



west virginia department of environmental protection

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

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

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

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

Re: Permit approval for VAN WINKLE S-22HU
47-051-02355-00-00

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.

James A. Martin
Chief

Operator's Well Number: VAN WINKLE S-22HU
Farm Name: XCL MIDSTREAM OPERATING
U.S. WELL NUMBER: 47-051-02355-00-00
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 57th 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 #47-051-02355

COMPANY: Tug Hill Operating, LLC

FARM: XCL Midstream Operating, LLC Van Winkle S-22HU

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-121IU 47-051-02268; Knob Creek N-11HU 47-051-02287; Hunter 1 47-051-01284; Van Winkle N-161IU 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-23HU 47-051-02356; Pendleton N-9HU 47-051-02245; Heaven Hill 2W-131IU 47-051-01957, Heaven Hill 2W-121IU 47-051-01952, Keith Stern N-131IU 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

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.

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-22HU Well Pad Name: Hunter Pethel

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

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Point Pleasant is the target formation at a depth of 10,969' - 11,089', thickness of 120' and anticipated pressure of approx. 7,500 psi.

8) Proposed Total Vertical Depth: 11,239'

9) Formation at Total Vertical Depth: Trenton

10) Proposed Total Measured Depth: 26,212'

11) Proposed Horizontal Leg Length: 14,694.13'

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: _____

RECEIVED
Office of Oil and Gas
FEB 03 2021
WV Department of
Environmental Protection

WW-6B
(04/15)

API NO. 47-051 -
OPERATOR WELL NO. Van Winkle S-22HU
Well Pad Name: Hunter Pethel

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#	2,225'	2,225'	1576FT^3(CTS)
Intermediate	9 5/8"	NEW	HPP110	47#	9,978'	9,978'	3236FT^3(CTS)
Production	5 1/2"	NEW	P110	23#	26,212'	26,212'	6174FT^3(CTS)
Tubing	2 7/8"	NEW	P110	6.5#		10,378'	
Liners							

Bang 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 FEB 03 2021
Sizes:	N/A				WV Department of Environmental Protection
Depths Set:	N/A				

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

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

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

Well to be completed with approximately 36,250,000 lb. proppant and 650,000 bbl of water. Max rate = 80bpm; max psi = 9,000#.

Bang Stillie
1-22-21

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

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

23) Describe centralizer placement for each casing string:

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

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

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

25) Proposed borehole conditioning procedures:

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

RECEIVED
Office of Oil and Gas
FEB 03 2021
WV Department of
Environmental Protection

*Note: Attach additional sheets as needed.

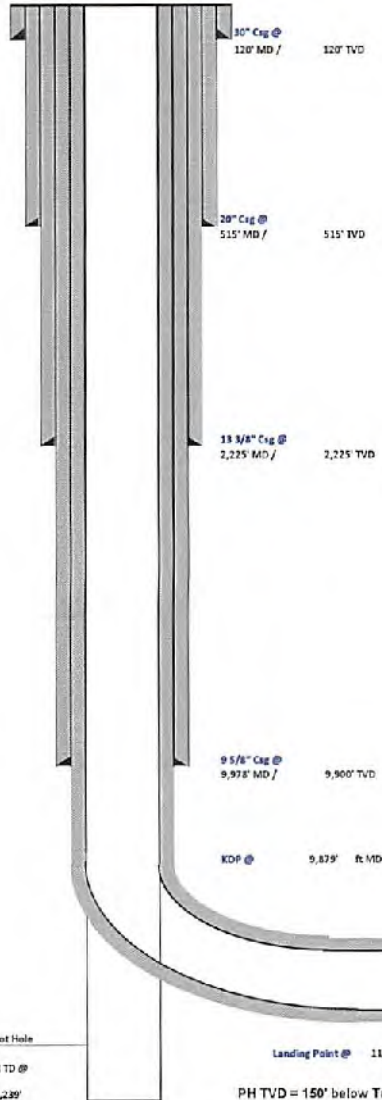


WELL NAME: Van Winde S-22HU
STATE: WV **COUNTY:** Marshall
DISTRICT: Meade
DF Elev: 754' **GL Elev:** 754'
TD: 26,212'
TH Latitude: 39.781555
TH Longitude: -80.726935
BH Latitude: 39.745715
BH Longitude: -80.701428

FORMATION TOPS	
Formation	Depth TVD
Deepest Fresh Water	415'
Sewickley Coal	818'
Pittsburgh Coal	409'
Big Lime	1,635'
Berea	2,121'
Tully	6,040'
Marcellus	6,143'
Onondaga	6,193'
Salina	6,913'
Lockport	7,972'
Utica	10,589'
Point Pleasant	10,969'
Landing Depth	11,016'
Trenton	11,089'
Pilot Hole TD	11,239'

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'	BW	BW	Surface
Surface	26	20	515'	515'	106.5	J35	Surface
Intermediate 1	17 1/2	13 3/8	2,225'	2,225'	54.5	J35	Surface
Intermediate 2	12 1/4	9 5/8	9,978'	9,900'	47	HPP110	Surface
Production	8 1/2	5 1/2	26,212'	11,232'	25	HCP110	Surface

	CEMENT SUMMARY			DRILLING DETAILS	
	Sacks	Class	Density	Fluid Type	Centralizer Notes
Conductor	336	A	15.6	Air	None
Surface	949	A	15.6	Air	3 Centralizers at equal distance
Intermediate 1	1,707	A	15	Air	1 Centralizer every other jt
Intermediate 2	2,788	A	14.5	Air	1 Centralizer every other jt
Production	5,505	A	15	Air / SOBM	1 every other joint in lateral; 1 per joint in curve; 1 every other jt to stc



Barry Stilleys 1-22-21

Pilot Hole
 PH TD @ 11,239'
 Landing Point @ 11,521' MD / 11,016' TVD
 PH TVD = 150' below Trenton Top

Lateral TD @ 26,212' R MD
 11,232' R TVD

RECEIVED
 Office of Oil and Gas
 FEB 03 2021
 WV Division of Oil and Gas



Tug Hill Operating, LLC Casing and Cement Program

Van Winkle S-22HU

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"	2,225'	CTS
Intermediate 2	9 5/8"	HPP110	12 1/4"	9,978'	CTS
Production	5 1/2"	HCP110	8 1/2"	26,212'	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

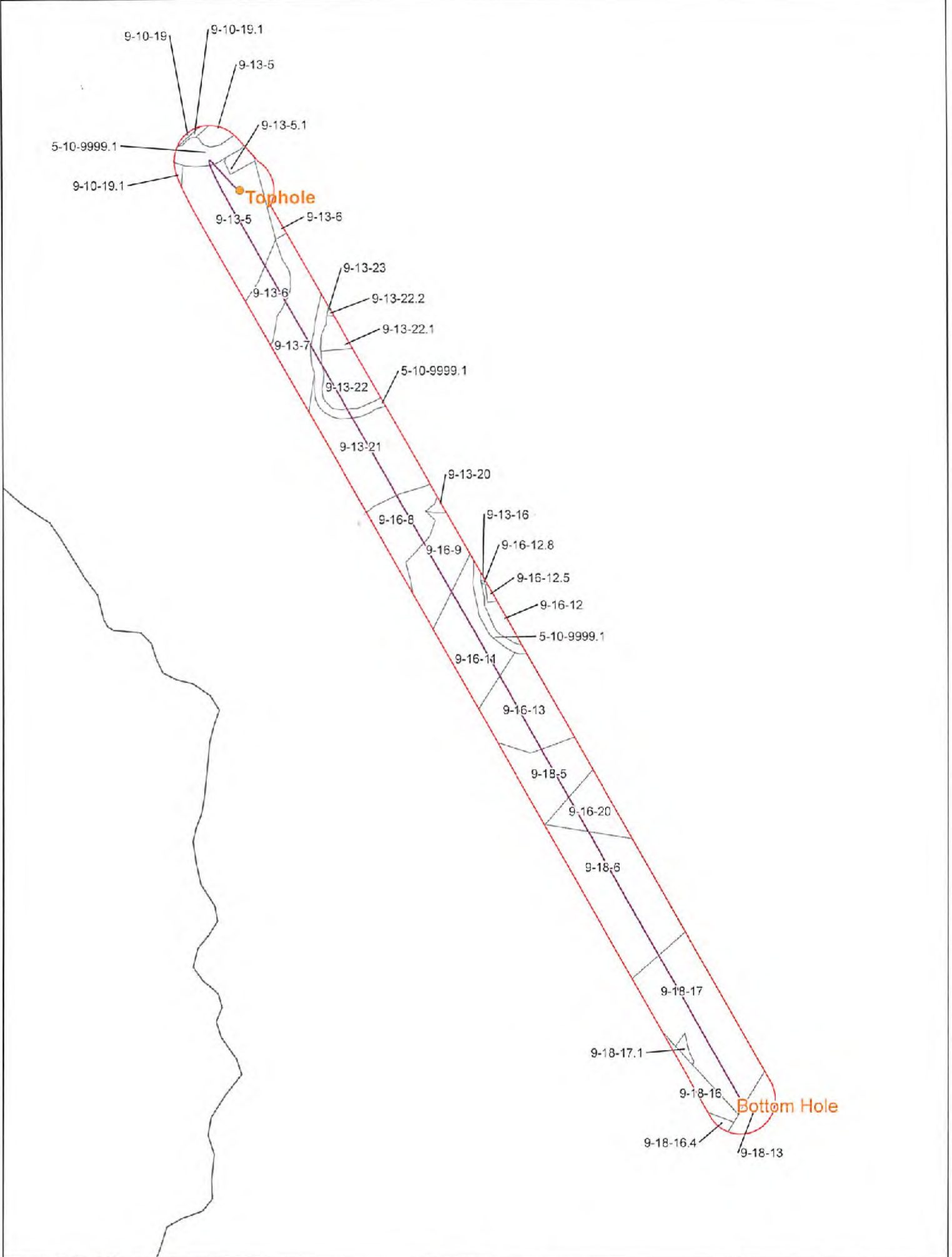
Intermediate 2: Premium NE-1 + 1% bwoc CaC12 + 46.5% Fresh Water – Intermediate Cement mixed at 15.6 ppg, Y=1.99

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

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

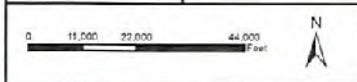
07/16/2021

Van Winkle S-22HU



Coordinate System: NAD 1983 UTM Zone 17N
 Projection: Transverse Mercator
 Datum: North American 1983
 False Easting: 165000.000000
 False Northing: 0.000000
 Central Meridian: -81.000000
 Scale Factor: 0.999600
 Latitude Of Origin: 38.000000
 Units: Feet US

CONFIDENTIAL



- Utica Well
- Force Pool
- 500' Buffer

Van Winkle S-22HU
 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, 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

RECEIVED
Office of Oil and Gas

JAN 19 2021

WV Department of
Environmental Protection
Page 1 of 5

07/16/2021

Permit well - Van Winkle 5-22HU

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.
4705100530	Manufacturers Light & Heat Co.	1809' TVD	Big Injun	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 7/24/1969.
4705170778	Hope Natural Gas Company	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.
4705109731	Hope Natural Gas Company	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.
4705130022	Hope Natural Gas Company	2456' 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 5/24/1932.
4705170300	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.

RECEIVED
Office of Oil and Gas

JAN 19 2021

WV Department of
Environmental Protection

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX DISTRICT	QUAD 76	QUAD 15	LAT_DD	LONG_DD	UTME	UTMN
4705100530	Marshall	530	Meade	Glen Easton	Carmicha	39 778584	-80 72056	523415.9	4403282.0

There is no Bottom Hole Location data for this well

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
4705100530	2/25/1966	Original Loc	Completed	John J Goff	1					Manufacturers Light & Heat Co				

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_FIG	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	
4705100530	2/25/1966	1/8/1966	740 Ground Level	Cameron-Gamer	Big Injan (undiff)	Big Injan (undiff)	Development Well	Development Well	Gas	Spudder	Acid-Frize	1200		1900		20	66	0	0			0	0	0	0	0	0	0	24

Pay/Show/Water Information:

API	CMP_DT	ACTIVITY	PRODUCT	SECTION	DEPTH_TOP	FM_TOP	DEPTH_BOT	FM_BOT	G_BEF	G_AFT	O_BEF	O_AFT	WATER_QNTY
4705100530	2/25/1966	Show	Gas	Vertical			375	Pittsburgh coal	0	0			
4705100530	2/25/1966	Pay	Gas	Vertical	1375	Salt Sands (undiff)	1379	Salt Sands (undiff)	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:

API	SUFFIX	FM	FM_QUALITY	DEPTH_TOP	DEPTH_QUALITY	THICKNESS	THICKNESS_QUALITY	ELEV	DATUM
4705100530	Original Loc	unidentified coal	Well Record	260	Reasonable	4	Reasonable	740	Ground Level
4705100530	Original Loc	Pittsburgh coal	Well Record	367	Reasonable	8	Reasonable	740	Ground Level
4705100530	Original Loc	Maxton	Well Record	1264	Reasonable	118	Reasonable	740	Ground Level

Wireline (E-Log) Information:

API	LOG_TOP	LOG_BOT	DEEPEST_FML	LOGS_AVAIL	SCAN	DIGITIZED	GR_TOP	GR_BOT	D_TOP	D_BOT	H_TOP	N_BOT	L_TOP	L_BOT	T_TOP	S_TOP	S_BOT	O_TOP	O_BOT	INCH2	INCH6	REDUCED	KOP	LOGMD	ELEV_KB	ELEV_GL	ELEV_OF	LOG_MSRD_FROM
4705100530	100	1822	Big Lime	G.D.N.I.T.C.*	Y	N	100	1822	1158	1614	600	1822	1176	1610	950	1808			1158	1614	Y	Y	N					

Comment: logs: calliper, tension device, casing collars

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.

FILENAME
4705100530.drf.tif
4705100530.drho.tif
4705100530.drf.tif
4705100530.drf.tif
4705100530_3.tif

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

geologic log types:

- d density (includes bulk density, compensated density, density, density porosity, grain density, matrix density, etc.)
- e photoelectric adsorption (PE or Pa, etc.)
- g gamma ray
- i induction (includes dual induction, medium induction, deep induction, etc.)
- l laterolog
- m dipmeter
- n neutron (includes neutron porosity, sidewall neutron--SWN, 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 calliper
- o other
- p perforation depth control or perforate

¹ 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, gasvd, NGTL--Nuclear Cement Top Locator, radioactive tracer, tension

Plugging Information:

API	PLG_DT	DEPTH_PBT
4705100530	7/24/1969	0

There is no Sample data for this well

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

Location Information: View Map

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_76	QUAD_15	LAT_DD	LONG_DD	UTME	UTM_N
4705100731	Marshall	731	Meade	Glen Easton	Cameron	39.766979	-80.719605	524014.9	4402154.2

There is no Bottom Hole Location data for this well

Owner Information:

API	CMP_DT	SUFFIX	STATUS	SURFACE_OWNER	WELL_NUM	CO_NUM	LEASE	LEASE_NUM	MINERAL_OWN	OPERATOR_AY	COMPLETION	PROP_VD	PROP_TRCT_FM	YFM_EST_PR
4705100731	Original Loc. Completed	J M Kelly			504-HOPE			Hope Natural Gas Company				

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	TI_BEF	P_AFT	TI_AFT	BH_P_BEF	BH_P_AFT	G_MSRD_BY
4705100731	1231 Spirit Level				undclassified	undclassified	not available	unknown	unknown																	

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
4705100731	Perkins Oil and Gas, Inc.	1990	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100731	Perkins Oil and Gas, Inc.	1991	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100731	Perkins Oil and Gas, Inc.	1997	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100731	Perkins Oil and Gas, Inc.	2001	817	66	42	44	69	83	82	80	72	70	68	83	58
4705100731	Perkins Oil and Gas, Inc.	2002	620	86	59	74	51	40	59	60	16	15	20	42	98
4705100731	Perkins Oil and Gas, Inc.	2003	639	77	73	68	61	61	62	34	28	47	70	0	36
4705100731	Perkins Oil and Gas, Inc.	2004	788	73	56	98	61	90	50	59	28	13	64	96	89
4705100731	Perkins Oil and Gas, Inc.	2005	938	25	59	85	89	85	67	70	82	84	82	93	77
4705100731	Perkins Oil and Gas, Inc.	2006	815	22	54	69	63	85	80	82	87	61	70	83	59
4705100731	Perkins Oil and Gas, Inc.	2007	435	26	10	36	36	72	48	32	41	30	36	48	18
4705100731	Perkins Oil and Gas, Inc.	2008	603	46	39	44	34	56	37	62	65	49	71	32	49
4705100731	Perkins Oil and Gas, Inc.	2009	1,005	68	63	77	69	95	67	87	99	81	94	91	78
4705100731	Perkins Oil and Gas, Inc.	2010	829	61	69	68	78	61	65	70	68	82	100	81	66
4705100731	Perkins Oil and Gas, Inc.	2011	1,043	73	72	96	90	105	94	82	74	61	67	79	110
4705100731	Perkins Oil and Gas, Inc.	2012	1,295	83	106	103	196	82	100	88	75	109	119	109	105
4705100731	Perkins Oil and Gas, Inc.	2013	1,198	111	68	86	63	102	82	79	115	108	122	112	108
4705100731	Perkins Oil and Gas, Inc.	2014	1,229	90	94	74	111	118	114	112	90	108	108	101	108
4705100731	Perkins Oil and Gas, Inc.	2015	1,199	125	95	99	81	73	83	117	154	102	119	118	115
4705100731	Perkins Oil and Gas, Inc.	2016	1,231	80	82	102	85	113	84	100	99	108	115	112	118
4705100731	Perkins Oil and Gas, Inc.	2017	2,130	214	102	186	168	174	170	226	186	206	216	210	92
4705100731	Perkins Oil and Gas, Inc.	2018	1,028	27	53	79	77	69	85	105	101	105	88	102	105
4705100731	Perkins Oil and Gas, Inc.	2019	965	0	42	101	95	99	105	97	102	90	92	63	99

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
4705100731	Perkins Oil and Gas, Inc.	1990	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100731	Perkins Oil and Gas, Inc.	1991	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100731	Perkins Oil and Gas, Inc.	1997	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100731	Perkins Oil and Gas, Inc.	2001	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100731	Perkins Oil and Gas, Inc.	2002	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100731	Perkins Oil and Gas, Inc.	2003	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100731	Perkins Oil and Gas, Inc.	2004	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100731	Perkins Oil and Gas, Inc.	2005	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100731	Perkins Oil and Gas, Inc.	2006	6	0	6	0	0	0	0	0	0	0	0	0	0
4705100731	Perkins Oil and Gas, Inc.	2007	3	0	0	0	0	0	0	0	0	0	0	0	3
4705100731	Perkins Oil and Gas, Inc.	2008	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100731	Perkins Oil and Gas, Inc.	2009	6	0	0	0	0	0	0	0	0	0	0	0	0
4705100731	Perkins Oil and Gas, Inc.	2010	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100731	Perkins Oil and Gas, Inc.	2011	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100731	Perkins Oil and Gas, Inc.	2012	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100731	Perkins Oil and Gas, Inc.	2013	0	0	0	0	0	0	0	5	0	0	0	0	0
4705100731	Perkins Oil and Gas, Inc.	2014	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100731	Perkins Oil and Gas, Inc.	2015	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100731	Perkins Oil and Gas, Inc.	2016	7	0	0	7	0	0	0	0	0	0	0	0	0
4705100731	Perkins Oil and Gas, Inc.	2017	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100731	Perkins Oil and Gas, Inc.	2018	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100731	Perkins Oil and Gas, Inc.	2019	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
4705100731	Perkins Oil and Gas, Inc.	2013	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100731	Perkins Oil and Gas, Inc.	2014	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100731	Perkins Oil and Gas, Inc.	2015	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100731	Perkins Oil and Gas, Inc.	2016	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100731	Perkins Oil and Gas, Inc.	2018	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100731	Perkins Oil and Gas, Inc.	2019	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
4705100731	Perkins Oil and Gas, Inc.	2018	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100731	Perkins Oil and Gas, Inc.	2019	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

