURF		55	N-80	11.90
FULL	9.625	0	0	2,172	2,173	INT1	18.000	40	K-55	19.20
FULL	7.000	-3	0	7,375	7,372	PROD	8.750	29	L-80	

Miscellaneous Drilling Parameters

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

Slow Circulation Data:

Pump 1: 47 spm 396 psi

Hours on BHA: **Since Inspection:** 7.5 **Total:** 7.5 **Jars:** 2

Hours on Casing/Liner: **Rotating:** 521 / **Tripping:** 258 / ☐ **Wear Bushing Installed**

Rig Information

Equipment Problems:

Location Condition:

Transport:

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 57 **Report For 21-Sep-17**

Solids Control Information

Screen Sizes:	Top	Middle 1	Middle 2	Bottom	Equipment Usage (Hrs):	
Shaker No 1:	145	145	145	145	Desilter:	0
Shaker No 2:	145	145	145	145		
Shaker No 3:	255	255	255			

Drill Pipe Inventory

DP Size	Joints	Weight	Grade	Thread	DP Size	Joints	Weight	Grade	Thread
4 TSDS	252	14.0	S-135	TSDS40	4 HWDP	30	28.0		TSDS40

Safety Information

Meetings/Drills	Time	Description
Safety	30	Pre-tour safety meeting with both crews. PJSM with Baker.

First Aid Treatments: **Medical Treatments:** **Lost Time Incidents:** **Days Since LTI:** 57

☐ **BOP Test** ☐ **Crownamatic Check**

Weather Information

Sky Condition:	Cloudy, rainy, hail.	**Visibility:**	
Air Temperature:	77 degF	**Bar. Pressure:**	
Wind Speed/Dir:	50 / S	**Wind Gusts:**	60

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
FLIFT	36K forklift		AHERN	32a1	---	27-Jul-17	
Notes:	Charged as dayrate						
LIGHTS	2 X Light towers		BnL	43e	---	27-Jul-17	
OTHER	2 x Trailers		BnL	43m	---	27-Jul-17	
OTHER	Mud cleaner		NOVB	32a1	---	31-Jul-17	21-Sep-17
Notes:	Charged as dayrate						
OTHER	Automatic driller		NOVT	38d	---	31-Jul-17	
SURVEY	Survey tools		KnR	38h	---	31-Jul-17	
Notes:	4800 per month						
MUDCOOLER	Gen for mud cooler		AHERN	38o	---	03-Aug-17	21-Sep-17
Notes:	start 8/15						
MUDCOOLER	Mud cooler		DRLCO	38o	---	03-Aug-17	21-Sep-17
Notes:	start 8/15						
OTHER	Mud office		Rollins	36b	---	04-Aug-17	
Notes:	60 day min. with deliver and return						
OTHER	Restrooms		Rollins	43i	---	28-Jul-17	
Notes:	2 x 15 day (est)						
OTHER	Rain4rent tank		Rollins	43c	---	30-Jun-17	
Notes:	30 day (est)						
OTHER	Trash dumpster		Rollins	43j	---	30-Jun-17	
Notes:	30 day (est)						
OTHER	Centrifuge		NOVB	38g	---	15-Aug-17	21-Sep-17
Notes:	Centrifuge 300/day						
			Total Daily Rental Cost $:		---		

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 58 **Report For 22-Sep-17**

Operator:	University of Utah	**Rig:**	Kenai 10	**Spud Date:**	31-Jul-17	**Daily Cost / Mud ($):**			---
Measured Depth (ft):	7536	**Drilling Days (act.):**	54	**Wellbore:**	Original Well Bore	**AFE No.**		**AFE ($)**	**Actual ($)**
Vertical Depth (ft):	7528	**Drilling Days (plan):**	58	**RKB Elevation (ft):**	21.50	---		---	---
Proposed TD (ft):	7060	**Days On Location:**	58	**Last BOP Test:**	13-Aug-17	---		---	---
Hole Made (ft) / Hrs:	0 / 0.0	**Last Casing:**	7.000 at 7,375			**Totals:**		---	---
Average ROP (ft/hr):		**Next Casing:**		**Working Interest:**		**Well Cost ($):**			---

Pers/Hrs: **Operator:** 2 / 24 **Contractor:** 12 / 144 **Service:** 8 / 96 **Other:** 0 / 0 **Total:** 22 / 264

SafetySummary: No incidents or events reported. 58 days since LTI. Conducted Safety Meeting.

