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west virginia department of environmental protection

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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](http://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.

A blue ink signature of James A. Martin, Chief, is written over a white background.

James A. Martin  
Chief

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

Promoting a healthy environment.

07/16/2021



west virginia department of environmental protection

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

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: XCL Midstream Operating, LLC Van Winkle S-23HU

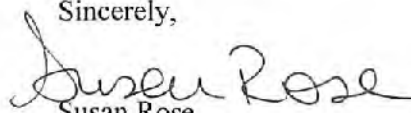
COUNTY: Marshall DISTRICT: Meade QUAD: Glen Easton

The deep well review of the application for the above company is Approved to drill to Trenton for 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,

  
Susan Rose  
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

07/16/2021

# 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

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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.

API Number: \_\_\_\_\_

## 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](mailto:DEPOOGNotify@wv.gov).

07/16/2021

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

1) Well Operator: Tug Hill Operating, LLC      494510851      Marshall      Meade      Glen Easton 7.5'  
Operator ID      County      District      Quadrangle

2) Operator's Well Number: Van Winkle S-23HU      Well Pad Name: Hunter Pethtel

3) Farm Name/Surface Owner: XcL Midstream Operating, LLC      Public Road Access: County Route 74

4) Elevation, current ground: 754'      Elevation, proposed post-construction: 754'

5) Well Type (a) Gas       Oil \_\_\_\_\_      Underground Storage \_\_\_\_\_

Other \_\_\_\_\_

(b) If Gas Shallow \_\_\_\_\_      Deep

Horizontal

6) Existing Pad: Yes or No Yes      *Bang Shiller 6-4-21*

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):  
Point Pleasant is the target formation at a depth of 10,987' - 11,107', thickness of 120' and anticipated pressure of approx. 7,500 psi.

8) Proposed Total Vertical Depth: 11,257'

9) Formation at Total Vertical Depth: Trenton

10) Proposed Total Measured Depth: 25,638'

11) Proposed Horizontal Leg Length: 13,996.01'

12) Approximate Fresh Water Strata Depths: 70; 415'

13) Method to Determine Fresh Water Depths: Offset well reports or noticeable flow at the flowline or when need to start soaping

14) Approximate Saltwater Depths: 870'

15) Approximate Coal Seam Depths: Sewickley Coal - 314' and Pittsburgh Coal - 409'

16) Approximate Depth to Possible Void (coal mine, karst, other): None anticipated

17) Does Proposed well location contain coal seams directly overlying or adjacent to an active mine?      Yes \_\_\_\_\_      No

(a) If Yes, provide Mine Info:      Name: \_\_\_\_\_  
Depth: \_\_\_\_\_  
Seam: \_\_\_\_\_  
Owner: \_\_\_\_\_

18)

**CASING AND TUBING PROGRAM**

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (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'	
Liners							

*Bay Stills  
1-22-21*

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (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 03 2021
Depths Set:	N/A			WV Department of Environmental Protection

WW-6B  
(10/14)

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

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.

*Bang Stealy 1-22-21*

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

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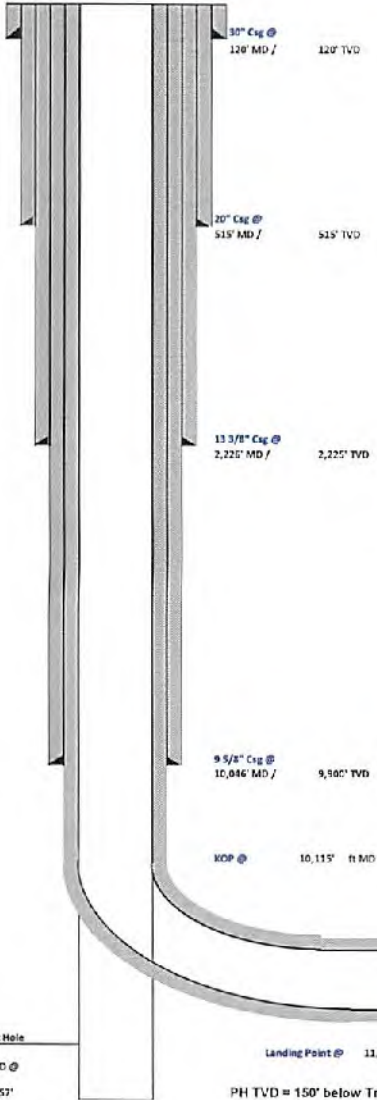
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\*Note: Attach additional sheets as needed.



WELL NAME: Van Winkle S-23HU  
 STATE: WV COUNTY: Marshall  
 DISTRICT: Meade  
 5F Elev: 754' 6I Elev: 754'  
 TD: 25,638'  
 TH Latitude: 39.781575  
 TH Longitude: -80.726901  
 BH Latitude: 39.749075  
 BH Longitude: -80.698788



FORMATION TOPS	
Formation	Depth TVD
Deepest Fresh Water	415'
Sewickley Coal	314'
Pittsburgh Coal	409'
Big Lime	1,630'
Berea	2,121'
Tully	6,050'
Maecius	6,143'
Onondaga	6,193'
Salina	6,914'
Lockport	7,974'
Utica	10,703'
Point Pleasant	10,987'
Landing Depth	11,094'
Trenton	11,107'
Pilot Hole TD	11,257'

CASING SUMMARY							
Type	Hole Size (in)	Csg Size (in)	Depth (MD)	Depth (TVD)	Weight (lb/ft)	Grade	Top of Cement
Conductor	36	30	120'	120'	6W	BW	Surface
Surface	76	20	515'	515'	105.5	J55	Surface
Intermediate 1	17 1/2	13 3/8	2,226'	2,225'	94.5	J55	Surface
Intermediate 2	12 1/4	9 5/8	10,046'	9,900'	47	HPP110	Surface
Production	8 1/2	5 1/2	25,638'	11,279'	23	HGP110	Surface

CEMENT SUMMARY				DRILLING DETAILS	
	Sacks	Class	Density	Fluid Type	Centralizer Notes
Conductor	118	A	15.6	Air	None
Surface	949	A	15.6	Air	3 Centralizers at equal distance
Intermediate 1	1,708	A	15	Air	1 Centralizer every other jt
Intermediate 2	2,802	A	14.5	Air	1 Centralizer every other jt
Production	5,383	A	15	Air / SOBIM	1 every other joint in lateral; 1 per joint in curve; 1 every other jt to s/c

*Baystiller 1-22-21*

Pilot Hole  
 PH TD @ 11,257'  
 Landing Point @ 11,644' MD / 11,094' TVD  
 PH TVD = 150' below Trenton Top

Lateral TD @ 25,638' ft MD  
 11,279' ft TVD

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**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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Well: Van Winkle S-23 HU (slot D)  
 Site: Van Winkle  
 Project: Marshall County, West Virginia  
 Design: rev3

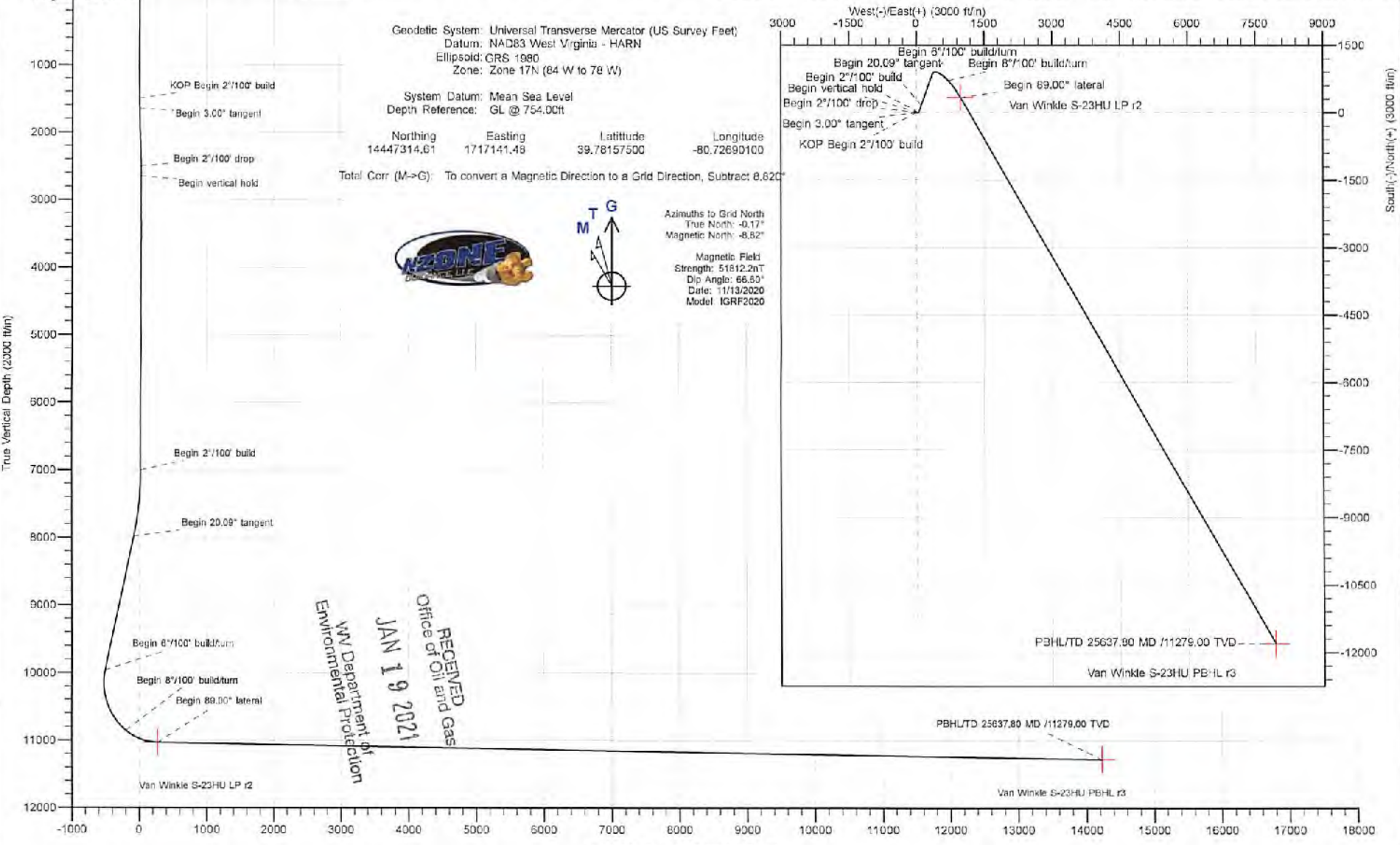
Rig:

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Van Winkle S-23HU LP r2	11034.00	331.46	983.13	14447546.07	1718124.61	39.78247700	-80.72339800
- plan misses target center by 0.05ft at 11644.40ft MD (11034.01 TVD, 331.49 N, 983.17 E)							
Van Winkle S-23HU PBHL r3	11279.00	-11808.81	7937.93	14435505.83	1725079.40	39.74907500	-80.69878900
- plug hits target center							

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	1500.00	0.00	0.00	1500.00	0.00	0.00	0.00	0.00	0.00	KOP Begin 2°/100' build
3	1650.00	3.00	90.00	1649.93	0.00	3.93	2.00	90.000	2.19	Begin 3.00° tangent
4	2501.24	3.00	90.00	2500.00	0.00	48.48	0.00	0.000	27.04	Begin 2°/100' drop
5	2551.24	0.00	90.00	2649.93	0.00	52.40	2.00	190.000	29.23	Begin vertical hold
6	7001.30	0.00	90.00	7000.00	0.00	52.40	0.00	90.000	29.23	Begin 2°/100' build
7	8005.69	20.09	19.59	7983.94	164.18	110.84	2.00	19.592	-74.42	Begin 20.09° tangent
8	10114.93	20.09	19.59	9954.87	846.68	353.76	0.00	0.000	-505.32	Begin 8°/100' build/turn
9	11135.07	50.00	137.23	10858.41	711.31	712.63	6.00	129.253	-193.19	Begin 8°/100' build/turn
10	11644.33	89.00	150.19	11034.00	331.54	983.13	8.00	20.068	273.31	Begin 89.00° lateral
11	25637.81	89.00	150.19	11279.00	-11808.81	7937.93	0.00	0.00014228.80		PBHLTD 25637.80 MD /11279.00 TVD



Vertical Section at 146.09° (2000 ft/in)



Planning Report - Geographic

Database:	DB_Dec2220_v16	Local Co-ordinate Reference:	Well Van Winkle S-23 HU (slot D)
Company:	Tug Hill Operating LLC	TVD Reference:	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		

Project	Marshall County, West Virginia		
Map System:	Universal Transverse Mercator (US Survey Feet)	System Datum:	Mean Sea Level
Geo Datum:	NAD83 West Virginia - HARN		
Map Zone:	Zone 17N (84 W to 78 W)		

Site	Van Winkle				
Site Position:		Northing:	14,447,389.50 usft	Latitude:	39.78172533
From:	Lat/Long	Easting:	1,717,188.44 usft	Longitude:	-80.72673327
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "		

Well	Van Winkle S-23 HU (slot D)					
Well Position	+N/-S	0.00 ft	Northing:	14,447,314.61 usft	Latitude:	39.78157500
	+E/-W	0.00 ft	Easting:	1,717,141.48 usft	Longitude:	-80.72690100
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	754.00 ft
Grid Convergence:		0.175 °				

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	11/13/2020	-8.646	66.595	51,812.16920531

Design	rev3				
Audit Notes:					
Version:	Phase:	PLAN	Tie On Depth:	0.00	
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.00	0.00	0.00	146.09	

Plan Survey Tool Program	Date 1/5/2021				
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	25,637.81 rev3 (Original Hole)	MWD MWD - Standard		

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Planning Report - Geographic

<b>Database:</b>	DB_Dec2220_v16	<b>Local Co-ordinate Reference:</b>	Well Van Winkle S-23 HU (slot D)
<b>Company:</b>	Tug Hill Operating LLC	<b>TVD Reference:</b>	GL @ 754.00ft
<b>Project:</b>	Marshall County, West Virginia	<b>MD Reference:</b>	GL @ 754.00ft
<b>Site:</b>	Van Winkle	<b>North Reference:</b>	Grid
<b>Well:</b>	Van Winkle S-23 HU (slot D)	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	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	846.66	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	69.00	150.19	11,034.01	331.54	983.13	8.00	7.66	2.55	20.096	
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 F

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Planning Report - Geographic

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

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Planned Survey

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Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (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	-80.72690100
100.00	0.00	0.00	100.00	0.00	0.00	14,447,314.61	1,717,141.48	39.78157500	-80.72690100
200.00	0.00	0.00	200.00	0.00	0.00	14,447,314.61	1,717,141.48	39.78157500	-80.72690100
300.00	0.00	0.00	300.00	0.00	0.00	14,447,314.61	1,717,141.48	39.78157500	-80.72690100
400.00	0.00	0.00	400.00	0.00	0.00	14,447,314.61	1,717,141.48	39.78157500	-80.72690100
500.00	0.00	0.00	500.00	0.00	0.00	14,447,314.61	1,717,141.48	39.78157500	-80.72690100
600.00	0.00	0.00	600.00	0.00	0.00	14,447,314.61	1,717,141.48	39.78157500	-80.72690100
700.00	0.00	0.00	700.00	0.00	0.00	14,447,314.61	1,717,141.48	39.78157500	-80.72690100
800.00	0.00	0.00	800.00	0.00	0.00	14,447,314.61	1,717,141.48	39.78157500	-80.72690100
900.00	0.00	0.00	900.00	0.00	0.00	14,447,314.61	1,717,141.48	39.78157500	-80.72690100
1,000.00	0.00	0.00	1,000.00	0.00	0.00	14,447,314.61	1,717,141.48	39.78157500	-80.72690100
1,100.00	0.00	0.00	1,100.00	0.00	0.00	14,447,314.61	1,717,141.48	39.78157500	-80.72690100
1,200.00	0.00	0.00	1,200.00	0.00	0.00	14,447,314.61	1,717,141.48	39.78157500	-80.72690100
1,300.00	0.00	0.00	1,300.00	0.00	0.00	14,447,314.61	1,717,141.48	39.78157500	-80.72690100
1,400.00	0.00	0.00	1,400.00	0.00	0.00	14,447,314.61	1,717,141.48	39.78157500	-80.72690100
1,500.00	0.00	0.00	1,500.00	0.00	0.00	14,447,314.61	1,717,141.48	39.78157500	-80.72690100
<b>KOP Begin 2°/100' build</b>									
1,600.00	2.00	90.00	1,599.98	0.00	1.75	14,447,314.61	1,717,143.23	39.78157498	-80.72689479
1,650.00	3.00	90.00	1,649.93	0.00	3.93	14,447,314.61	1,717,145.41	39.78157497	-80.72688703
<b>Begin 3.00° tangent</b>									
1,700.00	3.00	90.00	1,699.86	0.00	6.54	14,447,314.61	1,717,146.03	39.78157495	-80.72687771
1,800.00	3.00	90.00	1,799.73	0.00	11.78	14,447,314.61	1,717,153.26	39.78157490	-80.72685908
1,900.00	3.00	90.00	1,899.59	0.00	17.01	14,447,314.61	1,717,158.49	39.78157486	-80.72684045
2,000.00	3.00	90.00	1,999.45	0.00	22.24	14,447,314.61	1,717,163.73	39.78157482	-80.72682193
2,100.00	3.00	90.00	2,099.31	0.00	27.48	14,447,314.61	1,717,168.96	39.78157477	-80.72680320
2,200.00	3.00	90.00	2,199.18	0.00	32.71	14,447,314.61	1,717,174.19	39.78157473	-80.72678457
2,300.00	3.00	90.00	2,299.04	0.00	37.94	14,447,314.61	1,717,179.43	39.78157468	-80.72676594
2,400.00	3.00	90.00	2,398.90	0.00	43.18	14,447,314.61	1,717,184.66	39.78157464	-80.72674731
2,500.00	3.00	90.00	2,498.77	0.00	48.41	14,447,314.61	1,717,189.89	39.78157460	-80.72672868
2,501.24	3.00	90.00	2,500.00	0.00	49.48	14,447,314.61	1,717,189.96	39.78157460	-80.72672845
<b>Begin 2°/100' drop</b>									
2,600.00	1.02	90.00	2,598.70	0.00	51.94	14,447,314.61	1,717,193.43	39.78157457	-80.72671611
2,651.24	0.00	0.00	2,649.93	0.00	52.40	14,447,314.61	1,717,193.88	39.78157456	-80.72671448
<b>Begin vertical hold</b>									
2,700.00	0.00	0.00	2,698.70	0.00	52.40	14,447,314.61	1,717,193.88	39.78157456	-80.72671448
2,800.00	0.00	0.00	2,798.70	0.00	52.40	14,447,314.61	1,717,193.88	39.78157456	-80.72671448
2,900.00	0.00	0.00	2,898.70	0.00	52.40	14,447,314.61	1,717,193.88	39.78157456	-80.72671448
3,000.00	0.00	0.00	2,998.70	0.00	52.40	14,447,314.61	1,717,193.88	39.78157456	-80.72671448
3,100.00	0.00	0.00	3,098.70	0.00	52.40	14,447,314.61	1,717,193.88	39.78157456	-80.72671448
3,200.00	0.00	90.00	3,198.70	0.00	52.40	14,447,314.61	1,717,193.88	39.78157456	-80.72671448
3,300.00	0.00	0.00	3,298.70	0.00	52.40	14,447,314.61	1,717,193.88	39.78157456	-80.72671448
3,400.00	0.00	0.00	3,398.70	0.00	52.40	14,447,314.61	1,717,193.88	39.78157456	-80.72671448
3,500.00	0.00	90.00	3,498.70	0.00	52.40	14,447,314.61	1,717,193.88	39.78157456	-80.72671448
3,600.00	0.00	0.00	3,598.70	0.00	52.40	14,447,314.61	1,717,193.88	39.78157456	-80.72671448
3,700.00	0.00	0.00	3,698.70	0.00	52.40	14,447,314.61	1,717,193.88	39.78157456	-80.72671448
3,800.00	0.00	0.00	3,798.70	0.00	52.40	14,447,314.61	1,717,193.88	39.78157456	-80.72671448
3,900.00	0.00	0.00	3,898.70	0.00	52.40	14,447,314.61	1,717,193.88	39.78157456	-80.72671448
4,000.00	0.00	0.00	3,998.70	0.00	52.40	14,447,314.61	1,717,193.88	39.78157456	-80.72671448
4,100.00	0.00	0.00	4,098.70	0.00	52.40	14,447,314.61	1,717,193.88	39.78157456	-80.72671448
4,200.00	0.00	90.00	4,198.70	0.00	52.40	14,447,314.61	1,717,193.88	39.78157456	-80.72671448
4,300.00	0.00	0.00	4,298.70	0.00	52.40	14,447,314.61	1,717,193.88	39.78157456	-80.72671448
4,400.00	0.00	0.00	4,398.70	0.00	52.40	14,447,314.61	1,717,193.88	39.78157456	-80.72671448
4,500.00	0.00	0.00	4,498.70	0.00	52.40	14,447,314.61	1,717,193.88	39.78157456	-80.72671448
4,800.00	0.00	0.00	4,598.70	0.00	52.40	14,447,314.61	1,717,193.88	39.78157456	-80.72671448







Planning Report - Geographic

Database: DB\_Dec2220\_v16
Company: Tug Hill Operating LLC
Project: Marshall County, West Virginia
Site: Van Winkle
Well: Van Winkle S-23 HU (slot D)
Wellbore: Original Hole
Design: rev3

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

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Planned Survey

Table with 10 columns: Measured Depth (ft), Inclination (°), Azimuth (°), Vertical Depth (ft), +N-S (ft), +E-W (ft), Map Northing (usft), Map Easting (usft), Latitude, Longitude. It contains 40 rows of survey data.