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

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LONG_DD	UTM_E	UTM_N
4705101846	Marshall	1846	Meade	Glen Easton	Cameron	39 781827	-80 726602	523411 3	4403578 3

Bottom Hole Location Information:

API	EP_FLAG	UTM_E	UTM_N	LONG_DD	LAT_DD
4705101846	1	As Proposed	521973 8	4404978 5	-80 743342 39 784461

Owner Information:

API	CMP_DT	SUFFIX	STATUS	SURFACE_OWNER	WELL_NUM	CO_NUM	LEASE	LEASE_NUM	MINERAL_OWN	OPERATOR_AT_COMPLETION	PROP_VD	PROP_YRGT_FM	TFM_EST_PR
4705101846	JJ		Dmd Grant Loc	Cancelled	Dennis W Hunter	9H	Hunter Petfield		Dennis W Hunter et al	Stons Energy Corporation	6140	Marcelus 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_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
4705101846	JJ	JJ		755	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

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

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_76	QUAD_16	LAT_DD	LONG_DD	UTME	UTMN
4705101847	Marshall	1847	Meade	Glen Easton	Cameron	39.781755	-80.72647	523422.6	4403970.4

Bottom Hole Location Information:

API	EP_FLAG	UTME	UTMN	LONG_DD	LAT_DD
4705101847	1	As Proposed	523970	4401941.7	-80.720137

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	--		Dwld Oper/ Loc	Cancelled	Dennis W Hunter	4H	Hunter Petthal		Dennis W Hunter et al	Stone Energy Corporation		6250	Marco/Sun Fin

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	TI_BEF	P_AFT	TI_AFT	BH_P_BEF	BH_P_AFT	G_MSRD_BY
4705101847	--	--		795	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

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

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_76	QUAD_15	LAT_DD	LOW_DD	UTME	UTRN
4705101859	Marshall	1859	Meade	Glen Easton	Cameron	39.78156	-90.726575	523388	4403548.6

Bottom Hole Location Information:

API	EP_FLAG	UTME	UTRN	LOW_DD	LAT_DD
4705101859	1	As Proposed	521903.3	4404831.6	-90.744175

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	YFM_EST_PR
4705101859	--	Dvd Orig Loc	Cancelled	Dennis W Hunter	6H		Hunter Pethtel		Dennis W Hunter et al	Stone Energy Corporation	6140	Marcelus 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_FIG	KOD	G_BEF	G_AFT	O_BEF	O_AFT	NGL_BEF	NGL_AFT	P_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

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

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LONG_DD	UTME	UTMN
4705101880	Marshall	1880	Meade	Glen Easton	Cameron	39.781673	-80.726548	523416	4403581.3

Bottom Hole Location Information:

API	EP_FLAG	UTME	UTMN	LONG_DD	LAT_DD
4705101880	1	As Proposed	522074.3	4403230.4	-80.74216

Owner Information:

API	CMP_DT	SUFFIX	STATUS	SURFACE_OWNER	WELL_NUM	CO_NUM	LEASE	LEASE_NUM	MINERAL_OWN	OPERATOR_AT_COMPLETION	PROP_VO	PRDP	TRGT_FM	TFM_EST_PR
4705101880	JJ	DW1	Operl Loc	Cancelled	Dennis W Hunter	10H	Hunter Pethtel		Dennis W Hunter et al	Stone Energy Corporation	6140	Marceus Fm		

Completion Information:

API	CMP_DT	SPUD_DT	ELEV DATUM	FIELD	DEEPEST_FM	DEEPEST_FMT	INITIAL_CLASS	FNAL_CLASS	TYPE	RIG	CMP_MTHD	TYD	TMD	NEW_FIG	KOO	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
4705101880	JJ	JJ	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
4705101880	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
4705101880	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
4705101880	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
4705101880	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

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

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_76	QUAD_16	LAT_DD	LONG_DD	UTME	UTMN
4705101886	Marshall	1886	Meade	Glen Easton	Cameron	39 781782	-90 726409	523427.8	4403573.4

Bottom Hole Location Information:

API	EP_FLAG	UTME	UTMN	LONG_DD	LAT_DD
4705101886	1	As Proposed	524237.2	4402287.1	-90 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_VD	PROP_TRGT_FM	TFM_EST_PR
4705101886	-/-		Cancelled	Dennis W Hunter	5H		Hunter/Petitel		Dennis W Hunter et al	Stone Energy Corporation	6250	Marcelus Fm	4200

Completion Information:

API	CMP_DT	SPUD_DT	ELEV DATUM	FIELD	DEEPEST_FM	DEEPEST_FMT	INITIAL_CLASS	FINAL_CLASS	TYPE	RIG	CMP_MTHD	TVD	YMD	NEW_FTG	ROD	G_BEF	G_AFT	O_BEF	O_AFT	NGL_BEF	NGL_AFT	P_BEF	TL_BEF	TL_AFT	TL_AFT	BH_P_BEF	BH_P_AFT	G_MSRD_BY
4705101886	-/-		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
4705101886	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
4705101886	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
4705101886	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
4705101886	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

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

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAY_DD	LOW_DD	UTM_E	UTM_N
4705130022	Marshall	30022	Meade	Glen Easton	Cameron	39 763904	-80 713987	524499 6	4401592 5

There is no Bottom Hole Location data for this well

Owner Information:

API	CMP_DT	SUFFIX	STATUS	SURFACE_OWNER	WELL_NUM	CO_NUM	LEASE	LEASE_NUM	MINERAL_OWN	OPERATOR_AT_COMPLETION	PROP_VO	PROP_TRGT_FM	TFM_EST_PR
4705130022	--	--	Original Loc Completed	J S Richmond		291			unknown	Hope Natural Gas Company			

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	TI_BEF	P_AFT	TI_AFT	BH_P_BEF	BH_P_AFT	G_MSRD_BY
4705130022	--	--	769 Ground Level	Unnamed	UDev undr	DevLoHURN	Gordon	Development Well	unclassified	Gas	Cable Tool	unknown	2456	2456		0	0	0	0	0	0	0	0	0	0	0	0	0

Pay/Show/Water Information:

API	CMP_DT	ACTIVITY	PRODUCT	SECTION	DEPTH_TOP	FM_TOP	DEPTH_BOT	FM_BOT	G_BEF	G_AFT	O_BEF	O_AFT	WATER_QNTY
4705130022	--	Pay	Gas	Vertical			2385	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:

API	SUFFIX	FM	FM_QUALITY	DEPTH_TOP	DEPTH_QUALITY	THICKNESS	THICKNESS_QUALITY	ELEV	DATUM
4705130022	Original Loc	unidentified coal	Well Record	100	Reasonable	5	Reasonable	769	Ground Level
4705130022	Original Loc	Sensibkey coal	Well Record	308	Reasonable	2	Reasonable	769	Ground Level
4705130022	Original Loc	Pittsburgh coal	Well Record	398	Reasonable	8	Reasonable	769	Ground Level
4705130022	Original Loc	Salt Sands (undr)	Well Record	1220	Reasonable	240	Reasonable	769	Ground Level
4705130022	Original Loc	Big Lime	Well Record	1523	Reasonable	40	Reasonable	769	Ground Level
4705130022	Original Loc	Big Injan (undr)	Well Record	1863	Reasonable	207	Reasonable	769	Ground Level
4705130022	Original Loc	Gordon Stray	Well Record	2327	Reasonable	6	Reasonable	769	Ground Level
4705130022	Original Loc	Gordon	Well Record	2374	Reasonable	26	Reasonable	769	Ground Level

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

Plugging Information:

API	PLG_DT	DEPTH_PBT
4705130022	5/24/1992	0

There is no Sample data for this well

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

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_76	QUAD_46	LAT_DD	LONG_DD	UTME	UTMN
4705170300	Marshall	70300	Meade	Wierville	Littleton	39.747456	-80.708947	525535.2	4399771.5

There is no Bottom Hole Location data for this well

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
4705170300	---	---	unknown	Puffy Map J Scheelhood						Manufacturers Light & Heat Co			

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_DEF	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
4705170300	---	---						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

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

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_16	LAT_DD	LONG_DD	UTME	UTMN
4705170778	Marshall	70778	Meade	Glen Easton	Cameron	39.775354	-80.721305	523567.3	4402625

There is no Bottom Hole Location data for this well

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
4705170778	--	--	unknown	Prby Map F Weller				657		Hope Natural Gas Company			

Completion Information:

API	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	TI_BEF	P_AFT	TI_AFT	BH_P_BEF	BH_P_AFT	G_MSRD_BY
4705170778	--	--						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

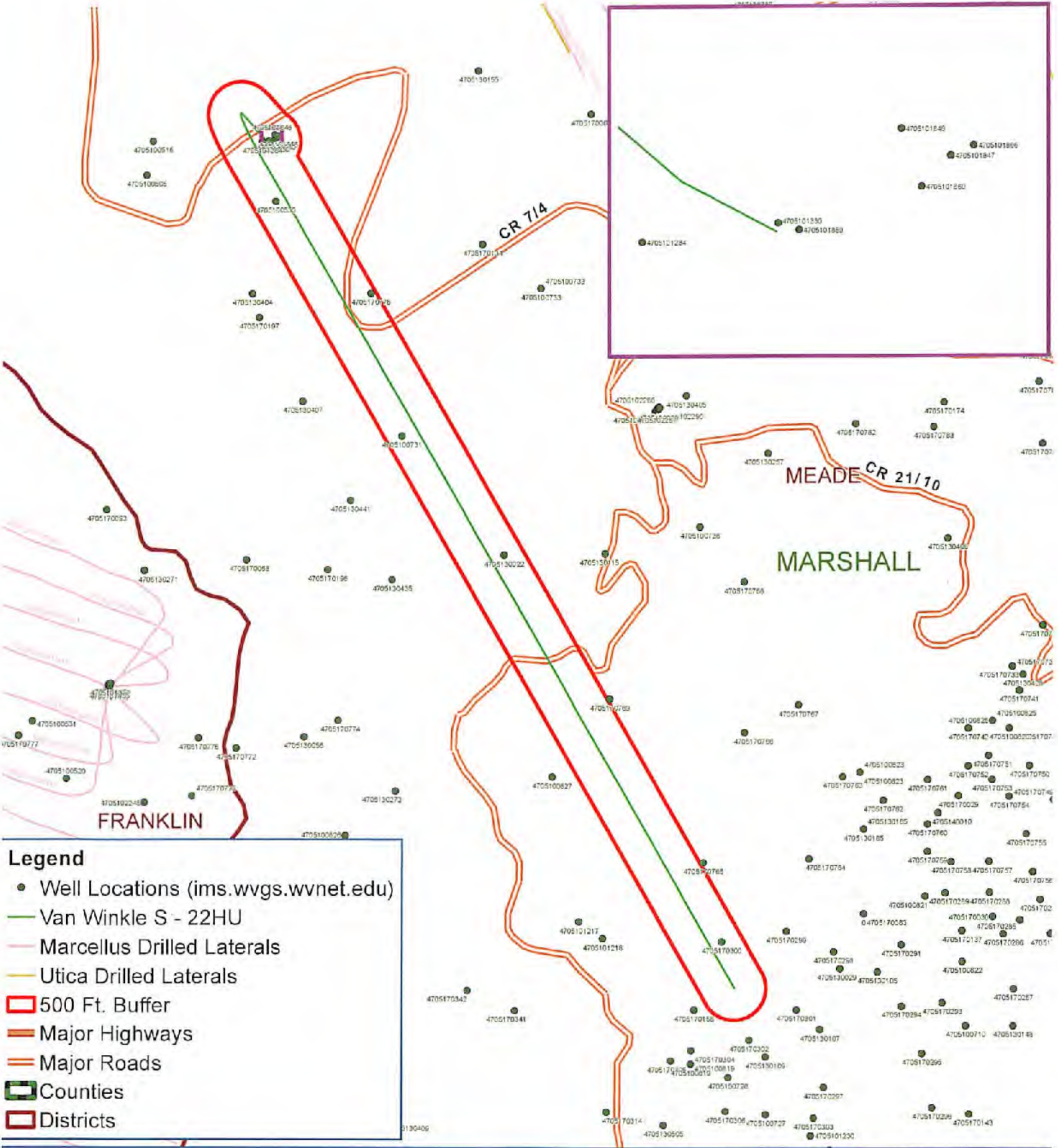
There is no Stratigraphy data for this well

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

There is no Plugging data for this well

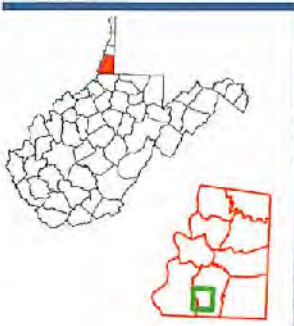
There is no Sample data for this well

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



Legend

- Well Locations (ims.wvgs.wvnet.edu)
- Van Winkle S - 22HU
- Marcellus Drilled Laterals
- Utica Drilled Laterals
- 500 Ft. Buffer
- Major Highways
- Major Roads
- ▭ Counties
- ▭ Districts



Van Winkle S - 22HU Meade District Marshall County, WV



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



Map Prepared by:
EPS
LAND SERVICES
07/16/2021



Well Site Safety Plan

Tug Hill Operating, LLC

Bay Skelley 1-22-21

Well Name: Van Winkle S-22HU

Location: Hunter Pethtel

Marshall County, West Virginia

UTM (meters), NAD83, Zone 17:

Northing: 4,403,548.05

Easting: 523,382.90

January 2021

RECEIVED
Office of Oil and Gas

FEB 03 2021

WV Department of
Environmental Protection

07/16/2021



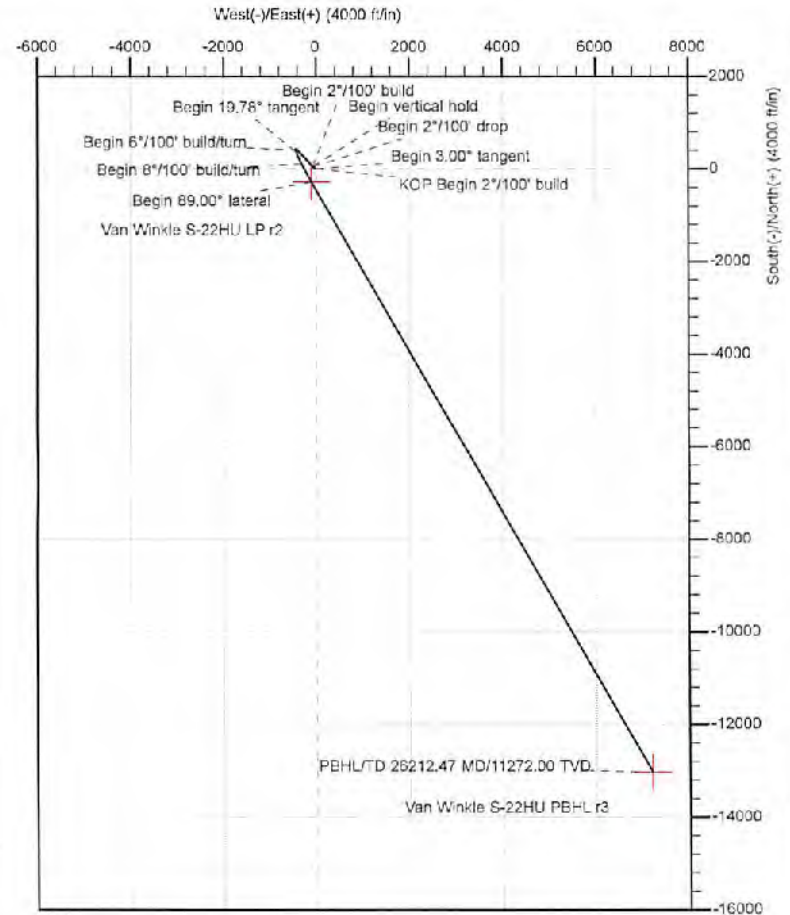
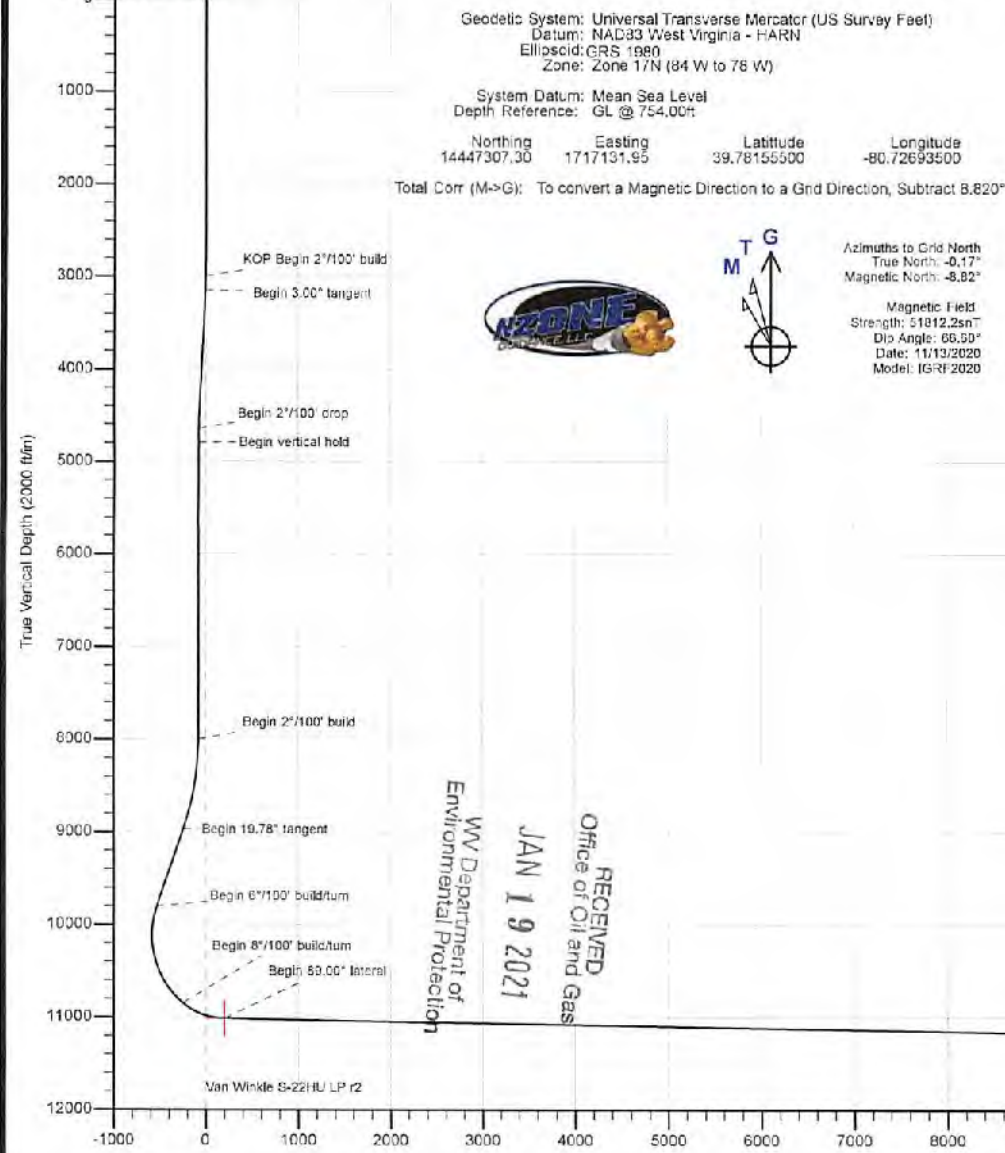
Well: Van Winkle S-22 HU (slot C)
 Site: Van Winkle
 Project: Marshall County, West Virginia
 Design: rev3
 Rig:

