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

API 47 061 01922 County	Monongalia	District_Grant	
Quad Morgantown South Pad Nam	ne MIP	Field/Pool Name	
Farm name Enroute Properties, LLC		Well Number 1S	(Geothermal Science Well)
Operator (as registered with the OOG) Northeast	Natural Energy LLC	8	
Address 707 Virginia St. E., Suite 1200	City Charleston	State WV	_{Zip} 25301
Top hole Northing 438 Landing Point of Curve Northing Bottom Hole Northing	E	and deviation survey Easting 587894.0 Easting asting	
Elevation (ft) 1,058' GL Type	of Well ■New □ Existing	Type of Report	Interim □Final
Permit Type Deviated Horizontal	Horizontal 6A 📕 Vertica	Depth Type	■ Deep □ Shallow
Type of Operation □ Convert □ Deepen ■ I	orill □ Plug Back □ Re	drilling Rework	□ Stimulate
Well Type □ Brine Disposal □ CBM □ Gas □ C	Dil □ Secondary Recovery □	Solution Mining 🗆 Sto	orage
Drilled with □ Cable ■ Rotary Drilling Media Surface hole ■ Air □ Mud □			□ Other
Production hole	□ Brine		
Mud Type(s) and Additive(s) Synthetic Based Mud - Horizontal Section:BIO-BASE 3	65, CALCIUM CHLORIDE POW	DER, G-SEAL PLUS, HRI	P, LIME, M-I WATE (BARITE),
M-I-X II MEDIUM, MEGADRIL P SYSTEM, MEGADRIL P SYSTEM RENTAL,	MEGAMUL, SAFE-CARB 250, VERSATHIN H	F, VERSAWET, VG-PLUS, VINSEAL	MEDIUM, WALNUT NUT PLUG MEDIUM
Date permit issued2/10/2023 Date dril	ling commenced5/25/20	23 Date drilling of	ceased6/27/2023
Date completion activities beganNA		ctivities ceased	NA
Verbal plugging (Y/N)NA Date permissi	on granted NA	Granted by	
Please note: Operator is required to submit a pluggi	ng application within 5 days o	of verbal permission to p	lug
Freshwater depth(s) ft 350'	Open mine(s) (Y/N	() depths	N
Salt water depth(s) ft 700', 1,440', 2,120'	Void(s) encountere	d (Y/N) depths	N
Coal depth(s) ft295'	Cavern(s) encounte	ered (Y/N) depths	N
	N .		Reviewed by

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API 47- 061	01922	Farm na	ame_En	route Prop	erties	LLC	Wel	I number_1	S (Geo	thermal Science Well)
CASING STRINGS	Hole Size	Casing Size	Dej		ew or Jsed	Grade wt/ft		Basket Depth(s)		ment circulate (Y/N) vide details below*
Conductor	30"	24"	78		N			NA		
Surface	24"	18-5/8"	49		N	3	37.5	NA		Y, 22 bbl
Coal					,00000	100		Fig. (Set. 3)		Add Mill Colonia States and A
Intermediate 1	17-1/2"	13-3/8"	1,9	10'	N		54.5	NA		Y, 24 bbl
Intermediate 2	12-1/4"	9-5/8"	10,4		N		40	NA		Y, 140 bbl
Intermediate 3										
Production										
Tubing										
Packer type and de	epth set									
CEMENT DATA	Class/Type of Cement	Numbe of Sack		Slurry wt (ppg)		Yield t ³ /sks)	Volume (ft ³)		ement (MD)	WOC (hrs)
Conductor	4,500 PSI Gro		T	VIII)						48
Surface	Class A	742		15.6		1.18	875	C	CTS	8
Coal										
Intermediate 1	Class A	1,340		15.6	8	1.18	1,616	C	CTS	8
Intermediate 2	Class L/Class	Н 3,335		14		1.22	4,083		CTS	48
Intermediate 3										
Production										
Tubing										
Drillers TD (ft Deepest forma Plug back pro	tion penetrated	Rose Hill				TD (ft) 10, to (ft) N/				
Kick off depth	(ft) NA				_:					
Check all wire	line logs run	□ caliper □ neutron	□ de	- v. 7 h.	□ deviat I gamm	ed/direct a ray		induction temperature	□sor	nic
Well cored	Yes 🖪 No	Convention	onal	Sidewall		W	Vere cutting	s collected	■ Yes	□ No
	HE CENTRAL		ENT US	SED FOR E	ACH C	ASING S	TRING _			
Intermediate: Bow sp	ring centralizers every 3	rd joint or approximately	120'							
WAS WELL	COMPLETED A	AS SHOT HOLE	Ε # Σ	es □ No	D	ETAILS				
WAS WELL	COMPLETED (OPEN HOLE?	□ Yes	■ No	DET	AILS _				
WERE TRAC	ERS USED 🗆	Yes • No	TYP	E OF TRAC	CER(S)	USED _				

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API 47- 061 _ 01922

Farm name_Enroute Properties, LLC

_____Well number_1S (Geothermal Science Well)

PERFORATION RECORD

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

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							

Please insert additional pages as applicable.

