Bit Summary 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

No	Run No	Diam	Manuf.	Model	Serial No	Nozzles - 1/32 in	TFA	Date/Time In	Depth - ft In	Depth - ft Out	Hole Made	Hrs	ROP	WOB	RPM	Flow	MWt	Grading In	Grading Out	Grading Major	Grading Loc	Grading Brg	Grading Gge	Grading Oth	Grading Pull
Well ID: Forge 58-32																									**Well Name: 58-32**
1	1	17.500	HC	X3A	BC840	18 18 24	0.939	31-Jul-17 23:30	84	342	258	12.0	21.5	10000	60	750	8.60	2	2	NO	A	2	0	NO	TD
Bit Comments: Retipped bit (rental)																									
							Report No:	5	Date:	31-Jul-17	15	0.5	30.0	5000	70	800		Jet Vel:		273.4	P. Drop:				
							Report No:	6	Date:	01-Aug-17	244	11.5	21.6	10	80	736	8.80	Jet Vel:		251.5	P. Drop:		498.1	
2	1	12.250	Smith	XR+	RJ2738	22 22 22	1.114	03-Aug-17 05:00	342	2180	1838	60.8	30.3	20	80	613	9.20	6	5	FC	A	2	0	NO	TD
Bit Comments: Cost with tax																									
Bit Run Comments: Good bit run																									
							Report No:	8	Date:	03-Aug-17	190	6.0	31.7	10	80	614	8.60	Jet Vel:		176.9	P. Drop:		240.7	
							Report No:	9	Date:	04-Aug-17	980	19.5	45.9	15	80	613	9.00	Jet Vel:		176.6	P. Drop:		251.1	
							Report No:	10	Date:	05-Aug-17	445	19.3	36.1	25	90	613	9.10	Jet Vel:		176.6	P. Drop:		253.9	
							Report No:	11	Date:	06-Aug-17	223	16.0	30.3	25	90	613	9.20	Jet Vel:		176.6	P. Drop:		256.7	
3	1	8.750	Smith	FHi28	RD3133	20 20 20	0.920	08-Aug-17 13:00	2180	3187	1007	36.0	28.0	25	190	499	9.20	3	3	ER	A	E	0	NO	DTF
Bit Comments: Good bit run, bit was full gauge with only minimal tooth wear. Pulled due to broken sleeve stab on motor with junk in hole.																									
Bit Run Comments: Good bit run, bit was full gauge with only minimal tooth wear. Pulled due to broken sleeve stab on motor with junk in hole.																									
							Report No:	13	Date:	08-Aug-17	160	7.0	22.9	20	200	500	8.10	Jet Vel:		174.3	P. Drop:		220.1	
							Report No:	14	Date:	09-Aug-17	645	22.0	27.8	25	200	499	9.10	Jet Vel:		173.9	P. Drop:		246.3	
							Report No:	15	Date:	10-Aug-17	193	7.0	27.7	25	200	499	9.20	Jet Vel:		173.9	P. Drop:		249	
3	2	8.750	Smith	FHi28	RD3133	20 20 20	0.920	11-Aug-17 17:00	3187	3281	94	5.8	16.3	20	200	535	9.50	3	3	ER	A	E	0	NO	BHA
Bit Run Comments: Drilled past junk in the well.																									
							Report No:	16	Date:	11-Aug-17	51	3.8	13.6	25	200	525	9.50	Jet Vel:			P. Drop:				
							Report No:	17	Date:	12-Aug-17	43	2.0	16.3	20	200	535	9.50	Jet Vel:		186.5	P. Drop:		295.6	
4	1	8.750	HC	VGD-30DX	5270559	20 20 20	0.920	12-Aug-17 06:00	3281	3961	680	49.5	13.7	25	190	510	9.40	3	5	NO	G	E	0	CT	TQ
Bit Comments: Encountered down hole torque.																									
Bit Run Comments: Encountered down hole torque. The used bit was in gauge with some chipped teeth on the gauge row. The used 8.5" stabs were approx. 1/16 under.																									
							Report No:	17	Date:	12-Aug-17	224	15.0	14.9	20	200	535	9.50	Jet Vel:		186.5	P. Drop:		295.6	
							Report No:	18	Date:	13-Aug-17	288	22.5	13.7	25000	190	504	9.40	Jet Vel:		175.7	P. Drop:		259.6	
							Report No:	19	Date:	14-Aug-17	168	12.0	13.7	25000	190	510	9.40	Jet Vel:		177.8	P. Drop:		265.8	
5	1	8.750	HC	KM624	5265598	18 18 18 18	0.994	14-Aug-17 16:00	3961	4044	83	5.5	15.1	20	192	508	9.40	0	0	NO	A	E	0	NO	OTH
Bit Comments: Kymera bit. Cost plus $25.00 per foot drilled.																									
Bit Run Comments: TOH recovered survey tool. One chipped cutter.																									
							Report No:	19	Date:	14-Aug-17	10	1.0	10.0	20	190	512	9.40	Jet Vel:		165.2	P. Drop:		229.7	
							Report No:	20	Date:	15-Aug-17	73	5.5	13.3	20000	192	508	9.40	Jet Vel:		164	P. Drop:		226.1	
5	2	8.750	HC	KM624	5265598	18 18 18 18	0.994	15-Aug-17 08:00	4044	4392	348	22.5	15.5	22	190	510	9.00	0	0	NO	A	E	1	NO	BHA
Bit Run Comments: 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. POH inclination building. POH added 3rd stabilizer,																									
							Report No:	20	Date:	15-Aug-17	189	11.5	16.4	25	192	506	9.10	Jet Vel:		163.3	P. Drop:		217.1	

