

west virginia department of environmental protection

Office of Oil and Gas 601 57<sup>th</sup> Street, S.E. Charleston, WV 25304 (304) 926-0450 fax: (304) 926-0452

Harold D. Ward, Cabinet Secretary www.dep.wv.gov

Tuesday, July 13, 2021 WELL WORK PERMIT Horizontal 6A / New Drill

#### TUG HILL OPERATING, LLC 380 SOUTHPOINTE BOULEVARD, PLAZA II SUITE 200 CANONSBURG, PA 15317

#### Re: Permit approval for VAN WINKLE S-23HU 47-051-02356-00-00

This well work permit is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to any additional specific conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas Inspector.

Please be advised that form WR-35, Well Operators Report of Well Work is to be submitted to this office within 90 days of completion of permitted well work, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

Per 35 CSR 4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926-0450.

Martin mes A Chief

Operator's Well Number: VAN WINKLE S-23HU Farm Name: XCL MIDSTREAM OPERATIN U.S. WELL NUMBER: 47-051-02356-00-00 Horizontal 6A New Drill Date Issued: 7/13/2021

Promoting a healthy environment.



west virginia department of environmental protection

Oil and Gas Conservation Commission 601 57th Street SE, Charleston, WV 25304 304-414-1239

Randall M. Albert, Chairman dep.wv.gov

Van Winkle S-23HU

June 14, 2021

Department of Environmental Protection Office of Oil and Gas Charleston, WV 25304

RE: Application for Deep Well Permit – API #47-051-02356

COMPANY: Tug Hill Operating, LLC

FARM: <u>XCL Midstream Operating, LLC</u>

COUNTY: Marshall DISTRICT: Meade QUAD: Glen Easton

The deep well review of the application for the above company is <u>Approved to drill to Trenton for</u> Point Pleasant completion.

The applicant has complied with the provision of Chapter 22C-9, of the Code of West Virginia, nineteen hundred and thirty-one (1931), as amended, Oil and Gas Conservation Commission as follows:

- 1. Comments to Notice of Deviation filed? No.
- 2. Provided a certified copy of duly acknowledged and recorded consent and easement form from all surface owners? Yes
- 3. Provided a tabulation of all deep wells within one mile of the proposed location, including the API number of all deep wells: \*\*yes
- 4. Provided a plat showing that the productive interval of the well meets the requirements of the Rules of the Commission W. Va. C.S.R. § 39-1-4.2.

Sincerely, Administrator

\*\* Old Crow N-20HU 47-051-02191; Old Crow N-21HU 47-051-02335, MND 6 HHS 47-051-01732; MND20EU 47-051-02045; Knob Creek N-12HU 47-051-02268; Knob Creek N-11HU 47-051-02287; Hunter 1 47-051-01284; Van Winkle N-16HU 47-051-02349, Van Winkle N-17HU 47-051-02350, Van Winkle N-18HU 47-051-02351, Van Winkle N-19HU 47-051-02352, Van Winkle S-20HU 47-051-02353, Van Winkle S-21HU 47-051-02354, Van Winkle S-22HU 47-051-02355; Pendleton N-9HU 47-051-02245; Heaven Hill 2W-13HU 47-051-01957, Heaven Hill 2W-12HU 47-051-01952, Keith Stern N-13HU 47-051-02265; Keith Stern S-17HU 47-051-02266, Knob Creek N-13HU 47-051-02269; Knob Creek S-16HU 47-051-02290; Knob Creek S-15HU 47-051-02289; Knob Creek S-14HU 47-051-02288

## **PERMIT CONDITIONS**

West Virginia Code § 22-6A-8(d) allows the Office of Oil and Gas to place specific conditions upon this permit. Permit conditions have the same effect as law. Failure to adhere to the specified permit conditions may result in enforcement action.

#### CONDITIONS

- 1. This proposed activity may require permit coverage from the United States Army Corps of Engineers (USACE). Through this permit, you are hereby being advised to consult with USACE regarding this proposed activity.
- 2. If the operator encounters an unanticipated void, or an anticipated void at an unanticipated depth, the operator shall notify the inspector within 24 hours. Modifications to the casing program may be necessary to comply with W. Va. Code § 22-6A-5a (12), which requires drilling to a minimum depth of thirty feet below the bottom of the void, and installing a minimum of twenty (20) feet of casing. Under no circumstance should the operator drill more than one hundred (100) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.
- 3. When compacting fills, each lift before compaction shall not be more than 12 inches in height, and the moisture content of the fill material shall be within limits as determined by the Standard Proctor Density test of the actual soils used in specific engineered fill, ASTM D698, Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort, to achieve 95 % compaction of the optimum density. Each lift shall be tested for compaction, with a minimum of two tests per lift per acre of fill. All test results shall be maintained on site and available for review.
- 4. Operator shall install signage per § 22-6A-8g (6) (B) at all source water locations included in their approved water management plan within 24 hours of water management plan activation.
- 5. Oil and gas water supply wells will be registered with the Office of Oil and Gas and all such wells will be constructed and plugged in accordance with the standards of the Bureau for Public Health set forth in its Legislative rule entitled *Water Well Regulations*, 64 C.S.R. 19. Operator is to contact the Bureau of Public Health regarding permit requirements. In lieu of plugging, the operator may transfer the well to the surface owner upon agreement of the parties. All drinking water wells within fifteen hundred feet of the water supply well shall be flow tested by the operator upon request of the drinking well owner prior to operating the water supply well.
- 6. Pursuant to the requirements pertaining to the sampling of domestic water supply wells/springs the operator shall, no later than thirty (30) days after receipt of analytical data provide a written copy to the Chief and any of the users who may have requested such analyses.
- 7. 24 hours prior to the initiation of the completion process the operator shall notify the Chief or his designee.
- 8. During the completion process the operator shall monitor annular pressures and report any anomaly noticed to the chief or his designee immediately.
- 9. If any explosion or other accident causing loss of life or serious personal injury occurs in or about a well or well work on a well, the well operator or its contractor shall give notice, stating the particulars of the explosion or accident, to the oil and gas inspector and the Chief, within 24 hours of said accident.
- 10. During the casing and cementing process, in the event cement does not return to the surface, the oil and gas inspector shall be notified within 24 hours.

## **PERMIT CONDITIONS**

11. The operator shall provide to the Office of Oil and Gas the dates of each of the following within 30 days of their occurrence: completion of construction of the well pad, commencement of drilling, cessation of drilling, completion of any other permitted well work, and completion of the well. Such notice shall be provided by sending an email to DEPOOGNotify@wv.gov.

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07/16/2021

API NO. 47-051

WW-6B (04/15)

OPERATOR WELL NO. Van Winkle S-23HU Well Pad Name: Hunter Pathtel

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### STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS WELL WORK PERMIT APPLICATION

1) Well Operator: Tug Hill Operat	ing, LLC	494510851	Marshall	Meade	Glen Easton 7.5'
	-	Operator ID	County	District	Quadrangle
2) Operator's Well Number: Van W	/inkle S-23H	HU Well I	ad Name: Hu	nter Pethtel	
3) Farm Name/Surface Owner: XeL M	didstream Opera	ating, LLC Public R	oad Access: C	ounty Route	e 74
4) Elevation, current ground: 754	F	Elevation, propose	ed post-construc	ction: 754'	
5) Well Type (a) Gas X Other	Oil	ປາ	nderground Stor	rage	
(b)If Gas Shallow	/	Deep	Х		_
Horizon	ntal X		Barry St	Don 1	- 4- 11
6) Existing Pad: Yes or No Yes		~	Daug Sh	wyr 6	1. 01
7) Proposed Target Formation(s), De					
Point Pleasant is the target formation at	a depth of 10,9	987' - 11,107', Ihickn	ess of 120' and an	licipated press	ure of approx. 7,500 psi.
8) Proposed Total Vertical Depth:	11,257'				
9) Formation at Total Vertical Depth	1: Trenton				
10) Proposed Total Measured Depth	: 25,638'				
11) Proposed Horizontal Leg Length	13,996.0	01'			
12) Approximate Fresh Water Strata	Depths:	70; 415'			
13) Method to Determine Fresh Wat	er Depths:	Offset well reports of	noticeable flow at	the flowline or v	when need to start soaping
14) Approximate Saltwater Depths:					
15) Approximate Coal Seam Depths	Sewickle	y Coal - 314' an	d Pittsburgh C	oal - 409'	
16) Approximate Depth to Possible	Void (coal n	nine, karst, other)	None anticip	bated	
<ol> <li>Does Proposed well location con directly overlying or adjacent to an a</li> </ol>			N	No X	
(a) If Yes, provide Mine Info: Na	ime:				
	epth:				
	am:				
Ov					

Page 1 0f.3 07/16/2021

API NO. 47- 051

OPERATOR WELL NO. Van Winkle S-23HU Well Pad Name: Hunter Pethtel

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18)

### CASING AND TUBING PROGRAM

ТҮРЕ	Size (in)	<u>New</u> or Used	<u>Grade</u>	<u>Weight per ft.</u> (lb/ft)	<u>FOOTAGE: For</u> <u>Drilling (ft)</u>	INTERVALS: Left in Well (ft)	CEMENT: <u>Fill-up</u> (Cu. Ft.)/CTS
Conductor	30"	NEW	BW	BW	120'	120'	259FT^3(CTS)
Fresh Water	20"	NEW	J55	106.5#	515'	515'	883FT^3(CTS)
Coal	13 3/8"	NEW	J55	54.5#	2,226'	2,226'	1576FT^3(CTS)
Intermediate	9 5/8"	NEW	HPP110	47#	10,046'	10,046'	3257FT^3(CTS)
Production	5 1/2"	NEW	P110	23#	25,638'	25,638'	6044FT^3(CTS)
Tubing	2 7/8"	NEW	P110	6.5#		10,614'	1
Liners							

	-	Bary Att	lys 2-21	
Wall ickness (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	<u>Cement</u> <u>Type</u>	
1.0	2,333	1,866	CLASS A	

ТҮРЕ	Size (in)	<u>Wellbore</u> Diameter (in)	<u>Wall</u> <u>Thickness</u> <u>(in)</u>	Burst Pressure (psi)	<u>Anticipated</u> <u>Max. Internal</u> <u>Pressure (psi)</u>	<u>Cement</u> <u>Type</u>	<u>Cement</u> <u>Yield</u> (cu. ft./k)
Conductor	30#	36#	1.0	2,333	1,866	CLASS A	1.2
Fresh Water	20"	26#	.5	2,410	1,928	SEE #24	1.2
Coal	13 3/8"	17 1/2"	.38	2,740	2,192	SEE #24	1.2
Intermediate	9 5/8"	12 1/4"	.472	10,730	6,968	SEE #24	1.33
Production	5 1/2"	8 1/2"	.415	16,510	13,208	SEE #24	1.17/1.19
Tubing	2 7/8"			14,530	11,624		
Liners							

### PACKERS

Kind:	N/A	RECEIVED Office of Oil and Gas
Sizes:	N/A	FEB 0 3 2021
Depths Set:	N/A	WV Department of Environmental Protection

WW-6B (04/15) WW-6B (10/14) API NO. 47-051 -OPERATOR WELL NO. Van Winkle S-23HU Well Pad Name: Hunter Pethtel

22-21

19) Describe proposed well work, including the drilling and plugging back of any pilot hole:

Drill through the Point Pleasant and TD Pilot Hole 150' into the Trenton. Log vertical section and run a solid cement plug back to proposed KOP. Drill curve and lateral per proposed well plan, run and cement production casing. Perform DBL from 60 deg to surface, make cleanout run, and stimulate.

20) Describe fracturing/stimulating methods in detail, including anticipated max pressure and max rate:

Well to be completed with approximately 34,500,000 lb. proppant and 620,000 bbl of water. Max rate = 80bpm; max psi = 9,000#.

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 16.63 acres

22) Area to be disturbed for well pad only, less access road (acres): 4.87 acres

23) Describe centralizer placement for each casing string:

Will run 3 centralizers on surface casing at equal distance. Intermediate strings will have 1 centralizer every other joint. Production casing will have one centralizer every other joint in lateral, one centralizer every joint through curve, one centralizer every other joint to surface.

24) Describe all cement additives associated with each cement type:

Sfc - Premium NE-1 + 2% CaCl; Int1 - Premium NE-1 + 1.5% CaCL + Flake; Int2 - Lead: Premium NE-1 + 5% BA-90 + .85% R-3 + 3% KCl + .75 gals/100sk FP-13L + 1% MPA-170 Tail: Premium NE-1 + .1% R-3 + 5% KCl + 1% CD-32 + .4% FL-52 + .2% ASA-301 + .6% Sodium Metasilicate; Kick Plug - Class H Cement + 1% CD-32 + .7% Sodium Metasilicate + .1% R-3 + .75 gal/100sk FP-13L; Prod - Lead: 50:50 (Poz:Class H) + .3% R-3 + .3% MPA-250 + .75 gal/100sk FP-13L Tail: 25:75 (Poz:Class H) + .3% R-3 + .3% MPA-250 + .375 gal/100sk FP-13L

25) Proposed borehole conditioning procedures:

Will circulate a minimum of 3 hours at TD, short trip to curve, circulate bottoms up, check for flow, POOH RECEIVED

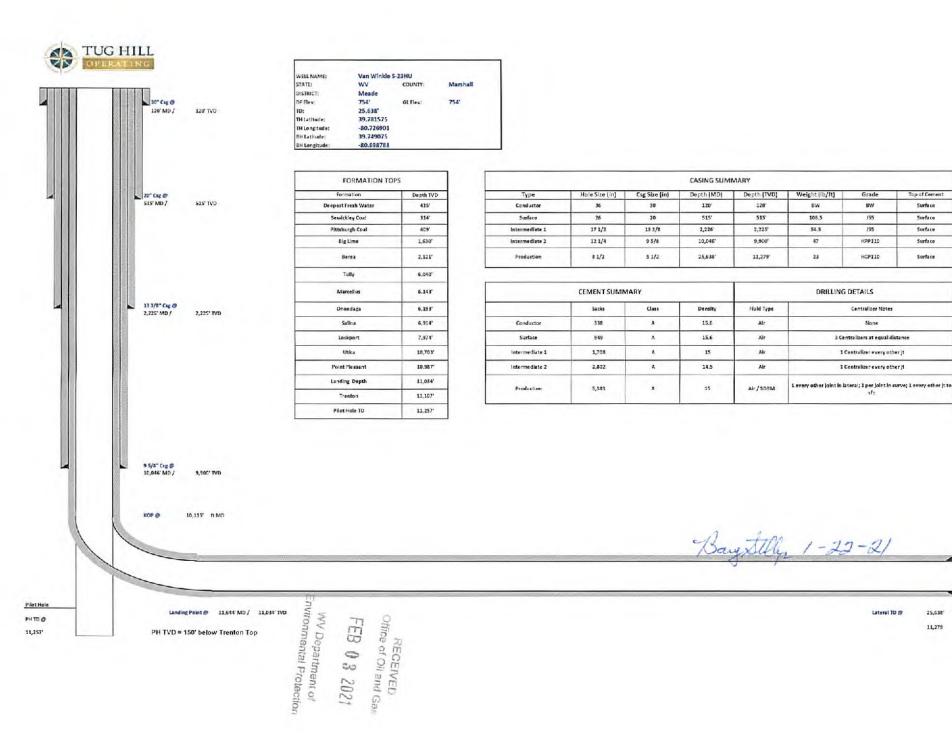
Office of Oil and Gas

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WV Dapartment or Environmental Protection

\*Note: Attach additional sheets as needed.





Top of Cement

Surfa ce

Surface

Surface Surface

Surface

25,638' 11 MD

11,275 ft TVD



#### Tug Hill Operating, LLC Casing and Cement Program

#### Van Winkle S-23HU

		Casing							
	String	Grade	Bit Size	Depth (Measured)	Cement Fill Up				
Conductor	30"	BW	36"	120'	CTS				
Surface	20"	J55	26"	515'	CTS				
Intermediate 1	13 3/8"	J55	17 1/2"	2,226'	CTS				
Intermediate 2	9 5/8"	HPP110	12 1/4"	10,046'	CTS				
Production	5 1/2"	HCP110	8 1/2"	25,638'	CTS				

### Cement

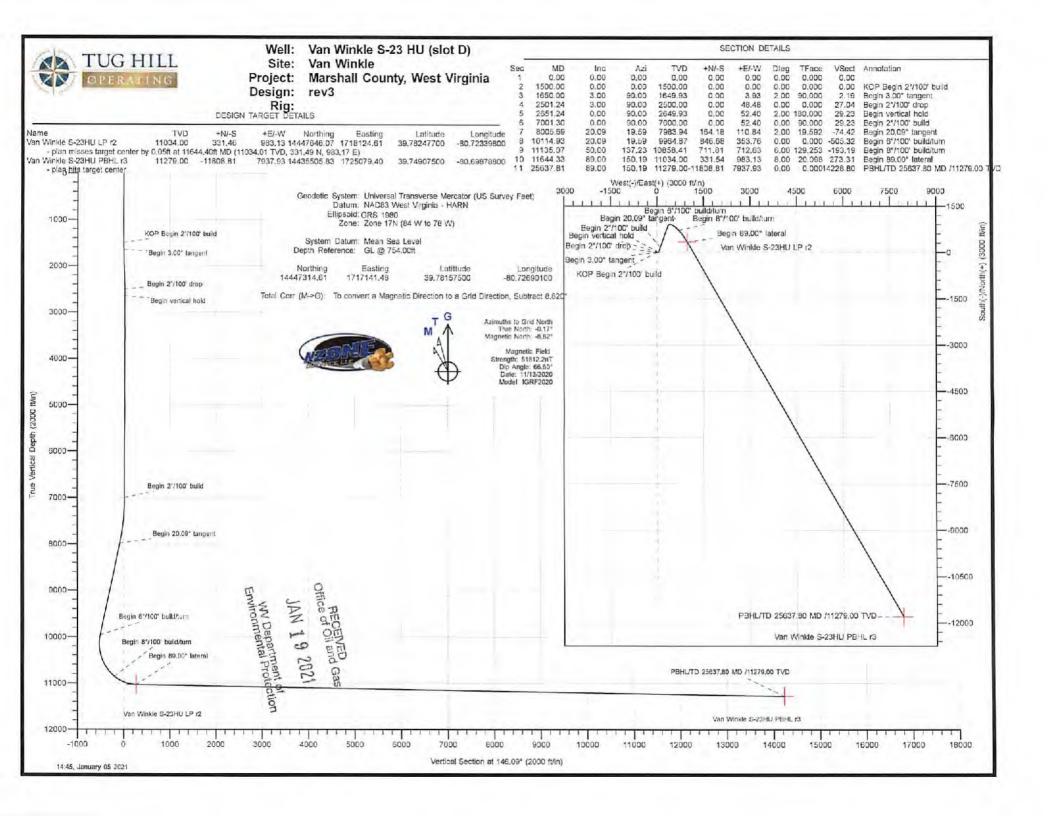
Surface:	Premium NE-1 + 2% bwoc CaC12 + 46.5% Fresh Water - Surface Cement mixed at 15.6 ppg, Y=1.2
Intermediate 1:	Premium NE-1 + 1% bwoc CaC12 + 46.5% Fresh Water - Intermediate Cement mixed at 15.6 ppg, Y=1.2
Intermediate 2:	Premium NE-1 + 1% bwoc CaC12 + 46.5% Fresh Water - Intermediate Cement mixed at 15.6 ppg, Y=1.99
Production:	50:50 Poz: Premium NE-1 + .1% bwoc ASA-301 + 60lb/sk ASCA-1 + .35% bwoc BA-10A + .25% bwoc MPA-170, 44 lb sack + .5% bwoc R-3 + .75 gals/100sk FP-13L - Production Cement mixed at 15.2ppg, Y = 1.18

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WV Department of Environmental Protection

07/16/2021





Database: Company: Project: Site: Well: Wellbore: Design:	Van Winkle	rating LLC unty, West Virg 5-23 HU (slot I		TVD Reference MD Reference North Referen	<b>a</b> :	GL @ 7 GL @ 7 Grid		HU (slot D)
Project	Marshall Cour	nty, West Virg	nia					
Map System: Geo Datum: Map Zone:	Universal Trans NAD83 West V Zone 17N (84 V	irginia - HARN	or (US Survey Feet) I	System Datum		Mean Sea	Level	
Site	Van Winkle							
Site Position: From: Position Uncertainty:	Lat/Long	0.00 ft	Northing: Easting: Slot Radius:	14,447,369. 1,717,188. 13-3/	44 usft Lon	tude: gitude:		39.78172533 -80.72673327
Well	Van Winkle S-	23 HU (slot D)	K					
Well Position	+N/-S +E/-W	0.00 ft 0.00 ft	Northing: Easting:	1,7	47,314.61 usft 17,141.48 usft	Latitude: Longitude:		39.78157500 -80.72690100 -751.00.0
Position Uncertainty Grid Convergence:		0.00 ft 0.175 °	Wellhead Ele	vation:	ft	Ground Lev	rel:	754.00 ft
Wellbore	Original Hole							
Magnetics	Model Na	me	Sample Date	Declination (°)		Dip Angle (°)		Field Strength (nT)
	IGI	RF2020	11/13/2020		-8.646	66	.595	51,812.16920531
Design	rev3							
Audit Notes: Version:			Phase:	PLAN	Tie On I	Depth:	0.00	
Vertical Section:			From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)		Direction (°)	
			0.00	0.00	0.00		146.09	
Plan Survey Tool Pro Depth From (ft)	Depth To	Date 1/5/2 Survey (Welli		Tool Name	Re	marks		
1 0.00	25,637.81	rev3 (Original	Hole)	MWD MWD - Standard				

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Database: Company:	DB_Dec2220_v16 Tug Hill Operating LLC	Local Co-ordinate Reference: TVD Reference:	Well Van Winkle S-23 HU (slot D) GL @ 754.00ft
Project:	Marshall County, West Virginia	MD Reference:	GL @ 754.00ft
Site:	Van Winkle	North Reference:	Grid
Well:	Van Winkle S-23 HU (slot D)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev3		

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (*/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.000	
1,650.00	3.00	90.00	1,649.93	0.00	3.93	2.00	2.00	0.00	90.000	
2,501.24	3.00	90.00	2,500.00	0.00	48.48	0.00	0.00	0.00	0.000	
2,651.24	0.00	90.00	2,649,93	0.00	52.40	2.00	-2.00	0.00	180.000	
7,001.30	0.00	90.00	7,000.00	0.00	52.40	0.00	0.00	0.00	90.000	
8,005.69	20.09	19.59	7,983.94	164.18	110.84	2.00	2.00	-7.01	19.592	
10,114.93	20.09	19.59	9,964.87	846.68	353.76	0.00	0.00	0.00	0.000	
11,135.07	50.00	137.23	10,858.41	711.81	712.63	6.00	2.93	11.53	129.253	
11,644.33	89.00	150.19	11,034.01	331.54	983.13	8.00	7.66	2.55	20.098	
25,637.81	89.00	150,19	11,279.00	-11.808.81	7,937.93	0.00	0.00	0.00	0.000	Van Winkle S-23HU

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Well Van Winkle S-23 HU (slot D) Database: DB\_Dec2220\_v16 Local Co-ordinate Reference: Tug Hill Operating LLC GL @ 754.00ft Company: TVD Reference: Project: Marshall County, West Virginia MD Reference: GL @ 754.00ft Site: Van Winkle North Reference: Grid RECEIVED Office of Oil and Gas Well: Van Winkle S-23 HU (slot D) Survey Calculation Method: Minimum Curvature Wellbore: Original Hole nev3 Design: JAN 1 9 2021

#### Planned Survey

ion

leasured			Vertical Depth			Map Northing	Map Easting	Envi	W Department ronmental Prot
Depth (ft)	Inclination (°)	Azimuth (°)	(ft)	+N/-S (代)	+E/-W (ft)	(usft)	(usft)	Latitude	Longitude
0.00	0.00	0.00	0.00	0.00	0.00	14,447,314.61	1,717,141.48	39.78157500	-80.72690
100.00	0.00	0.00	100.00	0.00	0.00	14,447,314.61	1,717,141.48	39.78157500	-80.72690
200.00	0.00	0.00	200.00	0.00	0.00	14,447,314.61	1,717,141.48	39.78157500	-80.72690
300,00	0.00	0.00	300.00	0.00	0.00	14,447,314.61	1,717,141.48	39.78157500	-80.72690
400.00	0.00	0.00	400.00	0.00	0.00	14,447,314.61	1,717,141.48	39,78157500	-80.72690
500,00	0.00	0.00	500.00	0.00	0.00	14,447,314.61	1,717,141.48	39,78157500	-80.72690
600.00	0.00	0.00	600.00	0.00	0.00	14,447,314.61	1,717,141.48	39.78157500	-80.72690
700.00	0.00	0.00	700.00	0.00	0.00	14,447,314.61	1,717,141.48	39.78157500	-80.72690
800.00	0.00	0.00	800.00	0.00	0.00	14,447,314.61	1,717,141.48	39.78157500	-80.72690
900.00	0.00	0.00	900.00	0.00	0.00	14,447,314.61	1,717,141.48	39.78157500	-80.72690
1,000.00	0.00	0.00	1,000.00	0.00	0.00	14,447,314.61	1,717,141.48	39.78157500	-80.72690
1,100.00	0.00	0.00	1,100.00	0.00	0.00	14,447,314.61	1,717,141.48	39.78157500	-80.72690
1,200.00	0.00	0.00	1,200.00	0.00	0.00	14,447,314.61	1,717,141.48	39.78157500	-80.72690
1,300.00	0.00	0.00	1,300.00	0.00	0.00	14,447,314.61	1,717,141.48	39.78157500	-80.72690
1,400,00	0.00	0.00	1,400.00	0.00	0,00	14,447,314.61	1,717,141.48	39.78157500	-80.72690
1,500.00	0.00	0.00	1,500,00	0,00	0.00	14,447,314.61	1,717,141,48	39.78157500	-80.72690
	in 2°/100' bui								
1,600.00	2.00	90.00	1,599.98	0.00	1.75	14,447,314.61	1,717,143.23	39.78157499	-80.72689
1,650.00	3.00	90.00	1,649.93	0.00	3.93	14,447,314.61	1,717,145.41	39.78157497	-80.72688
		00.00	1,010.00	0.00	0.00	and a more than			
1,700.00	00° tangent 3.00	90.00	1,699.86	0.00	6.54	14,447,314.61	1,717,148.03	39.78157495	-80.72687
	3.00	90.00	1,799.73	0.00	11.78	14,447,314.61	1,717,153.26	39.78157490	-80.72685
1,800.00	3.00	90.00	1,899.59	0.00	17.01	14,447,314.61	1,717,158.49	39.78157486	-80.72684
1,900.00		90.00		0.00	22.24		1,717,163.73	39.78157482	-80.72682
	3.00 3.00	90.00	1,999.45 2,099.31	0.00	27.48	14,447,314.61	1,717,168.96	39.76157477	-80.72680
2,100.00		90.00		0.00	32.71	14,447,314.61	1,717.174.19	39.78157473	-80.72678
2,200.00	3.00		2,199.18		37.94	14,447,314.61		39.78157468	-80.72676
2,300.00	3.00	90.00	2,299.04	0.00		14,447,314.61	1,717,179.43	39.78157464	-80.72674
2,400.00	3.00	90.00	2,398.90	0.00	43.18 48.41	14,447,314.61	1,717,184.66	39.78157460	-80.72672
2,500.00	3.00	90.00	2,498.77	0.00		14,447,314.61		39.78157460	-80.72672
2,501.24	3.00	90.00	2,500.00	0.00	48.48	14,447,314.61	1,717,189.95	39.70157400	-00.72072
	/100' drop								00 7007
2,600.00	1.02	90.00	2,598.70	0.00	51.94	14,447,314.61	1,717,193.43	39,78157457	-80.7267
2,651.24	0.00	0.00	2,649.93	0.00	52.40	14,447,314.61	1,717,193.88	39.78157456	-80.72671
	rtical hold								11000
2,700.00	0.00	0.00	2,698.70	0.00	52.40	14,447,314.61	1,717,193.88	39.78157456	-80.72671
2,800.00	0.00	0.00	2,798.70	0.00	52,40	14,447,314.61	1,717,193.88	39.78157456	-80.72671
2,900.00	0.00	0.00	2,898.70	0.00	52.40	14,447,314.61	1,717,193.88	39.78157456	-80.72671
3,000.00	0.00	0.00	2,998.70	0.00	52.40	14,447,314.61	1,717,193.88	39.78157456	-80.72671
3,100.00	0.00	0.00	3,098.70	0.00	52.40	14,447,314.61	1,717,193.88	39,78157456	-80.72671
3,200.00	0,00	90.00	3,198.70	0,00	52.40	14,447,314.61	1,717,193.88	39,78157456	-80.72671
3,300.00	0.00	0.00	3,298.70	0.00	52.40	14,447,314.61	1,717,193.88	39,78157456	-80.72671
3,400.00	0.00	0.00	3,398.70	0.00	52.40	14,447,314.61	1,717,193.88	39,78157456	-80.72671
3,500.00	0.00	90.00	3,498.70	0.00	52.40	14,447,314.61	1,717,193,88	39,78157456	-80.72671
3,600.00	0.00	0.00	3,598,70	0.00	52.40	14,447,314.61	1,717,193.88	39,78157456	-80.72671
3,700.00	0.00	0.00	3,698.70	0.00	52.40	14,447,314.61	1,717,193.88	39.78157456	-80.72671
3,800.00	0.00	0.00	3,798,70	0.00	52.40	14,447,314.61	1,717,193.88	39.78157456	-80,72671
3,900.00	0.00	0.00	3,898.70	0.00	52.40	14,447,314.61	1,717,193.88	39.78157456	-80,72671
4,000.00	0.00	0.00	3,998.70	0.00	52.40	14,447,314.61	1.717,193.88	39.78157456	-80.72671
4,100.00	0.00	0.00	4,098.70	0.00	52.40	14,447,314.61	1,717,193.88	39.78157458	-80.72671
4,200.00	0.00	90.00	4,198.70	0.00	52.40	14,447,314.61	1,717,193.88	39.78157456	-80.72671
4,300.00	0.00	0.00	4,298.70	0.00	52.40	14,447,314.61	1,717,193.88	39,78157455	-80.72671
4,400.00	0.00	0.00	4,398.70	0.00	52.40	14,447,314.61	1,717,193.88	39,78157456	-80.72671
4,500.00	0.00	0.00	4,498.70	0.00	52.40	14,447,314.61	1,717,193.88	39.78157456	-80.72671
4,600.00	0.00	0.00	4,598.70	0.00	52.40	14,447,314.61	1,717,193.88	39.78157456	-80.72671

COMPASS 00016/02021



 DB\_Dec2220\_v16
 Loc

 Tug Hill Operating LLC
 TVE

 Marshall County, West Virginia
 MD

 Van Winkle
 Nor

 Van Winkle S-23 HU (slot D)
 Sur

 Original Hole
 rev3

Local Co-ordinate Reference: TVD Reference: MD Reference: North Reference: Survey Calculation Method: Well Van Winkle S-23 HU (slot D) GL @ 754.00ft GL @ 754.00ft Grid Minimum Curvature

RECEIVED Office of Oil and Gas

JAN 1 9 2021

#### Planned Survey

Database:

Company:

Project:

Wellbore:

Design:

Site:

Well:

(ft) 4,700.00 4,800.00 4,900.00 5,000.00 5,100.00 5,200.00	(*) 0.00 0.00 0.00 0.00	(°) 0.00 0.00	(ft) 4,698.70	(ft)	(ft)	(usft)	(usft)	Latitude	Longitude
4,800.00 4,900.00 5,000.00 5,100.00 5,200.00	0.00 0.00 0.00		4,090,70	0.00	52,40	14,447,314.61	1,717,193.88	39,78157456	-80.72671448
4,900.00 5,000.00 5,100.00 5,200.00	0.00 0.00	0.00	4,798.70	0.00	52.40	14,447,314.61	1,717,193.88	39,78157456	-80.72671448
5,000.00 5,100.00 5,200.00	0.00	0.00						39,78157456	-80.72671448
5,100.00 5,200.00		0.00	4,898.70	0.00	52.40	14,447,314.61	1,717,193.88		-80.72671448
5,200.00		90.00	4,998,70	0,00	52.40	14,447,314.61	1,717,193.88	39.78157456	
the second s	0.00	0.00	5,098.70	0.00	52.40	14,447,314.61	1.717,193.88	39,78157456	-80.72671448
	0.00	0.00	5,198.70	0.00	52.40	14,447,314.61	1,717,193.88	39.78157456	-80.72671448
5,300.00	0.00	90.00	5,298.70	0.00	52.40	14,447,314.61	1,717,193.88	39.78157456	-80.72671448
5,400.00	0,00	0.00	5,398.70	0.00	52.40	14,447,314.61	1,717,193.88	39.78157456	-80.72671448
5,500.00	0.00	0.00	5,498.70	0.00	52.40	14,447,314.61	1,717,193.88	39.78157456	-80,72671448
5,600.00	0.00	0.00	5,598.70	0.00	52.40	14,447,314.61	1,717,193.88	39.78157456	-80,72671448
5,700.00	0.00	0.00	5,698.70	0.00	52.40	14,447,314.61	1,717,193.88	39.78157456	-80.72671448
5,800.00	0.00	0.00	5,798.70	0.00	52.40	14,447,314.61	1,717,193.88	39.78157456	-80.72671448
5,900.00	0.00	0.00	5,898.70	0.00	52.40	14,447,314.61	1,717,193.88	39,78157456	-80,72671448
6,000.00	0.00	0.00	5,998.70	0.00	52.40	14,447,314.61	1,717,193.88	39.78157456	-80.72671448
6,100.00	0,00	0.00	6,098.70	0.00	52.40	14,447,314.61	1,717,193.88	39.78157456	-80.72671448
6,200.00	0.00	0.00	6,198.70	0.00	52,40	14,447,314.61	1,717,193,88	39.78157456	-80.72671448
6,300.00	0.00	90.00	6,298.70	0,00	52.40	14,447,314.61	1,717,193.88	39.78157456	-80.72671448
6,400.00	0.00	0.00	6,398.70	0.00	52.40	14,447,314.61	1,717,193.88	39.78157456	-80.72671448
6,500.00	0.00	90.00	6,498,70	0.00	52.40	14,447,314.61	1,717,193.88	39.78157456	-80.72671448
6,600.00	0.00	0.00	6,598,70	0.00	52.40	14,447,314.61	1,717,193.88	39,78157456	-80.72671448
6,700.00	0.00	0.00	6,698.70	0.00	52.40	14,447,314.61	1,717,193.88	39.78157456	-80.72671448
6,800.00	0.00	0.00	6,798,70	0.00	52.40	14,447,314.61	1,717,193.88	39.78157456	-80.72671448
6,900.00	0.00	0.00	6,898.70	0.00	52.40	14,447,314.61	1,717,193.88	39.78157456	-80.72671448
7,000.00	0.00	0.00	6,998.70	0.00	52,40	14,447,314.61	1,717,193.88	39.78157456	-80.72671448
7,001.30	0.00	0.00	7,000.00	0.00	52.40	14,447,314.61	1,717,193.88	39.78157456	-80.72671448
Begin 2º/	100' build								
7,100.00	1.97	19.59	7,098.68	1.60	52.97	14,447,316.21	1,717,194,45	39.78157896	-80.72671243
7,200.00	3.97	19.59	7,198.54	6.49	54.71	14.447,321.10	1,717,196.19	39.78159236	-80.72670619
7,300.00	5.97	19.59	7,298.16	14.66	57.62	14,447,329.27	1,717,199.10	39.78161477	-80.72669575
7,400.00	7.97	19.59	7,397.41	26.10	61.69	14,447,340.71	1,717,203.17	39.78164615	-80.72668113
7,500.00	9.97	19.59	7,496.18	40.79	66.92	14,447,355.40	1,717,208.40	39.78168646	-80.72666236
7,600.00	11.97	19.59	7,594.35	58.72	73.30	14,447,373.34	1,717,214.79	39.78173566	-80.72663944
7,700.00	13.97	19.59	7,691.79	79.87	80.83	14,447,394.49	1,717,222.31	39.78179368	-80.72661242
7,800.00	15.97	19.59	7,788.39	104.21	89.50	14,447,418.83	1,717,230.98	39.78186045	-80.72658132
7,900.00	17.97	19.59	7,884.03	131.72	99.28	14,447,446.33	1,717,240.77	39.78193589	-80.72654617
8,000.00	19.97	19.59	7,978.59	162.35	110.19	14,447,476.96	1,717,251.67	39,78201992	-80.72650704
8,005.69	20.09	19.59	7,983.94	164.18	110.84	14,447,478.79	1,717,252.32	39.78202496	-80.72650469
Province and a read	09° tangent					T OF CONTRACTOR			
8,100.00	20.09	19.59	8,072.51	194.70	121.70	14,447,509.31	1,717,263.18	39.78210867	-80.72646570
8,200.00	20.09	19.59	8,166.43	227.06	133.22	14.447.541.67	1,717,274.70	39.78219744	-80,72642435
8,300.00	20.09	19.59	8,260.34	259.41	144.74	14,447,574.03	1,717,286.22	39.78228620	-80,72638300
8,400.00	20.09	19.59	8,354.26	291.77	156.25	14,447,606.38	1,717,297.74	39,78237497	-80,72634166
8,500.00	20.09	19.59	8,448.18	324.13	167.77	14,447,638.74	1,717,309.25	39.78246373	-80.72630031
8,600.00	20.09	19.59	8,542.09	356.48	179.29	14,447,671.10	1,717,320.77	39.78255250	-80.72625896
8,700.00	20.09	19,59	8,636.01	388.84	190.80	14,447,703.45	1,717,332.29	39.78264126	-80.72621762
8,800.00	20.09	19,59	8,729.93	421.20	202.32	14,447,735.81	1,717,343.80	39,78273003	-80.72617627
8,900.00	20.09	19.59	8,823.84	453.56	213.84	14,447,768.17	1,717,355.32	39.78281879	-80.72613492
9,000.00	20.09	19.59	8,917.76	485.91	225.36	14,447,800.53	1,717,366.84	39,78290756	-80.72609358
9,100.00	20.09	19,59	9,011.68	518.27	236.87	14,447,832.88	1,717,378.35	39.78299632	-80,72605223
9,200.00	20.09	19.59	9,105.59	550.63	248,39	14,447,865.24	1,717,389.87	39,78308509	-80,72601088
9,300.00	20.09	19.59	9,199.51	582.99	259,91	14,447,897.60	1,717,401.39	39.78317386	-80.72596953
9,400.00	20.09	19.59	9,293.43	615.34	271.42	14,447,929.96	1,717,412.91	39.78326262	-80.72592819
9,500.00	20.09	19,59	9,387.34	647.70	282.94	14,447,962.31	1,717,424.42	39.78335139	-80.72588684
9,600.00	20.09	19.59	9,481.26	680.06	294.46	14,447,994.67	1,717,435.94	39.78344015	-80.72584549