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API 47- 061	_ 01922	Farm	_{name} Enroute	Properties,	LLC	Well r	umber_	IS (C	Geothermal Sc	ience Well)
PRODUCING 1	FORMATION(S)	<u>DEPTHS</u>							
Well will not pro		N - 25		TVD		MD				
				_ 1 1						
Please insert ad	ditional pages a	is applicable.								
GAS TEST	□ Build up	Drawdown	□ Open Flow	OI	L TEST 🗆 F	Flow 🗆	Pump			
SHUT-IN PRE	SSURE Sur	face	_psi Botto	m Hole	psi	DURAT	ION OI	TEST	7h	ars
OPEN FLOW	Gas mc	Oil fpd	NGL bpd	bpd		GAS M □ Estin	IEASUF nated	RED B` □ Orifi	Y ice □ Pilot	
LITHOLOGY/ FORMATION	TOP DEPTH IN FT NAME TVD	BOTTOM DEPTH IN FT TVD	TOP DEPTH IN FT MD	BOTTOM DEPTH IN FT MD) QUANTITYAN IE, OIL, GAS, H	
See attached	0	TVD	0	IVID		OID (TIE	JII 11 11 12 12 12 12 12 12 12 12 12 12 12	rt, Drui	12, 012, 0110, 11	20, 210)
				,						
					-					
					1					
Please insert ad	lditional pages	as applicable.								
Drilling Contra	ctor Patterson									
Address 4000 T	own Center Blvd,	Suite 240	City	Canonsburg		State	PA	_ Zip _	15317	
Logging Comp	any Javins									
Address 2000 N	lorgantown Indust	ria	City	Morgantown		State	WV	_Zip _	26501	
Cementing Cor	npany NexTier									
Address 4000 T	own Center Blvd		City	Canonsburg		State	PA	_Zip_	15317	
Stimulating Co	mpany									
Address			City			State		_Zip_		
Please insert ad	lditional pages	as applicable.								
Completed by	Hollie Medley				Telephone	304-212	-0422			
Signature #			Title R	egulatory Mana			Date 3/6	6/2024		

5:30 AM	4:05 AM			3:45 AM	3:19 AM			2:40 AM	2:30 AM	1;50 AM	1:45 AM	12:30 AM	9:00 PM	7:30 PM	7:00 PM	6:10 PM		6:00 PM	(Hr:Min)	TIME		DATE:	WELL#:	TIELD:	COMPANY NAME:		
				680	100			190	120	115									(PSI)	PRESSURE						ENERGY SERVICES	
																			Pressure	Wellhead							
				2	5			ហ	.4	5									(BPM)	RATE				0	NORTHEAST	0	10 Bi
					H20			CEMENT	GEL	H20									TYPE	FLUID	TILL OF JOB.	TVPE OF IOR.				Office 304-933-3544	104 Heliport Loop Rd Bridgeport Wv 26330
			5 MIN		137			156	25	160									BBLS	STAGE			COM	PUMP	SUI		
Left Location.	Starting Rig Down		Held Pressure for How Long?	Plug landed	Start Diplacement		Cement Density 15.5 1.18 5.4 (/42 SKS)	ent Blend, Sks, Yield, a	GEL SPACER	WATER SPACER	Pressure Test	Pre Job Safety Meeting	Rigging Up	Pre Rig Up Meeting	Spotting trucks	Hazard Hunt	Rig Status (PULL DRILL PIPE)	Arrived on site	COMMENTS:	_			COMPANY REP:		SUPERVISOR: Danny Gum		DETAILED TREATMENT LOG

						2000	1930	1900	1805	1800	1757	1755	1700	1650	1635	1547	1545	1540	1530	0845	0830	0830	0830	(Hr:Min)	TIME	DAID.	ı	WELL#:	FIELD:	COMPANY NAME:		
										550	550		450	120	120	120	2500							(PSI)	PRESSURE	wednesday, may 31, 2023					ENERGY SERVICES	
																								Pressure	Wellhead	620						51
										ത	ത		ത	ത	6	6						10		(BPM)	RATE				MIP IS	Northeast	Off	104 Bric
										processed water	processed water		cement	water	gel	processed water								TYPE	FLUID	TIPE OF JOB.	TWINT OF JOB.				Office 304-933-3544	104 Heliport Loop Rd Bridgeport Wv 26330
										297	288		283	10											STAGE	illediae i		COMPANY	PUMP I	Idns		
24 bbl cement returns to surface	water temp 52	yield 1.18 water 5.24 density 15.6	1340 sacks Class A			leave location	rig down	wash up stack	release pressure check float, float held	shutdown, plug didn't land	displace plug	release plug	pump cement	pump water spacer	pump gel	pump water ahead	pressure test	fill lines	safety meeting	rig up	spot trucks	Rig Running casing	Arrived on site	COMMEN 18:				ANY KEP:	PUMP NUMBER:	SUPERVISOR:		DETAILE
urface		sity 15.6							oat, float held																				CBTK05	Jason Starcher		DETAILED TREATMENT LOG