Current Operations: 00:00 to 06:00 hrs: Formation evaluation test.

Planned Operations: Formation evaluation test.

Toolpusher: John Rogers, Daniel Lovell

Wellsite Supervisors: Virgil Welch, Randy Baldwin **Tel No.:**

Operations Summary

From	To	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	3:00	3.00	7,536	11-6-3	RIH w/ test assembly filling every stand	
3:00	5:00	2.00	7,536	11-99	Pressure test drill pipe to 8000 psi	
5:00	6:00	1.00	7,536	11-99	RIH w/ braided line and sinker bars and after 7 attempts rupture ceramic glass disc	
6:00	0:00	18.00	7,536	11-99	Set packer. Formation evaluation test.	

Management Summary

RIH. Test drill pipe to 8,000 psi. Set packer. Formation evaluation test.

Casing/Tubular Information

Type	Size (ins)	Top MD (ft)	Top TVD (ft)	Bottom MD (ft)	Bottom TVD (ft)	Hole Section	OH Diam. (ins)	Nom. Wgt. (lbs)	Nominal Grade	LOT (lbs/gal)
FULL	20.000	0	0	84		COND		53		
FULL	13.375	0		338		SURF		55	N-80	11.90
FULL	9.625	0	0	2,172	2,173	INT1	18.000	40	K-55	19.20
FULL	7.000	-3	0	7,375	7,372	PROD	8.750	29	L-80	

Mud Consumables

Item Description	Qty.	Cost	Item Description	Qty.	Cost
XGD Xanthan Gum - 50#SK		---			

Miscellaneous Drilling Parameters

Hook Loads (lbs): **Off Bottom Rotate:** 110,000 **Pick Up:** 125,000 **Slack Off:** 105,000 **Drag Avg/Max:** /

Hours on BHA: **Since Inspection:** 7.5 **Total:** 7.5 **Jars:** 2

Hours on Casing/Liner: **Rotating:** 521 / **Tripping:** 260 / ☐ **Wear Bushing Installed**

Rig Information

Equipment Problems:

Location Condition:

Transport:

Solids Control Information

Screen Sizes:	Top	Middle 1	Middle 2	Bottom
Shaker No 1:	145	145	145	145
Shaker No 2:	145	145	145	145
Shaker No 3:	255	255	255	

Drill Pipe Inventory

DP Size	Joints	Weight	Grade	Thread	DP Size	Joints	Weight	Grade	Thread
4 TSDS	252	14.0	S-135	TSDS40	4 HWDP	30	28.0		TSDS40

Safety Information

Meetings/Drills	Time	Description
Safety	30	Pre-tour safety meeting with both crews, PJSM with Baker.

First Aid Treatments: **Medical Treatments:** **Lost Time Incidents:** **Days Since LTI:** 58

☐ **BOP Test** ☐ **Crownamatic Check**

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 58

Report For 22-Sep-17

Weather Information

Sky Condition:	Partly cloudy	**Visibility:**	
Air Temperature:	77 degF	**Bar. Pressure:**	
Wind Speed/Dir:	5 / NE	**Wind Gusts:**	