DESIGN TARGET DETAILS

Name	TVD	+N-S	+E-W	Northing	Easting	Latitude	Longitude
Van Winkle S-22HU LP r2	11016.00	-283.22	-95.2214447024.08	1717036.73	39.76077800	-80.72727700	
- plan misses target center by 0.02ft at: 11520.96ft MD (11016.00 TVD, -283.23 N, -95.24 E)							
Van Winkle S-22HU PBHL r3	11272.00	-13027.44	7209.5014434270.88	1724341.44	39.74571500	-80.70142800	
- plan hits target center							

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	TFace	VSect	Annotation
1	0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.000	0.00	
2	3000.00	0.00	0.000	3000.00	0.00	0.00	0.00	0.000	0.00	KOP Begin 2'100' build
3	3150.00	3.00	304.290	3149.93	2.21	-3.24	2.00	304.290	-3.51	Begin 3.00° tangent
4	4650.00	3.00	304.290	4547.88	48.44	-68.10	0.00	0.000	-73.61	Begin 2'100' drop
5	4800.00	0.00	304.290	4797.81	48.65	-71.35	2.00	190.000	-77.11	Begin vertical hold
6	8002.19	0.00	304.290	8000.00	48.65	-71.35	0.00	304.290	-77.11	Begin 2'100' build
7	8951.22	19.78	318.024	8969.50	174.32	-184.40	2.00	318.024	-241.81	Begin 19.78° tangent
8	9878.59	19.78	318.024	9804.51	397.57	-385.25	0.00	0.000	-534.40	Begin 6'100' build/tum
9	11032.07	50.00	153.456	10848.02	111.81	-308.83	6.00	157.406	-247.37	Begin 8'100' build/tum
10	11521.02	89.00	150.179	11016.00	-283.26	-85.22	8.00	-5.197	201.73	Begin 89.00° lateral
11	23212.47	89.00	150.179	11272.00	-13027.44	7209.50	0.00	0.000	4889.30	PBHL/TD 23212.47 MD/11272.00 TVD



Vertical Section at 151.039° (2000 ft/m)



Planning Report - Geographic

Database:	DB_Aug1919_v14	Local Co-ordinate Reference:	Well Van Winkle S-22 HU (slot C)
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-22 HU (slot C)	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:	14,447,369.50 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 "	Grid Convergence:	0.175 "

Well	Van Winkle S-22 HU (slot C)					
Well Position	+N/-S	0.00 ft	Northing:	14,447,307.30 usft	Latitude:	39.78155500
	+E/-W	0.00 ft	Easting:	1,717,131.95 usft	Longitude:	-80.72693500
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	754.00 ft

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	11/13/2020	-8.646	66.595	51,812.16262516

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	151.039

Plan Survey Tool Program	Date	12/21/2020		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	26,212.47 rev3 (Original Hole)	MWD	
			MWD - Standard	

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



Planning Report - Geographic

Database:	DB_Aug1919_v14	Local Co-ordinate Reference:	Well Van Winkle S-22 HU (slot C)
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-22 HU (slot C)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev3		

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.000	
3,000.00	0.00	0.000	3,000.00	0.00	0.00	0.00	0.00	0.00	0.000	
3,150.00	3.00	304.290	3,149.93	2.21	-3.24	2.00	2.00	0.00	304.290	
4,650.00	3.00	304.290	4,647.88	48.44	-68.10	0.00	0.00	0.00	0.000	
4,800.00	0.00	304.290	4,797.81	48.65	-71.35	2.00	-2.00	0.00	180.000	
8,002.19	0.00	304.290	8,000.00	48.65	-71.35	0.00	0.00	0.00	304.290	
8,991.22	19.78	318.024	8,969.50	174.32	-184.40	2.00	2.00	1.39	318.024	
9,878.59	19.78	318.024	9,804.51	397.57	-385.25	0.00	0.00	0.00	0.000	
11,032.07	50.00	153.456	10,848.02	111.81	-308.83	6.00	2.62	-14.27	-167.406	
11,521.02	89.00	150.179	11,016.00	-283.26	-95.22	8.00	7.98	-0.67	-5.197	
26,212.47	89.00	150.179	11,272.00	-13,027.44	7,209.50	0.00	0.00	0.00	0.000	Van Winkle S-22HU F

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



Planning Report - Geographic

Database: DB_Aug1919_v14
 Company: Tug Hill Operating LLC
 Project: Marshall County, West Virginia
 Site: Van Winkle
 Well: Van Winkle S-22 HU (slot C)
 Wellbore: Original Hole
 Design: rev3

Local Co-ordinate Reference: Well Van Winkle S-22 HU (slot C)
 TVD Reference: GL @ 754.00ft
 MD Reference: GL @ 754.00ft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

RECEIVED
 Office of Oil and Gas

JAN 19 2021

WV Department of
 Environmental Protection

Planned Survey

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	0.000	0.00	0.00	0.00	14,447,307.30	1,717,131.95	39.78155500	-80.72693500
100.00	0.00	0.000	100.00	0.00	0.00	14,447,307.30	1,717,131.95	39.78155500	-80.72693500
200.00	0.00	0.000	200.00	0.00	0.00	14,447,307.30	1,717,131.95	39.78155500	-80.72693500
300.00	0.00	0.000	300.00	0.00	0.00	14,447,307.30	1,717,131.95	39.78155500	-80.72693500
400.00	0.00	0.000	400.00	0.00	0.00	14,447,307.30	1,717,131.95	39.78155500	-80.72693500
500.00	0.00	0.000	500.00	0.00	0.00	14,447,307.30	1,717,131.95	39.78155500	-80.72693500
600.00	0.00	0.000	600.00	0.00	0.00	14,447,307.30	1,717,131.95	39.78155500	-80.72693500
700.00	0.00	0.000	700.00	0.00	0.00	14,447,307.30	1,717,131.95	39.78155500	-80.72693500
800.00	0.00	0.000	800.00	0.00	0.00	14,447,307.30	1,717,131.95	39.78155500	-80.72693500
900.00	0.00	0.000	900.00	0.00	0.00	14,447,307.30	1,717,131.95	39.78155500	-80.72693500
1,000.00	0.00	0.000	1,000.00	0.00	0.00	14,447,307.30	1,717,131.95	39.78155500	-80.72693500
1,100.00	0.00	0.000	1,100.00	0.00	0.00	14,447,307.30	1,717,131.95	39.78155500	-80.72693500
1,200.00	0.00	0.000	1,200.00	0.00	0.00	14,447,307.30	1,717,131.95	39.78155500	-80.72693500
1,300.00	0.00	0.000	1,300.00	0.00	0.00	14,447,307.30	1,717,131.95	39.78155500	-80.72693500
1,400.00	0.00	0.000	1,400.00	0.00	0.00	14,447,307.30	1,717,131.95	39.78155500	-80.72693500
1,500.00	0.00	0.000	1,500.00	0.00	0.00	14,447,307.30	1,717,131.95	39.78155500	-80.72693500
1,600.00	0.00	0.000	1,600.00	0.00	0.00	14,447,307.30	1,717,131.95	39.78155500	-80.72693500
1,700.00	0.00	0.000	1,700.00	0.00	0.00	14,447,307.30	1,717,131.95	39.78155500	-80.72693500
1,800.00	0.00	0.000	1,800.00	0.00	0.00	14,447,307.30	1,717,131.95	39.78155500	-80.72693500
1,900.00	0.00	0.000	1,900.00	0.00	0.00	14,447,307.30	1,717,131.95	39.78155500	-80.72693500
2,000.00	0.00	0.000	2,000.00	0.00	0.00	14,447,307.30	1,717,131.95	39.78155500	-80.72693500
2,100.00	0.00	0.000	2,100.00	0.00	0.00	14,447,307.30	1,717,131.95	39.78155500	-80.72693500
2,200.00	0.00	0.000	2,200.00	0.00	0.00	14,447,307.30	1,717,131.95	39.78155500	-80.72693500
2,300.00	0.00	0.000	2,300.00	0.00	0.00	14,447,307.30	1,717,131.95	39.78155500	-80.72693500
2,400.00	0.00	0.000	2,400.00	0.00	0.00	14,447,307.30	1,717,131.95	39.78155500	-80.72693500
2,500.00	0.00	0.000	2,500.00	0.00	0.00	14,447,307.30	1,717,131.95	39.78155500	-80.72693500
2,600.00	0.00	0.000	2,600.00	0.00	0.00	14,447,307.30	1,717,131.95	39.78155500	-80.72693500
2,700.00	0.00	0.000	2,700.00	0.00	0.00	14,447,307.30	1,717,131.95	39.78155500	-80.72693500
2,800.00	0.00	0.000	2,800.00	0.00	0.00	14,447,307.30	1,717,131.95	39.78155500	-80.72693500
2,900.00	0.00	0.000	2,900.00	0.00	0.00	14,447,307.30	1,717,131.95	39.78155500	-80.72693500
3,000.00	0.00	0.000	3,000.00	0.00	0.00	14,447,307.30	1,717,131.95	39.78155500	-80.72693500
KOP Begin 2°/100' build									
3,100.00	2.00	304.290	3,099.96	0.96	-1.44	14,447,308.28	1,717,130.51	39.78155771	-80.72694012
3,150.00	3.00	304.290	3,149.93	2.21	-3.24	14,447,309.51	1,717,128.71	39.78158110	-80.72694652
Begin 3.00° tangent									
3,200.00	3.00	304.290	3,199.86	3.69	-5.41	14,447,310.99	1,717,126.55	39.78156517	-80.72695420
3,300.00	3.00	304.290	3,299.73	6.63	-9.73	14,447,313.94	1,717,122.22	39.78157330	-80.72696956
3,400.00	3.00	304.290	3,399.59	9.58	-14.05	14,447,316.88	1,717,117.90	39.78158144	-80.72698492
3,500.00	3.00	304.290	3,499.45	12.53	-18.38	14,447,319.83	1,717,113.57	39.78158957	-80.72700028
3,600.00	3.00	304.290	3,599.31	15.48	-22.70	14,447,322.78	1,717,109.25	39.78159770	-80.72701564
3,700.00	3.00	304.290	3,699.18	18.43	-27.03	14,447,325.73	1,717,104.93	39.78160584	-80.72703100
3,800.00	3.00	304.290	3,799.04	21.38	-31.35	14,447,328.68	1,717,100.60	39.78161397	-80.72704635
3,900.00	3.00	304.290	3,898.90	24.33	-35.67	14,447,331.63	1,717,096.28	39.78162211	-80.72706171
4,000.00	3.00	304.290	3,998.77	27.27	-40.00	14,447,334.58	1,717,091.96	39.78163024	-80.72707707
4,100.00	3.00	304.290	4,098.63	30.22	-44.32	14,447,337.52	1,717,087.63	39.78163837	-80.72709243
4,200.00	3.00	304.290	4,198.49	33.17	-48.65	14,447,340.47	1,717,083.31	39.78164651	-80.72710779
4,300.00	3.00	304.290	4,298.36	36.12	-52.97	14,447,343.42	1,717,078.98	39.78165464	-80.72712315
4,400.00	3.00	304.290	4,398.22	39.07	-57.29	14,447,346.37	1,717,074.66	39.78166277	-80.72713851
4,500.00	3.00	304.290	4,498.08	42.02	-61.62	14,447,349.32	1,717,070.34	39.78167091	-80.72715387
4,600.00	3.00	304.290	4,597.94	44.97	-65.94	14,447,352.27	1,717,066.01	39.78167904	-80.72716923
4,650.00	3.00	304.290	4,647.88	46.44	-68.10	14,447,353.74	1,717,063.85	39.78168311	-80.72717691
Begin 2°/100' drop									
4,700.00	2.00	304.290	4,697.83	47.67	-69.91	14,447,354.97	1,717,062.05	39.78168650	-80.72718331



Planning Report - Geographic

Database: DB_Aug1919_v14
 Company: Tug Hill Operating LLC
 Project: Marshall County, West Virginia
 Site: Van Winkle
 Well: Van Winkle S-22 HU (slot C)
 Wellbore: Original Hole
 Design: rev3

Local Co-ordinate Reference: Well Van Winkle S-22 HU (slot C)
 TVD Reference: GL @ 754.00ft
 MD Reference: GL @ 754.00ft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

RECEIVED
Office of Oil and Gas

JAN 19 2021

WV Department of
Environmental Protection

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
4,800.00	0.00	304.290	4,797.81	48.65	-71.35	14,447,355.95	1,717,050.61	39.78168921	-80.72718843
Begin vertical hold									
4,900.00	0.00	0.000	4,897.81	48.65	-71.35	14,447,355.95	1,717,050.61	39.78168921	-80.72718843
5,000.00	0.00	0.000	4,997.81	48.65	-71.35	14,447,355.95	1,717,050.61	39.78168921	-80.72718843
5,100.00	0.00	0.000	5,097.81	48.65	-71.35	14,447,355.95	1,717,050.61	39.78168921	-80.72718843
5,200.00	0.00	0.000	5,197.81	48.65	-71.35	14,447,355.95	1,717,050.61	39.78168921	-80.72718843
5,300.00	0.00	0.000	5,297.81	48.65	-71.35	14,447,355.95	1,717,050.61	39.78168921	-80.72718843
5,400.00	0.00	0.000	5,397.81	48.65	-71.35	14,447,355.95	1,717,050.61	39.78168921	-80.72718843
5,500.00	0.00	0.000	5,497.81	48.65	-71.35	14,447,355.95	1,717,050.61	39.78168921	-80.72718843
5,600.00	0.00	0.000	5,597.81	48.65	-71.35	14,447,355.95	1,717,050.61	39.78168921	-80.72718843
5,700.00	0.00	0.000	5,697.81	48.65	-71.35	14,447,355.95	1,717,050.61	39.78168921	-80.72718843
5,800.00	0.00	304.290	5,797.81	48.65	-71.35	14,447,355.95	1,717,050.61	39.78168921	-80.72718843
5,900.00	0.00	0.000	5,897.81	48.65	-71.35	14,447,355.95	1,717,050.61	39.78168921	-80.72718843
6,000.00	0.00	0.000	5,997.81	48.65	-71.35	14,447,355.95	1,717,050.61	39.78168921	-80.72718843
6,100.00	0.00	304.290	6,097.81	48.65	-71.35	14,447,355.95	1,717,050.61	39.78168921	-80.72718843
6,200.00	0.00	0.000	6,197.81	48.65	-71.35	14,447,355.95	1,717,050.61	39.78168921	-80.72718843
6,300.00	0.00	0.000	6,297.81	48.65	-71.35	14,447,355.95	1,717,050.61	39.78168921	-80.72718843
6,400.00	0.00	0.000	6,397.81	48.65	-71.35	14,447,355.95	1,717,050.61	39.78168921	-80.72718843
6,500.00	0.00	0.000	6,497.81	48.65	-71.35	14,447,355.95	1,717,050.61	39.78168921	-80.72718843
6,600.00	0.00	0.000	6,597.81	48.65	-71.35	14,447,355.95	1,717,050.61	39.78168921	-80.72718843
6,700.00	0.00	0.000	6,697.81	48.65	-71.35	14,447,355.95	1,717,050.61	39.78168921	-80.72718843
6,800.00	0.00	0.000	6,797.81	48.65	-71.35	14,447,355.95	1,717,050.61	39.78168921	-80.72718843
6,900.00	0.00	0.000	6,897.81	48.65	-71.35	14,447,355.95	1,717,050.61	39.78168921	-80.72718843
7,000.00	0.00	0.000	6,997.81	48.65	-71.35	14,447,355.95	1,717,050.61	39.78168921	-80.72718843
7,100.00	0.00	0.000	7,097.81	48.65	-71.35	14,447,355.95	1,717,050.61	39.78168921	-80.72718843
7,200.00	0.00	0.000	7,197.81	48.65	-71.35	14,447,355.95	1,717,050.61	39.78168921	-80.72718843
7,300.00	0.00	0.000	7,297.81	48.65	-71.35	14,447,355.95	1,717,050.61	39.78168921	-80.72718843
7,400.00	0.00	0.000	7,397.81	48.65	-71.35	14,447,355.95	1,717,050.61	39.78168921	-80.72718843
7,500.00	0.00	0.000	7,497.81	48.65	-71.35	14,447,355.95	1,717,050.61	39.78168921	-80.72718843
7,600.00	0.00	304.290	7,597.81	48.65	-71.35	14,447,355.95	1,717,050.61	39.78168921	-80.72718843
7,700.00	0.00	0.000	7,697.81	48.65	-71.35	14,447,355.95	1,717,050.61	39.78168921	-80.72718843
7,800.00	0.00	0.000	7,797.81	48.65	-71.35	14,447,355.95	1,717,050.61	39.78168921	-80.72718843
7,900.00	0.00	0.000	7,897.81	48.65	-71.35	14,447,355.95	1,717,050.61	39.78168921	-80.72718843
8,000.00	0.00	0.000	7,997.81	48.65	-71.35	14,447,355.95	1,717,050.61	39.78168921	-80.72718843
8,002.19	0.00	0.000	8,000.00	48.65	-71.35	14,447,355.95	1,717,050.61	39.78168921	-80.72718843
Begin 2°/100' build									
8,100.00	1.96	318.024	8,097.79	49.89	-72.46	14,447,357.19	1,717,059.49	39.78169263	-80.72719239
8,200.00	3.96	318.024	8,197.65	53.73	-75.91	14,447,361.03	1,717,059.04	39.78170318	-80.72720462
8,300.00	5.96	318.024	8,297.27	60.15	-81.69	14,447,357.45	1,717,050.26	39.78172087	-80.72722512
8,400.00	7.96	318.024	8,396.53	69.15	-89.79	14,447,376.45	1,717,042.16	39.78174566	-80.72725385
8,500.00	9.96	318.024	8,495.31	80.72	-100.20	14,447,388.03	1,717,031.75	39.78177753	-80.72729079
8,600.00	11.96	318.024	8,593.48	94.85	-112.91	14,447,402.15	1,717,019.04	39.78181644	-80.72733586
8,700.00	13.96	318.024	8,690.93	111.52	-127.91	14,447,418.82	1,717,004.05	39.78186234	-80.72736907
8,800.00	15.96	318.024	8,787.54	130.71	-145.17	14,447,438.01	1,716,986.79	39.78191517	-80.72745030
8,900.00	17.96	318.024	8,883.18	152.39	-164.67	14,447,459.69	1,716,967.28	39.78197487	-80.72751949
8,991.22	19.76	318.024	8,969.50	174.32	-184.40	14,447,481.62	1,716,947.55	39.78203526	-80.72756946
Begin 19.78° tangent									
9,000.00	19.78	318.024	8,977.76	176.52	-186.39	14,447,483.63	1,716,945.56	39.78204134	-80.72759652
9,100.00	19.78	318.024	9,071.86	201.68	-209.02	14,447,508.98	1,716,922.93	39.78211082	-80.72767682
9,200.00	19.78	318.024	9,165.96	226.84	-231.66	14,447,534.14	1,716,900.30	39.78217991	-80.72775711
9,300.00	19.78	318.024	9,260.06	252.00	-254.29	14,447,559.30	1,716,877.66	39.78224919	-80.72783740
9,400.00	19.78	318.024	9,354.16	277.16	-276.93	14,447,584.46	1,716,855.03	39.78231847	-80.72791770
9,500.00	19.78	318.024	9,448.26	302.32	-299.56	14,447,609.62	1,716,832.39	39.78238775	-80.72799799
9,600.00	19.78	318.024	9,542.36	327.48	-322.19	14,447,634.78	1,716,809.76	39.78245703	-80.72807829