NE	XII	EK				4-0								(713)325-6000
Customer: NO	ORTHEAST	NATURAL EN	ERGY LLC			Date:	26	Jun-23			S	rv. Supervisor:	Drew Forsyth	θ
Cust. Rep.: Jo	sh, Pat					Ticket #:	BPA-2306-004	18				Serv. Center	Black Lick - 1	571
Well Name: M	IP 1S					API Well #:	47-081-01922				1	: Monongalia	State:	wv
Well Type:						Rig:	Patterson 277			7	ype d	CM-INTER.	CASING	
					Material	is Furnished by N	VexTier		Physical Siur	ry Pro	perti	95		
Plugs		a appli Olively Div		lardware // Buttress Crossov	or.	Sacks of	Fluid	Excess	Yield		Wate		Fluid Volume	Mix Water
p Rubber Plug		9,625" Single Pi	ug Container v	7 Buttless Clossov	61	Cement	Density (lb/gal)		(cuft/sk)	(ga	(/sk)	(DDIS)	(duity	(bbls)
.5 lb/gal PureSo acer	crub	4	7.0 PPB NFP-703	+5.0 PPB NSU-888			12.5		5.66		29,4	100.00		
.0 lb/gal Lead (Cement	+0.2 % NFP-703+	0.2 % NFL-549+	5+50 % NPZ-010 D.2 % NRT-213+0.1 % 'C-405	NAS-504+0.2	3335	14	70%	1.22		5.3	727.18	4,083.11	428
.2 lb/gal Tall Co	ement	+0.2 % NFL-54	49+0.2 % NFP-70	H50 % NCM-916 03+0.05 % NAS-504+0 % NRT-250).3 % NTC-	980	15.2	44%	1.04		4.0	1 181.50	1,019.14	93
esh Water Disp	lacement		1.				8.33					792.16	-	
										_	-		-	
											-		-	
										ļ	•		-	
				and the second						L	-		-	
											-		-	
					10-11-11-11-11-11-11-11-11-11-11-11-11-1				-					
isplacement Cl					and the same of th		TURIU	AR DATA		-				
	N HOLE DA		0.625	n. 40#, (0 to 10,	494 ft)	SIZE WEIGHT	THRD		EPTH	1	RAD	E ID (in)	BURST (psi)	COLLAPS (psi)
12.25 in. O. Ambient Tmp.	Bulk Tmp.	Slurry 1 Tmp.	Slurry 2 Tmp.	Slurry 3 Tmp.	Slurry 4 Tmp.	9.625" 40#	втс		(ft) 10497	P	1101		7910	4230
82.0 °F	Jam Impi	82.0 °F	82.0 °F											
131 MILES A 14	PREVIOUS	CASING DATA				FORATED INTER			SIZE	T	SHO	A STATE OF THE PARTY OF THE PAR	STAGE	THS ACP
13.3	76 in. 54.5	# (0 to 1,910	ft)	ТОР		втм	SPF		OILL.		0494			
WELL F	LUID		DISPLAC	EMENT FLUID		DIFF PRESS	CSG LIFT	М	AX PRESS		lix Ha	O Mix H2O	Mix H2O	WATER ON I
TYPE	DENSITY	VOLUME	TYPE	DENSI	TY	(psi)	(psi)		(psi)	1	(ppn)	remp	(bbl)
ОВМ	12.0#	792 bbl	H2O	8.3 pj	pg	3274	4506		5000		<30		70.0 °F	2000
Bumped Plug	Final Differential (psl)	Floats Held (Y/N)	PSI Left on Casing	Cement to Surface (bbl)	Top of Cement (ft)	Full Circ, During Jo (Y/N)	Max Pump Pressure (psi)	Cas	ng Rotation	Ad	ditions arged	00	on Rathol	e Length (ft)
	3,550.00		-	140,00	0	Yes	3,550.00		No			No		20
Yes Comments/Additi	onai Dolans.													
1000000	onal Delais.												and the same of th	
1000000	onal Details.		-				T							