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
FLIFT	36K forklift		AHERN	32a1	---	27-Jul-17	
Notes:	Charged as dayrate						
LIGHTS	2 X Light towers		BnL	43e	---	27-Jul-17	
OTHER	2 x Trailers		BnL	43m	---	27-Jul-17	
OTHER	Automatic driller		NOVT	38d	---	31-Jul-17	22-Sep-17
SURVEY	Survey tools		KnR	38h	---	31-Jul-17	22-Sep-17
Notes:	4800 per month						
OTHER	Mud office		Rollins	36b	---	04-Aug-17	22-Sep-17
Notes:	60 day min. with deliver and return						
OTHER	Restrooms		Rollins	43i	---	28-Jul-17	
Notes:	2 x 15 day (est)						
OTHER	Rain4rent tank		Rollins	43c	---	30-Jun-17	
Notes:	30 day (est)						
OTHER	Trash dumpster		Rollins	43j	---	30-Jun-17	
Notes:	30 day (est)						
			Total Daily Rental Cost $:		---		

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 59 **Report For 23-Sep-17**

Operator:	University of Utah	**Rig:**	Kenai 10	**Spud Date:**	31-Jul-17	**Daily Cost / Mud ($):**			---
Measured Depth (ft):	7536	**Drilling Days (act.):**	55	**Wellbore:**	Original Well Bore	**AFE No.**		**AFE ($)**	**Actual ($)**
Vertical Depth (ft):	7528	**Drilling Days (plan):**	58	**RKB Elevation (ft):**	21.50	---		---	---
Proposed TD (ft):	7060	**Days On Location:**	59	**Last BOP Test:**	13-Aug-17	---		---	---
Hole Made (ft) / Hrs:	0 / 0.0	**Last Casing:**	7.000 at 7,375			**Totals:**		---	---
Average ROP (ft/hr):		**Next Casing:**		**Working Interest:**		**Well Cost ($):**			---

Pers/Hrs:	**Operator:**	2 / 24	**Contractor:**	12 / 144	**Service:**	8 / 96	**Other:**	0 / 0	**Total:** 22 / 264

SafetySummary: No incidents or events reported. 59 days since LTI. Conducted Crown Check, Safety Meeting.

Current Operations: 00:00 to 06:00 hrs: Bleed pressure through 1/4" choke for 30 min, switched to 45/64" choke and bled to zero. Release packer. POH with packer.

Planned Operations: Drill out cement to bottom. Log open hole.

Toolpusher: John Rogers, Daniel Lovell

Wellsite Supervisors: Virgil Welch, Randy Baldwin/Rod Bray **Tel No.:**

Operations Summary

From	To	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	23:00	23.00	7,536	11-99	Formation evaluation test.	
23:00	0:00	1.00	7,536	11-99	Bleed back pressure through 1/8" choke from 1010 psi to 850 psi. Installed 1/4" choke.	

Management Summary

Formation evaluation test.

Casing/Tubular Information

Type	Size (ins)	Top MD (ft)	Top TVD (ft)	Bottom MD (ft)	Bottom TVD (ft)	Hole Section	OH Diam. (ins)	Nom. Wgt. (lbs)	Nominal Grade	LOT (lbs/gal)
FULL	20.000	0	0	84		COND		53		
FULL	13.375	0		338		SURF		55	N-80	11.90
FULL	9.625	0	0	2,172	2,173	INT1	18.000	40	K-55	19.20
FULL	7.000	-3	0	7,375	7,372	PROD	8.750	29	L-80	

Miscellaneous Drilling Parameters

Hook Loads (lbs):	**Off Bottom Rotate:**	110,000	**Pick Up:**	125,000	**Slack Off:**	105,000	**Drag Avg/Max:**	/	
Hours on Casing/Liner:	**Rotating:**	521 /	**Tripping:**	260 /	☐ **Wear Bushing Installed**				

Rig Information

Equipment Problems:

Location Condition:

Transport:

Solids Control Information

Screen Sizes:	**Top**	**Middle 1**	**Middle 2**	**Bottom**
Shaker No 1:	145	145	145	145
Shaker No 2:	145	145	145	145
Shaker No 3:	255	255	255	

Drill Pipe Inventory

DP Size	Joints	Weight	Grade	Thread	DP Size	Joints	Weight	Grade	Thread
4 TSDS	252	14.0	S-135	TSDS40	4 HWDP	30	28.0		TSDS40