Planning Report - Geographic

Database: DB_Aug1919_v14
 Company: Tug Hill Operating LLC
 Project: Marshall County, West Virginia
 Site: Van Winkle
 Well: Van Winkle S-22 HU (slot C)
 Wellbore: Original Hole
 Design: rev3

Local Co-ordinate Reference: Well Van Winkle S-22 HU (slot C)
 TVD Reference: GL @ 754.00ft
 MD Reference: GL @ 754.00ft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

RECEIVED
 Office of Oil and Gas
 JAN 19 2021

WV Department of
 Environmental Protection

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
9,700.00	19.78	318.024	9,636.46	352.64	-344.83	14,447,859.94	1,716,787.12	39.78252631	-80.72815858
9,800.00	19.78	318.024	9,730.56	377.79	-367.46	14,447,685.10	1,716,764.49	39.78259559	-80.72823867
9,878.59	19.78	318.024	9,804.51	397.57	-385.25	14,447,704.87	1,716,746.70	39.78265004	-80.72830198
Begin 6°/100' build/tum									
9,900.00	18.53	317.142	9,824.73	402.75	-389.99	14,447,710.05	1,716,741.96	39.78266433	-80.72831878
10,000.00	12.77	310.837	9,920.99	421.64	-409.17	14,447,728.94	1,716,722.78	39.78271636	-80.72838687
10,100.00	7.38	295.077	10,019.43	431.60	-423.37	14,447,738.90	1,716,708.59	39.78274383	-80.72843728
10,200.00	4.23	240.656	10,118.97	432.52	-432.41	14,447,739.82	1,716,699.54	39.78274642	-80.72848946
10,300.00	7.29	185.223	10,218.52	424.36	-436.21	14,447,731.68	1,716,695.75	39.78272411	-80.72848307
10,400.00	12.66	169.127	10,316.99	407.28	-434.72	14,447,714.58	1,716,697.24	39.78267714	-80.72847794
10,500.00	18.42	162.733	10,413.30	381.41	-427.95	14,447,688.71	1,716,704.00	39.78280603	-80.72845415
10,600.00	24.29	159.331	10,508.40	347.05	-415.98	14,447,654.35	1,716,715.96	39.78251155	-80.72841194
10,700.00	30.21	157.196	10,595.26	304.57	-396.96	14,447,611.87	1,716,732.99	39.78239475	-80.72835179
10,800.00	36.16	155.708	10,678.91	254.44	-377.06	14,447,561.74	1,716,754.90	39.78225690	-80.72827435
10,900.00	42.12	154.591	10,756.44	197.21	-350.51	14,447,504.51	1,716,781.45	39.78209951	-80.72818047
11,000.00	48.08	153.705	10,827.00	133.50	-319.61	14,447,440.80	1,716,812.35	39.78192430	-80.72807117
11,032.07	50.00	153.456	10,848.02	111.81	-308.83	14,447,419.11	1,716,823.12	39.78186465	-80.72803305
Begin 8°/100' build/tum									
11,100.00	55.41	152.859	10,889.16	63.62	-284.43	14,447,370.92	1,716,847.52	39.78173209	-80.72794672
11,200.00	63.39	152.107	10,940.02	-12.65	-244.67	14,447,294.66	1,716,887.28	39.78152232	-80.72780604
11,300.00	71.36	151.454	10,978.46	-93.91	-201.05	14,447,213.39	1,716,930.90	39.78129679	-80.72765164
11,400.00	79.34	150.860	11,003.73	-178.58	-154.41	14,447,128.72	1,716,977.55	39.78106586	-80.72748653
11,500.00	87.32	150.296	11,015.32	-265.02	-105.65	14,447,042.28	1,717,026.30	39.78082606	-80.72731393
11,521.02	89.00	150.179	11,016.00	-283.26	-95.22	14,447,024.04	1,717,036.73	39.78077789	-80.72727701
Begin 89.00° lateral									
11,600.00	89.00	150.179	11,017.37	-351.77	-55.95	14,446,955.53	1,717,076.00	39.78058941	-80.72713788
11,700.00	89.00	150.179	11,019.12	-438.52	-6.23	14,446,868.78	1,717,125.72	39.78035077	-80.72695194
11,800.00	89.00	150.179	11,020.86	-525.26	43.49	14,446,782.04	1,717,175.44	39.78011213	-80.72678591
11,900.00	89.00	150.179	11,022.60	-612.01	93.21	14,446,695.29	1,717,225.16	39.77987348	-80.72660988
12,000.00	89.00	150.179	11,024.35	-698.75	142.93	14,446,608.55	1,717,274.86	39.77963484	-80.72643385
12,100.00	89.00	150.179	11,026.09	-785.50	192.65	14,446,521.80	1,717,324.60	39.77939620	-80.72625782
12,200.00	89.00	150.179	11,027.83	-872.25	242.37	14,446,435.06	1,717,374.32	39.77915755	-80.72608180
12,300.00	89.00	150.179	11,029.57	-958.99	292.09	14,446,348.31	1,717,424.04	39.77891891	-80.72590577
12,400.00	89.00	150.179	11,031.32	-1,045.74	341.81	14,446,261.57	1,717,473.77	39.77868027	-80.72572974
12,500.00	89.00	150.179	11,033.06	-1,132.48	391.53	14,446,174.82	1,717,523.49	39.77844182	-80.72555372
12,600.00	89.00	150.179	11,034.80	-1,219.23	441.26	14,446,088.08	1,717,573.21	39.77820298	-80.72537770
12,700.00	89.00	150.179	11,036.54	-1,305.97	490.98	14,446,001.33	1,717,622.93	39.77796433	-80.72520188
12,800.00	89.00	150.179	11,038.29	-1,392.72	540.70	14,445,914.59	1,717,672.65	39.77772569	-80.72502566
12,900.00	89.00	150.179	11,040.03	-1,479.46	590.42	14,445,827.84	1,717,722.37	39.77748704	-80.72484984
13,000.00	89.00	150.179	11,041.77	-1,566.21	640.14	14,445,741.09	1,717,772.09	39.77724840	-80.72467362
13,100.00	89.00	150.179	11,043.51	-1,652.96	689.86	14,445,654.35	1,717,821.81	39.77700975	-80.72449760
13,200.00	89.00	150.179	11,045.26	-1,739.70	739.58	14,445,567.60	1,717,871.53	39.77677110	-80.72432159
13,300.00	89.00	150.179	11,047.00	-1,826.45	789.30	14,445,480.86	1,717,921.25	39.77653246	-80.72414557
13,400.00	89.00	150.179	11,048.74	-1,913.19	839.02	14,445,394.11	1,717,970.97	39.77629381	-80.72396956
13,500.00	89.00	150.179	11,050.48	-1,999.94	888.74	14,445,307.37	1,718,020.69	39.77605516	-80.72379355
13,600.00	89.00	150.179	11,052.23	-2,086.68	938.46	14,445,220.62	1,718,070.42	39.77581652	-80.72361754
13,700.00	89.00	150.179	11,053.97	-2,173.43	988.19	14,445,133.88	1,718,120.14	39.77557787	-80.72344153
13,800.00	89.00	150.179	11,055.71	-2,260.17	1,037.91	14,445,047.13	1,718,169.86	39.77533922	-80.72326552
13,900.00	89.00	150.179	11,057.45	-2,346.92	1,087.63	14,444,960.39	1,718,219.58	39.77510057	-80.72308952
14,000.00	89.00	150.179	11,059.20	-2,433.67	1,137.35	14,444,873.64	1,718,269.30	39.77486192	-80.72291351
14,100.00	89.00	150.179	11,060.94	-2,520.41	1,187.07	14,444,786.89	1,718,319.02	39.77462327	-80.72273751
14,200.00	89.00	150.179	11,062.68	-2,607.16	1,236.79	14,444,700.15	1,718,368.74	39.77438463	-80.72256150
14,300.00	89.00	150.179	11,064.42	-2,693.90	1,286.51	14,444,613.40	1,718,418.46	39.77414598	-80.72238550
14,400.00	89.00	150.179	11,066.17	-2,780.65	1,336.23	14,444,526.66	1,718,468.18	39.77390733	-80.72220950



Planning Report - Geographic

Database:	DB_Aug1919_v14	Local Co-ordinate Reference:	Well Van Winkle S-22 HU (slot C)
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-22 HU (slot C)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev3		

RECEIVED
Office of Oil and Gas

JAN 19 2021

WV Department of
Environmental Protection

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
14,500.00	89.00	150.179	11,067.91	-2,867.39	1,365.95	14,444,439.91	1,718,517.90	39.77368888	-80.72203350	
14,600.00	89.00	150.179	11,069.85	-2,954.14	1,435.67	14,444,353.17	1,718,567.62	39.77343003	-80.72185750	
14,700.00	89.00	150.179	11,071.39	-3,040.89	1,485.39	14,444,266.42	1,718,617.34	39.77319138	-80.72168151	
14,800.00	89.00	150.179	11,073.14	-3,127.63	1,535.12	14,444,179.68	1,718,667.06	39.77295273	-80.72150551	
14,900.00	89.00	150.179	11,074.88	-3,214.38	1,584.84	14,444,092.93	1,718,716.79	39.77271408	-80.72132952	
15,000.00	89.00	150.179	11,076.62	-3,301.12	1,634.56	14,444,006.19	1,718,766.51	39.77247542	-80.72115352	
15,100.00	89.00	150.179	11,078.36	-3,387.87	1,684.28	14,443,919.44	1,718,816.23	39.77223677	-80.72097753	
15,200.00	89.00	150.179	11,080.11	-3,474.61	1,734.00	14,443,832.70	1,718,865.95	39.77199812	-80.72080154	
15,300.00	89.00	150.179	11,081.85	-3,561.36	1,783.72	14,443,745.95	1,718,915.67	39.77175947	-80.72062555	
15,400.00	89.00	150.179	11,083.59	-3,648.10	1,833.44	14,443,659.20	1,718,965.39	39.77152082	-80.72044956	
15,500.00	89.00	150.179	11,085.33	-3,734.85	1,883.16	14,443,572.46	1,719,015.11	39.77128218	-80.72027357	
15,600.00	89.00	150.179	11,087.08	-3,821.60	1,932.88	14,443,485.71	1,719,064.83	39.77104351	-80.72009759	
15,700.00	89.00	150.179	11,088.82	-3,908.34	1,982.60	14,443,398.97	1,719,114.55	39.77080488	-80.71992160	
15,800.00	89.00	150.179	11,090.56	-3,995.09	2,032.32	14,443,312.22	1,719,164.27	39.77056620	-80.71974562	
15,900.00	89.00	150.179	11,092.30	-4,081.83	2,082.05	14,443,225.48	1,719,213.99	39.77032755	-80.71956964	
16,000.00	89.00	150.179	11,094.05	-4,168.58	2,131.77	14,443,138.73	1,719,263.71	39.77008890	-80.71939366	
16,100.00	89.00	150.179	11,095.79	-4,255.32	2,181.49	14,443,051.99	1,719,313.44	39.76985024	-80.71921768	
16,200.00	89.00	150.179	11,097.53	-4,342.07	2,231.21	14,442,965.24	1,719,363.16	39.76961159	-80.71904170	
16,300.00	89.00	150.179	11,099.27	-4,428.81	2,280.93	14,442,878.50	1,719,412.88	39.76937293	-80.71886572	
16,400.00	89.00	150.179	11,101.02	-4,515.56	2,330.65	14,442,791.75	1,719,462.60	39.76913428	-80.71868974	
16,500.00	89.00	150.179	11,102.76	-4,602.31	2,380.37	14,442,705.01	1,719,512.32	39.76889562	-80.71851377	
16,600.00	89.00	150.179	11,104.50	-4,689.05	2,430.09	14,442,618.26	1,719,562.04	39.76865697	-80.71833779	
16,700.00	89.00	150.179	11,106.24	-4,775.80	2,479.81	14,442,531.51	1,719,611.76	39.76841831	-80.71816182	
16,800.00	89.00	150.179	11,107.99	-4,862.54	2,529.53	14,442,444.77	1,719,661.48	39.76817965	-80.71798585	
16,900.00	89.00	150.179	11,109.73	-4,949.29	2,579.25	14,442,358.02	1,719,711.20	39.76794100	-80.71780988	
17,000.00	89.00	150.179	11,111.47	-5,036.03	2,628.98	14,442,271.28	1,719,760.92	39.76770234	-80.71763391	
17,100.00	89.00	150.179	11,113.21	-5,122.78	2,678.70	14,442,184.53	1,719,810.64	39.76746369	-80.71745794	
17,200.00	89.00	150.179	11,114.96	-5,209.52	2,728.42	14,442,097.79	1,719,860.36	39.76722503	-80.71728197	
17,300.00	89.00	150.179	11,116.70	-5,296.27	2,778.14	14,442,011.04	1,719,910.09	39.76698637	-80.71710601	
17,400.00	89.00	150.179	11,118.44	-5,383.02	2,827.86	14,441,924.30	1,719,959.81	39.76674771	-80.71693004	
17,500.00	89.00	150.179	11,120.18	-5,469.76	2,877.58	14,441,837.55	1,720,009.53	39.76650906	-80.71675408	
17,600.00	89.00	150.179	11,121.93	-5,556.51	2,927.30	14,441,750.81	1,720,059.25	39.76627040	-80.71657812	
17,700.00	89.00	150.179	11,123.67	-5,643.25	2,977.02	14,441,664.06	1,720,108.97	39.76603174	-80.71640216	
17,800.00	89.00	150.179	11,125.41	-5,730.00	3,026.74	14,441,577.31	1,720,158.69	39.76579308	-80.71622620	
17,900.00	89.00	150.179	11,127.15	-5,816.74	3,076.46	14,441,490.57	1,720,208.41	39.76555442	-80.71605024	
18,000.00	89.00	150.179	11,128.90	-5,903.49	3,126.18	14,441,403.82	1,720,258.13	39.76531576	-80.71587428	
18,100.00	89.00	150.179	11,130.64	-5,990.23	3,175.91	14,441,317.08	1,720,307.85	39.76507710	-80.71569833	
18,200.00	89.00	150.179	11,132.38	-6,076.98	3,225.63	14,441,230.33	1,720,357.57	39.76483844	-80.71552237	
18,300.00	89.00	150.179	11,134.12	-6,163.73	3,275.35	14,441,143.59	1,720,407.29	39.76459978	-80.71534642	
18,400.00	89.00	150.179	11,135.87	-6,250.47	3,325.07	14,441,056.84	1,720,457.01	39.76436112	-80.71517047	
18,500.00	89.00	150.179	11,137.61	-6,337.22	3,374.79	14,440,970.10	1,720,506.73	39.76412246	-80.71499452	
18,600.00	89.00	150.179	11,139.35	-6,423.96	3,424.51	14,440,883.35	1,720,556.46	39.76388380	-80.71481857	
18,700.00	89.00	150.179	11,141.09	-6,510.71	3,474.23	14,440,796.61	1,720,606.18	39.76364514	-80.71464262	
18,800.00	89.00	150.179	11,142.84	-6,597.45	3,523.95	14,440,709.88	1,720,655.90	39.76340648	-80.71446667	
18,900.00	89.00	150.179	11,144.58	-6,684.20	3,573.67	14,440,623.12	1,720,705.62	39.76316781	-80.71429073	
19,000.00	89.00	150.179	11,146.32	-6,770.95	3,623.39	14,440,536.37	1,720,755.34	39.76292915	-80.71411478	
19,100.00	89.00	150.179	11,148.06	-6,857.69	3,673.11	14,440,449.62	1,720,805.06	39.76269049	-80.71393884	
19,200.00	89.00	150.179	11,149.81	-6,944.44	3,722.84	14,440,362.88	1,720,854.78	39.76245183	-80.71376289	
19,300.00	89.00	150.179	11,151.55	-7,031.18	3,772.56	14,440,276.13	1,720,904.50	39.76221316	-80.71358695	
19,400.00	89.00	150.179	11,153.29	-7,117.93	3,822.28	14,440,189.39	1,720,954.22	39.76197450	-80.71341101	
19,500.00	89.00	150.179	11,155.03	-7,204.67	3,872.00	14,440,102.64	1,721,003.94	39.76173584	-80.71323507	
19,600.00	89.00	150.179	11,156.78	-7,291.42	3,921.72	14,440,015.90	1,721,053.66	39.76149717	-80.71305914	
19,700.00	89.00	150.179	11,158.52	-7,378.16	3,971.44	14,439,929.15	1,721,103.38	39.76125851	-80.71288320	
19,800.00	89.00	150.179	11,160.26	-7,464.91	4,021.16	14,439,842.41	1,721,153.11	39.76101985	-80.71270727	
19,900.00	89.00	150.179	11,162.00	-7,551.66	4,070.88	14,439,755.66	1,721,202.83	39.76078118	-80.71253133	



Planning Report - Geographic

Database: DB_Aug1919_v14
 Company: Tug Hill Operating LLC
 Project: Marshall County, West Virginia
 Site: Van Winkle
 Well: Van Winkle S-22 HU (slot C)
 Wellbore: Original Hole
 Design: rev3

Local Co-ordinate Reference: Well Van Winkle S-22 HU (slot C)
 TVD Reference: GL @ 754.00ft
 MD Reference: GL @ 754.00ft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