Bit Summary 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

No	Run No	Diam	Manuf.	Model	Serial No	Nozzles - 1/32 in	TFA	Date/Time In	Depth - ft In	Depth - ft Out	Hole Made	Hrs	ROP	WOB	RPM	Flow	MWt	Grading In	Grading Out	Grading Major	Grading Loc	Grading Brg	Grading Gge	Grading Oth	Grading Pull
Well ID: Forge 58-32																									**Well Name: 58-32**
						Report No:	21	Date:	16-Aug-17		159	11.0	15.5	24000	190	508	9.00	Jet Vel:			164	P. Drop:		216.5	
5	3	8.750	HC	KM624	5265598	18 18 18 18	0.994	16-Aug-17 20:00	4392	4630	238	50.5	4.7	20	190	508	9.00	4	6	BT	G	E	2	CT	BHA
Bit Run Comments: TOH for directional tools. Cutters - Inner-chipped (4), Outer-Worn (6). The Kymera bit was 1/8" out, the outside cutters were 1/2 gone and middle cutters were approx. 1/3 gone. the inside cutters look good. All stabs were all in gauge.																									
						Report No:	21	Date:	16-Aug-17		10	2.0	5.0	10	190	508	9.00	Jet Vel:			164	P. Drop:		216.5	
						Report No:	22	Date:	17-Aug-17		191	23.5	7.9	9	190	508	9.00	Jet Vel:			164	P. Drop:		216.5	
						Report No:	23	Date:	18-Aug-17		37	6.0	4.7	20000	190	508	9.00	Jet Vel:			164	P. Drop:		216.5	
6	1	8.750	Smith	Z713	JM4035	13 13 13 13 13 13 13	0.907	18-Aug-17 12:00	4630	4875	245	31.5	7.8	20	114	394	8.90	1	1	BT	N	X	0	CT	BHA
Bit Comments: Sting blade bit. Cost plus $6.00 per foot drilled.																									
Bit Run Comments: 5 ea. chipped cutters (small chips) and still in gage,																									
						Report No:	23	Date:	18-Aug-17		41	4.5	9.1	20	190	500	9.00	Jet Vel:			176.8	P. Drop:		251.7	
						Report No:	24	Date:	19-Aug-17		184	24.0	7.9	20000	114	394	8.90	Jet Vel:			139.3	P. Drop:		154.5	
						Report No:	25	Date:	20-Aug-17		30	3.0	8.1	20000	114	394	8.90	Jet Vel:			139.3	P. Drop:		154.5	
7	1	8.750	HC	VG-44CDX	5271015	24 24 24	1.325	20-Aug-17 11:00	4875	5477	602	82.0	7.3	30	130	430	8.60	8	8	LT	A	E	0.25	BT	BHA
Bit Run Comments: It is 1/4 inch out. Broken and missing buttons both on inside and outside rows. Missing approx 10 buttons and approx 10 buttons broken. The only stab is the 8.5 slider on top of mud motor. It also is a 1/4" out.																									
						Report No:	25	Date:	20-Aug-17		62	7.5	8.3	20000	160	447	8.80	Jet Vel:			108.2	P. Drop:		92.2	
						Report No:	26	Date:	21-Aug-17		171	23.0	7.6	25000	150	430	8.80	Jet Vel:			104.1	P. Drop:		85.3	
						Report No:	27	Date:	22-Aug-17		165	23.0	7.4	25000	164	450	8.60	Jet Vel:			108.9	P. Drop:		91.3	
						Report No:	28	Date:	23-Aug-17		167	22.5	7.4	28000	150	430	8.60	Jet Vel:			104.1	P. Drop:		83.4	
						Report No:	29	Date:	24-Aug-17		37	6.0	7.3	30000	130	430	8.60	Jet Vel:			104.1	P. Drop:		83.4	
8	1	8.750	Smith	F37HYOD	P58395	20 20 20	0.920	24-Aug-17 14:00	5477	5708	231	31.5	7.3	30	90	450	8.60	5	6	WT	A	E	0	ER	HR
						Report No:	29	Date:	24-Aug-17									Jet Vel:				P. Drop:			
						Report No:	30	Date:	25-Aug-17		129	15.5	8.3	30	80	460	8.60	Jet Vel:			160.3	P. Drop:		197.8	
						Report No:	31	Date:	26-Aug-17		102	16.0	7.3	30	90	450	8.60	Jet Vel:			156.9	P. Drop:		189.3	
9	1	8.750	HC	HRMPS44DX	5043270	18 18 18	0.746	27-Aug-17 00:00	5708	6177	469	54.0	8.7	35	155	414	8.60	8	8	LT	A	E	4	BC	DTF
Bit Comments: Hughes bit from San Joaquin Bit. Cost is estimated.																									
Bit Run Comments: Bit was 1/2" under gauge, had broken and lost teeth also damaged cones, seals remain in all three cones. Top stab 1/4" under gauge, middle stab 1/16" under gauge and bottom stab 1/32" under gauge.																									
						Report No:	32	Date:	27-Aug-17		131	15.0	8.7	35	160	414	8.60	Jet Vel:			178.2	P. Drop:		244.2	
						Report No:	33	Date:	28-Aug-17		184	23.0	8.3	35	150	414	8.60	Jet Vel:			178.2	P. Drop:		244.2	
						Report No:	34	Date:	29-Aug-17		154	16.0	8.7	35	160	414	8.60	Jet Vel:			178.2	P. Drop:		244.2	
10	1	8.750	Smith	F67ODR	PT7245	18 18 18	0.746	30-Aug-17 10:30	6177	6552	375	32.0	11.7	35	160	414	8.40	4	5	FC	A	E	0	CT	OTH
Bit Run Comments: Good bit run. Full gauge																									
						Report No:	35	Date:	30-Aug-17		55	5.5	10.0	35	160	414	8.50	Jet Vel:			178.2	P. Drop:		241.4	
						Report No:	36	Date:	31-Aug-17		275	23.0	11.6	35	160	414	8.40	Jet Vel:			178.2	P. Drop:		238.5	
						Report No:	37	Date:	01-Sep-17		45	3.5	11.7	35	160	414	8.40	Jet Vel:			178.2	P. Drop:		238.5	