COMPASSOF COLOR 1



Database: DB\_Dec2220\_v16 Local Co-ordinate Reference: Well Van Winkle S-23 HU (slot D) Tug Hill Operating LLC Company: GL @ 754.00ft **TVD Reference:** Marshall County, West Virginia GL @ 754.00ft Project: MD Reference: Van Winkle Grid North Reference: Van Winkle S-23 HU (slot D) Survey Calculation Method: Minimum Curvature Wellbore: Original Hole Design: rev3

#### Planned Survey

Site:

Well:

RECEIVED Office of Oil and Gas

JAN 19 2021

WV Department of Environmental Protection

Measured Depth (ft)	Inclination (")	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
9,700.00	20.09	19.59	9,575.18	712.42	305.98	14,448,027.03	1,717,447.46	39.78352892	-80.7258041
9,800.00	20.09	19.59	9,669.09	744.77	317.49	14,448,059.39	1,717,458.97	39,78361768	-80.7257627
9,900.00	20.09	19.59	9,763.01	777,13	329.01	14,448,091,74	1,717,470,49	39,78370645	-80.7257214
10,000.00	20.09	19.59	9,856,93	809,49	340.53	14,448,124.10	1,717,482.01	39,78379521	-80.7256801
10,100.00	20.09	19.59	9,950.84	841.85	352.04	14,448,156.46	1,717,493.53	39.78388398	-80,7256387
10,114.93	20.09	19.59	9,964.87	846.68	353,76	14,448,161.29	1,717,495.24	39.78389723	-80.7256325
Begin 6ª	/100' build/tur	n							
10,200.00	17.30	32,99	10,045.48	871.06	365.56	14,448,185.68	1,717,507.04	39.78396410	-80,7255903
10,300.00	15.54	53.41	10,141.48	891.54	384.42	14,448,206.15	1,717,525.91	39.78402017	-80,7255229
10,400.00	15.94	75.61	10,237.81	902.94	408.50	14,448,217.56	1,717,549.99	39,78405129	-80.725437
10,500.00	18.36	94.36	10,333.43	905.16	437.53	14,448,219.77	1,717,579.01	39.78405713	-80.7253337
10,600.00	22.14	107,91	10,427.29	898.16	471.19	14,448,212.77	1,717,612,67	39.78403763	-80.7252140
10,700.00	26.71	117.36	10,518.35	882.03	509.11	14,448,196.64	1,717,650.59	39.78399300	-80.7250792
10,800.00	31.73	124.11	10,605.63	856.93	550.88	14,448,171.54	1,717,692.36	39.78392372	-80.7249308
10,900.00	37.02	129.15	10,688.15	823.14	596.03	14,448,137.76	1,717,737.51	39,78383056	-80.724770-
11,000.00	42.47	133.07	10,765.03	781.04	644.08	14,448,095.66	1,717,785.56	39.78371453	-80.724599
11,100.00	48.03	136.25	10,835.41	731.09	694.49	14,448,045.70	1,717,835.97	39.78357692	-80.7244210
11,135.07	50.00	137.23	10,858.41	711.81	712.63	14,448,026.42	1,717,854.11	39.78352381	-80.7243566
Begin 8°	/100' bulld/tur	n							
11,200.00	54.90	139.41	10,897.98	673.35	746.82	14,447,987.97	1,717,888.31	39.78341792	-80.724235
11,300.00	62.51	142.30	10,949.89	607.09	800.65	14,447,921,70	1,717,942.13	39.78323548	-80.724044
11,400.00	70.17	144.82	10,990.00	533.43	854.96	14,447,848.04	1,717,996.44	39.78303273	-80.723852
11,500.00	77.86	147.10	11,017.51	453.81	908.69	14,447,768.42	1,718,050.17	39.78281362	-80.723661
11,600.00	85.58	149.26	11,031.91	369.78	960.81	14,447,684.40	1,718,102.29	39.78258242	-80.723477
11,644.33	89.00	150,19	11,034.01	331.55	983.13	14,447,646.16	1,718,124.61	39.78247723	-80.723397
Begin 89	.00° lateral								
11,700.00	89.00	150.19	11,034.98	283.25	1.010.80	14,447,597.88	1,718,152.28	39.78234436	-80.7233000
11,800.00	89.00	150.19	11,036.73	196.49	1,060.50	14,447,511.11	1,718,201.98	39.78210568	-80.723124
11,900.00	89.00	150.19	11,038.48	109.74	1,110.20	14,447,424.35	1,718,251.68	39.78186700	-80.722948
12,000.00	89.00	150.19	11,040.23	22.98	1,159.90	14,447,337.59	1,718,301.38	39.78162832	-80.722772
12,100.00	89.00	150.19	11,041.98	-63.78	1,209.60	14,447,250.83	1,718,351.08	39.78138964	-80.722596
12,200.00	89.00	150.19	11,043.73	-150.54	1,259.30	14,447,164.08	1,718,400.78	39.78115096	-80.722420
12,300.00	89.00	150,19	11,045.48	-237.29	1,309,00	14,447,077.32	1,718,450.48	39.78091227	-80,722244
12,400.00	89.00	150.19	11,047.24	-324.05	1,358.70	14,446,990.56	1,718,500.18	39.78067359	-80.722068
12,500.00	89.00	150.19	11,048.99	-410.81	1,408.40	14,446,903.81	1,718,549.88	39.78043491	-80.721892
12,600.00	89,00	150.19	11,050,74	-497,57	1,458.10	14,446,817.05	1,718,599.58	39.78019623	-80.721716
12,700.00	89.00	150.19	11,052.49	-584.32	1,507.80	14,446,730.29	1,718,649.28	39.77995755	-80.721540
12,800.00	89.00	150.19	11,054.24	-671.08	1,557.50	14,446,643.53	1,718,698.98	39.77971886	-80.721364
12,900.00	89.00	150.19	11,055.99	-757.84	1,607.20	14,446,556.78	1,718,748.68	39.77948018	-80.721188
13,000.00	89.00	150.19	11,057.74	-844,59	1,656.90	14,446,470.02	1,718,798.38	39,77924150	-80,721012
13,100.00	89.00	150.19	11,059.49	-931.35	1,705.60	14,446,383.26	1,718,848.08	39.77900282	-80.720836
13,200.00	89.00	150.19	11,061.24	-1,018.11	1,758.30	14,446,296.51	1,718,897.78	39.77876413	-80.720660
13,300.00	89.00	150.19	11,062.99	-1,104.87	1,806.00	14,446,209.75	1,718,947.48	39.77852545	-80.720484
13,400.00	89.00	150.19	11,064.74	-1,191.62	1,855.70	14,446,122.99	1,718,997.18	39,77828676	-80.720309
13,500.00	89.00	150.19	11,066.49	-1,278.38	1,905.40	14,446,036.24	1,719,046.88	39.77804808	-80,720133
13,600.00	89.00	150.19	11,068.24	-1,365.14	1,955,10	14,445,949.48	1,719,096.58	39.77780939	-80.719957
13,700.00	89.00	150.19	11,070.00	-1,451.89	2,004.81	14,445,862.72	1,719,146.28	39.77757071	-80.719781
13,800.00	89.00	150.19	11,071.75	-1,538.65	2,054.51	14,445,775.96	1,719,195,98	39.77733202	-80.719605
13,900.00	89.00	150.19	11,073.50	-1,625.41	2,104.21	14,445,689.21	1,719,245.68	39.77709334	-80,719429
14,000.00	89.00	150.19	11,075.25	-1,712.17	2,153.91	14,445,602,45	1,719,295,38	39.77685465	-80,719253
14,100.00	89.00	150.19	11,077.00	-1,798.92	2,203.61	14,445,515.69	1,719,345.08	39.77661597	-80.719077
14,200.00	89.00	150.19	11,078.75	-1,885.68	2,253,31	14,445,428,94	1,719,394,78	39.77637728	-80,718901
14,300.00	89.00	150,19	11,080,50	-1,972.44	2,303.01	14,445,342.18	1,719,444.48	39.77613859	-80.718725
14,400.00	89.00	150.19	11,082.25	-2,059.20	2,352.71	14,445,255.42	1,719,494.18	39.77589991	-80,718549

COMPAS:070016420621



Database:

Company:

Project:

Wellbore:

Design:

Site:

Well:

DB\_Dec2220\_v16 Tug Hill Operating LLC

Van Winkle

Original Hole

rev3

#### Planning Report - Geographic

Local Co-ordinate Reference: **TVD Reference:** Marshall County, West Virginia MD Reference: North Reference: Van Winkle S-23 HU (slot D) Survey Calculation Method:

Well Van Winkle S-23 HU (slot D) GL @ 754.00ft GL @ 754.00ft Grid Minimum Curvature

RECEIVED Office of Oil and Gas

JAN 1 9 2021

WV Department of Environmental Protection

ned Survey	ť.							En	vironmental Pr
Aeasured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
14,500.00	89.00	150,19	11,084.00	-2,145,95	2,402,41	14,445,168.66	1,719,543.88	39.77556122	-80,71837
14,600.00	89.00	150,19	11,085.75	-2,232.71	2,452.11	14,445,081.91	1,719,593.58	39.77542253	-80.71819
14,700.00	89.00	150.19	11,087.50	-2,319.47	2.501.81	14,444,995.15	1,719,643,29	39.77518385	-80.71802
14,800.00		150,19	11,089,25	-2,406,22	2,551.51	14,444,908,39	1,719,692.99	39.77494516	-80.71784
14,900.00		150.19	11,091.00	-2,492,98	2,601,21	14,444,821.64	1,719,742.69	39.77470647	-80,71767
15,000.00		150,19	11,092,76	-2,579.74	2,650.91	14,444,734,88	1,719,792.39	39.77446778	-80.71749
15,100.00	89.00	150,19	11,094.51	-2,666.50	2,700.61	14,444,648.12	1,719,842.09	39.77422909	-80.71731
15,200.00		150.19	11,096.26	-2,753.25	2,750.31	14,444,561.37	1,719,891.79	39.77399040	-80.71714
15,300.00	89.00	150.19	11,098.01	-2,840.01	2,800.01	14,444,474.61	1,719,941.49	39.77375171	-80.71698
15,400.00		150.19	11,099.76	-2.926.77	2.849.71	14,444,387.85	1,719,991,19	39.77351302	-80.71679
15,500.00	89.00	150.19	11,101.51	-3,013,53	2,899,41	14,444,301.09	1,720,040.89	39.77327433	-80.7166
15,600.00		150.19	11,103.26	-3,100.28	2,949.11	14,444,214.34	1,720,090.59	39.77303564	-80,71643
15,700.00	89.00	150.19	11,105.01	-3,187.04	2,998.81	14,444,127.58	1,720,140.29	39.77279695	-80.71620
15,800.00	89.00	150.19	11,106.76	-3,273.80	3,048.51	14,444,040.82	1,720,189.99	39.77255826	-80.71608
1	89.00	150.19	11,108.51	-3,360.55	3,098.21	14,443,954.07	1,720,239,69	39.77231957	-80.7159
15,900,00				-3,360.33			1,720,289.39	39,77208088	-80.7157
16,000.00	89.00	150.19	11,110.26		3,147.91	14,443,867.31	1,720,339.09		-80.7155
16,100.00	89.00	150.19	11,112.01	-3,534.07	3,197.61	14,443,780.55		39.77184219	-80.7153
16,200.00	89.00	150.19	11,113.76	-3,620.83	3,247.31	14,443,693.79	1,720,388.79	39.77160350	
16,300.00	89.00	150,19	11,115.52	-3,707.58	3,297.01	14,443,607.04	1,720,438.49	39.77136481	-80.7152
16,400.00	89.00	150.19	11,117.27	-3,794.34	3,346.71	14,443,520.28	1,720,488,19	39.77112611	-80.7150
16,500.00	89.00	150.19	11,119.02	-3,881.10	3,396.41	14,443,433.52	1,720,537.89	39.77088742	-80.7148
16,600.00	89.00	150.19	11,120,77	-3,967.85	3,446.11	14,443,348.77	1,720,587.59	39.77064873	-80.7146
16,700.00	89.00	150.19	11,122.52	-4,054,61	3,495.81	14,443,260.01	1,720,637.29	39.77041004	-80.7145
16,800.00	89.00	150.19	11,124.27	-4,141.37	3,545.51	14,443,173.25	1,720,686.99	39.77017134	-80.7143
16,900.00	89.00	150.19	11,126.02	-4,228.13	3,595.21	14,443,086.50	1,720,736.69	39.76993265	-80.7141
17,000.00	89.00	150.19	11,127.77	-4,314.88	3,644.91	14,442,999.74	1,720,786.39	39.76969395	-80.7139
17,100.00	89.00	150.19	11,129.52	-4,401.64	3,694.61	14,442,912.98	1,720,836.09	39.76945526	-80.7138
17,200.00	89.00	150.19	11,131.27	-4,488.40	3,744.31	14,442,826.22	1,720,885.79	39.76921657	-80.7136
17,300.00	89.00	150.19	11,133.02	-4,575.16	3,794.01	14,442,739.47	1,720,935.49	39.76897787	-80.7134
17,400.00	89.00	150.19	11,134.77	-4,661.91	3,843.72	14,442,652.71	1,720,985.19	39.76873918	-80.7132
17,500.00	89.00	150.19	11,136.53	-4,748.67	3,893.42	14,442,565.95	1,721,034.89	39.76850048	-80,7130
17,600.00	89.00	150.19	11,138.28	-4,835.43	3,943.12	14,442,479.20	1,721,084.59	39.76826179	-80.7129
17,700.00	89,00	150,19	11,140.03	-4,922.18	3,992,82	14,442,392.44	1,721,134,29	39,76802309	-80.7127
17,800.00	89.00	150.19	11,141,78	-5,008.94	4,042.52	14,442,305.68	1,721,183,99	39.76778439	-80,7125
17,900.00	89.00	150,19	11,143.53	-5,095.70	4,092.22	14,442,218.92	1,721,233,69	39,76754570	-80,7123
18,000.00	89.00	150.19	11,145.28	-5,182.46	4,141.92	14,442,132.17	1,721,283.39	39.76730700	-80.7122
18,100.00	89.00	150.19	11,147.03	-5,269.21	4,191.62	14,442,045,41	1,721,333,09	39,76706830	-80.7120
18,200.00	89.00	150.19	11,148.78	-5,355.97	4,241.32	14,441,958.65	1,721,382.79	39.76682961	-80.7118
18,300.00	89.00	150.19	11,150.53	-5,442.73	4,291.02	14,441,871.90	1,721,432,49	39.76659091	-80.7116
18,400.00	89.00	150.19	11,152.28	-5,529.48	4,340.72	14,441,785,14	1,721,482.19	39.76635221	-80.7115
18,500.00	89.00	150.19	11,154.03	-5,618.24	4,390.42	14,441,698.38	1,721,531.89	39.76611351	-80.7113
18,600.00	89.00	150.19	11,155.78	-5,703.00	4,440.12	14,441,611.63	1,721,581.59	39.76587481	-80.7111
18,700.00	89.00	150.19	11,157.53	-5,789.76	4,489.82	14,441,524.87	1,721,631.29	39.76563612	-80.7109
18,800.00	89.00	150.19	11,159.29	-5,876.51	4,539.52	14,441,438.11	1,721,680.99	39.76539742	-80.7108
18,900.00	89.00	150.19	11,161.04	-5,963.27	4,589.22	14,441,351.35	1,721,730.69	39.78515872	-80.7106
19,000.00	89.00	150,19	11,162.79	-6,050.03	4,638.92	14,441,264.60	1,721,780.39	39.76492002	-80.7104
19,100.00	89.00	150.19	11,164.54	-6,136,79	4,688,62	14.441.177.84	1,721,830.09	39.76468132	-80.71028
19,200.00	89.00	150.19	11,166,29	-6,223.54	4,738.32	14,441,091.08	1,721,879,79	39.76444262	-80.71010
19,300.00	89.00	150.19	11,168.04	-6,310,30	4,788.02	14,441,004.33	1,721,929,49	39.76420392	-80.7099
19,400.00	89.00	150.19	11,169.79	-6,397.06	4,738.02	14,440,917.57	1,721,929,49		-80.7095
19,500.00	89.00	150.19	11,171.54	-6,483.81	4,037.72			39.76396522	-80.7097
19,600.00	89.00	150.19	11,173.29	-6,483.81		14,440,830.81	1,722,028.89	39.76372652	
19,700.00	89.00	150.19	11,175.04	-6,657,33	4,937.12	14,440,744.05	1,722,078.59	39.76348782	-80.70940
19,800.00	89.00	150.19	and the second		4,986,82	14,440,657,30	1,722,128.29	39,76324912	-80.70922
19,900.00	89.00	150.19	11,176.79 11,178.54	-6,744.09 -6,830.84	5,036.52 5,086.22	14,440,570.54 14,440,483.78	1,722,177.99 1,722,227.69	39.76301041 39.76277171	-80.70905

COMPASS 000 100 2021



DB Dec2220 v16

Van Winkle

Original Hole rev3

Tug Hill Operating LLC

Marshall County, West Virginia

Van Winkle S-23 HU (slot D)

Database:

Company:

Project:

Wellbore:

Planned Survey

Design:

Site:

Well:

#### Planning Report - Geographic

Local Co-ordinate Reference: TVD Reference: MD Reference: North Reference: Survey Calculation Method: Well Van Winkle S-23 HU (slot D) GL @ 754.00ft GL @ 754.00ft Grid Minimum Curvature

RECEIVED Office of Oil and Gas

### JAN 1 9 2021

WV Department of Measured Vertical Map Мар Environmental Protection Depth Depth +E/-W Northing Easting Inclination Azimuth +N/-S (ft) (ft) (usft) (usft) Latitude (") (") (ft) (ft) Longitude 20,000,00 89.00 150,19 11,180,29 -6.917.60 5.135.92 14,440,397.03 1,722,277.39 39.76253301 -80,70870022 150.19 11,182.05 -7.004.36 5,185.62 14,440,310,27 1,722,327.09 39,76229431 -80.70852437 20,100.00 89.00 89.00 150 19 11 183.80 -7 091.12 5.235.32 14 440 223 51 1 722 376 79 39.76205561 -80.70834852 20,200,00 11,185.55 5,285.02 39,76181690 -80.70817267 20,300.00 89,00 150.19 -7.177.87 14,440,136.76 1,722,426,50 39.76157820 -80.70799683 150,19 11 187 30 -7 264 63 5 334 72 1 722 476 20 20,400.00 89.00 14 440 050 00 20,500.00 89.00 150.19 11.189.05 -7 351.39 5.384.42 14,439,963.24 1,722,525.90 39.76133950 -80.70782098 39.76110079 -80.70764514 20,600.00 89.00 150,19 11,190.80 -7.438.14 5,434.12 14,439,876.48 1,722,575.60 -80.70746930 89.00 150.19 11,192.55 -7,524.90 5 483 82 14,439,789.73 1,722,625.30 39,76086209 20,700.00 89.00 150,19 11,194.30 -7.611.66 5.533.52 14,439,702.97 1,722,675,00 39,76062338 -80.70729345 20,800.00 -7,698.42 5,583.22 39.76038468 -80,70711761 89.00 150.19 11,196.05 14,439,616,21 1.722.724.70 20,900.00 150.19 11,197.80 -7.785.17 5,632.93 14,439,529.46 1.722,774.40 39,76014597 -80.70694177 21,000.00 89.00 -80.70676593 150.19 5 682 63 14,439,442,70 39,75990727 21,100.00 89.00 11 199.55 -7.871.931.722.824.10 39.75966856 -80.70659010 21,200.00 89.00 150.19 11,201.30 -7.958.69 5.732.33 14,439,355.94 1.722.873.80 -80.70641426 39 75942986 21,300.00 89.00 150.19 11 203 05 -8 045 44 5782 03 14 439 269 18 1,722,923.50 39.75919115 -80.70623843 21 400 00 89.00 150.19 11,204.81 -8,132.20 5.831.73 14,439,182.43 1,722,973.20 -80.70606259 21,500.00 89.00 150.19 11.206.56 -8.218.98 5.881.43 14,439,095.67 1,723,022,90 39 75895245 150,19 11,208.31 -8,305.72 5,931.13 14,439,008.91 1,723,072.60 39.75871374 -80.70588676 21,600.00 89.00 -80.70571093 21,700.00 89.00 150.19 11,210.06 -8,392.47 5,980,83 14,438,922.16 1,723,122,30 39,75847503 6,030.53 39.75823633 -80.70553510 150.19 11.211.81 -8.479.23 1,723,172.00 89.00 14,438,835,40 21,800,00 150,19 6,080,23 39,75799762 -80 70535927 21,900.00 89.00 11.213.56 -8.565.99 14,438,748.64 1.723.221.70 -80,70518344 6.128.93 39.75775891 150.19 -8.652.75 22,000,00 89.00 11,215,31 14,438,661.89 1.723.271.40 -80.70500762 22,100.00 89.00 150.19 11.217.06 -8.739.50 6.179.63 14,438,575,13 1.723.321.10 39.75752020 39 75728150 -80 70483179 22,200.00 89.00 150.19 11 218 81 -8 826 26 6 229 33 14,438,488.37 1 723 370.80 -80.70465597 22,300.00 89.00 150.19 11,220.56 -8,913.02 6,279.03 14,438,401.61 1,723,420.50 39.75704279 22,400.00 89.00 150.19 11,222.31 -8,999.77 6.328.73 14,438,314.86 1,723,470.20 39,75680408 -80.70448015 22,500.00 89.00 150.19 11,224,06 -9.086.53 6.378.43 14 438 228 10 1 723 519.90 39.75656537 -80.70430433 150.19 11,225.81 6,428.13 39,75632666 -80,70412851 22,600.00 89.00 -9,173.29 14,438,141.34 1,723,569.60 -80.70395269 89.00 150.19 11,227.57 -9.260.05 6.477.83 14 438 054 59 39,75608795 22,700.00 1 723 619.30 22,800.00 89.00 150.19 11.229.32 -9.346.80 6,527.53 14,437,967.83 1.723.669.00 39.75584924 -80.70377687 150.19 39,75561053 -80.70360105 22,900.00 89.00 11,231.07 -9 433 56 6.577.23 14,437,881.07 1,723,718,70 23,000.00 89.00 150,19 11.232.82 -9.520.32 6.626.93 14,437,794.31 1,723,768.40 39,75537182 -80,70342524 23,100,00 89.00 150,19 11.234.57 -9.607.07 6.676.63 14,437,707.56 1,723,818,10 39,75513311 -80,70324942 89.00 150,19 11,236.32 -9,693.83 6,726.33 14,437,620.80 39.75489440 -80.70307361 23,200,00 1,723,867,80 23,300.00 89.00 150.19 11,238.07 -9,780.59 6,776.03 14,437,534.04 1,723,917.50 39,75465569 -80,70289780 150,19 -80,70272199 23,400,00 89.00 11,239,82 -9.867.35 6.825.73 14,437,447.29 1.723.967.20 39,75441698 89.00 150.19 11,241.57 6,875,43 39.75417827 -80,70254618 23,500,00 -9,954,10 14,437,360.53 1,724,016,90 150.19 11,243.32 -80 70237037 89.00 -10.040.86 6 925 13 39 75393955 23,600.00 14,437,273,77 1 724 066 60 150.19 23,700.00 89.00 11,245.07 -10,127.62 6,974.83 14,437,187.02 1,724,116.30 39,75370084 -80.70219456 150.19 23,800.00 89.00 11,246.82 -10.214.387.024.53 14,437,100.26 1,724,166.00 39 75346213 -80 70201876 23,900.00 89.00 150,19 11,248,58 -10,301.13 7,074.23 14,437,013.50 1,724,215.70 39,75322342 -80,70184295 150.19 24.000.00 89.00 11,250,33 -10.387.89 7.123.93 14,436,926,74 1,724,265,40 39,75298470 -80.70166715 24,100.00 89.00 150,19 11,252.08 -10,474.65 7,173.63 14,436,839.99 1,724,315.10 39.75274599 -80.70149135 24,200.00 89.00 150.19 11.253.83 -10,561.40 7.223.33 14,436,753.23 1,724,364.80 39,75250728 -80.70131555 24,300.00 89.00 150.19 11,255,58 -10,648.16 7.273.03 14,436,666.47 39.75226856 -80,70113975 1,724,414,50 24,400.00 89.00 150.19 11,257.33 -10.734.927.322.73 14,436,579.72 1,724,464.20 39,75202985 -80,70096395 24,500,00 89.00 150.19 11,259.08 -10,821.68 7,372.43 -80,70078815 14,436,492,96 1.724.513.90 39.75179114 24,600.00 89.00 150.19 11,260.83 -10,908.43 7,422.14 14,436,406.20 1,724,563.60 39.75155242 -80,70061236 24,700.00 89 00 150 19 11,262.58 -10,995,19 7.471.84 -80,70043656 14 436 319 44 39.75131371 1.724,613,30 24,800.00 89.00 150,19 11,264.33 -11,081.95 7,521.54 14,436,232,69 1,724,663,00 39.75107499 -80,70026077 24,900.00 89.00 150,19 11,266.08 -11,168,71 7,571.24 14,436,145,93 39.75083628 -80.70008498 1,724,712.70 25.000.00 89.00 150.19 11,267.83 -11,255.46 7,620.94 14.436.059.17 1,724,762.40 39.75059756 -80.69990918 25,100.00 89.00 150.19 11.269.58 -11,342.22 7.670.64 14,435,972.42 1,724,812.10 39.75035884 -80,69973339 25,200.00 89.00 150.19 11,271.34 7,720.34 -11,428.9814.435.885.66 1,724,861.80 39.75012013 -80.69955761 25,300.00 89.00 150.19 11,273,09 -11.515.73 7.770.04 14,435,798,90 1.724.911.50 39,74988141 -80.69938182 25,400.00 89.00 150.19 11,274.84 -11,602,49 7.819.74 14,435,712.15 1,724,961.20 39.74964269 -80.69920803

COMPASS 000 100 0021



Database: Company: Project: Site: Well: Wellbore:	DB_Dec2220_v16 Tug Hill Operating LLC Marshall County, West Virginia Van Winkle Van Winkle S-23 HU (slot D) Original Hole	Local Co-ordinate Reference: TVD Reference: MD Reference: North Reference: Survey Calculation Method:	Well Van Winkle S-23 HU (slot D) GL @ 754.00ft GL @ 754.00ft Grid Minimum Curvature
Design:	rev3		

#### Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
25,500.00	89.00	150,19	11,276.59	-11,689.25	7,869.44	14,435,625,39	1,725,010.90	39.74940398	-80.69903025
25,600.00	89.00	150.19	11,278.34	-11,776.01	7,919.14	14,435,538.63	1,725,060.60	39.74916526	-80.69885446
25,637.80	89.00	150.19	11,279.00	-11,808.80	7,937.92	14,435,505.84	1,725,079.39	39.74907502	-80.69878802
PBHL/TC	25637.80 MD	/11279.00 TV	/D						
25,637,81	89.00	150.19	11,279.00	-11,808.81	7,937,93	14,435,505.83	1,725,079.40	39.74907500	-80.69878800

#### Design Targets **Target Name** - hit/miss target Dip Angle Dip Dir. TVD +N/-S +E/-W Northing Easting - Shape (usft) (usft) (ft) (ft) (ft) (°) (°) Latitude Longitude 14,447,646.08 Van Winkle S-23HU LP r 0.00 0.00 11,034.00 331.46 983.13 1,718,124.61 39.78247700 -80.72339800 - plan misses target center by 0.05ft at 11644.40ft MD (11034.01 TVD, 331.49 N, 983.17 E) - Point -80.69878800 0.00 11,279.00 -11,808.81 7,937.93 14,435,505.83 39.74907500 Van Winkle S-23HU PBF 0.00 1,725,079.40 - plan hits target center - Point

Cas	ing	Po	ints	
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Measured	Vertical		Casing Hole
Depth	Depth		Diameter Diameter
(ft)	(ft)	Name	(") (")
25,637.81	11,279.00 20" Casing	(Marine	20 24

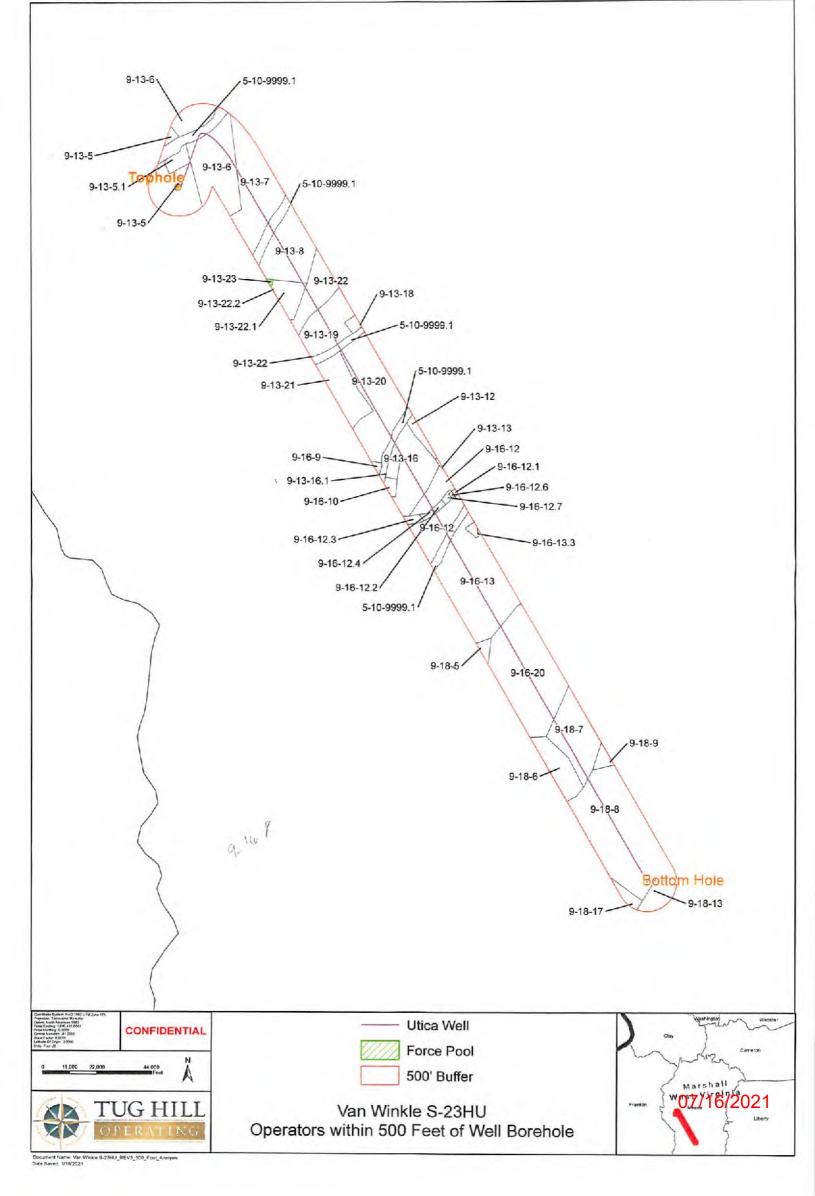
Plan	Annotations	

		dinates	Local Coord	Vertical	Measured
	Comment	+E/-W (ft)	+N/-S (ft)	Depth (ft)	Depth (ft)
	KOP Begin 2°/100' build	0.00	0.00	1,500.00	1,500.00
	Begin 3.00° tangent	3.93	0.00	1,649.93	1,650.00
	Begin 2°/100' drop	48,48	0.00	2,500.00	2,501.24
	Begin vertical hold	52.40	0.00	2,649.93	2,651,24
	Begin 2°/100' build	52.40	0.00	7,000.00	7,001.30
	Begin 20.09° tangent	110.84	164.18	7,983.94	8,005.69
RECEIVED	Begin 6°/100' build/turn	353.76	846.68	9,964.87	10,114.93
Office of Oil and Ga	Begin 8°/100' build/turn	712.63	711.81	10,858.41	11,135.07
	Begin 89.00° lateral	983.13	331.55	11,034.01	11,644.33
JAN 1 9 2021	PBHL/TD 25637.80 MD /11279.00 TVD	7,937.92	-11,808.80	11,279.00	25,637.80

WV Department of Environmental Protection

Van Winkle S-23HU

## 4705102356



## 4705102356

Operator's Well No. Van Winkle S-23HU

#### Area of Review

#### Sources of information to Support 35CSR8 - 5.11: 9.3 et seq.

Description of process to identify potential pathways for well communication during hydraulic fracturing activities.

Data Sources Reviewed:

1. IHS Well Data service: Public nationwide data service that pulls directly from State agency Oil and Gas databases

- 2. Farm Maps
- 3. Topo Maps: Recent and older (contact WVGES)

4. Check with DPS

Contacted Adam Picard 724-485-9331, <u>apicard@dpslandservices.com</u>, DPS GIS (12/04/2020) to have him make maps of the wellbores with his information. DPS utilizes WVGES maps for their mapping seems it as the best publicly available. See attached map he provided.

Request maps for:

1. Wellbore with IHS All Wells Layer

2. Map with Farm lines overlain and any well spots identified on Farm Maps

3. More recent (1970s vintage) topos and older topos

Discussion with Phil Dinterman WVGES GIS Department (7/15/2016)

- WVGES has plotted every well spot they have access to and are aware of with that contains a coordinate. 30000, 70000, and 90000 series wells are available via the WVGES online map. Some locations aren't great due to vintage and manipulation of maps through time
- 30000 series any well drilled prior to 1929 APIs were not assigned to original wells
- 70000 series Well spots pulled from old Farm line maps that the WVGES has access to
- 90000 series Any sources that the WVGES has access that shows a well spot but has no additional supporting information. DEP does not have 90000 series on their maps.
- There can be duplication between wells in the 3 series
- Phil indicated that other Operators are providing a screenshot of the WVGES map with their planned well and using that for permits

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WV Department of Environmental Protection 07/16/2021

Permit well - Van Winkle S-23HU Wells within 500' Buffer Note: Well spats depicted on Area of Review map are derived from State held coordinates. The spats may differ from those depicted on the Well Plat because the Plat locations represent actual field surveyed locations. Please refer to the Plat for surveyed well spats.