Planning Report - Geographic

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

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Planned Survey table with columns: Measured Depth (ft), Inclination (°), Azimuth (°), Vertical Depth (ft), +N/-S (ft), +E/-W (ft), Map Northing (usft), Map Easting (usft), Latitude, Longitude. Contains 30 rows of well log data.



Planning Report - Geographic

<b>Database:</b>	DB_Dec2220_v16	<b>Local Co-ordinate Reference:</b>	Well Van Winkle S-23 HU (slot D)
<b>Company:</b>	Tug Hill Operating LLC	<b>TVD Reference:</b>	GL @ 754.00ft
<b>Project:</b>	Marshall County, West Virginia	<b>MD Reference:</b>	GL @ 754.00ft
<b>Site:</b>	Van Winkle	<b>North Reference:</b>	Grid
<b>Well:</b>	Van Winkle S-23 HU (slot D)	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	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	11,278.59	-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	-80.69876802
<b>PBHL/TD 25637.80 MD /11279.00 TVD</b>									
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	-80.69876800

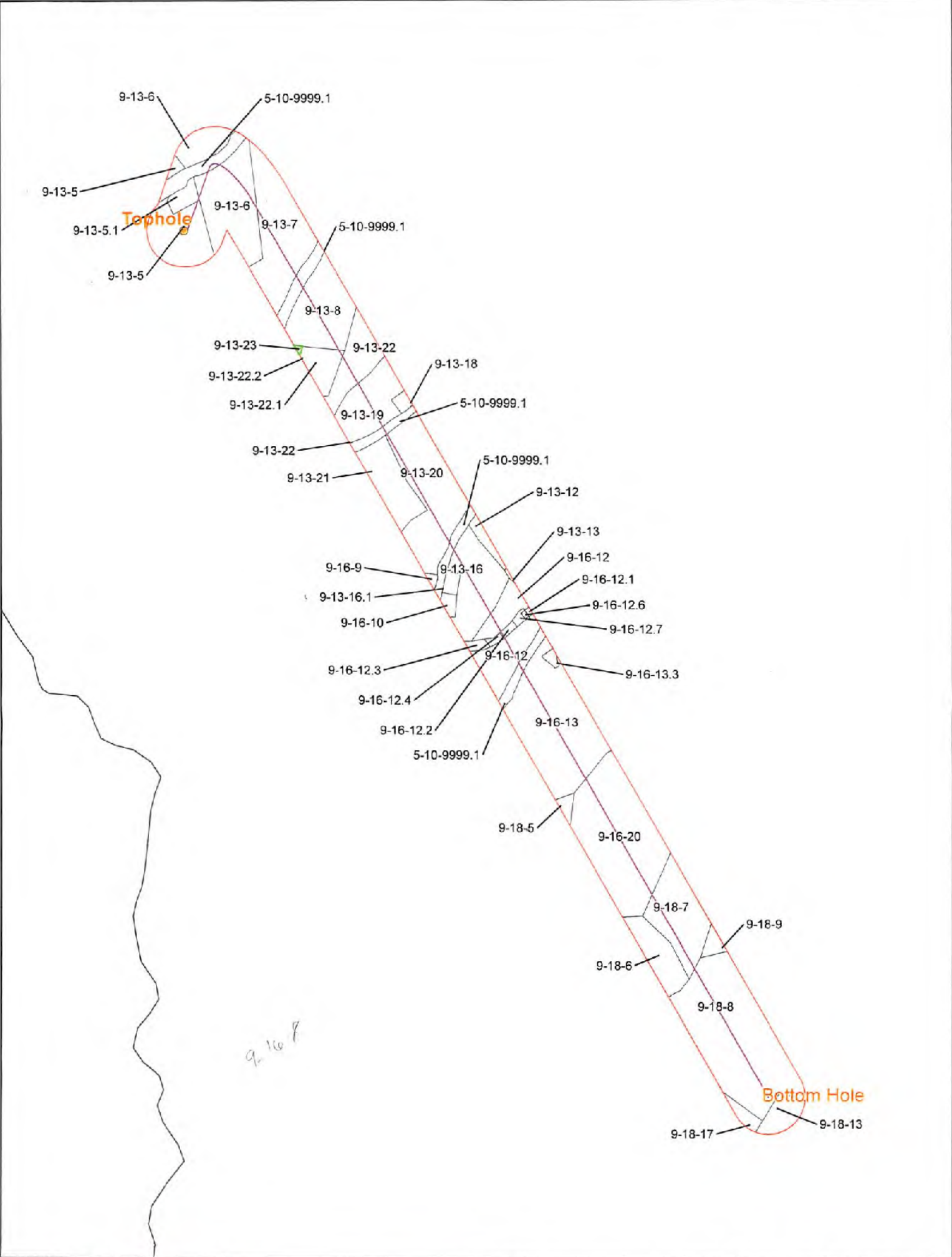
Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Van Winkle S-23HU LP I - hit/miss target - Shape - Point	0.00	0.00	11,034.00	331.46	983.13	14,447,646.08	1,718,124.61	39.78247700	-80.72339800
- plan misses target center by 0.05ft at 11644.40ft MD (11034.01 TVD, 331.49 N, 983.17 E)									
Van Winkle S-23HU PB I - plan hits target center - Point	0.00	0.00	11,279.00	-11,808.81	7,937.93	14,435,505.83	1,725,079.40	39.74907500	-80.69876800

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
25,637.81	11,279.00	20" Casing	20	24	

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment	
1,500.00	1,500.00	0.00	0.00	KOP Begin 2°/100' build	
1,650.00	1,649.93	0.00	3.93	Begin 3.00° tangent	
2,501.24	2,500.00	0.00	48.48	Begin 2°/100' drop	
2,651.24	2,649.93	0.00	52.40	Begin vertical hold	
7,001.30	7,000.00	0.00	52.40	Begin 2°/100' build	
8,005.69	7,983.94	164.18	110.84	Begin 20.09° tangent	
10,114.93	9,964.87	846.68	353.76	Begin 6°/100' build/tum	
11,135.07	10,856.41	711.81	712.63	Begin 8°/100' build/tum	
11,644.33	11,034.01	331.55	983.13	Begin 89.00° lateral	
25,637.80	11,279.00	-11,808.80	7,937.92	PBHL/TD 25637.80 MD /11279.00 TVD	




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Coordinate System: NAD 1983 (114 Zone 17)  
 Projection: Transverse Mercator  
 Datum: North American 1983  
 False Easting: 1640,416 (566)  
 False Northing: 0.0000  
 Central Meridian: 41.5000  
 Scale Factor: 0.9999  
 Latitude Of Origin: 39.0000  
 Units: Feet US

**CONFIDENTIAL**

-  Utica Well
-  Force Pool
-  500' Buffer

**Van Winkle S-23HU**  
 Operators within 500 Feet of Well Borehole



**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, [apicard@dpslandservices.com](mailto:apicard@dpslandservices.com), 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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Page 1 of 5  
JAN 19 2021

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07/16/2021

Permit well - Van Winkle S-23HU

Wells within 500' Buffer

Note: Well spots depicted on Area of Review map are derived from State held coordinates. The spots 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 spots.

API Number	Operator Name	Total Depth	Perforated Fms	Producing zones 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 I 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, well is a proposed well. The well was not drilled. This is a canceled permit.	A canceled permit.
4705101846	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.
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 Light & Heat Co.	Unknown	Unknown	Unknown	Unknown but unlikely. The well likely 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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Location Information View Map

Table with columns: API, COUNTY, PERMIT, TAX\_DISTRICT, QUAD\_75, QUAD\_15, LAT\_6D, LON\_6D, UTM\_E, UTM\_N

There is no Bottom Hole Location data for this well

Owner Information

Table with columns: API, CMP\_ID, SUFFIX, STATUS, SURFACE\_OWNER, WELL\_NUM, CO\_NUM, LEASE, LEASE\_NUM, MINERAL\_OWN, OPERATOR, AC\_COMPLETION, PRCP\_VID, PRCP\_THICK\_FM, TFM\_EST\_PR

Completion Information

Table with columns: API, CMP\_ID, SPOD\_ID, ELEV, DATUM, FIELD, DEEPEST\_FM, DEEPEST\_FTM, INITIAL\_CLASS, FINAL\_CLASS, TYPE, RIG, CMP\_MTHD, TVD, TMD, NEW\_FTG, KOD, G\_BEF, G\_AFF, O\_BEF, O\_AFT, NGL\_BEF, NGL\_AFT, P\_BEF, P\_AFT, TL\_AFT, BH\_P\_BEF, BH\_P\_AFT, G\_MSRD\_BY

Pay/Show/Water Information

Table with columns: API, CMP\_ID, ACTIVITY, PRODUCT, SECTION, DEPTH\_TOP, FM\_TOP, DEPTH\_BOT, FM\_BOT, G\_BEF, G\_AFF, O\_BEF, O\_AFT, WATER\_QNTTY

Production Gas Information (Volumes in Mcf)

Table with columns: API, PRODUCING\_OPERATOR, PRD\_YEAR, ANN\_GAS, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DCM

Production Oil Information (Volumes in Bbl) \*\* some operators may have reported NGL under Oil

Table with columns: API, PRODUCING\_OPERATOR, PRD\_YEAR, ANN\_OIL, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DCM

Production NGL Information (Volumes in Bbl) \*\* some operators may have reported NGL under Oil

Table with columns: API, PRODUCING\_OPERATOR, PRD\_YEAR, ANN\_NGL, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DCM

Production Water Information (Volumes in Gallons)

Table with columns: API, PRODUCING\_OPERATOR, PRD\_YEAR, ANN\_WTR, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DCM

Stratigraphy Information

Table with columns: API, LITHO, FILM, FM\_QUALITY, DEPTH\_TOP, DEPTH\_QUALITY, THICKNESS, THICKNESS\_QUALITY, ELEV, DATUM

Wireline (E-Log) Information

Table with columns: API, LOG\_TOP, LOG\_BOT, DEEPEST\_FML, LOGS\_AVAILABLE, SCAN, DIGITIZED, GR\_TOP, GR\_BOT, D\_TOP, D\_BOT, N\_TOP, N\_BOT, L\_TOP, L\_BOT, T\_TOP, T\_BOT, S\_TOP, S\_BOT, O\_TOP, O\_BOT, INCH2, INCHS, REDUCED, WOP, LOGMOD, ELEV\_WB, ELEV\_GL, ELEV\_DF, LOG\_MSRD\_FROM

Comment: logs caliber, pe, tension, ll, amplitude, ccl, vdr, bit size,

Downloadable Log Images: We advise you to save the log image file to your PC for viewing. To do so, right-click the log image of interest and select the save option. Then you can direct the file to a location of your choice. Please note these images vary in size and some may take several minutes to download, especially if using a 56k or slower dialup connection.

Quick Reference Guide for Log File Names For more info about WVGES scanned logs click here

Table with columns: FILENAME, log type description

Other logs may include, but are not limited to, such curves as audio, bit size, CCL—casing collar locator, continuous meter, geophysical surveys, gas detector, guard, NCTR—Nuclear Cement Top Locator, radioactive tracer, tension

There is no Plugging data for this well

There is no Sample data for this well

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Location Information: View Map

Table with columns: API, COUNTY, PERMIT, TAX\_DISTRICT, QUAD 75, QUAD 15, LAT\_DD, LONG\_DD, UTM\_E, UTM\_N

Bottom Hole Location Information:

Table with columns: API, EP\_FLAG, UTM\_E, UTM\_N, LONG\_DD, LAT\_DD

Owner Information:

Table with columns: API, CMP\_DT, SUFFIX, STATUS, SURFACE\_OWNER, WELL\_NUM, CD\_NUM, LEASE, LEASE\_NUM, MINERAL\_OWN, OPERATOR, AT\_COMPLETION, PROP\_VD, PROP\_TRGT\_FM, TFM\_EST\_PR

Completion Information:

Table with columns: API, CMP\_DT, SPUD\_DT, ELEV DATUM, FIELD, DEEPEST\_FM, DEEPEST\_FMT, INITIAL\_CLASS, FINAL\_CLASS, TYPE, RIG, CMP\_MTHD, IVD, IMD, NEW\_FIG, KOD, C\_BEF, G\_AFT, O\_BEF, D\_AFT, NGL\_REF, NGL\_AFT, P\_REF, TL\_REF, P\_AFT, TL\_AFT, SH\_P\_REF, RH\_P\_AFT, G\_MSRD\_BY

Pay/Show/Water Information:

Table with columns: API, CMP\_DT, ACTIVITY, PRODUCT, SECTION, DEPTH\_TOP, FM\_TOP, DEPTH\_BOI, FM\_BOI, G\_BEF, G\_AFT, O\_BEF, G\_AFT, WATER\_QNTY

Production Gas Information: (Volumes in Mcf)

Table with columns: API, PRODUCING\_OPERATOR, PRD\_YEAR, ANN\_GAS, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DCM

Production Oil Information: (Volumes in Bbl) \*\* some operators may have reported NGL under Oil

Table with columns: API, PRODUCING\_OPERATOR, PRD\_YEAR, ANN\_OIL, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DCM

Production NGL Information: (Volumes in Bbl) \*\* some operators may have reported NGL under Oil

Table with columns: API, PRODUCING\_OPERATOR, PRD\_YEAR, ANN\_NGL, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DCM

Production Water Information: (Volumes in Gallons)

Table with columns: API, PRODUCING\_OPERATOR, PRD\_YEAR, ANN\_WTR, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DCM

Stratigraphy Information:

Table with columns: API, SUFFIX, FM, FM\_QUALITY, DEPTH\_TOP, DEPTH\_QUALITY, THICKNESS, THICKNESS\_QUALITY, ELEV DATUM

Wireline (E-Log) Information:

Table with columns: API, LOG\_TOP, LOG\_BOT, DEEPEST\_FML, LOGS\_AVAILABLE, SCAN, DIGITIZED, GR\_TOP, GR\_BOT, D\_TOP, D\_BOT, N\_TOP, N\_BOT, L\_TOP, L\_BOT, T\_TOP, T\_BOT, S\_TOP, S\_BOT, O\_TOP, O\_BOT, INCH2, INCH5, REDUCED, KOP, LOGMO, ELEV\_KB, ELEV\_GL, ELEV\_DF, LOG\_MSRD, FROM

Comment: \*logs: ROP, tool temp

Downloadable Log Images. We advise you to save the log image file to your PC for viewing. To do so, right-click the tif image of interest and select the save option. Then you can direct the file to a location of your choice. Please note these images vary in size and some may take several minutes to download, especially if using a 56k or slower dialup connection.

Quick Reference Guide for Log File Names. For more info about WAGES scanned logs click [here](#)

Table with columns: FILENAME, 4705101330\_00\_5m\_0m\_tvd.tif, 4705101330\_00\_5m\_0m\_tvd.tif

- geologic log types:
d density (includes bulk density, compensated density, density, density porosity, grain density, matrix density, etc.)
e photoelectric absorption (PE or Pe, etc.)
g gamma ray
i induction (includes dual induction, medium induction, deep induction, etc.)
l laterolog
m diameter
n neutron (includes neutron porosity, sidewall neutron-SW/N, etc.)
o other
s sonic or velocity
t temperature (includes borehole temperature, BHT, differential temperature, etc.)
z spontaneous potential or potential
mechanical log types:
b cement bond
c caliper
o other
p perforation depth control or perforate

Other logs may include, but are not limited to, such curves as audio, bit size, CCL-casing collar locator, continuous meter, directional survey, gas detector, guard, NCTL-Nuclear Cement Top Locator, radioactive tracer, tension

There is no Plugging data for this well

There is no Sample data for this well

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_16	LAT_DD	LONG_DD	UTME	UTMN
4705101846	Marshall	1846	Meade	Glen Easton	Cameron	39 78 1827	-80 75 5802	523411 3	44035578 3

Bottom Hole Location Information:

API	EP_FLAG	UTME	UTMN	LONG_DD	LAT_DD
4705101846	1 As Proposed	521973 5	4404978 5	-80 743542	39 79 4481

Owner Information:

API	CMP_DT	SUFFIX	STATUS	SURFACE_OWNER	WELL_NUM	CO_NUM	LEASE	LEASE_NUM	MINERAL_OWN	OPERATOR_AT_COMPLETION	PROP_VD	PROP_TRGT_FM	TFM_EST_PR
4705101846	-/-	Divd Cqnl Loc	Cancelled	Dennis W Hunter	9H		Hunter Petibel		Dennis W Hunter et al	Stone Energy Corporation	6110	Marcellus Fm	

Completion Information:

API	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_BEFO	G_AFT	O_BEFO	O_AFT	NGL_BEFO	NGL_AFT	P_BEFO	TI_BEFO	P_AFT	TI_AFT	BH_P_BEFO	BH_P_AFT	G_MSRD_BY
4705101846	-/-	-/-	756	Ground Level																									

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	DCM
4705101846	EQT 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

API	PRODUCING_OPERATOR	PRD_YEAR	ANN_OIL	JAN	FEB	MAR	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

Production NGL Information: (Volumes in Bbl) \*\* some operators may have reported NGL under Oil

API	PRODUCING_OPERATOR	PRD_YEAR	ANN_NGL	JAN	FEB	MAR	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

Production Water Information: (Volumes in Gallons)

API	PRODUCING_OPERATOR	PRD_YEAR	ANN_WTR	JAN	FEB	MAR	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

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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Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LONG_DD	UTME	UTMN
4705101847	Marshall	1847	Meade	Glen Easton	Cameron	39.781755	-81.72647	623422.6	4403570.4

Bottom Hole Location Information:

API	EP_FLAG	UTME	UTMN	LONG_DD	LAT_DD
4705101847	1 As Proposed	523970	4401941.7	-80.750137	39.787065

Owner Information:

API	CMP_DT	SUFFIX	STATUS	SURFACE_OWNER	WELL_NUM	CO_NUM	LEASE	LEASE_NUM	MINERAL_OWN	OPERATOR_AT_COMPLETION	PROP_VD	PROP_TRGT_FM	TFM_EST_PR
4705101847	7/1	Divd Cntrl Loc	Cancelled	Dennis W Hunter	4H		Hunter Pethtel		Dennis W Hunter et al	Stone Energy Corporation	6250	Marcellus Fin	

Completion Information:

API	CMP_DT	SPUD_DT	ELEV	DATUM	FIELD	DEEPEST_FTM	DEEPEST_FMT	INITIAL_CLASS	FINAL_CLASS	TYPE	RIG	CMP_MTHD	TVD	TMD	NEW_FTG	KOO	G_BEF	G_AFT	O_BEF	O_AFT	NGL_BEF	NGL_AFT	P_BEF	T1_BEF	P_AFT	T1_AFT	BH_P_BEF	BH_P_AFT	G_MSRD_BY
4705101847	7/1	7/1	785	Ground Level																									

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	DCM
4705101847	EQT 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

API	PRODUCING_OPERATOR	PRD_YEAR	ANN_OIL	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

Production NGL Information: (Volumes in Bbl) \*\* some operators may have reported NGL under Oil

API	PRODUCING_OPERATOR	PRD_YEAR	ANN_NGL	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

Production Water Information: (Volumes in Gallons)

API	PRODUCING_OPERATOR	PRD_YEAR	ANN_WTR	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

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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Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_76	QUAD_16	LAT_DD	LONG_DD	UTME	UTMN
4705101859	Marshall	1859	Meade	Glen Easton	Cameron	39.78156	-80.726875	523388	4403548.6

Bottom Hole Location Information:

API	EP_FLAG	UTME	UTMN	LONG_DD	LAT_DD
4705101859	1	As Proposed	521903.3	4404681.6	-80.744175

Owner Information:

API	CMP_DT	SUFFIX	STATUS	SURFACE_OWNER	WELL_NUM	CO_NUM	LEASE	LEASE_NUM	MINERAL_OWN	OPERATOR_AY_COMPLETION	PROP_VD	PROP_TRGT_FM	TFM_EST_PR
4705101859	..	Dvld Orgnl Loc	Cancelled	Dennis W Hunter	BH		Huxter Pethtel		Dennis W Hunter et al	Stone Energy Corporation	6140	Masteliza Fm	

Completion Information:

API	CMP_DT	SPUD_DT	ELEV DATUM	FIELD	DEEPEST_FM	DEEPEST_FMT	INITIAL_CLASS	FINAL_CLASS	TYPE	RIG	CMP_MTHD	TVD	TMD	NEW_FYD	KOD	G_BEF	G_AFT	O_BEF	O_AFT	NGL_BEF	NGL_AFT	P_BEF	TI_BEF	P_AFT	TI_AFT	BH_P_BEF	BH_P_AFT	G_MSRD_BY
4705101859	..	..	755 Ground Level																									

Comment: -/- Plat coordinates hard to read, blurry Per WVDEP OOG website, well 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	DCM
4705101859	EQT 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

API	PRODUCING_OPERATOR	PRD_YEAR	ANN_OIL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DCM
4705101859	EQT Production Company	2018	0	0	0	0	0	0	0	0	0	0	0	0	0

Production NGL Information: (Volumes in Bbl) \*\* some operators may have reported NGL under Oil

API	PRODUCING_OPERATOR	PRD_YEAR	ANN_NGL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DCM
4705101859	EQT Production Company	2018	0	0	0	0	0	0	0	0	0	0	0	0	0

Production Water Information: (Volumes in Gallons)

API	PRODUCING_OPERATOR	PRD_YEAR	ANN_WTR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DCM
4705101859	EQT Production Company	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

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_16	LAT_DD	LONG_DD	UTME	UTMN
4705101860	Marshall	1860	Meads	Glen Easton	Cameron	39.781673	-80.726548	523416	4403561.3

Bottom Hole Location Information:

API	EP	FLAG	UTME	UTMN	LONG_DD	LAT_DD
4705101860	1	As Proposed	522074.3	4405230.4	-80.74218	39.796746

Owner Information:

API	CMP_DT	SUFFIX	STATUS	SURFACE_OWNER	WELL_NUM	CO_NUM	LEASE	LEASE_NUM	MINERAL_OWN	OPERATOR_AT_COMPLETION	PROP_VD	PROP_TRGT_FM	TFM_EST_PR
4705101860	--		Cancelled	Dennis W Hunter	101		Hunter Petrol		Dennis W Hunter et al	Stone Energy Corporation	6140	Mercedes Pm	

Completion Information:

API	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	O_BEF	O_AFT	NGL_BEF	NGL_AFT	P_BEF	TL_BEF	P_AFT	TL_AFT	BH_P_BEF	BH_P_AFT	G_MSRD_BY
4705101860	--	--	755	Ground Level																									

Comment: -- Per WVDEP OOG website, well 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	DCM
4705101860	EQT 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

API	PRODUCING_OPERATOR	PRD_YEAR	ANN_OIL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DCM
4705101860	EQT Production Company	2018	0	0	0	0	0	0	0	0	0	0	0	0	0

Production NGL Information: (Volumes in Bbl) \*\* some operators may have reported NGL under Oil

API	PRODUCING_OPERATOR	PRD_YEAR	ANN_NGL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DCM
4705101860	EQT Production Company	2018	0	0	0	0	0	0	0	0	0	0	0	0	0

Production Water Information: (Volumes in Gallons)

API	PRODUCING_OPERATOR	PRD_YEAR	ANN_WTR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DCM
4705101860	EQT Production Company	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

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Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_76	QUAD_15	LAT_DD	LOW_DD	UTME	UTMN
4705101866	Marshall	1866	Meade	Gen Easton	Cameron	39 781782	-80 726409	523427 0	4403573 4

Bottom Hole Location Information:

API	EP_FLAG	UTME	UTMN	LOW_DD	LAT_DD
4705101866	1	As Proposed	524237 2	4402287 1	-80 717005 39 77017

Owner Information:

API	CMP_DT	SUFFIX	STATUS	SURFACE_OWNER	WELL_NUM	CO_NUM	LEASE	LEASE_NUM	MINERAL_OWN	OPERATOR_AT_COMPLETION	PROP_V0	PROP_TRGT_FM	TFM_EST_FR
4705101866	--	Drill Orig Loc	Cancelled	Dennis W Hunter	5H		Hunter/Petroleum		Dennis W Hunter et al	Stone Energy Corporation	6250	Marcellus Fr	4200

Completion Information:

API	CMP_DT	SPUD_DT	ELEV DATUM	FIELD	DEEPEST_FM	DEEPEST_FWT	INITIAL_CLASS	FINAL_CLASS	TYPE	RIG	CMP_MTHD	TVD	TMD	NEW_FYD	KOD	G_BEF	G_AFT	O_BEF	O_AFT	NGL_BEF	NGL_AFT	P_BEF	P_AFT	TL_AFT	BH_P_BEF	BH_P_AFT	G_MSRD_BY
4705101866	--	--	765 Ground Level																								

Comment: -- Per WVDEP OOG website, well 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	DCM
4705101866	EGT 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

API	PRODUCING_OPERATOR	PRD_YEAR	ANN_OIL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DCM
4705101866	EGT Production Company	2018	0	0	0	0	0	0	0	0	0	0	0	0	0

Production NGL Information: (Volumes in Bbl) \*\* some operators may have reported NGL under Oil

API	PRODUCING_OPERATOR	PRD_YEAR	ANN_NGL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DCM
4705101866	EGT Production Company	2018	0	0	0	0	0	0	0	0	0	0	0	0	0

Production Water Information: (Volumes in Gallons)

API	PRODUCING_OPERATOR	PRD_YEAR	ANN_WTR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DCM
4705101866	EGT Production Company	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

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Geological & Economic Survey.

Well: County = 61 Permit = 30115

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

Location Information: [View Map](#)

#	COUNTY	PERMIT	TAX_DISTRICT	QUAD_76	QUAD_16	LAT_DD	LONG_DD	UTM_E	UTM_N
05130115	Marshall	30115	Meade	Green Easton	Cameron	39.763954	-90.706374	524978.6	4401599.6

There is no Bottom Hole Location data for this well

Owner Information:

#	CMP_DT	SUFFIX	STATUS	SURFACE_OWNER	WELL_NUM	CO_NUM	LEASE	LEASE_NUM	MINERAL_OWN	OPERATOR_AT_COMPLETION	PROP_VD	PROP_TRGT_FM	TFM_EST_PR
05130115	5/13/1902	Original Loc.	Completed	Hayley Kemp	1	49	Peter Kemp	2008	Unknown	Hope Natural Gas Company			

Completion Information:

#	CMP_DT	SPUD_DT	ELEV	DATUM	FIELD	DEEPEST_FM	DEEPEST_FMT	INITIAL_CLASS	FINAL_CLASS	TYPE	RIG	CMP_MTHD	TVD	TMD	NEW_FTS	KOD	G_BEF	G_AFT	O_BEF	O_AFT	NGL_BEF	NGL_AFT	P_BEF	P_AFT	T_AFT	BH_P_BEF	BH_P_AFT	G_MSRD_BY	
05130115	5/13/1902	3/26/1902	698	Ground Level	Cameron-Garner	Gordon	Gordon	Development Well	Unclassified	Gas	Cable Tool	Shot	2329		2329		0	0	0	0	0	0	0	0	0	0	0	0	

Show Water Information:

#	CMP_DT	ACTIVITY	PRODUCT	SECTION	DEPTH_TOP	FML_TOP	DEPTH_BOT	FML_BOT	G_BEF	G_AFT	O_BEF	O_AFT	WATER_QNTY
05130115	5/13/1902	Pay	Gas	Vertical	2318	Gordon	2325	Gordon	0	0			

There is no Production Gas data for this well

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

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

There is no Production Water data for this well

Stratigraphy Information:

#	SUFFIX	FM	FM_QUALITY	DEPTH_TOP	DEPTH_QUALITY	THICKNESS	THICKNESS_QUALITY	ELEV	DATUM
05130115	Original Loc	Sevickley coal	Well Record	90	Reasonable	5	Reasonable	698	Ground Level
05130115	Original Loc	Pittsburgh coal	Well Record	313	Reasonable	10	Reasonable	698	Ground Level
05130115	Original Loc	Salt Sands (sandst)	Well Record	1015	Reasonable	185	Reasonable	698	Ground Level
05130115	Original Loc	Big Lins	Well Record	1310	Reasonable	46	Reasonable	698	Ground Level
05130115	Original Loc	Big Injan (undist)	Well Record	1350	Reasonable	300	Reasonable	698	Ground Level
05130115	Original Loc	Gordon Stray	Well Record	2276	Reasonable	5	Reasonable	698	Ground Level
05130115	Original Loc	Gordon	Well Record	2316	Reasonable	13	Reasonable	698	Ground Level

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

Logging Information:

#	PLG_DT	DEPTH_PBT
05130115	12/18/1939	0

There is no Sample data for this well

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Location Information: [View Map](#)

WELL	COUNTY	PERMIT	TAX DISTRICT	QUAD_75	QUAD_16	LAT_DD	LONG_DD	UTM_E	UTM_N
705170299	Marshall	70299	Meade	Wileyville	Liteton	39.747901	-80.636381	525840.5	4399820.8

There is no Bottom Hole Location data for this well

Owner Information:

WELL	CMP_DT	SUFFIX	STATUS	SURFACE_OWNER	WELL_NUM	CO_NUM	LEASE	LEASE_NUM	MINERAL_OWN	OPERATOR_AT_COMPLETION	PROP_VD	PROP_TRGT_FM	TFM_EST_PR
705170299	++		unknown	Prsty Msp Frank Weigand			3147			Manufacturers Light & Heat Co			

Completion Information:

WELL	CMP_DT	SPUD_DT	ELEV	DATUM	FIELD	DEEPEST_FM	DEEPEST_FMT	INITIAL_CLASS	FINAL_CLASS	TYPE	RIG	CMP_MTHD	TYD	TMD	NEW_FTG	KOD	G_BEF	G_AFT	O_BEF	O_AFT	NGL_BEF	NGL_AFT	P_BEF	TL_BEF	P_AFT	TL_AFT	BH_P_BEF	BH_P_AFT	G_MSRD_BY
705170299	++	++						unclassified	unclassified	not available	unknown	unknown																	

There is no Pay data for this well

There is no Production Gas data for this well

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

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

There is no Production Water data for this well

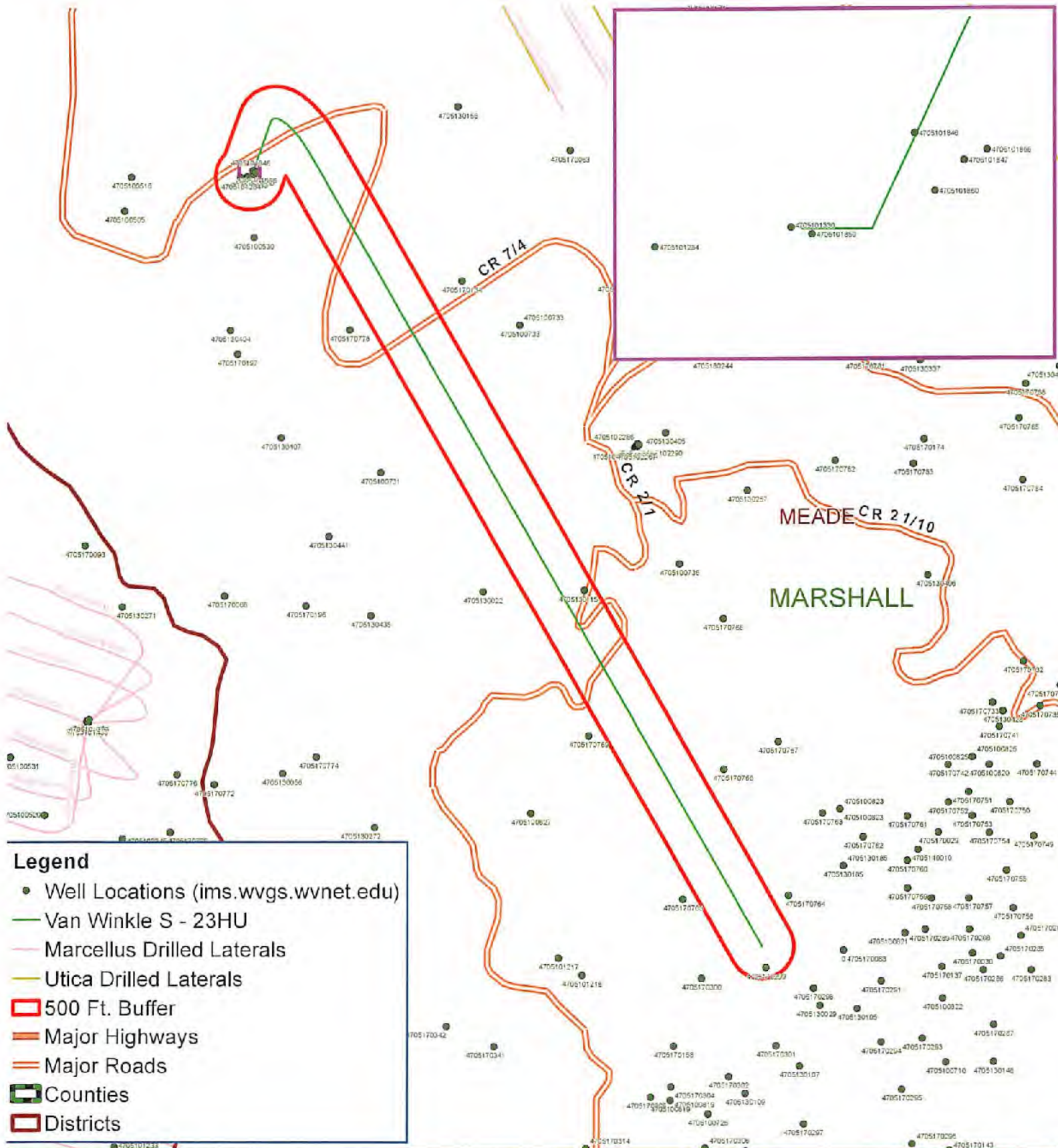
There is no Stratigraphy data for this well

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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- Legend**
- Well Locations (ims.wvgs.wvnet.edu)
  - Van Winkle S - 23HU
  - Marcellus Drilled Laterals
  - Utica Drilled Laterals
  - 500 Ft. Buffer
  - Major Highways
  - Major Roads
  - Counties
  - Districts



# Van Winkle S - 23HU Meade District Marshall County, WV

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Environmental Protection  
Map Prepared by:



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 Operating, LLC OP Code 494510851

Watershed (HUC 10) Fish Creek Quadrangle Glen Easton 7.5'

Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes  No

Will a pit be used? Yes  No

If so, please describe anticipated pit waste: AST Tanks with proper containment will be used for staging fresh water for frac and flow back water

Will a synthetic liner be used in the pit? Yes  No  If so, what ml.? AST Tanks will be used with proper containment

Proposed Disposal Method For Treated Pit Wastes:

- Land Application
- Underground Injection ( UIC Permit Number UIC 2459; UIC 965, UIC 359, UIC 2D0732540, UIC 2D0732523 )
- Reuse (at API Number \_\_\_\_\_)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain \_\_\_\_\_)

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? Wayzel County Sanitary Landfill (SWF-1021 / WV0109185) and Westmoreland Sanitary Landfill, LLC (SAN1405 / PA DEP ECH1309426)

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 Pancake

Company Official (Typed Name) James Pancake

Company Official Title Vice President - Geoscience

RECEIVED  
Office of Oil and Gas

FEB 03 2021

WV Department of  
Environmental Protection

Subscribed and sworn before me this 8 day of JANUARY, 2021

[Signature]

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 Notaries

Notary Public

My commission expires \_\_\_\_\_

07/16/2021



Tug Hill Operating, LLC

Proposed Revegetation Treatment: Acres Disturbed 16.63 Prevegetation pH 6.0

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer type 10-20-20

Fertilizer amount 500 lbs/acre

Mulch 2.5 Tons/acre

Seed Mixtures

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
Annual Ryegrass	40	Orchard Grass	12
Spring Oats	96	Ladino	3
		White Clover	2

Attach:

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: Bay Stillep

Comments:

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FEB 03 2021

Title: Oil and Gas Inspector

Date: 1-22-21

WV Department of  
Environmental Protection

Field Reviewed? (  ) Yes (  ) No

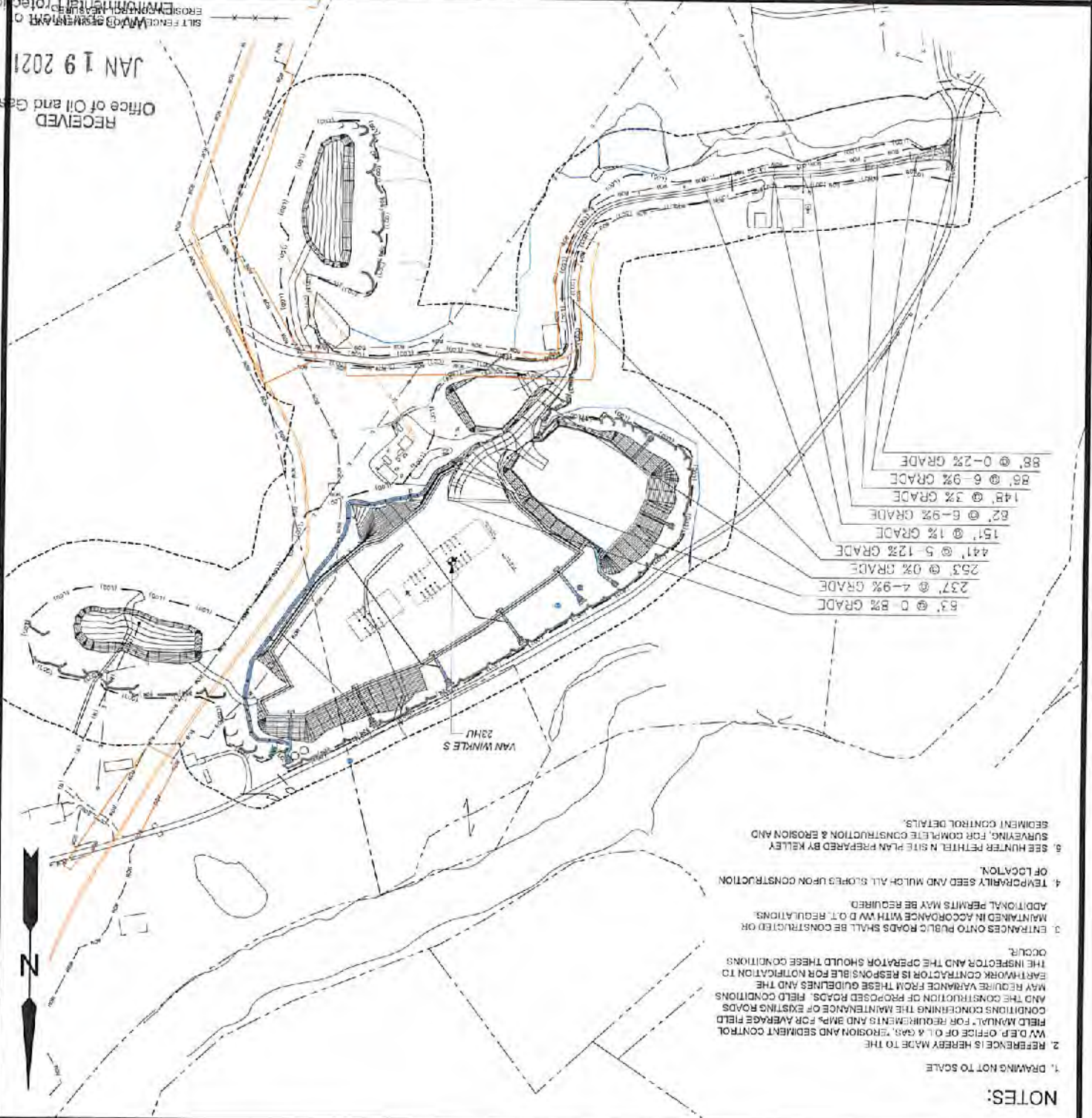
# PROPOSED VAN WINKLE S - 23HU

SUPPLEMENT PG. 1

### NOTES:

1. DRAWING NOT TO SCALE
2. REFERENCE IS HEREBY MADE TO THE W.V. DEPT. OF OIL & GAS, "EROSION AND SEDIMENT CONTROL FIELD MANUAL" FOR REQUIREMENTS AND BMPs FOR AVERAGE FIELD CONDITIONS CONCERNING THE MAINTENANCE OF EXISTING ROADS AND THE CONSTRUCTION OF PROPOSED ROADS. FIELD CONDITIONS MAY REQUIRE VARIANCE FROM THESE GUIDELINES AND THE EARTHWORK CONTRACTOR IS RESPONSIBLE FOR NOTIFICATION TO THE INSPECTOR AND THE OPERATOR SHOULD THESE CONDITIONS OCCUR.
3. ENTRANCES ONTO PUBLIC ROADS SHALL BE CONSTRUCTED OR MAINTAINED IN ACCORDANCE WITH W.V. D.O.T. REGULATIONS. ADDITIONAL PERMITS MAY BE REQUIRED.
4. TEMPORARILY SEED AND MULCH ALL SLOPES UPON CONSTRUCTION OF LOCATION.
5. SEE HUNTER PETERLIN SITE PLAN PREPARED BY KELLEY SURVEYING, FOR COMPLETE CONSTRUCTION & EROSION AND SEDIMENT CONTROL DETAILS.

83' @ 0.8% GRADE
237' @ 4-9% GRADE
253' @ 0% GRADE
441' @ 5.12% GRADE
151' @ 1% GRADE
62' @ 6-9% GRADE
148' @ 3% GRADE
86' @ 6-9% GRADE
88' @ 0-2% GRADE



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JAN 19 2021

ENVIRONMENTAL PROTECTION  
SILT FENCE MEASUREMENT LOCATION

TOPO SECTION:	OPERATOR:
GLEN EASTON 7.5'	PREPARED FOR:
DISTRICT	TUG HILL OPERATING, LLC
MARSHALL	380 SOUTHPOINTE BLVD
MEADE	SUITE 200
JOB NO. 8952	CANONSBURG, PA 15317
DATE 12/24/2020	SCALE NONE

**SLS**  
FROM THE GROUND UP

12 Vanhook Drive | P.O. Box 150 | Glenville, WV 26031 | 304.462.8834  
1422 Kanawha Boulevard, East | Charleston, WV 25301 | 304.546.3932  
254 East Beckley Bypass | Beckley, WV 25801 | 304.255.5296  
slsww.com

**TUG HILL OPERATING**



# Well Site Safety Plan

## Tug Hill Operating, LLC

*Barry Phillips 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

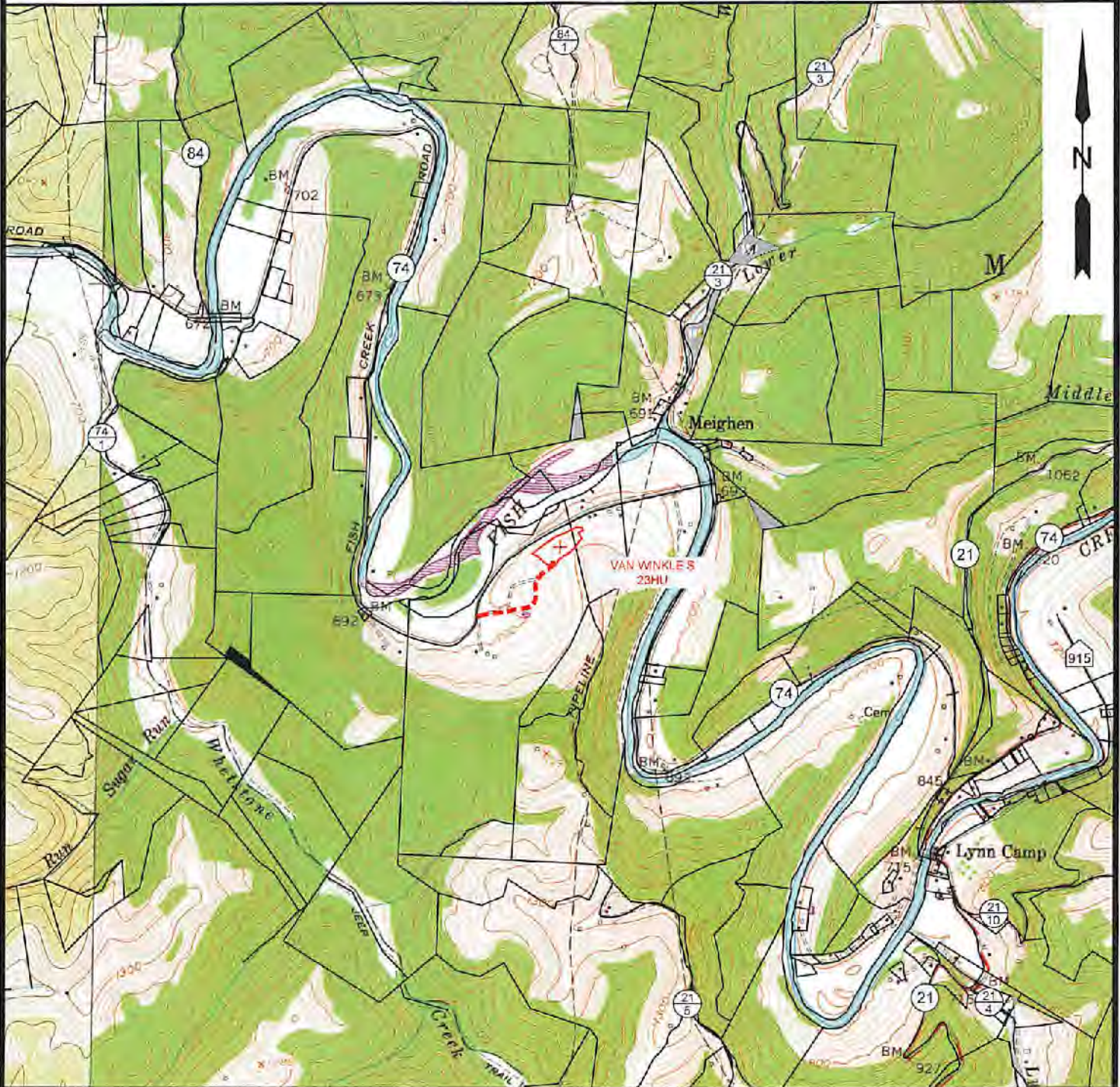
RECEIVED  
Office of Oil and Gas

FEB 03 2021

WV Department of  
Environmental Protection



07/16/2021

# PROPOSED VAN WINKLE S - 23HU



NOTE: CLOSEST WATER PURVEYOR  
GRANDVIEW - DOOLIN PUBLIC SERVICE DISTRICT  
PROCTOR, WV

LAT: 39.7137712  
LON: -80.6258327  
LOCATED: S 49°13'46" W AT 37,316.19' FROM THE CENTER OF HUNTER PETHTEL N WELL PAD LOCATION.

 <p>12 Vanborn Drive   P.O. Box 150   Glenville, WV 26031   304.462.5554 1412 Kanawha Boulevard, East   Charleston, WV 25301   304.346.3152 254 East Beckley Bypass   Beckley, WV 25801   304.255.5298 slsw.com</p>	<b>TOPO SECTION:</b>		<b>OPERATOR:</b>		 <p><b>TUG HILL OPERATING</b></p> <p style="color: red; font-weight: bold;">07/16/2021</p>
	GLEN EASTON 7.5'		PREPARED FOR:		
	COUNTY	DISTRICT	TUG HILL OPERATING, LLC 360 SOUTHPOINTE BLVD SUITE 200 CANONSBURG, PA 15317		
	MARSHALL	MEADE			
<b>DRAWN BY</b>	<b>JOB NO.</b>	<b>DATE</b>	<b>SCALE</b>		
K.G.M.	8952	12/24/2020	1" = 2000'		

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

B.H.

9,032' B.H.

5,218' T.H.

T.H. LATITUDE 39°47'30"  
B.H. LATITUDE 39°45'00"

T.H. LONG. 80°42'30"  
B.H. LONG. 80°40'00"

3,677' T.H.

(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)

NAD'83 S.P.C.(FT) N. 489,143.79 E. 1,623,704.99  
NAD'83 GEO. LAT-(N) 39.781575 LONG-(W) 80.723901  
NAD'83 UTM (M) N. 4,403,550.23 E. 523,365.80

LANDING POINT

NAD'83 S.P.C.(FT) N. 489,459.0 E. 1,624,693.8  
NAD'83 GEO. LAT-(N) 39.782477 LONG-(W) 80.723398  
NAD'83 UTM (M) N. 4,403,851.4 E. 523,665.4

BOTTOM HOLE

NAD'83 S.P.C.(FT) N. 457,200.1 E. 1,631,447.0  
NAD'83 GEO. LAT-(N) 39.749075 LONG-(W) 80.698788  
NAD'83 UTM (M) N. 4,399,951.0 E. 525,805.3

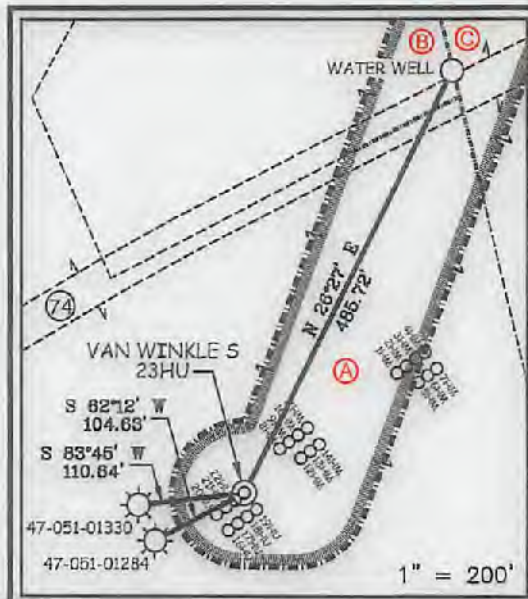
TAG	SURFACE OWNER	PARCEL	ACRES
A	XCL MIDSTREAM OPERATING, LLC	9-13-5	190.17
B	MICHAEL WALKER & JOSEPH BLAKE	9-13-5.1	3.26
C	MARY VIRGINIA PETHTEL (LIFE)	9-13-6	66.36
D	STATE OF WEST VIRGINIA (FISH CREEK)	N/A	N/A
E	MARY VIRGINIA PETHTEL (LIFE)	9-13-7	96.00
F	SHUTLER FAMILY TRUST	9-13-8	56.04
G	MARGARET FOX (LIFE)	9-13-23	1.52
H	EUGENE A. SCHERRER	9-13-22.2	0.925
I	HENRY, JR. & BARBARA DICK	9-13-22.1	11.82
J	TRICYCLE LLC	9-13-22	42.27
K	ELEANOR M. FOX ESTATE	9-13-19	19.20
L	ELEANOR M. FOX ESTATE	9-13-18	30.00
M	SHUTLER FAMILY TRUST	9-13-21	81.49
N	DANIEL JAY FITZWATER	9-13-20	105.5
O	JAMES G. RICHMOND	9-16-8	30.00
P	ANDREW L. FROHNAPFEL	9-13-12	91.1007
Q	JAMES G. RICHMOND	9-16-9	22.71
R	JAMES G. RICHMOND	9-16-11	67.8822
S	IVAN H. & MARGARET A. RICHMOND	9-13-16	21.354
T	IVAN H. & MARGARET A. RICHMOND	9-13-16.1	1.518
U	IVAN H. & MARGARET A. RICHMOND	9-16-10	1.518
V	JAMES RICHMOND	9-16-12	28.638
W	MARGARET FOX (LIFE)	9-13-13	15.513
X	JAMES G. RICHMOND	9-16-12.1	0.691
Y	SPENCER J. & CARRIE A. RICHMOND	9-16-12.6	0.141
Z	SPENCER J. & CARRIE A. RICHMOND	9-16-12.7	0.55
AA	SPENCER J. & CARRIE A. RICHMOND	9-16-12.2	0.575
BB	SHEILA TRUAX, ET VIR	9-16-12.4	0.516
CC	JAMES G. RICHMOND	9-16-12.3	0.937
DD	IVAN H. & MARGARET A. RICHMOND	9-16-12.8	0.85
EE	TIMOTHY S. & GRETCHEN M. KIDD	9-16-12.5	1.23
FF	PAUL R. BLAKE	9-16-13.3	0.7538
GG	PAUL R. BLAKE	9-16-13	97.9962
HH	WILLIAM B. KLUG, ET UX	9-18-5	122.437
II	LOUIS T. FOX	9-16-20	86.174
JJ	ALICE FAYE WINLAND	9-16-18	48.667
KK	LOUIS T. FOX	9-18-7	27.864
LL	LOUIS FOX	9-18-6	141.75
MM	ROBERT J. COMBS, ET AL	9-18-9	110.75
NN	DOUGLAS J. WAYMAN	9-18-8	92.72
OO	VINCENT J. WAYMAN, ET UX	9-18-17	68.99

PARCEL	SURFACE ADJOINER	ACRES
9-10-15	JOSEPH MICHAEL BONENE	44.00
9-10-19	COBLENTZ BROS. INC.	67.88
9-16-13.1	PAUL W. BLAKE (LIFE), WESLEY D. YEATER, JR., ET AL	0.91
9-16-13.2	ELEANOR M. FOX EST.	1.570
9-16-13.4	JOHN FOX	0.533
9-16-13.5	PAUL R. BLAKE & PAUL R. BLAKE II	2.921
9-16-13.6	WESLEY D. YEATER, ET UX	2.144
9-16-16	CLINTON B. WHITELATCH, SR., ET UX, ESTS.	1 AC 5.6 P
9-16-18.1	ROBIN D. & DAVID G. STEWART	5.333
9-18-11	BETTY J. GOULDSBERRY EST., ET AL.	60.00
9-18-17.1	VINCENT JOHN WAYMAN	1.010

T.H.

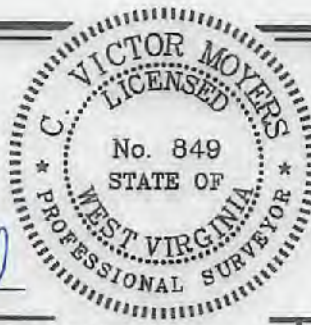
NOTES ON SURVEY

- NO WATER WELLS WERE FOUND WITHIN 250' OF PROPOSED GAS WELL. NO AGRICULTURAL BUILDINGS ≥ 2500 SQ. FT. OR DWELLINGS WERE FOUND WITHIN 525' OF THE CENTER OF PROPOSED WELL PAD.
- WELL SPOT CIRCLE & TOPD MARK SCALE IS 1"=2000'.
- BASED ON WV DOT COUNTY ROUTE 74 IS A 40' STRIP OF LAND ACQUIRED IN NUMEROUS DEEDS.
- PROPOSED LATERAL OR TOP HOLE OF VAN WINKLE S-23HU IS WITHIN 3000' OF TOP HOLES OR LATERALS OF:  
PROPOSED VAN WINKLE N-16HU,  
PROPOSED VAN WINKLE N-17HU,  
PROPOSED VAN WINKLE N-18HU,  
PROPOSED VAN WINKLE N-19HU,  
PROPOSED VAN WINKLE S-20HU,  
PROPOSED VAN WINKLE S-21HU,  
PROPOSED VAN WINKLE S-22HU,  
KNOB CREEK N-11HU (47-051-02287),  
KNOB CREEK S-14HU (47-051-02288),  
KNOB CREEK S-15HU (47-051-02289).



12 Vanhorn Drive | P.O. Box 150 | Glenville, WV 26351 | 304.462.5634  
1412 Kanawha Boulevard, East | Charleston, WV 25301 | 304.346.3952  
254 East Beckley Bypass | Beckley, WV 25801 | 304.255.8296  
sllwv.com

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DIVISION OF ENVIRONMENTAL PROTECTION.



P.S. 849 *C. Victor Moyers*

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.