RECEIVED
 Office of Oil and Gas
 JAN 19 2021

WV Department of
 Environmental Protection

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
20,000.00	89.00	150.179	11,163.75	-7,636.40	4,120.60	14,439,668.92	1,721,252.55	39.76054252	-80.71235540	
20,100.00	89.00	150.179	11,165.49	-7,725.15	4,170.32	14,439,582.17	1,721,302.27	39.76030385	-80.71217947	
20,200.00	89.00	150.179	11,167.23	-7,811.89	4,220.04	14,439,495.43	1,721,351.99	39.76006519	-80.71200354	
20,300.00	89.00	150.179	11,168.97	-7,898.64	4,269.77	14,439,408.68	1,721,401.71	39.75982652	-80.71182761	
20,400.00	89.00	150.179	11,170.72	-7,985.38	4,319.49	14,439,321.93	1,721,451.43	39.75958785	-80.71165168	
20,500.00	89.00	150.179	11,172.46	-8,072.13	4,369.21	14,439,235.19	1,721,501.15	39.75934919	-80.71147575	
20,600.00	89.00	150.179	11,174.20	-8,158.87	4,418.93	14,439,148.44	1,721,550.87	39.75911052	-80.71129983	
20,700.00	89.00	150.179	11,175.94	-8,245.62	4,468.65	14,439,061.70	1,721,600.59	39.75887185	-80.71112390	
20,800.00	89.00	150.179	11,177.69	-8,332.37	4,518.37	14,438,974.95	1,721,650.31	39.75863319	-80.71094798	
20,900.00	89.00	150.179	11,179.43	-8,419.11	4,568.09	14,438,888.21	1,721,700.03	39.75839452	-80.71077206	
21,000.00	89.00	150.179	11,181.17	-8,505.86	4,617.81	14,438,801.46	1,721,749.75	39.75815585	-80.71059614	
21,100.00	89.00	150.179	11,182.91	-8,592.60	4,667.53	14,438,714.72	1,721,799.48	39.75791719	-80.71042022	
21,200.00	89.00	150.179	11,184.66	-8,679.35	4,717.25	14,438,627.97	1,721,849.20	39.75767852	-80.71024430	
21,300.00	89.00	150.179	11,186.40	-8,766.09	4,766.97	14,438,541.23	1,721,898.92	39.75743985	-80.71006838	
21,400.00	89.00	150.179	11,188.14	-8,852.84	4,816.70	14,438,454.48	1,721,948.64	39.75720118	-80.70989247	
21,500.00	89.00	150.179	11,189.88	-8,939.58	4,866.42	14,438,367.73	1,721,998.36	39.75696251	-80.70971655	
21,600.00	89.00	150.179	11,191.63	-9,026.33	4,916.14	14,438,280.99	1,722,048.08	39.75672384	-80.70954064	
21,700.00	89.00	150.179	11,193.37	-9,113.08	4,965.86	14,438,194.24	1,722,097.80	39.75648517	-80.70936473	
21,800.00	89.00	150.179	11,195.11	-9,199.82	5,015.58	14,438,107.50	1,722,147.52	39.75624650	-80.70918882	
21,900.00	89.00	150.179	11,196.85	-9,286.57	5,065.30	14,438,020.75	1,722,197.24	39.75600783	-80.70901291	
22,000.00	89.00	150.179	11,198.60	-9,373.31	5,115.02	14,437,934.01	1,722,246.96	39.75576916	-80.70883700	
22,100.00	89.00	150.179	11,200.34	-9,460.06	5,164.74	14,437,847.26	1,722,296.68	39.75553049	-80.70866109	
22,200.00	89.00	150.179	11,202.09	-9,546.80	5,214.46	14,437,760.52	1,722,346.40	39.75529182	-80.70848518	
22,300.00	89.00	150.179	11,203.82	-9,633.55	5,264.18	14,437,673.77	1,722,396.13	39.75505315	-80.70830928	
22,400.00	89.00	150.179	11,205.57	-9,720.29	5,313.90	14,437,587.03	1,722,445.85	39.75481448	-80.70813337	
22,500.00	89.00	150.179	11,207.31	-9,807.04	5,363.63	14,437,500.28	1,722,495.57	39.75457581	-80.70795747	
22,600.00	89.00	150.179	11,209.05	-9,893.79	5,413.35	14,437,413.54	1,722,545.29	39.75433714	-80.70778157	
22,700.00	89.00	150.179	11,210.79	-9,980.53	5,463.07	14,437,326.79	1,722,595.01	39.75409848	-80.70760567	
22,800.00	89.00	150.179	11,212.54	-10,067.28	5,512.79	14,437,240.04	1,722,644.73	39.75385979	-80.70742977	
22,900.00	89.00	150.179	11,214.28	-10,154.02	5,562.51	14,437,153.30	1,722,694.45	39.75362112	-80.70725387	
23,000.00	89.00	150.179	11,216.02	-10,240.77	5,612.23	14,437,066.55	1,722,744.17	39.75338244	-80.70707798	
23,100.00	89.00	150.179	11,217.76	-10,327.51	5,661.95	14,436,979.81	1,722,793.89	39.75314377	-80.70690208	
23,200.00	89.00	150.179	11,219.51	-10,414.26	5,711.67	14,436,893.06	1,722,843.61	39.75290510	-80.70672619	
23,300.00	89.00	150.179	11,221.25	-10,501.01	5,761.39	14,436,806.32	1,722,893.33	39.75266642	-80.70655030	
23,400.00	89.00	150.179	11,222.99	-10,587.75	5,811.11	14,436,719.57	1,722,943.05	39.75242775	-80.70637440	
23,500.00	89.00	150.179	11,224.73	-10,674.50	5,860.83	14,436,632.83	1,722,992.78	39.75218908	-80.70619851	
23,600.00	89.00	150.179	11,226.48	-10,761.24	5,910.56	14,436,546.08	1,723,042.50	39.75195040	-80.70602262	
23,700.00	89.00	150.179	11,228.22	-10,847.99	5,960.28	14,436,459.34	1,723,092.22	39.75171173	-80.70584674	
23,800.00	89.00	150.179	11,229.96	-10,934.73	6,010.00	14,436,372.59	1,723,141.94	39.75147305	-80.70567085	
23,900.00	89.00	150.179	11,231.70	-11,021.48	6,059.72	14,436,285.84	1,723,191.66	39.75123438	-80.70549496	
24,000.00	89.00	150.179	11,233.45	-11,108.22	6,109.44	14,436,199.10	1,723,241.38	39.75099570	-80.70531908	
24,100.00	89.00	150.179	11,235.19	-11,194.97	6,159.16	14,436,112.35	1,723,291.10	39.75075702	-80.70514320	
24,200.00	89.00	150.179	11,236.93	-11,281.72	6,208.88	14,436,025.61	1,723,340.82	39.75051835	-80.70496731	
24,300.00	89.00	150.179	11,238.68	-11,368.46	6,258.60	14,435,938.86	1,723,390.54	39.75027967	-80.70479143	
24,400.00	89.00	150.179	11,240.42	-11,455.21	6,308.32	14,435,852.12	1,723,440.26	39.75004099	-80.70461555	
24,500.00	89.00	150.179	11,242.16	-11,541.95	6,358.04	14,435,765.37	1,723,489.98	39.74980232	-80.70443968	
24,600.00	89.00	150.179	11,243.90	-11,628.70	6,407.76	14,435,678.63	1,723,539.70	39.74956364	-80.70426380	
24,700.00	89.00	150.179	11,245.65	-11,715.44	6,457.48	14,435,591.88	1,723,589.42	39.74932496	-80.70408792	
24,800.00	89.00	150.179	11,247.39	-11,802.19	6,507.21	14,435,505.14	1,723,639.15	39.74908628	-80.70391205	
24,900.00	89.00	150.179	11,249.13	-11,888.93	6,556.93	14,435,418.39	1,723,688.87	39.74884761	-80.70373618	
25,000.00	89.00	150.179	11,250.87	-11,975.68	6,606.65	14,435,331.65	1,723,738.59	39.74860893	-80.70356030	
25,100.00	89.00	150.179	11,252.62	-12,062.43	6,656.37	14,435,244.90	1,723,788.31	39.74837025	-80.70338443	
25,200.00	89.00	150.179	11,254.36	-12,149.17	6,706.09	14,435,158.15	1,723,838.03	39.74813157	-80.70320856	
25,300.00	89.00	150.179	11,256.10	-12,235.92	6,755.81	14,435,071.41	1,723,887.75	39.74789289	-80.70303269	
25,400.00	89.00	150.179	11,257.84	-12,322.66	6,805.53	14,434,984.66	1,723,937.47	39.74765421	-80.70285683	



Planning Report - Geographic

Database:	DB_Aug1919_v14	Local Co-ordinate Reference:	Well Van Winkle S-22 HU (slot C)
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-22 HU (slot C)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev3		

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

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	150.179	11,259.59	-12,409.41	6,855.25	14,434,897.92	1,723,987.19	39.74741553	-80.70268096
25,600.00	89.00	150.179	11,261.33	-12,498.15	6,904.97	14,434,811.17	1,724,036.91	39.74717685	-80.70250509
25,700.00	89.00	150.179	11,263.07	-12,582.90	6,954.69	14,434,724.43	1,724,086.63	39.74693817	-80.70232923
25,800.00	89.00	150.179	11,264.81	-12,669.64	7,004.42	14,434,637.68	1,724,136.35	39.74669949	-80.70215337
25,900.00	89.00	150.179	11,266.56	-12,756.39	7,054.14	14,434,550.94	1,724,186.07	39.74648081	-80.70197751
26,000.00	89.00	150.179	11,268.30	-12,843.14	7,103.86	14,434,464.19	1,724,235.80	39.74622213	-80.70180165
26,100.00	89.00	150.179	11,270.04	-12,929.88	7,153.58	14,434,377.45	1,724,285.52	39.74598345	-80.70162579
26,200.00	89.00	150.179	11,271.78	-13,016.63	7,203.30	14,434,290.70	1,724,335.24	39.74574477	-80.70144993
26,212.47	89.00	150.179	11,272.00	-13,027.44	7,209.50	14,434,279.88	1,724,341.44	39.74571500	-80.70142800

PBHL/TD 26212.47 MD/11272.00 TVD

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-22HU LP 1 - hit/miss target - Shape - Point	0.00	0.000	11,016.00	-283.22	-95.22	14,447,024.08	1,717,036.73	39.78077800	-80.72727700
- plan misses target center by 0.02ft at 11520.99ft MD (11016.00 TVD, -283.23 N, -95.24 E)									
Van Winkle S-22HU PBF - plan hits target center - Point	0.00	0.000	11,272.00	-13,027.44	7,209.50	14,434,279.88	1,724,341.44	39.74571500	-80.70142800

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
3,000.00	3,000.00	0.00	0.00	KOP Begin 2°/100' build
3,150.00	3,149.93	2.21	-3.24	Begin 3.00° tangent
4,650.00	4,647.88	46.44	-68.10	Begin 2°/100' drop
4,800.00	4,797.81	48.65	-71.35	Begin vertical hold
8,002.19	8,000.00	48.65	-71.35	Begin 2°/100' build
8,991.22	8,969.50	174.32	-184.40	Begin 19.78° tangent
9,878.59	9,804.51	397.57	-385.25	Begin 6°/100' build/turn
11,032.07	10,848.02	111.81	-308.83	Begin 6°/100' build/turn
11,521.02	11,016.00	-283.26	-95.22	Begin 89.00° lateral
26,212.47	11,272.00	-13,027.44	7,209.50	PBHL/TD 26212.47 MD/11272.00 TVD

4705102355

WW-9
(4/16)

API Number 47 - 051 - _____
Operator's Well No. Van Winkle S-22HU

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 contain

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? Wetzel County Sanitary Landfill (SWF-1021 / WV0109185) and Westmoreland Sanitary Landfill, LLC (SAN1405 / PA DEP ECP1396426)

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
Annual Ryegrass	40
Spring Oats	96

Seed Type	lbs/acre
Orchard Grass	12
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: Bang Stubbins

Comments: _____

Title: Oil and Gas Inspector

Date: 1-22-21

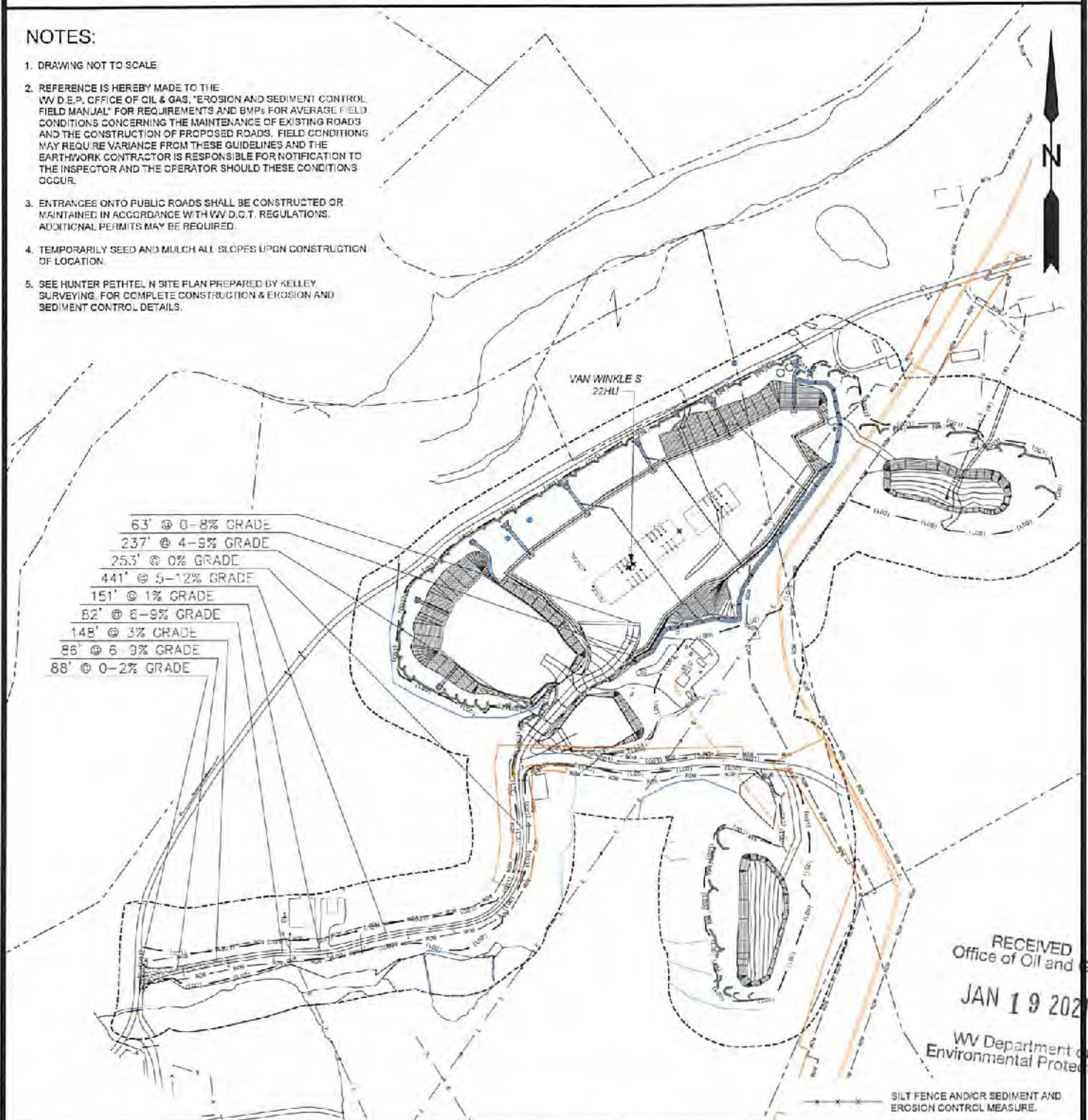
Field Reviewed? Yes No

RECEIVED
Office of Oil and Gas
FEB 03 2021
WV Department of
Environmental Protection

PROPOSED VAN WINKLE S - 22HU

NOTES:

1. DRAWING NOT TO SCALE
2. REFERENCE IS HEREBY MADE TO THE WV D.E.P. OFFICE 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 WV D.C.T. REGULATIONS. ADDITIONAL PERMITS MAY BE REQUIRED.
4. TEMPORARILY SEED AND MULCH ALL SLOPES UPON CONSTRUCTION OF LOCATION.
5. SEE HUNTER PETHTEL N SITE PLAN PREPARED BY KELLEY SURVEYING FOR COMPLETE CONSTRUCTION & EROSION AND SEDIMENT CONTROL DETAILS.



- 63' @ 0-8% GRADE
- 237' @ 4-9% GRADE
- 253' @ 0% GRADE
- 441' @ 5-12% GRADE
- 151' @ 1% GRADE
- 52' @ 6-9% GRADE
- 148' @ 3% GRADE
- 86' @ 6-9% GRADE
- 88' @ 0-2% GRADE

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

SILT FENCE AND/OR SEDIMENT AND EROSION CONTROL MEASURE.



12 Vanhorn Drive | P.O. Box 150 | Glenville, WV 26031 | 304.462.5634
1412 Kanawha Boulevard, East | Charleston, WV 25301 | 304.346.3952
254 East Beckley Bypass | Beckley, WV 25801 | 304.255.5296
slswv.com

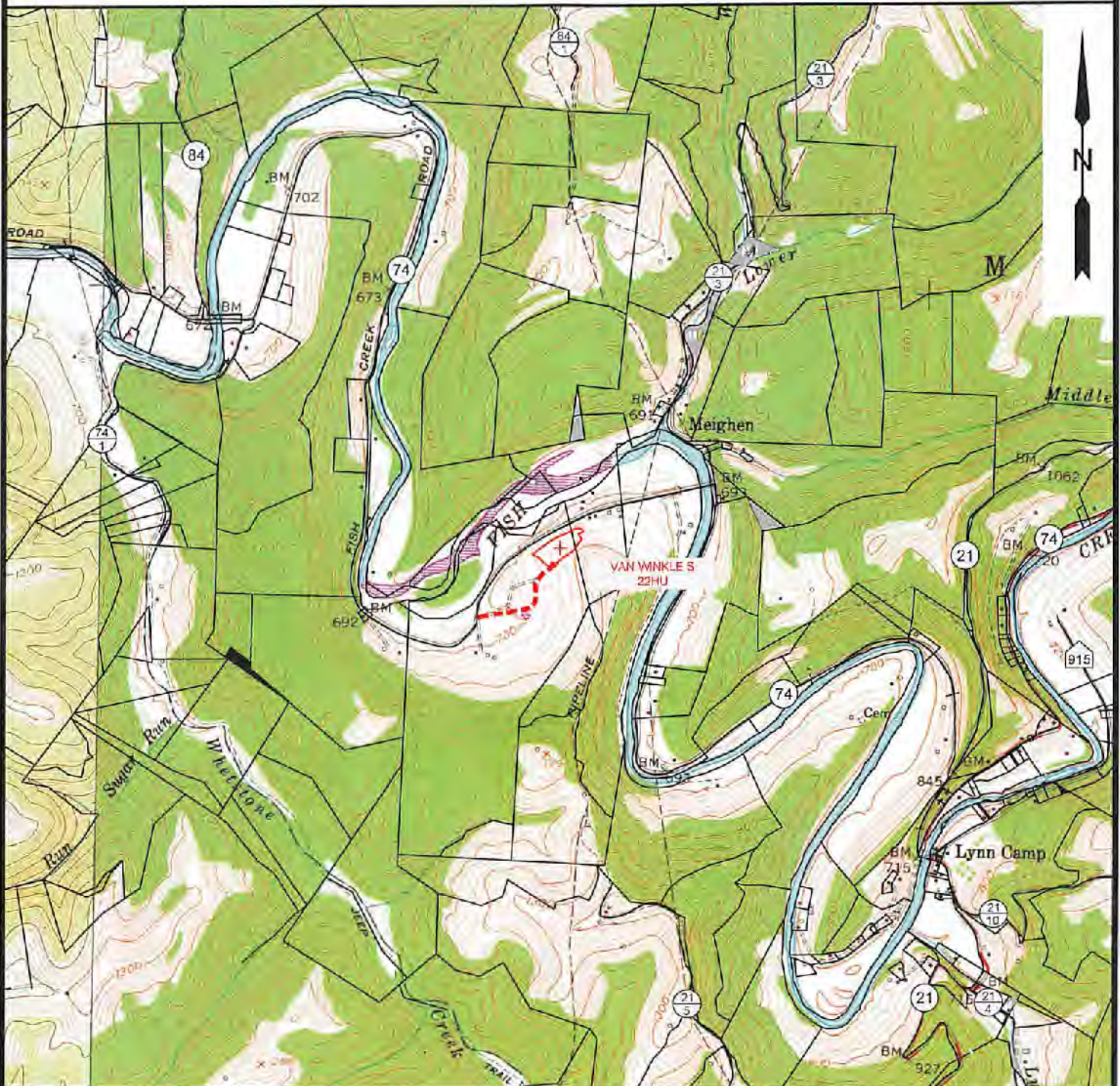
TOPO SECTION:		OPERATOR:	
GLEN EASTON 7.5'		PREPARED FOR: TUG HILL OPERATING, LLC 380 SOUTHPOINTE BLVD SUITE 200 CANONSBURG, PA 15317	
COUNTY	DISTRICT		
MARSHALL	MEADE		
DRAWN BY	JOB NO.	DATE	SCALE
K.G.M.	8952	12/24/2020	NONE



**TUG HILL
OPERATING**

07/16/2021

PROPOSED VAN WINKLE S - 22HU



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

LAT: 39.7137712
LON: -80.8258327
LOCATED: S 49°13'48" W AT 37,316.19' FROM THE CENTER OF HUNTER PETHEL N WELL PAD LOCATION.



