State of West Virginia Department of Environmental Protection - Office of Oil and Gas Well Operator's Report of Well Work

	County Monongalia	District Grant
Quad Morgantown South	Pad Name MIP	Field/Pool Name
Farm name Enroute Properties, LLC		Well Number 1S (Geothermal Science Well)
Operator (as registered with the OOG) No	rtheast Natural Energy LLC	IT CALL TABLE OF
Address 707 Virginia St. E., Suite 120		State WV Zip 25301
Top hole North Landing Point of Curve North	Attach an as-drilled plat, profile ving 4384076.5 inging	view, and deviation survey Easting 587894.0 Easting Easting
Elevation (ft) 1,058' GL	Type of Well ■New □ Exis	ting Type of Report ■Interim □Final
Permit Type Deviated Horizon	ntal 🗆 Horizontal 6A 💄 Ve	ertical Depth Type 📱 Deep 🗆 Shallow
Type of Operation □ Convert □ Deeper	n ■ Drill □ Plug Back	□ Redrilling □ Rework □ Stimulate
Well Type □ Brine Disposal □ CBM □ C	Gas □ Oil □ Secondary Recove	ery Solution Mining Storage Other Geothermal Science
Type of Completion □ Single □ Multiple Drilled with □ Cable ■ Rotary		
Drilling Media Surface hole ■ Air □ M		mediate hole ■ Air □ Mud □ Fresh Water □ Brine
	n Water □ Brine	
Mud Type(s) and Additive(s)	DACE SEE CALCULA OU COURT	2011
		POWDER, G-SEAL PLUS, HRP, LIME, M-I WATE (BARITE),
TATI MEDICINI, MEDADINE F STSTEM, MEGADINE P STSTEM	RENTAL, MEGAMUL, SAFE-CARB 250, VERSAT	NTHIN HF, VERSAWET, VG-PLUS, VINSEAL MEDIUM, WALNUT NUT PLUG MEDIUM
Date permit issued2/10/2023	eate drilling commenced5/25	5/2023 Date drilling ceased 6/27/2023
Date completion activities began	NA Date complet	tion activities ceased NA
Verbal plugging (Y/N)NA Date p	ermission grantedNA	Granted by RECEIVED Office of Oil and Ga
Please note: Operator is required to submit a	plugging application within 5 da	
Freshwater depth(s) ft350'	Open mine(s) ((Y/N) depths N WV Department of Environmental Protection
Salt water depth(s) ft 700', 1,440', 2	2,120' Void(s) encour	intered (Y/N) depths N
Coal depth(s) ft295'		ountered (Y/N) depths
Is coal being mined in area (Y/N)	E STATE OF THE STA	
	A	Reviewed by: Hample Reviewed by:

WR-35 Rev. 8/23/13								Page of
API 47- 061	01922	Farm nam	_{e_} Enroute Pro	operties,	LLC	_Well number	1S (Ge	othermal Science We
CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft	Basket Depth(s)		ement circulate (Y/N) ovide details below*
Conductor	30"	24"	78'	N	WUIL	NA NA	PIC	ovide details below*
Surface	24"	18-5/8"	491'	N	87.5	NA NA		Y, 22 bbl
Coal		0.000.000.000			07.5	INA		Y, 22 DDI
Intermediate 1	17-1/2"	13-3/8"	1,910'	N	54.5	NA		V OALLI
Intermediate 2	12-1/4"	9-5/8"	10,497'	N	40			Y, 24 bbl
Intermediate 3		0 0/0	10,437	IN	40	NA		Y, 140 bbl
Production					79.41			
Tubing								
Packer type and d	lepth set							
CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yi. (ft ³	eld Vo		Cement	WOC
Conductor	4,500 PSI Grou		wt (ppg)	(It	(I	<u>t³)</u> T	op (MD)	(hrs)
Surface	Class A	742	15.6	1.	10 0	75	CTC	48
Coal		7.12	10.0	1.	0	75	CTS	8
Intermediate 1	Class A	1,340	15.6	1.1	18 1	616	CTS	
Intermediate 2	Class L/Class H		14	1.2		083	7000000000	8
Intermediate 3			1-1	1.2	-2 4,1	000	CTS	48
Production						_		
Tubing								
Drillers TD (ft Deepest forma) 10,535' tion penetrated R	ose Hill		oggers TD	25 60-			
Plug back pro	cedure NA							
Kick off depth	(ft) NA			_				
Check all wire	line logs run		man will some	□ deviated ■ gamma ı	/directional ay	□ induction □ temperatur	e □son	ic
Well cored	Yes 🖪 No	Conventional	Sidewall		Were cutt	ings collected	■ Yes	□ No
DESCRIBE TI Surface: Bow spring central	HE CENTRALIZ	ER PLACEMENT	USED FOR E	ACH CAS	ING STRING			
Intermediate: Bow spri	ing centralizers every 3rd jo	pint or approximately 120'					DEC	EIVED
							Office of (Oil and Gas