Bit Summary 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

No	Run No	Diam	Manuf.	Model	Serial No	Nozzles - 1/32 in	TFA	Date/Time In	Depth - ft In	Depth - ft Out	Hole Made	Hrs	ROP	WOB	RPM	Flow	MWt	Grading In	Grading Out	Grading Major	Grading Loc	Grading Brg	Grading Gge	Grading Oth	Grading Pull
Well ID: Forge 58-32																									**Well Name: 58-32**
6	2	8.750	Smith	Z713	JM4035	13 13 13 13 13 13 13	0.907	01-Sep-17 12:00	6552	6800	248	28.5	8.7	35	182	492	8.40	2	3	CT	A	X	0	BT	CP
Bit Run Comments: POH at 6,800 ft to run PT surveys																									
							Report No: 37	Date:	01-Sep-17		32	4.5	7.1	35	188	512	8.40	Jet Vel:			181	P. Drop:		246.3	
							Report No: 38	Date:	02-Sep-17		208	23.0	8.7	35	182	492	8.40	Jet Vel:			174	P. Drop:		227.4	
							Report No: 39	Date:	03-Sep-17		8	1.0	8.7	35	182	492	8.40	Jet Vel:			174	P. Drop:		227.4	
11	1	8.500	CORPRO	Diamond imp	84069			04-Sep-17 08:00	6800	6813	13	10.0	1.3	14	85	209	8.40	2	2	NO	A	X	0	NO	TW
Bit Comments: Core bit																									
Bit Run Comments: Diamond impregnated core bit																									
							Report No: 40	Date:	04-Sep-17		11	8.0	1.4	14	85	209	8.40	Jet Vel:				P. Drop:			
							Report No: 41	Date:	05-Sep-17		2	2.0	1.3	14	85	209	8.40	Jet Vel:				P. Drop:			
							Report No: 42	Date:	06-Sep-17		0	0.0	1.3	14	85	209	8.40	Jet Vel:				P. Drop:			
12	1	8.750	HC	MXBPS68DX	5028896	18 18 18	0.746	06-Sep-17 12:00	6812	7200	388	40.5	9.6	25	124	430	8.40	6	7	FC	A	E	0	CT	HR
Bit Comments: Hughes bit supplied by K and R tool																									
							Report No: 42	Date:	06-Sep-17									Jet Vel:				P. Drop:			
							Report No: 43	Date:	07-Sep-17		196	19.5	10.1	30	124	430	8.50	Jet Vel:			185	P. Drop:		260.4	
							Report No: 44	Date:	08-Sep-17		192	21.0	9.6	25	160	430	8.40	Jet Vel:			185	P. Drop:		257.3	
							Report No: 45	Date:	09-Sep-17		0	0.0	0.0	0	0	0	8.40	Jet Vel:				P. Drop:			
13	1	8.750	HC	HR-P68DXO	5193136	18 18 18	0.746	09-Sep-17 05:00	7200	7440	240	23.0	10.4	30	160	435	8.50	3	4	WT	G	E	0	NO	OTH
Bit Comments: Hughes bit supplied by K&R tool																									
Bit Run Comments: Reamed 250 ft.																									