Safety Information

Meetings/Drills	Time	Description
Safety	15	Held safety meeting with both crews

First Aid Treatments: **Medical Treatments:** **Lost Time Incidents:** **Days Since LTI:** 59

☐ **BOP Test** ☑ **Crownamatic Check**

Weather Information

Sky Condition:	Cloudy	**Visibility:**	10
Air Temperature:	42 degF	**Bar. Pressure:**	29.92
Wind Speed/Dir:	12 / NNW	**Wind Gusts:**	

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 59

Report For 23-Sep-17

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
FLIFT	36K forklift		AHERN	32a1	---	27-Jul-17	
Notes:	Charged as dayrate						
LIGHTS	2 X Light towers		BnL	43e	---	27-Jul-17	
OTHER	2 x Trailers		BnL	43m	---	27-Jul-17	
OTHER	Automatic driller		NOVT	38d	---	31-Jul-17	23-Sep-17
SURVEY	Survey tools		KnR	38h	---	31-Jul-17	22-Sep-17
Notes:	4800 per month						
OTHER	Mud office		Rollins	36b	---	04-Aug-17	22-Sep-17
Notes:	60 day min. with deliver and return						
OTHER	Restrooms		Rollins	43i	---	28-Jul-17	
Notes:	2 x 15 day (est)						
OTHER	Rain4rent tank		Rollins	43c	---	30-Jun-17	
Notes:	30 day (est)						
OTHER	Trash dumpster		Rollins	43j	---	30-Jun-17	
Notes:	30 day (est)						
			Total Daily Rental Cost $:		---		

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 60 **Report For 24-Sep-17**

Operator:	University of Utah	**Rig:**	Kenai 10	**Spud Date:**	31-Jul-17	**Daily Cost / Mud ($):**			---
Measured Depth (ft):	7536	**Drilling Days (act.):**	56	**Wellbore:**	Original Well Bore	**AFE No.**		**AFE ($)**	**Actual ($)**
Vertical Depth (ft):	7528	**Drilling Days (plan):**	58	**RKB Elevation (ft):**	21.50	---		---	---
Proposed TD (ft):	7060	**Days On Location:**	60	**Last BOP Test:**	13-Aug-17	---		---	---
Hole Made (ft) / Hrs:	0 / 0.0	**Last Casing:**	7.000 at 7,375			**Totals:**		---	---
Average ROP (ft/hr):		**Next Casing:**		**Working Interest:**		**Well Cost ($):**			---

Pers/Hrs: **Operator:** 2 / 24 **Contractor:** 12 / 144 **Service:** 1 / 12 **Other:** 0 / 0 **Total:** 15 / 180

SafetySummary: No incidents or events reported. 60 days since LTI. Conducted Crown Check, Safety Meeting.

Current Operations: 00:00 to 06:00 hrs: Rigged down loggers. RIH with DP to shoe.

Planned Operations: Lay down DP. Nipple down BOP. Rig down.

Toolpusher: John Rogers, Daniel Lovell

Wellsite Supervisors: Virgil Welch, Rod Bray **Tel No.:**

Operations Summary

From	To	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	1:30	1.50	7,536	11-99	Bleed pressure through 1/4" choke for 30 min, switched to 45/64" choke and bled to zero.	
1:30	2:00	0.50	7,536	11-23	Release packer and rig down 2" lines	
2:00	5:30	3.50	7,536	11-6-4	POH with packer	
5:30	6:30	1.00	7,536	11-344	Laid down packer and load out tools	
6:30	12:30	6.00	7,536	11-6-3	RIH with 6" bit	
12:30	13:00	0.50	7,536	11-99	Drill out cement from 7,525' to 7,536'	
13:00	14:30	1.50	7,536	11-5-1	Circulated hole clean. Pumped polymer sweep	
14:30	19:00	4.50	7,536	11-6-4	POH. Break out kelly.	
19:00	0:00	5.00	7,536	11-11	Held safety meeting. Rigged up Schlumberger. Ran FMI log	

Management Summary

POH and laid down packer.
RIH and drilled out cement from 7,525' to 7,536'.
POH.
Ran FMI log.