WAS WELL COMPLETED AS SHOT HOLE ■ Yes □ No DETAILS ____

WAS WELL COMPLETED OPEN HOLE? □ Yes ■ No DETAILS _____

WERE TRACERS USED □ Yes ■ No TYPE OF TRACER(S) USED __

MAR 0 8 2024

WV Department of Environmental Protection

WR-	35
Rev.	8/23/13

Page	o.f
rage	01

API 47-061 _ 01922

Farm name Enroute Properties, LLC

_Well number_1S

(Geothermal Science Well)

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
	NA				1 officiation(3)
-					
0					

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

Stage No.	Stimulations Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units
	NA				1011 (101)	110ppant (103)	Water (bbis)	Tyllrogen/other (units
						100000		
								
							RECEIVE	D
						C	ffice of Oil	nd Gas
							MAR 0 8	7024
							,,,,,,,	Marie Taranta
	-							a
			1.000			C.	WV Departr	

Please insert additional pages as applicable.

WR-35 Rev. 8/23/13								Page of
API 47- 061	01922	Farm	name Enroute	e Properties	s, LLC	Well numb	er_1S (Ge	othermal Science Wel
PRODUCING Well will not pro	FORMATION oduce		DEPTHS					
Please insert ac	lditional pages	as applicable.		-				
GAS TEST	□ Build up □	Drawdown	□ Open Flow	C	DIL TEST	Flow □ Pum	p	
SHUT-IN PRE	SSURE Sur	face	psi Botte	om Hole	psi	DURATION	OF TEST	hrs
OPEN FLOW	Gas	Oil	NGL bpd	•	Water	GAS MEAS	URED BY	
LITHOLOGY/ FORMATION	TOP DEPTH IN FT NAME TVD	BOTTOM DEPTH IN FT TVD	TOP DEPTH IN FT MD	BOTTOM DEPTH IN FI MD	FILE CONTROL OF	ROCK TYPE ANI JUID (FRESHWA		JANTITYAND OIL, GAS, H₂S, ETC)
See attached	0		0			(, seri, bruits,	O.E., G.10, 1125, E.10)
						-		-
								RECEIVED
						-	Office	of Oil and Gas
							MA	AR 08 2024
							140	
							Environ	Department of mental Protection
Please insert add	ditional pages a	s applicable.		W. 100				0.10011011
Drilling Contract Address 4000 To		uite 240	City	Canonsburg		State PA	Zip 153	17
			City			_ State	Z1p <u>100</u>	17
Address 2000 Mo		а	City	Morgantown		_State _WV	Zip _2650	01
Cementing Com	1 -							
Address 4000 To	wn Center Blvd		City	Canonsburg		_State PA	Zip _153	17
Stimulating Con	npany							
Address Please insert add	ditional pages as	applicable.	City			State	Zip	
Completed by		4			m t	204 242 0400		
Signature Signature		2	Title Re	egulatory Manag	Telephone ger	304-212-0422 Date ³	/6/2024	
Submittal of Hye		0				FRACFOCUS		