12 Vanhorn Drive | P.O. Box 150 | Glenville, WV 26351 | 304.462.8884
1412 Kanawha Boulevard, East | Charleston, WV 25301 | 304.346.3552
254 East Beckley Bypass | Beckley, WV 25801 | 304.255.9296
slawv.com

TOPO SECTION:		OPERATOR:	
GLEN EASTON 7.5'		PREPARED FOR: TUG HILL OPERATING, LLC 380 SOUTHPOINTE BLVD SUITE 200 CANONSBURG, PA 15317	
COUNTY	DISTRICT		
MARSHALL	MEADE		
DRAWN BY	JOB NO.	DATE	SCALE
K.G.M.	8952	12/24/2020	1" = 2000'



**TUG HILL
OPERATING**

07/16/2021

**HUNTER PETHTEL LEASE
UTICA UNIT - 430.84 AC±
VAN WINKLE S 22HU WELL
TUG HILL OPERATING**

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

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

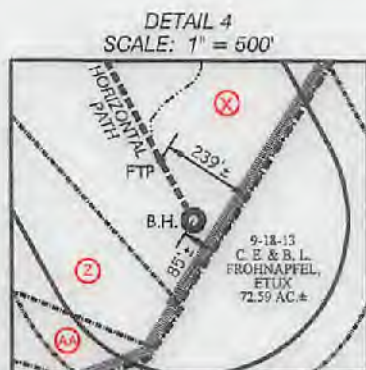
NAD 83 S.P.C. (FT)	N. 489,138.83	E. 1,623,895.36
NAD 83 GEO.	LAT-(N) 39.781555	LONG-(W) 80.726935
NAD 83 UTM (M)	N. 4,403,548.05	E. 523,382.90
LANDING POINT		
NAD 83 S.P.C. (FT)	N. 488,855.0	E. 1,623,595.3
NAD 83 GEO.	LAT-(N) 39.780778	LONG-(W) 80.727277
NAD 83 UTM (M)	N. 4,403,461.7	E. 523,353.8
BOTTOM HOLE		
NAD 83 S.P.C. (FT)	N. 455,986.2	E. 1,630,688.4
NAD 83 GEO.	LAT-(N) 39.745715	LONG-(W) 80.701428
NAD 83 UTM (M)	N. 4,399,577.3	E. 525,580.3

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

3,684' T.H.

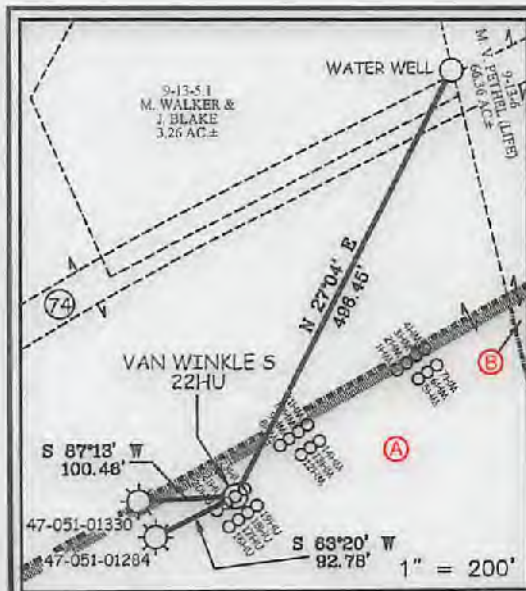
TAG	SURFACE OWNER	PARCEL	ACRES
A	XCL MIDSTREAM OPERATING, LLC	9-13-5	190.12
B	MARY VIRGINIA PETHTEL (LIFE)	9-13-6	66.36
C	MARY VIRGINIA PETHTEL (LIFE)	9-13-7	96.00
D	STATE OF WEST VIRGINIA (FISH CREEK)	N/A	N/A
E	SHUTLER FAMILY TRUST	9-13-8	56.04
F	MARGARET FOX (LIFE)	9-13-23	1.52
G	EUGENE A. SCHERRER	9-13-22.2	0.925
H	ROBERT M. & NANCY MCCARDLE	9-13-24	50.64
I	HENRY, JR. & BARBARA DICK	9-13-22.1	11.82
J	TRICYCLE LLC	9-13-22	42.27
K	SHUTLER FAMILY TRUST	9-13-21	81.49
L	JAMES G. RICHMOND	9-16-8	39.00
M	DANIEL JAY FITZWATER	9-13-20	104.5
N	JAMES G. RICHMOND	9-16-9	22.71
O	IVAN H. & MARGARET A. RICHMOND	9-13-16	21,354
P	IVAN H. & MARGARET A. RICHMOND	9-16-12.8	0.85
Q	TIMOTHY S. & GRETCHEN M. KIDD	9-16-12.5	1.23
R	JAMES RICHMOND	9-16-12	28.638
S	JAMES G. RICHMOND	9-16-11	67.8822
T	PAUL R. BLAKE	9-16-13	97.9962
U	WILLIAM B. KLUG, ET UX ESTS.	9-18-5	122.437
V	LOUIS T. FOX	9-16-20	86.174
W	LOUIS FOX	9-18-6	141.75
X	VINCENT J. WAYMAN, ET UX	9-18-17	68.99
Y	VINCENT J. WAYMAN, ET UX	9-18-17.1	1.010
Z	ROBERT F. VILLERS	9-18-16	62.893
AA	ROBERT F. & APRIL L. VILLERS	9-18-16.4	1.509

PARCEL	SURFACE ADJOINER	ACRES
9-13-8	SHUTLER FAMILY TRUST	56.04
9-13-16.1	IVAN H. & MARGARET A. RICHMOND	1.518
9-16-10	IVAN H. & MARGARET A. RICHMOND	1.518
9-16-12.2	SPENCER J. & CARRIE A. RICHMOND	0.575
9-16-12.3	TIMOTHY S. & GRETCHEN M. KIDD	0.937
9-16-12.4	TRUAX FAMILY TRUST	0.516
9-16-12.6	SPENCER J. & CARRIE A. RICHMOND	0.141
9-16-12.7	SPENCER J. & CARRIE A. RICHMOND	0.55
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
9-16-13.3	PAUL R. BLAKE	0.7538
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
9-16-15	RONALD R. YOUNG ET UX	52.02
P/O 9-16-15	RONALD R. YOUNG ET UX	4.033
9-16-16	CLINTON B. WHITELATCH, SR., ET UX ESTS.	1 AC 5.6 P
9-16-17	ELEANOR M. FOX EST.	0.741

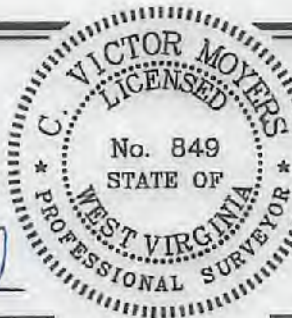


NOTES ON SURVEY

- NO WATER WELLS WERE FOUND WITHIN 250' OF PROPOSED GAS WELL. NO AGRICULTURAL BUILDINGS ≥ 2500 SQ. FT. OR DWELLINGS WERE FOUND WITHIN 625' OF THE CENTER OF PROPOSED WELL PAD.
- WELL SPOT CIRCLE & TOPO 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-22HU 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-23HU, KNOB CREEK N-11HU (47-051-02237), KNOB CREEK S-14HU (47-051-02288).



12 Vaihorn Drive | P.O. Box 180 | Glenville, WV 26031 | 304.462.5634
1412 Kanawha Boulevard, East | Charleston, WV 25301 | 304.346.5932
254 East Beckley Bypass | Beckley, WV 25801 | 304.255.5296
slsvw.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 3/3/21 & 3/12/21
OPERATORS WELL NO. VAN WINKLE S 22HU
API WELL NO. 47 - 051 - 02355 Deep
STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 2500 FILE NO. 8952P22HUR2.dwg
VAN WINKLE S 22HU-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

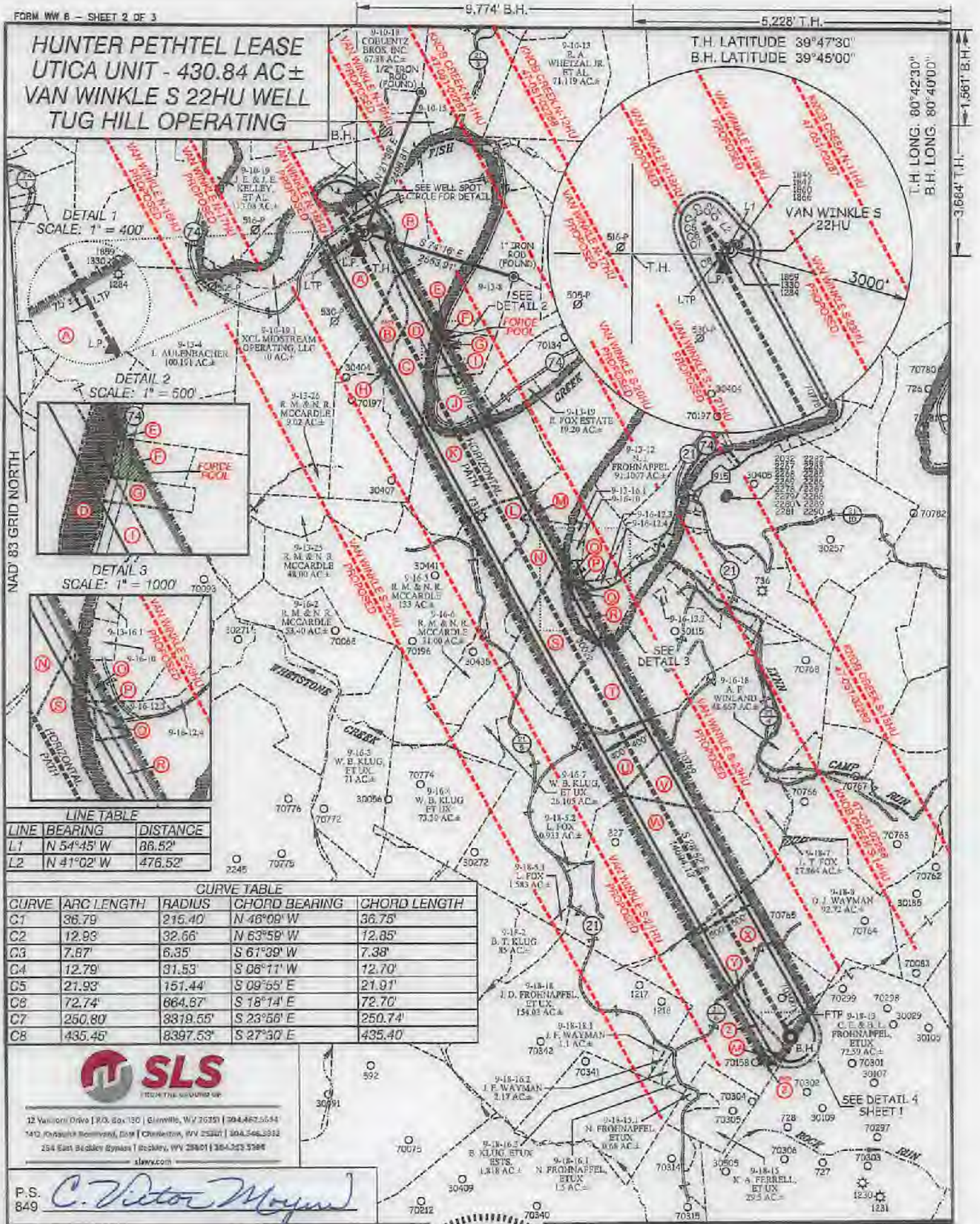
WELL TYPE: OIL ___ GAS X INJECTION ___ WASTE DISPOSAL ___ IF "GAS" PRODUCTION X STORAGE ___ DEEP X SHALLOW ___
LOCATION: GROUND: 756.10' ELEVATION PROPOSED: 753.50' WATERSHED FISH CREEK (HUC 10)
DISTRICT MEADE COUNTY MARSHALL QUADRANGLE GLEN EASTON 7.5'
SURFACE OWNER XCL MIDSTREAM OPERATING, LLC ACREAGE 190.12 ±
ROYALTY OWNER DENNIS HUNTER, ET AL - SEE WW-6A1 ACREAGE 190.12 ±
PROPOSED WORK: 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: 11,239' / TMD: 26,212'

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

07/16/2024

**HUNTER PETHTEL LEASE
UTICA UNIT - 430.84 AC±
VAN WINKLE S 22HU WELL
TUG HILL OPERATING**



DETAIL 1
SCALE: 1" = 400'

DETAIL 2
SCALE: 1" = 500'

DETAIL 3
SCALE: 1" = 1000'

LINE TABLE

LINE	BEARING	DISTANCE
L1	N 54°45' W	86.52'
L2	N 41°02' W	476.52'

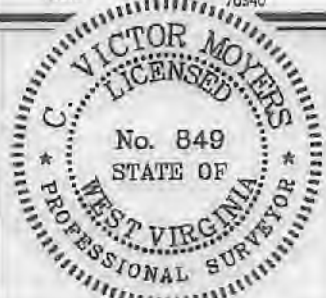
CURVE TABLE

CURVE	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
C1	36.79'	215.40'	N 46°09' W	36.75'
C2	12.93'	32.66'	N 63°59' W	12.85'
C3	7.87'	6.35'	S 61°39' W	7.38'
C4	12.79'	31.53'	S 08°11' W	12.70'
C5	21.93'	151.44'	S 09°55' E	21.91'
C6	72.74'	664.67'	S 18°14' E	72.70'
C7	250.80'	3319.55'	S 23°56' E	250.74'
C8	435.45'	8397.53'	S 27°30' E	435.40'



22 Veterans Drive | P.O. Box 130 | Glenville, WV 26031 | 304.467.5644
140 Orchard Roadway, One | Charleston, WV 25301 | 304.546.3312
254 East Beckley Square | Beckley, WV 25801 | 304.323.5398
sllwv.com

P.S. 849 *C. Victor Moyers*



(+) 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. 8952P22HUR2.dwg
VAN WINKLE S 22HU-REV3
DATE JANUARY 14, 20 21
REVISED 3/3/21 & 3/12/21
OPERATORS WELL NO. VAN WINKLE S 22HU
API WELL NO. 47 - 051 - 02355
STATE COUNTY PERMIT

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

DIANNA STAMPER
CT CORPORATION SYSTEM
5400 D BIG TYLER ROAD
CHARLESTON, WV 25313

WELL OPERATOR TUG HILL OPERATING, LLC
ADDRESS 1320 SOUTH UNIVERSITY DRIVE, SUITE 500
FORT WORTH, TX 78107

COUNTY NAME PERMIT

07167202

**HUNTER PETHTEL LEASE
UTICA UNIT - 430.84 AC±
VAN WINKLE S 22HU WELL
TUG HILL OPERATING**



12 Vanhorns 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
slsvw.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*31303	9-13-6	B	MARY V & FRANK E PETHTEL, ET AL	668 525
3	10*28265	9-18-16,4	AA	ROBERT F VILLERS AND APRIL L MILLERS	1073 381
4	10*31303	9-13-7	C	MARY V & FRANK E PETHTEL, ET AL	668 525
5	10*23458	Fish Creek	D	WEST VIRGINIA DIVISION OF NATURAL RESOURCES	1019 373
6	10*28299	9-13-8	E	THE SHUTLER FAMILY TRUST	1070 425
7	**	9-13-23	F	THOMAS JOHN FOX, ET AL	
8	10*27247	9-13-22,2	G	DANIEL R JOHNSON AND JOANNA L JOHNSON, ET AL	1053 3
9	10*21131	9-13-24	H	ROBERT M MCCARDLE & NANCY R MCCARDLE, ET AL	951 621
10	10*27247	9-13-22,1	I	DANIEL R JOHNSON AND JOANNA L JOHNSON, ET AL	1053 3
11	10*27247	9-13-22	J	DANIEL R JOHNSON AND JOANNA L JOHNSON, ET AL	1053 3
12	10*23197	9-13-21	K	J W KELLEY AND R A KELLEY	63 156
13	10*23197	9-16-8	L	J W KELLEY AND R A KELLEY	63 156
14	10*18527	9-13-20	M	ANN TURNER YOUNG SHRIVER, ET AL	933 589
15	10*16481	9-16-9	N	JAMES G RICHMOND AND CINDY L RICHMOND	829 71
16	10*17895	9-13-16	O	IVAN H RICHMOND AND MARGARET A RICHMOND	924 543
17	10*17895	9-16-12,8	P	IVAN H RICHMOND AND MARGARET A RICHMOND	924 543
18	10*16481	9-16-12,5	Q	JAMES G RICHMOND AND CINDY L RICHMOND	829 71
19	10*16481	9-16-12	R	JAMES G RICHMOND AND CINDY L RICHMOND	829 71
20	10*16481	9-16-11	S	JAMES G RICHMOND AND CINDY L RICHMOND	829 71
21	10*47051.135.0	9-16-13	T	PAUL R BLAKE	878 280
22	10*22789	9-18-5	U	DONNA K FAHEY	962 87
23	10*27947	9-18-5	U	STONE HILL MINERALS HOLDINGS LLC	1063 553
24	10*28268	9-18-5	U	JOSEPH & ELIZABETH SHUTLER	63 203
25	10*23726	9-16-20	V	LOUIS T FOX	1011 520
26	10*27395	9-16-20	V	LYNN CAMP UNITED METHODIST CHURCH	1058 376
27	10*28268	9-18-6	W	JOSEPH & ELIZABETH SHUTLER	63 203
28	10*47051.136.0	9-18-17	X	VINCENT J WAYMAN AND KATHY JO WAYMAN	885 273
29	10*47051.136.0	9-18-17,1	Y	VINCENT J WAYMAN AND KATHY JO WAYMAN	885 273
30	10*28265	9-18-16	Z	ROBERT F VILLERS AND APRIL L VILLERS	1073 381

FILE NO. 8952P22HUR2.dwg
VAN WINKLE S 22HU-REV3

DATE JANUARY 14, 20 21

REVISED 3/3/21 & 3/12/21

OPERATORS WELL NO. VAN WINKLE S 22HU

API WELL NO. 47 — 051 — 02355
STATE COUNTY PERMIT



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



P.S. 849 C. Victor Moyers

COUNTY NAME PERMIT

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

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

WW-6A1
(5/13)

Operator's Well No. Van Winkle S-22HU

**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
-------------------------	-----------------------	-----------------------	---------	-----------

*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 *amyllorris*

Its: Permitting Specialist - Appalachia Region

WW-6A1 Supplement - Well Bore Tracts

Operator's Well No. Van Winkle S - 22HU

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*31303	9-13-6	B	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	B	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	B	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	B	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	B	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*31303	9-13-7	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	9-13-7	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*31305	9-13-7	C	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 38/54	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	C	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	C	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	C	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*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*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
10*27248	9-13-22	J	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	J	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	J	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*29963	9-13-22	J	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*29453	9-13-22	J	TRICYCLE LLC	TH EXPLORATION LLC	1/8+	1096	307	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*23197	9-13-21	K	J W KELLEY AND R A KELLEY	TG STILES	1/8+	63	156	TG Stiles to South Penn OH Company: DB 60/366	Hope Natural Gas Company to Consolidated Gas Supply Corporation: DB 374/234	Consolidated Gas Supply Corporation to Consolidated Gas Transmission Corporation: DB 505/405	Consolidated Gas Transmission Corporation to CNG Development Company: DB 515/88	Merger of CNG Development Company into CNG Producing Company eff. 1/1/1991	Name change of CNG Producing Company to Dominion Exploration & Production Inc - 5/10/2000	Merger from Dominion Exploration & Production Inc to CONSOL Gas Company 5/21/2010: CB 19/546	Affidavit of Name Changes & Mergers from CONSOL Gas Co. to CNX Gas Company LLC: MB 11/415	CNX Gas Company LLC to TH Exploration LLC: AB 42/140	