DATE JANUARY 14, 20 21

REVISED MARCH 3, 2021

OPERATORS WELL NO. VAN WINKLE S 23HU

API WELL NO. 47-051-02354  
STATE COUNTY PERMIT  
NO. 47-051-02354  
STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1/2500 FILE NO. 8952P23HUR.dwg  
VAN WINKLE S 23HU-REV3  
HORIZONTAL & VERTICAL CONTROL DETERMINED BY DGPS (SURVEY GRADE TIE TO CORS NETWORK) SCALE 1" = 2000'

STATE OF WEST VIRGINIA  
DIVISION OF ENVIRONMENTAL PROTECTION  
OFFICE OF OIL AND GAS

WELL TYPE: OIL \_\_\_ GAS X LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_ IF "GAS" PRODUCTION X STORAGE \_\_\_ DEEP X SHALLOW \_\_\_  
LOCATION: GROUND: 756.10' ELEVATION PROPOSED: 763.50' WATERSHED FISH CREEK (HUC 10)  
DISTRICT MEADE COUNTY MARSHALL QUADRANGLE GLEN EASTON 7.5'  
SURFACE OWNER XCL MIDSTREAM OPERATING, LLC ACREAGE 190.12 ±  
ROYALTY OWNER DENNIS HUNTER, ET AL - SEE WW-6A1 ACREAGE 190.12  
PROPOSED WORK: LEASE NO. SEE WW-6A1  
DRILL X CONVERT \_\_\_ DRILL DEEPER \_\_\_ REDRILL \_\_\_ FRACTURE OR STIMULATE X PLUG OFF OLD FORMATION \_\_\_ PERFORATE NEW FORMATION \_\_\_ PLUG AND ABANDON \_\_\_ CLEAN OUT AND REPLUG \_\_\_ OTHER \_\_\_  
PHYSICAL CHANGE IN WELL (SPECIFY) TARGET FORMATION POINT PLEASANT ESTIMATED DEPTH TVD: 11,257' / TMD: 25,638'

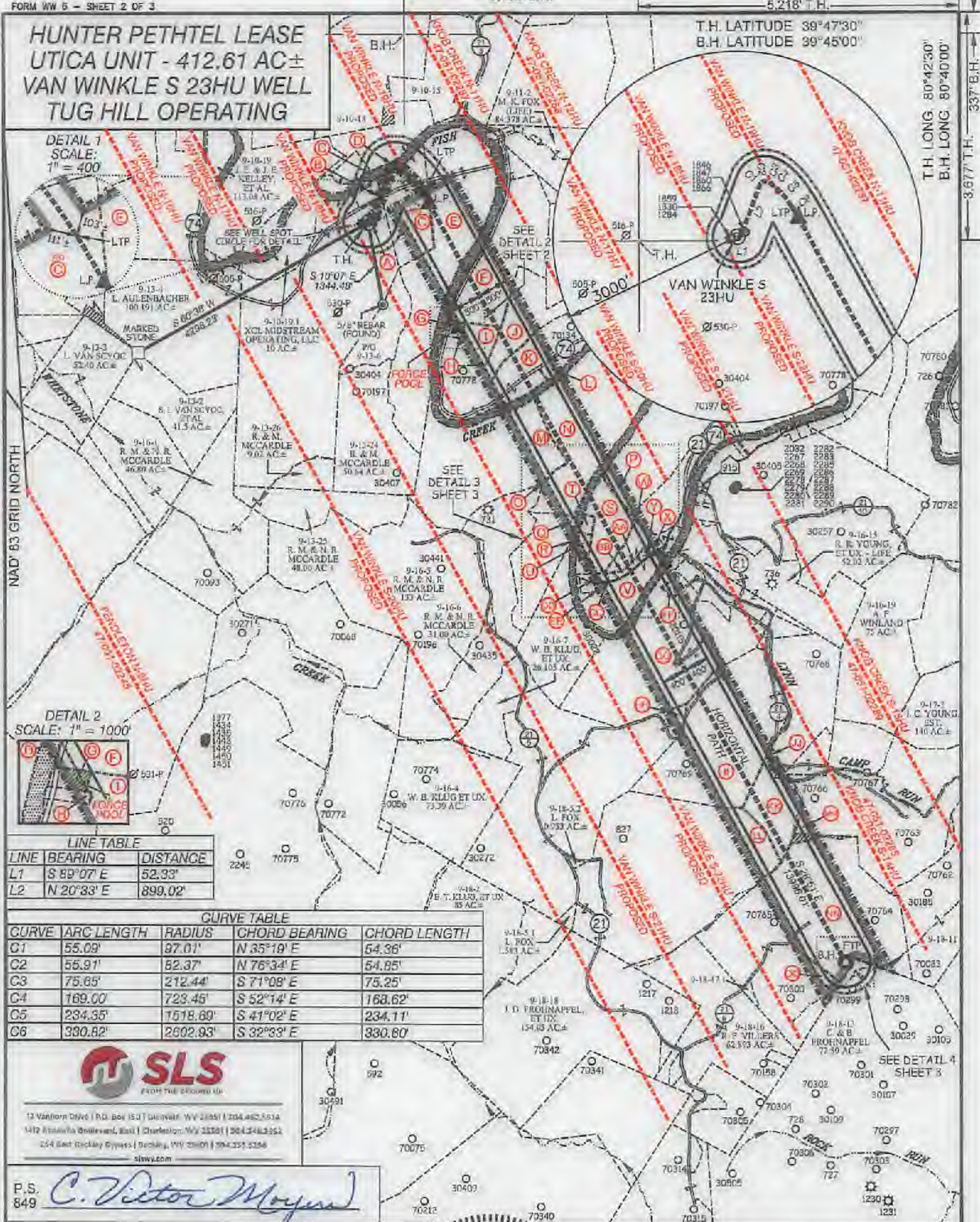
WELL OPERATOR TUG HILL OPERATING, LLC DESIGNATED AGENT DIANNA STAMPER  
ADDRESS 1320 SOUTH UNIVERSITY DRIVE, SUITE 500 ADDRESS 5400 D BIG TYLER ROAD  
FORT WORTH, TX 76107 CHARLESTON, WV 25313

COUNTY NAME PERMIT

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

T.H. LATITUDE 39°47'30"  
B.H. LATITUDE 39°45'00"

T.H. LONG. 80°42'30"  
B.H. LONG. 80°40'00"  
337' B.H.  
3,677' T.H.



**LINE TABLE**

LINE	BEARING	DISTANCE
L1	S 89°07' E	52.33'
L2	N 20°33' E	899.02'

**CURVE TABLE**

CURVE	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
C1	55.09'	97.01'	N 35°19' E	54.36'
C2	55.91'	82.37'	N 76°34' E	54.85'
C3	75.65'	212.44'	S 71°08' E	75.25'
C4	169.00'	723.46'	S 52°14' E	168.62'
C5	234.35'	1518.60'	S 41°02' E	234.11'
C6	330.82'	2602.93'	S 32°33' E	330.60'

12 Vanhorn Drive | P.O. Box 153 | Unweat, WV 26851 | 304.452.5934  
1412 Kanawha Boulevard, East | Charleston, WV 25320 | 304.248.2552  
254 East Claydon Ryans | Beckley, WV 25801 | 304.251.2256  
slsww.com

P.S. 849 *C. Victor Moyers*

(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)

COORDINATE SYSTEM	NORTHING	EASTING
NAD83 S.P.C. (FT)	N. 469,143.79	E. 1,823,704.89
NAD83 GEO.	LAT-(N) 39.781575	LONG (W) 80.726901
NAD83 UTM (M)	N. 4,409,550.29	E. 629,385.80

**LANDING POINT**

COORDINATE SYSTEM	NORTHING	EASTING
NAD83 S.P.C. (FT)	N. 469,459.0	E. 1,624,693.6
NAD83 GEO.	LAT-(N) 39.782477	LONG (W) 80.723398
NAD83 UTM (M)	N. 4,409,651.4	E. 629,085.4

**BOTTOM HOLE**

COORDINATE SYSTEM	NORTHING	EASTING
NAD83 S.P.C. (FT)	N. 467,200.1	E. 1,831,447.0
NAD83 GEO.	LAT-(N) 39.749075	LONG (W) 80.898788
NAD83 UTM (M)	N. 4,399,951.0	E. 626,805.3



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

**LEGEND**

- UNIT BOUNDARY
- LEASED TRACTS INSIDE UNIT BOUNDARY
- SURFACE LINE
- PROPOSED UTICA
- WELL LATERAL
- 400' OFFSET LINE
- 500' OFFSET LINE
- TIE LINE
- FORCE POOL TRACT
- CREEK
- ROAD
- PROPOSED FIRST TAKE POINT
- PROPOSED LAST TAKE POINT
- COUNTY ROUTE
- PROPOSED WELL
- EXISTING WELL
- PERMITTED WELL
- SURFACE OWNER (SEE TABLE)
- LEASE # (SEE ADDITIONAL SHEETS)

SCALE 1" = 2000' FILE NO. 8952P23HUR.dwg  
VAN WINKLE S 23HU-REV3  
DATE JANUARY 14, 2021  
REVISED MARCH 3, 2021  
OPERATORS WELL NO. VAN WINKLE S 23HU  
API WELL NO. 47-051-02356  
NO. STATE COUNTY PERMIT

STATE OF WEST VIRGINIA  
DIVISION OF ENVIRONMENTAL PROTECTION  
OFFICE OF OIL AND GAS

WELL OPERATOR TUG HILL OPERATING, LLC ADDRESS 1320 SOUTH UNIVERSITY DRIVE, SUITE 500 FORT WORTH, TX 76107  
DESIGNATED AGENT DIANNA STAMPER CT CORPORATION SYSTEM ADDRESS 5400 D BIG TYLER ROAD CHARLESTON, WV 25313

07/16/2021

COUNTY NAME PERMIT

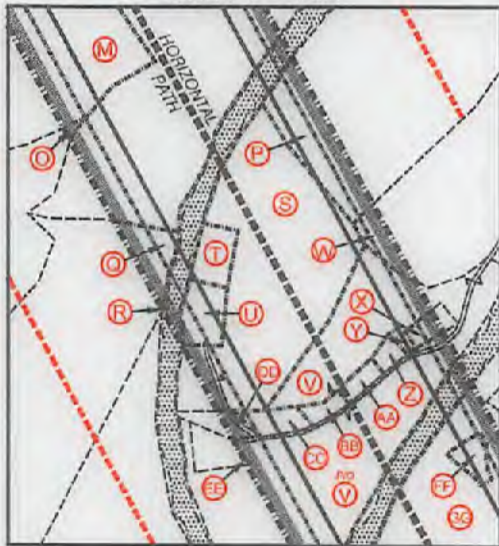
**HUNTER PETHTEL LEASE  
UTICA UNIT - 412.61 AC±  
VAN WINKLE S 23HU WELL  
TUG HILL OPERATING**



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1412 Kanawha Boulevard, East | Charleston, WV 25301 | 304.346.3952  
254 East Beckley Bypass | Beckley, WV 25801 | 304.295.5296  
slsuv.com

NO.	Lease ID	Parcel	Tag	Grantor, Lessor, Etc.	Deed Book/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	C	MARY V & FRANK E PETHTEL, ET AL	668 525
4	10*23458	Fish Creek	D	WEST VIRGINIA DIVISION OF NATURAL RESOURCES	1019 378
5	10*31303	9-13-7	E	MARY V & FRANK E PETHTEL, ET AL	668 525
6	10*28299	9-13-8	F	THE SHUTLER FAMILY TRUST	1070 425
7	**	9-13-23	G	THOMAS JOHN FOX, ET AL	
8	10*27247	9-13-22.2	H	DANIEL R JOHNSON AND JOANNA L JOHNSON, ET AL	1053 3
9	10*27247	9-13-22.1	I	DANIEL R JOHNSON AND JOANNA L JOHNSON, ET AL	1053 3
10	10*27247	9-13-22	J	DANIEL R JOHNSON AND JOANNA L JOHNSON, 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	O	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 G RICHMOND AND CINDY L RICHMOND	829 71
18	10*16481	9-16-11	R	JAMES G 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	9-13-16.1	T	IVAN H RICHMOND AND MARGARET A RICHMOND	924 543
21	10*17895	9-16-10	U	IVAN H RICHMOND AND MARGARET A RICHMOND	924 543
22	10*16481	9-16-12	V	JAMES G 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 G 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	Z	JAMES G RICHMOND	872 359
27	10*31359	9-16-12.2	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	9-16-12.5	EE	JAMES G RICHMOND AND CINDY L RICHMOND	829 71
32	10*47051.135.0	9-16-13.3	FF	PAUL R BLAKE	878 280
33	10*47051.135.0	9-16-13	GG	PAUL R BLAKE	878 280
34	10*22789	9-18-5	HH	DONNA K FAHEY, ET AL	962 87
35	10*23726	9-16-20	II	LOUIS T FOX, ET AL	1011 520
36	10*47051.187.1	9-16-18	JJ	ALICE F WILKIND	881 138
37	10*21293	9-18-7	KK	LOUIS T FOX AND KAREN A FOX	952 364
38	10*28268	9-18-6	LL	JOSEPH & ELIZABETH 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	OO	VINCENT J WAYMAN AND KATHY JO WAYMAN	885 275

DETAIL 3  
SCALE: 1" = 1000'



DETAIL 4  
SCALE: 1" = 500'



FILE NO. 8952P23HUR.dwg  
VAN WINKLE S 23HU-REV3

DATE JANUARY 14, 20 21

REVISED MARCH 3, 2021

OPERATORS WELL NO. VAN WINKLE S 23HU

API NO. 47 — 051 — 02356 Deep  
STATE COUNTY PERMIT



STATE OF WEST VIRGINIA  
DIVISION OF ENVIRONMENTAL PROTECTION  
OFFICE OF OIL AND GAS



07/15/2021

P.S. 849 C. Victor Moyers

WELL OPERATOR TUG HILL OPERATING, LLC  
ADDRESS 1320 SOUTH UNIVERSITY DRIVE, SUITE 500  
FORT WORTH, TX 76107

DESIGNATED AGENT DIANNA STAMPER  
ADDRESS 5400 D BIG TYLER ROAD  
CHARLESTON, WV 25313

COUNTY NAME PERMIT

**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
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\*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 *Amy Morris*  
 Its: Permitting Specialist - Appalachia Region



Lease ID	Parcel	Tag	Grantor, Lessor, Etc.	Grantee, Lessee, Etc.	Royalty	Deed Book	Page	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment		
10*31312	9-13-5	A	DENNIS W & KATHY A HUNTER	CENTRAL MICHIGAN EXPLORATION LLC	1/8+	668	155	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Central Michigan Exploration LLC to Stone Energy Corp.: AB 21/288 & 21/497	Stone Energy Corporation to EQT Production Company: AB 38/75	EQT Production Company to TH Exploration LLC: AB 48/21
10*31359	9-16-12.2	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	N/A	Stone Energy Corporation to EQT Production Company: AB 38/75	EQT Production Company to TH Exploration LLC: AB 48/21
10*31312	9-13-5.1	B	DENNIS W & KATHY A HUNTER	CENTRAL MICHIGAN EXPLORATION LLC	1/8+	668	155	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Central Michigan Exploration LLC to Stone Energy Corp.: AB 21/288 & 21/497	Stone Energy Corporation to EQT Production Company: AB 38/75	EQT Production Company to TH Exploration LLC: AB 48/21
10*31303	9-13-6	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	N/A	Central Michigan Exploration LLC to Stone Energy Corp.: AB 21/288 & 21/497	Stone Energy Corporation to EQT Production Company: AB 38/75	EQT Production Company to TH Exploration LLC: AB 48/21
10*31304	9-13-6	C	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	N/A	Central Michigan Exploration LLC to Stone Energy Corp.: AB 21/288 & 21/497	Stone Energy Corporation to EQT Production Company: AB 38/75	EQT Production Company to TH Exploration LLC: AB 48/21
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	N/A	Stone Energy Corporation to EQT Production Company: AB 38/75	EQT Production Company to TH Exploration LLC: AB 48/21
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	N/A	Stone Energy Corporation to EQT Production Company: AB 38/75	EQT Production Company to TH Exploration LLC: AB 48/21
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	N/A	Stone Energy Corporation to EQT Production Company: AB 38/75	EQT Production Company to TH Exploration LLC: AB 48/21
10*23458	Fish Creek	D	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	N/A	N/A	N/A
10*31303	9-13-7	E	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	N/A	Central Michigan Exploration LLC to Stone Energy Corp.: AB 21/288 & 21/497	Stone Energy Corporation to EQT Production Company: AB 38/75	EQT Production Company to TH Exploration LLC: AB 48/21
10*31304	9-13-7	E	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	N/A	Central Michigan Exploration LLC to Stone Energy Corp.: AB 21/288 & 21/497	Stone Energy Corporation to EQT Production Company: AB 38/75	EQT Production Company to TH Exploration LLC: AB 48/21
10*31305	9-13-7	E	MARY V & FRANK E PETHTEL	CENTRAL MICHIGAN EXPLORATION LLC	1/8+	677	401	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Central Michigan Exploration LLC to Stone Energy Corp.: AB 21/288 & 21/497	Stone Energy Corporation to EQT Production Company: AB 38/75	EQT Production Company to TH Exploration LLC: AB 48/21
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	N/A	Stone Energy Corporation to EQT Production Company: AB 38/75	EQT Production Company to TH Exploration LLC: AB 48/21
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	N/A	Stone Energy Corporation to EQT Production Company: AB 38/75	EQT Production Company to TH Exploration LLC: AB 48/21
10*31311	9-13-7	E	LINDA DANLEY	STONE ENERGY CORPORATION	1/8+	870	141	N/A	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*28299	9-13-8	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	N/A	N/A	N/A
10*47051.135.0	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	N/A
10*27247	9-13-22.1	I	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	N/A
10*27248	9-13-22.1	I	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	N/A
10*27835	9-13-22.1	I	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	N/A
10*28267	9-13-22.1	I	STONE HILL MINERALS HOLDINGS 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	N/A
10*28963	9-13-22.1	I	STONE HILL MINERALS HOLDINGS LLC	TH EXPLORATION LLC	1/8+	1101	34	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*23726	9-16-20	II	LOUIS T FOX	TH EXPLORATION LLC	1/8+	1011	520	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	II	LYNN CAMP UNITED METHODIST CHURCH	TH EXPLORATION LLC	1/8+	1058	376	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	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	N/A





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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	Statoil USA Onshore Properties Inc to SWN Exchange Titleholder LLC: 33/424	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	Statoil USA Onshore Properties Inc to TH Exploration LLC: 41/238
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
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
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
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
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
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
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	N	ROBERT R FISHER AND AUDREY L IRVIN	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
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
10*4705.1.152.1	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
10*4705.1.152.2	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
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
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.: AB 32/307 & 34/410	Fossil Creek Ohio LLC & Gulfport Energy Corp. to American Petroleum Partners Operating LLC: AB 36/588	American Petroleum Partners Operating LLC to TH Exploration LLC: AB 36/535

Lease ID	Parcel	Tag	Grantor, Lessor, Etc.	Grantee, Lessee, Etc.	Royalty	Deed Book	Page	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	
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	Fossil Creek Ohio LLC to Gulfport Energy Corp.: AB 32/307 & 34/410	Fossil Creek Ohio LLC & Gulfport Energy Corp. to American Petroleum Partners Operating LLC: AB 36/588	American Petroleum Partners Operating LLC to TH Exploration LLC: AB 36/535
10*17895	9-16-12.3	CC	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	N/A	N/A	N/A
10*47051.135.0	9-16-13.3	FF	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
**	9-13-23	G	THOMAS JOHN FOX	UNLEASED				**FORCE POOL**								
**	9-13-23	G	MARK H FOX	UNLEASED				**FORCE POOL**								
**	9-13-23	G	PAUL G FOX	UNLEASED				**FORCE POOL**								
**	9-13-23	G	LOUIS T FOX	UNLEASED				**FORCE POOL**								
**	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	H	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	H	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	H	STONE HILL MINERALS HOLDINGS 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	9-13-22.2	H	STONE HILL MINERALS HOLDINGS LLC	TH EXPLORATION LLC	1/8+	1101	34	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*28353	9-13-22.2	H	EUGENE A SCHERRER JR	TH EXPLORATION LLC	1/8+	1071	472	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*22789	9-18-5	HH	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
10*27947	9-18-5	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
10*28268	9-18-5	HH	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 & Heat Company: DB 148/388	The Manufacturers Light & Heat Company to AM Snider & Duane M Sniders, Partners dba Hundred Gas Company: AB 4/489	Hundred Gas Company to Carl D Perkins: DB 451/132	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	9-16-18	JJ	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	LL	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 & Heat Company: DB 148/388	The Manufacturers Light & Heat Company to AM Snider & Duane M Sniders, Partners dba Hundred Gas Company: AB 4/489	Hundred Gas Company to Carl D Perkins: DB 451/132	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	M	J W KELLEY AND R A KELLEY	TG STILES	1/8+	63	156	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 & Heat Company: DB 148/388	The Manufacturers Light & Heat Company to AM Snider & Duane M Sniders, Partners dba Hundred Gas Company: AB 4/489	Hundred Gas Company to Carl D Perkins: DB 451/132	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	MM	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 Oil & 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	Perkins Oil & Gas Inc. to TH Exploration, LLC: 44/506
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	O	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 Supply Corporation to Consolidated Gas Sply Corporation: 374/234	Consolidated Gas Supply Corporation to Consolidated Gas Transmission Corporation: 505/406	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
10*47051.136.0	9-18-17	OO	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*24858	9-13-12	P	NILA JEAN FROHNAPPEL	TH EXPLORATION LLC	1/8+	1028	119	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A



Lease ID	Parcel	Tag	Grantor, Lessor, Etc.	Grantee, Lessee, Etc.	Royalty	Deed Book	Page	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	
10*16481	9-16-12.1	X	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.: AB 32/307 & 34/410	Fossil Creek Ohio LLC & Gulfport Energy Corp. to American Petroleum Partners Operating LLC: AB 36/588	American Petroleum Partners Operating LLC to TH Exploration LLC: AB 36/535
10*31359	9-16-12.6	Y	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*31359	9-16-12.7	Z	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



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](mailto:amorris@tug-hillop.com).