5:30 AM	4.03 AW	4.05 AM		3:43 AW	7	3:19 AM			2.30 AM	NA OC.	A CO AN	4.46 000	12:30 AM	9:00 PM	7:30 PM	7:00 PM	6:10 PM		0.00 (18)	6:00 PM	(Hr:Min)	TIME	DAIL.	DATE	** TILL #.	WELL #.	COMPANY NAME:		
				680		100		lac	120	115										(11)	(PSI)	PRESSURE			•				
																			+	. 10000110	Pressure	Wellhead						ERVICES	
				2		5		O	4	5										(DF 181)	(BDM)	BATE				0	NORTHEAST		
						H20		CEMENT	GEL	H20										1775	ירטוט		TYPE OF JOB:					Office 304-933-3544	104 Heliport Loop Rd Bridgeport Wv 26330
			5 MIN			137		156	25	160										BBLS	SIAGE	24.01			COM	PUMI	SU		
Left Location.	Starting Rig Down		Held Pressure for How Long?	Plug landed		Start Diplacement	Cerrient Density 15.6	No.	GEL SPACER	WATER SPACER	Pressure Test		Pre Job Safety Meeting	Rigging Up	Pre Rig I'm Meeting	Spotting trucks	Hayard Hunt	Rig Status (PULL DRILL PIPE)	Arrived on site		COMMENTS:	_			COMPANY REP:	PUMP NUMBER:	SUPERVISOR:		DETA
			Long?				1.18 5.4 (742 SKS)	eld, and MH2O				Offi	ce MA	- 1	0	8 2	02	as								CBTK05	Danny Gum		DETAILED TREATMENT LOG

COMPANY NAME: Northward								
Mortheast Northeast SUPERVISOR: Jason Starche			5	B ±	04 Heliport Loop Rd ridgeport Wv 26330		DETAILE	D TREATMENT LOG
Northeast Northeast MIP IS MIP IS MIP IS MIP IS MIP IS MIP IS COMPANY REP: CO	ENER	SY SERVICE	H S	0	office 304-933-3544			
ISLL):	OMPANY NAME:			Northeast		SUI	ERVISOR:	Jason Starcher
Wednesday, May 31, 2023 TYPE OF JOB: Intermediate 1 PRESSURE (BPM) PRESSURE	FIELD:			MIPIS		PUMP	NUMBER:	CBTK05
Wednesday, May 31, 2023 PRESSURE Wellhead (BPM) FLUID (PSI), Pressure (BPM) Pressu	WELL #:					COMI	ANY REP:	
PRESSURE Wellhead (BPM) TYPE OF IOB: Intermediate 1								
PRESSURE (PSI) Pressure (BPM) TYPE BBLS (PSI) Pressure (BPM) TYPE BBLS Arrived on site Arrived a		iesday, May 31,	2023		TYPE OF JOB:	Intermedia	ate 1	
Pressure (BPM) TYPE BBLS COMMENTS: (PSI) Pressure (BPM) TYPE BBLS COMMENTS: Pressure (BPM) TYPE BBLS COMMENTS: Arrived on site Arrived on								
Arrived on site Rig Running casing spot trucks Services		(PSI)	Pressure		דעטוי דעטוי	BBIS	COMMENTS:	
Rig Ruming casing spot trucks spot trucks spot trucks spot trucks spot trucks solve trucks safety meeting spot trucks safety meeting spot trucks safety meeting spot trucks safety meeting spot trucks spot spot spot spot spot spot spot spo	0830						Arrived on site	
Spot trucks Spot	0830						Rig Running casing	
2500 Safety meeting	0830						spot trucks	24
2500 Safely meeting Safely mater Safely meeting S	0845						rig up	20
2500 6 processed water 400 pump vater shead 29 for years water 120 6 processed water 10 pump vater shead 29 for years water 10 pump vater shead 29 for years water 10 pump vater shader 250 for years plug 250 for years water 288 displace plug 250 for years water 297 shutdown, plug didn't land 250 wash up stack float, float held 250 wash up stack 100 fig down 100 fig do	1530						safety meeting	90
2500 6 processed water 400 pump water ahead 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	1540						fill lines	-
120 6 processed water 400 pump water ahead 2 2 2 2 2 2 2 2 2	1545	2500					pressure test	AR
120 6 gel 50 pump get 50	1547	120		တ	processed water	400	pump water ahead	M
120 6 water 10 pump water spacer	1635	120		6	gel		pump gel	
450 6 cement 283 550 6 processed water 288 550 6 processed water 297	1650	120		6	water		pump water spacer	
550 6 processed water 288 550 6 processed water 297	1700	450		6	cement	283	pump cement	
550 6 processed water 288 550 6 processed water 297	1755						release plug	
6 processed water 297	1757	550		6	processed water	288	displace plug	
	1800	550		6	processed water	297	shutdown, plug didn't land	
	1805						release pressure check floar	t, float held
rig down leave location 1340 sacks Class A yield 1.18 water 5.24 water temp 52 24 bbl cement returns	1900						wash up stack	
leave location	1930						rig down	
sacks Class A 1.18 water 5.24 temp 52 cement returns	2000						leave location	
sacks Class A .18 water 5.24 temp 52								
sacks Class A 1.18 water 5.24 temp 52 cement returns								
temp 52 cement returns							1340 sacks Class A	
							.18 water 5.24	y 15.6
			1				water temp 52	
								face