Lease ID	Parcel	Tag	Grantor, Lessor, Etc.	Grantee, Lessee, Etc.	Royalty	Deed Book/Page		Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	
10*28299	9-13-8	E	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	
**	9-13-23	F	THOMAS JOHN FOX	UNLEASED				**FORCE POOL**								
**	9-13-23	F	MARK H FOX	UNLEASED				**FORCE POOL**								
**	9-13-23	F	PAUL G FOX	UNLEASED				**FORCE POOL**								
**	9-13-23	F	LOUIS T FOX	UNLEASED				**FORCE POOL**								
**	9-13-23	F	MARY A FOX	UNLEASED				**FORCE POOL**								
**	9-13-23	F	DAVID E FOX	UNLEASED				**FORCE POOL**								
10*27247	9-13-22.2	G	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	
10*27248	9-13-22.2	G	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	
10*27835	9-13-22.2	G	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	
10*28267	9-13-22.2	G	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	
10*29963	9-13-22.2	G	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	
10*28353	9-13-22.2	G	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	
10*21131	9-13-24	H	ROBERT M MCCARDLE & NANCY R MCCARDLE	TH EXPLORATION LLC	1/8+	951	621	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
10*28341	9-13-24	H	WILLIAM BRAD FOX	TH EXPLORATION LLC	1/8+	1071	466	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
10*28622	9-13-24	H	LINDA SMITH	TH EXPLORATION LLC	1/8+	1075	33	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
10*28623	9-13-24	H	ANN MILLER	TH EXPLORATION LLC	1/8+	1075	31	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
10*31313	9-13-24	H	MARY V & FRANK E PETHTEL	CENTRAL MICHIGAN EXPLORATION LLC	1/8+	674	354	N/A	N/A	N/A	N/A	N/A	N/A	Central Michigan Exploration LLC to Stone Energy Corp.: AB 21/288 & 21/356	Stone Energy Corporation to EQT Production Company: AB 38/75	EQT Production Company to TH Exploration LLC: AB 48/21
10*31314	9-13-24	H	JOHN FOX	STONE ENERGY CORPORATION	1/8+	703	276	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*31315	9-13-24	H	MICHAEL SHUTLER	STONE ENERGY CORPORATION	1/8+	715	207	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*31316	9-13-24	H	SUSAN WALKER	STONE ENERGY CORPORATION	1/8+	864	563	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*31317	9-13-24	H	RICHARD CUNNINGHAM	STONE ENERGY CORPORATION	1/8+	164A	416	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*31318	9-13-24	H	LINDA DANLEY	STONE ENERGY CORPORATION	1/8+	868	438	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*31319	9-13-24	H	AARON & REGINA MURRAY	STONE ENERGY CORPORATION	1/8+	868	436	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*31328	9-13-24	H	DEBRA COURTWRIGHT	STONE ENERGY CORPORATION	1/8+	702	376	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*31329	9-13-24	H	DAVID C YEAGER	STONE ENERGY CORPORATION	1/8+	702	368	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*31330	9-13-24	H	HEBERT YEAGER	STONE ENERGY CORPORATION	1/8+	702	370	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*31331	9-13-24	H	HOWARD FOX	STONE ENERGY CORPORATION	1/8+	697	431	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

Lease ID	Parcel	Tag	Grantor, Lessor, Etc.	Grantee, Lessee, Etc.	Royalty	Deed Book/Page		Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	
10*31332	9-13-24	H	ROBERT L SHUTLER	STONE ENERGY CORPORATION	1/8+	697	435	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*31333	9-13-24	H	CHARLOTTE JACKLEY	STONE ENERGY CORPORATION	1/8+	697	433	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*31334	9-13-24	H	BETTY PERSINGER	STONE ENERGY CORPORATION	1/8+	702	374	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*31335	9-13-24	H	BETTY JEAN OTTE	STONE ENERGY CORPORATION	1/8+	702	346	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*31336	9-13-24	H	JEANIUE HUFF	STONE ENERGY CORPORATION	1/8+	702	358	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*31337	9-13-24	H	JANE FOX	STONE ENERGY CORPORATION	1/8+	702	354	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*31338	9-13-24	H	KIM JONES	STONE ENERGY CORPORATION	1/8+	702	364	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*31339	9-13-24	H	MARY V & FRANK E PETHTEL	STONE ENERGY CORPORATION	1/8+	702	362	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*31340	9-13-24	H	MARY JANE FERKOL	STONE ENERGY CORPORATION	1/8+	702	350	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*31341	9-13-24	H	MARY KAY FRENCH	STONE ENERGY CORPORATION	1/8+	702	348	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*31342	9-13-24	H	MARY ELLEN YEAGER	STONE ENERGY CORPORATION	1/8+	702	366	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*31343	9-13-24	H	ROBERTA FROHNAPFEL	STONE ENERGY CORPORATION	1/8+	702	356	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*31344	9-13-24	H	MARTI SNYDER	STONE ENERGY CORPORATION	1/8+	702	384	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*31345	9-13-24	H	JAMES D FROHNAPFEL	STONE ENERGY CORPORATION	1/8+	702	360	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*31346	9-13-24	H	HELEN SHUTLER	STONE ENERGY CORPORATION	1/8+	702	382	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

Lease ID	Parcel	Tag	Grantor, Lessor, Etc.	Grantee, Lessee, Etc.	Royalty	Deed Book/Page		Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	
10*27947	9-13-20	M	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	
10*28158	9-13-20	M	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	
10*21598	9-13-20	M	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	
10*18469	9-13-20	M	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	
10*21709	9-13-20	M	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	
10*21012	9-13-20	M	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	
10*17895	9-13-16	O	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	
10*17895	9-16-12.8	P	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	
10*16481	9-16-12.5	Q	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 Gulport Energy Corp: 32/307, 32/322 & 32/337	Fossil Creek Ohio LLC to Gulport Energy Corp: 34/410	Gulport Energy Corp & Fossil Creek Ohio, LLC to TH Exploration LLC: 36/535
10*16481	9-16-12	R	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 Gulport Energy Corp: 32/307, 32/322 & 32/337	Fossil Creek Ohio LLC to Gulport Energy Corp: 34/410	Gulport Energy Corp & Fossil Creek Ohio, LLC to TH Exploration LLC: 36/535



January 15, 2021

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

RE: Van Winkle S-22HU

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

~~9-16-5~~

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

Sincerely,

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

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



west virginia department of environmental protection

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

Randall M. Albert, Chairman
dep.wv.gov

April 2, 2021

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

9489 00900027 6201 3317 10

RE: Intentional Deviation of New Deep Well
Tug Hill Operating, LLC – Van Winkle S-22HU

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 cursive script 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 10.

Item Details

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

Shipment Details

Weight:	10lb, 3.1oz
----------------	-------------

Recipient Signature

Signature of Recipient:	<i>JB</i>
Address of Recipient:	<i>JB Rm 711 Covid-19</i> <i>1320 S University</i> <i># 500</i> <i>76107</i>

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



west virginia department of environmental protection

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

Randall M. Albert, Chairman
dep.wv.gov

April 2, 2021

SWN Production Company, LLC
10000 Energy Dr
Spring TX 77389

9489 0090 0027 6201 3317 41

RE: Intentional Deviation of New Deep Well
Tug Hill Operating, LLC – Van Winkle S-22HU

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 black 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 41.

Item Details

Status:	Delivered, Front Desk/Reception/Mail Room
Status Date / Time:	April 8, 2021, 12:18 pm
Location:	MORGANTOWN, WV 26508
Postal Product:	First-Class Mail®
Extra Services:	Certified Mail™ Return Receipt Electronic

Shipment Details

Weight:	8lb, 7.8oz
----------------	------------

Recipient Signature

Signature of Recipient:	CO-19 MN 24
Address of Recipient:	1300 Fort Pierpont Dr #201

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



west virginia department of environmental protection

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

Randall M. Albert, Chairman
dep.wv.gov

April 2, 2021

Louis T. Fox
31 Crow Dr
Glen Easton WV 26039

9489 0090 0027 6201 3317 65

RE: Intentional Deviation of New Deep Well
Tug Hill Operating, LLC – Van Winkle S-22HU

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 cursive script 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 65.

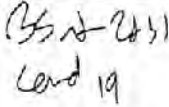

Item Details

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

Shipment Details

Weight:	5lb, 3.3oz
----------------	------------

Recipient Signature

Signature of Recipient:	
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



west virginia department of environmental protection

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

Randall M. Albert, Chairman
dep.wv.gov

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-22HU

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 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 black 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 72.

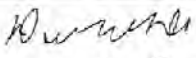

Item Details

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

Shipment Details

Weight:	5lb, 6.1oz
---------	------------

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



west virginia department of environmental protection

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

Randall M. Albert, Chairman
dep.wv.gov

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-22HU

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 cursive script that reads "Susan Rose". The signature is written in black ink and is positioned above the printed name and title.

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.

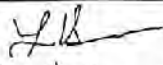
Item Details

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

Shipment Details

Weight:	5lb, 6.6oz
----------------	------------

Recipient Signature

Signature of Recipient:	 Liz Hall C-19
Address of Recipient:	5161 St. Joseph's Rel

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



west virginia department of environmental protection

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

Randall M. Albert, Chairman
dep.wv.gov

April 2, 2021

Thomas John Fox
100 Lynn Camp Lane
Glen Easton WV 26039

9489 0090 0027 6201 3317 96

RE: Intentional Deviation of New Deep Well
Tug Hill Operating, LLC – Van Winkle S-22HU

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 black 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.

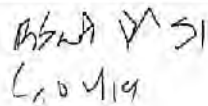
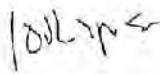
Item Details

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

Shipment Details

Weight:	5lb, 4.5oz
----------------	------------

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



west virginia department of environmental protection

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

Randall M. Albert, Chairman
dep.wv.gov

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-22HU

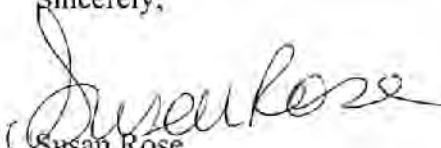
Dear Sir:

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 3318 19.

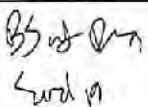

Item Details

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

Shipment Details

Weight:	5lb, 6.8oz
----------------	------------

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



west virginia department of environmental protection

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

Randall M. Albert, Chairman
dep.wv.gov

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-22HU

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

Susan Rose
Administrator

encl:

07/16/2021

West Virginia Oil and Gas Conservation Commission
Mail Code 031361
601 57th Street SE
Charleston WV 25304



9489 0090 0027 6201 3318 02

Label 890-PB, Oct. 2015
Pinney Bowes



U.S.
ZIP
02
000

Mary A. Fox
HC 81 Box 265-E
Lewisburg WV 24901

MSH

-R-T-S- 249012012-1N *94 04/29/21

RETURN TO SENDER

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	9-10-19	TH EXPLORATION, LLC	1320 S. University Drive Suite 500 Fort Worth, TX 76107
Marshall	Meade	9-10-19.1	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	9-13-20	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

07/16/2021

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	9-16-11	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	9-16-12.5	TH EXPLORATION, LLC	1320 S. University Drive Suite 500 Fort Worth, TX 76107
Marshall	Meade	9-16-12.8	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	9-16-20	TH EXPLORATION, LLC	1320 S. University Drive Suite 500 Fort Worth, TX 76107
Marshall	Meade	9-16-8	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	9-18-16	TH EXPLORATION, LLC	1320 S. University Drive Suite 500 Fort Worth, TX 76107
Marshall	Meade	9-18-16.4	TH EXPLORATION, LLC	1320 S. University Drive Suite 500 Fort Worth, TX 76107
Marshall	Meade	9-18-17	TH EXPLORATION, LLC	1320 S. University Drive Suite 500 Fort Worth, TX 76107
Marshall	Meade	9-18-17.1	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

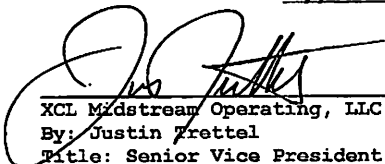
07/16/2021

Marshall	Meade	9-18-6	TH EXPLORATION, LLC	1320 S. University Drive Suite 500 Fort Worth, TX 76107
----------	-------	--------	---------------------	---

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

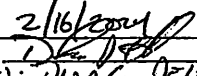
Marshall County
Jan Pest, Clerk
Instrument 1475005
02/18/2021 @ 12:30:42 PM
RIGHT OF WAY W/O CONSIDERATION
Book 1104 @ Page 189
Pages Recorded 2
Recording Cost \$ 11.00

ACKNOWLEDGMENT

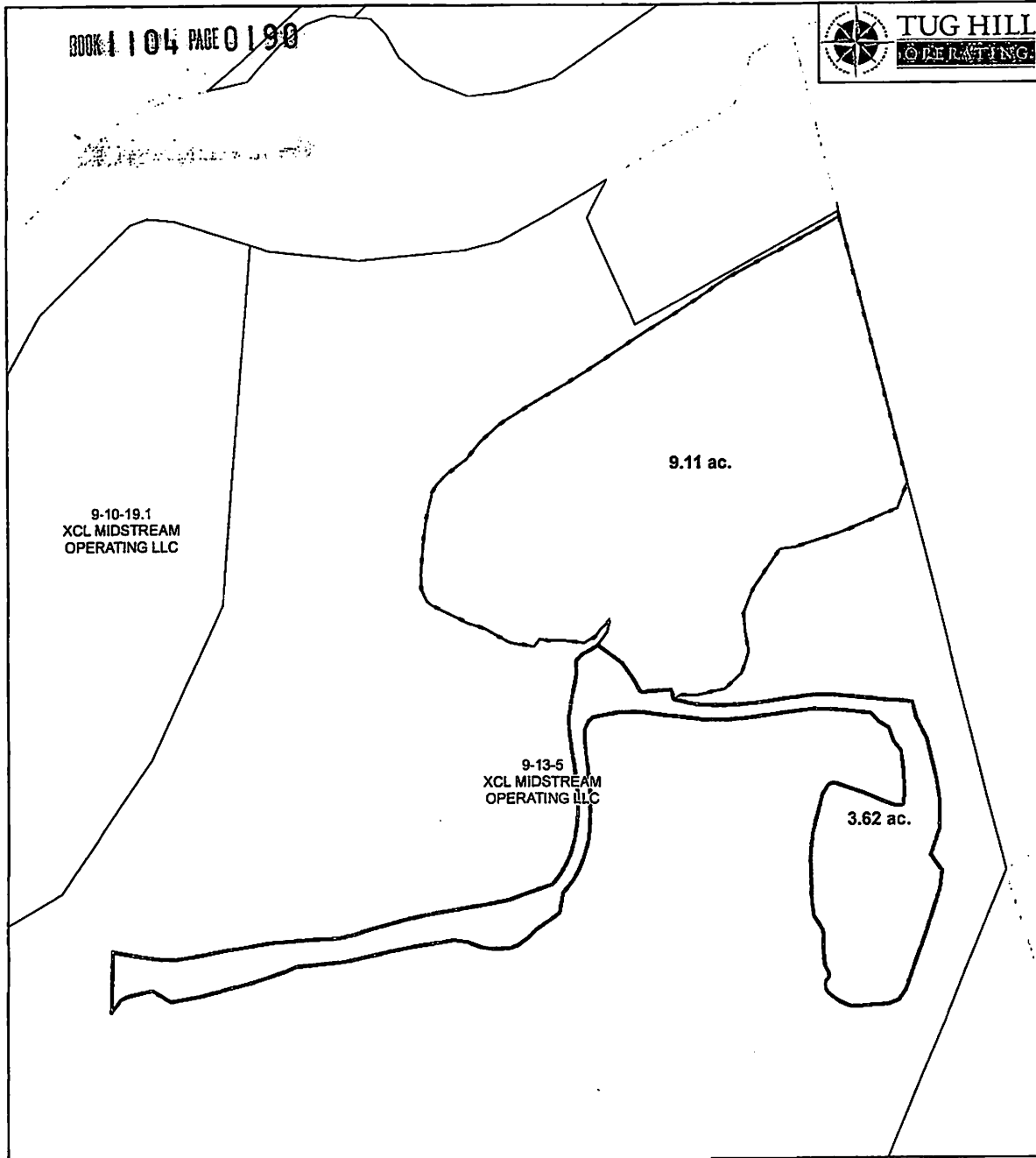
COMMONWEALTH OF PENNSYLVANIA §
§ SS:
COUNTY OF WASHINGTON §

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 57th Street
Charleston, WV 25304



1 inch: 226 feet

Limit of Disturbance - Access Road
 Limit of Disturbance - Pad

0 65 130 260
Feet



NOTE: THE APPROVED SITE LOCATION FOR THE SURFACE IS TO BE ACCESS FROM NORTH OF THE LOCATION OF THE PROPERTY THIS PARCEL AS SHOWN ON THE SURFACE. THE SURFACE IS TO BE ACCESS FROM NORTH OF THE LOCATION OF THE PROPERTY THIS PARCEL AS SHOWN ON THE SURFACE. THE SURFACE IS TO BE ACCESS FROM NORTH OF THE LOCATION OF THE PROPERTY THIS PARCEL AS SHOWN ON THE SURFACE.

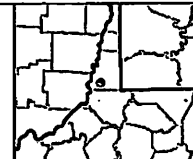
"Plat"

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 11th 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 18th day of February, 2021 at 12:30 o'clock P M.

TESTE: Jan Pest Clerk

WV Department of
Environmental Protection

RECEIVED
Office of Oil and Gas
JAN 19 2021

(a) Subject to the conveyance of the Wells Assets from BQT to TH II as described in the Agreement, the BQT Leases and appurtenances thereto (including rights of access and to install facilities), all Hydrocarbons within, produced from, derived from, or sold from the BQT 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 "BQT Surface Contracts"), related to the BQT 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 BQT Leases, lease files for the BQT Leases

ARTICLE II ASSIGNMENT OF ASSETS

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

ARTICLE I DEFINED TERMS

NOW, THEREFORE, for and in consideration of the mutual promises contained herein and in that 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:

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

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

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

RECITALS

This ASSIGNMENT AND BILL OF SALE (this "Assignment") dated as of December 1, 2020 (the "Execution Date"), is made by and between BQT PRODUCTION COMPANY, a Pennsylvania corporation, with an address at 625 Liberty Avenue, Suite 1700, Pittsburgh, Pennsylvania 15222 ("BQT"), and THE EXPLORATION, L.P.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 Amended and Restated Agreement by and among BQT, TH and TH Exploration II LLC ("TH II"), dated July 8, 2020 (the "Agreement"). BQT and TH may be referred to herein together as the "Parties", and each individually as a "Party".

ASSIGNMENT AND BILL OF SALE

600 TOWN CENTER BUILDING, SUITE 100
GREENSBORO, NC 27401-5241

01/19/2021 09:48 AM

07/16/2021

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")

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

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

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

07/16/2021

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*") INSOFAR AND ONLY INSOFAR 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

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

07/16/2021



January 15, 2021

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

RE: Van Winkle S-22HU

Subject: Marshall County Route 74, 21 and 21/6 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, 21 and 21/6 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.

Sincerely,

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

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

07/16/2021

WW-6AC
(1/12)

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-22HU

Well Pad Name: Hunter Pethel

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:	<u>West Virginia</u>	UTM NAD 83 Easting:	<u>523,382.90</u>
County:	<u>Marshall</u>	UTM NAD 83 Northing:	<u>4,403,548.05</u>
District:	<u>Meade</u>	Public Road Access:	<u>County Route 74</u>
Quadrangle:	<u>Glen Easton 7.5'</u>	Generally used farm name:	<u>XoL Midstream Operating, LLC</u>
Watershed:	<u>Fish Creek (HUC 10)</u>		

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.