Sincerely,

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

RECEIVED  
Office of Oil and Gas

JAN 19 2021

WV Department of  
Environmental Protection



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

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

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



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west virginia department of environmental protection

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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

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 Commission's 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,

A handwritten signature in blue ink that reads "Susan Rose". The signature is written in a cursive, flowing style.

Susan Rose  
Administrator

encl:

07/16/2021



May 12, 2021

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

<b>Status:</b>	Delivered, Front Desk/Reception/Mail Room
<b>Status Date / Time:</b>	April 9, 2021, 2:07 pm
<b>Location:</b>	FORT WORTH, TX 76107
<b>Postal Product:</b>	First-Class Mail®
<b>Extra Services:</b>	Certified Mail™ Return Receipt Electronic

### Shipment Details

<b>Weight:</b>	10lb, 3.1oz
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### Recipient Signature

Signature of Recipient:	<i>JB</i>
Address of Recipient:	<i>JB Rt 7# Covid-19 1320 S University # 500 76107</i>

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

07/16/2021



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west virginia department of environmental protection

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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 0090 00276201 3317 41

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 Commission's 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,

A handwritten signature in blue ink that reads "Susan Rose". The signature is fluid and cursive.

Susan Rose  
Administrator

encl:

07/16/2021



---

west virginia department of environmental protection

---

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 0077 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 Commission's 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,

Susan Rose  
Administrator

encl:

07/16/2021



May 12, 2021

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.

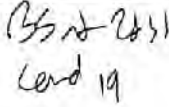

#### Item Details

<b>Status:</b>	Delivered, Left with Individual
<b>Status Date / Time:</b>	April 8, 2021, 12:37 pm
<b>Location:</b>	GLEN EASTON, WV 26039
<b>Postal Product:</b>	First-Class Mail <sup>®</sup>
<b>Extra Services:</b>	Certified Mail <sup>™</sup> Return Receipt Electronic

#### Shipment Details

<b>Weight:</b>	5lb, 3.3oz
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#### Recipient Signature

Signature of Recipient:	
Address of Recipient:	

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

07/16/2021





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west virginia department of environmental protection

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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

David E. Fox  
64 Sun Valley Ave  
Glen Dale WV 26038

9489 0090 0027 6201 3317 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 Commission's 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,

Susan Rose  
Administrator

encl:

07/16/2021



May 12, 2021

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.**

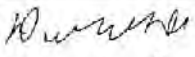
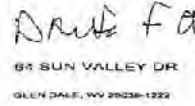
#### Item Details

<b>Status:</b>	Delivered
<b>Status Date / Time:</b>	April 10, 2021, 9:01 am
<b>Location:</b>	GLEN DALE, WV 26038
<b>Postal Product:</b>	First-Class Mail®
<b>Extra Services:</b>	Certified Mail™ Return Receipt Electronic

#### Shipment Details

<b>Weight:</b>	5lb, 6.1oz
----------------	------------

#### Recipient Signature

Signature of Recipient:	
Address of Recipient:	

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

07/16/2021



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west virginia department of environmental protection

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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

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:

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 Commission's 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,

A handwritten signature in blue ink that reads "Susan Rose".

Susan Rose  
Administrator

encl:

07/16/2021



May 12, 2021

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

<b>Status:</b>	Delivered, Left with Individual
<b>Status Date / Time:</b>	April 8, 2021, 11:28 am
<b>Location:</b>	PROCTOR, WV 26055
<b>Postal Product:</b>	First-Class Mail®
<b>Extra Services:</b>	Certified Mail™ Return Receipt Electronic

#### Shipment Details

**Weight:** 5lb, 6.6oz

#### Recipient Signature

Signature of Recipient:	 L. B. Hall C-19
Address of Recipient:	5761 St. Josephs Rd

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Sincerely,  
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Washington, D.C. 20260-0004

07/16/2021



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west virginia department of environmental protection

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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

Thomas John Fox  
100 Lynn Camp Lane  
Glen Easton WV 26039

9489 0090 00276201 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 Commission's 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,

A handwritten signature in blue ink that reads "Susan Rose". The signature is written in a cursive, flowing style.

Susan Rose  
Administrator

encl:

07/16/2021



May 12, 2021

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.**

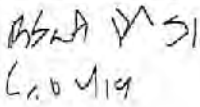
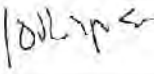
#### Item Details

<b>Status:</b>	Delivered, Left with Individual
<b>Status Date / Time:</b>	April 8, 2021, 12:41 pm
<b>Location:</b>	GLEN EASTON, WV 26039
<b>Postal Product:</b>	First-Class Mail®
<b>Extra Services:</b>	Certified Mail™ Return Receipt Electronic

#### Shipment Details

<b>Weight:</b>	5lb, 4.5oz
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#### Recipient Signature

Signature of Recipient:	
Address of Recipient:	

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

07/16/2021



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west virginia department of environmental protection

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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

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

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 Commission's 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,

A handwritten signature in blue ink that reads "Susan Rose". The signature is fluid and cursive, written in a professional style.

Susan Rose  
Administrator

encl:

07/16/2021



May 12, 2021

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.**

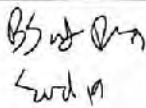

#### Item Details

<b>Status:</b>	Delivered, Left with Individual
<b>Status Date / Time:</b>	April 8, 2021, 1:42 pm
<b>Location:</b>	GLEN EASTON, WV 26039
<b>Postal Product:</b>	First-Class Mail®
<b>Extra Services:</b>	Certified Mail™ Return Receipt Electronic

#### Shipment Details

<b>Weight:</b>	5lb, 6.8oz
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#### Recipient Signature

Signature of Recipient:	
Address of Recipient:	

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

Thank you for selecting the United States Postal Service® for your mailing needs. If you require additional assistance, please contact your local Post Office™ or a Postal representative at 1-800-222-1811.

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

07/16/2021





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west virginia department of environmental protection

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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

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 Commission's 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,

A handwritten signature in blue ink that reads "Susan Rose". The signature is fluid and cursive.

Susan Rose  
Administrator

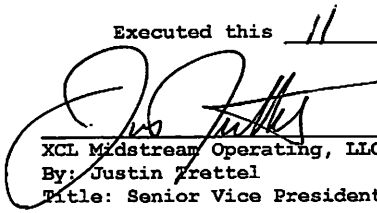
encl:

07/16/2021

CERTIFICATE OF CONSENT AND EASEMENT

I, the undersigned, for valuable consideration, 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 11 day of FEBRUARY, 2021.

  
\_\_\_\_\_  
XCL Midstream Operating, LLC  
By: Justin Trettel  
Title: Senior Vice President

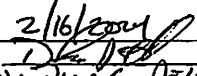
Marshall County  
Jan Pest, Clerk  
Instrument 1475005  
02/18/2021 @ 12:30:42 PM  
RIGHT OF WAY W/O CONSIDERATION  
Book 1104 @ Page 189  
Pages Recorded 2  
Recording Cost \$ 11.00

ACKNOWLEDGMENT

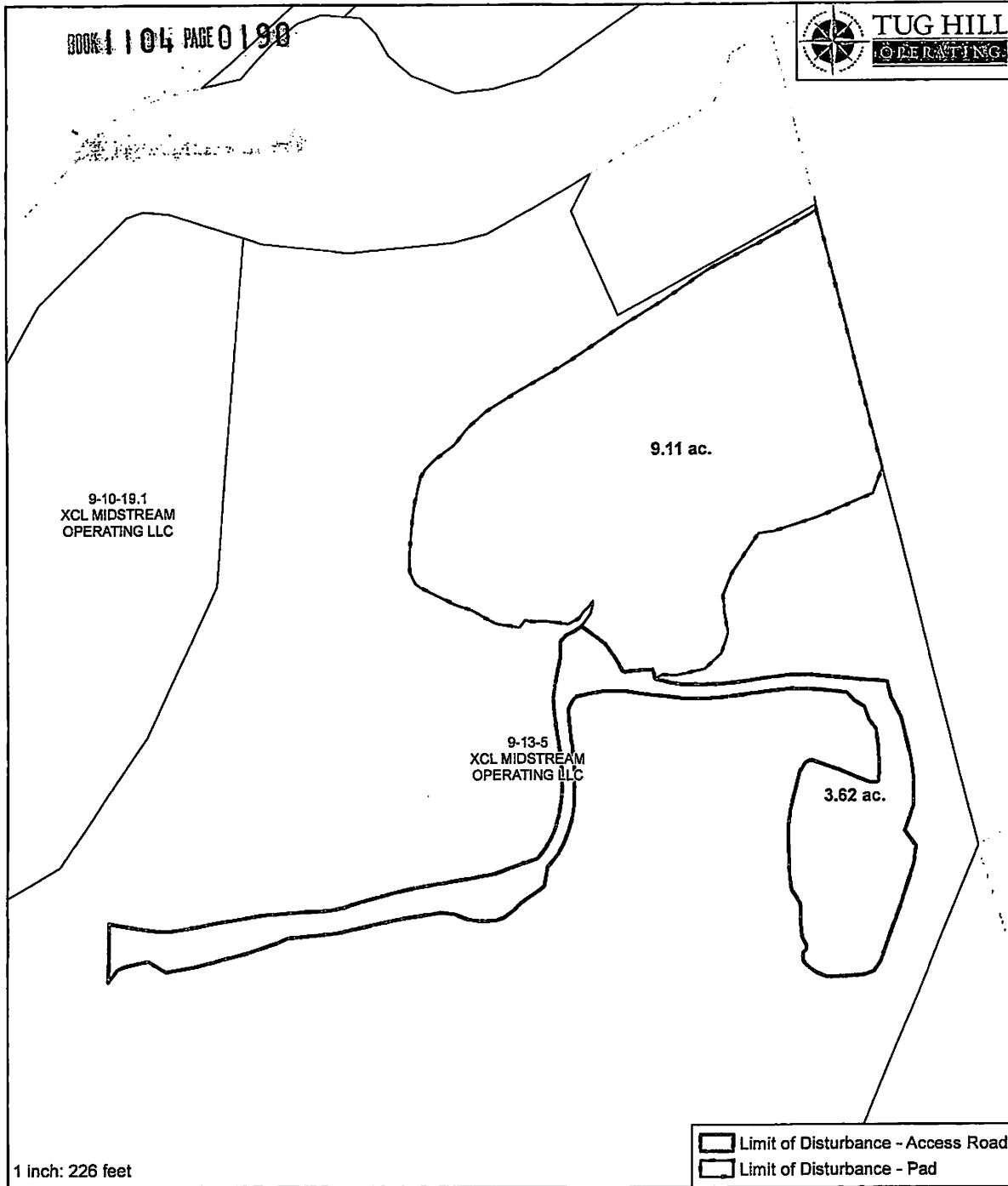
COMMONWEALTH OF PENNSYLVANIA §  
§ SS:  
COUNTY OF WASHINGTON §

On this, the 11 day of FEBRUARY 2021, before me, a notary public, the undersigned authority, personally appeared Justin Trettel, who acknowledged himself to be the Senior Vice President of XcL Midstream Operating, a Delaware limited liability company, and that he as such Senior Vice President being authorized to do so, executed the foregoing instrument for the purposes therein contained by signing the name of the limited liability company by himself as Senior Vice President.

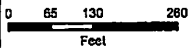
IN WITNESS WHEREOF, I hereunto set my hand and official seal.

Commonwealth of Pennsylvania - Notary Seal  
David Gabriel Delallo, Notary Public  
Washington County  
My commission expires February 18, 2024  
Commission number 1267492  
Member, Pennsylvania Association of Notaries  
Commission Expires: 2/18/2024  
Signature/Notary Public:   
Notary Public (print): David G. Delallo

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



1 inch: 226 feet



NOTE: THE APPROVED BY LOCATION FOR THE SURFACE IS TO ACCESS EASEMENT OF THE LOCATION OF THE PROPERTY HAS PARCELS AS AN ADJACENT PROPERTY. THE ACTUAL LOCATION OF THE PROPERTY HAS PARCELS AS SHOWN ON THIS MAP AS THE SAME AS SHOWN ON THE COUNTY RECORDS AND THE APPROVED BY LOCATION FOR THE SURFACE IS TO ACCESS EASEMENT OF THE LOCATION AS SHOWN ON THIS MAP.

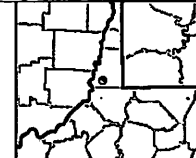
### "Plat"

XCL MIDSTREAM OPERATING LLC  
Marshall County, WV

Date: \_\_\_\_\_

Name: \_\_\_\_\_

Name: \_\_\_\_\_



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

I, JAN PEST, Clerk of the County Commission of said County, do hereby certify that the annexed writing, bearing date on the 11<sup>th</sup> day of February, 2021, was presented for and by me, admitted to record in my office upon the above certificate as to the parties therein named this 18<sup>th</sup> day of February, 2021 at 12:30 o'clock P M.

TESTE: Jan Pest Clerk

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, L.L.C., a Texas limited liability company, with an address at 1320 S. University Drive, Suite 500, Fort Worth, Texas 76107 ("TH") pursuant to the terms of that certain Acreage Trade Agreement by and among EQT, TH and TH Exploration II, LLC ("TH II"), dated July 8, 2020 (the "Agreement"). EQT and TH may be referred to herein together as the "Parties", and each individually as a "Party".

RECITALS

WHEREAS, EQT 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 Exhibit A attached hereto and incorporated herein ("EQT Leases") in accordance with this Assignment and the Agreement; and

WHEREAS, TH desires to receive from EQT, all of EQT'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  
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, produced 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 Exhibit B 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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PARTIAL ASSIGNMENT OF OIL AND GAS LEASES

This PARTIAL ASSIGNMENT OF OIL AND GAS LEASES (hereinafter, "Assignment"), made the 31 day of May, 2018 (hereinafter, "Effective Date"), 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 "Assignor") and TH EXPLORATION, LLC, a Texas limited liability company, whose address is 1320 S. University Drive, Suite 500, Fort Worth, TX 76107 (hereinafter "Assignee"). All references in this Assignment to "Party" or "Parties" 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 "ATA").

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, "Lease" or "Leases"), covering certain tracts of land (hereinafter, "Lands") located in Marshall County, West Virginia; such Leases and Lands covered thereby being more particularly described on Exhibit "A" 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 "Assigned Rights":

- (a) All of Assignor's right, title, and interest in and to those Leases set forth on Exhibit A attached hereto INsofar AND ONLY INsofar as to the particular Target Formation(s) (defined below) described and delineated on Exhibit A 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 Exhibit A. 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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**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 Assignment.** 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 Exhibit A attached hereto (the "*Leases*") IN SO FAR AND ONLY IN SO FAR as they cover those lands described on Exhibit A (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 Assignment Subject to Acreage Trade Agreement.** 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 Special Warranty of Title.** 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 SECTION VI OF THE ACREAGE TRADE AGREEMENT OR THIS ASSIGNMENT, ASSIGNOR MAKES NO, AND HEREBY EXPRESSLY DISCLAIMS, ANY REPRESENTATION OR

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STATE OF WEST VIRGINIA     §  
  §  
COUNTY OF MARSHALL       §

Jan Pest  
MARSHALL County 02:05:39 PM  
Instrument No 1415451  
Date Recorded 10/04/2016  
Document Type ASN  
Pages Recorded 7  
Book-Page 36-535  
Recording Fee \$7.00  
Additional \$6.00

**ASSIGNMENT AND CONVEYANCE**

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 Assignment.** 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 Exhibit A 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 Assignment Subject to Acreage Trade Agreement.** 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 Special Warranty of Title.** 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 Disclaimers of Warranties and Representations.**

(a) EXCEPT AS EXPRESSLY REPRESENTED OTHERWISE IN SECTION VI AND VII OF THE ACREAGE TRADE AGREEMENT OR THIS ASSIGNMENT, ASSIGNORS MAKE NO, AND HEREBY EXPRESSLY DISCLAIM, ANY

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BOOK 0044 PAGE 0506

MEMORANDUM OF PARTIAL ASSIGNMENT OF OIL AND GAS LEASES

STATE OF WEST VIRGINIA §  
 COUNTY OF MARSHALL §

This MEMORANDUM OF PARTIAL ASSIGNMENT OF OIL AND GAS LEASES (hereinafter, the "Memorandum") 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 "Assignor"), and TH EXPLORATION, LLC, a Texas limited liability company (hereinafter the "Assignee") whose address is 1320 South University Drive, Suite 500, Fort Worth, Texas 76107. Assignor and Assignee are sometimes referred to herein, collectively, as the "Parties" and, individually, as a "Party." 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 "Assignment"), 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 1<sup>st</sup> day of November, 2019 (hereinafter, the "Effective Date") 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 INSO FAR AND ONLY INSO FAR 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 "Assigned Formations"). 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 OVERRIDING ROYALTY 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 "Purchase Agreement").

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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WV Department of  
Environmental Protection





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-hilop.com](mailto:amorris@tug-hilop.com).

Sincerely,

Amy Morris  
Permit Specialist – Appalachia Region  
Cell 304-376-0111  
Email: [amiller@tug-hilop.com](mailto:amiller@tug-hilop.com)

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

Date of Notice Certification: 01/15/2021

API No. 47- 051 -  
Operator's Well No. Van Winkle S-23HU  
Well Pad Name: Hunter Pethiesl

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		Northing:	4,403,550.28
District:	Meade	Public Road Access:	County Route 74	
Quadrangle:	Glen Easton 7.5'	Generally used farm name:	XcL Midstream Operating, LLC	
Watershed:	Fish Creek (HUC 10)			

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 have been completed 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:  *PLEASE CHECK ALL THAT APPLY  <input type="checkbox"/> 1. NOTICE OF SEISMIC ACTIVITY or <input checked="" type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED  <input checked="" type="checkbox"/> 2. NOTICE OF ENTRY FOR PLAT SURVEY or <input type="checkbox"/> NO PLAT SURVEY WAS CONDUCTED  <input type="checkbox"/> 3. NOTICE OF INTENT TO DRILL or <input checked="" type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED or  <input type="checkbox"/> WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)  <input checked="" type="checkbox"/> 4. NOTICE OF PLANNED OPERATION  <input checked="" type="checkbox"/> 5. PUBLIC NOTICE  <input checked="" type="checkbox"/> 6. NOTICE OF APPLICATION	<b>OOG OFFICE USE ONLY</b>  <input type="checkbox"/> RECEIVED/ NOT REQUIRED  <input type="checkbox"/> RECEIVED  <input type="checkbox"/> RECEIVED/ NOT REQUIRED  <input type="checkbox"/> RECEIVED  <input type="checkbox"/> RECEIVED  <input type="checkbox"/> 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 service, the return receipt card or other postal receipt for certified mailing.