API Number	Operator Name	Total Depth	Perforated Fms	Producing tones not perforated	Is this well "known or reasonably expected to penetrate a depth that could be within the range of Fracture propagation"? 1000° is max limit 1 would assign to wells that might be within in range of fracture propagation	Comments
4705101330	Tug Hill Operating	10154' MD, 6151' TVD	Marcellus	Unknown	Yes, existing Marcellus producer. Proper casing and cement should prevent migration of fluids from new wellbore to existing wellbore.	Producing Marcellus horizontal well. Tug Hill Operating is considering plugging this well.
4705101284	Tug Hill Operating	6340' TVD	None	None	Yes, existing vertical pilot drilled into Onondaga. Well was not perforated. Proper casing and cement should prevent migration of fluids from new wellbore to existing wellbore.	Well is not producing.
4705101859	EQT Production Company	No Depth/Not Drilled	None	None	No, well is a proposed well. The well was not drilled. This is a canceled permit.	A canceled permit.
4705101860	EQT Production Company	No Depth/Not Drilled	None	None	No, well is a proposed well. The well was not drilled. This is a canceled permit.	A canceled permit.
4705101866	EQT Production Company	No Depth/Not Drilled	None	None	No, we'l is a proposed well. The well was not d'illed. This is a canceled permit.	A canceled permit.
4705101845	EQT Production Company	Na Depth/Not Drilled	None	None	No, well is a proposed well. The well was not drilled. This is a canceled permit.	A canceled permit.
4705101847	EQT Production Company	No Depth/Not Drilled	None	None	No, well is a proposed well. The well was not drilled. This is a canceled permit.	A canceled permit.
4705130115	Hope Natural Gas Company	2329' TVD	Gordon	Unknown	No, the well is not deep enough to be within the expected fracture propagation from a Point Pleasant stimulation. Well is plugged.	Well was plugged 12/18/1939.
4705170299	Manufacturers Ught & Heat Co.	Unknown	Unknown	Unknown	Unknown but unlikley. The well likley represents an old shallow well that is too shallow to be effected by fracturing in the planned Point Pleasant well.	State records are incomplete.

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WV Department of Environmental Protection

Page 2 of 5



#### WV Geological & Economic Survey

Well: County = 51 Permit = 01284

### Location Information View Mag. LPF COUNTY BERKIT TAX, DISTACT GUAD 75 GWAD 75 LAT GD LON DO UTME UTMN 475518728 Manhai 1124 Mede Gen Easta Cameron 38-711594 40727016 5235924 4483113 2

There is no Bottom Hole Location data for this well

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Location Information: View Map API COUNTY PERMIT TAX\_DISTRICT GUAD\_75 GUAD\_75 LAT\_DD LGH\_DD UTME UTMM 475/51535 Marshell 1350 Neads Glien Easton Generation 38/751575 480/756391 423393 2 4403590 6

 Bottom Hole Location Information\*

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 \*\* some operators may have reported NGL under Oil

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 Production Water Information: (Volumes in Gallions)

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There is no Plugging data for this well

WV Geological & Economic Survey.

Well: County = 51 Permit = 01846

Report Time: Thursday, December 03, 2020 4 00 51 PM

Location Information: <u>View Map</u> API COUNTY PERMIT TAX\_DISTRICT QUAD\_75 QUAD\_15 LAT\_DD LON\_DD UTME UTMN 4705101546 Marshall 1846 Meade Glen Easton Cameron 39 781827 -80 726602 523411 3 4403578.3

 Bottom Hole Location Information:

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 Owner Information:
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Completion Information: APD CMP\_DT SPUD\_DT ELEV DATUM FIELD DEEPEST\_FM DEEPEST\_FMT INITIAL\_CLASS FINAL\_CLASS TYPE RIG CMP\_MTHD TVD TMD NEW\_FTG KOD G\_BEF G\_AFT 0\_BEF O\_AFT NGL\_BEF NGL\_AFT P\_BEF TL\_BEF P\_AFT TL\_AFT BH\_P\_BEF BH\_P\_AFT G\_MSRD\_BY 470510548 44 44 755 Ground Level

There is no Pay data for this well

Production Oil Information: (Volumes in BbI) \*\* some operators may have reported NGL under Oil API PRODUCING\_OPERATOR PRO\_VEAR ANN\_OIL JAN FEB MAR JAPR MAY JUN JUL AUG SEP OCT NOV DCM 475510148 ED Production Contemp 2018 0 0 0 0 0 0 0 0 0 0

Production NGL Information: (Volumes in Bbl) \*\* some operators may have reported NGL under Cil API PRODUCING\_OPERATOR PRD\_YEAR ANN\_NGL JAN FEB NAR APR MAY JUN JUL AUG SEP OCT NOV DCM 4705101846 EQT Production Company 2018 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Production Water Information: (Volumes in Gallons)

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There is no Stratigraphy data for this well

There is no Wireline (E-Log) data for this well

There is no Plugging data for this well

There is no Sample data for this well

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WV Department of Environmental Protection

WW Geological & Economic Survey.

Well: County = 51 Permit = 01847

Report Time: Thursday, December 03, 2020 4:01:16 PM

Location Information: View Map API COUNTY PERMIT TAX\_DISTRICT\_QUAD\_75\_QUAD\_15\_LAT\_DD\_LON\_DD\_UTME\_UTMN 4705101847\_Marshall\_1847\_Meade Glen Easton Cameron 38.781755\_60.72647\_523402.6\_4409570.4

Bottom Hole Location Information: API EP FLAG UTME UTMN LON DD LAT DD 4705101547 1 As Proposed 523970 4401941.7 -80.720137 39.767065

Owner Information:

API CMP\_DT\_SUFFIX\_STATUS\_SURFACE\_OWNER\_WELL\_NUM\_CO\_NUM\_LEASE 4705101847\_JJ. Dvtd Drgni Loc\_Cancelled\_Dennis W Hunter\_\_\_\_\_4H Hunter Petitiet LEASE\_NUM MINERAL\_OWN OPERATOR\_AT\_COMPLETION PROP\_VD PROP\_TRGT\_FM TFM\_EST\_PR Dennis W Hunter et al Stone Energy Corporation 6250 Marcellus Fm

There is no Pay data for this well

Production Gas Information: (Volumes in Mcf) API PRODUCING OPERATOR PRO\_YEAR ANN\_GAS JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DCM 4705101847 EQT Production Company 2018 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Production Water Information: (Volumes in Gallone) API PRODUCING OPERATOR PROLYEAR ANN\_WTR JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV OCM 470501047 ED Troductor Company 2013 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

There is no Stratigraphy data for this well

There is no Wireline (E-Log) data for this well

There is no Plugging data for this well

There is no Sample data for this well

WV Department of Environmental Protection Office of Oil and Gas JAN 1 9 2021

WV Geological & Economic Survey.

Weil: County = 61 Permit = 01869

Report Time: Thursday, December 03, 2020 3 58 45 PM

Location Information: VIew Map API COUNTY PERMIT TAX DISTRICT QUAD\_76 QUAD\_15 LAY\_DD LON\_DD UTME UTMM 4705101859 Mershwi 1859 Mesde Gien Easton Cameron 39.78156 -50.756875 523388 4403548 6

 Bottom Hole Location information:

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Owner Information: Api CMP\_DT Suffix Status Surface\_owner Well\_num co\_num lease lease\_num mineral\_own operator\_at\_completion prop\_vo\_prop\_trot\_fm\_yfm\_est\_pr 4705101859\_44 Drid Orgit Loc\_Cancelod Dennis W Hunter 8H Hunter Petitiel Dennis W Hunter et al Stone Energy Corporation 6140 Matcellus Fm

Completion Information: API CMP\_DT SPUD\_DT ELEV DATUM RELD DEEPEST\_FM DEEPEST\_FMT DITIAL\_CLASS FINAL\_CLASS TYPE RIG CMP\_MTHD TVD TMD NEW\_FTG KOD G\_BEF G\_AFT O\_BEF O\_AFT NGL\_BEF NGL\_AFT P\_BEF TI\_BEF P\_AFT TI\_AFT BN\_P\_BEF BN\_P\_AFT G\_MSRD\_BY 4705101859 44 755 Oround Lovel 4705101859 44 755 Oround Lovel Comment: -/-Plat coordinates hard to read, blury Per WVDEP OOG website, well was cancelled 12/11/2017. No cancelledin documents available.

There is no Pay data for this well

Production Gas Information: (Volumes in Mcf) [API PRODUCING\_OPERATOR PRD\_YEAR ANN\_GAS JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DOM [4705101259 GOT Production Company 2018 0 0 0 0 0 0 0 0 0 0 0 0 0

Production Oil Information: (Volumes In Bbl) \*\* some operators may have reported NGL under Oil IAPI PRODUCING OPERATOR PRO\_VEAR AMN OIL JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DOM 470510139 BOT Production Company 2018 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Production NGL Information: (Volumes in Bbi) \*\* some operators may have reported NGL under Oil API PRODUCING OPERATOR PRO\_VERA ANN\_NGL JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DCM 475301358 GAT Production Corpusny 2018 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

There is no Stratigraphy data for this well

There is no Wireline (E-Log) data for this well

There is no Plugging data for this well

There is no Sample data for this well

WV Geological & Economic Survey:

Well: County = 51 Permit = 01860

Report Time: Thursday, December 03, 2020 3 59:50 PM

Location Information: View Map. API COUNTY PERMIT YAX DISTRICT QUAD\_76 QUAD\_15 LAT\_DO LON DO UTME UTMM 4705101880 Marshall 1860 Maade Gion Easton Cameron 39.781673 -80.728548 523416 4403561.3

Bottom Hole Location Information: API EP FLAG UTIME UTIMN LON DO LAT DO 4705101880 1 As Proposed 522074 3 4405230 4 -00 74218 39 796748

Owner Information: API CAP\_DT SUFFIX STATUS SURFACE OWNER WELL\_NUM CO\_NUM LEASE LEASE NUM MONERAL\_OWN OPERATOR\_AT\_COMPLETION PROP\_VD PROP\_TRGT\_FM YFM\_EST\_PR 4705101280 44 Dennis W Runter toh Hunter Pethae Dennis W Runter et al. Stone Energy Corporation 6140 Narcebus Pm

There is no Pay data for this well

Production Gas Information: (Volumes in Mcf) [AP] PRODUCING OPERATOR PRD\_YEAR ANN\_GAS JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DCM 4705/01260 EDT Production Company 2018 0 0 0 0 0 0 0 0 0 0 0 0

Production Oil Information: (Volumes in Bb) <sup>↔</sup> some operators may have reported NGL under Oil API PRODUCING OPERATOR PRD\_VEAR ANN OIL JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DCM 470510566 CDT Production Concessry 2018 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Production Water Information: (Volumes in Gallons) API PRODUCING OPERATOR PROTYER ANN WIR JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DCM 470510568 EDT PROJECTIOCOMPANY 2018 0 0 0 0 0 0 0 0 0 0 0 0 0

There is no Stratigraphy data for this well

There is no Wireline (E-Log) data for this well

There is no Plugging data for this well

There is no Sample data for this well

WV Department of Environmental Protection RECEIVED Office of Oil and JAN jund 9 2021 Gas

WV Geological & Economic Survey.

Well: County = 51 Permit = 01866

Report Time: Thursday, December 03, 2020 4:00:22 PM

Location Information: View Map. API COUNTY PERMIT TAX DISTRICT QUAD\_76 QUAD\_15 LAY\_DD LON\_DD UTIME UTIMN 4705101866 Mambadi 1865 Meade Gen Easton Cameron 39 781782 -80 726409 523427 8 4403573 4

Bottom Hole Location Information: [API EP FLAG UTIME UTIMN LON DO LAT DD 4705191866 1 As Proposed \$24237 2 4492287 1 -60 717005 39 77017

OPERATOR AT\_COMPLETION PROP\_VD PROP\_TRGT\_FM TFM\_EST\_PR Stone Energy Corporation 6250 Marcellus Fm 4200

Completion information: API CAP\_DT SPUD\_DT ELEV DATUM FIELD DEEPEST\_FM DEEPEST\_FMT INITIAL\_CLASS FINAL\_CLASS TYPE RIG CMP\_MITHD TVD TMD NEW\_FTG KOD G\_BEF G\_AFT O\_BEF O\_AFT NGL\_BEF NGL\_AFT P\_BEF TLBEF P\_AFT TLAFT BH\_P\_BEF BH\_P\_AFT G\_MSRD\_BY 470510158 JL JL TT 755 Ground Lovel Comment: -44- Per WVDEP OOG website, welt was cancelled 12/11/2017. No cancellation documents available.

There is no Pay data for this well

Production Gas Information: (Volumes in Mcf) API PRODUCING\_OPERATOR PRD\_YEAR ANN\_GAS JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV UCM 4705101555 EQT Production Company 2018 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Production Oil Information: (Volumes in Bbi) \*\* some operators may have reported NGL under Oil API PRODUCING OPERATOR PRO VERA ANN OIL JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DCM 470510188 ED THOOLSON COMBAY 2018 0 0 0 0 0 0 0 0 0 0 0 0 0

Production Water Information: (Volumes in Galions) API PRODUCING OPERATOR PRD YEAR ANN WIR JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV OCM 4705101355 EQT Production Company 2013 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

There is no Stratigraphy data for this well

There is no Wireline (E-Log) data for this well

There is no Plugging data for this well

There is no Sample data for this well

WV Department of Environmental Protection JAN 1 9 2021

RECEIVED Office of Oil and Gas

V Geological & Economic Survey.

Well: County = 51 Permit = 30115

Report Time: Thursday, December 03, 2020 5 24:07 PM

cation Information: View Map. 9 COUNTY PERMET TAX DISTRICT QUAD 15 QUAD 15 LAT DO LON OD UTIME UITMN 9530115 MANMAD 3015 Meade Gen Easton Canceron 39753554 400769374 5249786 44015996

ere is no Bottom Hole Location data for this well

rner Information: 1 CMP\_DT SUFFIX STATUS SURFACE\_OWNER WELL\_NUM CO\_NUM LEASE LEASE\_NUM MINERAL\_OWN OPERATOR\_AT\_COMPLETION PROP\_VD PROP\_TRGT\_FM YFM\_EST\_PR 25/33115 3/13/1902 Original Loc. Completed Hailey Kemp 1 49. Peter Kemp 2008 Unknown Hode Natural Gas Complety

y/Show/Water Information: 9 CMP DY ACTIVITY PRODUCY SECTION DEPTH\_YOP FM\_TOP DEPTH\_BOY FM\_BOY G\_BEF G\_AFT 0\_BEF O\_AFT WATER\_ONTY 25130115 5/13/1902 Pay Gaa Vertical 2315 Gordon 2325 Gordon 0 0

ere is no Production Gas data for this well

ere is no Production Oil data for this well \*\* some operators may have reported NGL under Oil

ere is no Production NGL data for this well \*\* some operators may have reported NGL under Oil

ere is no Production Water data for this well

atigraphy information:

1	201614	rm	PNLQUALITY	DEPTH_TOP	UEPIN_QUALITY	THICKNESS	TRICKNESS_QUALITY	ELEV	DATUM	
05130115	Original Loc	Sevicitiey coal	Well Record		Reasonable		Ressonable		Ground Lovel	
25130115	Original Loc	Pittsburgh coal	Well Record	313	Reasonable	10	Reasonable		Ground Level	
25130115	Original Loc		Well Record	1015	Reasonable	185	Reasonable	696	Ground Level	
	Original Loc		Well Record	1310	Reasonable	40	Reasonable	696	Ground Level	
25130115	Original Loc	Big Injun (undiff)	Well Record		Reasonable	300	Reasonable	696	Ground Level	1
		Gordon Stray	Well Record	2278	Reasonable	5	Reasonable	696	Ground Level	1
25130115	Original Loc	Gorden	Well Record	2316	Reasonable	13	Reasonable		Ground Level	

ere is no Wireline (E-Log) data for this well

Igging Information: I PLG\_DT DEPTH\_PBT X130115 12/18/1939 0

are is no Sample data for this well

WV Department of Environmental Protection RECEIVED Office of Oil and Gas JAN 1 9 2021

W Geological & Economic Survey

Well: County = 51 Permit = 70299

Report Time: Thorsday, December 03, 2020 5 24:39 PM

Kašlon Information: <u>View Man</u> Pi Coukty Permit Tax (distruct Guad 75 Quad 15 Lay Do Lon Do Utme Utmen 2510239 Marphal 70239 Meade Wiewde Liketon 39 737001 -80 698331 535640 5 4359820 8

tere is no Bottom Hole Location data for this well

vrief Information: PI CMP\_DT SUFFIX STATUS SURFACE\_OWNER WELL\_NUM CO\_NUM LEASE LEASE\_NUM MUNERAL\_OWN OPERATOR\_AT\_COMPLETION PROP\_VD PROP\_TRGT\_FM TFM\_EST\_PR 105170239 -4- untrown Profy Map Frank Weigand 3147. Manufacturer Light & Heal Co

vere is no Pay data for this well

mindelion information: PI CMP\_DY SPUD\_DY ELEV DATUM FIELD DEEPEST\_FM DEEPEST\_FMT INITIAL\_CLASS FINAL\_CLASS TYPE RIG CMP\_MITHD TYD TMD NEW\_FTG KOD G\_BEF G\_AFT O\_BEF O\_AFT NGL\_BEF NGL\_AFT P\_BEF TI\_BEF P\_AFT TLAFT BH\_P\_BEF BH\_P\_AFT G\_MSRD\_BY UNITION UNITION INFORM UNITION INFORM UNITION INFORM UNITION INFORM UNITION INFORM UNITION INFORMATION INFORMATIONI

tere is no Production Gas data for this well

ere is no Production Oil data for this well \*\* some operators may have reported NGL under Oil

iere is no Production NGL data for this well \*\* some operators may have reported NGL under Oil

ere is no Production Water data for this well

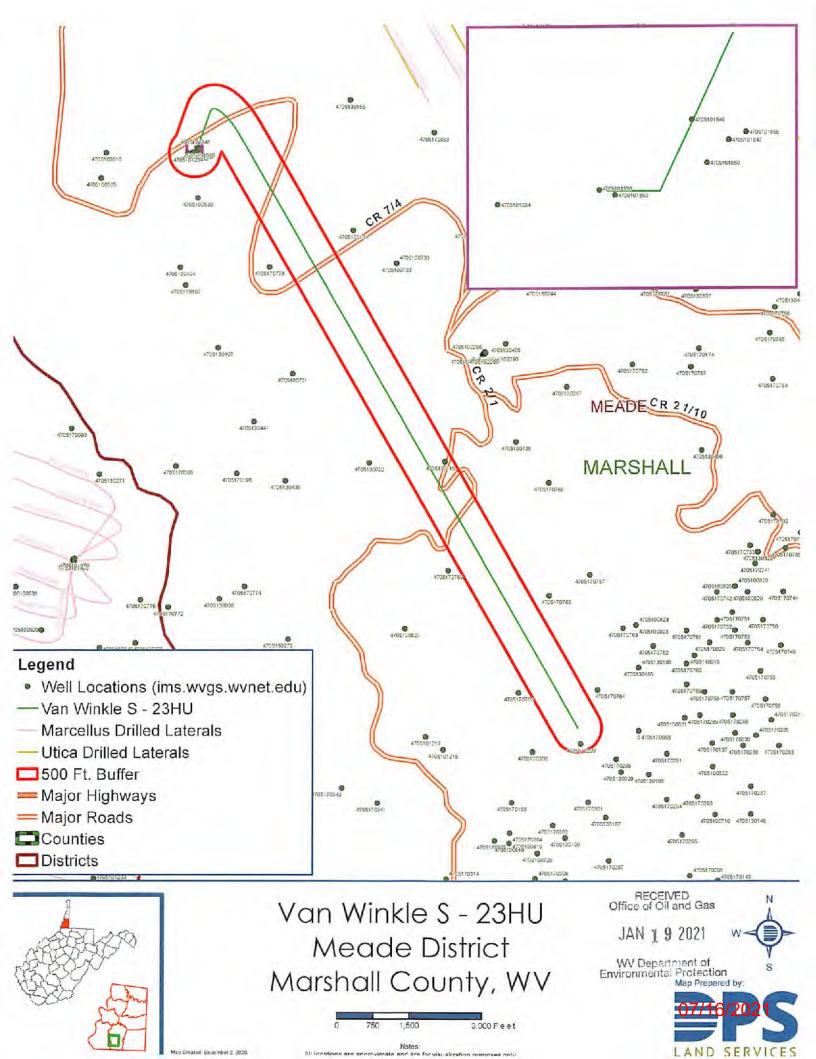
tere is no Stratigraphy data for this well

iere is no Wireline (E-Log) data for this well

iere is no Plugging data for this well

ere is no Sample data for this well

WV Department of Environmental Protection RECEIVED Office of Oil and Gas JAN 1 9 2021



### 4705102356

WW-9 (4/16)

API Number 47 - 051 -

Operator's Well No. Van Winkle S-23HU

#### STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF OIL AND GAS

#### FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name Tug Hill Op	erating, LLC	OF	<sup>o</sup> Code	494510851
Watershed (HUC 10) Fish	n Creek Quadran	ngle Glen	Easton	7.5'
Do you anticipate using m Will a pit be used? Yes	ore than 5,000 bbls of water to complete the propo	sed well v	vork?	Yes / No
Will a synthetic l	ribe anticipated pit waste:AST Tanks with proper contain iner be used in the pit? Yes No al Method For Treated Pit Wastes:			aging fresh water for free and flow back water
-	Land Application Underground Injection (UIC Permit Number UK Reuse (at API Number Off Site Disposal (Supply form WW-9 for dispos Other (Explain			359, UIC 2D0732540, UIC 2D0732523 )

Will closed loop system be used? If so, describe: Yes - For vertical and horizontal drilling

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. Air for vertical/ Oil for Horizontal

-If oil based, what type? Synthetic, petroleum, etc. Synthetic Oil Base

Additives to be used in drilling medium? Barite for weight

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. All drill cuttings to be disposed of in a Landfill

-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust) N/A

-Landfill or offsite name/permit number? Weizer County Sanitary Landfill (SWF-1021 / WV0109185) und Weistmoreland Sanitary Landfill, LLC (SAN1405 / PA DEP ECR 1386426

Permittee shall provide written notice to the Office of Oil and Gas of any load of drill cuttings or associated waste rejected at any West Virginia solid waste facility. The notice shall be provided within 24 hours of rejection and the permittee shall also disclose where it was properly disposed.

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on August 1, 2005, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applicable law or regulation can lead to enforcement action.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment.

Company Official Signature James A Jancale	RECEIVED
Company Official (Typed Name) James Pancake	Office of Oil and Gas
Company Official Title Vice President - Geoscience	FEB 0 3 2021
	1800 10

Subscribed and sworn before me thi	s & day of JANNART	, 20 21	Environmental Protection
Dhaff	Commonwealth of Pennsylvania - Notary Seal David Gabriel Delallo, Notary Public	Notary Public	
My commission expires	Washington County My commission expires February 16, 2024		
	Commission number 1267492		07/16/2021
	Member, Pennsylvania Association of Notaries		01/10/2021

## 4705102356

Form V	WW-9
--------	------

### Operator's Well No. Van Winkle S-23HU

Proposed Revegetation Treatment	nt: Acres Disturbed 16.63	Prevegetation pH	6.0		
Lime 3	Tons/acre or to correct to p	H 6.5			
Fertilizer type 10-20-	20				
Fertilizer amount 500		lbs/acre			
Mulch 2.5	Tons	s/acre			
Тетр	orary	Permanent			
Seed Type	lbs/acre	Seed Type	lbs/acre		
Annual Ryegrass	40	Orchard Grass	12		
Spring Oats	96	Ladino	3		
		White Clover	2		

Maps(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided). If water from the pit will be land applied, include dimensions (L x W x D) of the pit, and dimensions (L x W), and area in acreage, of the land application area.

Photocopied section of involved 7.5' topographic sheet.

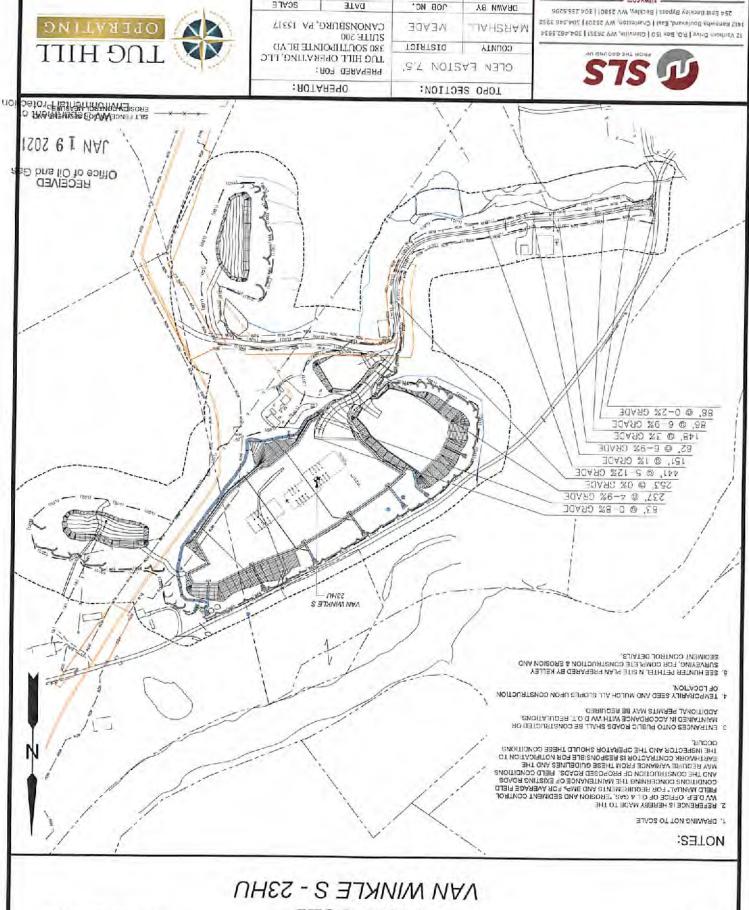
Plan Approved by: Bary Stilles	
Comments:	
	RECEIVED Office of Oil and Gas
	FEB 0 3 2021
Title: Oil and Gas Inspector Date: 1- 22- 2	WAY December
Field Reviewed? () Yes () No	



6-MM

PROPOSED

SUPPLEMENT PG. 1



CRER PHILSES

TAYOUT: Lavout

NONE

SCALE

5/24/2020

2969

CAD FILE: R-IDarie CADD/WORK 8900-8999/8952 Hunter Pethiel Plats and Mapping/8952/Survey/Well Plat Exhibits/Revised/8952REC23HU dvg

LUOD'AMSIE

K'C'W



# Well Site Safety Plan Tug Hill Operating, LLC

Bary Stiller 1-22-21 Well Name: Van Winkle S-23HU

Location: Hunter Pethtel

Marshall County, West Virginia

UTM (meters), NAD83, Zone 17:

Northing: 4,403,550.28 Easting: 523,385.80

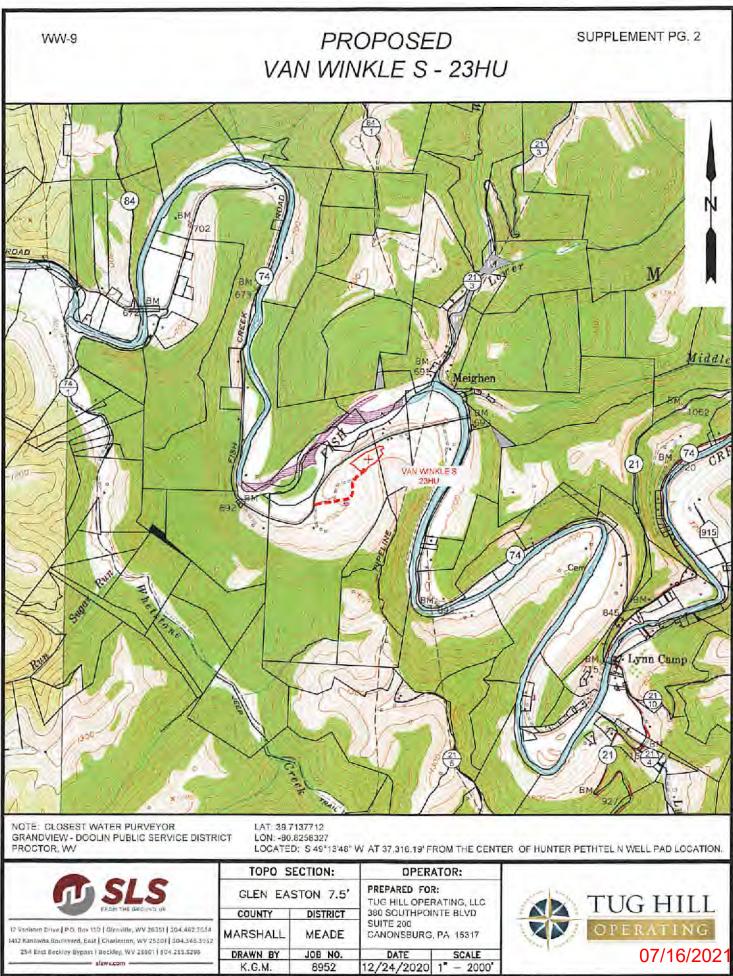
January 2021

RECEIVED Office of Oil and Gas

FEB 0 3 2021

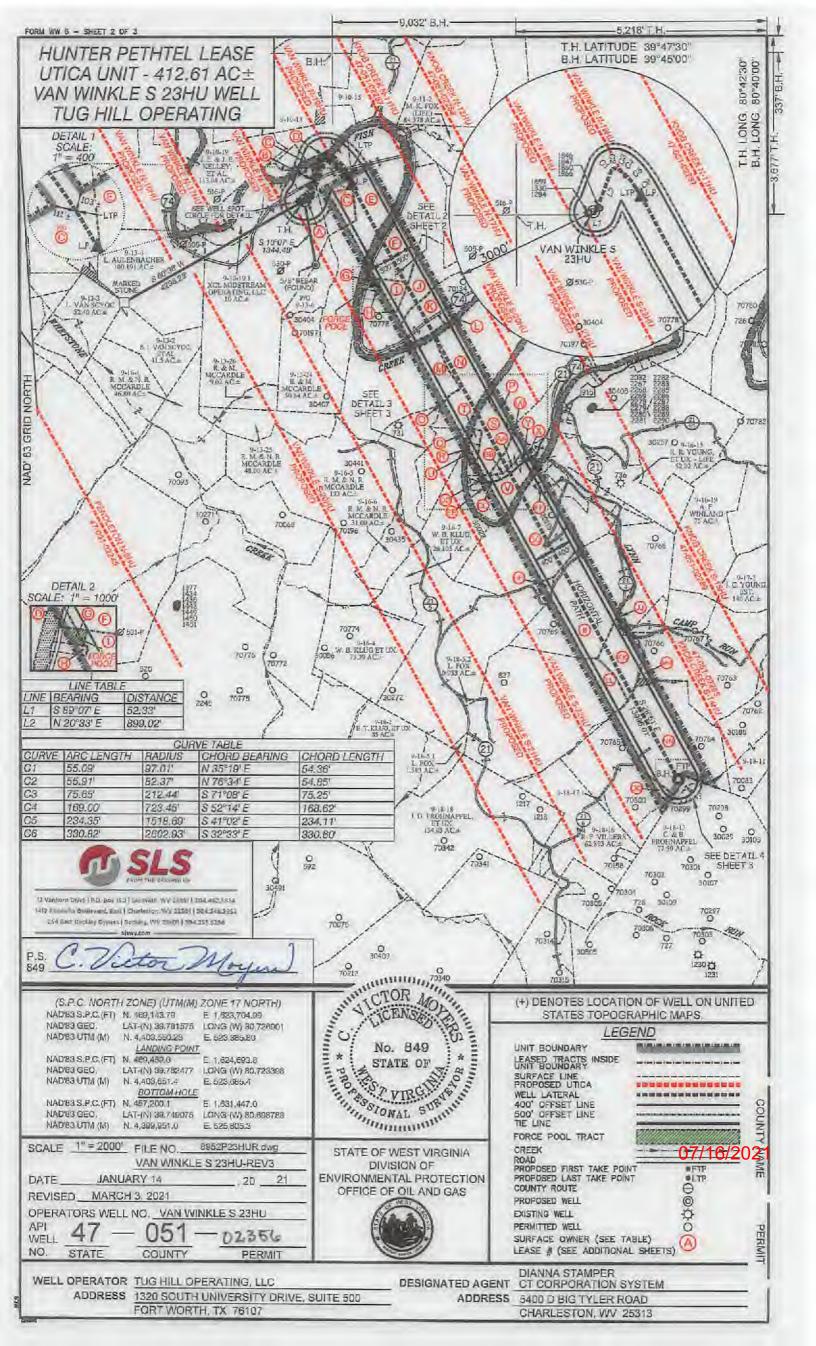
WV Department of Environmental Protection

07/16/2021



CAD FILE: R-(Data)CADD/WORK 8900-8999/862 Hunter Pethtel Plats and Mapping/8852/Survey/Well Plat Exhibits/Revised/8852-23HU Exhibits dwg LAYOUT: Layout5 USER: kmoyr