<p>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:</p> <p>*PLEASE CHECK ALL THAT APPLY</p> <p><input type="checkbox"/> 1. NOTICE OF SEISMIC ACTIVITY or <input checked="" type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED</p> <p><input checked="" type="checkbox"/> 2. NOTICE OF ENTRY FOR PLAT SURVEY or <input type="checkbox"/> NO PLAT SURVEY WAS CONDUCTED</p> <p><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</p> <p style="padding-left: 40px;"><input type="checkbox"/> WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)</p> <p><input checked="" type="checkbox"/> 4. NOTICE OF PLANNED OPERATION</p> <p><input checked="" type="checkbox"/> 5. PUBLIC NOTICE</p> <p><input checked="" type="checkbox"/> 6. NOTICE OF APPLICATION</p>	<p style="text-align: center;">OOG OFFICE USE ONLY</p> <p><input type="checkbox"/> RECEIVED/NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED/NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED</p> <p style="text-align: center;"> </p>
---	---

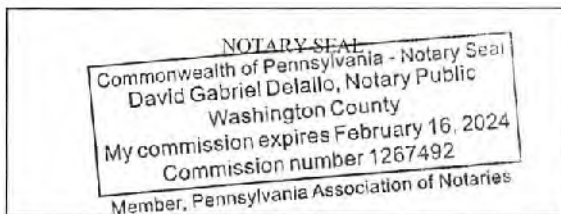
Required Attachments:
The Operator shall attach to this Notice Certification Form all Notice Forms and Certifications of Notice that have been provided to the required parties and/or any associated written waivers. For the Public Notice, the operator shall attach a copy of the Class II Legal Advertisement 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.

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 Gabriel Detallo 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.

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

WW-6A
(9-13)

API NO. 47- 051 -
OPERATOR WELL NO. Van Winkle S-22HU
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

RECEIVED
Office of Oil and Gas

FEB 03 2021

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 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 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting 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-22HU
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 57th St. SE
Charleston, WV 25304
(304) 926-0450

Office of Oil and Gas

FEB 03 2021

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.

RECEIVED
Office of Oil and Gas
FEB 03 2021
WV Department of
Environmental Protection

07/16/2021

WW-6A
(8-13)

API NO. 47- 051 -
OPERATOR WELL NO. Van Winkle S-22HU
Well Pad Name: Hunter Pethel

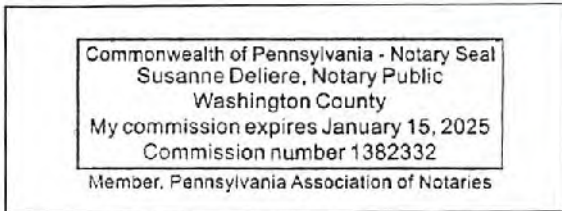
Notice is hereby given by:

Well Operator: Tug Hill Operating, LLC
Telephone: 724-749-8386
Email: amorris@tug-hillop.com *any & love*

Address: 390 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.



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

RECEIVED
Office of Oil and Gas
FEB 03 2021
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 – 22HU
 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.

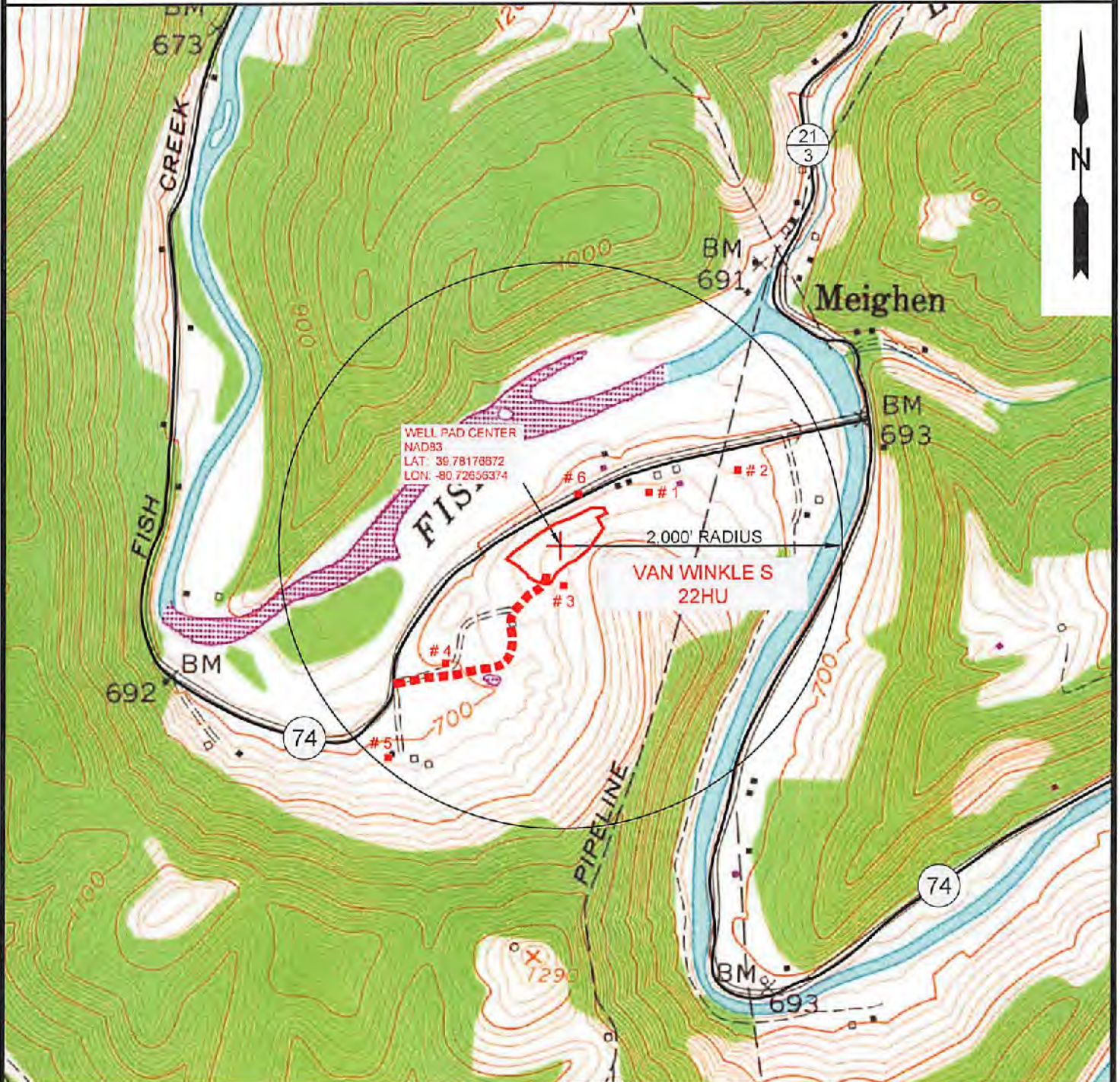
<p>Residence (#1) TM 13 Pcl. 6 Mary Virginia Pethtel Phone: 304-684-2646, 304-845-3423 Physical Address: None Found – Possible Mobile Home Tax Address: 9845 Fish Creek Rd Glen Easton, WV 26039</p>	<p>Residence (#2) TM 13 Pcl. 7 Mary Virginia Pethtel Phone: 304-684-2646, 304-845-3423 Physical Address: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

RECEIVED
 Office of Oil and Gas

FEB 03 2021

WV Department of
 Environmental Protection

PROPOSED VAN WINKLE S - 22HU



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



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 | 304.355.5295
sllw.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'



TUG HILL
OPERATING

07/16/2021

WW-6A
(9-13)

API NO. 47- 051 -
OPERATOR WELL NO. Van Winkle S-22HU
Well Pad Name: Hunter Pethel

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:

SURFACE OWNER(s)

Name: Xel 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: 9349 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

RECEIVED
Office of Oil and Gas

JAN 19 2021

WV Department of
Environmental Protection

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 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting 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

RECEIVED
Office of Oil and
JAN 19 2021

07/16/2021

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

Water Well Testing:

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

Water Testing Laboratories:

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

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

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

Written Comment:

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

Chief, Office of Oil and Gas
Department of Environmental Protection
601 57th 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.**

RECEIVED
Office of Oil and Gas

JAN 19 2021

WV Department of
Environmental Protection

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.

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

07/16/2021

WW-6A
(8-13)

API NO. 47- 051 -
OPERATOR WELL NO. Van Winkle S-22HU
Well Pad Name: Hunter Pethel

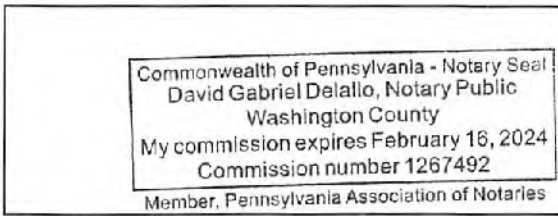
Notice is hereby given by:

Well Operator: Tug Hill Operating, LLC
Telephone: 724-749-8388
Email: amorris@tug-hillop.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 depprivacyofficer@wv.gov.



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

David Delallo

Notary Public

My Commission Expires 2/16/2024

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

07/16/2021

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 – 22HU
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>Residence (#1) TM 13 Pcl. 6 Mary Virginia Pethtel Phone: 304-684-2646, 304-845-3423 Physical Address: None Found – Possible Mobile Home Tax Address: 9845 Fish Creek Rd Glen Easton, WV 26039</p>	<p>Residence (#2) TM 13 Pcl. 7 Mary Virginia Pethtel Phone: 304-684-2646, 304-845-3423 Physical Address: 9845 Fish Creek Rd Glen Easton, WV 26039 Tax Address: Same</p>	<p>Commercial/Business (#3)* TM 13 Pcl. 5 XcL Midstream Operating, LLC Phone: 1-888-751-0434 Physical Address: 9269 Fish Creek Rd. Glen Easton, WV 26039 Tax Address: 1320 S University DR STE 500 Fort Worth, TX 76107 *Physical address appears to be related to Oil & Gas Well Pad.</p>
<p>Residence (#4) TM 13 Pcl. 5 XcL Midstream Operating, LLC Phone: 1-888-751-0434 Physical Address: None Found – Appears to be newer home Tax Address: 1320 S University DR STE 500 Fort Worth, TX 76107</p>	<p>Residence (#5) TM 13 Pcl. 5 XcL Midstream Operating, LLC Phone: 1-888-751-0434 Physical Address: 9201 Fish Creek Rd. Glen Easton, WV 26039 Tax Address: 1320 S University DR STE 500 Fort Worth, TX 76107</p>	<p>(#6) Water Well Only (No Residence)</p>

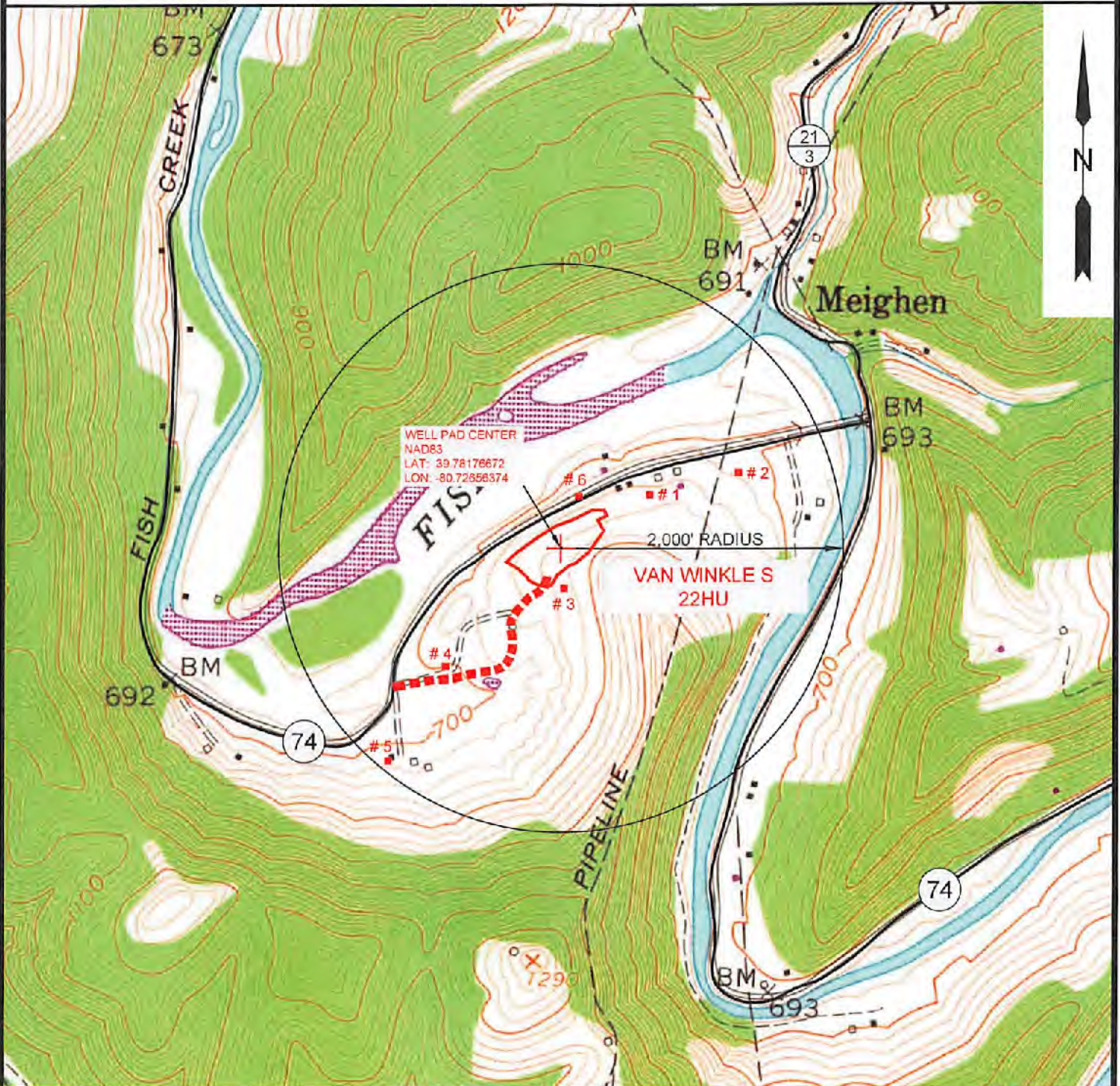
RECEIVED
Office of Oil and Gas

JAN 19 2021

WV Department of
Environmental Protection

07/16/2021

PROPOSED VAN WINKLE S - 22HU



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

RECEIVED
Office of Oil and Gas

JAN 19 2021



12 Venhorn 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 | 304.255.5286
slsw.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'



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) LOA5
- (2) Application on Form WW-2(B) ___ / WW-3(B) ___ / WW-4(B) ___ / WW-5(B) ___ / WW-6(B) X
- (3) Plat showing the well location on Form WW-6, and
- (4) Construction and Reclamation Plan on Form WW-9

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

--by delivering the same in 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 X / her ___ / or, because he ___ / she ___ / refused to take it when offered it, by leaving it in his ___ / her ___ / presence.

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

For a partnership:

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

For a limited partnership:

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

For a corporation:

Handing it to the corporation's employee ___ / officer ___ / director ___ / attorney in fact ___ / named _____

[Signature]
(Signature of person executing service)

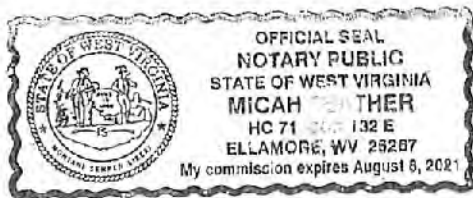
Taken, subscribed and sworn before me this 15 day of January, 2021.
My commission expires August 8, 2021

RECEIVED
Office of Oil and Gas

[Signature]
Notary Public

JAN 19 2021

(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. Van Winkle 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 14th 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.

anyklovic
(Signature of person executing service)

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

David Delallo
Notary Public

(AFFIX SEAL IF NOTARIZED OUTSIDE THE STATE)

Commonwealth of Pennsylvania - Notary Seal
David Gabriel Delallo, Notary Public
Washington County
My commission expires February 16, 2024
Commission number 1267492
Member, Pennsylvania Association of Notaries

RECEIVED
Office of Oil and Gas

JAN 19 2021

WV Department of
Environmental Protection

07/16/2021

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

RECEIVED
Office of Oil and Gas

JAN 19 2021

WV Department of
Environmental Protection
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 Pelhtel, 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 Pelhtel, 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: West Virginia
 County: Marshall
 District: Meade
 Quadrangle: Glen Easton 7.5'

Approx. Latitude & Longitude: 39.78176850; -80.72661368
 Public Road Access: County Route 74
 Watershed: Middle Fish Creek
 Generally used farm name: XcL Midstream Operating, LLC

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 57th 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.

Notice is hereby given by:

Well Operator: Tug Hill Operating, LLC
 Telephone: 724-749-8386
 Email: amorris@tug-hill-op.com

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

RECEIVED
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 of your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

07/16/2021

**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

RECEIVED
Office of Oil and Gas

JAN 19 2021

WV Department of
Environmental Protection

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. vanDuke 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 14th 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:

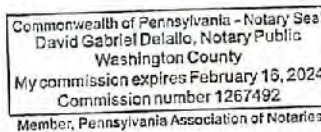
Handing it to the corporation's employee ___ / officer ✓ / director ___ / attorney in fact ___ / named Justin Irettel

Amy S. Lovvick
(Signature of person executing service)

Taken, subscribed and sworn before me this 14 day of December, 2020.
My commission expires 2/16/2024

David Gabriel Delallo
Notary Public

(AFFIX SEAL IF NOTARIZED OUTSIDE THE STATE)



RECEIVED
Office of Oil and Gas

JAN 19 2021

WV Department of
Environmental Protection

07/16/2021

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



RECEIVED
Office of Oil and Gas
JAN 19 2021
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 checked="" 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>523,382.90</u>
County:	<u>Marshall</u>		Northing:	<u>4,403,548.05</u>
District:	<u>Meade</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 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

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

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

Oil and Gas Privacy Notice:

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

RECEIVED
Office of Oil and Gas
JAN 19 2021
WV Department of
Environmental Protection
07/16/2021

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

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

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

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) 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. Van Winkle Wells (see) 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 14th 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 blawie
(Signature of person executing service)

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

David Delallo
Notary Public

(AFFIX SEAL IF NOTARIZED OUTSIDE THE STATE)

Commonwealth of Pennsylvania - Notary Seal
David Gabriel Delallo, Notary Public
Washington County
My commission expires February 16, 2024
Commission number 1267492
Member, Pennsylvania Association of Notaries

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

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) ^{6A5}
- (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. PETER Frank E. Peter
--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 X / her / or, because he / she / refused to take it when offered it, by leaving it in his / her / presence.

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

For a partnership:

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

For a limited partnership:

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

For a corporation:

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

[Signature]
(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

(AFFIX SEAL IF NOTARIZED OUTSIDE THE STATE)



Office of Oil and Gas

JAN 19 2021

07/16/2021

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

RECEIVED
Office of Oil and Gas

JAN 19 2021

WV Department of
Environmental Protection

07/16/2021



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 57th Street, SE
 Charleston, WV 25304

Subject: DOH Permit for the Hunter-Pethtel Pad, Marshall County
 Van Winkle S-22HU 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,

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

RECEIVED
 Office of Oil and Gas

JAN 19 2021

WV Department of
 Environmental Protection

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

07/16/2021



PLANNED ADDITIVES TO BE USED IN FRACTURING OR STIMULATION

Van Winkle Wells

PRODUCT NAME:	CHEMICAL DESCRIPTION:	PRODUCT USE:	HAZARDOUS COMPONENT:
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

RECEIVED
Office of Oil and Gas

JAN 19 2021

WV Department of
Environmental Protection