Office of Oil and Gas

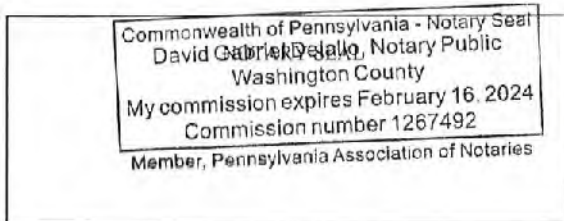
JAN 19 2021

07/16/2021

**Certification of Notice is hereby given:**

THEREFORE, I Amy L. Morris, 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:	<u>Tug Hill Operating, LLC</u>	Address:	<u>380 Southpointe Boulevard, Plaza II, Suite 200</u>
By:	<u><i>Amy L. Morris</i></u>		<u>Canonsburg, PA 15317</u>
Its:	<u>Permitting Specialist - Appalachia Region</u>	Facsimile:	<u>724-338-2030</u>
Telephone:	<u>724-749-8388</u>	Email:	<u>amorris@tug-hillop.com</u>



Subscribed and sworn before me this 15 day of JANUARY, 2021  
*David Charles Delak* Notary Public  
 My Commission Expires 2/16/24

**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 [deprivacyofficer@wv.gov](mailto:deprivacyofficer@wv.gov).

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WW-6A  
(9-13)

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

**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:** 1/26/2021 **Date Permit Application Filed:** 1/15/2021

**Notice of:**

- PERMIT FOR ANY WELL WORK
- CERTIFICATE OF APPROVAL FOR THE CONSTRUCTION OF AN IMPOUNDMENT OR PIT

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

- PERSONAL SERVICE
- REGISTERED MAIL
- METHOD OF DELIVERY THAT REQUIRES A 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)  
 Address: 380 Southpointe Boulevard, Plaza II, Suite 215  
Canonsburg, PA 15317

Name: Frank E. & Mary Virginia Pethtel, Life Estate (Well Pad)  
 Address: 9845 Fish Creek Road  
Glen Easton, WV 26039

SURFACE OWNER(s) (Road and/or Other Disturbance)

Name: Regina M. & Aaron D. Murray, Remainderman  
 Address: 5 Mound Manor  
St. Mary's, WV 26170

Name: \_\_\_\_\_  
 Address: \_\_\_\_\_

SURFACE OWNER(s) (Impoundments or Pits)

Name: \_\_\_\_\_  
 Address: \_\_\_\_\_

COAL OWNER OR LESSEE

Name: CNX Land, LLC  
 Address: 1000 Consol Energy Drive  
Canonsburg, PA 15317

COAL OPERATOR

Name: \_\_\_\_\_  
 Address: \_\_\_\_\_

SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)

Name: \*See attached  
 Address: \_\_\_\_\_

OPERATOR OF ANY NATURAL GAS STORAGE FIELD

Name: \_\_\_\_\_  
 Address: \_\_\_\_\_

\*Please attach additional forms if necessary

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WV Department of Environmental Protection

07/16/2021

**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 [www.dep.wv.gov/oil-and-gas/pages/default.aspx](http://www.dep.wv.gov/oil-and-gas/pages/default.aspx).

**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 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

WW-6A  
(8-13)

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

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  
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.

07/16/2021

**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-Permits/Pages/default.aspx> 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.

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Environmental Protection

WW-6A  
(8-13)

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

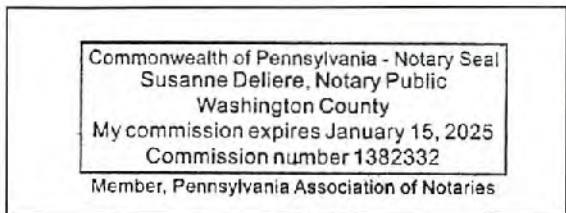
**Notice is hereby given by:**

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

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 [deprivacyofficer@wv.gov](mailto:deprivacyofficer@wv.gov).



Subscribed and sworn before me this 26<sup>th</sup> day of January 2021  
Susanne Deliere Notary Public  
My Commission Expires 1/15/2025

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WV Department of  
Environmental Protection

07/16/2021



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

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

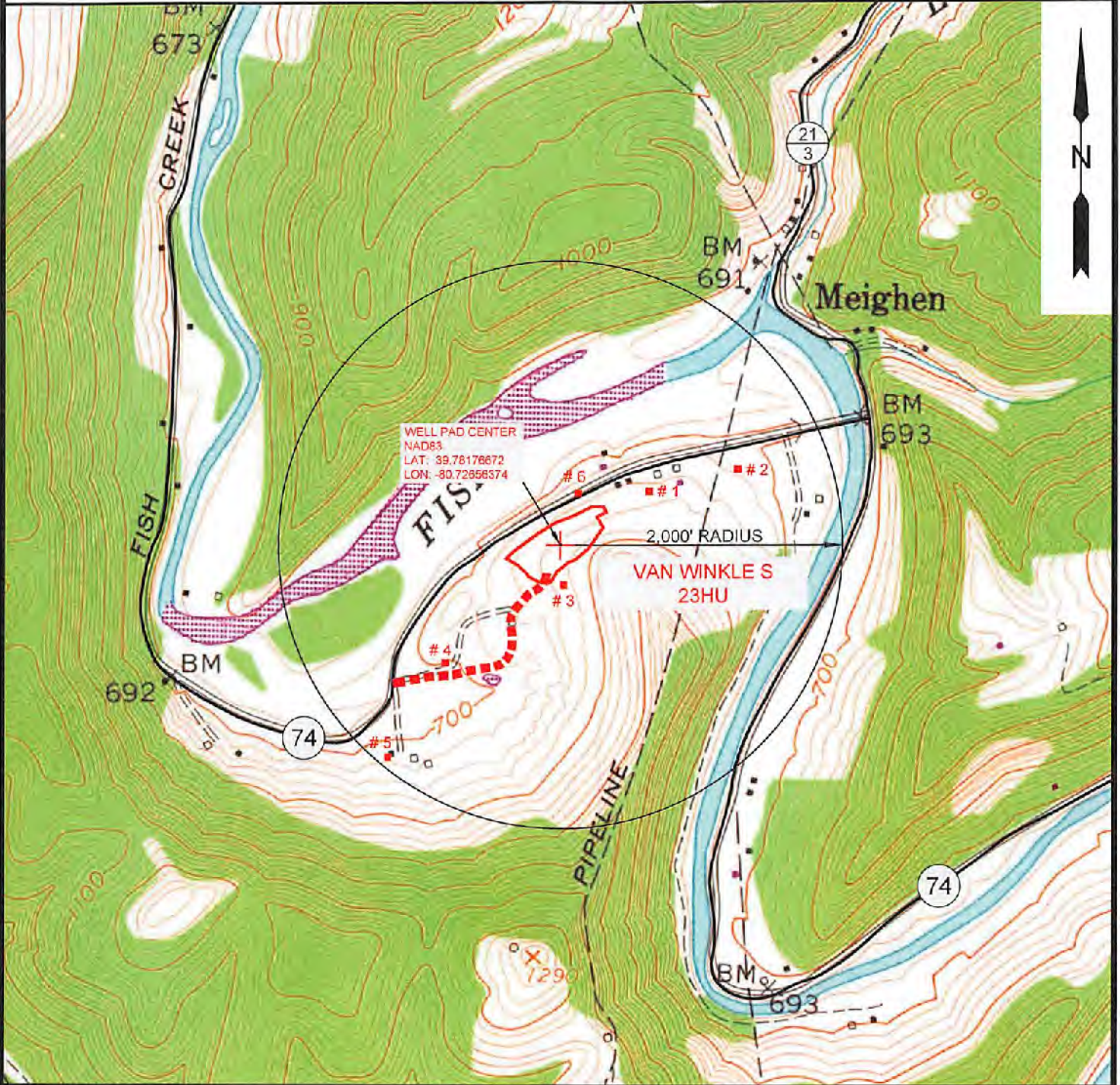
Well: Van Winkle S – 23HU  
 District: Meade  
 State: WV

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.



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

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# PROPOSED VAN WINKLE S - 23HU



NOTE: THERE APPEARS TO BE SIX (6) POSSIBLE WATER SOURCES WITHIN 2,000'. NUMBER 6 IS A WATER WELL ONLY (NO RESIDENCE).

 <p>12 Vanhorn Drive   P.O. Box 150   Glenville, WV 26351   304.462.5634 1412 Kanawha Boulevard, East   Charleston, WV 25301   304.346.3952 254 East Beckley Bypass   Beckley, WV 25801   304.255.5296 stew.com</p>	<b>TOPO SECTION:</b> GLEN EASTON 7.5'		<b>OPERATOR:</b> PREPARED FOR: TUG HILL OPERATING, LLC 380 SOUTHPOINTE BLVD SUITE 200 GANONSBURG, PA 15317		 <p><b>TUG HILL OPERATING</b></p> <p style="text-align: right; color: red; font-weight: bold;">07/16/2021</p>	
	<b>COUNTY</b> MARSHALL	<b>DISTRICT</b> MEADE	<b>DRAWN BY</b> K.G.M.	<b>JOB NO.</b> 8952		<b>DATE</b> 12/24/2020
			<b>SCALE</b> 1" = 1000'			

WW-6A  
(9-13)

API NO. 47- 051 - 02356  
OPERATOR WELL NO. Van Winkle S-23HU  
Well Pad Name: Hunter Pethtel

**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:**

- PERMIT FOR ANY WELL WORK
- CERTIFICATE OF APPROVAL FOR THE CONSTRUCTION OF AN IMPOUNDMENT OR PIT

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

- PERSONAL SERVICE
- REGISTERED MAIL
- METHOD OF DELIVERY THAT REQUIRES A 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:

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Canonsburg, PA 15317

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Address: 9845 Fish Creek Road  
Glen Easton, WV 26039

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Name: Regina M. & Aaron D. Murray, Remainderman ✓  
Address: 5 Mound Manor  
St. Mary's, WV 26170  
Name: \_\_\_\_\_  
Address: \_\_\_\_\_

SURFACE OWNER(s) (Impoundments or Pits)

Name: \_\_\_\_\_  
Address: \_\_\_\_\_

COAL OWNER OR LESSEE

Name: CNX Land, LLC ✓  
Address: 1000 Consol Energy Drive  
Canonsburg, PA 15317

COAL OPERATOR

Name: \_\_\_\_\_  
Address: \_\_\_\_\_

SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)

Name: \*See attached  
Address: \_\_\_\_\_

OPERATOR OF ANY NATURAL GAS STORAGE FIELD

Name: \_\_\_\_\_  
Address: \_\_\_\_\_

\*Please attach additional forms if necessary

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WV Department of  
Environmental Protection  
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**Notice is hereby given:**

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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/office-of-oil-and-gas/pages/default.aspx](http://www.dep.wv.gov/office-of-oil-and-gas/pages/default.aspx).

**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 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

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WW-6A  
(8-13)

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

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

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.**

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**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-Permits/Pages/default.aspx> 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.

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WW-6A  
(8-13)

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

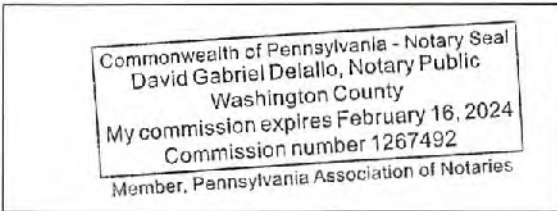
**Notice is hereby given by:**

Well Operator: Tug Hill Operating, LLC  
Telephone: 724-749-8388  
Email: amorris@tug-hilop.com *any Morris*

Address: 360 Southpointe Boulevard, Plaza II, Suite 200  
Canonsburg, PA 15317  
Facsimile: 724-339-2030

**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 [depprivacyofficer@wv.gov](mailto:depprivacyofficer@wv.gov).



Subscribed and sworn before me this 14 day of JANUARY 2021.

*[Signature]*  
\_\_\_\_\_  
Notary Public

My Commission Expires 2/16/2024

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**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 – 23HU  
 District: Meade  
 State: 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.

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

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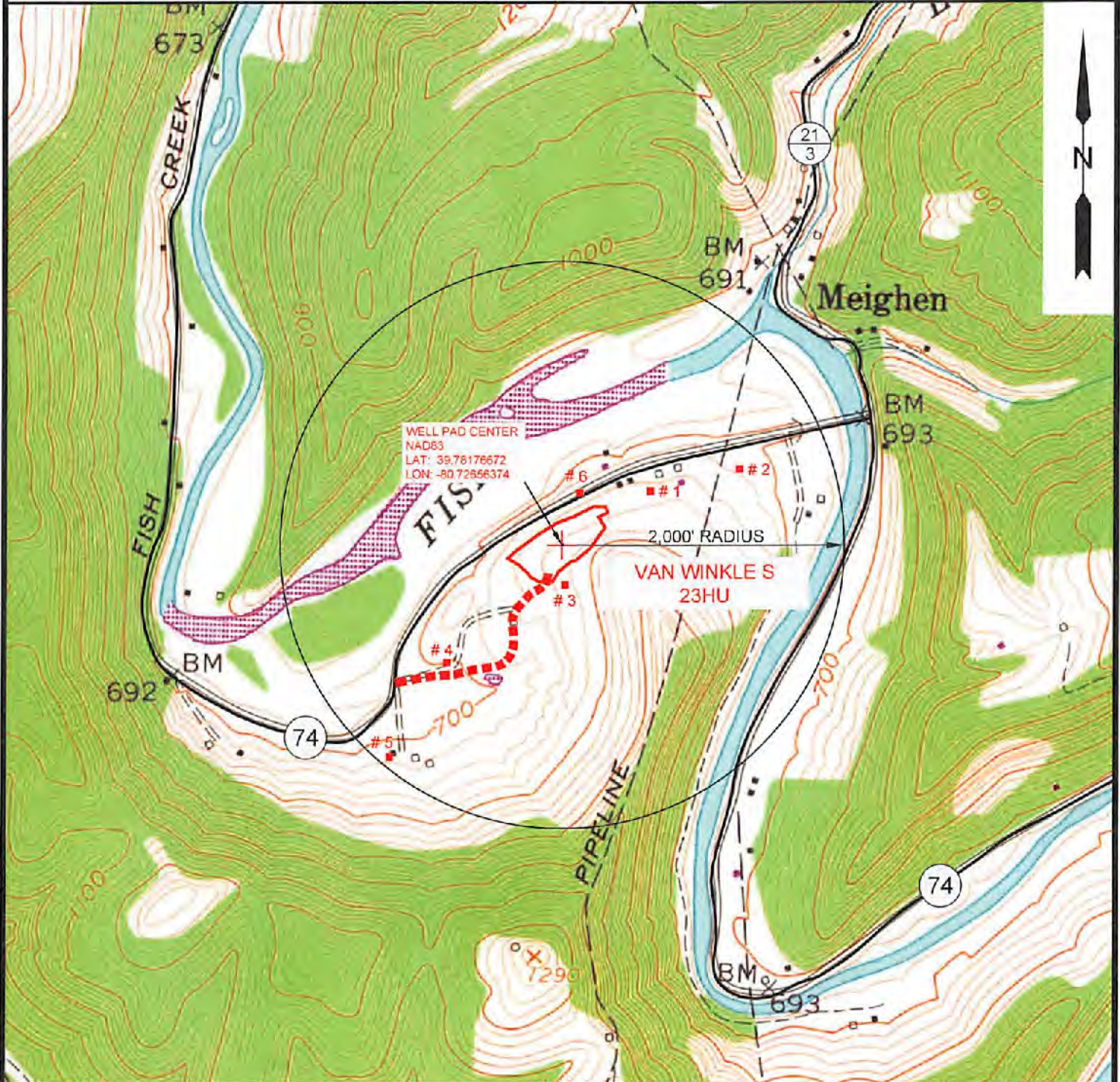
JAN 19 2021

WV Department of  
 Environmental Protection

07/16/2021



# PROPOSED VAN WINKLE S - 23HU



NOTE: THERE APPEARS TO BE SIX (6) POSSIBLE WATER SOURCES WITHIN 2,000'. NUMBER 6 IS A WATER WELL ONLY (NO RESIDENCE).

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17 Vanhorn Drive | P.O. Box 153 | Glenville, WV 26351 | 304.462.5634  
1412 Kanawha Boulevard, East | Charleston, WV 25301 | 304.346.3952  
254 East Beckley Bypass | Beckley, WV 25801 | 304.255.5296  
sllwv.com

TOPO SECTION:		OPERATOR:	
GLEN EASTON 7.5'		PREPARED FOR:	
COUNTY	DISTRICT	TUG HILL OPERATING, LLC	
MARSHALL	MEADE	380 SOUTHPOINTE BLVD	
		SUITE 200	
		CANONSBURG, PA 15317	
DRAWN BY	JOB NO.	DATE	SCALE
K.G.M.	8952	12/24/2020	1" = 1000'



WV Department of Environmental Protection  
**TUG HILL OPERATING**

07/16/2021

Affidavit of Personal Service

State Of WEST VIRGINIA  
County Of MARSHALL



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) WAS
- (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--

FRANK E. PETHER Frank E. Pether  
--by delivering the same in MARSHALL County, State of WEST VIRGINIA on the 15 day of JANUARY, 2021 in the manner specified below.

[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 in fact \_\_\_ / named \_\_\_\_\_

[Signature]  
(Signature of person executing service)

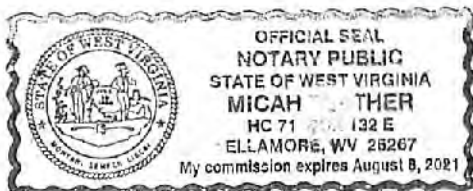
Taken, subscribed and sworn before me this 15 day of January  
My commission expires August 8, 2021

RECEIVED  
Office of Oil and Gas

[Signature]  
Notary Public

JAN 19 2021  
WV Department of Environmental Protection

(AFFIX SEAL IF NOTARIZED OUTSIDE THE STATE)



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--

- (1) Notice on Form WW-2(A) \_\_\_ / WW-3(A) \_\_\_ / WW-4(A) \_\_\_ / WW-5(A) \_\_\_ / WW-6(A) WAS
- (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. VanWinkle Wells (see) located in Meade District, Marshall County, West Virginia, upon the person or organization named--

Kcl Midstream Operating, LLC  
--by delivering the same in Washington County, State of Pennsylvania on the 14<sup>th</sup> day of January, 2021 in the manner specified below.

[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 in fact \_\_\_ / named Justin Trettel.

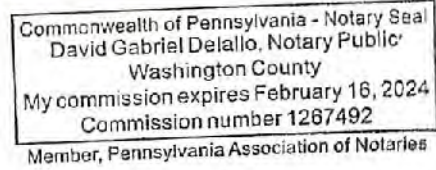
Amy Morris  
(Signature of person executing service)

Taken, subscribed and sworn before me this 14 day of JANUARY  
My commission expires 2/16/24

David Delallo  
Notary Public



(AFFIX SEAL IF NOTARIZED OUTSIDE THE STATE)



**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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07/16/2021

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

**Notice Time Requirement:** Notice shall be provided at least **SEVEN (7)** days but no more than **FORTY-FIVE (45)** days prior to entry

**Date of Notice:** 12/11/2020      **Date of Planned Entry:** 12/18/2020

**Delivery method pursuant to West Virginia Code § 22-6A-10a**

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

Pursuant to West Virginia Code § 22-6A-10(a), Prior to filing a permit application, the operator shall provide notice of planned entry on to the surface tract to conduct any plat surveys required pursuant to this article. Such notice shall be provided at least seven days but no more than forty-five days prior to such entry to: (1) The surface owner of such tract; (2) to any owner or lessee of coal seams beneath such tract that has filed a declaration pursuant to section thirty-six, article six, chapter twenty-two of this code; and (3) any owner of minerals underlying such tract in the county tax records. The notice shall include a statement that copies of the state Erosion and Sediment Control Manual and the statutes and rules related to oil and gas exploration and production may be obtained from the Secretary, which statement shall include contact information, including the address for a web page on the Secretary's web site, to enable the surface owner to obtain copies from the secretary.