WWW 6 - SHEET 1 OF 3		9,032' B.H5,218' T.H
HUNTER PETHTEL LEASE	B.H.	T.H. LATITUDE 39°47'30" B.H. LATITUDE 39°45'00"
UTICA UNIT - 412.61 AC±	Dirit.	
AN WINKLE S 23HU WELL		(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH) 4 4 NAD 83 S.P.C. (FT) N. 489,143.79 E. 1,623,704.99 8
TUG HILL OPERATING		NAD'83 GEO. LAT-(N) 39.781575 LONG-(W) 80.726901
IOUTILE OF LIATING		NAD'83 GEO.         LAT-(N) 39.781575         LONG-(W) 80.726901         S
G SURFACE OWNER	PARCEL ACRES	NAD'83 S.P.C. (FT) N. 469,459.0 E. 1,624,693.8 III
XCL MIDSTREAM OPERATING, LLC MICHAEL, WALKER & JOSEPH BLAKE	9-13-5 190.12 9-13-5.1 3.26	NAD'83 GEO, LAT-(N) 39.782477 LONG-(W) 80.723398 古富
MARY VIRGINIA PETHTEL (LIFE) STATE OF WEST VIRGINIA (FISH CREEK)	9-13-6 65.36 N/A N/A	NAD'83 UTM (M) N. 4,403,651.4 E. 523,685.4 BOTTOM HOLE
MARY VIRGINIA PETHTEL (LIFE)	9-13-7 96.00	NAD'83 S.P.C.(FT) N. 457,200.1 E. 1,631,447.0
SHUTLER FAMILY TRUST MARGARET FOX (LIFE)	9-13-8 56.04 9-13-23 1.52	NAD'83 GEO. LAT-(N) 39,749075 LONG-(W) 80.698788 NAD'83 UTM (M) N. 4,399,951.0 E. 525,805.3
EUGENE A SCHERRER HENRY, JR. & BARBARA DICK	9-13-22.2 0.925 9-13-22.1 11.82	NAD'B3 UTM (M) N. 4,399,951.0 E. 525,805.3
TRICYCLELLC	9-13-22 42,27	T.H.
ELEANOR M. FOX ESTATE ELEANOR M. FOX ESTATE	9-13-19 19.20 9-13-18 30.00	NOTES ON SURVEY
SHUTLER FAMILY TRUST DANIEL JAY FITZWATER	9-13-21 81,49 9-13-20 105.5	<ol> <li>NO WATER WELLS WERE FOUND WITHIN 250" DF PROPOSED GAS WELL. NO AGRICULTURAL</li> </ol>
JAMPS G. RICHMOND	9-16-8 30.00	BUILDINGS ≥ 2500 SQ. FT. OR DWELLINGS WERE FOUND WITHIN 625' OF THE CENTER OF
ANDREW I, FROHNAPFEL JAMES G, RICHMOND	9-13-12 91.1007 9-16-9 22,71	2. WELL SPOT CIRCLE & TOPO MARK SCALE IS
JAMES G. RICHMOND IVAN H. & MARGARET A. RICHMOND	9-16-11 67.8822 9-13-16 21.354	1"=2000". 3. BASED ON WY DOT COUNTY ROUTE 74 IS A 40'
IVAN H. & MARGARET A. RICHMOND	9-13-16.1 1.518	STRIP OF LAND ACQUIRED IN NUMEROUS DEEDS. 4. PROPOSED LATERAL OR TOP HOLE OF
IVAN H. & MARGARET A. RICHMOND JAMES RICHMOND	9-16-10 1.518 9-16-12 28.638	VAN WINKLE S-23HU IS WITHIN 3000' OF TOP HOLES OR LATERALS OF:
MARGARET FOX (LIFE) JAMES G. RICHMOND	9-13-13 15.513 9-16-12.1 0.691	PROPOSED VAN WINKLE N-16HU. PROPOSED VAN WINKLE N-17HU.
SPENCER J. & CARRIE A. RICHMOND	9-16-12.6 0.141	PROPOSED VAN WINKLE N-18HU, PROPOSED VAN WINKLE N-19HU.
A SPENCER J. & CABRIE A. RICHMOND A SPENCER J. & CARRIE A. RICHMOND	9-16-12.7 0.55 9-16-12.2 0.575	PROPOSED VAN WINKLE S-20HU, PROPOSED VAN WINKLE S-21HU,
S SHEILA TRUAN, ET VIR JAMES G. RICHMOND	9-16-12.4 0.516 9-16-12.3 0.937	PROPOSED VAN WINKLE S-22HU, KNOB CREEK N-11HU (47-051-02287).
IVAN H. & MARGARET A. RICHMOND	9-16-12.8 0.85	KNOB CREEK S-14HU (47-051-02288), KNOB CREEK S-15HU (47-051-02289).
TIMOTHY S. & GRETCHEN M. KIDD PAUL R. ELAKE	9-16-12.5 1.23 9-16-13.3 0.7538	NNUO UREEK 5-15HU (47-051-02289).
3 PAUL R, BLAKE H WILLIAMB, KLUG, ET UX	9-16-13 97.9962 9-18-5 122.437	
LOUIS T. FOX	9-16-20 \$6.174	
ALICE FAYE WINLAND	9+16-18 48.667 9-18-7 27.864	
LOUIS FOX ROBERT J. COMBS, ET AL	9-18-6 141.75 9-18-9 110.75	
DOUGLAS J. WAYMAN	9-18-8 92.72	WATER WELL
D   VINCENT J. WAYMAN, ET UX	9-18-17 68.99	
ARCEL SURFACE ADJOINER -10-15 JOSEPH MICHAEL BONENE	ACRES	
-10-18 COBLENTZ BROS, INC.	44,00 67,88	
16-13.1 PAUL W. BLAKE (LIFE), WESLEY D. YEATER, JR., ET. 16-13.2 ELEANOR M. FOX EST.	AL. 0.91 1.570	
16-13.4 JOHN FOX 16-13.5 PAUL R. BLAKE & PAUL R. BLAKE II	0.533	
16-13.6 WESLEY D. YEATER, ET UX	2.921 2.144	ATT AN A
LINTON B. WHITELATCH, SR., ET UX, ESIS.     General Robin D. & DAVID G. STEWART	1 AC 5.6 P 3.333	A. S.S.
418-11 BETTY J. GOULDSBERRY EST., ET AL.	60.00	VAN WINKLES
18-17.1 VINCENT JOHN WAYMAN	1.010	23HU A C C
		S 62"12' W
GIAS S		104.65 S 83*45' W
AN CHURD MAY NO.		110.64'
2 Vanhorn Drive   P.D. Bar 150   Glenville, WV 26351   504.462.5634		
12 Kanawha Boulevard, Bast   Charleston, WV 25301   304.346,3952		47-051-01330
254 East Beckley Bypass   Beckley, WV 25801   304:255.5296 sBwy.com		47-051-01284' $1'' = 200'$
		TOR
HE UNDERSIGNED, HEREBY CERTIFY THAT	There	(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.
IS PLAT IS CORRECT TO THE BEST OF MY WEDGE AND BELIEF AND SHOWS ALL	2.1	DATEJANUARY 14 2021
E INFORMATION REQUIRED BY LAW AND	10/1	No. 849 REVISED MARCH 3, 2021
E REGULATIONS ISSUED AND PRESCRIBED THE DIVISION OF ENVIRONMENTAL PROTE	=*! .	
THE BITCHER OF LIVINONWENTAL PROTE	PR	TATE OF THE OPERATORS WELL NO. VAN WINKLE S 23HU
a non na	)	VIRGINAL SUBULINO. VAN WINKLE S 23HU ONAL SUBULINO. 47 051 02359 ONAL SUBULINO. 47 051 02359 ONAL SUBULINO. 02359 ONAL SUBULINO. 02359 ORCP
C. Victor Ma	for miss	ONAL SUBJUNT NO. 41 UOI CREP
		STATE COUNTY PERMIT
ACCURACY 1/2500 FILE	NO. 8952P23HUR.dw	STATE OF WEST VIRGINIA
ACCURACY	VAN WINKLE S 2	3HU-REV3 DIVISION OF ENVIRONMENTAL PROTECTION
		OFFICE OF OIL AND GAS
	Y GRADE TIE TO COR	SINETWORK)
NTROL DETERMINED BY DGPS (SURVE	THE PARTY PARTY AND A PARTY AN	IF
IL LIQUID	WASTE	GAS" PRODUCTION X STORAGE DEEP X SHALLOW
INTROL DETERMINED BY DGPS (SURVE)  LIQUID PE: OIL GAS X INJECTION		
Introl determined by         DGPS (SURVE)           LIQUID         LIQUID           PE:         OIL         GAS_X           CATION :         GROUND: 756.10'	_ DISPOSAL	FISH CREEK (HUC 10)
CATION : GROUND: 756.10' ELEVATION PROPOSED: 753.50'	_ DISPOSAL	FISH CREEK (HUC 10)
CATION : GROUND: 756.10' ELL LIQUID CATION : GROUND: 756.10' ELEVATION PROPOSED: 753.50' DISTRICT MEADE	_ DISPOSAL WATERSHED COUNTY	MARSHALL QUADRANGLE GLEN EASTON 7.5'
CATION : GROUND: 756.10' ELL GAS_X_ INJECTION CATION : GROUND: 756.10' ELEVATION PROPOSED: 753.50' DISTRICT MEADE RFACE OWNER XCL MIDSTREAM OPER	_ DISPOSAL WATERSHED COUNTY ATING, LLC	MARSHALL QUADRANGLE GLEN EASTON 7.5'
ILL LIQUID PE: OIL GAS_X_INJECTION CATION : GROUND: 756.10' ELEVATION PROPOSED: 753.50' DISTRICT MEADE RFACE OWNER XCL MIDSTREAM OPER OYALTY OWNER DENNIS HUNTER, ET AL	_ DISPOSAL WATERSHED COUNTY ATING, LLC	MARSHALL         QUADRANGLE         GLEN EASTON 7.5'         G           ACREAGE         190.12 ±         400.12 ±
ILL LIQUID PE: OIL GAS_X_INJECTION CATION : GROUND: 756.10' PROPOSED: 753.50' DISTRICT MEADE IRFACE OWNER XCL MIDSTREAM OPER OYALTY OWNER DENNIS HUNTER, ET AL OPOSED WORK :	DISPOSAL WATERSHED COUNTY ATING, LLC SEE WW-6A1	MARSHALL QUADRANGLE GLEN EASTON 7.5'
DITROL DETERMINED BYDGPS (SURVE ELLLIQUID PE: OILGAS_XINJECTION DCATION : GROUND: 756.10' ELEVATIONROPOSED: 753.50' DISTRICTMEADE JRFACE OWNERXCL MIDSTREAM OPER	_ DISPOSAL WATERSHED COUNTY ATING, LLC SEE WW-6A1	MARSHALL         QUADRANGLE         GLEN EASTON 7.5'         G           ACREAGE         190.12 ±         400.12 ±
DITROL DETERMINED BYDGPS (SURVE LLLIQUID PE: OILGAS_XINJECTION DCATION : GROUND: 756.10' PROPOSED: 753.50' DISTRICTRADE URFACE OWNERXCL MIDSTREAM OPER DYALTY OWNERDENNIS HUNTER, ET AL ROPOSED WORK : RILLX CONVERT DRILL I	DISPOSAL WATERSHED COUNTY ATING, LLC SEE WW-6A1 DEEPER RE	MARSHALL QUADRANGLE <u>GLEN EASTON 7.5'</u> ACREAGE <u>190.12 ±</u> ACREAGE <u>190.12 ±</u> LEASE NO. <u>SEE WW-6A1</u> DRILL FRACTURE OR STIMULATE PLUG OFF OLD
DITROL DETERMINED BYDGPS (SURVE ELLLIQUID PE: OILGAS _XINJECTION CATION : GROUND: 756.10' PROPOSED: 753.50' DISTRICTREADE URFACE OWNERXCL MIDSTREAM OPER DYALTY OWNERDENNIS HUNTER, ET AI ROPOSED WORK : RILLX CONVERT DRILL I	DISPOSAL WATERSHED COUNTY ATING, LLC SEE WW-6A1 DEEPER RE	MARSHALL       QUADRANGLE       GLEN EASTON 7.5'       OF         ACREAGE       190.12 ±       ACREAGE       190.12 ±         ACREAGE       190.12 ±       ACREAGE       190.12 ±         LEASE NO.       SEE WW-6A1       FRACTURE OR STIMULATE       X       PLUG OFF OLD         AND ABANDON       CLEAN OUT AND REPLUG       OTHER       OTHER
ALLOWINE OVERVIEW DATE OF CONTROL DETERMINED BY DGPS (SURVE)  LL GAS_X INJECTION PROPOSED: 753.50' DISTRICT READE URFACE OWNER XCL MIDSTREAM OPER OYALTY OWNER DENNIS HUNTER, ET AL OPOSED WORK :  LL CONVERT DRILL F  RMATION PERFORATE NEW FORM	DISPOSAL WATERSHED COUNTY ATING, LLC SEE WW-6A1 DEEPER RE	MARSHALL       QUADRANGLE       GLEN EASTON 7.5'       OF         ACREAGE       190.12 ±       ACREAGE       190.12 ±         ACREAGE       190.12 ±       ACREAGE       190.12 ±         LEASE NO.       SEE WW-6A1       B         DRILL       FRACTURE OR STIMULATE       X       PLUG OFF OLD         AND ABANDON       CLEAN OUT AND REPLUG       OTHER
ALL DITROL DETERMINED BY DGPS (SURVE)  PE: OIL GAS_X_INJECTION DCATION : GROUND: 756.10' ELEVATION PROPOSED: 753.50' DISTRICT MEADE URFACE OWNER XCL MIDSTREAM OPER DYALTY OWNER DENNIS HUNTER. ET AI COPOSED WORK :  RILL _X CONVERT DRILL E  RMATION PERFORATE NEW FORMA INSIGAL CHANGE IN WELL (SPECIFY)	DISPOSAL WATERSHED COUNTY ATING, LLC SEE WW-6A1 DEEPER RE ATION PLUG	MARSHALL       QUADRANGLE       GLEN EASTON 7.5'       OF         ACREAGE       190.12 ±         ACREAGE       Y         ACREAGE       Y      <
CATION ISE & VERMONE BY DGPS (SURVE)  CATION : GROUND: 756.10' ELEVATION PROPOSED: 753.50' DISTRICT MEADE URFACE OWNER ZCL MIDSTREAM OPER DYALTY OWNER DENNIS HUNTER, ET AI COPOSED WORK :  RILLX CONVERT DRILL E URMATION PERFORATE NEW FORM/ IYSICAL CHANGE IN WELL (SPECIFY) ELL OPERATOR TUG HILL OPERATING, LL	DISPOSAL WATERSHED COUNTY ATING, LLC SEE WW-6A1 DEEPER RE ATION PLUG	MARSHALL       QUADRANGLE       GLEN EASTON 7.5'       OP         ACREAGE       190.12 ±       ACREAGE       190.12 ±         ACREAGE       190.12 ±       ACREAGE       190.12 ⊕ 7/16/20         LEASE NO.       SEE WW-6A1       DRILL       FRACTURE OR STIMULATE       X       PLUG OFF OLD         AND ABANDON       CLEAN OUT AND REPLUG       OTHER       OTHER       DIANNA STAMPER
ALL ONTROL DETERMINED BYDGPS (SURVE LLLIQUID PE: OILGAS_XINJECTION CATION : GROUND: 756.10' PROPOSED: 753.50' DISTRICTMEADE PRFACE OWNERXCL MIDSTREAM OPER DYALTY OWNERDENNIS HUNTER. ET AL OPOSED WORK : RILLXCONVERTDRILL D RMATION PERFORATE NEW FORMA IYSICAL CHANGE IN WELL (SPECIFY)	DISPOSAL WATERSHED COUNTY ATING, LLC SEE WW-6A1 DEEPER RE ATION PLUG	MARSHALL       QUADRANGLE       GLEN EASTON 7.5'       OP         ACREAGE       190.12 ±       ACREAGE       190.12 ±         ACREAGE       190.12 ±       ACREAGE       190.12 ±         LEASE NO.       SEE WW-6A1       SEE WW-6A1       SEE WW-6A1         DRILL       FRACTURE OR STIMULATE       X       PLUG OFF OLD         AND ABANDON       CLEAN OUT AND REPLUG       OTHER       OTHER         TARGET FORMATION       POINT PLEASANT       TOTHER       TOTHER         DIANNA STAMPER       DIANNA STAMPER       DIANNA STAMPER       DIANNA STAMPER



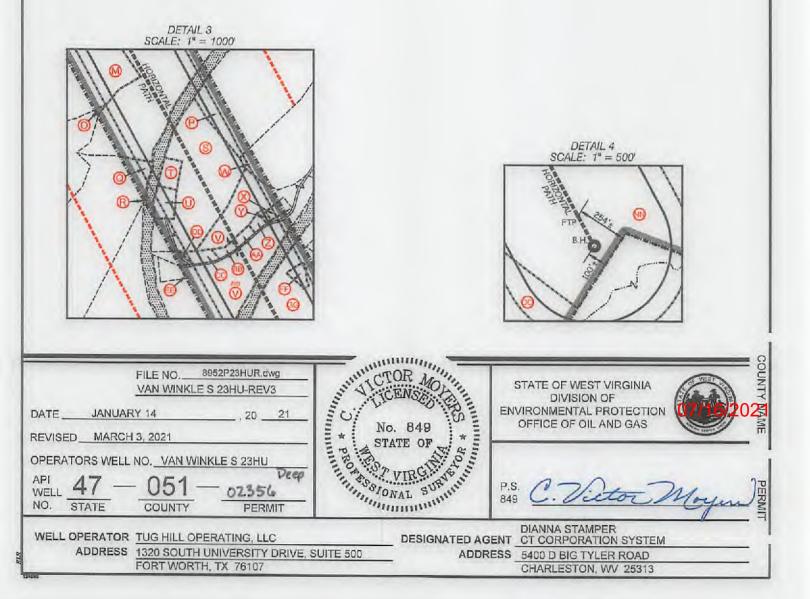
FORM WW 6 - SHEET 3

HUNTER PETHTEL LEASE UTICA UNIT - 412.61 AC± VAN WINKLE S 23HU WELL TUG HILL OPERATING



12 Vanhom Drive ( P.O. Box 150 ) Gleaville, WV 26351 | 304.462.5634 1412 Kanawina Boulevard, East | Charleston, WV 25301 | 304.346,3952 254 East Beckley Bypass | Beckley, WV 25801 | 304.285,5296 15wv.com

NO.	Lease ID	Parcel	Tag	Grantor, Lessor, Etc.	Deed Bo	ok/Page
1	10*31312	9-13-5	A	DENNIS W & KATHY A HUNTER	668	155
2	10*31312	9-13-5.1	B	DENNIS W & KATHY A HUNTER	668	155
3	10*31303	9-13-6	С	MARY V & FRANK E PETHTEL, ET AL	668	525
4	10*23458	Fish Creck	D	WEST VIRGINIA DIVISION OF NATURAL RESOURCES	1019	373
.5	10*31303	9-13-7	E	MARY V & FRANK E PETHTEL, ET AL	668	525
б	10*28299	9-13-8	F	THE SHUTLER FAMILY TRUST	1070	425
7	**	9-13-23	6	THOMAS JOHN FOX, ET AL		-
8	10*27247	9-13-22.2	н	DANIEL R JOHNSON AND JOANNA LJOHNSON, ET AL	1053	3
9	10*27247	9-13-22.1	1	DANIEL R JOHNSON AND JOANNA LJOHNSON, ET AL	1053	3
10	10*27247	9-13-22	J	DANIEL R JOHNSON AND JOANNA LJOHNSON, ET AL	1053	3
11	10*18527	9-13-19	K	ANN TURNER YOUNG SHRIVER, ET AL	933	589
12	10*18527	9-13-18	L	ANN TURNER YOUNG SHRIVER, ET AL	933	589
13	10*23197	9-13-21	M	J W KELLEY AND R A KELLEY, ET AL	63	156
14	10*18527	9-13-20	N	ANN TURNER YOUNG SHRIVER, ET AL	933	589
15	10*23197	9-16-8	0	J W KELLEY AND R A KELLEY	63	156
16	10*24858	9-13-12	p	NILA JEAN FROHNAPFEL	1028	119
17	10*16481	9-16-9	Q	JAMES & RICHMOND AND CINDY L RICHMOND	829	71
18	10*16481	9-16-11	R	JAMES & RICHMOND AND CINDY L RICHMOND	829	71
19	10*17895	9-13-16	S	IVAN H RICHMOND AND MARGARET A RICHMOND	924	543
20	10*17895	9-13-15.1	T	IVAN H RICHMOND AND MARGARET A RICHMOND	924	543
21	10*17895	9-16-10	U	WAN H RICHMOND AND MARGARET A RICHMOND	924	543
22	10*16481	9-16-12	V	JAMES & RICHMOND AND CINDY L RICHMOND	829	71
23	10*18732	9-13-13	W	SHERRILL M LEAVERS AND JAMES H LEAVERS, ET AL	938	245
24	10*16481	9-16-12.1	X	JAMES & RICHMOND AND CINDY L RICHMOND	829	71
25	10*31359	9-16-12.6	Y	JAMES G RICHMOND	872	359
26	10*31359	9-16-12.7	2	JAMES G RICHMOND	872	359
27	10*31359	9-15-12.2	AA	JAMES G RICHMOND	872	359
28	10*31359	9-16-12.4	BB	JAMES G RICHMOND	872	359
29	10*16481	9-16-12.3	CC	JAMES G RICHMOND AND CINDY L RICHMOND, ET AL	829	71
30	10*17895	9-16-12.8	DD	IVAN H RICHMOND AND MARGARET A RICHMOND	924	543
31	10*16481	9-15-12.5	EE	JAMES G RICHMOND AND CINDY L RICHMOND	829	71
32	10*47051.135.0	9-16-13.3	FF	PAUL R BLAKE	378	280
33	10*47051.135.0	9-16-13	GG	PAULRBLAKE	378	280
34	10*22789	9-18-5	HH	DONNA K FAHEY, ET AL	962	87
35	10*23726	9-16-20	11	LOUIS T FOX, ET AL	1011	520
36	10447051.187.1	9-16-18	11	ALICE F WINLAND	881	133
37	10*21293	9-18-7	KK	LOUIS T FOX AND KAREN A FOX	952	364
38	10*28268	9-18-6	LL	JOSEPH & EUZABETH SHUTLER	63	203
39	10*27824	9-18-9	MM	CATHARINE V B YOUNG AND A J YOUNG, ET AL	164	534
40	10*47051,152.1	9-18-8	NN	TAMMY JO LONG, ET AL	860	361
41	10*47051.136.0	9-18-17	00	VINCENT J WAYMAN AND KATHYJO WAYMAN	885	273



WW-6A1 (5/13)

### INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE Chapter 22, Article 6A, Section 5(a)(5) IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)

Under the oath required to make the verification on page 1 of this Notice and Application, I depose and say that I am the person who signed the Notice and Application for the Applicant, and that –

- (1) the tract of land is the same tract described in this Application, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;
- (2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

Lease Name or				
Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
	*5	See attached pages		

\*Co-tenancy utilization – At least 7 mineral owners in tract. At least 75% of the royalty owners have executed a lease on the tract. The interests of the remaining co-tenants were acquired pursuant to the Co-tenancy Modernization and Majority Protection Act.

### Acknowledgement of Possible Permitting/Approval In Addition to the Office of Oil and Gas

The permit applicant for the proposed well work addressed in this application hereby acknowledges the possibility of the need for permits and/or approvals from local, state, or federal entities in addition to the DEP, Office of Oil and Gas, including but not limited to the following:

- WV Division of Water and Waste Management
- WV Division of Natural Resources WV Division of Highways
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- County Floodplain Coordinator

The applicant further acknowledges that any Office of Oil and Gas permit in no way overrides, replaces, or nullifies the need for other permits/approvals that may be necessary and further affirms that all needed permits/approvals should be acquired from the appropriate authority before the affected activity is initiated.

Well Operator:	Tug Hill Operating, LLC
By:	Amy L. Morris MWY SURVUS
Its:	Permitting Specialist - Appalachia Region

Page 1 of 07/16/2021

ł	Lease ID	Parcel	Tag	Grantor, Lessor, Etc.	Grantee, Lessee, Etc.	Royalty	Deed Book	Page	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment
	54894 ID				······································										Central Michigan	Stone Energy	EQT Production
	10*31312	9-13-5		DENNIS W & KATHY A KUNTER	CENTRAL MICHIGAN EXPLORATION LLC	1/8+	668	155	N/A	N/A	N/A	N/A	N/A	N/A	Exploration LLC to	Corporation to EQT	Company to TH
	10-31312	2.12.2	^												Stone Energy Corp.: AE		Exploration LLC: AB
_				· · · · · · · · · · · · · · · · · · ·											21/288 & 21/497	AB 38/75 Stone Energy	48/21 EQT Production
														1		Corporation to EQT	Company to TH
	10*31359	9-16-12.2	AA	JAMES G RICHMOND	STONE ENERGY CORPORATION	1/8+	872	359	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Production Company:	Exploration LLC: AB
																AB 38/75	48/21
														1	Central Michigan	Stone Energy	EQT Production
			- I		CENTRAL MICHIGAN EXPLORATION LLC	1/8+	668	155	N/A	N/A	N/A	N/A	N/A	N/A	Exploration LLC to	Corporation to EQT	Company to TH
v	10°31312	9-13-5.1	8	DENNIS W & KATHY A HUNTER	CENTRAL MICHIGAN EXPLORATION LLC	4,01			194		170	10/0			Stone Energy Corp.: AB		Exploration LLC: AB
															21/288 & 21/497	AB 38/75	48/21
															Central Michigan	Stone Energy	EQT Production
	10°31303	9-13-6	l c	MARY V & FRANK E PETHTEL	CENTRAL MICHIGAN EXPLORATION LLC	1/8+	668	525	N/A	N/A	N/A	N/A	N/A	N/A	Exploration LLC to Stone Energy Corp.: AB	Corporation to EQT Production Company:	Company to TH Exploration LLC: AB
1															21/288 & 21/497	AB 38/75	48/21
-															Central Michigan	Stone Energy	EQT Production
					CENTRAL MICHIGAN EXPLORATION LLC	1/8+	675	171	N/A	N/A	N/A	N/A	N/A	N/A	Exploration LLC to	Corporation to EQT	Company to TH
	10*31304	9-13-6	c	MARY V & FRANK E PETHTEL	CENTRAL MICHIGAN EXPLORATION LLC	1/07	0/3		1975	11/0	19/2	17/6		, N/A	Stone Energy Corp.: AB	B Production Company:	Exploration LLC: AB
						ļ									21/288 & 21/497	AB 38/75	48/21
																Stone Energy	EQT Production
	10°31306	9-13-6	c	RICHARD CUNNINGHAM	STONE ENERGY CORPORATION	1/8+	859	595	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Corporation to EQT	Company to TH
			1													Production Company: AB 38/75	Exploration LLC: AB 48/21
∎ ⊦			<u> </u>					<u>  </u>								Stone Energy	EQT Production
						1/0.		£ 02	<b>N1/A</b>		N/A		A1/A			Corporation to EQT	Company to TH
	10°31307	9-13-6	c	LINDA DANLEY	STONE ENERGY CORPORATION	1/8+	859	593	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Production Company:	Exploration LLC: AB
																AB 38/75	48/21
							1									Stone Energy	EQT Production
	10°31308	9-13-6	c	SUZY WALKER	STONE ENERGY CORPORATION	1/8+	859	591	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Corporation to EQT	Company to TH
	10 31300	5-15-0	Ĩ													Production Company:	Exploration LLC: AB
	10122450	Fish Coost	<u>⊢ ₀</u> −	WEST VIRGINIA DIVISION OF NATURAL RESOURCES	TH EXPLORATION LLC	1/8+	1019	373	N/A	N/A	N/A	N/A	N/A	N/A	N/A	AB 38/75 N/A	48/21 N/A
I ♥ ⊦	10*23458	Fish Creek	<u>– – – – – – – – – – – – – – – – – – – </u>	WEIT VIRGINIA DIVISION OF INFLORME RESOURCES											Central Michigan	Stone Energy	EQT Production
						1/8+	668	525	N/A	N/A	N/A	N/A	N/A	N/A	Exploration LLC to	Corporation to EQT	Company to TH
	10*31303	9-13-7	E	MARY V & FRANK E PETHTEL	CENTRAL MICHIGAN EXPLORATION LLC	1/64	000	525	N/A	19/1	10/0	174	N/A		Stone Energy Corp.: AB	Production Company:	Exploration LLC: AB
													· · · · · · · · · · · · · · · · · · ·		21/288 & 21/497	AB 38/75	48/21
															Central Michigan	Stone Energy	EQT Production
	10°31304	9-13-7	Ε	MARY V & FRANK E PETHTEL	CENTRAL MICHIGAN EXPLORATION LLC	1/8+	675	171	N/A	N/A	N/A	N/A	N/A	N/A	Exploration LLC to	Corporation to EQT	Company to TH
															Stone Energy Corp.: AB 21/288 & 21/497	Production Company: AB 38/75	Exploration LLC: AB 48/21
		·													Central Michigan	Stone Energy	EQT Production
						1/8+	677	401	N/A	N/A	N/A	N/A	N/A	N/A	Exploration LLC to	Corporation to EQT	Company to TH
	10*31305	9-13-7	E	MARY V & FRANK E PETHTEL	CENTRAL MICHIGAN EXPLORATION LLC	1/8*	0//	401	NYA	N/A	N/A	N/A	n/A	N/A	Stone Energy Corp.: AB	Production Company:	Exploration LLC: AB
	_														21/288 & 21/497	AB 38/75	48/21
								1								Stone Energy	EQT Production
	10*31309	9-13-7	E	RICHARD CUNNINGHAM	STONE ENERGY CORPORATION	1/8+	870	122	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Corporation to EQT	Company to TH
		1														Production Company: AB 38/75	Exploration LLC: AB 48/21
		<u> </u>	+				1								1	Stone Energy	EQT Production
					FTOME FAILORS COROCO STALL	g./m.		1	N/A	N/A	M/A	M/4	N/A	81/A		Corporation to EQT	Company to TH
	10*31310	9-13-7	E	SUSAN WALKER	STONE ENERGY CORPORATION	1/8+	870	139	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Production Company:	Exploration LLC: AB
		_														AB 38/75	48/21
ł																Stone Energy	EQT Production
	10*31311	9-13-7	Ε	LINDA DANLEY	STONE ENERGY CORPORATION	1/8+	870	141	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Corporation to EQT	Company to TH
		1	1													Production Company:	Exploration LLC: AB
	10830300	0.12.0	F	THE SHUTLER FAMILY TRUST	TH EXPLORATION LLC	1/8+	1070	425	N/A	N/A	N/A	N/A	N/A	N/A	N/A	AB 38/75 N/A	<u>48/21</u> N/A
1	10*28299 10*47051.135.0	9-13-8 9-16-13	GG	PAUL R BLAKE	TH EXPLORATION LLC	1/8+	878	280	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
·/	10*27247	9-13-22.1		DANIEL R JOHNSON AND JOANNA L JOHNSON	TH EXPLORATION LLC	1/8+	1053	3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ľ.	10*27248	9-13-22.1		NILA K MOWDER AND THOMAS R MOWDER	TH EXPLORATION LLC	1/8+	1053	5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10°27835	9-13-22.1		STONE HILL MINERALS HOLDINGS LLC	TH EXPLORATION LLC	1/8+	1058	124	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10*28267	9-13-22.1	1	STONE HILL MINERALS KOLDINGS LLC	TH EXPLORATION LLC	1/8+	1062	266	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10*29963	9-13-22.1		STONE HILL MINERALS HOLDINGS LLC	TH EXPLORATION LLC TH EXPLORATION LLC	1/8+	1101 1011	34 520	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A
<b>•</b>	10*23726	9-16-20		LOUIS T FOX	TH EXPLORATION LLC	1/8+	1011	376	N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A
	10*27395	9-16-20		LYNN CAMP UNITED METHODIST CHURCH DANIEL R JOHNSON AND JOANNA L JOHNSON	TH EXPLORATION LLC	1/8+	1053	3/6	N/A N/A	N/A	N/A N/A	N/A	N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A
✓	10°27247	9-13-22					J	استبرجه									

### WELL BORE TRACTS

# Operator's Well No. Van Winkle S - 23HU

Lease tD	Parcel	Tag	Grantor, Lessor, Etc.	Grantee, Lessee, Etc.	Royalty	Deed Book	Page	Assignment								
10*27248	9-13-22	1	NILA K MOWDER AND THOMAS R MOWDER	TH EXPLORATION LLC	1/8+	1053	5	N/A								
10*27835	9-13-22	Ĺ	STONE HILL MINERALS HOLDINGS LLC	TH EXPLORATION LLC	1/8+	1058	124	N/A								
10°28267	9-13-22	1	STONE HILL MINERALS HOLDINGS LLC	TH EXPLORATION LLC	1/8+	1062	266	N/A								
10°29963	9-13-22	1	STONE HILL MINERALS HOLDINGS LLC	TH EXPLORATION LLC	1/8+	1101	34	N/A								
10°29453	9-13-22	L I	TRICYCLE LLC	TH EXPLORATION LLC	1/8+	1096	307	N/A								
10*18527	9-13-19	ĸ	ANN TURNER YOUNG SHRIVER	TH EXPLORATION LLC	1/8+	933	589	N/A								
10*19835	9-13-19	ĸ	BARBARA JEAN SAMAJ AND ANDREW J SAMAJ	TH EXPLORATION LLC	1/8+	945	616	N/A								
10*22497	9-13-19	ĸ	BRANDON C CANFIELD	TH EXPLORATION LLC	1/8+	966	622	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A	N/A	N/A	N/A	N/A
10*23250	9-13-19	ĸ	BUENA WELLMAN ET AL C/O HERMAN LANTZ, SPECIAL COMMISSIONER	TH EXPLORATION LLC TH EXPLORATION LLC	1/8+	979 937	189 620	N/A N/A	N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A
10*18829	9-13-19	K	CAROL A SAVOY CHARLES E EMERY AND DEBBIE EMERY	TH EXPLORATION LLC	1/8+	938	280	N/A N/A	N/A	N/A N/A	N/A	N/A	N/A	N/A N/A	N/A N/A	N/A
10*18696	9-13-19	<u>к</u> к	CHARLES E EMERT AND DEBBLE EMERT	TH EXPLORATION LLC	1/8+	933	148	N/A	N/A	N/A	N/A	N/A	N/A	N/A N/A	N/A	N/A N/A
10*18470 10*18697	9-13-19 9-13-19	K K	CHERTE STEFFEN AND GREGORT STEFFEN	TH EXPLORATION LLC	1/8+	938	499	N/A	N/A N/A							
10*18697	9-13-19	<u>к</u>	DAVID E EMERY SR	TH EXPLORATION LLC	1/8+	953	223	N/A								
10*18719	9-13-19	Γ <u>κ</u>	DONNA M CROW	TH EXPLORATION LLC	1/8+	938	504	N/A								
10*19832	9-13-19	<u>ι</u> κ	DOWNIE E EMERY JR AND ELAINE EMERY	TH EXPLORATION LLC	1/8+	945	619	N/A								
10*21251	9-13-19	ĸ	GREGORY R BAKER AND TRACEY L BAKER	TH EXPLORATION LLC	1/8+	953	62	N/A								
10*18703	9-13-19	ĸ	GREGORY W FRITZMAN	TH EXPLORATION LLC	1/8+	938	558	N/A								
10°19516	9-13-19	K	JAMES E NICHOLAS AND BEVERLY D NICHOLAS	TH EXPLORATION LLC	1/8+	944	366	N/A								
10°22863	9-13-19	ĸ	JAMES H CAMPBELL	TH EXPLORATION LLC	1/8+	977	55	N/A								
10*21014	9-13-19	K	JAMES P MCLAUGHLIN & ALICE W MCLAUGHLIN	TH EXPLORATION LLC	1/8+	946	29	N/A								
10*21051	9-13-19	j κ	JAMES 5 NEPERENY AND PHOBE A NEPERENY	TH EXPLORATION LLC	1/8+	966	501	N/A								
10*18699	9-13-19	ĸ	JAMIE A LANTZ AND JAMES L LANTZ	TH EXPLORATION LLC	1/8+	938	285	N/A								
10*21139	9-13-19	ĸ	JOHN C BAKER IR AND TRACIE L BAKER	TH EXPLORATION LLC	1/8+	952	167	N/A								
10*19611	9-13-19	к	JOHN H EMERY AND JANET M EMERY	TH EXPLORATION LLC	1/8+	944	201	N/A								
10*18702	9-13-19	К	JOHN W NICE JR	TH EXPLORATION LLC	1/8+	938	496	N/A	<u>N/A</u>	N/A	N/A	N/A N/A	N/A	N/A	N/A	N/A
10*18695	9-13-19	ĸ	JOSEPH S EMERY	TH EXPLORATION LLC	1/8+	938 942	572 569	N/A	N/A N/A	N/A N/A	N/A	N/A N/A	N/A	N/A	N/A	N/A
10*19461	9-13-19	ĸ	KELLY OCONNOR	TH EXPLORATION LLC	1/8+	942	543	N/A N/A	N/A	N/A						
10*18714	9-13-19	<u> </u>	LARRY J RICHARDSON AND D MARGARET RICHARDSON LINDA D GORDON AND JOHN L GORDON	TH EXPLORATION LLC	1/8+	938	204	N/A N/A	N/A	N/A N/A						
10*21318	9-13-19	K K	LINEA D GORDON AND JOHN L GORDON	TH EXPLORATION LLC	1/8+	938	490	N/A	N/A N/A							
10*18698 10*18716	9-13-19	K	MARCIA J MECHLING AND DENNIS J MECHLING	TH EXPLORATION LLC	1/8+	938	549	N/A	N/A N/A							
10*18/18	9-13-19	Γ <u>κ</u>	MARGARET R DONOFRIO	TH EXPLORATION LLC	1/8+	977	53	N/A								
10*18351	9-13-19	Γ <u>κ</u>	MARK ALLEN LENENBERG	TH EXPLORATION LLC	1/8+	931	399	N/A								
10*18715	9-13-19	ĸ	MARY ANN CROW RICHARDSON	TH EXPLORATION LLC	1/8+	938	546	N/A								
10*22271	9-13-19	ĸ	MARY ANN CROW RICHARDSON LT ETAL	TH EXPLORATION LLC	1/8+	988	60	N/A								
10*19612	9-13-19	ĸ	MARY JANE HYDE AND HARRY K HYDE	TH EXPLORATION LLC	1/8+	944	198	N/A								
10*18958	9-13-19	K	NANCY L GABLER	TH EXPLORATION LLC	1/8+	941	259	N/A								
10*18967	9-13-19	K	NATALIE GIBBS	TH EXPLORATION LLC	1/8+	941	266	N/A								
10*23190	9-13-19	K	NELSON RICHMOND ET AL by HERMAN LANTZ, AS SPECIAL COMMISSIONER	TH EXPLORATION LLC	1/8+	979	191	N/A								
10°21614	9-13-19	ĸ	NICOLE RAE BRACHER-MUSTY AND JASON BRACHER-MUSTY	TH EXPLORATION LLC	1/8+	959	464	N/A								
10*18700	9-13-19	ĸ	NOVA PAYNE	TH EXPLORATION LLC	1/8+	938	488	N/A								
10*22415	9-13-19	ĸ	PAUL A YOUNG	TH EXPLORATION LLC	1/8+	963	344	N/A								
10°21504	9-13-19	ĸ	PAULETA LINDA CHEATHAM AND CARL WOHLERS	TH EXPLORATION LLC TH EXPLORATION LLC	1/8+	951 938	142 283	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A	N/A	N/A N/A
10*18694	9-13-19	K	PEGGY A GOULDSBERRY AND JOSEPH W GOULDSBERRY	TH EXPLORATION LLC TH EXPLORATION LLC	1/8+	938	283	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A	N/A N/A	N/A
10*18718	9-13-19	K	PEGGY L STEWART AND DEWEY R STEWART PENELOPE A JONES	TH EXPLORATION LLC	1/8+	938	355	N/A N/A	N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A	N/A	N/A N/A
10*21710 10*18717	9-13-19 9-13-19	<u>к</u> к	RACHEL E AND ALLAN L SHEASLEY	TH EXPLORATION LLC	1/8+	938	552	N/A N/A	N/A	N/A	N/A N/A	N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A
10*19892	9-13-19		REX B FISHER AND DEBORAH FISHER	TH EXPLORATION LLC	1/8+	948	292	N/A	N/A	N/A	N/A	N/A	N/A	N/A N/A	N/A	N/A
10*21341	9-13-19	Γ <del>κ</del>	RITA M BAKER	TH EXPLORATION LLC	1/8+	953	225	N/A								
10*21015	9-13-19	ĸ	ROBERT L MCLAUGHLIN	TH EXPLORATION LLC	1/8+	946	339	N/A								
10*21613	9-13-19	ĸ	ROBERT MATTHEW KEDWARD	TH EXPLORATION LLC	1/8+	959	462	N/A								
10*21485	9-13-19	ĸ	ROBERT R FISHER AND AUDREY L IRVIN	TH EXPLORATION LLC	1/8+	942	572	N/A								
10*18959	9-13-19	ĸ	SALLY L DUNMIRE AND DAVID W DUNMIRE	TH EXPLORATION LLC	1/8+	941	270	N/A								
10*22038	9-13-19	ĸ	SANDRA C SHAFFER AND RONALD G SHAFFER	TH EXPLORATION LLC	1/8+	954	334	N/A								
10*19613	9-13-19	K	SHEILA LYNN GARRISON	TH EXPLORATION LLC	1/8+	944	196	N/A								
10°18701	9-13-19	ĸ	SHERRI J ANDERSON AND GEORGE C ANDERSON	TH EXPLORATION LLC	1/8+	938	277	N/A								
10°19834	9-13-19	ĸ	STEVEN D BEAKLEY	TH EXPLORATION LLC	1/8+	945	613	N/A								
10*27947	9-13-19	K	STONE HILL MINERALS HOLDINGS LLC	TH EXPLORATION LLC	1/8+	1063	568	N/A								
10°21598	9-13-19	ĸ	THE MILDRED Y MILLS TRUST JULY 5TH 2007	TH EXPLORATION LLC	1/8+	954	332	N/A								
10*18469	9-13-19	K	THOMAS RICHMOND YOUNG ANITA A YOUNG	TH EXPLORATION LLC TH EXPLORATION LLC	1/8+	933 959	151 350	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A	N/A N/A	N/A	<u>N/A</u>	N/A
10*21709	9-13-19	K	THOMAS YOUNG AND JANE CLAIRE YOUNG	TH EXPLORATION LLC	1/8+	959	206	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A	N/A N/A	N/A N/A	<u>N/A</u>	N/A N/A
10*19981	9-13-19	K	WILLIAM G EMERY	TH EXPLORATION LLC	1/8+	940	364	N/A	N/A N/A	N/A N/A	N/A N/A	N/A	N/A N/A	N/A N/A	N/A N/A	N/A
V 10*21293	9-18-7	<u>кк</u>	ANN TURNER YOUNG SHRIVER	TH EXPLORATION LLC	1/8+	933	589	N/A N/A	N/A N/A	N/A	N/A	N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A
V 10*18527 10*19835	9-13-18		BARBARA JEAN SAMAJ AND ANDREW J SAMAJ	TH EXPLORATION LLC	1/8+	945	616	N/A	N/A	N/A N/A	N/A	N/A	N/A	N/A	N/A N/A	N/A
10*19835	9-13-18	<u>+                                    </u>	BRANDON C CANFIELD	TH EXPLORATION LLC	1/8+	966	622	N/A								
10.55431	3-13-10			·												