	NORTHEAST	NATURAL EN	NERGY LLC			Date:	26	5-Jun-23	3		s	erv.	Supervisor:	Drew Forsythe	•
Cust. Rep.:	Josh, Pat			Transcription of the Communication of the Communica		Ticket #:	BPA-2306-004	18				8	Serv. Center	Black Lick - 1	571
Well Name:	MIP 1S					API Well #:	47-061-01922			С	ount	y: M	lonongalia	State:	MV
Well Type:		41.2000000000000000000000000000000000000				Rig:	Patterson 277	7		1	ype Jo	of C	M-INTER. C	ASING	
					Materia	ls Furnished by I	NexTier				30	D: 1			
Plug	s		Casing	Hardware					Physical Slurr	Barrier de	1	1	1.111/1.1	Fluid Volume	Mix Water
op Rubber Plu	g	9.625" Single P	lug Container	w/ Buttress Crossov	/er	Sacks of Cement	Fluid Density (lb/gal)	Excess	Yield (cuft/sk)		l/sk)		(bbls)	(cuft)	(bbis)
2.5 lb/gal Pure	Scrub		+7.0 PPB NFP-70	3+5.0 PPB NSU-888			12.5		5.66		29.4	2	100.00	- 1	
pacer 4.0 lb/gal Lead	d Cement	+0.2 % NFP-703-		6+50 % NPZ-010 +0.2 % NRT-213+0.1 %	NAS-504+0.2	3335	14	70%	1.22		5.3	9	727.18	4,083.11	428
5.2 lb/gal Tail	Cement	+0.2 % NFL-5	+50 % NPZ-01	TC-405 0+50 % NCM-916 703+0.05 % NAS-504+	0.3 % NTC-	980	15.2	44%	1.04		4.0	1	181.50	1,019.14	93
resh Water Di		400	405+0.2	5 % NRT-250			8.33				-	-	792.16	-	
Con Water Di	оргасстала	<u> </u>									-	+		-	
								W					CEIVED	-	
										Of	ice		Oil and	-	
-											M.A	AR_	0 8 20	24 -	
			***************************************						F	-V -nvi	A/ ron	De	partmen. ntal Prot	OÍ	
		***************************************											mai Fiol	ection -	
			4												
Displacement (Chemicals:			27 MANASTRA (SANTI JAMASTRA TANTA KANTANTANTANTANTANTANTANTANTANTANTANTANTA											
OF	PEN HOLE DA	ΓA					T 1	AR DATA	EPTH				ID	BURST	COLLAPSE
12.25 in. C	D.H. 1,910 to	10,494 ft	9.625	in. 40#, (0 to 10,	494 ft)	SIZE WEIGHT	THRD		(ft)		RAD		(in)	(psi)	(psi)
	Bulk Tmp.	Slurry 1 Tmp.	Slurry 2 Tmp.	Slurry 3 Tmp.	Slurry 4 Tmp.	9.625" 40#	BTC	1	0497	P	10H	С	8.835	7910	4230
Ambient Tmp.			82.0 °F										CASING EQL	IPMENT DEPT	-IS
	DDE/AOI 16 4	82.0 °F			DED	FORATED INTER	VAL DATA						FLOAT		ACP
Ambient Tmp.	PREVIOUS	82.0 °F		TOP		FORATED INTER	VAL DATA		SIZE		SHO		TLOAT	STAGE	7,01
Ambient Tmp. 82.0 °F) ft)	ТОР					SIZE		3HO		10450	STAGE	7.01