							Report No: 45	Date:	09-Sep-17		0	0.0	0.0	0	0	435	8.40	Jet Vel:			187.2	P. Drop:		263.4	
							Report No: 46	Date:	10-Sep-17		193	12.0	16.1	30	160	435	8.50	Jet Vel:			187.2	P. Drop:		266.5	
							Report No: 47	Date:	11-Sep-17		47	3.0	16.0	30	160	435	8.50	Jet Vel:			187.2	P. Drop:		266.5	
14	1	8.500	CORPRO	Diamond imp	100014			12-Sep-17 01:30	7440	7460	20	5.5	13.8	30	160	435	8.60	0	0	NO	A	E	0	NO	OTH
							Report No: 48	Date:	12-Sep-17		20	16.2	1.2	14	75	200	8.60	Jet Vel:				P. Drop:			
							Report No: 49	Date:	13-Sep-17		76	5.5	13.8	30	160	435	8.60	Jet Vel:				P. Drop:			
13	2	8.750	HC	HR-P68DXO	5193136	18 18 18	0.746	13-Sep-17 02:00	7460	7536	76	5.5	13.8	30	160	435	8.60	4	5	WT	A	E	1	NO	WO
Bit Run Comments: Had a 300 psi pressure drop, decided to POH to look for wash-out. Found no wash-outs, but found a piece of rubber in the bit. Decided to call it quits on the drilling.The bit is 1/16 out and so are all three stabs. The middle and top stabs have a groove cut in them.																									
							Report No: 49	Date:	13-Sep-17		76	5.5	13.8	30	160	435	8.60	Jet Vel:			187.2	P. Drop:		269.6	
							Report No: 50	Date:	14-Sep-17		0	0.0	0.0	0	0	0	8.60	Jet Vel:				P. Drop:			
15	1	6.000	HC	SL121P	835850	32 32 32	2.356	19-Sep-17 02:00	6920	7364	444	6.0	74.0	12	60	435	8.50	1	1	WT	A	E	0	NO	OTH
Bit Comments: Clean out cement and sand.																									
Bit Run Comments: Clean out cement to 10' of hoe.																									
							Report No: 55	Date:	19-Sep-17		444	6.0	74.0	12	60	435	8.50	Jet Vel:			59.2	P. Drop:		26.7	

Bit Summary 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

No	Run No	Diam	Manuf.	Model	Serial No	Nozzles - 1/32 in							TFA	Date/Time In	Depth - ft In	Depth - ft Out	Hole Made	Hrs	ROP	WOB	RPM	Flow	MWt	Grading In	Grading Out	Grading Major	Grading Loc	Grading Brg	Grading Gge	Grading Oth	Pull
Well ID: Forge 58-32																																**Well Name: 58-32**
15	2	6.000	HC	SL121P	835850	32	32	32					2.356	20-Sep-17 10:00	7364	7525	161	2.0	80.5	7	60	450	8.40	1	1	WT	A	E	0	NO	TD
Bit Run Comments: Clean out cement.																																
												Report No:	56	Date:	20-Sep-17		164	2.0	81.2	7000	60	450	8.40	Jet Vel:			61.3	P. Drop:		28.2	