Casing/Tubular Information

Type	Size (ins)	Top MD (ft)	Top TVD (ft)	Bottom MD (ft)	Bottom TVD (ft)	Hole Section	OH Diam. (ins)	Nom. Wgt. (lbs)	Nominal Grade	LOT (lbs/gal)
FULL	20.000	0	0	84		COND		53		
FULL	13.375	0		338		SURF		55	N-80	11.90
FULL	9.625	0	0	2,172	2,173	INT1	18.000	40	K-55	19.20
FULL	7.000	-3	0	7,375	7,372	PROD	8.750	29	L-80	

Miscellaneous Drilling Parameters

Hook Loads (lbs): **Off Bottom Rotate:** 108,000 **Pick Up:** 125,000 **Slack Off:** 100,000 **Drag Avg/Max:** /

Hours on Casing/Liner: **Rotating:** 522 / **Tripping:** 274 / ☐ **Wear Bushing Installed**

Rig Information

Equipment Problems:

Location Condition:

Transport:

Solids Control Information

Screen Sizes:	Top	Middle 1	Middle 2	Bottom
Shaker No 1:	145	145	145	145
Shaker No 2:	145	145	145	145
Shaker No 3:	255	255	255	

Drill Pipe Inventory

DP Size	Joints	Weight	Grade	Thread	DP Size	Joints	Weight	Grade	Thread
4 TSDS	252	14.0	S-135	TSDS40	4 HWDP	30	28.0		TSDS40

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 60

Report For 24-Sep-17

Safety Information

Meetings/Drills	Time	Description
Safety	15	Held safety meeting with both crews

First Aid Treatments:	Medical Treatments:	Lost Time Incidents:	Days Since LTI: 60

☐ **BOP Test** ☑ **Crownamatic Check**

Weather Information

Sky Condition:	Clear	**Visibility:**	10
Air Temperature:	39 degF	**Bar. Pressure:**	30.09
Wind Speed/Dir:	6 / WNW	**Wind Gusts:**	

Rental Tools Information

Type	Description	Serial No.	Vendor	Acct Code	Today's Cost $	Start	End
FLIFT	36K forklift		AHERN	32a1	---	27-Jul-17	
Notes:	Charged as dayrate						
LIGHTS	2 X Light towers		BnL	43e	---	27-Jul-17	
OTHER	2 x Trailers		BnL	43m	---	27-Jul-17	
OTHER	Restrooms		Rollins	43i	---	28-Jul-17	
Notes:	2 x 15 day (est)						
OTHER	Rain4rent tank		Rollins	43c	---	30-Jun-17	
Notes:	30 day (est)						
OTHER	Trash dumpster		Rollins	43j	---	30-Jun-17	
Notes:	30 day (est)						
			Total Daily Rental Cost $:		---		

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 61 **Report For 25-Sep-17**

Operator:	University of Utah	**Rig:**	Kenai 10	**Spud Date:**	31-Jul-17	**Daily Cost / Mud ($):**			---
Measured Depth (ft):	7536	**Drilling Days (act.):**	57	**Wellbore:**	Original Well Bore	**AFE No.**		**AFE ($)**	**Actual ($)**
Vertical Depth (ft):	7528	**Drilling Days (plan):**	58	**RKB Elevation (ft):**	21.50	---		---	---
Proposed TD (ft):	7060	**Days On Location:**	61	**Last BOP Test:**	13-Aug-17	---		---	---
Hole Made (ft) / Hrs:	0 / 0.0	**Last Casing:**	7.000 at 7,375			**Totals:**		---	---
Average ROP (ft/hr):		**Next Casing:**		**Working Interest:**		**Well Cost ($):**			---

Pers/Hrs: **Operator:** 2 / 24 **Contractor:** 12 / 144 **Service:** 0 / 0 **Other:** 0 / 0 **Total:** 14 / 168

SafetySummary: No incidents or events reported. 61 days since LTI. Conducted Crown Check, Safety Meeting.