Ambient Tmp. 82.0 °F	375 in. 54.5	CASING DATA		TOP					SIZE	- 10	0494 Ix H2	.9	10450	STAGE Mix H2O	WATER ON L
Ambient Tmp. 82.0 °F	375 in. 54.5	CASING DATA				ВТМ	SPF	МА		- 10 Ni Cir	1x H2	.9 O			WATER ON L
Ambient Tmp. 82.0 °F 13.3	375 in. 54.5 FLUID DENSITY	CASING DATA # (0 to 1,910	DISPLAC TYPE H2O	EMENT FLUID DENSI 8.3 pp	TY	DIFF PRESS (psi) 3274	CSG LIFT (psi)	MA	X PRESS	- 10 - M	ix H2 lorid (ppm)	.9 O es	10450 Mix H2O pH	Mix H2O	WATER ON L
Ambient Tmp. 82.0 °F 13.3 WELL TYPE	375 in. 54.5	# (0 to 1,910	TYPE H2O	EMENT FLUID DENSI	тү	DIFF PRESS (psi)	CSG LIFT (psi)	MA	X PRESS (psi) 5000	- 10 - M	1x H2 nlorid (ppm) <300	.9 O ess	10450 Mix H2O pH 6 Casing Reciprocation	Mix H2O Temp 70.0 °F	WATER ON L (bbi) 2000 Length (ft)
Ambient Tmp. 82.0 °F 13.3 WELL TYPE OBM Bumped Plug Yes	FLUID DENSITY 12.0# Final Differential (psi) 3,550.00	CASING DATA # (0 to 1,910 VOLUME 792 bbi Floats Held (Y/N)	TYPE H2O PSI Left on	DEMENT FLUID DENSI 8.3 pp	TY Dg Top of Cement	DIFF PRESS (psi) 3274 Full Circ. During Jo (Y/N)	CSG LIFT (psi) 4506 b Max Pump	MA	x PRESS (psi)	- 10 - M	1x H2 nlorid (ppm) <300	.9 O es	10450 Mix H2O pH 6 Casing	Mix H2O Temp 70.0 °F	WATER ON L (bbl)
Ambient Tmp. 82.0 °F 13.3 WELL TYPE OBM Bumped Plug Yes	FLUID DENSITY 12.0# Final Differential (psi) 3,550.00	CASING DATA # (0 to 1,910 VOLUME 792 bbi Floats Held (Y/N)	TYPE H2O PSI Left on	DEMENT FLUID DENSI 8.3 pp Cerment to Surface (bbl)	TY Top of Cement (ft)	DIFF PRESS (psi) 3274 Full Circ. During Jo (Y/N)	SPF CSB LIFT (psi) 4506 Max Pump Pressure (psi)	MA	X PRESS (psi) 5000	- 10 - M	1x H2 nlorid (ppm) <300	.9 O es	10450 Mix H2O pH 6 Casing Reciprocation	Mix H2O Temp 70.0 °F	WATER ON L (bbl) 2000 Length (ft)
Ambient Tmp. 82.0 °F 13.3 WELL TYPE OBM Bumped Plug	FLUID DENSITY 12.0# Final Differential (psi) 3,550.00	CASING DATA # (0 to 1,910 VOLUME 792 bbi Floats Held (Y/N)	TYPE H2O PSI Left on	DEMENT FLUID DENSI 8.3 pp Cerment to Surface (bbl)	TY Top of Cement (ft)	DIFF PRESS (psi) 3274 Full Circ. During Jo (Y/N)	SPF CSB LIFT (psi) 4506 Max Pump Pressure (psi)	MA Casir	X PRESS (psi) 5000	Addit Cha	0494 lix H2 lorid (ppm) <300 itional	.9 O es	10450 Mix H2O pH 6 Casing Reciprocation	Mix H2O Temp 70.0 °F Rathole	WATER ON L (bbl) 2000 Length (ft)