### WELL BORE TRACTS

Lease ID	Parcel	Tag	Grantor, Lessor, Etc.	Grantee, Lessee, Etc.	Royalty	Deed Book	Page	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment
10*23250	9-13-18	- i	BUENA WELLMAN ET AL C/O HERMAN LANTZ, SPECIAL COMMISSIONER	TH EXPLORATION LLC	1/8+	979	189	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*18829	9-13-18	i	CAROL A SAVOY	TH EXPLORATION LLC	1/8+	937	620	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10°18696	9-13-18	L	CHARLES E EMERY AND DEBBIE EMERY	TH EXPLORATION LLC	1/8+	938	280	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10°18470	9-13-18	L	CHERYL STEFFEN AND GREGORY STEFFEN	TH EXPLORATION LLC	1/8+	933	148	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10°18697	9-13-18	L	CHRYSTAL L RINE AND JOHN O RINE	TH EXPLORATION LLC	1/8+	938	499	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*22002	9-13-18	L	DAVID E EMERY SR	TH EXPLORATION LLC	1/8+	953	223	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*18719	9-13-18	L	DONNA M CROW	TH EXPLORATION LLC	1/8+	938	504	N/A	N/A	N/A	<u>N/A</u>	N/A	N/A	N/A	N/A	N/A
10°19832	9-13-18	L	DOWNIE E EMERY JR AND ELAINE EMERY	TH EXPLORATION LLC	1/8+	945	619	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*19887	9-13-18	L	ELIZABETH S SCOVELL & JONATHAN A SCOVELL	TH EXPLORATION LLC	1/8+	948	545	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<u>N/A</u>	N/A
10*21251	9-13-18	L	GREGORY R BAKER AND TRACEY L BAKER	TH EXPLORATION LLC	1/8+	953	62	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10°18703	9-13-18	L	GREGORY W FRITZMAN	TH EXPLORATION LLC	1/8+	938	558	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*21051	9-13-18	L	JAMES S NEPERENY AND PHOBE A NEPERENY	TH EXPLORATION LLC	1/8+	966	501	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*18699	9-13-18	L	JAMIE A LANTZ AND JAMES L LANTZ	TH EXPLORATION LLC	1/8+	938	286	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*19883	9-13-18	L	JILL A WILLIAMS AND TERRY L WILLIAMS	TH EXPLORATION LLC	1/8+	948	547	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*21139	9-13-18	L	JOHN C BAKER JR AND TRACIE L BAKER	TH EXPLORATION LLC	1/8+	952	167	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*19611	9-13-18	L	JOHN H EMERY AND JANET M EMERY	TH EXPLORATION LLC	1/8+	944	201	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*18702	9-13-18	L	JOHN W NICE JR	TH EXPLORATION LLC	1/8+	938	496	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*18695	9-13-18	ι	JOSEPH S EMERY	TH EXPLORATION LLC	1/8+	938	572	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*19461	9-13-18	L	KELLY OCONNOR	TH EXPLORATION LLC	1/8+	942	569	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*18714	9-13-18	L_L_	LARRY J RICHARDSON AND D MARGARET RICHARDSON	TH EXPLORATION LLC	1/8+	938	543 204	N/A	N/A	N/A	N/A	N/A	N/A	N/A		N/A
10*21318	9-13-18		LINDA D GORDON AND JOHN L GORDON	TH EXPLORATION LLC	1/8+			N/A	N/A	N/A	N/A	N/A N/A	<u>N/A</u>	N/A	N/A N/A	N/A
10*18698	9-13-18	L	LORETTA K CONNER AND OBERT L CONNER	TH EXPLORATION LLC	1/8+	938 938	490 549	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A		N/A
10*18716	9-13-18	L	MARCIA J MECHLING AND DENNIS J MECHLING	TH EXPLORATION LLC		938	549			N/A N/A					N/A	N/A
10*19886	9-13-18		MARK A RICHMOND & LISA D RICHMOND	TH EXPLORATION LLC TH EXPLORATION LLC	1/8+	948	399	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A
10*18351	9-13-18	L L	MARK ALLEN LENENBERG	TH EXPLORATION LLC	1/8+	931 938	546	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A
10*18715	9-13-18	<u> </u>	MARY ANN CROW RICHARDSON	TH EXPLORATION LLC	1/8+	988	60	N/A N/A	N/A N/A	N/A N/A	N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	
10*22271	9-13-18	<u> </u>	MARY ANN CROW RICHARDSON LT ETAL	TH EXPLORATION LLC	1/8+	988	198	N/A N/A	N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A
10*19612	9-13-18	L	MARY JANE HYDE AND HARRY K HYDE	TH EXPLORATION LLC	1/8+	944	259	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A
10*18958	9-13-18		NANCY L GABLER	TH EXPLORATION LLC	1/8+	948	549	N/A N/A	N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A
10*19885	9-13-18		NANCY L RICHMOND AND GREGORY RICHMOND NATALIE GIBBS	TH EXPLORATION LLC	1/8+	941	266	N/A N/A	N/A	N/A	N/A	N/A	N/A N/A	N/A	N/A N/A	N/A N/A
10*18967	9-13-18		NATALLE GIBBS NELSON RICHMOND ET AL by HERMAN LANYZ, AS SPECIAL COMMISSIONER	TH EXPLORATION LLC	1/8+	979	191	N/A N/A	N/A	N/A	N/A N/A	N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A
10*23190	9-13-18		NICOLE RAE BRACKER-MUSTY AND JASON BRACHER-MUSTY	TH EXPLORATION LLC	1/8+	959	464	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A N/A	N/A N/A
10*21614	9-13-18	<u> </u>	NICOLE RAE BRACHER-MUSIT AND JASON BRACHER-MUSIT	TH EXPLORATION LLC	1/8+	938	488	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A N/A	N/A N/A
10*18700	9-13-18		PAUL A YOUNG	TH EXPLORATION LLC	1/8+	963	344	N/A N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A N/A
10*22415	9-13-18		PEGGY A GOULDSBERRY AND JOSEPH W GOULDSBERRY	TH EXPLORATION LLC	1/8+	938	283	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A N/A
10*18694	9-13-18		PEGGY L STEWART AND DEWEY R STEWART	TH EXPLORATION LLC	1/8+	938	555	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*18718 10*21710	9-13-18 9-13-18	<u>                                     </u>	PENGLOPE A JONES	TH EXPLORATION LLC	1/8+	959	355	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A N/A
10*18717	9-13-18		RACHEL E AND ALLAN L SHEASLEY	TH EXPLORATION LLC	1/8+	938	552	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*21341	9-13-18		RITA M BAKER	TH EXPLORATION LLC	1/8+	953	225	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*21513	9-13-18	- ÷	ROBERT MATTHEW KEDWARD	TH EXPLORATION LLC	1/8+	959	462	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*18959	9-13-18	1 ÷	SALLY L DUNMIRE AND DAVID W DUNMIRE	TH EXPLORATION LLC	1/8+	941	270	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*22038	9-13-18	1	SANDRA C SHAFFER AND RONALD G SHAFFER	TH EXPLORATION LLC	1/8+	954	334	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*22038	9-13-18	L L	SHERI J ANDERSON AND GEORGE C ANDERSON	TH EXPLORATION LLC	1/8+	938	277	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A N/A	N/A
10*19834	9-13-18	+- <u>t</u> -	STEVEN D BEAKLEY	TH EXPLORATION LLC	1/8+	945	613	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*19834	9-13-18	<u> </u>	STONE HILL MINERALS HOLDINGS LLC	TH EXPLORATION LLC	1/8+	1063	568	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A N/A	N/A
10*21598	9-13-18	<u> </u>	THE MILDRED Y MILLS TRUST JULY 5TH 2007	TH EXPLORATION LLC	1/8+	954	332	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A N/A	N/A N/A
10*22294	9-13-18		THOMAS E WELLMAN AND LISA M WELLMAN	TH EXPLORATION LLC	1/8+	962	279	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*18469	9-13-18	<u> </u>	THOMAS RICHMOND YOUNG ANITA A YOUNG	TH EXPLORATION LLC	1/8+	933	151	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*21709	9-13-18	+	THOMAS YOUNG AND JANE CLAIRE YOUNG	TH EXPLORATION LLC	1/8+	959	350	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*21012	9-13-18		TIMOTHY R RICHMOND II AND BRANDI N RICHMOND	TH EXPLORATION LLC	1/8+	951	149	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*19981	9-13-18	ti	WILLIAM G EMERY	TH EXPLORATION LLC	1/8+	948	206	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10 13581	9-13-20	M	ANN TURNER YOUNG SHRIVER	TH EXPLORATION LLC	1/8+	933	589	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*18470	9-13-20	M	CHERYL STEFFEN AND GREGORY STEFFEN	TH EXPLORATION LLC	1/8+	933	148	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*18456	9-13-20	M	DANIEL J FITZWATER	TH EXPLORATION LLC	1/8+	933	180	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*18524	9-13-20		DAVID A GUMP AND BETTY J GUMP	TH EXPLORATION LLC	1/8+	933	597	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*19887	9-13-20	M	ELIZABETH S SCOVELL & JONATHAN A SCOVELL	TH EXPLORATION LLC	1/8+	948	545	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		1								Consolidated Gas			CNG Producing	Demision Fundaciation		
		1				ł		TG Stiles to South Penn	Hope Natural Gas	Supply Corporation to	Consolidated Gas	CNG Development	Company changed	Dominion Exploration & Production Inc.	Consol Gas Company	CHIV Case Campany Inc.
			I C AND MADY DISUMONIO	TG STILES	1/8+	63	154	Oll Company: DB	Company to	Consolidated Gas	Transmission Corp. to	Company merged into	name to Dominion		merged with & into	CNX Gas Company LLC
10*23164	9-13-20	M	J C AND MARY RICHMOND	10 311125	1 10	03	1.34	60/366	<b>Consolidated Gas Spply</b>	Transmission	CNG Development Co:	CNG Producing	Exploration &	changed its name to Consol Gas Company:	CNX Gas Company LLC:	to TH Exploration LLC:
1					1			00/300	Corporation: 374/234	Corporation: 505/406	515/88	Company.	Production Inc: July 11,	19/546	11/415	42/140
ł													2000			
10*19516	9-13-20	N	JAMES E NICHOLAS AND BEVERLY D NICHOLAS	TH EXPLORATION LLC	1/8+	944	366	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*22863	9-13-20	N	JAMES H CAMPBELL	TH EXPLORATION LLC	1/8+	977	55	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*21014	9-13-20	N	JAMES P MCLAUGHLIN & ALICE W MCLAUGHLIN	TH EXPLORATION LLC	1/8+	946	29	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10°19883	9-13-20	N	JILL A WILLIAMS AND TERRY L WILLIAMS	TH EXPLORATION LLC	1/8+	948	547	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

ſ	Lease ID	Parcel	Tag	Grantor, Lessor, Etc.	Grantee, Lessee, Etc.	Royalty	Deed Book	Page	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment
	10°17193	9-13-20	N	JOHN P. ICARD AKA JOHN PAUL RICHMOND ICARD	CHESAPEAKE APPALACHIA LLC	1/8+	716	12	N/A	N/A	N/A	Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc: 29/325		Cert of Merger of SWN Exchange Titleholder LLC to SWN Production Company LLC: 19/624	Chesapeake Appalachia LLC to SWN Production Co. LLC: 33/110	SWN Production Company LLC to TH Exploration LLC: 41/256	Statoii USA Onshore Properties Inc to TH Exploration LLC: 41/238
t t	10*18472	9-13-20	N	LEIGH A DURRAH	TH EXPLORATION LLC	1/8+	933	136	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10*22864	9-13-20	N	MARGARET R DONOFRIO	TH EXPLORATION LLC	1/8+	977	53	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
t i	10*19349	9-13-20	N	MARJOLEA A DEBOLD	TH EXPLORATION LLC	1/8+	932	409	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1	10*19886	9-13-20	N	MARK A RICHMOND & LISA D RICHMOND	TH EXPLORATION LLC	1/8+	948	543	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10*18351	9-13-20	N	MARK ALLEN LENENBERG	TH EXPLORATION LLC	1/8+	931	399	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1	10*18471	9-13-20	N	MORGAN C GUMP AND MARY J GUMP	TH EXPLORATION LLC	1/8+	942	210	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ł	10*19885	9-13-20	N	NANCY L RICHMOND AND GREGORY RICHMOND	TH EXPLORATION LLC	1/8+	948	549	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10°18967	9-13-20	N	NATALIE GIBBS	TH EXPLORATION LLC	1/8+	941	266	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1	10*23190	9-13-20	N	NELSON RICHMOND ET AL by HERMAN LANTZ, AS SPECIAL COMMISSIONER	TH EXPLORATION LLC	1/8+	979	191	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1	10*21504	9-13-20	N	PAULETA LINDA CHEATHAM AND CARL WOHLERS	TH EXPLORATION LLC	1/8+	951	142	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10*21710	9-13-20	N	PENELOPE A JONES	TH EXPLORATION LLC	1/8+	959	355	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10°19892	9-13-20	N	REX B FISHER AND DEBORAH FISHER	TH EXPLORATION LLC	1/8+	948	292	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10°21015	9-13-20	N	ROBERT L MCLAUGHLIN	TH EXPLORATION LLC	1/8+	946	339	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10*21485	9-13-20	Ň	ROBERT R FISHER AND AUDREY LIRVIN	TH EXPLORATION LLC	1/8+	942	572	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10*27947	9-13-20	N	STONE HILL MINERALS HOLDINGS LLC	TH EXPLORATION LLC	1/8+	1063	568	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ì	10*28158	9-13-20	N	STONE HILL MINERALS HOLDINGS LLC	TH EXPLORATION LLC	1/8+	1068	140	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10*21598	9-13-20	N	THE MILDRED Y MILLS TRUST JULY 5TH 2007	TH EXPLORATION LLC	1/8+	954	332	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10°18469	9-13-20	N	THOMAS RICHMOND YOUNG ANITA A YOUNG	TH EXPLORATION LLC	1/8+	933	151	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10°21709	9-13-20	N	THOMAS YOUNG AND JANE CLAIRE YOUNG	TH EXPLORATION LLC	1/8+	959	350	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10*21012	9-13-20	N	TIMOTHY R RICHMOND II AND BRANDI N RICHMOND	TH EXPLORATION LLC	1/8+	951	149	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1	0*47051.152.1	9-18-8	NN	TAMMY JO LONG	TH EXPLORATION LLC	1/8+	860	361	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	0*47051.152.2	9-18-8	NN	DOUGLAS J WAYMAN	TH EXPLORATION LLC	1/8+	865	350	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1	10°17895	9-13-16	S	IVAN H RICHMOND AND MARGARET A RICHMOND	TH EXPLORATION LLC	1/8+	924	543	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1	10*16481	9-16-12	v	JAMES G RICHMOND AND CINDY L RICHMOND	FOSSIL CREEK OHIO, LLC	1/8+	829	71	N/A	N/A	N/A	N/A	N/A	N/A	Fossil Creek Ohio LLC to Gulfport Energy Corp.:		

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10*31359	9-16-12.4	BB	JAMES G RICHMOND	STONE ENERGY CORPORATION	1/8+	872	359	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Stone Energy Corporation to EQT Production Company: AB 38/75	EQT Production Company to TH Exploration LLC: AB 48/21
10*16481	9-16-12.3	cc	JAMES G RICHMOND AND CINDY L RICHMOND	FOSSIL CREEK OHIO, LLC	1/8+	829	71	N/A	N/A	N/A	N/A	N/A	N/A	Gulfport Energy Corp.:	Fossil Creek Ohio LLC & Gulfport Energy Corp. to American Petroleum Partners Operating LLC AB 36/588	American Petroleum Partners Operating LLC
10°17895	9-16-12.3	20	IVAN H RICHMOND AND MARGARET A RICHMOND	TH EXPLORATION LLC	1/8+	924	543	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*17895	9-16-12.8	DD	IVAN H RICHMOND AND MARGARET A RICHMOND	TH EXPLORATION LLC	1/8+	924	543	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*16481	9-16-12.5	EE	JAMES G RICHMOND AND CINDY L RICHMOND	FOSSIL CREEK OHIO, LLC	1/8+	829	71	N/A	N/A	N/A	N/A	N/A	N/A		<u>                                     </u>	
10°47051.135.0		FF	PAUL R BLAKE	TH EXPLORATION LLC	1/8+	878	280	N/A **FORCE POOL**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
**	9-13-23	G	THOMAS JOHN FOX	UNLEASED		<u> </u>		**FORCE POOL**								
••	9-13-23	G	MARK H FOX PAUL G FOX	UNLEASED				**FORCE POOL**						<u> </u>		
	9-13-23 9-13-23	G	LOUIS T FOX	UNLEASED		1		**FORCE POOL**						1		· · · ·
••	9-13-23	G	MARY A FOX	UNLEASED				**FORCE POOL**								
	9-13-23	G	DAVID E FOX	UNLEASED				**FORCE POOL**								
10*27247	9-13-22.2	H	DANIEL R JOHNSON AND JOANNA L JOHNSON	TH EXPLORATION LLC	1/8+	1053	3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*27248	9-13-22.2	н	NILA K MOWDER AND THOMAS R MOWDER	TH EXPLORATION LLC	1/8+	1053	5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*27835	9-13-22.2	н	STONE HILL MINERALS HOLDINGS LLC	TH EXPLORATION LLC	1/8+	1058	124	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*28267	9-13-22.2	н	STONE HILL MINERALS HOLDINGS LLC	TH EXPLORATION LLC	1/8+	1062	265	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*29963	9-13-22.2	н	STONE HILL MINERALS HOLDINGS LLC	TH EXPLORATION LLC TH EXPLORATION LLC	1/8+	1101 1071	34 472	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A
10*28353	9-13-22.2	н	EUGENE A SCHERRER JR DONNA K FAHEY	TH EXPLORATION LLC	1/8+	962	87	N/A	N/A	N/A	N/A	N/A	N/A	N/A N/A	N/A N/A	N/A N/A
10*22789 10*27947	9-18-5 9-18-5	HH HH	STONE HILL MINERALS HOLDINGS LLC	TH EXPLORATION LLC	1/8+	1063	568	N/A	N/A	N/A	N/A	N/A	N/A	N/A N/A	N/A	N/A
10*28268	9-18-5	нн	JOSEPH & ELIZABETH SHUTLER	TG STILES	1/8+	63	203	TG Stiles to South Penn Oil Company: DB 60/366	South Penn Oil Company to Tri-State Gas Company: DB 80/150	Tri-State Gas Company to The Manufacturers Light & Hea Company: DB 148/388	to AM Snider & Duane		Carl D Perkins to Perkins Oil and Gas Inc: DB 583/72	Perkins Oil & Gas Inc to Stone Energy Corporation: AB 26/322	Stone Energy Corporation to EQT Production Company: AB 38/75	EQT Production Company to TH Exploration LLC: AB 48/21
10*47051.187.1	1 9-16-18	u l	ALICE F WINLAND	TH EXPLORATION LLC	1/8+	881	133	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*28268	9-18-6	u	JOSEPH & ELIZABETH SHUTLER	TG STILES	1/8+	63	203	YG Stiles to South Penn Oil Company: DB 60/366	South Penn Oil Company to Tri-State Gas Company: DB 80/150	Tri-State Gas Company to The Manufacturers Light & Hea Company: DB 148/388	to AM Snider & Duane		Carl D Perkins to Perkins Oil and Gas Inc: DB 583/72	Perkins Oil & Gas Inc to Stone Energy Corporation: AB 26/322	Stone Energy Corporation to EQT Production Company: AB 38/75	EQT Production Company to TH Exploration LLC: AB 48/21
10*23197	9-13-21	м	J W KELLEY AND R A KELLEY	TG STILES	1/8+	63	156	TG Stiles to South Penn Oil Company: DB 60/356	South Penn Oil Company to Tri-State Gas Company: DB 80/150	Tri-State Gas Company to The Manufacturers Light & Hea Company: DB 148/388	to AM Snider & Duane		Carl D Perkins to Perkins Oil and Gas Inc: DB 583/72	Perkins Oil & Gas Inc to Stone Energy Corporation: AB 26/322	Stone Energy Corporation to EQT Production Company: AB 38/75	EQT Production Company to TH Exploration LLC: AB 48/21
10°27824	9-18-9	мм	CATHARINE V B YOUNG AND A J YOUNG	J S MASON	1/8+	164	534	J S Mason to Frnk Marling: 164/571	Frank Marling to Lynn Camp Oll & Gas Company: 164/572	Lynn Camp Oil & Gas Company to Cameron Heat & Light Company: 220/423	Cameron Heat & Light Company to Zogg and Zogg Inc: 227/258	Zogg & Zogg Inc to Gerald Wells: 239/160	Gerald Wells & Hazel Wells to Paul J Klug and E J Klug: 380/359	E J Klug, Paul Klug & Lena Klug to Carl D. Perkins: 453/390	Carl D Perkins & Dorothy Louise Perkins to Perkins Oil & Gas Inc: 484/281 & 17/593	to TH Exploration, LLC:
10*27947	9-18-9	MM	STONE HILL MINERALS HOLDINGS LLC	TH EXPLORATION LLC	1/8+	1063	568	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*23197	9-16-8	0	J W KELLEY AND R A KELLEY	TG STILES	1/8+	63	156	TG Stiles to South Penn Oil Company: DB 60/366	Hope Natural Gas Company to Consolidated Gas Spply Corporation: 374/234		Consolidated Gas Transmission Corp. to CNG Development Co: 515/88	CNG Development Company merged into CNG Producing Company.	CNG Producing Company changed name to Dominion Exploration & Production Inc: July 11, 2000	Dominion Exploration & Production Inc. changed its name to Consol Gas Company: 19/546	Consol Gas Company merged with & into CNX Gas Company LLC: 11/415	CNX Gas Company LLC to TH Exploration LLC: 42/140
	0 9-18-17	00	VINCENT J WAYMAN AND KATHY JO WAYMAN	TH EXPLORATION LLC	1/8+	885	273	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*47051.136.						1028		N/A	N/A	N/A						

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10*16481	9-16-9	٩	JAMES G RICHMOND AND CINDY L RICHMOND	FOSSIL CREEK OHIO, LLC	1/8+	829	71	N/A	N/A	N/A	N/A	N/A	N/A	Fossil Creek Ohlo LLC to Gulfport Energy Corp.: AB 32/307 & 34/410	Fossil Creek Ohio LLC & Guifport Energy Corp. to American Petroleum Partners Operating LLC: AB 36/588	American Petroleum Partners Operating LLC to TH Exploration LLC: AB 36/535
10*16481	9-16-11	R	JAMES & RICHMOND AND CINDY L RICHMOND	FOSSIL CREEK OHIO, LLC	1/8+	829	71	N/A	N/A	N/A	N/A	N/A	N/A	AB 32/307 & 34/410	to American Petroleum Partners Operating LLC: AB 36/588	American Petroleum Partners Operating LLC to TH Exploration LLC: AB 36/535
10"17895	9-13-16.1	т	WAN H RICHMOND AND MARGARET A RICHMOND	TH EXPLORATION LLC	1/8+	924	543	N/A	N/A	N/A						
10°17895	9-16-10	U	IVAN H RICHMOND AND MARGARET A RICHMOND	TH EXPLORATION LLC	1/8+	924	543	N/A	N/A N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*18732	9-13-13	W	SHERRILL M LEAVERS AND JAMES H LEAVERS	TH EXPLORATION LLC TH EXPLORATION LLC	1/8+	938	245 247	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A	N/A N/A	N/A N/A
10*18734 10*18735	9-13-13 9-13-13		KENNETH EMERY AND MARTHA L EMERY DIANE E AND DENNIS P FOWLER	TH EXPLORATION LLC	1/8+	938	247	N/A	N/A	N/A	N/A	N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A
10*18736	9-13-13	w	DOROTHY JEAN HUSTON AND KENNETH HUSTON	TH EXPLORATION LLC	1/8+	938	221	N/A	N/A	N/A						
10*19401	9-13-13	w	JOYCE A WILSON AND D MURPHY WILSON	TH EXPLORATION LLC	1/8+	940	346	N/A	N/A	N/A						
10*19402	9-13-13	W	HOWARD G AND CLARA J RICHMOND	TH EXPLORATION LLC	1/8+	940	348	N/A	N/A	N/A						
10*19474	9-13-13	W	EDGAR ALLEN RICHMOND	TH EXPLORATION LLC	1/8+	941	318	N/A	N/A	N/A						
10*19475	9-13-13	w	ARDETH L PIPER AND PAUL E PIPER	TH EXPLORATION LLC TH EXPLORATION LLC	1/8+	941	316	N/A N/A	N/A N/A	N/A						
10*19481	9-13-13	w	WILLIAM EMERY DEBRA SHORT AND RODNEY SHORT	TH EXPLORATION LLC	1/8+	941	314	N/A	N/A	N/A	N/A N/A	N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A
10*19674 10*19675	9-13-13	w	BARBARA C LEISHMAN AND DANNY K LEISHMAN	TH EXPLORATION LLC	1/8+	944	432	N/A	N/A	N/A						
10*19714	9-13-13	- w	DAVID A ROBINSON AND PATRICIA A ROBINSON	TH EXPLORATION LLC	1/8+	944	434	N/A	N/A	N/A						
10*19868	9-13-13	w	TERRI J STREAM AND JOHN T STREAM	TH EXPLORATION LLC	1/8+	945	580	N/A	N/A	N/A						
10°19869	9-13-13	w	SHIRLEY J DUFFY	TH EXPLORATION LLC	1/8+	945	578	N/A	N/A	N/A						
10°19870	9-13-13	W	DORIS L MASTERS AND ROY N MASTERS	TH EXPLORATION LLC	1/8+	945	576	N/A	N/A	N/A						
10°21027	9-13-13	w	MARY D LING	TH EXPLORATION LLC	1/8+	951	126	N/A N/A	N/A N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10°21087	9-13-13	w	THOMAS E DODD AND ANITA M DODD DONALD E WEST AND MARTHA E WEST	TH EXPLORATION LLC	1/8+	951	124	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A
10*21088	9-13-13 9-13-13	- <del>*</del>	LARRY W BAILEY AND MARSHA K BAILEY	TH EXPLORATION LLC	1/8+	951	131	N/A	N/A	N/A						
10*21104 10*21105	9-13-13	w	THE CALVIN O WILLIAMS & PATSY S WILLIAMS REVOCABLE LIVING TRUST	TH EXPLORATION LLC	1/8+	951	137	N/A	N/A	N/A						
10*21107	9-13-13	Ŵ	RONALD L WEST	TH EXPLORATION LLC	1/8+	951	135	N/A	N/A	N/A						
10°21108	9-13-13	w	SANDRA A WHITE	TH EXPLORATION LLC	1/8+	951	140	N/A	N/A	N/A						
10°21491	9-13-13	W	DARLENA BRY AND LEE V BRY	TH EXPLORATION LLC	1/8+	957	290	N/A	N/A	N/A						
10°21507	9-13-13	w	DONALD FURLONG AND LISA K FURLONG	TH EXPLORATION LLC	1/8+	951	128 625	N/A N/A	N/A N/A	N/A						
10*21838	9-13-13	w	FIRST PRESBYTERIAN CHURCH OF CLARKSBURG THEODORE F MASLOWSKI AND ANITA MASLOWSKI	TH EXPLORATION LLC TH EXPLORATION LLC	1/8+	960	13	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A
10°21956 10°21963	9-13-13 9-13-13	w	LINDA R JANSSEN AND DENNIS D JANSSEN	TH EXPLORATION LLC	1/8+	960	28	N/A	N/A	N/A						
10*21963	9-13-13	w	WILLIAM K ZINK III AND CAROLYN L ZINK	TH EXPLORATION LLC	1/8+	977	283	N/A	N/A	N/A						
10*21983	9-13-13	Ŵ	OPAL V BUCKMASTER	TH EXPLORATION LLC	1/8+	953	497	N/A	N/A	N/A						
10*22113	9-13-13	w	SYLVIA D WEST	TH EXPLORATION LLC	1/8+	962	224	N/A	N/A	N/A						
10*22117	9-13-13	w	DEBORAH L WROBEL AND GREGORY G WROBEL	TH EXPLORATION LLC	1/8+	961	354	N/A	N/A	N/A						
10°22119	9-13-13	w	JAMES S RICHMOND	TH EXPLORATION LLC	1/8+	953	499	N/A	N/A	N/A						
10*22121	9-13-13	W	VICKI ANN WILLIAMS & WILLIAM J WILLIAMS MONTY W BAILEY AND MARTHA E BAILEY	TH EXPLORATION LLC	1/8+	961	352	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A
10*22377	9-13-13 9-13-13	w	KEVIN R RICHMOND AND VALERIE L RICHMOND	TH EXPLORATION LLC	1/8+	962	228	N/A	N/A	N/A N/A						
10°22378 10°22458	9-13-13	w	JAMES RICHMOND AND UNDY L RICHMOND	TH EXPLORATION LLC	1/8+	963	132	N/A	N/A	N/A						
10*22463	9-13-13	Ŵ	STEVEN R MCCLINTOCK	TH EXPLORATION LLC	1/8+	954	458	N/A	N/A	N/A						
10*22517	9-13-13	W	PHYLLIS M RADER	TH EXPLORATION LLC	1/8+	954	456	N/A	N/A	N/A						
10*22545	9-13-13	w	JANICE L MASLOWSKI AND FLOYD F MECHLING	TH EXPLORATION LLC	1/8+	958	9	N/A	N/A	N/A						
10°23140	9-13-13	w	MELISSA JENKINS	TH EXPLORATION LLC	1/8+	984	86 84	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A	N/A	N/A
10*23144	9-13-13	w	MARGARET A WALTERS WILLIAM BENNETT	TH EXPLORATION LLC TH EXPLORATION LLC	1/8+	984	84	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A
10°23145 10°23146	9-13-13 9-13-13	w	RETA I GRIFFIN AND MARTIN A GRIFFIN	TH EXPLORATION LLC	1/8+	984	80	N/A	N/A	N/A	N/A	N/A	N/A	N/A N/A	N/A	N/A N/A
10*23146	9-13-13	w	CAROLYN FAY BENNETT	TH EXPLORATION LLC	1/8+	984	78	N/A	N/A	N/A						
10*23188	9-13-13	w	LISA MCMANUS	TH EXPLORATION LLC	1/8+	984	530	N/A	N/A	N/A						
10*23299	9-13-13	w	PATRICIA L BECK	TH EXPLORATION LLC	1/8+	988	19	N/A	N/A	N/A						
10*23312	9-13-13	w	DONNA M CARTER	TH EXPLORATION LLC	1/8+	988	17	N/A	N/A	N/A						
10*23559	9-13-13	w	ROBERT TOOMBS WRIGHT MONTAGUE BY DAVID C WHITE, ESQ, GUARDIAN AT LITEM	TH EXPLORATION LLC	1/8+	1009	249	N/A	N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A	N/A	N/A
10*23577	9-13-13	W	JOHN WILLIAM MACKENZIE MONTAGUE BY DAVID C WHITE, ESO, GUARDIAN AD LITEM	TH EXPLORATION LLC TH EXPLORATION LLC	1/8+	1009	253	N/A N/A	N/A N/A	N/A						
10*23578	9-13-13	<u> w</u>	DUDLEY PORTER THAYER MONTAGUE JR BY DAVID C WHITE, ESQ, GUARDIAN AD LITEM RICARDO THOMAS MAYA*	TH EXPLORATION LLC	1/8+	1009	611	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A	N/A N/A	N/A N/A	N/A N/A
10*24739 10*25442	9-13-13		SARAH BETH PREWITT ET AL	TH EXPLORATION LLC	1/8+	1033	297	N/A	N/A	N/A						
10*25442	9-13-13	- w	STONE HILL MINERALS HOLDINGS LLC	TH EXPLORATION LLC	1/8+	1063	568	N/A	N/A	N/A						
24 21 341	1 - 10-10	1												· · ·		

Lease ID	Parcel	Tag	Grantor, Lessor, Etc.	Grantee, Lessee, Etc.	Royalty	Deed Book	Page	Assignment	Assignment	Assignment						
10*16481	9-16-12.1	×	JAMES & RICHMOND AND CINDY L RICHMOND	FOSSIL CREEK OHIO, LLC	1/8+	829	71	N/A	N/A	N/A	N/A	N/A	N/A	Fossil Creek Ohio LLC to	Fossil Creek Ohio LLC & Gulfport Energy Corp. to American Petroleum Partners Operating LLC: AB 36/588	American Petroleum
10*31359	9-1 <del>6</del> -12.6	Y	JAMES G RICHMOND	STONE ENERGY CORPORATION	1/8+	872	359	N/A	Stone Energy Corporation to EQT Production Company: AB 38/75	EQT Production Company to TH Exploration LLC: AB 48/21						
10*31359	9-16-12.7	z	JAMES G RICHMOND	STONE ENERGY CORPORATION	1/8+	872	359	N/A	Stone Energy Corporation to EQT Production Company: AB 38/75	EQT Production Company to TH Exploration LLC: AB 48/21						



January 15, 2021

WV Department of Environmental Protection Office of Oil & Gas 601 57<sup>th</sup> Street, SE Charleston, WV 25304 Attention: Susan Rose

RE: Van Winkle S-23HU

Subject: Proposed Voluntary Pooling and Unitization

Dear Susan:

Tug Hill Operating, LLC is authorized through, either lease or other agreement, to unitize and pool all lands falling within the boundaries of the proposed voluntary unit included with this submission, with the exception of the following tract which we intend to force pool.