Current Operations: 00:00 to 06:00 hrs: Waited on day light. Released rig at midnight. 24:00 hrs on 9/25/17.

Planned Operations: Rig down and move rig

Toolpusher: John Rogers, Daniel Lovell

Wellsite Supervisors: Virgil Welch, Rod Bray **Tel No.:**

Operations Summary

From	To	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	1:00	1.00	7,536	11-11	Rigged down loggers	
1:00	5:30	4.50	7,536	11-6-3	RIH with DP to shoe	
5:30	12:30	7.00	7,536	11-342	Rigged up B & Lay down machine. Laid down drill pipe. Rigged down B & L	
12:30	13:00	0.50	7,536	11-344	Laid down Kelly and swivel	
13:00	19:00	6.00	7,536	1-14	Nippled down BOP. Installed top flange with 3" valve.	
19:00	0:00	5.00	7,536	1-01	Cleaned mud pits. Released rig at midnight. 24:00 hrs on 9/25/17	

Management Summary

Laid down drill pipe. Nippled down BOP. Cleaned mud pits. Released rig at 24:00 hrs on 9/25/17.

Casing/Tubular Information

Type	Size (ins)	Top MD (ft)	Top TVD (ft)	Bottom MD (ft)	Bottom TVD (ft)	Hole Section	OH Diam. (ins)	Nom. Wgt. (lbs)	Nominal Grade	LOT (lbs/gal)
FULL	20.000	0	0	84		COND		53		
FULL	13.375	0		338		SURF		55	N-80	11.90
FULL	9.625	0	0	2,172	2,173	INT1	18.000	40	K-55	19.20
FULL	7.000	-3	0	7,375	7,372	PROD	8.750	29	L-80	

Rig Information

Equipment Problems:

Location Condition:

Transport:

Solids Control Information

Screen Sizes:	Top	Middle 1	Middle 2	Bottom
Shaker No 1:	145	145	145	145
Shaker No 2:	145	145	145	145
Shaker No 3:	255	255	255	

Drill Pipe Inventory

DP Size	Joints	Weight	Grade	Thread	DP Size	Joints	Weight	Grade	Thread
4 TSDS	252	14.0	S-135	TSDS40	4 HWDP	30	28.0		TSDS40

Safety Information

Meetings/Drills	Time	Description
Safety	15	Held safety meeting with both crews

First Aid Treatments: **Medical Treatments:** **Lost Time Incidents:** **Days Since LTI:** 61

☐ **BOP Test** ☑ **Crownamatic Check**

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 62 **Report For 26-Sep-17**

Operator:	University of Utah	**Rig:**	Kenai 10	**Spud Date:**	31-Jul-17	**Daily Cost / Mud ($):**			---
Measured Depth (ft):	7536	**Drilling Days (act.):**	57	**Wellbore:**	Original Well Bore	**AFE No.**		**AFE ($)**	**Actual ($)**
Vertical Depth (ft):	7528	**Drilling Days (plan):**	58	**RKB Elevation (ft):**	21.50	---		---	---
Proposed TD (ft):	7060	**Days On Location:**	62	**Last BOP Test:**	13-Aug-17	---		---	---
Hole Made (ft) / Hrs:	0 / 0.0	**Last Casing:**	7.000 at 7,375			**Totals:**		---	---
Average ROP (ft/hr):		**Next Casing:**		**Working Interest:**		**Well Cost ($):**			---

Pers/Hrs:	**Operator:**	1 / 12	**Contractor:**	12 / 155	**Service:**	10 / 120	**Other:**	0 / 0	**Total:** 23 / 287

SafetySummary: No incidents or events reported. 62 days since LTI.