**Notice is hereby provided to:**

- SURFACE OWNER(s)
  - Name: XcL Midstream Operating, LLC (Well Pad & Access Road)
  - Address: 380 Southpointe Boulevard, Plaza II, Suite 215  
Canonsburg, PA 15317
  - Name: Frank E. & Mary Virginia Pethel, Life Estate (Well Pad)
  - Address: 9845 Fish Creek Road  
Glen Easton, WV 26039
  - Name: Regina M. & Aaron D. Murray, Remainderman
  - Address: 5 Mound Manor  
St. Marys, WV 26170

- COAL OWNER OR LESSEE
  - Name: CNX Land, LLC
  - Address: 1000 Consol Energy Drive  
Canonsburg, PA 15317

- MINERAL OWNER(s)
    - Name: Frank E. & Mary Virginia Pethel, Life Estate
    - Address: 9845 Fish Creek Road  
Glen Easton, WV 26039    \*\*See attached list
- \*please attach additional forms if necessary

**Notice is hereby given:**

Pursuant to West Virginia Code § 22-6A-10(a), notice is hereby given that the undersigned well operator is planning entry to conduct a plat survey on the tract of land as follows:

State:	<u>West Virginia</u>	Approx. Latitude & Longitude:	<u>39.78176850; -80.72661368</u>
County:	<u>Marshall</u>	Public Road Access:	<u>County Route 74</u>
District:	<u>Meade</u>	Watershed:	<u>Middle Fish Creek</u>
Quadrangle:	<u>Glen Easton 7.5'</u>	Generally used farm name:	<u>XcL Midstream Operating, LLC</u>

Copies of the state Erosion and Sediment Control Manual and the statutes and rules related to oil and gas exploration and production 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). Copies of such documents or additional information related to horizontal drilling may be obtained from the Secretary by visiting [www.dep.wv.gov/oil-and-gas/pages/default.aspx](http://www.dep.wv.gov/oil-and-gas/pages/default.aspx).

**Notice is hereby given by:**

Well Operator: Tug Hill Operating, LLC  
 Telephone: 724-749-8388  
 Email: amorris@tug-hillcp.com

Address: 380 Southpointe Boulevard, Plaza II, Suite 200  
Canonsburg, PA 15317  
 Facsimile: 724-338-2020

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

**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 [depprivacyofficer@wv.gov](mailto:depprivacyofficer@wv.gov).

**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

07/16/2021

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--

- (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)
- (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. VanDyke Wells (see list) located in Meade District, Marshall County, West Virginia, upon the person or organization named--

XCL Midstream Operating, LLC  
--by delivering the same in Washington County, State of Pennsylvania on the 11th day of December, 2020 in the manner specified below.

[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:

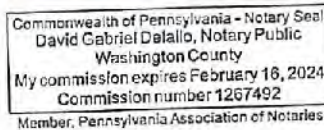
Handing it to the corporation's employee    / officer    / director    / attorney in fact    / named Justin Trettel.

Amy Klovins  
(Signature of person executing service)

Taken, subscribed and sworn before me this 11 day of December, 2020.  
My commission expires 2/16/2024

David Gabriel Dalallo  
Notary Public

(AFFIX SEAL IF NOTARIZED OUTSIDE THE STATE)



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JAN 19 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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WV Department of  
Environmental Protection

07/16/2021



**STATE OF WEST VIRGINIA**  
**DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS**  
**NOTICE OF PLANNED OPERATION**

**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)**

- |  |                               |
|--|-------------------------------|
| <input checked="" type="checkbox"/> CERTIFIED MAIL | <input type="checkbox"/> 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)**  
(at the address listed in the records of the sheriff at the time of notice):

Name: XcL Midstream Operating, LLC  
Address: 380 Southpointe Boulevard, Plaza II, Suite 200  
Canonsburg, PA 15317

Name: Frank E. & Mary Virginia Pethtel (Life Estate)  
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:	<u>West Virginia</u>	UTM NAD 83 Easting:	<u>523,385.80</u>
County:	<u>Marshall</u>	Northing:	<u>4,403,550.28</u>
District:	<u>Moade</u>	Public Road Access:	<u>County Route 74</u>
Quadrangle:	<u>Glen Easton 7.5'</u>	Generally used farm name:	<u>XcL Midstream Operating, LLC</u>
Watershed:	<u>Fish Creek (HUC 10)</u>		

**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](http://www.dep.wv.gov/oil-and-gas/pages/default.aspx).

Well Operator: Tug Hill Operating, LLC  
Telephone: 724-749-8388  
Email: amorris@tug-hill.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 [depprivacyofficer@wv.gov](mailto:depprivacyofficer@wv.gov).

**Additional Surface Owner – Van Winkle Wells  
WW-6A5**

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



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Office of Oil and Gas

JAN 19 2021

WV Department of  
Environmental Protection

07/16/2021

Affidavit of Personal Service

State Of WEST VIRGINIA  
County Of MARSHALL



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)    <sup>WAS</sup>
- (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. see list located in Meade District, Marshall County, West Virginia, upon the person or organization named--

FRANK E. PETHER - Frank E. Pether  
--by delivering the same in MARSHALL County, State of WEST VIRGINIA on the 15 day of JANUARY, 2021 in the manner specified below.

[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 in fact    / named   

[Signature]  
(Signature of person executing service)

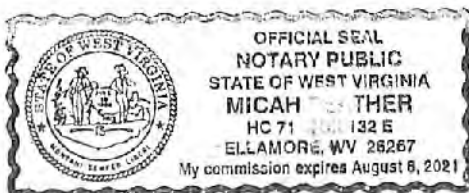
Taken, subscribed and sworn before me this 15 day of January 2021.  
My commission expires August 8, 2021

[Signature]  
Notary Public

RECEIVED  
Office of Oil and Gas

JAN 19 2021

(AFFIX SEAL IF NOTARIZED OUTSIDE THE STATE)



07/16/2021

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--

- (1) Notice on Form WW-2(A) \_\_\_ / WW-3(A) \_\_\_ / WW-4(A) \_\_\_ / WW-5(A) \_\_\_ / WW-6(A) UAS
- (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. VanWinkle Wells (see) located in Meade District, Marshall County, West Virginia, upon the person or organization named--

Kel Midstream Operating, LLC  
--by delivering the same in Washington County, State of Pennsylvania on the 14<sup>th</sup> day of January, 2021 in the manner specified below.

[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 in fact \_\_\_ / named Justin Trettel.

anyllowis  
(Signature of person executing service)

Taken, subscribed and sworn before me this 14 day of JANUARY 2021.  
My commission expires 2/16/24

[Signature]  
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

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Member, Pennsylvania Association of Notaries of Oil and Gas

JAN 19 2021

**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



WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

**Division of Highways**

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

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

January 14, 2021

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-Pethel 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,

A handwritten signature in blue ink that reads "Gary K. Clayton".

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

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

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Office of Oil and Gas

JAN 19 2021

WV Department of  
Environmental Protection

07/16/2021



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

**Van Winkle Wells**

<b>PRODUCT NAME:</b>	<b>CHEMICAL DESCRIPTION:</b>	<b>PRODUCT USE:</b>	<b>HAZARDOUS COMPONENT:</b>
GBW-20C	Hemicellulase Breaker	Breaker - Water	None
ALPHA 1427		Biocide	Glutaraldehyde – CAS#000111-30-8 Quaternary 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
FRAC SAND	Silica Sand (various Mesh sizes)	Proppant	Crystalline silica (quartz) CAS# 14808-60-7
S-8C, Sand	Silica Sand (100 mesh)	Sand	Silica – CAS# 14808-60-7
GW-3LDF		Gellant - Water	Petroleum Distillate Blend – Proprietary, (Not Associated with Diesel Fuel) Guar gum – CAS# 009000-30-0
FRW-18		Friction Reducer	Hydrotreated light distillate CAS# 064742-47-8
Scaletrol		Scale Inhibitor	Ethylene glycol – CAS# 000107-21-1 Diethylene glycol – CAS# 000111-46-6

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JAN 19 2021

WV Department of  
Environmental Protection

# Hunter Pehtel Well Pad Site

Site Design, Construction Plan, & Erosion and Sediment Control Plans

Tug Hill Operating  
Marshall County  
Meade District

Latitude -39.78176672°  
Longitude -80.72656374°  
Middle Fish Creek Watershed

**Pertinent Site Information**  
Hunter Pehtel Well Pad Site  
Emergency Number: 304-845-1920  
Meade District, Marshall County, WV  
Watershed: Middle Fish Creek Watershed  
Tug Hill Contact Number: 1-817-632-3400



Property Owner Information - Hunter Pehtel Well Site						
Owner	Meade District - Marshall County					
	Lot	Area	Acres	Approx. Value	Assessed Value	Year Assessed
City of Meadsport, LLC	12	4.03	1.14	1,200	1,200	2015
State	10	1.71	0.50	500	500	2015
<b>Total</b>	<b>22</b>	<b>5.74</b>	<b>1.64</b>	<b>1,700</b>	<b>1,700</b>	<b>2015</b>

## Exhibit A: Final Design: Issue for Permitting



WV State Plane Coordinate System  
North Zone, NAD 83  
Projection Method: Lambert Conformal Conic  
Datum: North American 1983  
Spheroid: GRS 80  
Datum Shift: 110.0000

Access Easement				
Access Owner	Time	From	To	Notes
WV State Plane Coordinate System	11/15/2011	11/15/2011	11/15/2011	WV State Plane Coordinate System

Disturbed Area	
WV State Plane Coordinate System	11/15/2011

Hunter Pehtel Well Pad Site Quantities	
Item	Quantity
Excavation	1,200 cu yd
Fill	2,500 cu yd
Clearing	100,000 sq ft

Sedimentation Impact (Enter Feet)	
Item	Value
Pre-construction	0.5
Construction	1.0
Post-construction	0.5

Erosion/Sediment Impact (Enter Feet)	
Item	Value
Pre-construction	0.5
Construction	1.0
Post-construction	0.5

Wetland Impact (Square Feet)	
Item	Quantity
Wetland	10,000 sq ft
Wetland	5,000 sq ft

Point	Easting	Northing	Point	Easting	Northing
1	411100.00	7945000.00	11	411100.00	7945000.00
2	411100.00	7945000.00	12	411100.00	7945000.00

Point	Easting	Northing	Point	Easting	Northing
13	411100.00	7945000.00	23	411100.00	7945000.00
14	411100.00	7945000.00	24	411100.00	7945000.00

**APPROVED**  
**WVDEP OOG**  
2/24/2021



**Project Contacts**

Site Location (NAD 83)  
Site Location (NAD 83)

Site Location (NAD 83)				Site Location (NAD 83)			
Point	Easting	Northing	Point	Easting	Northing		
1	411100.00	7945000.00	11	411100.00	7945000.00		
2	411100.00	7945000.00	12	411100.00	7945000.00		



**Well Location Restrictions**

1. All performance measures shall be in accordance with the following restrictions.

2. The site shall be developed in a manner that shall be in accordance with the following restrictions.

3. The site shall be developed in a manner that shall be in accordance with the following restrictions.

4. The site shall be developed in a manner that shall be in accordance with the following restrictions.

5. The site shall be developed in a manner that shall be in accordance with the following restrictions.

6. The site shall be developed in a manner that shall be in accordance with the following restrictions.

7. The site shall be developed in a manner that shall be in accordance with the following restrictions.

8. The site shall be developed in a manner that shall be in accordance with the following restrictions.

9. The site shall be developed in a manner that shall be in accordance with the following restrictions.

10. The site shall be developed in a manner that shall be in accordance with the following restrictions.

**MISS JUDITH Q**  
WEST VIRGINIA  
1-800-245-4686  
811  
Keep what's below. Call before you dig.

**811**  
Keep what's below.  
Call before you dig.

**WVDEP Notice**

The WV Meade District has been notified. Previous (Current) zoning activities are not within the ADE.

WVDEP Notice also shows that there are active and/or abandoned gas wells within the ADE.

**TUG HILL**  
OPERATING

**Hunter Pehtel Well Pad Site**  
Meade District  
Marshall County, WV



Hunter Pethel Well Site  
Tug Hill Operating

Exhibit A: Final Design: Issue for Permitting

Xcl. Midstream  
Operating, LLC  
Trk. 13  
Parcel 5

Xcl. Midstream  
Operating, LLC  
Trk. 13  
Parcel 5

APPROVED  
WVDEP OOG  
2/24/2021

APPROVED  
WVDEP OOG  
2/24/2021



NOTE:  
All section boundary lines shown herein are based on the best available information and do not constitute a warranty of accuracy.

**Legend**

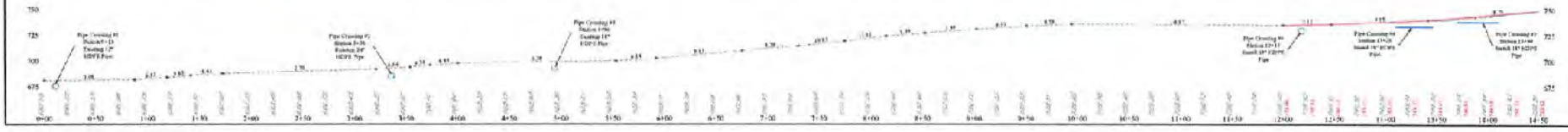
- Orange dashed line: Original Section 2 - Center
- Blue dashed line: Original Section 2 - Corner
- Red dashed line: Design 2 - Center
- Red dashed line: Design 2 - Corner
- Red dashed line: Design 2 - Property
- Black dashed line: Original Section 1 - Center
- Black dashed line: Original Section 1 - Corner
- Black dashed line: Design 1 - Center
- Black dashed line: Design 1 - Corner
- Black dashed line: Design 1 - Property
- Black dashed line: Property Line

**Disturbed Area**

- Light green fill: 2" Camped Filter Sand
- Dark green fill: 4" Camped Filter Sand
- Light yellow fill: 2" Camped Filter Sand
- Dark yellow fill: 4" Camped Filter Sand
- Light blue fill: 2" Camped Filter Sand
- Dark blue fill: 4" Camped Filter Sand
- Light purple fill: 2" Camped Filter Sand
- Dark purple fill: 4" Camped Filter Sand

**Access Road**

Location	Trk. 13	Parcel 5	Zone
2400000	11000	10000	2400000
2400000	11000	10000	2400000
2400000	11000	10000	2400000
2400000	11000	10000	2400000
2400000	11000	10000	2400000



TUG HILL OPERATING

THIS DOCUMENT PREPARED FOR: TUG HILL OPERATING

**KCS** CONSULTING

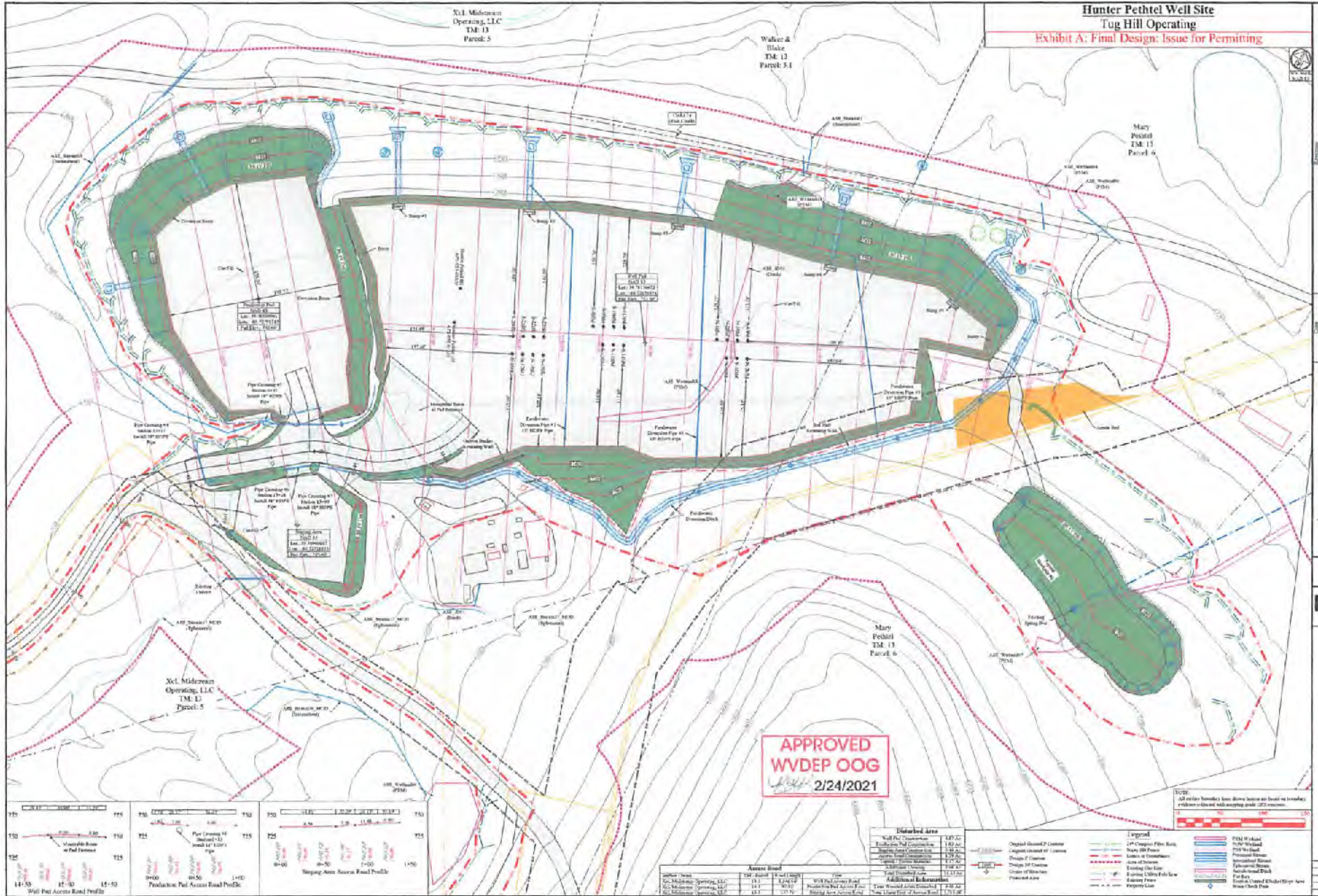
Hunter Pethel Well Site  
Madeleine  
Marshall County, WV

Scale: As Shown  
Drawn By: JS  
Date: 2/24/2021  
Sheet 9 of 13

# Hunter Pethtel Well Site

## Tug Hill Operating

Exhibit A: Final Design: Issue for Permitting



**TUG HILL OPERATING**

**Hunter Pethtel Well Site**

Moose District  
Marshall County, WV

Site #1610  
Date: 10/20/19  
Scale: As Shown  
Designed By: JLS  
File #: 1610-03

THIS DOCUMENT PREPARED FOR TUG HILL OPERATING

Site #1610  
Date: 10/20/19  
Scale: As Shown  
Designed By: JLS  
File #: 1610-03

**APPROVED  
WDEP OOG**  
*[Signature]*  
2/24/2021

Symbol / Line Style	Description
Solid Black Line	Well Pad
Dashed Black Line	Property Line
Red Dashed Line	Well Path
Blue Line	24" Composite Pipe Line
Orange Line	18" Composite Pipe Line
Black Line	12" Composite Pipe Line
Green Outline	Production Area
Orange Outline	Fugitive Production Area
Blue Dashed Outline	Well Pad Access Road
Yellow Outline	Production Area Access Road Profile
Blue Dotted Line	24" Wellhead
Blue Circle	24" Wellhead
Blue Square	Wellhead
Blue Triangle	Wellhead
Blue Circle with Dot	Wellhead