9-13-23

If your office has any questions or concerns regarding the contents of this letter, please do not hesitate to contact me directly at 724-749-8388, or by email at amorris@tug-hillop.com.

Sincerely,

land

Amy L. Morris Permitting Specialist – Appalachia Region Tug Hill Operating

RECEIVED Office of Oil and Gas

JAN 1 9 2021

WV Department of Environmental Protection

380 SOUTHPOINTE BLVD . SUITE 200 . CANONSBURG, PA 15317 . T 724.485-20007/96/2021

COUNTY	DISTRICT	PARCEL	OWNER	ADDRESS
		•• ····		1320 S. University Drive
Marshall	Meade	5-10-9999.1	TH EXPLORATION, LLC	Suite 500
				Fort Worth,TX 76107
				1320 S. University Drive
Marshall	Meade	9-13-12	TH EXPLORATION, LLC	Suite 500
				Fort Worth,TX 76107
				1320 S. University Drive
Marshall	Meade	9-13-13	TH EXPLORATION, LLC	Suite 500
				Fort Worth,TX 76107
				1320 S. University Drive
Marshall	Meade	9-13-16	TH EXPLORATION, LLC	Suite 500
				Fort Worth,TX 76107
				1320 S. University Drive
Marshall	Meade	9-13-16.1	TH EXPLORATION, LLC	Suite 500
				Fort Worth,TX 76107
				1320 S. University Drive
Marshall	Meade	9-13-18	TH EXPLORATION, LLC	Suite 500
				Fort Worth,TX 76107
				1320 S. University Drive
Marshall	Meade	9-13-19	TH EXPLORATION, LLC	Suite 500
				Fort Worth,TX 76107
				1320 S. University Drive
Marshall	Meade	9-13-20	TH EXPLORATION, LLC	Suite 500
				Fort Worth,TX 76107
				1320 S. University Drive
Marshall	Meade	9-13-21	TH EXPLORATION, LLC	Suite 500
				Fort Worth,TX 76107
				1320 S. University Drive
Marshall	Meade	9-13-22	TH EXPLORATION, LLC	Suite 500
				Fort Worth,TX 76107
				1320 S. University Drive
Marshall	Meade	9-13-22.1	TH EXPLORATION, LLC	Suite 500
				Fort Worth,TX 76107
				1320 S. University Drive
Marshall	Meade	9-13-22.2	TH EXPLORATION, LLC	Suite 500
				Fort Worth,TX 76107
Marshall	Meade			31 Crow Drive
		9-13-23	LOUIS T. FOX	Glen Easton, WV 26039
Marshall	Meade	0.000		64 Sun Valley Avenue
	<b> </b>	9-13-23	DAVID E. FOX	Glen Dale, WV 26038
Marshall	Meade	0 12 22		5761 St. Joseph Road
ļ		9-13-23	PAUL G. FOX	Proctor, WV 26055
Marshall	Meade	0 12 22		100 Lynn Camp Lane
		9-13-23	THOMAS JOHN FOX	Glen Easton, WV 26039
Marshall	Meade	0 12 22		HC 81 Box 265-E
		9-13-23	MARY A. FOX	Lewisburg, WV 24901

07/16/2021

<b>_</b>		· <u>····</u> ·····		
Marshall	Meade			2468 Bowman Ridge Road
		9-13-23	MARK H. FOX	Glen Easton, WV 26039
Marshall				1320 S. University Drive
	Meade	9-13-5	TH EXPLORATION, LLC	Suite 500
				Fort Worth,TX 76107
				1320 S. University Drive
Marshall	Meade	9-13-5.1	TH EXPLORATION, LLC	Suite 500
				Fort Worth,TX 76107
			TH EXPLORATION, LLC	1320 S. University Drive
Marshall	Meade	9-13-6		Suite 500
				Fort Worth,TX 76107
				1320 S. University Drive
Marshall	Meade	9-13-7	TH EXPLORATION, LLC	Suite 500
				Fort Worth,TX 76107
				1320 S. University Drive
Marshall	Meade	9-13-8	TH EXPLORATION, LLC	Suite 500
				Fort Worth,TX 76107
				1320 S. University Drive
Marshall	Meade	9-16-10	TH EXPLORATION, LLC	Suite 500
				Fort Worth,TX 76107
		9-16-12		1320 S. University Drive
Marshall	Meade		TH EXPLORATION, LLC	Suite 500
				Fort Worth,TX 76107
	Meade	Meade 9-16-12.1	TH EXPLORATION, LLC	1320 S. University Drive
Marshall				Suite 500
				Fort Worth,TX 76107
		Neade 9-16-12.2	TH EXPLORATION, LLC	1320 S. University Drive
Marshall	Meade			Suite 500
				Fort Worth,TX 76107
	Meade 9-16			1320 S. University Drive
Marshall		Meade 9-16-12.3	TH EXPLORATION, LLC	Suite 500
				Fort Worth,TX 76107
	Meade	Meade 9-16-12.4		1320 S. University Drive
Marshall			TH EXPLORATION, LLC	Suite 500
				Fort Worth,TX 76107
Marshall	Meade	Meade 9-16-12.6	TH EXPLORATION, LLC	1320 S. University Drive
				Suite 500
				Fort Worth,TX 76107
Marshall	Meade	Meade 9-16-12.7		1320 S. University Drive
			TH EXPLORATION, LLC	Suite 500
				Fort Worth,TX 76107
	Meade	Meade 9-16-13	TH EXPLORATION, LLC	1320 S. University Drive
Marshall				Suite 500
			L	Fort Worth,TX 76107

Marshall	Meade	9-16-13.3	TH EXPLORATION, LLC	1320 S. University Drive
				Suite 500
				Fort Worth,TX 76107
		9-16-20	TH EXPLORATION, LLC	1320 S. University Drive
Marshall	Meade			Suite 500
				Fort Worth,TX 76107
				1320 S. University Drive
Marshall	Meade	9-16-9	TH EXPLORATION, LLC	Suite 500
				Fort Worth,TX 76107
				10000 Energy Drive
Marshall	nall Meade 9-18-13 SV		SWN PRODUCTION COMPANY, LLC	Spring, TX 77389
	Meade	Meade 9-18-17	TH EXPLORATION, LLC	1320 S. University Drive
Marshall				Suite 500
				Fort Worth,TX 76107
	Meade	ade 9-18-5	TH EXPLORATION, LLC	1320 S. University Drive
Marshall				Suite 500
				Fort Worth,TX 76107
Marshall	Meade	leade 9-18-6	TH EXPLORATION, LLC	1320 S. University Drive
				Suite 500
				Fort Worth,TX 76107
		Meade 9-18-7	TH EXPLORATION, LLC	1320 S. University Drive
Marshall	Meade			Suite 500
				Fort Worth,TX 76107
Marshall	Meade	Meade 9-18-8	TH EXPLORATION, LLC	1320 S. University Drive
				Suite 500
				Fort Worth,TX 76107
	Meade	Meade 9-18-9	TH EXPLORATION, LLC	1320 S. University Drive
Marshall				Suite 500



Oil and Gas Conservation Commission 601 57th Street SE, Charleston, WV 25304 304-414-1239

Randall M. Albert, Chairman dep.wv.gov

April 2, 2021

TH Exploration, LLC 1320 S. University Dr Ste 500 Ft Worth TX 76107

# 9489 0090 0027 6201 331710

RE: Intentional Deviation of New Deep Well Tug Hill Operating, LLC – Van Winkle S-23HU

Dear Sir or Ma'am:

Please be advised that Tug Hill Operating, LLC, has applied to the Oil and Gas Conservation Commission for approval to intentionally deviate a new deep well. The Code of State Regulations Title 39 Section 1.4.10 requires that the Commission notify the offset operators of the applicants' intent to deviate the proposed well. You are receiving this notice because you are listed as an offset operator (unleased mineral owner is also an "offset operator") to the proposed well. Any offset operator has ten days to object to the Commissions' granting approval to the proposed deviation. If you file an objection, the Commission will schedule a hearing and you will be notified of the date and time to attend.

A copy of the location plat is enclosed for your review. If no objection(s) are received within ten 10 days from the date of delivery, the application will be processed in the normal manner.

If you have any questions please call me at (304) 414-1239.

Sincerely,

pli Rose

Susan Rose Administrator



Dear Susan Rose:

The following is in response to your request for proof of delivery on your item with the tracking number: 9489 0090 0027 6201 3317 10.

Item Details			
Status:	Delivered, Front Desk/Reception/Mail Room		
Status Date / Time:	April 9, 2021, 2:07 pm		
Location:	FORT WORTH, TX 76107		
Postal Product:	First-Class Mail®		
Extra Services:	Certified Mail™		
	Return Receipt Electronic		
Shipment Details			
Weight:	10lb, 3.1oz		
Recipient Signature			
	9B		
Signature of Recipient:	JB Rt 71 Coricl 19 1320 S University		
	1320 S University		
Address of Recipient:	7607 500		

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Oil and Gas Conservation Commission 601 57<sup>th</sup> Street SE, Charleston, WV 25304 304-414-1239

Randall M. Albert, Chairman dep.wv.gov

April 2, 2021

SWN Production Company, LLC 10000 Energy Dr Spring TX 77389 9489 009000276201 331741

RE: Intentional Deviation of New Deep Well Tug Hill Operating, LLC – Van Winkle S-23HU

Dear Sir or Ma'am:

Please be advised that Tug Hill Operating, LLC, has applied to the Oil and Gas Conservation Commission for approval to intentionally deviate a new deep well. The Code of State Regulations Title 39 Section 1.4.10 requires that the Commission notify the offset operators of the applicants' intent to deviate the proposed well. You are receiving this notice because you are listed as an offset operator (unleased mineral owner is also an "offset operator") to the proposed well. Any offset operator has ten days to object to the Commissions' granting approval to the proposed deviation. If you file an objection, the Commission will schedule a hearing and you will be notified of the date and time to attend.

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If you have any questions please call me at (304) 414-1239.

Sincerely,

pulore Susan Rose

Administrator



Oil and Gas Conservation Commission 601 57<sup>th</sup> Street SE, Charleston, WV 25304 304-414-1239

Randall M. Albert, Chairman dep.wv.gov

April 2, 2021

Louis T. Fox 31 Crow Dr Glen Easton WV 26039 9489 0090 0027 6201 3317 65

RE: Intentional Deviation of New Deep Well Tug Hill Operating, LLC – Van Winkle S-23HU

Dear Sir:

Please be advised that Tug Hill Operating, LLC, has applied to the Oil and Gas Conservation Commission for approval to intentionally deviate a new deep well. The Code of State Regulations Title 39 Section 1.4.10 requires that the Commission notify the offset operators of the applicants' intent to deviate the proposed well. You are receiving this notice because you are listed as an offset operator (unleased mineral owner is also an "offset operator") to the proposed well. Any offset operator has ten days to object to the Commissions' granting approval to the proposed deviation. If you file an objection, the Commission will schedule a hearing and you will be notified of the date and time to attend.

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Sincerely,

on Rose

Susan Rose Administrator



Dear Susan Rose:

The following is in response to your request for proof of delivery on your item with the tracking number: 9489 0090 0027 6201 3317 65.

status:	Delivered, Left with Individual		
Status Date / Time:	April 8, 2021, 12:37 pm		
Location:	GLEN EASTON, WV 26039		
Postal Product:	First-Class Mail®		
Extra Services:	Certified Mail™		
	Return Receipt Electronic		
Shipment Details			
Weight:	5lb, 3.3oz		
Recipient Signature			
Signature of Recipient:	(35 x 2 2 3) Lend 19		
Address of Recipient:	47		

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Sincerely, United States Postal Service® 475 L'Enfant Plaza SW Washington, D.C. 20260-0004



Oil and Gas Conservation Commission 601 57<sup>th</sup> Street SE, Charleston, WV 25304 304-414-1239

Randall M. Albert, Chairman dep.wv.gov

April 2, 2021

David E. Fox 64 Sun Valley Ave Glen Dale WV 26038 9489 0090 0027 62013317 72

RE: Intentional Deviation of New Deep Well Tug Hill Operating, LLC – Van Winkle S-23HU

Dear Sir:

Please be advised that Tug Hill Operating, LLC, has applied to the Oil and Gas Conservation Commission for approval to intentionally deviate a new deep well. The Code of State Regulations Title 39 Section 1.4.10 requires that the Commission notify the offset operators of the applicants' intent to deviate the proposed well. You are receiving this notice because you are listed as an offset operator (unleased mineral owner is also an "offset operator") to the proposed well. Any offset operator has ten days to object to the Commissions' granting approval to the proposed deviation. If you file an objection, the Commission will schedule a hearing and you will be notified of the date and time to attend.

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Sincerely,

Susan Rose Administrator



Dear Susan Rose:

The following is in response to your request for proof of delivery on your item with the tracking number: 9489 0090 0027 6201 3317 72.

Delivered		
April 10, 2021, 9:01 am		
GLEN DALE, WV 26038		
First-Class Mail®		
Certified Mail™		
Return Receipt Electronic		
5lb, 6.1oz		
Durner		
NRUE FO		
68 SUN VALLEY DR		
GLUN DALE, WY 20038-1222		
	April 10, 2021, 9:01 am GLEN DALE, WV 26038 First-Class Mail <sup>®</sup> Certified Mail <sup>™</sup> Return Receipt Electronic 5lb, 6.1oz 5lb, 6.1oz MMMM DAUE FØ BAUE FØ BAUE FØ	

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Oil and Gas Conservation Commission 601 57th Street SE, Charleston, WV 25304 304-414-1239

Randall M. Albert, Chairman dep.wv.gov

April 2, 2021

Paul G. Fox 5761 St. Joseph Rd Proctor WV 26055 9489 0090 0027 6201 3317 89

RE: Intentional Deviation of New Deep Well Tug Hill Operating, LLC – Van Winkle S-23HU

Dear Sir:

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Sincerely,

Susan Rose Administrator



Dear Susan Rose:

The following is in response to your request for proof of delivery on your item with the tracking number: 9489 0090 0027 6201 3317 89.

Item Details			
Status:	Delivered, Left with Individual		
Status Date / Time:	April 8, 2021, 11:28 am		
Location:	PROCTOR, WV 26055		
Postal Product:	First-Class Mail <sup>®</sup>		
Extra Services:	Certified Mail™		
	Return Receipt Electronic		
Shipment Details			
Weight:	5lb, 6.6oz		
Recipient Signature			
Signature of Recipient:	HLL LizHall C19		
Address of Recipient:	Siles Surps		

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Sincerely, United States Postal Service<sup>®</sup> 475 L'Enfant Plaza SW Washington, D.C. 20260-0004



Oil and Gas Conservation Commission 601 57<sup>th</sup> Street SE, Charleston, WV 25304 304-414-1239

Randall M. Albert, Chairman dep.wv.gov

April 2, 2021

Thomas John Fox 100 Lynn Camp Lane Glen Easton WV 26039 9489 0090 0027 6201 3317 96

RE: Intentional Deviation of New Deep Well Tug Hill Operating, LLC – Van Winkle S-23HU

Dear Sir:

Please be advised that Tug Hill Operating, LLC, has applied to the Oil and Gas Conservation Commission for approval to intentionally deviate a new deep well. The Code of State Regulations Title 39 Section 1.4.10 requires that the Commission notify the offset operators of the applicants' intent to deviate the proposed well. You are receiving this notice because you are listed as an offset operator (unleased mineral owner is also an "offset operator") to the proposed well. Any offset operator has ten days to object to the Commissions' granting approval to the proposed deviation. If you file an objection, the Commission will schedule a hearing and you will be notified of the date and time to attend.

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Sincerely,

Susan Rose Administrator



Dear Susan Rose:

The following is in response to your request for proof of delivery on your item with the tracking number: 9489 0090 0027 6201 3317 96.

Item Details			
Status:	Delivered, Left with Individual		
Status Date / Time:	April 8, 2021, 12:41 pm		
Location:	GLEN EASTON, WV 26039		
Postal Product:	First-Class Mail <sup>®</sup>		
Extra Services:	Certified Mail™		
	Return Receipt Electronic		
Shipment Details	a the second second second		
Weight:	5lb, 4.5oz		
Recipient Signature			
Signature of Recipient:	10027p <-		
Address of Recipient:	1002-70 ~		

Note: Scanned image may reflect a different destination address due to Intended Recipient's delivery instructions on file.

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Sincerely, United States Postal Service<sup>®</sup> 475 L'Enfant Plaza SW Washington, D.C. 20260-0004



Oil and Gas Conservation Commission 601 57th Street SE, Charleston, WV 25304 304-414-1239

Randall M. Albert, Chairman dep.wv.gov

April 2, 2021

Mark H. Fox 2468 Bowman Ridge Rd Glen Easton WV 26039

9489 0090 0027 6201 3318 19

RE: Intentional Deviation of New Deep Well Tug Hill Operating, LLC – Van Winkle S-23HU

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Sincerely,

Denkose

Susan Rose Administrator



Dear Susan Rose:

The following is in response to your request for proof of delivery on your item with the tracking number: 9489 0090 0027 6201 3318 19.

tem Details	and the second	
Status:	Delivered, Left with Individual	
Status Date / Time:	April 8, 2021, 1:42 pm	
Location:	GLEN EASTON, WV 26039	
Postal Product:	First-Class Mail <sup>®</sup>	
Extra Services:	Certified Mail™	
	Return Receipt Electronic	
Shipment Details		
Weight:	5lb, 6.8oz	
Recipient Signature		
	Buton	
Signature of Recipient:	But Orn Swid pr	
Address of Recipient:	22	

Note: Scanned image may reflect a different destination address due to Intended Recipient's delivery instructions on file.

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Sincerely, United States Postal Service<sup>®</sup> 475 L'Enfant Plaza SW Washington, D.C. 20260-0004



Oil and Gas Conservation Commission 601 57<sup>th</sup> Street SE, Charleston, WV 25304 304-414-1239

Randall M. Albert, Chairman dep.wv.gov

April 2, 2021

Mary A. Fox HC 81 Box 265-E Lewisburg WV 24901 9489 0090 0027 6201 3318 02

RE: Intentional Deviation of New Deep Well Tug Hill Operating, LLC – Van Winkle S-23HU

Dear Ma'am:

Please be advised that Tug Hill Operating, LLC, has applied to the Oil and Gas Conservation Commission for approval to intentionally deviate a new deep well. The Code of State Regulations Title 39 Section 1.4.10 requires that the Commission notify the offset operators of the applicants' intent to deviate the proposed well. You are receiving this notice because you are listed as an offset operator (unleased mineral owner is also an "offset operator") to the proposed well. Any offset operator has ten days to object to the Commissions' granting approval to the proposed deviation. If you file an objection, the Commission will schedule a hearing and you will be notified of the date and time to attend.

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If you have any questions please call me at (304) 414-1239.

Sincerely,

voor Rose

Susan Rose Administrator

### DPS LAND SERVICES CORP 6000 TOWN CENTER BULLEVARD, SUITE 145 CANONSBUKG PA 15317-5841

# BOOK 1 104 PAGE 0 189

.

### CERTIFICATE OF CONSENT AND EASEMENT

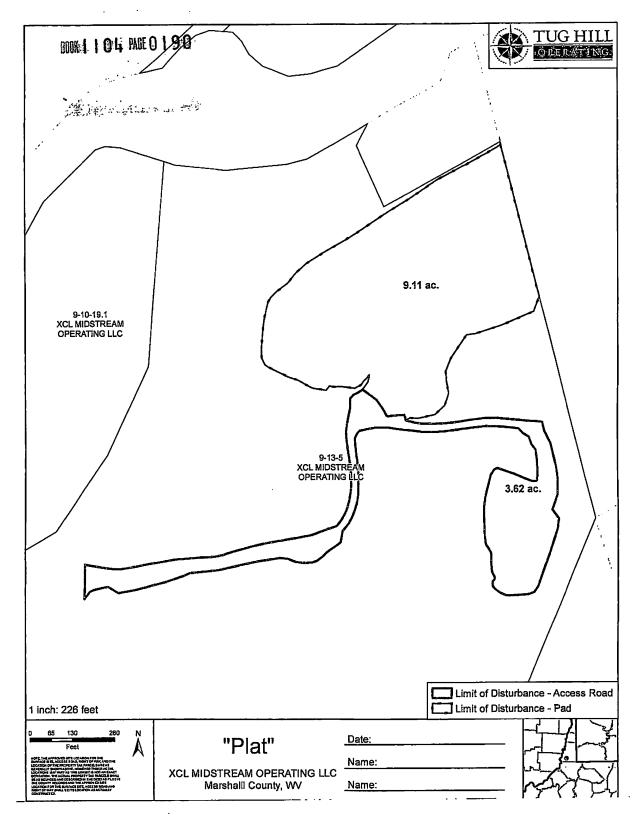
ىرىيى ئۇرىيىلى بىرى ئىلىرى ئىلىرى ئىلىرى ئىلىرى

I, the undersigned, for valuable considerable, the receipt and sufficiency of which is hereby acknowledged, being all the owners of the surface of that certain lot, tract or parcel of land located in Meade District, Marshall County, State of West Virginia, shown on the attached plat or survey, or hereby consent and grant an easement, pursuant to West Virginia Code, Section 22C-9-7(b) (4) and Operating Rule 4.4 of the Rules and Regulations of the West Virginia Oil and Gas Conservation Commission, to TH Exploration, LLC, its successors or assigns, for the drilling and operation of a deep well for the production of oil or gas at the location shown on the attached plat or survey.

Executed this _/ day of FERROAL , XCL Midstream Operating, LLC By: Justin Frettel Fitle: Senior Vice President	2021. Harshall County Jan Pest, Clerk Instrusent 1475005 02/18/2021 @ 12:30:42 PM RIGHT OF WAY W/O CONSIDERATION Book 1104 @ Page 189 Pages Recorded 2 Recording Cost \$ 11.00
ACKNOWLEDGMENT	
COMMONWEALTH OF PENNSYLVANIA \$ \$ SS: COUNTY OF WASHINGTON \$ On this, the day of ESAMA 2021, the undersigned authority, personally appeared Jus himself to be the Senior Vice President of XcL Mic limited liability company, and that he as such Ser authorized to do so, executed the foregoing instru- contained by signing the name of the limited liabi Senior Vice President. IN WITNESS WHEREOF, I hereunto set my hand and off	etin Trettel, who acknowledged Astream Operating, a Delaware Nior Vice President being ment for the purposes therein Lity company by himself as
	- hele in a

Commonwealth of Pennsylvania - Notary Seal maission Expires: David Gabriel Delallo, Notary Public:	2/16/2021
Mashington County Digita Cure/ No cary & upite.	Dra 198
My commission expires February 192024 Notary Public (print	1: Utoro G. Deltue
Commission number 1267492	
Member, Pennsylvania Association of Notarles	

This instrument prepared by: WV Oil and Gas Conservation Commission 601 57th Street Charleston, WV 25304



# STATE OF WEST VIRGINIA, MARSHALL COUNTY, SCT.:

# 07/16/2021

### ASSIGNMENT AND BILL OF SALE

This ASSIGNMENT AND BILL OF SALE (this "Assignment") dated as of December 1, 2020 (the "Execution Date"), is made by and between EQT PRODUCTION COMPANY, a Pennsylvania corporation, with an address at 625 Liberty Avenue, Suite 1700, Pittsburgh, Pennsylvania 15222 ("EQT"), and TH EXPLORATION, LLC, a Texas limited liability company, with an address at 1320 S. University Drive, Suite 500, Fort Worth, Toxas 76107 ("TH") pursuant to the terms of that certain Acreage Trade Agreement by and among EQT, TH and TH Exploration II, LLC ("TH IP"), dated July 8, 2020 (the "Agreement"). EQT and TH may be reformed to herein together as the "Partier", and each individually as a "Party".

### RECITALS

WHEREAS, BQT desires to transfer, convey and assign to TH certain of EQT's oil and gas leasehold interests located in Marshall County, West Virginia set forth on <u>Exhibit A</u> statched hereto and incorporated herein ("EQT Leases") in accordance with this Assignment and the Agreement; and

WHEREAS, TH desires to receive from BQT, all of BQT's right, title and interest in and to the EQT Leases in accordance with this Assignment and the Agreement.

NOW, THEREFORE, for and in consideration of the mutual promises contained herein and in the Agreement, the benefits to be derived by each Party hereunder and under the Agreement, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties hereby agree as follows:

# ARTICLE I

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### DEFINED TERMS

1.1 Definitions. Capitalized terms used herein and not otherwise defined throughout this Assignment shall have the meanings given such terms in the Agreement.

#### ARTICLE II ASSIGNMENT OF ASSETS

2.1 Assignment. Subject to the terms and conditions of this Assignment and the Agreement, EQT does hereby assign, convey and transfer to TH all of the right, title and interest of EQT in and to the following (collectively for purposes of this Assignment, the "EQT Assets"):

(a) Subject to the conveyance of the Wells Assets from EQT to TH II as described in the Agreement, the EQT Leases and appurtenances thereto (including rights of access and to install facilities), all Hydrocarbons within, inconced from, derived from, or sold from the EQT Leases (and all proceeds related thereto), on and after the Valuation Date, and all Surface Contracts including but not limited to those set forth on <u>Kathibith B</u> attached hereto and incorporated herein (the "EQT Surface Contracts") related to the EQT Leases and such Hydrocarbons; and

(b) Copies of deeds, files and all other ownership information directly related to the acquisition, operations and maintenance of the EQT Leases, lease files for the EQT Leases

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# JAN 19 2021

WV Department of Environmental Protection

07/16/2021

#### PARTIAL ASSIGNMENT OF OIL AND GAS LEASES

This PARTIAL ASSIGNMENT OF OIL AND GAS LEASES (hereinafter, "<u>Assignment</u>"), made the <u>21</u> day of May, 2018 (hereinafter, "<u>Effective Date</u>"), is by and between CNX GAS COMPANY LLC, a Virginia limited liability company, whose address is 1000 CONSOL Energy Drive, Suite 400, Canonsburg, Pennsylvania 15317 (hereinafter "<u>Assignor</u>") and TH EXPLORATION, LLC, a Texas limited liability company, whose address is 1320 S. University Drive, Suite 500, Fort Worth, TX 76107 (hereinafter "<u>Assignee</u>"). All references in this Assignment to "<u>Party</u>" or "<u>Parties</u>" shall be deemed at all times to mean Assignor or Assignee or both. Capitalized terms used but not defined herein shall have the meaning given such terms in the Acreage Trade Agreement, by and between Assignor and Assignee dated April 9, 2018 (the "<u>ATA</u>").

WHEREAS, Assignor desires to assign all of Assignor's right, title and interest in and to those Oil and Gas Lease(s) as same may have been previously or will in the future be modified, extended, or amended (hereinafter, "<u>Lease</u>" or "<u>Leases</u>"), covering certain tracts of land (hereinafter, "<u>Lands</u>") located in Marshall County, West Virginia; such Leases and Lands covered thereby being more particularly described on <u>Exhibit "A"</u> attached hereto and made a part hereof insofar and only insofar as such Leases cover the Target Formations (as defined below).

NOW, THEREFORE, for and in consideration of TEN AND NO/100 DOLLARS (\$10.00) and other valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Assignor does hereby GRANT, BARGAIN, ASSIGN, TRANSFER, AND CONVEY unto Assignee the following "<u>Assigned Rights</u>":

- (a) All of Assignor's right, title, and interest in and to those Leases set forth on <u>Exhibit A</u> attached hereto INSOFAR AND ONLY INSOFAR as to the particular Target Formation(s) (defined below) described and delineated on <u>Exhibit A</u> for each Lease:
  - i. "Target Formation(s)" means, with respect to each Lease, two hundred feet (200') above the top and two hundred feet (200') below the base of the Marcellus Formation or the Utica Formation or both, as specified for each Lease on <u>Exhibit A</u>. For the purposes of this Assignment, the Marcellus Formation shall be defined as the formation commonly known as the Marcellus Shale Formation, with the top of the Marcellus Shale Formation defined as the correlative stratigraphic equivalent to that point found at 6517 feet (6517') measured depth on the Halliburton Simms U-5H Composite\_DLL\_DEN\_NEU Log dated June 14, 2014 (the "Log")

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WV Department of Environmental Protection DPS LAND SERVICES CORP 6000 TOWN CENTER BOULEVARD, SUITE 145 CANONSBURG PA 15317-5841

### ASSIGNMENT AND CONVEYANCE

This Assignment and Conveyance (this "Assignment") is from STATOIL USA ONSHORE PROPERTIES INC., a Delaware corporation ("Assignor"), to TH Exploration, LLC, a Texas limited liability company ("Assignee"), and is executed on December 18, 2017 (the "Effective Date"). Assignor and Assignee may be referred to herein collectively as the "Parties," or individually as a "Party." Capitalized terms used herein but not otherwise defined herein (including in Section 3.7) shall have the meanings given such terms in that certain Acreage Trade Agreement between the Assignor and the Assignee dated August 24, 2017 (the "Acreage Trade Agreement").

### ARTICLE 1 ASSIGNMENT OF ASSETS

Section 1.1 <u>Assignment</u>. For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Assignor hereby GRANTS, BARGAINS, ASSIGNS, CONVEYS AND TRANSFERS unto Assignee all of Assignor's right, title and interest in and to (i) the oil and gas leases described in more detail on <u>Exhibit A</u> attached hereto (the "Leases") INSOFAR AND ONLY INSOFAR as they cover those lands described on <u>Exhibit A</u> (the "Leasehold Rights") and (ii) any surface use agreements that relate to such Leasehold Rights (collectively with the Leasehold Rights, the "Conveyed Assets").

TO HAVE AND TO HOLD the Conveyed Assets, together with all and singular the rights, privileges, contracts and appurtenances, in any way appertaining or belonging thereto, unto Assignee, its successors and assigns, forever, subject, to the terms and conditions of this . Assignment.

Section 1.2 <u>Assignment Subject to Acreage Trade Agreement</u>. This Assignment is made in accordance with and is subject to the terms, covenants and conditions contained in that certain Acreage Trade Agreement. In the event of a conflict between the provisions of the Acreage Trade Agreement and this Assignment, the provisions of the Acreage Trade Agreement shall control. The execution and delivery of this Assignment by Assignor, and the execution and acceptance of this Assignment by Assignee, shall not operate to release or impair any surviving rights or obligations of either Party with respect to the other under the Acreage Trade Agreement.

### ARTICLE 2

### SPECIAL WARRANTY OF TITLE AND DISCLAIMERS

Section 2.1 <u>Special Warranty of Title</u>. Assignor hereby agrees to warrant and defend Defensible Title to the Leases unto Assignee, its successors and assigns, against every Person whomsoever lawfully claiming or to claim the same or any part thereof by, through or under Assignor or any of its Affiliates, but not otherwise.

### Section 2.2 Disclaimers of Warranties and Representations.

(a) EXCEPT AS EXPRESSLY REPRESENTED OTHERWISE IN <u>SECTION</u> <u>VI</u> OF THE ACREAGE TRADE AGREEMENT OR THIS ASSIGNMENT, ASSIGNOR MAKES NO, AND HEREBY EXPRESSLY DISCLAIMS, ANY REPRESENTATION OR

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WV Department of Environmental Protection

# DP3 LAND SERVICES CORP 6000 TOAN CENTER BOLLEVARD, SUITE 145 CANONSBURG, PA 15317-5841 DURAD 036 PAGE 0535

STATE OF WEST VIRGINIA

Document Type ASN Pages Recorded 7 Book-Page 36-535 Recording Fee \$7.00 Additional \$6.00

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MARSHALL County 02:05:39 PM Instrument No 1415451 Date Recorded 10/04/2016

### ASSIGNMENT AND CONVEYANCE

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This Assignment and Conveyance (this "Assignment") is from GULFPORT ENERGY CORPORATION, a Delaware corporation ("Gulfport"), and FOSSIL CREEK OHIO, LLC, a Delaware limited liability company ("Fossil Creek" and, together with Gulfport, "Assignors"), to TH Exploration, LLC, a Texas limited liability company ("Assignee"), and is executed on September 23, 2016 (the "Effective Date"). Assignors and Assignee may be referred to herein collectively as the "Parties," or individually as a "Party." Capitalized terms used herein but not otherwise defined herein (including in Section 3.7) shall have the meanings given such terms in that certain Acreage Trade Agreement between the Assignors and the Assignee dated June 24, 2016 (the "Acreage Trade Agreement").

#### ARTICLE 1 ASSIGNMENT OF ASSETS

Section 1.1 <u>Assignment</u>. For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, each Assignor hereby GRANTS, BARGAINS, ASSIGNS, CONVEYS AND TRANSFERS unto Assignee its right, title and interest in and to the oil and gas leases described in more detail on <u>Exhibit A</u> attached hereto (the "Leases") and any surface use agreements that relate to such Leases insofar as such surface use agreements relate to the portion of lands covered by such Leases (collectively with the Leases, the "Conveyed Assets").

TO HAVE AND TO HOLD the Conveyed Assets, together with all and singular the rights, privileges, contracts and appurtenances, in any way appertaining or belonging thereto, unto Assignee, its successors and assigns, forever, subject, to the terms and conditions of this Assignment.

Section 1.4 <u>Assignment Subject to Acreage Trade Agreement</u>. This Assignment is made in accordance with and is subject to the terms, covenants and conditions contained in that certain Acreage Trade Agreement. In the event of a conflict between the provisions of the Acreage Trade Agreement and this Assignment, the provisions of the Acreage Trade Agreement shall control. The execution and delivery of this Assignment by Assignors, and the execution and acceptance of this Assignment by Assignee, shall not operate to release or impair any surviving rights or obligations of either Party with respect to the other under the Acreage Trade Agreement.

### ARTICLE 2 SPECIAL WARRANTY OF TITLE AND DISCLAIMERS

Section 2.1 <u>Special Warranty of Title</u>. Each Assignor hereby agrees to warrant and defend Defensible Title to the Leases unto Assignee, its successors and assigns, against every Person whomsoever lawfully claiming or to claim the same or any part thereof by, through or under Assignors or any of their respective Affiliates, but not otherwise.

### Section 2.2 <u>Disclaimers of Warranties and Representations</u>.

(a) EXCEPT AS EXPRESSLY REPRESENTED OTHERWISE IN <u>SECTION</u> <u>VI AND VII</u> OF THE ACREAGE TRADE AGREEMENT OR THIS ASSIGNMENT, ASSIGNORS MAKE NO, AND HEREBY EXPRESSLY DISCLAIM, ANY RECEIVED Office of Oil and Gas

JAN 19 2021

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# STATE OF <u>WEST VIRGINIA</u>

COUNTY OF MARSHALL

This MEMORANDUM OF PARTIAL ASSIGNMENT OF OIL AND GAS LEASES (hereinafter, the "<u>Memorandum</u>") has been executed by and between PERKINS OIL & GAS, INC., a West Virginia corporation, whose address is 2966 Northwest Turnpike, Pennsboro, West Virginia 26415 (hereinafter the "<u>Assignor</u>"), and TH EXPLORATION, LLC, a Texas limited liability company (hereinafter the "<u>Assignee</u>") whose address is 1320 South University Drive, Suite 500, Fort Worth, Texas 76107. Assignor and Assignee are sometimes referred to herein, collectively, as the "<u>Parties</u>" and, individually, as a "<u>Party</u>." This Memorandum is being executed for the purpose of providing notice to third parties of the execution of a certain Partial Assignment of Oil and Gas Leases (hereinafter, the "<u>Assignment</u>"), by and between the Parties.

WHEREAS, Assignor is the current owner and lessee of certain oil and gas leases located in Marshall County, West Virginia, covering specific parcels and being more particularly described on Exhibit "A" attached hereto and made a part hereof (collectively, the "Oil and Gas Leases").

In the Assignment dated effective as of the <u>1</u> day of <u>Noverber</u>, 2019 (hereinafter, the "<u>Effective Date</u>") and this Memorandum, Assignor does hereby GRANT, BARGAIN, SELL, CONVEY, TRANSFER and ASSIGN unto Assignee, all right, title and interest in and to the Oil and Gas Leases INSOFAR AND ONLY INSOFAR as each lease and parcel covers those formations lying between two hundred (200) feet above and two hundred (200) feet below the formations commonly known to as the Utica/Point Pleasant Shale formations, or the stratigraphic equivalent thereof (such depths and formations being referred to as the "<u>Assigned Formations</u>"). The Assigned Formations are included with and part of the Assigned Rights as defined in the Assignment.

EXCLUDING THEREFROM AND EXCEPTING AND RESERVING UNTO THE ASSIGNOR, ITS SUCCESSORS AND ASSIGNS, THE <u>OVERRIDING ROYALTY</u> INTEREST, as defined in the Assignment.

The Assignment contains various other terms, provisions and conditions, all of which are incorporated herein by reference, and made a part hereof in all respects as though the same were fully set forth herein. To the extent that there are any inconsistencies between this Memorandum and the Assignment, the terms and provisions of the Assignment shall prevail.

Assignor does hereby bind itself and its successors and assigns to warrant and forever defend all and singular title to the Assigned Formations unto Assignee and Assignee's successors and assigns, against every person whomsoever lawfully claiming or to claim the same or any part thereof, by through, or under Assignor, but not otherwise.

This Memorandum is made expressly subject to the terms and conditions of the Purchase and Sale Agreement dated September 23, 2019, by and between the Parties, all of which are fully incorporated herein by reference (the "<u>Purchase Agreement</u>").

This Memorandum may be executed in multiple counterparts, each of which shall be deemed an original instrument, but all such counterparts together shall constitute but one agreement.

[TWO SIGNATURE PAGES TO FOLLOW] ,

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JAN 19 2021

WV Department of Environmental Protection

Page 1 of 4

# 07/16/2021

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January 15, 2021

WV Department of Environmental Protection Office of Oil & Gas 601 57<sup>th</sup> Street, SE Charleston, WV 25304 Attention: Wade Stansberry

RE: Van Winkle S-23HU

Subject: Marshall County Route 74 Road Crossing Letter

Dear Wade:

Tug Hill Operating, LLC (THO) hereby submits this letter as confirmation that THO has obtained the right to drill, extract and produce the minerals under Marshall County Route 74 in the area reflected on the Van Winkle S-22HU well plat. THO has conducted a full title search in the relevant Court House to confirm its ownership under said County Routes and is not currently aware of any recorded document that would suggest an ownership other than THO.

If your office has any questions or concerns regarding the contents of this letter, please do not hesitate to contact me directly at 304-376-0111, or by email at amorris@tug-hillop.com.

Sincerely,

any Morris

Amy Morris Permit Specialist – Appalachia Region Cell 304-376-0111 Email: amiller@tug-hillop.com

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WV Department of Environmental Protection

WW-6AC (1/12)

### STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS <u>NOTICE CERTIFICATION</u>

#### Date of Notice Certification: 01/15/2021

API No. 47- 051 -Operator's Well No, Van Winkle S-23HU Well Pad Name: Honter Pethics

#### Notice has been given:

Pursuant to the provisions in West Virginia Code § 22-6A, the Operator has provided the required parties with the Notice Forms listed below for the tract of land as follows:

State:	West Virginia	UTM NAD 83	Easting:	523,385,80	_
County:	Marshall	UTM NAD 83	Northing:	4,403,550.28	
District:	Meade	Public Road Acc	Cess:	County Route 74	
Quadrangle:	Glen Easton 7.5	Generally used f	arm name:	XcL Midstream Operating, LLC	
Watershed:	Fish Creek (HUC 10)			and the second se	

Pursuant to West Virginia Code § 22-6A-7(b), every permit application filed under this section shall be on a form as may be prescribed by the secretary, shall be verified and shall contain the following information: (14) A certification from the operator that (i) it has provided the owners of the surface described in subdivisions (1), (2) and (4), subsection (b), section ten of this article, the information required by subsections (b) and (c), section sixteen of this article; (ii) that the requirement was deemed satisfied as a result of giving the surface owner notice of entry to survey pursuant to subsection (a), section ten of this article six-a; or (iii) the notice requirements of subsection (b), section sixteen of this article were waived in writing by the surface owner; and Pursuant to West Virginia Code § 22-6A-11(b), the applicant shall tender proof of and certify to the secretary that the notice requirements of section ten of this article by the applicant shall tender proof of and certify to the secretary that the notice requirements of section ten of this article by the applicant shall tender proof of and certify to the secretary that the notice requirements of section ten of this article by the applicant shall tender proof of and certify to the secretary that the notice requirements of section ten of this article by the applicant.

Pursuant to West Virginia Code § 22-6A, the Operator has attached proof to this Notice Certification that the Operator has properly served the required parties with the following:	OOG OFFICE USE
*PLEASE CHECK ALL THAT APPLY	ONLY
□ 1. NOTICE OF SEISMIC ACTIVITY OF ■ NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED	RECEIVED/ NOT REQUIRED
■ 2. NOTICE OF ENTRY FOR PLAT SURVEY or □ NO PLAT SURVEY WAS CONDUCTED	RECEIVED
□ 3. NOTICE OF INTENT TO DRILL or INOTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED or	RECEIVED/ NOT REQUIRED
WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)	
4. NOTICE OF PLANNED OPERATION	RECEIVED
5, PUBLIC NOTICE	RECEIVED
6. NOTICE OF APPLICATION	RECEIVED

#### **Required Attachments:**

The Operator shall attach to this Notice Certification Form all Notice Forms and Certifications of Notice that have been provided to the required parties and/or any associated written waivers. For the Public Notice, the operator shall attach a copy of the Class II Legal Advertisement with publication date verification or the associated Affidavit of Publication. The attached Notice Forms and Certifications of Notice shall serve as proof that the required parties have been noticed as required under West Virginia Code § 22-6A. Pursuant to West Virginia Code § 22-6A-11(b), the Certification of Notice to the person may be made by affidavit of personal services, the return receipt card or other postal receipt for certified mailing.

JAN 1 9 2021

#### Certification of Notice is hereby given:

THEREFORE, I <u>Amy L. Morris</u>, have read and understand the notice requirements within West Virginia Code § 22-6A. I certify that as required under West Virginia Code § 22-6A. I have served the attached copies of the Notice Forms, identified above, to the required parties through personal service, by registered mail or by any method of delivery that requires a receipt or signature confirmation. I certify under penalty of law that I have personally examined and am familiar with the information submitted in this Notice Certification and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Well Operator:	Tug Hill Operating, LLC		Address:	380 Southpointe Boulevard, Plaza II, S	uite 200
By:	anyfuloria	_		Canonsburg, PA 15317	
Its:	Permitting Specialist - Appalachia Region		Facsimile:	724-338-2030	
Telephone:	724-749-8388		Email:	amorris@tug-hillop.com	
C My	monwealth of Pennsylvania - Notary Seat David Gabriek Delako, Notary Public Washington County commission expires February 16, 2024 Commission number 1267492 mber, Pennsylvania Association of Notaries		ibed and swo	properties $15$ day of $5$ day o	Notary Public

#### Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at <u>depprivacyofficer@wv.gov</u>.

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JAN 1 9 2021

WV Department of Environmental Protection

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#### STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS <u>NOTICE OF APPLICATION</u>

Notice Time Requirement: notice shall be provided no later than the filing date of permit application.

Date of Notice: 1/26/2021	Date Permit Application Filed: 1/15/2021
Notice of:	

$\checkmark$	PERMIT FOR ANY	CERTIFICATE OF APPROVAL FOR THE
	WELL WORK	CONSTRUCTION OF AN IMPOUNDMENT OR PIT

Delivery method pursuant to West Virginia Code § 22-6A-10(b)

PERSONAL	REGISTERED	METHOD OF DELIVERY THAT REQUIRES A
SERVICE	MAIL	RECEIPT OR SIGNATURE CONFIRMATION

Pursuant to W. Va. Code § 22-6A-10(b) no later than the filing date of the application, the applicant for a permit for any well work or for a certificate of approval for the construction of an impoundment or pit as required by this article shall deliver, by personal service or by registered mail or by any method of delivery that requires a receipt or signature confirmation, copies of the application, the erosion and sediment control plan required by section seven of this article, and the well plat to each of the following persons: (1) The owners of record of the surface of the tract on which the well is or is proposed to be located; (2) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for roads or other land disturbance as described in the erosion and sediment control plan submitted pursuant to subsection (c), section seven of this article; (3) The coal owner, operator or lessee, in the event the tract of land on which the well proposed to be drilled is located [sic] is known to be underlain by one or more coal seams; (4) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for the placement, construction, enlargement, alteration, repair, removal or abandonment of any impoundment or pit as described in section nine of this article; (5) Any surface owner or water purveyor who is known to the applicant to have a water well, spring or water supply source located within one thousand five hundred feet of the center of the well pad which is used to provide water for consumption by humans or domestic animals; and (6) The operator of any natural gas storage field within which the proposed well work activity is to take place. (c)(1) If more than three tenants in common or other co-owners of interests described in subsection (b) of this section hold interests in the lands, the applicant may serve the documents required upon the person described in the records of the sheriff required to be maintained pursuant to section eight, article one, chapter eleven-a of this code. (2) Notwithstanding any provision of this article to the contrary, notice to a lien holder is not notice to a landowner, unless the lien holder is the landowner. W. Va. Code R. § 35-8-5.7.a requires, in part, that the operator shall also provide the Well Site Safety Plan ("WSSP") to the surface owner and any water purveyor or surface owner subject to notice and water testing as provided in section 15 of this rule.

Application Notice WSSP Notice E&S Plan Notice Well Plat Notice is hereby provided to:

SURFACE OWNER(s) Name: XcL Midstream Operating, LLC (Well Pad & Access Road)	COAL OWNER OR LESSEE Name: CNX Land, LLC	RECEIVED – Office of Oil and Gas
Address: 380 Southpointe Boulevard, Plaza II, Suite 215	Address: 1000 Consol Energy Drive	_
Canonsburg, PA 15317	Canonsburg, PA 15317	- FEB <b>0 3</b> 2021
Name: Frank E. & Mary Virginia Pethtel, Life Estate (Well Pad)	COAL OPERATOR	
Address: 9845 Fish Creek Road	Name:	
Glen Easton, WV 26039	A ddreen:	
SURFACE OWNER(s) (Road and/or Other Disturbance)		Environmental Protection
Name: Regina M. & Aaron D. Murray, Remainderman	SURFACE OWNER OF WATER WELL	_
Address: 5 Mound Manor	AND/OR WATER PURVEYOR(s)	
St. Mary's, WV 26170	Name: *See attached	
Name:	Address:	_
Address:		-
	OPERATOR OF ANY NATURAL GAS STO	RAGE FIELD
URFACE OWNER(s) (Impoundments or Pits)	Name:	
Name:	Address:	
Address:		—
	*Please attach additional forms if necessary	_

API NO. 47, 051 -OPERATOR WELL NO. Van Winkle 5-23HU Well Pad Name: Hunter Pethlel

#### Notice is hereby given:

Pursuant to West Virginia Code § 22-6A-10(b), notice is hereby given that the undersigned well operator has applied for a permit for well work or for a certificate of approval for the construction of an impoundment or pit.

#### This Notice Shall Include:

Pursuant to W. Va. Code § 22-6A-10(b), this notice shall include: (1) copies of the application; (2) the erosion and sediment control plan required by section seven of this article; and (3) the well plat.

Pursuant to W. Va. Code § 22-6A-10(f), this notice shall include: (1) a statement of the time limits for filing written comments; (2) who may file written comments; (3) the name and address of the secretary for the purpose of filing the comments and obtaining additional information; and (4) a statement that the persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water.

Pursuant to W. Va. Code R. § 35-8-5.7.a, the operator shall provide the Well Site Safety Plan to the surface owner and any water purveyor or surface owner subject to notice and water testing as provided in section 15 of this rule.

Pursuant to W. Va. Code R. § 35-8-15.2.c, this notice shall: (1) contain a statement of the surface owner's and water purveyor's right to request sampling and analysis; (2) advise the surface owner and water purveyor of the rebuttable presumption for contamination or deprivation of a fresh water source or supply; advise the surface owner and water purveyor that refusal to allow the operator to conduct a pre-drilling water well test constitutes a method to rebut the presumption of liability; (3) advise the surface owner and water purveyor of his or her independent right to sample and analyze any water supply at his or her own expense; advise the surface owner and water purveyor whether or not the operator will utilize an independent laboratory to analyze any sample; and (4) advise the surface owner and or water purveyor that he or she can obtain from the Chief'a list of water testing laboratories in the subject area capable of and qualified to test water supplies in accordance with standard acceptable methods.

Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57<sup>th</sup> Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting <u>www.dep.wv.gov/oil-and-gas/pages/default.aspx</u>.

#### Well Location Restrictions

Pursuant to W. Va. Code § 22-6A-12, Wells may not be drilled within two hundred fifty feet measured horizontally from any existing water well or developed spring used for human or domestic animal consumption. The center of well pads may not be located within six hundred twenty-five feet of an occupied dwelling structure, or a building two thousand five hundred square feet or larger used to house or shelter dairy cattle or poultry husbandry. This limitation is applicable to those wells, developed springs, dwellings or agricultural buildings that existed on the date a notice to the surface owner of planned entry for surveying or staking as provided in section ten of this article or a notice of intent to drill a horizontal well as provided in subsection (b), section sixteen of this article was provided. whichever occurs first, and to any dwelling under construction prior to that date. This limitation may be waived by written consent of the surface owner transmitted to the department and recorded in the real property records maintained by the clerk of the county commission for the county in which such property is located. Furthermore, the well operator may be granted a variance by the secretary from these distance restrictions upon submission of a plan which identifies the sufficient measures, facilities or practices to be employed during well site construction, drilling and operations. The variance, if granted, shall include terms and conditions the department requires to ensure the safety and protection of affected persons and property. The terms and conditions may include insurance, bonding and indemnification, as well as technical requirements. (b) No well pad may be prepared or well drilled within one hundred feet measured horizontally from any perennial stream, natural or artificial lake, pond or reservoir, or a wetland, or within three hundred feet of a naturally reproducing trout stream. No well pad may be located within one thousand feet of a surface or ground water intake of a public water supply. The distance from the public water supply as identified by the department shall be measured as follows: (1) For a surface water intake on a lake or reservoir, the distance shall be measured from the boundary of the lake or reservoir. (2) For a surface water intake on a flowing stream, the distance shall be measured from a semicircular radius extending upstream of the surface water infake. (3) For a groundwater source, the distance shall be measured from the wellhead or spring. The department may, in its discretion, waive these distance restrictions upon submission of a plan identifying sufficient measures, facilities or practices to be employed during well site construction, drilling and operations to protect the waters of the state. A waiver, if granted, shall impose any permit conditions as the secretary considers necessary. (c) Notwithstanding the foregoing provisions of this section, nothing contained in this section prevents an operator from conducting the activities permitted or authorized by a Clean Water Act Section 404 permit or other approval from the United States Army Corps of Engineers within any waters of the state or within the restricted areas referenced in this section. (d) The well location restrictions set forth in this section shall not apply to any well on a multiple well pad if at least one of the wells was permitted prior to the effective date of this article. (e) The secretary shall, by December 31, 2012, report to the Legislature on the noise, light, dust and volatile organic compounds generated by the drilling of horizontal wells as they relate to the well location restrictions regarding occupied dwelling structures pursuant to this section. Upon a finding, if any, by the secretary that the well location restrictions regarding occupied dwelling structures are inadequate or otherwise require alteration to address the items



examined in the study required by this subsection, the secretary shall have the authority to propose for promulgation legislative rules establishing guidelines and procedures regarding reasonable levels of noise, light, dust and volatile organic compounds relating to drilling horizontal wells, including reasonable means of mitigating such factors, if necessary.

#### Water Well Testing:

Pursuant to West Virginia Code § 22-6A-10(d), notification shall be made, with respect to surface landowners identified in subsection (b) or water purveyors identified in subdivision (5), subsection (b) of this section, of the opportunity for testing their water well. The operator shall provide an analysis to such surface landowner or water purveyor at their request.

#### Water Testing Laboratories:

Pursuant to West Virginia Code § 22-6A-10(i), persons entitled to notice pursuant to subsection (b) of this section may contact the department to ascertain the names and locations of water testing laboratories in the subject area capable and qualified to test water supplies in accordance with standard accepted methods. In compiling that list of names the department shall consult with the state Bureau for Public Health and local health departments. A surface owner and water purveyor has an independent right to sample and analyze any water supply at his or her own expense. The laboratory utilized by the operator shall be approved by the agency as being certified and capable of performing sample analyses in accordance with this section.

#### Rebuttable Presumption for Contamination or Deprivation of a Fresh Water Source or Supply:

W. Va. Code § 22-6A-18 requires that (b) unless rebutted by one of the defenses established in subsection (c) of this section, in any action for contamination or deprivation of a fresh water source or supply within one thousand five hundred feet of the center of the well pad for horizontal well, there is a rebuttable presumption that the drilling and the oil or gas well or either was the proximate cause of the contamination or deprivation of the fresh water source or supply. (c) In order to rebut the presumption of liability established in subsection (b) of this section, the operator must prove by a preponderance of the evidence one of the following defenses: (1) The pollution existed prior to the drilling or alteration activity as determined by a predrilling or prealteration water well test. (2) The landowner or water purveyor refused to allow the operator access to the property to conduct a predrilling or prealteration water well test. (3) The water supply is not within one thousand five hundred feet of the well. (4) The pollution occurred more than six months after completion of drilling or alteration activities. (5) The pollution occurred as the result of some cause other than the drilling or alteration activity. (d) Any operator electing to preserve its defenses under subdivision (1), subsection (c) of this section shall retain the services of an independent certified laboratory to conduct the predrilling or prealteration water well test. A copy of the results of the test shall be submitted to the department and the surface owner or water purveyor in a manner prescribed by the secretary. (e) Any operator shall replace the water supply of an owner of interest in real property who obtains all or part of that owner's supply of water for domestic, agricultural, industrial or other legitimate use from an underground or surface source with a comparable water supply where the secretary determines that the water supply has been affected by contamination, diminution or interruption proximately caused by the oil or gas operation, unless waived in writing by that owner. (f) The secretary may order the operator conducting the oil or gas operation to: (1) Provide an emergency drinking water supply within twenty-four hours; (2) Provide temporary water supply within seventy-two hours; (3) Within thirty days begin activities to establish a permanent water supply or submit a proposal to the secretary outlining the measures and timetables to be used in establishing a permanent supply. The total time in providing a permanent water supply may not exceed two years. If the operator demonstrates that providing a permanent replacement water supply cannot be completed within two years, the secretary may extend the time frame on case-by-case basis; and (4) Pay all reasonable costs incurred by the real property owner in securing a water supply. (g) A person as described in subsection (b) of this section aggrieved under the provisions of subsections (b), (e) or (f) of this section may seek relief in court... (i) Notwithstanding the denial of the operator of responsibility for the damage to the real property owner's water supply or the status of any appeal on determination of liability for the damage to the real property owner's water supply, the operator may not discontinue providing the required water service until authorized to do so by the secretary or a court of competent jurisdiction.

#### Written Comment:

Pursuant to West Virginia Code § 22-6A-11(a), all persons described in subsection (b), section ten of this article may file written comments with the secretary as to the location or construction of the applicant's proposed well work within thirty days after the application is filed with the secretary. All persons described in West Virginia Code § 22-6A-10(b) may file written comments as to the location or construction of the applicant's proposed well work to the Secretary at:
Chief Office of Oil and Gas

Chief, Office of Oil and Gas Department of Environmental Protection 601 57<sup>th</sup> St. SE Charleston, WV 25304 (304) 926-0450

FEB 0 3 2001

WV Department of

Such persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water. NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.

API NO. 47-051 -OPERATOR WELL NO. Van Winkle S-23HU Well Pad Name: Hunter Pathtel

#### Time Limits and Methods for Filing Comments.

The law requires these materials to be served on or before the date the operator files its Application. You have **THIRTY (30) DAYS** after the filing date to file your comments. Comments must be filed in person or received in the mail by the Chief's office by the time stated above. You may call the Chief's office to be sure of the date. Check with your postmaster to ensure adequate delivery time or to arrange special expedited handling. If you have been contacted by the well operator and you have signed a "voluntary statement of no objection" to the planned work described in these materials, then the permit may be issued at any time.

Pursuant to West Virginia Code § 22-6A-11(c)(2), Any objections of the affected coal operators and coal seam owners and lessees shall be addressed through the processes and procedures that exist under sections fifteen, seventeen and forty, article six of this chapter, as applicable and as incorporated into this article by section five of this article. The written comments filed by the parties entitled to notice under subdivisions (1), (2), (4), (5) and (6), subsection (b), section ten of this article shall be considered by the secretary in the permit issuance process, but the parties are not entitled to participate in the processes and proceedings that exist under sections fifteen, seventeen or forty, article six of this chapter, as applicable and as incorporated into this article by section five of this article.

#### **Comment Requirements**

Your comments must be in writing and include your name, address and telephone number, the well operator's name and well number and the approximate location of the proposed well site including district and county from the application. You may add other documents, such as sketches, maps or photographs to support your comments.

Disclaimer: All comments received will be placed on our web site http://www.dep.wv.gov/oil-and-gas/Horizontal-

<u>Permits/Pages/default.aspx</u> and the applicant will automatically be forwarded an email notice that such comments have been submitted. The applicant will be expected to provide a response to comments submitted by any surface owner, water purveyor or natural gas storage operator noticed within the application.

#### Permit Denial or Condition

The Chief has the power to deny or condition a well work permit. Pursuant to West Virginia Code § 22-6A-8(d), the permit may not be issued or be conditioned, including conditions with respect to the location of the well and access roads prior to issuance if the director determines that:

- (1) The proposed well work will constitute a hazard to the safety of persons;
- (2) The plan for soil erosion and sediment control is not adequate or effective;
- (3) Damage would occur to publicly owned lands or resources; or
- (4) The proposed well work fails to protect fresh water sources or supplies.

A permit may also be denied under West Virginia Code § 22-6A-7(k), the secretary shall deny the issuance of a permit if the secretary determines that the applicant has committed a substantial violation of a previously issued permit for a horizontal well, including the applicable erosion and sediment control plan associated with the previously issued permit, or a substantial violation of one or more of the rules promulgated under this article, and in each instance has failed to abate or seek review of the violation within the time prescribed by the secretary pursuant to the provisions of subdivisions (1) and (2), subsection (a), section five of this article and the rules promulgated hereunder, which time may not be unreasonable.

Pursuant to West Virginia Code § 22-6A-10(g), any person entitled to submit written comments to the secretary pursuant to subsection (a), section eleven of this article, shall also be entitled to receive from the secretary a copy of the permit as issued or a copy of the order modifying or denying the permit if the person requests receipt of them as a part of the written comments submitted concerning the permit application. Such persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water.

RECEIVED Office of Oil and Gas

FEB 0 3 2021

WV Department o: Environmental Protection

07/16/2021

API NO. 47-051 -OPERATOR WELL NO. Van Winkle S-23HU Well Pad Name: Hunter Pethtel

#### Notice is hereby given by:

Well Operator: Tug Hill Operating, LLC Telephone: 724-749-8368 Email: amorris@tug-hillop.com

Address: 380 Southpointe Boulevard, Plaza II, Suite 200			
Canonsburg, PA 15317			
Facsimile: 724-338-2030			

#### **Oil and Gas Privacy Notice:**

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at <u>depprivacyofficer@wv.gov</u>.

Commonwealth of Pennsylvania - Notary Seal Susanne Deliere, Notary Public Washington County My commission expires January 15, 2025 Commission number 1382332 Member, Pennsylvania Association of Notaries

Subscribed and sworn before me this 21 day of	January 2021
Susame Deliere	Notary Public
My Commission Expires/15/2020	5

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WV Department or Environmental Protection

## Supplement Pg. 1A

### Exhibit WW-6A

Tug Hill Operating, LLC 380 Southpointe Blvd, Suite 200 Cannonsburg, PA 15137

### Residences within Two-Thousand Feet (2,000')

Well:Van Winkle S – 23HUDistrict:MeadeState:WV

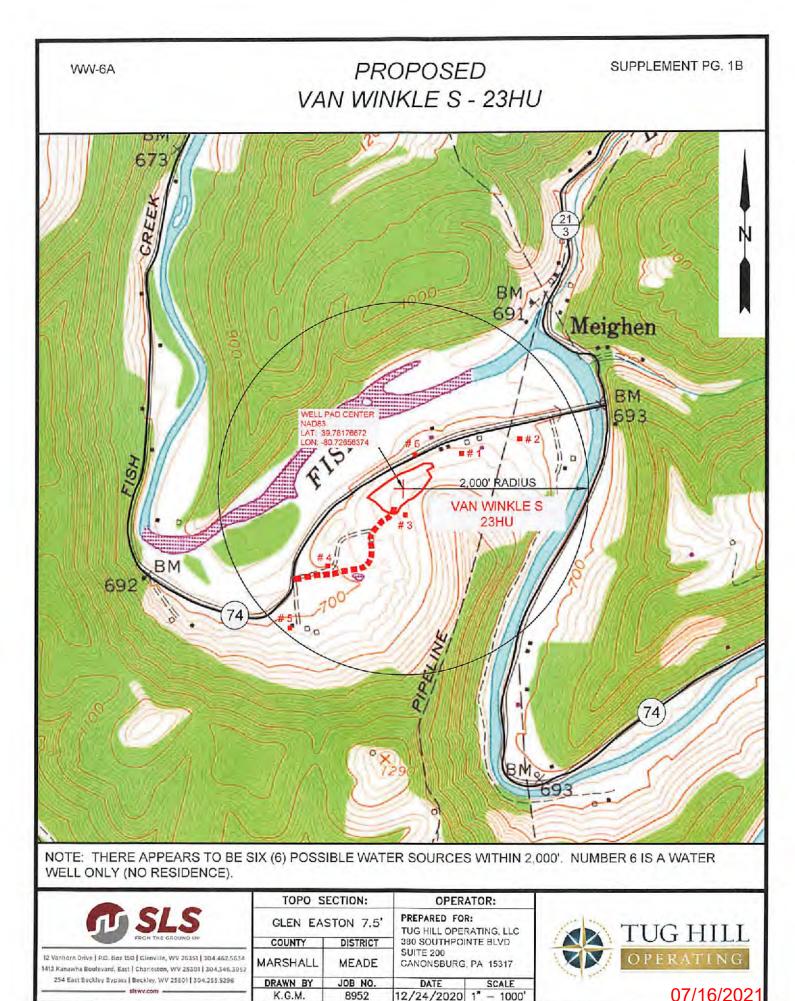
There are four (4) possible residences, one (1) possible commercial or business site, no churches, no schools and no emergency facilities within two-thousand feet (2,000') of the above referenced well location. Number 6 is a water well only and is not a residence.

Residence (#1)	Residence (#2)	Commercial/Business (#3)*
TM 13 Pcl. 6	TM 13 Pcl. 7	TM 13 Pcl. 5
Mary Virginia Pethtel	Mary Virginia Pethtel	XcL Midstream Operating, LLC
Phone: 304-684-2646, 304-845-3423	Phone: 304-684-2646, 304-845-3423	Phone: 1-888-751-0434
Physical Address:	Physical Address:	Physical Address:
None Found – Possible Mobile Home	9845 Fish Creek Rd	9269 Fish Creek Rd.
Tax Address:	Glen Easton, WV 26039	Glen Easton, WV 26039
9845 Fish Creek Rd	Tax Address:	Tax Address:
Glen Easton, WV 26039	Same	1320 S University DR STE 500
		Fort Worth, TX 76107
		*Physical address appears to be related
		to Oil & Gas Well Pad.
Residence (#4)	Residence (#5)	(#6)
TM 13 Pcl. 5	TM 13 Pcl. 5	Water Well Only (No Residence)
XcL Midstream Operating, LLC	XcL Midstream Operating, LLC	Joseph L. Blake & Michael A. Walker
Phone: 1-888-751-0434	Phone: 1-888-751-0434	1207 Roberts Ridge Rd.
Physical Address:	Physical Address:	Moundsville, WV 26041
None Found – Appears to be newer	9201 Fish Creek Rd.	
	Glen Easton, WV 26039	
home		
home Tax Address:	Tax Address:	

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FEB 03 2021

WV Department of Environmental Protection



ILE: R:\Data\CADD\WCRK 8900-8999\8952 Hun Mapping\8952\St Well Plat Ex 52-23HU Exhibits.dwg LAYOUT: Layout

SERVICE

#### STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS NOTICE OF APPLICATION

Notice Time Requirement: notice shall be provided no later than the filing date of permit application.

Date of Notice: 1/14/2021	Date Permit Application Filed:	1/15/2021	
Notice of:			

MAIL

PERMIT FOR AN	Y CERTIF	ICATE OF APPROVAL FOR THE
WELL WORK	CONST	RUCTION OF AN IMPOUNDMENT OR PIT
Delivery method pursu	uant to West Virginia C	ode § 22-6A-10(b)
D PERSONAL	REGISTERED	METHOD OF DELIVERY THAT REQUIRES A

Pursuant to W. Va. Code § 22-6A-10(b) no later than the filing date of the application, the applicant for a permit for any well work or for a certificate of approval for the construction of an impoundment or pit as required by this article shall deliver, by personal service or by registered mail or by any method of delivery that requires a receipt or signature confirmation, copies of the application, the crosion and sediment control plan required by section seven of this article, and the well plat to each of the following persons: (1) The owners of record of the surface of the tract on which the well is or is proposed to be located; (2) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for roads or other land disturbance as described in the erosion and sediment control plan submitted pursuant to subsection (c), section seven of this article; (3) The coal owner, operator or lessee, in the event the tract of land on which the well proposed to be drilled is located [sie] is known to be underlain by one or more coal seams; (4) The owners of record of the surface tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for the placement, construction, enlargement, alteration, repair, removal or abandonment of any impoundment or pit as described in section nine of this article; (5) Any surface owner or water purveyor who is known to the applicant to have a water well, spring or water supply source located within one thousand five hundred feet of the center of the well pad which is used to provide water for consumption by humans or domestic animals; and (6) The operator of any natural gas storage field within which the proposed well work activity is to take place. (c)(1) If more than three tenants in common or other co-owners of interests described in subsection (b) of this section hold interests in the lands, the applicant may serve the documents required upon the person described in the records of the sheriff required to be maintained pursuant to section eight, article one, chapter eleven-a of this code. (2) Notwithstanding any provision of this article to the contrary, notice to a lien holder is not notice to a landowner, unless the lien holder is the landowner. W. Va. Code R. § 35-8-5.7.a requires, in part, that the operator shall also provide the Well Site Safety Plan ("WSSP") to the surface owner and any water purveyor or surface owner subject to notice and water testing as provided in section 15 of this rule.

RECEIPT OR SIGNATURE CONFIRMATION

☑ Application Notice ☑ WSSP Notice ☑ E&S Plan Notice ☑ Well Plat Notice is hereby provided to:

☑ SURFACE OWNER(s)	COAL OWNER OR LESSEE
Name: XcL Midstream Operating, LLC (Well Pad & Access Road)	Name: CNX Land, LLC
Address: 380 Southpointe Boulevard, Plaza II, Suite 215	Address: 1000 Consol Energy Drive
Canonsburg, PA 15317	Canonsburg, PA 15317
Name: Frank E. & Mary Virginia Pethtel, Life Estate (Well Pad)	COAL OPERATOR
Address: 9845 Fish Creek Road	Name:
Glen Easton, WV 26039	Address:
SURFACE OWNER(s) (Road and/or Other Disturbance)	
Name: Regina M. & Aaron D. Murray, Remainderman	SURFACE OWNER OF WATER WELL
Address: 5 Mound Manor	AND/OR WATER PURVEYOR(s)
St. Mary's, WV 26170	Name: 'See attached
Name:	Address:
Address:	and the second
	OPERATOR OF ANY NATURAL GAS STORAGE FIELD
□ SURFACE OWNER(s) (Impoundments or Pits)	Name:
Name:	Address:
Address:	Address:
	*Please attach additional forms if necessary

WV Department of

API NO. 47-031 OPERATOR WELL NO. Van Winkle S-23HD Well Pad Name: Hurter Pethtel

#### Notice is hereby given:

Pursuant to West Virginia Code § 22-6A-10(b), notice is hereby given that the undersigned well operator has applied for a permit for well work or for a certificate of approval for the construction of an impoundment or pit.

#### This Notice Shall Include:

Pursuant to W. Va. Code § 22-6A-10(b), this notice shall include: (1) copies of the application; (2) the erosion and sediment control plan required by section seven of this article; and (3) the well plat.

Pursuant to W. Va. Code § 22-6A-10(f), this notice shall include: (1) a statement of the time limits for filing written comments; (2) who may file written comments; (3) the name and address of the secretary for the purpose of filing the comments and obtaining additional information; and (4) a statement that the persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water.

Pursuant to W. Va. Code R. § 35-8-5.7.a, the operator shall provide the Well Site Safety Plan to the surface owner and any water purveyor or surface owner subject to notice and water testing as provided in section 15 of this rule.

Pursuant to W. Va. Code R. § 35-8-15.2.c, this notice shall: (1) contain a statement of the surface owner's and water purveyor's right to request sampling and analysis; (2) advise the surface owner and water purveyor of the rebuttable presumption for contamination or deprivation of a fresh water source or supply; advise the surface owner and water purveyor that refusal to allow the operator to conduct a pre-drilling water well test constitutes a method to rebut the presumption of liability; (3) advise the surface owner and water purveyor of his or her independent right to sample and analyze any water supply at his or her own expense; advise the surface owner and water purveyor whether or not the operator will utilize an independent laboratory to analyze any sample; and (4) advise the surface owner and or water purveyor that he or she can obtain from the Chief a list of water testing laboratories in the subject area capable of and qualified to test water supplies in accordance with standard acceptable methods.

Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental RECEIVED Gate Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov@fffee of Oil and Gate JAN 1 9 2021 and-gas/pages/default.aspx.

Pursuant to W. Va. Code § 22-6A-12, Wells may not be drilled within two hundred fifty feet measured horizontally from any existing nental Protect water well or developed spring used for human or domestic animal consumption. The canter of well and horizontally from any existing nental Protect hundred twenty-five feet of an occupied dwelling structure, or a building two thousand five hundred square feet or larger used to house or shelter dairy cattle or poultry husbandry. This limitation is applicable to those wells, developed springs, dwellings or agricultural buildings that existed on the date a notice to the surface owner of planned entry for surveying or staking as provided in section ten of this article or a notice of intent to drill a horizontal well as provided in subsection (b), section sixteen of this article was provided, whichever occurs first, and to any dwelling under construction prior to that date. This limitation may be waived by written consent of the surface owner transmitted to the department and recorded in the real property records maintained by the clerk of the county commission for the county in which such property is located. Furthermore, the well operator may be granted a variance by the secretary from these distance restrictions upon submission of a plan which identifies the sufficient measures, facilities or practices to be employed during well site construction, drilling and operations. The variance, if granted, shall include terms and conditions the department requires to ensure the safety and protection of affected persons and property. The terms and conditions may include insurance, bonding and indemnification, as well as technical requirements. (b) No well pad may be prepared or well drilled within one hundred feet measured horizontally from any perennial stream, natural or artificial lake, pond or reservoir, or a wetland, or within three hundred feet of a naturally reproducing trout stream. No well pad may be located within one thousand feet of a surface or ground water intake of a public water supply. The distance from the public water supply as identified by the department shall be measured as follows: (1) For a surface water intake on a lake or reservoir, the distance shall be measured from the boundary of the lake or reservoir. (2) For a surface water intake on a flowing stream, the distance shall be measured from a semicircular radius extending upstream of the surface water intake. (3) For a groundwater source, the distance shall be measured from the wellhead or spring. The department may, In its discretion, waive these distance restrictions upon submission of a plan identifying sufficient measures, facilities or practices to be employed during well site construction, drilling and operations to protect the waters of the state. A waiver, if granted, shall impose any permit conditions as the secretary considers necessary. (c) Notwithstanding the foregoing provisions of this section, nothing contained in this section prevents an operator from conducting the activities permitted or authorized by a Clean Water Act Section 404 permit or other approval from the United States Army Corps of Engineers within any waters of the state or within the restricted areas referenced in this section. (d) The well location restrictions set forth in this section shall not apply to any well on a multiple well pad if at least one of the wells was permitted prior to the effective date of this article. (e) The secretary shall, by December 31, 2012, report to the Legislature on the noise, light, dust and volatile organic compounds generated by the drilling of horizontal wells as they relate to the well location restrictions regarding occupied dwelling structures pursuant to this section. Upon a finding, if any, by the secretary that the well location restrictions regarding occupied dwelling structures are inadequate or otherwise require alteration to address the items 07/16/2021

examined in the study required by this subsection, the secretary shall have the authority to propose for promulgation legislative rules establishing guidelines and procedures regarding reasonable levels of noise, light, dust and volatile organic compounds relating to drilling horizontal wells, including reasonable means of mitigating such factors, if necessary.

#### Water Well Testing:

Pursuant to West Virginia Code § 22-6A-10(d), notification shall be made, with respect to surface landowners identified in subsection (b) or water purveyors identified in subdivision (5), subsection (b) of this section, of the opportunity for testing their water well. The operator shall provide an analysis to such surface landowner or water purveyor at their request.

#### Water Testing Laboratories:

Pursuant to West Virginia Code § 22-6A-10(i), persons entitled to notice pursuant to subsection (b) of this section may contact the department to ascertain the names and locations of water testing laboratories in the subject area capable and qualified to test water supplies in accordance with standard accepted methods. In compiling that list of names the department shall consult with the state Bureau for Public Health and local health departments. A surface owner and water purveyor has an independent right to sample and analyze any water supply at his or her own expense. The laboratory utilized by the operator shall be approved by the agency as being certified and capable of performing sample analyses in accordance with this section.

#### Rebuttable Presumption for Contamination or Deprivation of a Fresh Water Source or Supply:

W. Va. Code § 22-6A-18 requires that (b) unless rebutted by one of the defenses established in subsection (c) of this section, in any action for contamination or deprivation of a fresh water source or supply within one thousand five hundred feet of the center of the well pad for horizontal well, there is a rebuttable presumption that the drilling and the oil or gas well or either was the proximate cause of the contamination or deprivation of the fresh water source or supply. (c) In order to rebut the presumption of liability established in subsection (b) of this section, the operator must prove by a preponderance of the evidence one of the following defenses: (1) The pollution existed prior to the drilling or alteration activity as determined by a predrilling or prealteration water well test. (2) The landowner or water purveyor refused to allow the operator access to the property to conduct a predrilling or prealteration water well test. (3) The water supply is not within one thousand five hundred feet of the well. (4) The pollution occurred more than six months after completion of drilling or alteration activities. (5) The pollution occurred as the result of some cause other than the drilling or alteration activity. (d) Any operator electing to preserve its defenses under subdivision (1), subsection (c) of this section shall retain the services of an independent certified laboratory to conduct the predrilling or prealteration water well test. A copy of the results of the test shall be submitted to the department and the surface owner or water purveyor in a manner prescribed by the secretary. (e) Any operator shall replace the water supply of an owner of interest in real property who obtains all or part of that owner's supply of water for domestic, agricultural, industrial or other legitimate use from an underground or surface source with a comparable water supply where the secretary determines that the water supply has been affected by contamination, diminution or interruption proximately caused by the oil or gas operation, unless waived in writing by that owner. (f) The secretary may order the operator conducting the oil or gas operation to: (1) Provide an emergency drinking water supply within twenty-four hours; (2) Provide temporary water supply within seventy-two hours; (3) Within thirty days begin activities to establish a permanent water supply or submit a proposal to the secretary outlining the measures and timetables to be used in establishing a permanent supply. The total time in providing a permanent water supply may not exceed two years. If the operator demonstrates that providing a permanent replacement water supply cannot be completed within two years, the secretary may extend the time frame on case-by-case basis; and (4) Pay all reasonable costs incurred by the real property owner in securing a water supply. (g) A person as described in subsection (b) of this section aggrieved under the provisions of subsections (b), (e) or (f) of this section may seek relief in court... (i) Notwithstanding the denial of the operator of responsibility for the damage to the real property owner's water supply or the status of any appeal on determination of liability for the damage to the real property owner's water supply, the operator may not discontinue providing the required water service until authorized to do so by the secretary or a court of competent jurisdiction.

#### Written Comment:

Pursuant to West Virginia Code § 22-6A-11(a), all persons described in subsection (b), section ten of this article may file written comments with the secretary as to the location or construction of the applicant's proposed well work within thirty days after the application is filed with the secretary. All persons described in West Virginia Code § 22-6A-10(b) may file written comments as to the location or construction of the applicant's proposed well work to the Secretary at: Chief, Office of Oil and Gas

Chief, Office of Oil and Gas Department of Environmental Protection 601 57<sup>th</sup> St. SE Charleston, WV 25304 (304) 926-0450

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WV Department of Environmental Protection

Such persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water. NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.

#### Time Limits and Methods for Filing Comments.

API NO. 47-051 -OPERATOR WELL, NO. Van Winkle S-23HU Well Pad Name: Hunter Pathtel

The law requires these materials to be served on or before the date the operator files its Application. You have **THIRTY (30) DAYS** after the filing date to file your comments. Comments must be filed in person or received in the mail by the Chief's office by the time stated above. You may call the Chief's office to be sure of the date. Check with your postmaster to ensure adequate delivery time or to arrange special expedited handling. If you have been contacted by the well operator and you have signed a "voluntary statement of no objection" to the planned work described in these materials, then the permit may be issued at any time.

Pursuant to West Virginia Code § 22-6A-11(c)(2), Any objections of the affected coal operators and coal seam owners and lessees shall be addressed through the processes and procedures that exist under sections fifteen, seventeen and forty, article six of this chapter, as applicable and as incorporated into this article by section five of this article. The written comments filed by the parties entitled to notice under subdivisions (1), (2), (4), (5) and (6), subsection (b), section ten of this article shall be considered by the secretary in the permit issuance process, but the parties are not entitled to participate in the processes and proceedings that exist under sections fifteen, seventeen or forty, article six of this chapter, as applicable and as incorporated into this article by section five of this article and proceedings that exist under sections fifteen, seventeen or forty, article six of this chapter, as applicable and as incorporated into this article by section five of this article.

#### **Comment Requirements**

Your comments must be in writing and include your name, address and telephone number, the well operator's name and well number and the approximate location of the proposed well site including district and county from the application. You may add other documents, such as sketches, maps or photographs to support your comments.

Disclaimer: All comments received will be placed on our web site http://www.dep.wv.gov/oil-and-gas/Horizontal-

<u>Permits/Pages/default.aspx</u> and the applicant will automatically be forwarded an email notice that such comments have been submitted. The applicant will be expected to provide a response to comments submitted by any surface owner, water purveyor or natural gas storage operator noticed within the application.

#### Permit Denial or Condition

The Chief has the power to deny or condition a well work permit. Pursuant to West Virginia Code § 22-6A-8(d), the permit may not be issued or be conditioned, including conditions with respect to the location of the well and access roads prior to issuance if the director determines that:

- (1) The proposed well work will constitute a hazard to the safety of persons;
- (2) The plan for soil erosion and sediment control is not adequate or effective;
- (3) Damage would occur to publicly owned lands or resources; or
- (4) The proposed well work fails to protect fresh water sources or supplies.

A permit may also be denied under West Virginia Code § 22-6A-7(k), the secretary shall deny the issuance of a permit if the secretary determines that the applicant has committed a substantial violation of a previously issued permit for a horizontal well, including the applicable erosion and sediment control plan associated with the previously issued permit, or a substantial violation of one or more of the rules promulgated under this article, and in each instance has failed to abate or seek review of the violation within the time prescribed by the secretary pursuant to the provisions of subdivisions (1) and (2), subsection (a), section five of this article and the rules promulgated hereunder, which time may not be unreasonable.

Pursuant to West Virginia Code § 22-6A-10(g), any person entitled to submit written comments to the secretary pursuant to subsection (a), section eleven of this article, shall also be entitled to receive from the secretary a copy of the permit as issued or a copy of the order modifying or denying the permit if the person requests receipt of them as a part of the written comments submitted concerning the permit application. Such persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water.

RECEIVED Office of Oil and Gas

JAN 19 2021

WV Department of Environmental Protection

API NO. 47-051 -OPERATOR WELL NO. Van Winkle S-23HU Well Pad Name: Hunter Pethtel

#### Notice is hereby given by:

Well Operat	or: Tug Hill Operating, LLC		
Telephone:	724-749-8388		
Email amor	is@tug-hillop.com	UNIOTHIS	

Address: 360 Southpointe Boulevard, Plaza II, Suite 200 Canonsburg, PA 15317 Facsimile: 724-338-2030

#### **Oil and Gas Privacy Notice:**

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at <u>depprivacyofficer@wv.gov</u>.

David G20HELL	Pennsylvania - Notary Sea Delallo, Notary Public
	ngton County xpires February 16, 202 a number 1267492
	n number 1267492 ania Association of Notarie

Subscribed and sworn before me this 14 day	y of JANUARY ZOZI
- Sta fill	Notary Public
My Commission Expires 2/16/2024	

RECEIVED Office of Oil and Gas

JAN 1 9 2021

WV Department of Environmental Protection

### **Exhibit WW-6A**

### Supplement Pg. 1A

Tug Hill Operating, LLC 380 Southpointe Blvd, Suite 200 Cannonsburg, PA 15137

### Residences within Two-Thousand Feet (2,000')

Well:Van Winkle S – 23HUDistrict:MeadeState:WV

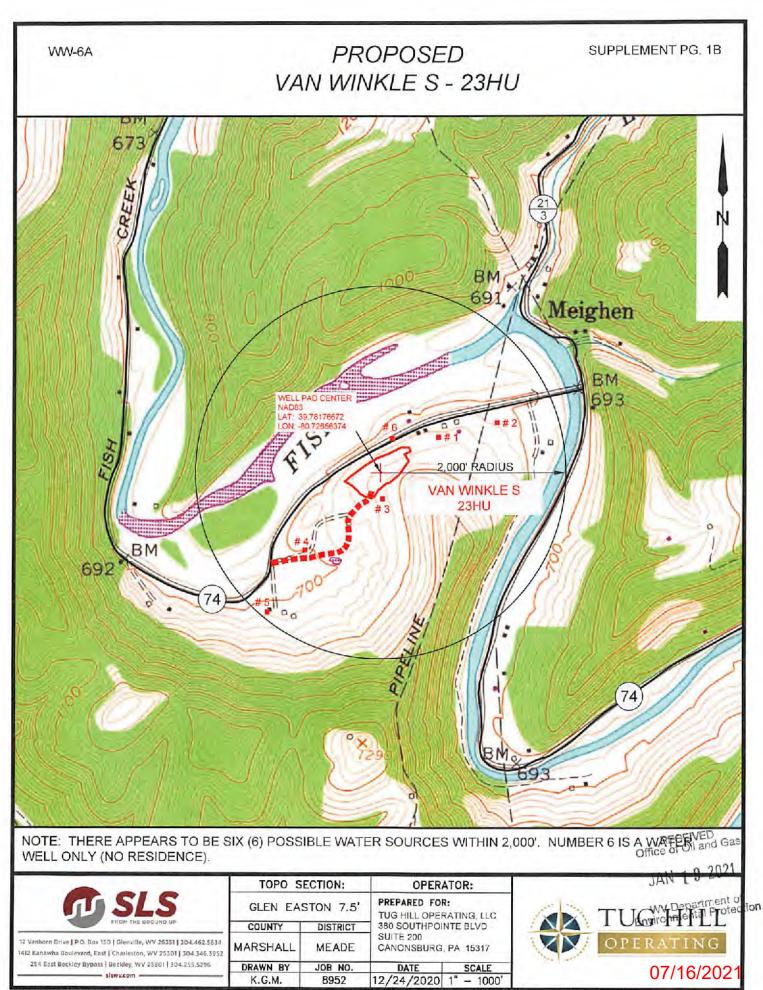
There are four (4) possible residences, one (1) possible commercial or business site, no churches, no schools and no emergency facilities within two-thousand feet (2,000') of the above referenced well location. Number 6 is a water well only and is not a residence.

Residence (#1)	Residence (#2)	Commercial/Business (#3)*
TM 13 Pcl. 6	TM 13 Pcl. 7	TM 13 Pcl. 5
Mary Virginia Pethtel	Mary Virginia Pethtel	XcL Midstream Operating, LLC
Phone: 304-684-2646, 304-845-3423	Phone: 304-684-2646, 304-845-3423	Phone: 1-888-751-0434
Physical Address:	Physical Address:	Physical Address:
None Found – Possible Mobile Home	9845 Fish Creek Rd	9269 Fish Creek Rd.
Tax Address:	Glen Easton, WV 26039	Glen Easton, WV 26039
9845 Fish Creek Rd	Tax Address:	Tax Address:
Glen Easton, WV 26039	Same	1320 S University DR STE 500
		Fort Worth, TX 76107
		*Physical address appears to be related
		to Oil & Gas Well Pad.
·· · · · · · · · · · · · · · · · · · ·		
Residence (#4)	Residence (#5)	(#6)
TM 13 Pcl. 5	TM 13 Pcl. 5	Water Well Only (No Residence)
XcL Midstream Operating, LLC	XcL Midstream Operating, LLC	
Phone: 1-888-751-0434	Phone: 1-888-751-0434	
Physical Address:	Physical Address:	
None Found – Appears to be newer	9201 Fish Creek Rd.	
home	Glen Easton, WV 26039	
Tax Address:	Tax Address:	
1320 S University DR STE 500	1320 S University DR STE 500	
Fort Worth, TX 76107	Fort Worth, TX 76107	

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JAN 19 2021

WV Department of Environmental Protection



E: R: Data/CADDWORK 8909-8952 Hunter Pethtel Plats and Mapping/8952/Gurvey/Well Plat Exhibits/Revised/8952-23HU Exhibits.dwg LAYOUT; Layout4 USER: kmoyer:

WW-70 Rev. 7/01

Affidavit of Personal Service

State OF WEST VIRGINIA County Of MALSHALL

The undersigned, being first duly sworn, says that the undersigned served a true and complete copy of all sides of --

- Notice on Form WW-2(A) / WW-3(A) / WW-4(A) / WW-5(A) / WW-6(A), UA5Application on Form WW-2(B) / WW-3(B) / WW-4(B) / WW-5(B) / WW-6(B) X (1)Notice on Form WW-2(A) /
- (2)Plat showing the well location on Form WW-6, and (3)
- Construction and Reclamation Plan on Form WW-9 (4)

--all with respect to operator's Well No. Seelist located in Meade District, MAYSNAL County, West Virginia, upon the person or organization named--

County, State of WEST UKAINIA on the 15 day of JANUARI, 2021 in the manner specified below.

[COMPLETE THE APPROPRIATE SECTION]

For an individual: [X] Handing it to him X/ her / or, because he / she / refused to take it when offered it, by leaving it in his / her / presence.

[ ] Handing it to a member of his or her family above the age of 16 years named who resides at the usual place of abode of the person to be served, and asking the family member to give it to the person to be served as soon as possible.

For a partnership:

[ ] Handing it to , a partner of the partnership or, because the partner refused to take it when I handed it over, by leaving it in the presence of the partner.

For a limited partnership:

[ ] Handing it to the general partner, named , or, because the general partner refused to take it when I tried to hand it over, by leaving it in the presence of the general partner.

For a corporation:

[ ] Handing it to the corporation's employee / officer / director / attorney in fact / named (Signature of person executing service) REGENED Gas Taken, subscribed and sworn before me this 15 day of \umarkow JAN 19 2021 My commission expires August 8, 2021 WV Department of WV Department of Protection OFFICIAL SEA NOTABY Notary Public (AFFIX SEAL IF NOTARIZED OUTSIDE THE STATE) And A Contraction of the Party OFFICIAL SEAL STATEOF " STV RGINIA NOTARY PUBLIC MICA THER 132 E STATE OF WEST VIRGINIA HC 7 MICAH THER WY 26267 August 8, 2021 ELLAMORE, WV 25267 My commission expires August 8, 2021

WW-70 Rev. 7/01

Affidavit of Personal Service

state of tennsylvania County of Washington

The undersigned, being first duly sworn, says that the undersigned served a true and complete copy of all sides of --

WW-6(A), UAS Notice on Form WW-2(A) / WW-3(A) / WW-4(A) / WW-5(A) (1) WW-5(B) WW-6(B) X

Application on Form WW-2(B) / WW-3(B) / WW-4(B) (2) 1

Plat showing the well location on Form WW-6, and (3) Construction and Reclamation Plan on Form WW-9 (4)

--all with respect to operator's Well No. Van Wurkle Wells (1967) located in Meadl District, Marshall County, West Virginia, upon the person or organiza County, West Virginia, upon the person or organization named--

Kel Midsbream Operating, LIC

-- by delivering the same in Washington County, State of Pennsylvania on the 4 , 20 21 in the manner specified below. day of anuaky

[COMPLETE THE APPROPRIATE SECTION]

For an individual: [ ] Handing it to him / her / or, because he / she / refused to take it when offered it, by leaving it in his / her / presence.

[ ] Handing it to a member of his or her family above the age of 16 years named who resides at the usual place of abode of the person to be served, and asking the family member to give it to the person to be served as soon as possible.

For a partnership:

[ ] Handing it to , a partner of the partnership or, because the partner refused to take it when I handed it over, by leaving it in the presence of the partner.

For a limited partnership:

[ ] Handing it to the general partner, named , or, because the general partner refused to take it when I tried to hand it over, by leaving it in the presence of the general partner.

For a corporation: [ ] Handing it to the corporation's employee \_/ officer // director \_/ attorney t\_\_/ named wsbn [refte] in fact (Signature of person executing service) GOS Taken, subscribed and sworn before me this  $\frac{14}{14}$  day of My commission expires  $\frac{216}{24}$ IANUA-WV Department of Environmental Protection Notary Public Commonwealth of Pennsylvania - Notary Seal (AFFIX SEAL IF NOTARIZED OUTSIDE THE STATE) David Gabriel Delallo, Notary Public Washington County My commission expires February 16, 2024 Commission number 1267492 Member, Pennsylvania Association of Notaries

WW-70 Attachment

Well List

Van Winkle N-16HU Van Winkle N-17HU Van Winkle N-18HU Van Winkle N-19HU Van Winkle S-20HU Van Winkle S-21HU Van Winkle S-22HU Van Winkle S-23HU

> RECEIVED Office of Oil and Gas JAN **19** 2021 WV Department of Environmental Protection

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Operator Well No. Van Winkle S-23HU

#### STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS NOTICE OF ENTRY FOR PLAT SURVEY

	ement: Notice shall be provi	ded at least SEVEN (7) days but no more tha	n FORTY-FIVE (45) days prior to	
entry Date of Notice: <u>12/11/</u>	Date of Plan	ned Entry: <u>12/18/2020</u>		
Delivery method pu	rsuant to West Virginia Co	de § 22-6A-10a		
PERSONAL	REGISTERED	METHOD OF DELIVERY THAT RE	EQUIRES A	
SERVICE	MAIL	RECEIPT OR SIGNATURE CONFIR		
on to the surface tract but no more than fort beneath such tract tha owner of minerals un and Sediment Contro Secretary, which state	to conduct any plat surveys y-five days prior to such entr t has filed a declaration purs derlying such tract in the cou l Manual and the statutes and ement shall include contact in mer to obtain copies from the	rior to filing a permit application, the operator required pursuant to this article. Such notice y to: (1) The surface owner of such tract; (2) uant to section thirty-six, article six, chapter to inty tax records. The notice shall include a st l rules related to oil and gas exploration and p information, including the address for a web part e secretary.	shall be provided at least seven days to any owner or lessee of coal seams wenty-two of this code; and (3) any atement that copies of the state Erosion production may be obtained from the	
SURFACE OWN		COAL OWNER OR LE	SSEE	
	erating, LLC (Well Pad & Access Road)	Name: CNX Land, LLC	V	
	Boulevard, Plaza II, Suite 215	Address: 1000 Consol Energy Drive		
Canonsburg, PA 15317		Canonsburg, PA 15317	Canonsburg, PA 15317	
	ginia Pethtel, Life Estate (Well Pad)			
Address: 9845 Fish Creek	Road	MINERAL OWNER(s)		
Glen Easton, WV 26039	S. W	Name: Frank E. & Mary Virginia Peth	tel, Life Estate	
Name: Regina M. & Aaron		Address: 9845 Fish Creek Road		
Address: 5 Mound Manor St. Marys, WV 26170			Glen Easton, WV 26039 **See attached list	
51. Marys, WV 20170		*please attach additional forms if ne	cessary	
		otice is hereby given that the undersigned wel	l operator is planning entry to conduct	
State: West Virg		Approx. Latitude & Longitude:	39.78176850; -80.72661368	
County: Marshall	1999 E	Public Road Access:	County Route 74	

Quadrangie.	Gien Lasion 7.5	Concrany used failin name.	Accimitation operating, LLC
Copies of the	state Erosion and Sediment	Control Manual and the statutes and rules related to	o oil and gas exploration and production
may be obtain	ned from the Secretary, at th	e WV Department of Environmental Protection hea	dquarters, located at 601 57th Street, SE,
Charleston, W	VV 25304 (304-926-0450).	Copies of such documents or additional informatio	n related to horizontal drilling may be

Watershed:

Commally unad fo

obtained from th	ne Secretary by visiting www.dep	.wv.gov/oil-and-gas/pages/d	default.aspx.	
Notice is here				RECEIVED Office of Oil and Gas
Well Operator:	Tug Hill Operating, LLC	Address:	380 Southpointe Boulevard, Plaza II, Suite 200	
Telephone:	724-749-8388		Canonsburg, PA 15317	JAN 1 9 2021
Email:	amorris@tug-hillop.com	Facsimile:	724-338-2020	in the external of

Environmental Protection

Middle Fish Creek

alles LLO

#### Oil and Gas Privacy Notice:

Meade

Clas Faster 7 5

District:

Quadranala

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at <u>depprivacyofficer@wv.gov</u>.

WW-6A3 Notice of Entry for Plat Survey Additional Parties to Notice Van Winkle Wells

Additional Mineral Owner: Dennis W. Hunter 3322 Rainbow Lane North Ft. Myers, FL 33903 WW-70 Rev. 7/01

Affidavit of Personal Service

State Of Pennsylvania

County OF Washington

The undersigned, being first duly sworn, says that the undersigned served a true and complete copy of all sides of--

<pre>(1) Notice on Form WW-2(A) / WW-3(A) / WW-4(A) / WW-5(A) / WW-6(A) 3/ (2) Application on Form WW-2(B) / WW-3(B) / WW-4(B) / WW-5(B) / WW-6(B)</pre>
<ul> <li>(3) Plat showing the well location on Form NW-6, and</li> <li>(4) Construction and Reclamation Plan on Form WW-9</li> </ul>
all with respect to operator's Well No. Wells (see list) located in Meade
District, Marshall County, West Virginia, upon the person or organization named
by delivering the game in Washington County, State of Pennsylvania
on the the day of December , 2020 in the manner specified below.
[COMPLETE THE APPROFRIATE SECTION]
<pre>For an individual:     [ ] Handing it to him _/ her _/ or, because he/ she/ refused to take it when     offered it, by leaving it in his/ her/ presence.</pre>
[ ] Handing it to a member of his or her family above the age of 16 years named who resides at the usual place of abode of the person to be
served, and asking the family member to give it to the person to be served as soon as possible.
For a partnership: [] Handing it to, a partner of the partnership or,
because the partner refused to take it when I handed it over, by leaving it in the presence of the partner.
For a limited partnership: [ ] Handing it to the general partner, named, or,
because the general partner refused to take it when I tried to hand it over, by leaving it in the presence of the general partner.
For a corporation: [/] Handing it to the corporation's employee / officer // director // attorney
in fact_/ named_ustin Irettel
(Signature of person executing service)
Taken, subscribed and sworn before me this <u>A</u> day of <u>AccemBol</u> 2020. My commission expires 2/16/2024
Notary Public
(AFFIX SEAL IF NOTARIZED OUTSIDE THE STATE) Commonwealth of Pennsylvania - Notary Seal David Gabriel Delallo, Notary Public Washington County
My commission expires February 16, 2024 Commission number 1267492
Member, Pennsylvania Association of Notarles
RECEIVED Office of Oil and Gas

JAN 1 9 2021

WV Department of Environmental Protection WW-70 Attachment

Well List

Van Winkle N-16HU Van Winkle N-17HU Van Winkle N-18HU Van Winkle N-19HU Van Winkle S-20HU Van Winkle S-21HU Van Winkle S-22HU Van Winkle S-23HU

> RECEIVED Office of Oil and Gas

JAN 1 9 2021

W Department of Environmental Protection

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### STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS <u>NOTICE OF PLANNED OPERATION</u>

Notice Time Requirement: notice shall be provided no later than the filing date of permit application. Date of Notice: 01/14/2021 Date Permit Application Filed: 01/15/2021

Delivery method pursuant to West Virginia Code § 22-6A-16(c)

2	CERTIFIED MAIL	HAND
	RETURN RECEIPT REQUESTED	DELIVERY

Pursuant to W. Va. Code § 22-6A-16(c), no later than the date for filing the permit application, an operator shall, by certified mail return receipt requested or hand delivery, give the surface owner whose land will be used for the drilling of a horizontal well notice of the planned operation. The notice required by this subsection shall include: (1) A copy of this code section; (2) The information required to be provided by subsection (b), section ten of this article to a surface owner whose land will be used in conjunction with the drilling of a horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation for damages to the surface affected by oil and gas operations to the extent the damages are compensable under article six-b of this chapter. (d) The notices required by this section shall be given to the surface owner at the address listed in the records of the sheriff at the time of notice.

#### Notice is hereby provided to the SURFACE OWNER(s)

e time of notice): Name: Frank E. & Mary Virginia Pethtel (Life Estars)
Address: 9845 Fish Creek Road
Glen Easton, WV 26039

#### Notice is hereby given:

Pursuant to West Virginia Code § 22-6A-16(c), notice is hereby given that the undersigned well operator has developed a planned operation on the surface owner's land for the purpose of drilling a horizontal well on the tract of land as follows:

State:	West Virginia	LITMANTAD 02	Easting:	523,385,80
County:	Marshall	– UTM NAD 83	Northing:	4,403,550.28
District:	Meade	Public Road Access: Generally used farm name:		County Route 74
Quadrangle:	Glen Easton 7.5'			XcL Midstream Operating, LLC
Watershed:	Fish Creek (HUC 10)	-		

#### This Notice Shall Include:

Pursuant to West Virginia Code § 22-6A-16(c), this notice shall include: (1)A copy of this code section; (2) The information required to be provided by W. Va. Code § 22-6A-10(b) to a surface owner whose land will be used in conjunction with the drilling of a horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation for damages to the surface affected by oil and gas operations to the extent the damages are compensable under article six-b of this chapter. Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57<sup>th</sup> Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

Well Operator:	Tug Hill Operating, LLC	Address:	380 Southpointe Boulevard, Plaza II, Suite 200	
Telephone:	724-749-8388		Canonsburg, PA 15317	
Email:	amorris@lug-hillop.com	Facsimile:	724-338-2030	

#### Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at <u>deprivacyofficer@wv.gov</u>.

Additional Surface Owner – Van Winkle Wells WW-6A5

Regina M. & Aaron D. Murray 5 Mound Manor St. Marys, WV 26170

> RECEIVED Office of Oil and Gas

JAN 1 9 2021

WV Department of Environmental Protection

WW-70 Rev. 7/01

#### Affidavit of Personal Service

State Of WEST VIRGINIA County Of MAUSHALL

The undersigned, being first duly sworn, says that the undersigned served a true and complete copy of all sides of--

- (1) Notice on Form WW-2(A) / WW-3(A) / WW-4(A) / WW-5(A) / WW-6(A), (AS = APP) (2) Application on Form WW-2(B) / WW-3(B) / WW-4(B) / WW-5(B) / WW-6(B) X
- (3) Plat showing the well location on Form WW-6, and
- (4) Construction and Reclamation Plan on Form WW-9

--all with respect to operator's Well No. Seelist located in Meade District, Marshall County, West Virginia, upon the person or organization named--

-- by delivering the same in Masure County, State of LEST UILGINIA on the 15 day of JANUAM, 2021 in the manner specified below.

[COMPLETE THE APPROPRIATE SECTION]

For an individual: [X] Handing it to him X/ her / or, because he / she / refused to take it when offered it, by leaving it in his / her / presence.

[ ] Handing it to a member of his or her family above the age of 16 years named who resides at the usual place of abode of the person to be served, and asking the family member to give it to the person to be served as soon as possible.

For a partnership:

[ ] Handing it to \_\_\_\_\_\_, a partner of the partnership or, because the partner refused to take it when I handed it over, by leaving it in the presence of the partner.

For a limited partnership:

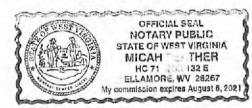
[ ] Handing it to the general partner, named \_\_\_\_\_\_, or, because the general partner refused to take it when I tried to hand it over, by leaving it in the presence of the general partner.

For a corporation: [ ] Handing it to the corporation's employee \_/ officer \_/ director \_/ attorney in fact \_\_/ named

(Signature of person executing service)

Taken, subscribed and sworn before me this  $15 \text{ day of } \int (1 + 1)^2 y$ My commission expires  $A_{u}(y) \neq 8$ , 20212021 RECEIVED Office of Oil and Gas ne Fl Notary Public

(AFFIX SEAL IF NOTARIZED OUTSIDE THE STATE)





# 07/16/2021

JAN 1 9 2021

WW-70 Rev. 7/01

#### Affidavit of Personal Service

The undersigned, being first duly sworn, says that the undersigned served a true and

state of Kennsulvania County of Washington

complete copy of all sides of --(1) Notice on Form WW-2(A) / WW-3(A) / WW-4(A) / WW-5(A)/ WW-6(A), 445 Application on Form WW-2(B) / WW-3(B) / WW-4(B) / WW-5(B) (2) Plat showing the well location on Form WW-6, and WW-6(B) X (3)Construction and Reclamation Plan on Form WW-9 (4) --all with respect to operator's Well No. Van Wicku Welks (182) located in <u>Meade</u> District, <u>Marshall</u> County, West Virginia, upon the person or organization County, West Virginia, upon the person or organization named--Midsbream Operating, LIC on the 14th day of a whather, 20 County, State of Pennsylvania day of 3, 20 21 in the manner specified below. anuary [COMPLETE THE APPROPRIATE SECTION] For an individual: [ ] Handing it to him / her / or, because he / she / refused to take it when offered it, by leaving it in his / her / presence. [ ] Handing it to a member of his or her family above the age of 16 years named who resides at the usual place of abode of the person to be served, and asking the family member to give it to the person to be served as soon as possible. For a partnership: , a partner of the partnership or, [ ] Handing it to because the partner refused to take it when I handed it over, by leaving it in the presence of the partner. For a limited partnership: [ ] Handing it to the general partner, named , or, because the general partner refused to take it when I tried to hand it over, by leaving it in the presence of the general partner. For a corporation: [ ] Handing it to the corporation's employee / officer / director / attorney in fact / named Justin 1 rettel (Signature of person executing service) Taken, subscribed and sworn before me this <u>14</u> day of My commission expires <u>2/16/24</u> JANUAL-20 21 Public Notary Commonwealth of Pennsylvania - Notary Seal (AFFIX SEAL IF NOTARIZED OUTSIDE THE STATE) David Gabriel Delallo, Notary Public Washington County My commission expires February 16, 2024 Commission number 1267492 RECEIVED Member, Pennsylvania Association of Notries of Oil and Gas JAN 1 9 2021 WV Department of Environmental Protection

### WW-70 Attachment

### Well List

Van Winkle N-16HU Van Winkle N-17HU Van Winkle N-18HU Van Winkle N-19HU Van Winkle S-20HU Van Winkle S-21HU Van Winkle S-22HU Van Winkle S-23HU

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# WEST VIRGINIA DEPARTMENT OF TRANSPORTATION Division of Highways

1900 Kanawha Boulevard East • Building Five • Room 110 Charleston, West Virginia 25305-0430 • (304) 558-3505

January 14, 2021

Byrd E. White, III Secretary of Transportation/ Commissioner of Highways

> Jimmy Wriston, P. E. Deputy Secretary/ Deputy Commissioner

James A. Martin, Chief Office of Oil and Gas Department of Environmental Protection 601 57<sup>th</sup> Street, SE Charleston, WV 25304

Subject: DOH Permit for the Hunter-Pethtel Pad, Marshall County Van Winkle S-23HU Well Site

Dear Mr. Martin,

This well site will be accessed from a DOH permit #06-2009-0275 which has been transferred to Tug Hill Operating for access to the State Road for a well site located off Marshall County Route 74 SLS.

This operator is in compliance with §22-6A-20 of the WV Code. Operator has signed a DISTRICT WIDE OIL AND GAS ROAD MAINTENANCE BONDING AGREEMENT and provided the required Bond. This operator is currently in compliance with the DOH OIL AND GAS POLICY dated October 1, 2018.

Very Truly Yours,

Day K. Clayton

Gary K. Clayton, P.E. Regional Maintenance Engineer Central Office O&G Coordinator

RECEIVED Office of Oil and Gas

JAN 19 2021

WV Department of Environmental Protection

07/16/2021

Cc: Amy Morris Tug Hill Operating CH, OM, D-6 File

E.E.O./AFFIRMATIVE ACTION EMPLOYER



### PLANNED ADDITIVES TO BE USED IN FRACTURING OR STIMULATION

CHEMICAL DESCRIPTION:	PRODUCT USE:	HAZARDOUS COMPONENT:
Hemicellulase Breaker	Breaker - Water	None
	Biocide	Glutaraldehyde – CAS#000111-30-8 Quatemary ammonium chloride CAS# 007173-51-5 Alky dimethyl benzyl ammonium Chloride (C12-16) – CAS#068424-85-1 Ethanol – CAS# 000064-17-5 Water – CAS# 007732-18-5
Silica Sand (various Mesh sizes)	Proppant	Crystalline silica (quartz) CAS# 14808-60-7
Silica Sand (100 mesh)	Sand	Silica – CAS# 14808-60-7
	Gellant - Water	Petroleum Distillate Blend – Proprietary, (Not Associated with Diesel Fuel) Guar gum – CAS# 009000-30-0
	Friction Reducer	Hydrotreated light distillate CAS# 064742-47-8
	Scale Inhibitor	Ethylene glycol – CAS# 000107-21-1 Diethylene glycol – CAS# 000111-46-6
	Hemicellulase Breaker Silica Sand (various Mesh sizes)	Hemicellulase BreakerBreaker - WaterBiocideSilica Sand (various Mesh sizes)ProppantSilica Sand (100 mesh)SandGellant - WaterFriction Reducer

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