Current Operations: 00:00 to 06:00 hrs: Clean up site and install fence around well head

Planned Operations: Continue with rig demob.

Toolpusher: John Rogers, Daniel Lovell

Wellsite Supervisors: Virgil Welch, Rod Bray **Tel No.:**

Operations Summary

From	To	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	7:00	7.00	7,536	1-01	Waiting on daylight	
7:00	19:00	12.00	7,536	1-01	Tear down and load out rig	
19:00	0:00	5.00	7,536	1-01	Waiting on daylight	

Management Summary

Rigged down rig and loaded entire rig.
One load left to load this morning and cleaning of location will be completed

Casing/Tubular Information

Type	Size (ins)	Top MD (ft)	Top TVD (ft)	Bottom MD (ft)	Bottom TVD (ft)	Hole Section	OH Diam. (ins)	Nom. Wgt. (lbs)	Nominal Grade	LOT (lbs/gal)
FULL	20.000	0	0	84		COND		53		
FULL	13.375	0		338		SURF		55	N-80	11.90
FULL	9.625	0	0	2,172	2,173	INT1	18.000	40	K-55	19.20
FULL	7.000	-3	0	7,375	7,372	PROD	8.750	29	L-80	

Rig Information

Equipment Problems:

Location Condition:

Transport:

Safety Information

First Aid Treatments: **Medical Treatments:** **Lost Time Incidents:** **Days Since LTI:** 62

☐ **BOP Test** ☐ **Crownamatic Check**

Daily Drilling Report

Well ID: Forge 58-32

Field: None

Geothermal Resource Group

Well Name: 58-32

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

Report No: 63 **Report For 27-Sep-17**

Operator:	University of Utah	**Rig:**	Kenai 10	**Spud Date:**	31-Jul-17	**Daily Cost / Mud ($):**			---
Measured Depth (ft):	7536	**Drilling Days (act.):**	57	**Wellbore:**	Original Well Bore	**AFE No.**		**AFE ($)**	**Actual ($)**
Vertical Depth (ft):	7528	**Drilling Days (plan):**	58	**RKB Elevation (ft):**	21.50	---		---	---
Proposed TD (ft):	7060	**Days On Location:**	63	**Last BOP Test:**	13-Aug-17	---		---	---
Hole Made (ft) / Hrs:	0 / 0.0	**Last Casing:**	7.000 at 7,375			**Totals:**		---	---
Average ROP (ft/hr):		**Next Casing:**		**Working Interest:**		**Well Cost ($):**			---

Pers/Hrs:	**Operator:**	1 / 0	**Contractor:**	3 / 0	**Service:**	4 / 0	**Other:**	0 / 0	**Total:** 8 / 0

Current Operations: FINAL REPORT

Planned Operations: Rollin scheduled to fence around sump Saturda and at that time will do final grade of the road to the location and will dress off the location

Toolpusher: John Rogers, Daniel Lovell

Wellsite Supervisors: Virgil Welch, Rod Bray **Tel No.:**

Operations Summary

From	To	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
0:00	7:00	7.00	7,536	1-01	Waiting on dayligth	
7:00	19:00	12.00	7,536	1-01	Loaded last load, break down crane, pump out cellar, install chain on valves, install fence around wellhead	

Management Summary

Loaded last load, break down crane, pump out cellar, install chains on valves, install fence around wellhead

Casing/Tubular Information

Type	Size (ins)	Top MD (ft)	Top TVD (ft)	Bottom MD (ft)	Bottom TVD (ft)	Hole Section	OH Diam. (ins)	Nom. Wgt. (lbs)	Nominal Grade	LOT (lbs/gal)
FULL	20.000	0	0	84		COND		53		
FULL	13.375	0		338		SURF		55	N-80	11.90
FULL	9.625	0	0	2,172	2,173	INT1	18.000	40	K-55	19.20
FULL	7.000	-3	0	7,375	7,372	PROD	8.750	29	L-80	

Rig Information

Equipment Problems:

Location Condition:

Transport: