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west virginia department of environmental protection

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

Harold D. Ward, Cabinet Secretary  
[www.dep.wv.gov](http://www.dep.wv.gov)

Wednesday, August 24, 2022  
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 PENDLETON S-12HU  
47-051-02457-00-00

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: PENDLETON S-12HU  
Farm Name: ALPINE FARM, LLC  
U.S. WELL NUMBER: 47-051-02457-00-00  
Horizontal 6A New Drill  
Date Issued: 8/24/2022

Promoting a healthy environment.

08/26/2022



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west virginia department of environmental protection

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Oil and Gas Conservation Commission  
601 57<sup>th</sup> Street SE, Charleston, WV 25304  
304-926-0499 Ext 41239

Randall M. Albert, Chairman  
dep.wv.gov

August 5, 2022

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

RE: Application for Deep Well Permit – API #47-051-02457

COMPANY: Tug Hill Operating, LLC


FARM: Alpine Farm, LLC Pendleton S-12HU

COUNTY: Marshall DISTRICT: Franklin 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

\*\*Van Winkle S-20HU 47-051-02353; Pendleton N-16HU 47-051-02441; Pendleton N-8HU 47-051-02454; Pendleton N-10HU 47-051-02455; Pendleton N-11HU 47-051-02456; Pendleton S-13HU 47-051-02458; Pendleton S-14HU 47-051-02459; Pendleton S-15HU 47-051-02460; Corley N-10HU 47-051-01998; Simms No. U-5H 47-051-01731

08/26/2022

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

08/26/2022

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 Franklin Glen Easton 7.5'  
Operator ID County District Quadrangle

2) Operator's Well Number: Pendleton S-12HU Well Pad Name: Pendleton

3) Farm Name/Surface Owner: Alpine Farm, LLC Public Road Access: Rines Ridge Road (County Route 76)

4) Elevation, current ground: 1,296' Elevation, proposed post-construction: 1,271.82'

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

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

6) Existing Pad: Yes or No No

*MDK 7/28/2022*

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):  
Point Pleasant is the target formation at a depth of 11,498' - 11,615', thickness of 117' and anticipated pressure of approx. 7,500 psi.

8) Proposed Total Vertical Depth: 11,765'

9) Formation at Total Vertical Depth: Trenton

10) Proposed Total Measured Depth: 18,562'

11) Proposed Horizontal Leg Length: 6,282.93'

12) Approximate Fresh Water Strata Depths: 70; 914'

13) Method to Determine Fresh Water Depths: Based on the depth of Pittsburgh Coal seam, per WVGES mapping contours

14) Approximate Saltwater Depths: 1,427'

15) Approximate Coal Seam Depths: Sewickley Coal - 816' and Pittsburgh Coal - 908'

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

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

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

18) **CASING AND TUBING PROGRAM**

<b>TYPE</b>	<u>Size (in)</u>	<u>New or Used</u>	<u>Grade</u>	<u>Weight per ft. (lb/ft)</u>	<u>FOOTAGE: For Drilling (ft)</u>	<u>INTERVALS: Left in Well (ft)</u>	<u>CEMENT: Fill-up (Cu. Ft.)/CTS</u>
Conductor	30"	NEW	BW	BW	120'	120'	259FT^3(CTS)
Fresh Water/Coal	20"	NEW	J55	106.5#	1,040'	1,040'	1,674FT^3(CTS)
Intermediate 1	13 3/8"	NEW	J55	54.5#	2,800'	2,800'	1,974FT^3(CTS)
Intermediate 2	9 5/8"	NEW	HPP110	47#	10,669'	10,669'	3,480FT^3(CTS)
Production	5 1/2"	NEW	P110	23#	18,562'	18,562'	4,434FT^3(CTS)
Tubing	2 7/8"	NEW	P110	6.5#		11,212'	
Liners							

*MJK 7/28/2022*

<b>TYPE</b>	<u>Size (in)</u>	<u>Wellbore Diameter (in)</u>	<u>Wall Thickness (in)</u>	<u>Burst Pressure (psi)</u>	<u>Anticipated Max. Internal Pressure (psi)</u>	<u>Cement Type</u>	<u>Cement Yield (cu. ft./k)</u>
Conductor	30"	36"	1.0	2,333	1,866	CLASS A	1.2
Fresh Water/Coal	20"	26"	.5	2,410	1,928	SEE #24	1.2
Intermediate 1	13 3/8"	17 1/2"	.38	2,740	2,192	SEE #24	1.2
Intermediate 2	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			
Sizes:	N/A			
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(10,712'). Drill curve and lateral per proposed well plan, run and cement production casing. Perform CBL 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 6,600,000 lb. proppant and 120,000 bbl of water. Max rate = 80bpm; max psi = 9,000#.

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 26.23 acres

22) Area to be disturbed for well pad only, less access road (acres): 6.88 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

\*Note: Attach additional sheets as needed.

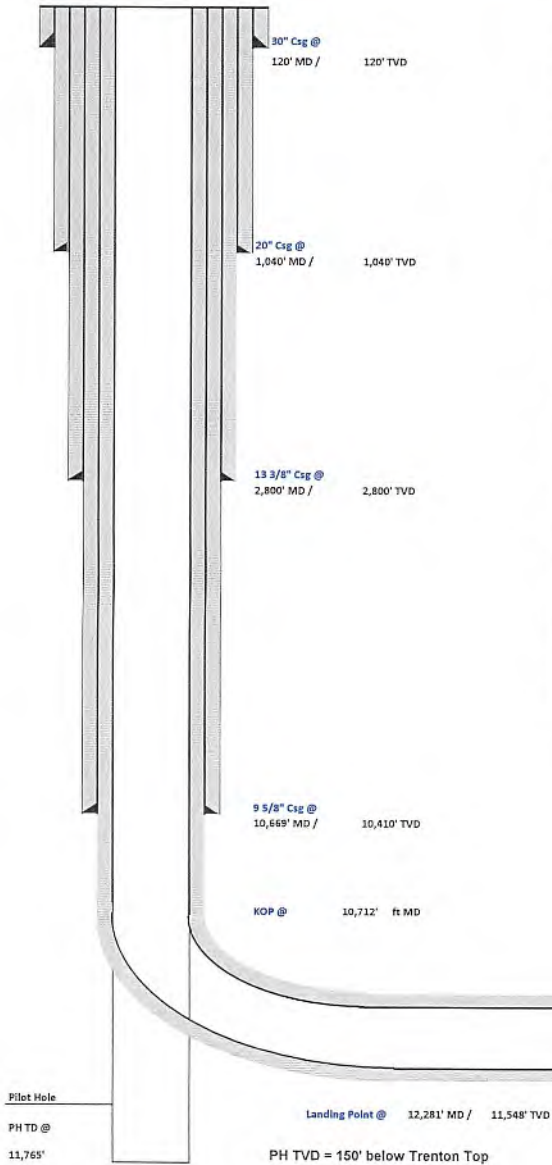


WELL NAME:	Pendleton S-12HU		
STATE:	WV	COUNTY:	Marshall
DISTRICT:	Franklin		
DF Elev:	1,272'	GL Elev:	1,272'
TD:	18,562'		
TH Latitude:	39.753408		
TH Longitude:	-80.73386		
BH Latitude:	39.737263		
BH Longitude:	-80.727818		

FORMATION TOPS	
Formation	Depth TVD
Deepest Fresh Water	914'
Sewickley Coal	816'
Pittsburgh Coal	908'
Big Lime	2,173'
Berea	2,658'
Tully	6,554'
Marcellus	6,654'
Onondaga	6,704'
Salina	7,403'
Lockport	8,490'
Utica	11,227'
Point Pleasant	11,498'
Landing Depth	11,548'
Trenton	11,615'
Pilot Hole TD	11,765'

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'	8W	BW	Surface
Surface	26	20	1,040'	1,040'	106.5	J55	Surface
Intermediate 1	17 1/2	13 3/8	2,800'	2,800'	54.5	J55	Surface
Intermediate 2	12 1/4	9 5/8	10,669'	10,410'	47	HPP110	Surface
Production	8 1/2	5 1/2	18,562'	11,658'	23	HCP110	Surface

CEMENT SUMMARY				DRILLING DETAILS	
Type	Sacks	Class	Density (ppg)	Fluid Type	Centralizer Notes
Conductor	338	A	15.6	Air	None
Surface	1,805	A	15.6	Air	3 Centralizers at equal distance
Intermediate 1	2,140	A	15.6	Air	1 Centralizer every other joint
Intermediate 2	3,173	A	14.5	Air	1 Centralizer every other joint
Production	4,485	A	16.5	Air / SOBMM	1 every other joint in lateral; 1 per joint in curve; 1 every other joint to surface



Pilot Hole  
PH TD @  
11,765'

Lateral TD @ 18,562' ft MD  
11,658' ft TVD





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

**Pendleton S-12HU**

**Casing**

	String	Grade	Bit Size	Depth (Measured)	Cement Fill Up
Conductor	30"	BW	36"	120'	CTS
Surface	20"	J55	26"	1,040'	CTS
Intermediate 1	13 3/8"	J55	17 1/2"	2,800'	CTS
Intermediate 2	9 5/8"	HPP110	12 1/4"	10,669'	CTS
Production	5 1/2"	HCP110	8 1/2"	18,562'	CTS

**Cement**

- Conductor: Premium NE-1 + 2% bwoc CaC12 + 46.5% Fresh Water – Conductor Cement mixed at 15.6 ppg, Y=1.2
- 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 14.5 ppg, Y=1.35
- Kick Off Plug: Class H Cement + 1% CD-32 + .7% Sodium Metasilicate + .1% R-3 + .75 gal/100sk FP-13L - KOP Plug
- 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 16.5 ppg, Y = 1.03

**CERTIFICATE OF CONSENT AND EASEMENT**

The undersigned, for valuable consideration, the receipt and sufficiency of which is hereby acknowledged, being the owner of the surface of that certain lot, tract or parcel of land located in Franklin District, Marshall County, State of West Virginia, shown on the attached plat or survey, hereby consents and grants 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 1 day of July, 2019.

Marshall County  
Jan Pest, Clerk  
Instrument 1456384  
07/12/2019 @ 12:25:33 PM

ALPINE FARM, LLC.

By: Eli A Wengerd  
Name: Eli A. Wengerd  
Title: Member

STATE OF OHIO  
COUNTY OF HOLMES

SS:

RIGHT OF WAY W/O CONSIDERATION  
Book 1052 @ Page 490  
Pages Recorded 2  
Recording Cost \$ 11.00

On this, the 1<sup>st</sup> day of July, 2019, before me, a notary public, the undersigned officer, personally appeared Eli A. Wengerd, who acknowledged himself/herself to be the Owner of Alpine Farm, LLC and that he/she as such, being authorized to do so, executed the foregoing instrument for the purposes therein contained by signing the name of the company by himself/herself as Owner.

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

My Commission Expires: July 14 2019  
Signature/Notary Public: Amber K Sramek  
Name/Notary Public (print): Amber K Sramek

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



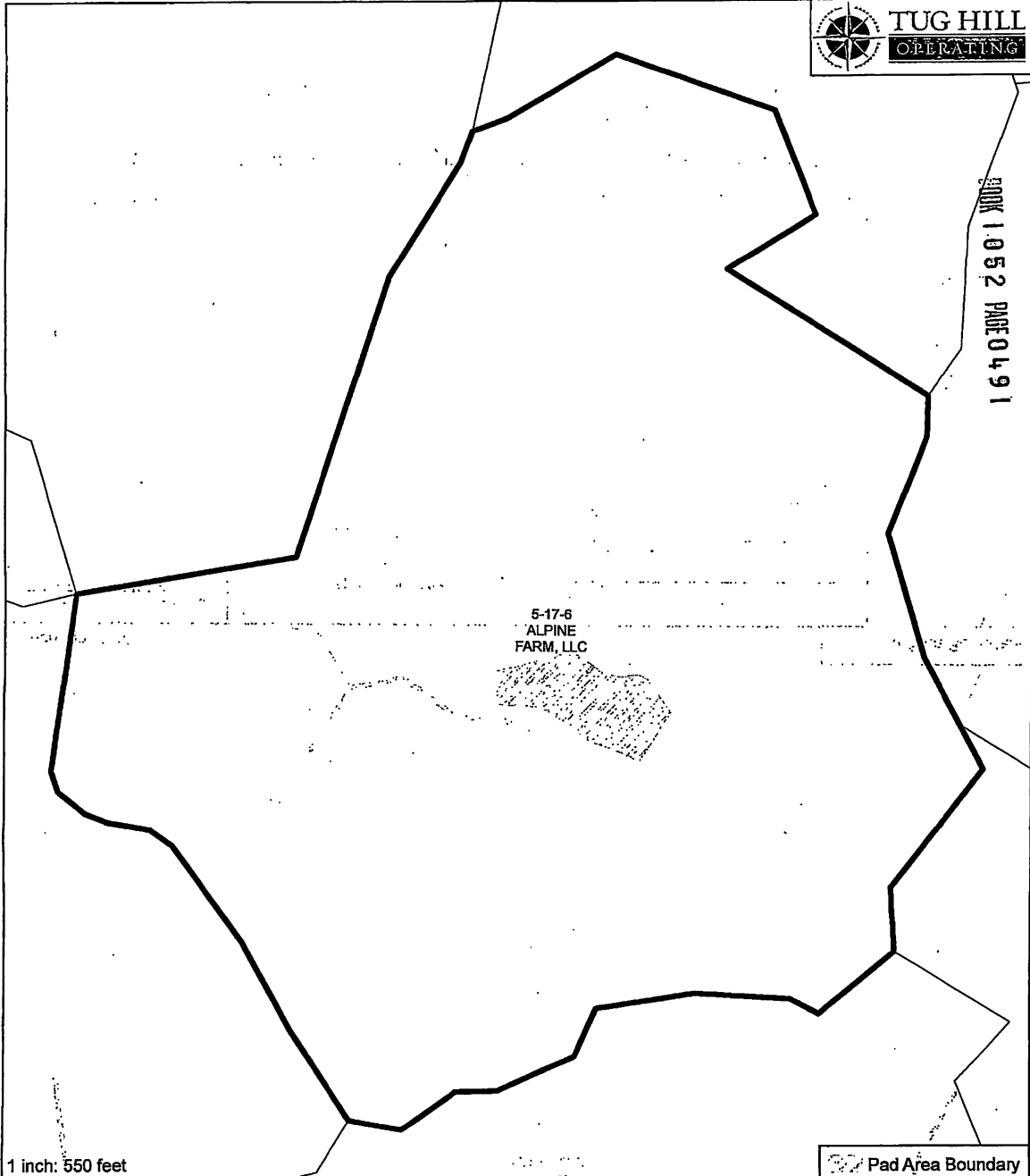
AMBER K SRAMEK  
Notary Public, State of Ohio  
My Comm. Expires 07/14/2019

RECEIVED  
Office of Oil and Gas

JUN 06 2022

WV Department of  
Environmental Protection  
08/26/2022

BOOK 1052 PAGE 0491



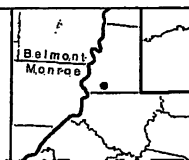
1 inch: 550 feet

0 162.5 325 650  
Feet

NOTE: THE APPROVED SITE LOCATION FOR THE SURFACE SITE, ACCESS ROAD, EGGY OF YAC AND THE LOCATION OF THE PROPERTY TOA FRACURE HETAS, OCCURRING FROM ABOVE, HOWEVER THESE ACTUAL LOCATIONS MAY VARY AS THE EQUIPMENT IS NOT AN EXACT REPRESENTATION OF THE ACTUAL. THE PLOT SHALL BE AS SHOWN AND DISPOSED IN THE ORDER AS FILED IN THE COUNTY RECORDS AND THE APPROVED SITE LOCATION FOR THE SURFACE SITE, ACCESS ROAD AND HOLEY OF AND SHALL BE ITS LOCATION AS ACTUALLY CONSTRUCTED.

**"PLAT"**  
ALPINE FARM, LLC  
Marshall, WV

Date: 7-1-19  
Name: Elieborgad  
Name: Fannie Mae Wengert



Pad Area Boundary

**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 1st day of July, 2019, was presented for and by me, admitted to record in my office upon the above certificate as to the parties therein named this 12th day of July, 2019 at 12:25 o'clock P M.

TESTE: Jan Pest Clerk

RECEIVED  
Office of Oil and Gas

JUN 06 2022

08/26/2022  
Environmental Protection



Well: Pendleton S-12 HU (slot B)  
 Site: Pendleton  
 Project: Marshall County, West Virginia NAD83 UTM 17N  
 Design: rev3  
 Rig:

SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	V/Sect	Annotation
1	0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	
2	3300.00	0.00	0.000	3300.00	0.00	0.00	0.00	0.00	0.00	KOP Begin 2°/100' build
3	3550.00	5.00	281.490	3549.68	2.17	-10.68	2.00	281.49	-5.08	Begin 5.00° tangent
4	7013.50	5.00	281.490	7000.00	62.30	-306.50	0.00	0.00	-145.75	Begin 2°/100' build
5	7902.29	22.77	282.665	7859.36	108.10	-513.96	2.00	1.49	-247.89	Begin 22.77° tangent
6	10711.83	22.77	282.665	10449.85	346.55	-1575.09	0.00	0.00	-774.34	Begin 6°/100' build/turn
7	11766.45	50.00	163.833	11370.54	-36.41	-1671.81	6.00	-131.29	-433.87	Begin 8°/100' build/turn
8	12280.70	89.00	149.436	11548.00	-465.55	-1477.83	8.00	-22.20	32.45	Begin 89.00° lateral
9	18562.48	89.00	149.436	11657.75	-5873.71	1716.00	0.00	0.00	6119.24	PBHL/TD 18562.48 MD 11657.75 TVD

DESIGN TARGET DETAILS							
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Pendleton S-12HU LP 50W r1	11548.00	-465.55	-1477.83	4436586.821	1713739.058	39.752141400	-80.739122896
- plan hits target center							
Pendleton S-12HU PBHL r3	11657.75	-5873.71	1716.00	4431178.674	1716932.883	39.737263000	-80.727818000
- plan hits target center							

Geodetic System: Universal Transverse Mercator (US Survey Feet)  
 Datum: NAD83 West Virginia - HARN  
 Ellipsoid: GRS 1980  
 Zone: Zone 17N (84 W to 78 W)

System Datum: Mean Sea Level  
 Depth Reference: GL @ 1272.00ft  
 Surface location

Northing	Easting	Latitude	Longitude
14437052.373	1715216.885	39.753408000	-80.733860000

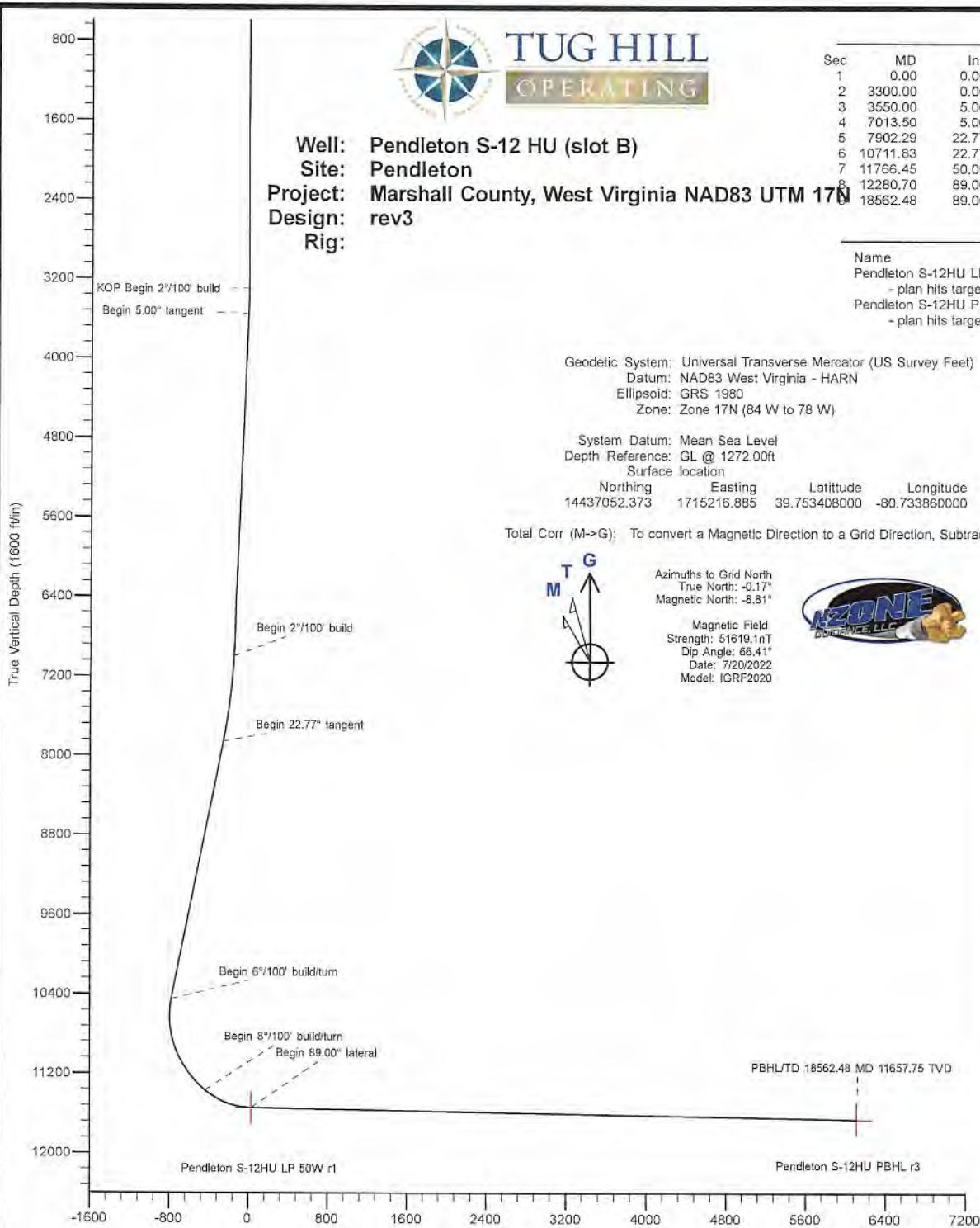
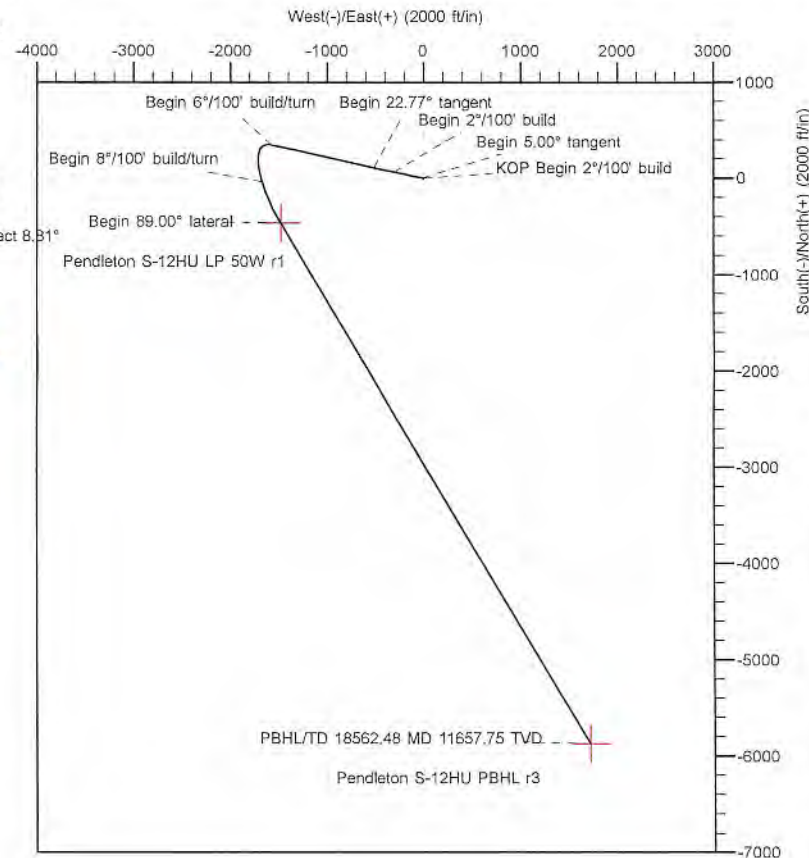
Total Corr (M->G): To convert a Magnetic Direction to a Grid Direction, Subtract 8.31°



Azimuths to Grid North  
 True North: -0.17°  
 Magnetic North: -8.81°



Magnetic Field  
 Strength: 51619.1nT  
 Dip Angle: 66.41°  
 Date: 7/20/2022  
 Model: IGRF2020





Planning Report - Geographic

<b>Database:</b>	DB_Feb2822	<b>Local Co-ordinate Reference:</b>	Well Pendleton S-12 HU (slot B)
<b>Company:</b>	Tug Hill Operating LLC	<b>TVD Reference:</b>	GL @ 1272.00ft
<b>Project:</b>	Marshall County, West Virginia NAD83 UTM 17N	<b>MD Reference:</b>	GL @ 1272.00ft
<b>Site:</b>	Pendleton	<b>North Reference:</b>	Grid
<b>Well:</b>	Pendleton S-12 HU (slot B)	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	rev3		

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

<b>Site</b>	Pendleton				
<b>Site Position:</b>		<b>Northing:</b>	14,437,088.243 usft	<b>Latitude:</b>	39.753506850
<b>From:</b>	Lat/Long	<b>Easting:</b>	1,715,175.249 usft	<b>Longitude:</b>	-80.734007760
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13-3/16 "		

<b>Well</b>	Pendleton S-12 HU (slot B)					
<b>Well Position</b>	<b>+N/-S</b>	0.00 ft	<b>Northing:</b>	14,437,052.373 usft	<b>Latitude:</b>	39.753408000
	<b>+E/-W</b>	0.00 ft	<b>Easting:</b>	1,715,216.884 usft	<b>Longitude:</b>	-80.733860000
<b>Position Uncertainty</b>	0.00 ft	<b>Wellhead Elevation:</b>	ft	<b>Ground Level:</b>	1,272.00 ft	
<b>Grid Convergence:</b>						

<b>Wellbore</b>	Original Hole				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2020	7/20/2022	-8.64	66.41	51,619.13275309

<b>Design</b>	rev3			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	163.714

Plan Survey Tool Program		Date		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	18,562.47 rev3 (Original Hole)		



Planning Report - Geographic

<b>Database:</b>	DB_Feb2822	<b>Local Co-ordinate Reference:</b>	Well Pendleton S-12 HU (slot B)
<b>Company:</b>	Tug Hill Operating LLC	<b>TVD Reference:</b>	GL @ 1272.00ft
<b>Project:</b>	Marshall County, West Virginia NAD83 UTM 17N	<b>MD Reference:</b>	GL @ 1272.00ft
<b>Site:</b>	Pendleton	<b>North Reference:</b>	Grid
<b>Well:</b>	Pendleton S-12 HU (slot B)	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	rev3		

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,300.00	0.00	0.000	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,550.00	5.00	281.490	3,549.68	2.17	-10.68	2.00	2.00	0.00	281.49	
7,013.50	5.00	281.490	7,000.00	62.30	-306.50	0.00	0.00	0.00	0.00	
7,902.29	22.77	282.665	7,859.36	108.10	-513.96	2.00	2.00	0.13	1.49	
10,711.83	22.77	282.665	10,449.85	346.55	-1,575.09	0.00	0.00	0.00	0.00	
11,766.45	50.00	163.833	11,370.54	-36.41	-1,671.81	6.00	2.58	-11.27	-131.29	
12,280.70	89.00	149.436	11,548.00	-465.55	-1,477.83	8.00	7.58	-2.80	-22.20	
18,562.48	89.00	149.436	11,657.75	-5,873.71	1,716.00	0.00	0.00	0.00	0.00	Pendleton S-12HU PE



Planning Report - Geographic

Database:	DB_Feb2822	Local Co-ordinate Reference:	Well Pendleton S-12 HU (slot B)
Company:	Tug Hill Operating LLC	TVD Reference:	GL @ 1272.00ft
Project:	Marshall County, West Virginia NAD83 UTM 17N	MD Reference:	GL @ 1272.00ft
Site:	Pendleton	North Reference:	Grid
Well:	Pendleton S-12 HU (slot B)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev3		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
0.00	0.00	0.000	0.00	0.00	0.00	14,437,052.373	1,715,216.884	39.753408000	-80.733860000	
100.00	0.00	0.000	100.00	0.00	0.00	14,437,052.373	1,715,216.884	39.753408000	-80.733860000	
200.00	0.00	0.000	200.00	0.00	0.00	14,437,052.373	1,715,216.884	39.753408000	-80.733860000	
300.00	0.00	0.000	300.00	0.00	0.00	14,437,052.373	1,715,216.884	39.753408000	-80.733860000	
400.00	0.00	0.000	400.00	0.00	0.00	14,437,052.373	1,715,216.884	39.753408000	-80.733860000	
500.00	0.00	0.000	500.00	0.00	0.00	14,437,052.373	1,715,216.884	39.753408000	-80.733860000	
600.00	0.00	0.000	600.00	0.00	0.00	14,437,052.373	1,715,216.884	39.753408000	-80.733860000	
700.00	0.00	0.000	700.00	0.00	0.00	14,437,052.373	1,715,216.884	39.753408000	-80.733860000	
800.00	0.00	0.000	800.00	0.00	0.00	14,437,052.373	1,715,216.884	39.753408000	-80.733860000	
900.00	0.00	0.000	900.00	0.00	0.00	14,437,052.373	1,715,216.884	39.753408000	-80.733860000	
1,000.00	0.00	0.000	1,000.00	0.00	0.00	14,437,052.373	1,715,216.884	39.753408000	-80.733860000	
1,100.00	0.00	0.000	1,100.00	0.00	0.00	14,437,052.373	1,715,216.884	39.753408000	-80.733860000	
1,200.00	0.00	0.000	1,200.00	0.00	0.00	14,437,052.373	1,715,216.884	39.753408000	-80.733860000	
1,300.00	0.00	0.000	1,300.00	0.00	0.00	14,437,052.373	1,715,216.884	39.753408000	-80.733860000	
1,400.00	0.00	0.000	1,400.00	0.00	0.00	14,437,052.373	1,715,216.884	39.753408000	-80.733860000	
1,500.00	0.00	0.000	1,500.00	0.00	0.00	14,437,052.373	1,715,216.884	39.753408000	-80.733860000	
1,600.00	0.00	0.000	1,600.00	0.00	0.00	14,437,052.373	1,715,216.884	39.753408000	-80.733860000	
1,700.00	0.00	0.000	1,700.00	0.00	0.00	14,437,052.373	1,715,216.884	39.753408000	-80.733860000	
1,800.00	0.00	0.000	1,800.00	0.00	0.00	14,437,052.373	1,715,216.884	39.753408000	-80.733860000	
1,900.00	0.00	0.000	1,900.00	0.00	0.00	14,437,052.373	1,715,216.884	39.753408000	-80.733860000	
2,000.00	0.00	0.000	2,000.00	0.00	0.00	14,437,052.373	1,715,216.884	39.753408000	-80.733860000	
2,100.00	0.00	0.000	2,100.00	0.00	0.00	14,437,052.373	1,715,216.884	39.753408000	-80.733860000	
2,200.00	0.00	0.000	2,200.00	0.00	0.00	14,437,052.373	1,715,216.884	39.753408000	-80.733860000	
2,300.00	0.00	0.000	2,300.00	0.00	0.00	14,437,052.373	1,715,216.884	39.753408000	-80.733860000	
2,400.00	0.00	0.000	2,400.00	0.00	0.00	14,437,052.373	1,715,216.884	39.753408000	-80.733860000	
2,500.00	0.00	0.000	2,500.00	0.00	0.00	14,437,052.373	1,715,216.884	39.753408000	-80.733860000	
2,600.00	0.00	0.000	2,600.00	0.00	0.00	14,437,052.373	1,715,216.884	39.753408000	-80.733860000	
2,700.00	0.00	0.000	2,700.00	0.00	0.00	14,437,052.373	1,715,216.884	39.753408000	-80.733860000	
2,800.00	0.00	0.000	2,800.00	0.00	0.00	14,437,052.373	1,715,216.884	39.753408000	-80.733860000	
2,900.00	0.00	0.000	2,900.00	0.00	0.00	14,437,052.373	1,715,216.884	39.753408000	-80.733860000	
3,000.00	0.00	0.000	3,000.00	0.00	0.00	14,437,052.373	1,715,216.884	39.753408000	-80.733860000	
3,100.00	0.00	0.000	3,100.00	0.00	0.00	14,437,052.373	1,715,216.884	39.753408000	-80.733860000	
3,200.00	0.00	0.000	3,200.00	0.00	0.00	14,437,052.373	1,715,216.884	39.753408000	-80.733860000	
3,300.00	0.00	0.000	3,300.00	0.00	0.00	14,437,052.373	1,715,216.884	39.753408000	-80.733860000	
<b>KOP Begin 2°100' build</b>										
3,400.00	2.00	281.490	3,399.98	0.35	-1.71	14,437,052.720	1,715,215.174	39.753408969	-80.733866081	
3,500.00	4.00	281.490	3,499.84	1.39	-6.84	14,437,053.763	1,715,210.046	39.753411874	-80.733884317	
3,550.00	5.00	281.490	3,549.68	2.17	-10.68	14,437,054.544	1,715,206.202	39.753414051	-80.733897987	
<b>Begin 5.00° tangent</b>										
3,600.00	5.00	281.490	3,599.49	3.04	-14.95	14,437,055.412	1,715,201.931	39.753416470	-80.733913172	
3,700.00	5.00	281.490	3,699.11	4.78	-23.49	14,437,057.148	1,715,193.390	39.753421307	-80.733943542	
3,800.00	5.00	281.490	3,798.73	6.51	-32.04	14,437,058.885	1,715,184.849	39.753426145	-80.733973912	
3,900.00	5.00	281.490	3,898.35	8.25	-40.58	14,437,060.621	1,715,176.308	39.753430982	-80.734004282	
4,000.00	5.00	281.490	3,997.97	9.98	-49.12	14,437,062.357	1,715,167.768	39.753435820	-80.734034652	
4,100.00	5.00	281.490	4,097.59	11.72	-57.66	14,437,064.093	1,715,159.227	39.753440657	-80.734065022	
4,200.00	5.00	281.490	4,197.21	13.46	-66.20	14,437,065.829	1,715,150.686	39.753445495	-80.734095392	
4,300.00	5.00	281.490	4,296.83	15.19	-74.74	14,437,067.565	1,715,142.145	39.753450332	-80.734125762	
4,400.00	5.00	281.490	4,396.45	16.93	-83.28	14,437,069.301	1,715,133.604	39.753455170	-80.734156131	
4,500.00	5.00	281.490	4,496.07	18.66	-91.82	14,437,071.037	1,715,125.063	39.753460007	-80.734186501	
4,600.00	5.00	281.490	4,595.69	20.40	-100.36	14,437,072.773	1,715,116.522	39.753464845	-80.734216871	
4,700.00	5.00	281.490	4,695.31	22.14	-108.90	14,437,074.510	1,715,107.981	39.753469682	-80.734247241	
4,800.00	5.00	281.490	4,794.93	23.87	-117.44	14,437,076.246	1,715,099.440	39.753474519	-80.734277611	
4,900.00	5.00	281.490	4,894.55	25.61	-125.99	14,437,077.982	1,715,090.900	39.753479357	-80.734307981	



Planning Report - Geographic

Database:	DB_Feb2822	Local Co-ordinate Reference:	Well Pendleton S-12 HU (slot B)
Company:	Tug Hill Operating LLC	TVD Reference:	GL @ 1272.00ft
Project:	Marshall County, West Virginia NAD83 UTM 17N	MD Reference:	GL @ 1272.00ft
Site:	Pendleton	North Reference:	Grid
Well:	Pendleton S-12 HU (slot B)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev3		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
5,000.00	5.00	281.490	4,994.17	27.35	-134.53	14,437,079.718	1,715,082.359	39.753484194	-80.734338351	
5,100.00	5.00	281.490	5,093.78	29.08	-143.07	14,437,081.454	1,715,073.818	39.753489032	-80.734368721	
5,200.00	5.00	281.490	5,193.40	30.82	-151.61	14,437,083.190	1,715,065.277	39.753493869	-80.734399091	
5,300.00	5.00	281.490	5,293.02	32.55	-160.15	14,437,084.926	1,715,056.736	39.753498706	-80.734429461	
5,400.00	5.00	281.490	5,392.64	34.29	-168.69	14,437,086.662	1,715,048.195	39.753503544	-80.734459831	
5,500.00	5.00	281.490	5,492.26	36.03	-177.23	14,437,088.399	1,715,039.654	39.753508381	-80.734490201	
5,600.00	5.00	281.490	5,591.88	37.76	-185.77	14,437,090.135	1,715,031.113	39.753513218	-80.734520571	
5,700.00	5.00	281.490	5,691.50	39.50	-194.31	14,437,091.871	1,715,022.572	39.753518056	-80.734550942	
5,800.00	5.00	281.490	5,791.12	41.23	-202.85	14,437,093.607	1,715,014.032	39.753522893	-80.734581312	
5,900.00	5.00	281.490	5,890.74	42.97	-211.39	14,437,095.343	1,715,005.491	39.753527730	-80.734611682	
6,000.00	5.00	281.490	5,990.36	44.71	-219.94	14,437,097.079	1,714,996.950	39.753532568	-80.734642052	
6,100.00	5.00	281.490	6,089.98	46.44	-228.48	14,437,098.815	1,714,988.409	39.753537405	-80.734672422	
6,200.00	5.00	281.490	6,189.60	48.18	-237.02	14,437,100.551	1,714,979.868	39.753542242	-80.734702792	
6,300.00	5.00	281.490	6,289.22	49.91	-245.56	14,437,102.287	1,714,971.327	39.753547080	-80.734733162	
6,400.00	5.00	281.490	6,388.84	51.65	-254.10	14,437,104.024	1,714,962.786	39.753551917	-80.734763532	
6,500.00	5.00	281.490	6,488.46	53.39	-262.64	14,437,105.760	1,714,954.245	39.753556754	-80.734793902	
6,600.00	5.00	281.490	6,588.08	55.12	-271.18	14,437,107.496	1,714,945.704	39.753561592	-80.734824272	
6,700.00	5.00	281.490	6,687.70	56.86	-279.72	14,437,109.232	1,714,937.163	39.753566429	-80.734854642	
6,800.00	5.00	281.490	6,787.32	58.60	-288.26	14,437,110.968	1,714,928.623	39.753571266	-80.734885012	
6,900.00	5.00	281.490	6,886.94	60.33	-296.80	14,437,112.704	1,714,920.082	39.753576103	-80.734915382	
7,000.00	5.00	281.490	6,986.55	62.07	-305.34	14,437,114.440	1,714,911.541	39.753580941	-80.734945752	
7,013.50	5.00	281.490	7,000.00	62.30	-306.50	14,437,114.675	1,714,910.388	39.753581593	-80.734949851	
<b>Begin 2°/100' build</b>										
7,100.00	6.73	281.874	7,086.05	64.10	-315.15	14,437,116.468	1,714,901.733	39.753586590	-80.734980626	
7,200.00	8.73	282.128	7,185.13	66.90	-328.31	14,437,119.269	1,714,888.579	39.753594387	-80.735027398	
7,300.00	10.73	282.289	7,283.69	70.47	-344.82	14,437,122.844	1,714,872.064	39.753604342	-80.735086123	
7,400.00	12.73	282.399	7,381.60	74.82	-364.68	14,437,127.192	1,714,852.206	39.753616441	-80.735156729	
7,500.00	14.73	282.480	7,478.74	79.93	-387.85	14,437,132.305	1,714,829.032	39.753630672	-80.735239129	
7,600.00	16.73	282.542	7,574.99	85.81	-414.32	14,437,138.178	1,714,802.569	39.753647015	-80.735333223	
7,700.00	18.73	282.591	7,670.23	92.43	-444.04	14,437,144.803	1,714,772.849	39.753665452	-80.735438897	
7,800.00	20.73	282.631	7,764.36	99.80	-476.98	14,437,152.174	1,714,739.908	39.753685960	-80.735556022	
7,902.29	22.77	282.665	7,859.36	108.10	-513.96	14,437,160.473	1,714,702.924	39.753709053	-80.735687525	
<b>Begin 22.77° tangent</b>										
8,000.00	22.77	282.665	7,949.45	116.39	-550.87	14,437,168.766	1,714,666.019	39.753732127	-80.735818744	
8,100.00	22.77	282.665	8,041.65	124.88	-588.63	14,437,177.253	1,714,628.251	39.753755740	-80.735953035	
8,200.00	22.77	282.665	8,133.86	133.37	-626.40	14,437,185.740	1,714,590.482	39.753779353	-80.736087327	
8,300.00	22.77	282.665	8,226.06	141.85	-664.17	14,437,194.227	1,714,552.713	39.753802966	-80.736221819	
8,400.00	22.77	282.665	8,318.27	150.34	-701.94	14,437,202.714	1,714,514.945	39.753826579	-80.736355910	
8,500.00	22.77	282.665	8,410.47	158.83	-739.71	14,437,211.201	1,714,477.176	39.753850192	-80.736490202	
8,600.00	22.77	282.665	8,502.67	167.32	-777.48	14,437,219.688	1,714,439.408	39.753873805	-80.736624494	
8,700.00	22.77	282.665	8,594.88	175.80	-815.25	14,437,228.175	1,714,401.639	39.753897417	-80.736758786	
8,800.00	22.77	282.665	8,687.08	184.29	-853.02	14,437,236.662	1,714,363.870	39.753921030	-80.736893079	
8,900.00	22.77	282.665	8,779.28	192.78	-890.78	14,437,245.149	1,714,326.102	39.753944642	-80.737027371	
9,000.00	22.77	282.665	8,871.49	201.26	-928.55	14,437,253.636	1,714,288.333	39.753968254	-80.737161663	
9,100.00	22.77	282.665	8,963.69	209.75	-966.32	14,437,262.123	1,714,250.564	39.753991866	-80.737295956	
9,200.00	22.77	282.665	9,055.89	218.24	-1,004.09	14,437,270.610	1,714,212.796	39.754015477	-80.737430248	
9,300.00	22.77	282.665	9,148.10	226.72	-1,041.86	14,437,279.097	1,714,175.027	39.754039089	-80.737564541	
9,400.00	22.77	282.665	9,240.30	235.21	-1,079.63	14,437,287.584	1,714,137.259	39.754062700	-80.737698834	
9,500.00	22.77	282.665	9,332.50	243.70	-1,117.40	14,437,296.071	1,714,099.490	39.754086312	-80.737833126	
9,600.00	22.77	282.665	9,424.71	252.19	-1,155.17	14,437,304.558	1,714,061.721	39.754109923	-80.737967419	
9,700.00	22.77	282.665	9,516.91	260.67	-1,192.93	14,437,313.045	1,714,023.953	39.754133534	-80.738101712	
9,800.00	22.77	282.665	9,609.12	269.16	-1,230.70	14,437,321.532	1,713,986.184	39.754157144	-80.738236005	
9,900.00	22.77	282.665	9,701.32	277.65	-1,268.47	14,437,330.019	1,713,948.415	39.754180755	-80.738370298	





Planning Report - Geographic

Database:	DB_Feb2822	Local Co-ordinate Reference:	Well Pendleton S-12 HU (slot B)
Company:	Tug Hill Operating LLC	TVD Reference:	GL @ 1272.00ft
Project:	Marshall County, West Virginia NAD83 UTM 17N	MD Reference:	GL @ 1272.00ft
Site:	Pendleton	North Reference:	Grid
Well:	Pendleton S-12 HU (slot B)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev3		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
10,000.00	22.77	282.665	9,793.52	286.13	-1,306.24	14,437,338.506	1,713,910.647	39.754204365	-80.738504592
10,100.00	22.77	282.665	9,885.73	294.62	-1,344.01	14,437,346.993	1,713,872.878	39.754227976	-80.738638885
10,200.00	22.77	282.665	9,977.93	303.11	-1,381.78	14,437,355.480	1,713,835.109	39.754251586	-80.738773179
10,300.00	22.77	282.665	10,070.13	311.59	-1,419.55	14,437,363.967	1,713,797.341	39.754275196	-80.738907472
10,400.00	22.77	282.665	10,162.34	320.08	-1,457.32	14,437,372.454	1,713,759.572	39.754298806	-80.739041766
10,500.00	22.77	282.665	10,254.54	328.57	-1,495.08	14,437,380.941	1,713,721.804	39.754322415	-80.739176060
10,600.00	22.77	282.665	10,346.74	337.06	-1,532.85	14,437,389.428	1,713,684.035	39.754346025	-80.739310353
10,700.00	22.77	282.665	10,438.95	345.54	-1,570.62	14,437,397.915	1,713,646.266	39.754369634	-80.739444647
10,711.83	22.77	282.665	10,449.85	346.55	-1,575.09	14,437,398.918	1,713,641.800	39.754372426	-80.739460528
<b>Begin 6°/100' build/turn</b>									
10,750.00	21.33	277.929	10,485.23	349.12	-1,589.17	14,437,401.496	1,713,627.713	39.754379618	-80.739510623
10,800.00	19.67	270.786	10,532.07	350.49	-1,606.60	14,437,402.867	1,713,610.290	39.754383520	-80.739572601
10,850.00	18.33	262.520	10,579.36	349.59	-1,622.81	14,437,401.958	1,713,594.076	39.754381154	-80.739630301
10,900.00	17.41	253.211	10,626.95	346.40	-1,637.77	14,437,398.773	1,713,579.115	39.754372527	-80.739683564
10,950.00	16.95	243.159	10,674.73	340.95	-1,651.44	14,437,393.321	1,713,565.449	39.754357663	-80.739732244
11,000.00	17.00	232.873	10,722.57	333.24	-1,663.77	14,437,385.616	1,713,553.115	39.754336602	-80.739776209
11,050.00	17.56	222.936	10,770.32	323.31	-1,674.74	14,437,375.680	1,713,542.147	39.754309402	-80.739815337
11,100.00	18.57	213.822	10,817.86	311.17	-1,684.31	14,437,363.540	1,713,532.574	39.754276138	-80.739849521
11,150.00	19.98	205.784	10,865.07	296.86	-1,692.46	14,437,349.228	1,713,524.424	39.754236900	-80.739878668
11,200.00	21.70	198.864	10,911.80	280.41	-1,699.17	14,437,332.786	1,713,517.718	39.754191797	-80.739902697
11,250.00	23.66	192.977	10,957.94	261.88	-1,704.41	14,437,314.256	1,713,512.475	39.754140951	-80.739921544
11,300.00	25.82	187.981	11,003.35	241.32	-1,708.18	14,437,293.691	1,713,508.709	39.754084503	-80.739935155
11,350.00	28.12	183.728	11,047.92	218.77	-1,710.46	14,437,271.146	1,713,506.431	39.754022608	-80.739943494
11,400.00	30.53	180.083	11,091.51	194.31	-1,711.24	14,437,246.684	1,713,505.646	39.753955433	-80.739946539
11,450.00	33.03	176.931	11,134.01	168.00	-1,710.53	14,437,220.371	1,713,506.358	39.753883165	-80.739944280
11,500.00	35.60	174.182	11,175.31	139.91	-1,708.33	14,437,192.280	1,713,508.563	39.753806001	-80.739936724
11,550.00	38.22	171.759	11,215.29	110.11	-1,704.63	14,437,162.487	1,713,512.256	39.753724152	-80.739923891
11,600.00	40.89	169.606	11,253.84	78.70	-1,699.46	14,437,131.074	1,713,517.427	39.753637842	-80.739905817
11,650.00	43.60	167.673	11,290.85	45.75	-1,692.83	14,437,098.128	1,713,524.061	39.753547309	-80.739882552
11,700.00	46.33	165.925	11,326.22	11.37	-1,684.75	14,437,063.738	1,713,532.141	39.753452801	-80.739854159
11,750.00	49.09	164.329	11,359.87	-24.37	-1,675.24	14,437,027.999	1,713,541.645	39.753354576	-80.739820716
11,766.45	50.00	163.833	11,370.54	-36.41	-1,671.81	14,437,015.963	1,713,545.078	39.753321494	-80.739808625
<b>Begin 8°/100' build/turn</b>									
11,800.00	52.49	162.555	11,391.54	-61.45	-1,664.24	14,436,990.921	1,713,552.647	39.753252660	-80.739781953
11,850.00	56.23	160.800	11,420.67	-100.01	-1,651.46	14,436,952.360	1,713,565.432	39.753146659	-80.739736863
11,900.00	59.99	159.193	11,447.08	-139.89	-1,636.93	14,436,912.481	1,713,579.962	39.753037026	-80.739685577
11,950.00	63.77	157.703	11,470.65	-180.89	-1,620.72	14,436,871.480	1,713,596.167	39.752924294	-80.739628344
12,000.00	67.56	156.307	11,491.25	-222.82	-1,602.92	14,436,829.555	1,713,613.968	39.752809015	-80.739565444
12,050.00	71.36	154.986	11,508.79	-265.46	-1,583.61	14,436,786.910	1,713,633.278	39.752691748	-80.739497182
12,100.00	75.18	153.723	11,523.18	-308.62	-1,562.89	14,436,743.755	1,713,654.002	39.752573065	-80.739423893
12,150.00	79.00	152.504	11,534.35	-352.08	-1,540.85	14,436,700.298	1,713,676.040	39.752453545	-80.739345932
12,200.00	82.82	151.316	11,542.25	-395.62	-1,517.60	14,436,656.752	1,713,699.285	39.752333769	-80.739263679
12,250.00	86.65	150.148	11,546.83	-439.04	-1,493.26	14,436,613.329	1,713,723.623	39.752214322	-80.739177536
12,280.70	89.00	149.436	11,548.00	-465.55	-1,477.83	14,436,586.819	1,713,739.058	39.752141395	-80.739122896
<b>Begin 89.00° lateral</b>									
12,300.00	89.00	149.436	11,548.34	-482.17	-1,468.02	14,436,570.203	1,713,748.870	39.752095685	-80.739088156
12,400.00	89.00	149.436	11,550.08	-568.26	-1,417.17	14,436,484.111	1,713,799.713	39.751858844	-80.738908155
12,500.00	89.00	149.436	11,551.83	-654.36	-1,366.33	14,436,398.018	1,713,850.556	39.751622002	-80.738728155
12,600.00	89.00	149.436	11,553.58	-740.45	-1,315.49	14,436,311.926	1,713,901.398	39.751385160	-80.738548157
12,700.00	89.00	149.436	11,555.33	-826.54	-1,264.65	14,436,225.833	1,713,952.241	39.751148318	-80.738368159
12,800.00	89.00	149.436	11,557.07	-912.63	-1,213.80	14,436,139.741	1,714,003.084	39.750911476	-80.738188163
12,900.00	89.00	149.436	11,558.82	-998.73	-1,162.96	14,436,053.648	1,714,053.926	39.750674633	-80.738008168
13,000.00	89.00	149.436	11,560.57	-1,084.82	-1,112.12	14,435,967.556	1,714,104.769	39.750437790	-80.737828175



Planning Report - Geographic

Database:	DB_Feb2822	Local Co-ordinate Reference:	Well Pendleton S-12 HU (slot B)
Company:	Tug Hill Operating LLC	TVD Reference:	GL @ 1272.00ft
Project:	Marshall County, West Virginia NAD83 UTM 17N	MD Reference:	GL @ 1272.00ft
Site:	Pendleton	North Reference:	Grid
Well:	Pendleton S-12 HU (slot B)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev3		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
13,100.00	89.00	149.436	11,562.31	-1,170.91	-1,061.28	14,435,881.463	1,714,155.612	39.750200947	-80.737648182	
13,200.00	89.00	149.436	11,564.06	-1,257.01	-1,010.43	14,435,795.370	1,714,206.454	39.749964103	-80.737468191	
13,300.00	89.00	149.436	11,565.81	-1,343.10	-959.59	14,435,709.278	1,714,257.297	39.749727260	-80.737288201	
13,400.00	89.00	149.436	11,567.56	-1,429.19	-908.75	14,435,623.185	1,714,308.140	39.749490416	-80.737108212	
13,500.00	89.00	149.436	11,569.30	-1,515.28	-857.90	14,435,537.093	1,714,358.982	39.749253571	-80.736928225	
13,600.00	89.00	149.436	11,571.05	-1,601.38	-807.06	14,435,451.000	1,714,409.825	39.749016726	-80.736748238	
13,700.00	89.00	149.436	11,572.80	-1,687.47	-756.22	14,435,364.908	1,714,460.668	39.748779882	-80.736568253	
13,800.00	89.00	149.436	11,574.54	-1,773.56	-705.38	14,435,278.815	1,714,511.510	39.748543036	-80.736388270	
13,900.00	89.00	149.436	11,576.29	-1,859.65	-654.53	14,435,192.722	1,714,562.353	39.748306191	-80.736208287	
14,000.00	89.00	149.436	11,578.04	-1,945.75	-603.69	14,435,106.630	1,714,613.196	39.748069345	-80.736028306	
14,100.00	89.00	149.436	11,579.79	-2,031.84	-552.85	14,435,020.537	1,714,664.038	39.747832499	-80.735848325	
14,200.00	89.00	149.436	11,581.53	-2,117.93	-502.00	14,434,934.445	1,714,714.881	39.747595652	-80.735668347	
14,300.00	89.00	149.436	11,583.28	-2,204.03	-451.16	14,434,848.352	1,714,765.724	39.747358806	-80.735488369	
14,400.00	89.00	149.436	11,585.03	-2,290.12	-400.32	14,434,762.260	1,714,816.566	39.747121959	-80.735308392	
14,500.00	89.00	149.436	11,586.77	-2,376.21	-349.48	14,434,676.167	1,714,867.409	39.746885112	-80.735128417	
14,600.00	89.00	149.436	11,588.52	-2,462.30	-298.63	14,434,590.075	1,714,918.252	39.746648264	-80.734948443	
14,700.00	89.00	149.436	11,590.27	-2,548.40	-247.79	14,434,503.982	1,714,969.094	39.746411416	-80.734768471	
14,800.00	89.00	149.436	11,592.02	-2,634.49	-196.95	14,434,417.889	1,715,019.937	39.746174568	-80.734588499	
14,900.00	89.00	149.436	11,593.76	-2,720.58	-146.10	14,434,331.797	1,715,070.780	39.745937720	-80.734408529	
15,000.00	89.00	149.436	11,595.51	-2,806.67	-95.26	14,434,245.704	1,715,121.622	39.745700871	-80.734228560	
15,100.00	89.00	149.436	11,597.26	-2,892.77	-44.42	14,434,159.612	1,715,172.465	39.745464022	-80.734048592	
15,200.00	89.00	149.436	11,599.00	-2,978.86	6.42	14,434,073.519	1,715,223.308	39.745227173	-80.733868625	
15,300.00	89.00	149.436	11,600.75	-3,064.95	57.27	14,433,987.427	1,715,274.151	39.744990323	-80.733688660	
15,400.00	89.00	149.436	11,602.50	-3,151.05	108.11	14,433,901.334	1,715,324.993	39.744753474	-80.733508696	
15,500.00	89.00	149.436	11,604.25	-3,237.14	158.95	14,433,815.242	1,715,375.836	39.744516624	-80.733328733	
15,600.00	89.00	149.436	11,605.99	-3,323.23	209.79	14,433,729.149	1,715,426.679	39.744279773	-80.733148771	
15,700.00	89.00	149.436	11,607.74	-3,409.32	260.64	14,433,643.056	1,715,477.521	39.744042922	-80.732968811	
15,800.00	89.00	149.436	11,609.49	-3,495.42	311.48	14,433,556.964	1,715,528.364	39.743806072	-80.732788851	
15,900.00	89.00	149.436	11,611.23	-3,581.51	362.32	14,433,470.871	1,715,579.207	39.743569220	-80.732608893	
16,000.00	89.00	149.436	11,612.98	-3,667.60	413.17	14,433,384.779	1,715,630.049	39.743332369	-80.732428937	
16,100.00	89.00	149.436	11,614.73	-3,753.69	464.01	14,433,298.686	1,715,680.892	39.743095517	-80.732248981	
16,200.00	89.00	149.436	11,616.47	-3,839.79	514.85	14,433,212.594	1,715,731.735	39.742858665	-80.732069027	
16,300.00	89.00	149.436	11,618.22	-3,925.88	565.69	14,433,126.501	1,715,782.577	39.742621813	-80.731889074	
16,400.00	89.00	149.436	11,619.97	-4,011.97	616.54	14,433,040.408	1,715,833.420	39.742384960	-80.731709122	
16,500.00	89.00	149.436	11,621.72	-4,098.07	667.38	14,432,954.316	1,715,884.264	39.742148107	-80.731529171	
16,600.00	89.00	149.436	11,623.46	-4,184.16	718.22	14,432,868.223	1,715,935.106	39.741911254	-80.731349222	
16,700.00	89.00	149.436	11,625.21	-4,270.25	769.07	14,432,782.131	1,715,985.949	39.741674400	-80.731169274	
16,800.00	89.00	149.436	11,626.96	-4,356.34	819.91	14,432,696.038	1,716,036.792	39.741437547	-80.730989327	
16,900.00	89.00	149.436	11,628.70	-4,442.44	870.75	14,432,609.946	1,716,087.634	39.741200692	-80.730809381	
17,000.00	89.00	149.436	11,630.45	-4,528.53	921.59	14,432,523.853	1,716,138.477	39.740963838	-80.730629437	
17,100.00	89.00	149.436	11,632.20	-4,614.62	972.44	14,432,437.761	1,716,189.320	39.740726983	-80.730449493	
17,200.00	89.00	149.436	11,633.95	-4,700.71	1,023.28	14,432,351.667	1,716,240.162	39.740490129	-80.730269551	
17,300.00	89.00	149.436	11,635.69	-4,786.81	1,074.12	14,432,265.574	1,716,291.005	39.740253273	-80.730089610	
17,400.00	89.00	149.436	11,637.44	-4,872.90	1,124.96	14,432,179.482	1,716,341.848	39.740016418	-80.729909671	
17,500.00	89.00	149.436	11,639.19	-4,958.99	1,175.81	14,432,093.389	1,716,392.690	39.739779562	-80.729729733	
17,600.00	89.00	149.436	11,640.93	-5,045.09	1,226.65	14,432,007.297	1,716,443.533	39.739542706	-80.729549795	
17,700.00	89.00	149.436	11,642.68	-5,131.18	1,277.49	14,431,921.204	1,716,494.376	39.739305850	-80.729369860	
17,800.00	89.00	149.436	11,644.43	-5,217.27	1,328.34	14,431,835.112	1,716,545.218	39.739068993	-80.729189925	
17,900.00	89.00	149.436	11,646.18	-5,303.36	1,379.18	14,431,749.019	1,716,596.061	39.738832136	-80.729009992	
18,000.00	89.00	149.436	11,647.92	-5,389.46	1,430.02	14,431,662.927	1,716,646.904	39.738595279	-80.728830059	
18,100.00	89.00	149.436	11,649.67	-5,475.55	1,480.86	14,431,576.834	1,716,697.746	39.738358421	-80.728650128	
18,200.00	89.00	149.436	11,651.42	-5,561.64	1,531.71	14,431,490.741	1,716,748.589	39.738121564	-80.728470199	
18,300.00	89.00	149.436	11,653.16	-5,647.73	1,582.55	14,431,404.649	1,716,799.432	39.737884706	-80.728290270	
18,400.00	89.00	149.436	11,654.91	-5,733.83	1,633.39	14,431,318.556	1,716,850.274	39.737647847	-80.728110343	



Planning Report - Geographic

<b>Database:</b>	DB_Feb2822	<b>Local Co-ordinate Reference:</b>	Well Pendleton S-12 HU (slot B)
<b>Company:</b>	Tug Hill Operating LLC	<b>TVD Reference:</b>	GL @ 1272.00ft
<b>Project:</b>	Marshall County, West Virginia NAD83 UTM 17N	<b>MD Reference:</b>	GL @ 1272.00ft
<b>Site:</b>	Pendleton	<b>North Reference:</b>	Grid
<b>Well:</b>	Pendleton S-12 HU (slot B)	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	rev3		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
18,500.00	89.00	149.436	11,656.66	-5,819.92	1,684.24	14,431,232.464	1,716,901.117	39.737410989	-80.727930417
18,562.48	89.00	149.436	11,657.75	-5,873.71	1,716.00	14,431,178.673	1,716,932.884	39.737263000	-80.727818000
PBHL/TD 18562.48 MD 11657.75 TVD									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
Pendleton S-12HU LP 5'	0.00	0.000	11,548.00	-465.55	-1,477.83	14,436,586.821	1,713,739.058	39.752141400	-80.739122896
- plan hits target center									
- Point									
Pendleton S-12HU PBH	0.00	0.000	11,657.75	-5,873.71	1,716.00	14,431,178.673	1,716,932.884	39.737263000	-80.727818000
- plan hits target center									
- Point									

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
3,300.00	3,300.00	0.00	0.00	KOP Begin 2°/100' build	
3,550.00	3,549.68	2.17	-10.68	Begin 5.00° tangent	
7,013.50	7,000.00	62.30	-306.50	Begin 2°/100' build	
7,902.29	7,859.36	108.10	-513.96	Begin 22.77° tangent	
10,711.83	10,449.85	346.55	-1,575.09	Begin 6°/100' build/turn	
11,766.45	11,370.54	-36.41	-1,671.81	Begin 8°/100' build/turn	
12,280.70	11,548.00	-465.55	-1,477.83	Begin 89.00° lateral	
18,562.48	11,657.75	-5,873.71	1,716.00	PBHL/TD 18562.48 MD 11657.75 TVD	

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WW-9  
(4/16)

API Number 47 - 051 -  
Operator's Well No. Pendleton S-12HU

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) Middle 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 and produced water for frac

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

Proposed Disposal Method For Treated Pit Wastes:

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

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

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

-If oil based, what type? Synthetic, petroleum, etc. n/a

Additives to be used in drilling medium?

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. All drill cuttings to be disposed of in 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-1021MVO109165) and Westmoreland Sanitary Landfill, LLC (SAN1405/PADEP ECR1396426); Chestnut Valley Landfill (100419)

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.

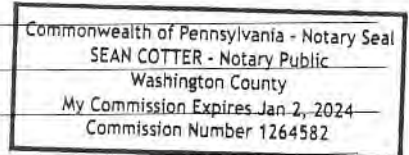
I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on August 1, 2005, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations 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 - Geosciences



Subscribed and sworn before me this 1 day of June, 2022

Notary Public

My commission expires 1/2/2024

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Tug Hill Operating, LLC

Proposed Revegetation Treatment: Acres Disturbed 6.88 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: *Stacy Green* *MSK*

Comments: \_\_\_\_\_

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Environmental Protection

Title: Oil and Gas Inspector Date: 5/26/22

Field Reviewed? (  ) Yes (  ) No

DRAWING NOT TO SCALE

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.

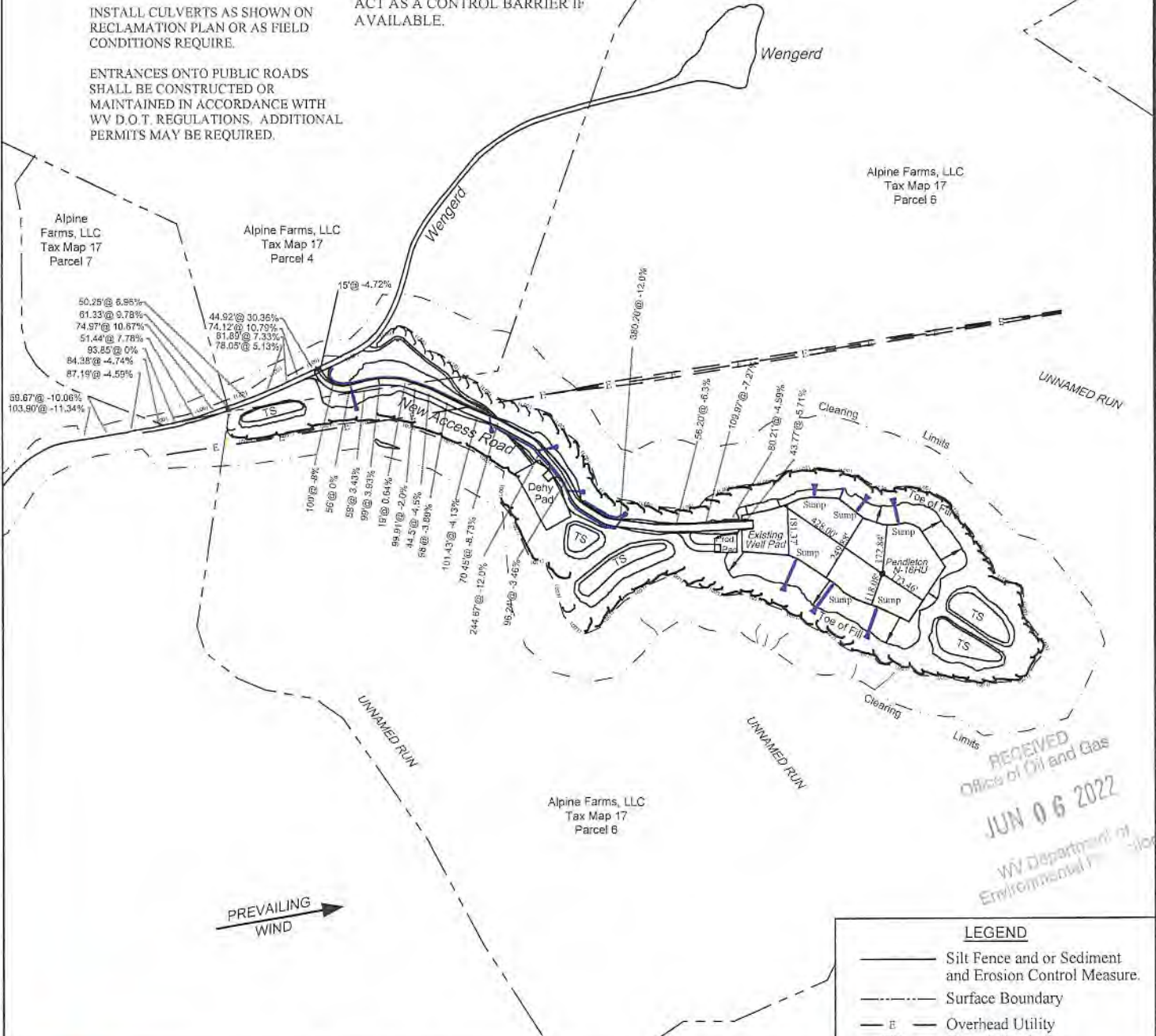
INSTALL CULVERTS AS SHOWN ON RECLAMATION PLAN OR AS FIELD CONDITIONS REQUIRE.

ENTRANCES ONTO PUBLIC ROADS SHALL BE CONSTRUCTED OR MAINTAINED IN ACCORDANCE WITH WV D.O.T. REGULATIONS. ADDITIONAL PERMITS MAY BE REQUIRED.

TEMPORARILY SEED AND MULCH ALL SLOPES UPON CONSTRUCTION OF LOCATION.

ALL CUT AND FILL SLOPES ARE 2H : 1V SLOPE.

ALL TREES 6-INCHES AND ABOVE ARE TO BE CUT AND STACKED. BRUSH SLASHINGS ARE TO UTILIZED DOWN SLOPE OF SITE AND STRUCTURES TO ACT AS A CONTROL BARRIER IF AVAILABLE.



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**Jackson Surveying Inc.**  
2413 E. Pike St.  
Clarksburg, WV 26301  
Phone: 304-623-6861

TOPO SECTION:		OPERATOR:	
GLEN EASTON 7.5'		PREPARED FOR:	
COUNTY	DISTRICT	TUG HILL OPERATING, LLC	
MARSHALL	FRANKLIN	380 SOUTHPOINTE BLVD	
		SUITE 200	
		CANDONSBURG, PA 15317	
DRAWN BY	JOB NO.	DATE	SCALE
J.D.C	494510851	03-16-2022	NONE

**TUG HILL OPERATING**

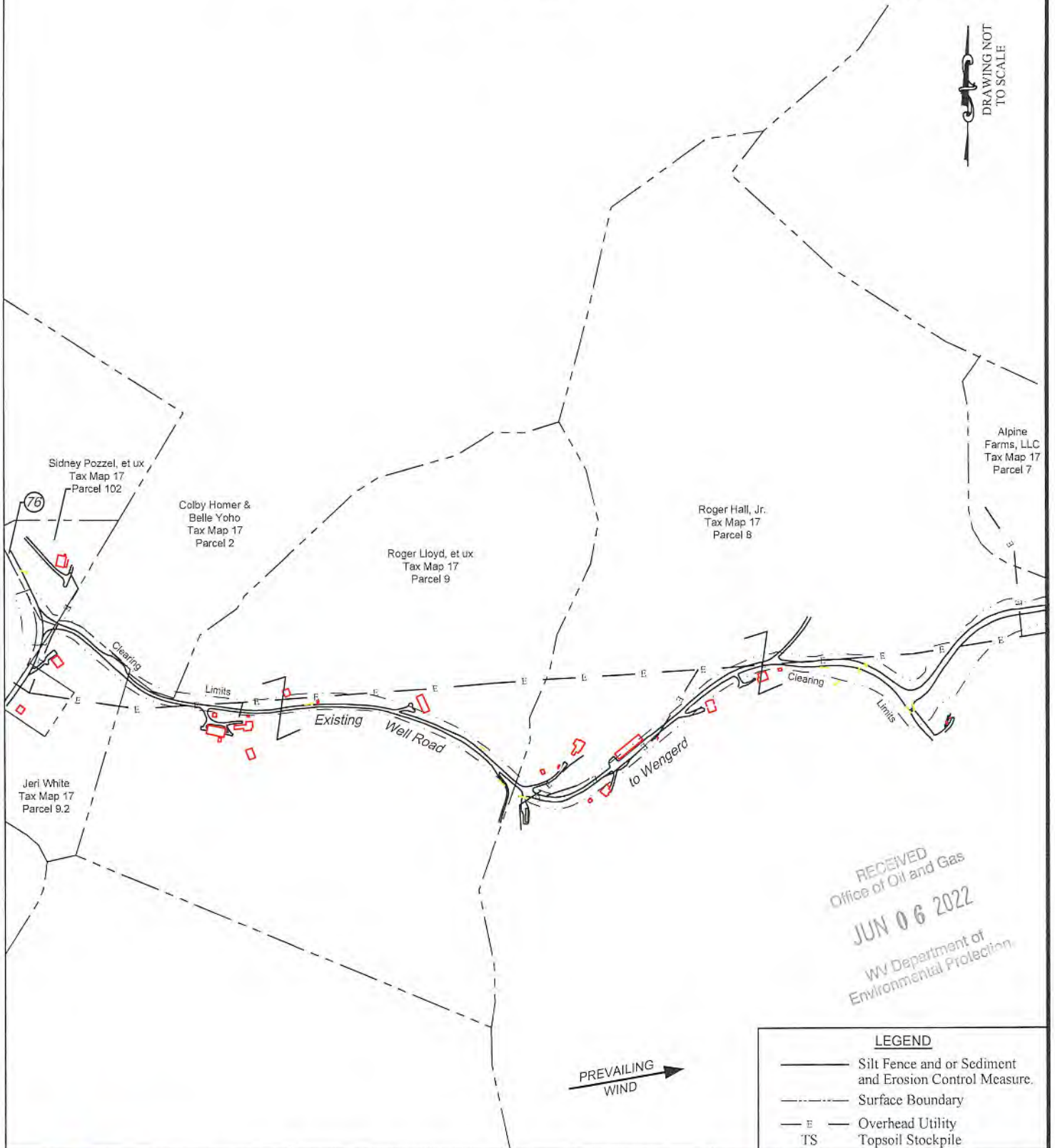
08/26/2022

# PROPOSED PENDLETON N16-HU

Exhibit 1

Page 2 of 2

DRAWING NOT  
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**LEGEND**

- Silt Fence and or Sediment and Erosion Control Measure.
- - - - - Surface Boundary
- E — Overhead Utility
- TS — Topsoil Stockpile

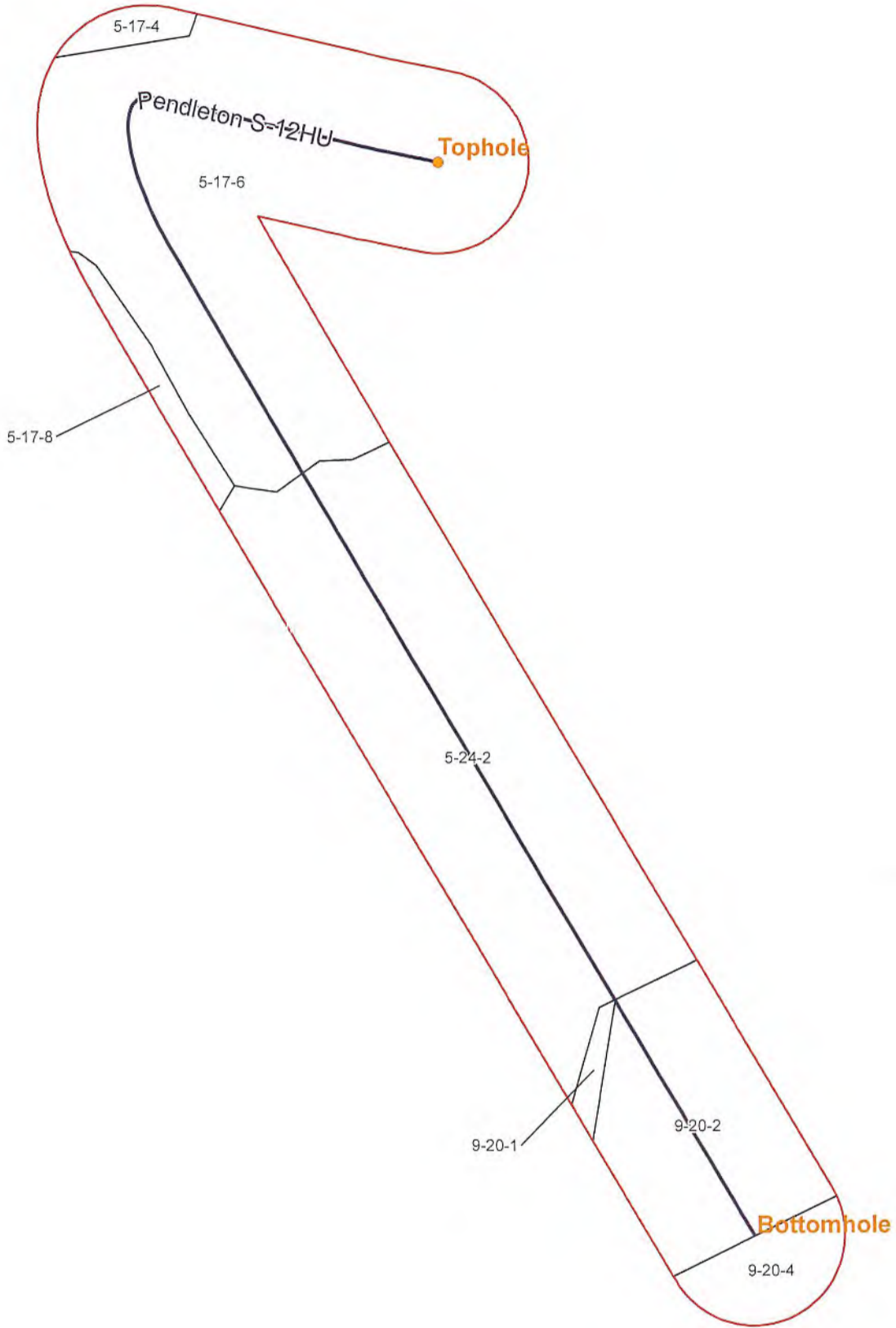
**Jackson Surveying Inc.**  
2413 E. Pike St.  
Clarksburg, WV 26301  
Phone: 304-823-5851

TOPO SECTION:		OPERATOR:	
GLEN EASTON 7.5'		PREPARED FOR:	
COUNTY	DISTRICT	TUG HILL OPERATING, LLC	
MARSHALL	FRANKLIN	380 SOUTHPOINTE BLVD	
		SUITE 200	
		CANONSBURG, PA 15317	
DRAWN BY	JOB NO.	DATE	SCALE
J.D.C	494510851	03-16-2022	NONE

**TUG HILL  
OPERATING**

08/26/2022

Pendleton S-12HU



Coordinate System: NAD 1983 UTM Zone 18N  
 Projection: Transverse Mercator  
 Datum: North American 1983  
 Paper Contour: 1,000.000  
 False Northing: 0.0000  
 Central Meridian: -81.0000  
 Scale Factor: 0.9999  
 UTM Code: 18N  
 UTM Zone: 18N

**CONFIDENTIAL**

0 43,500 87,000 174,000 Feet



**TUG HILL**  
 OPERATING

— Well of Interest

□ 500' Buffer

Pendleton S-12HU  
 Operators within 500 Feet of Well Borehole



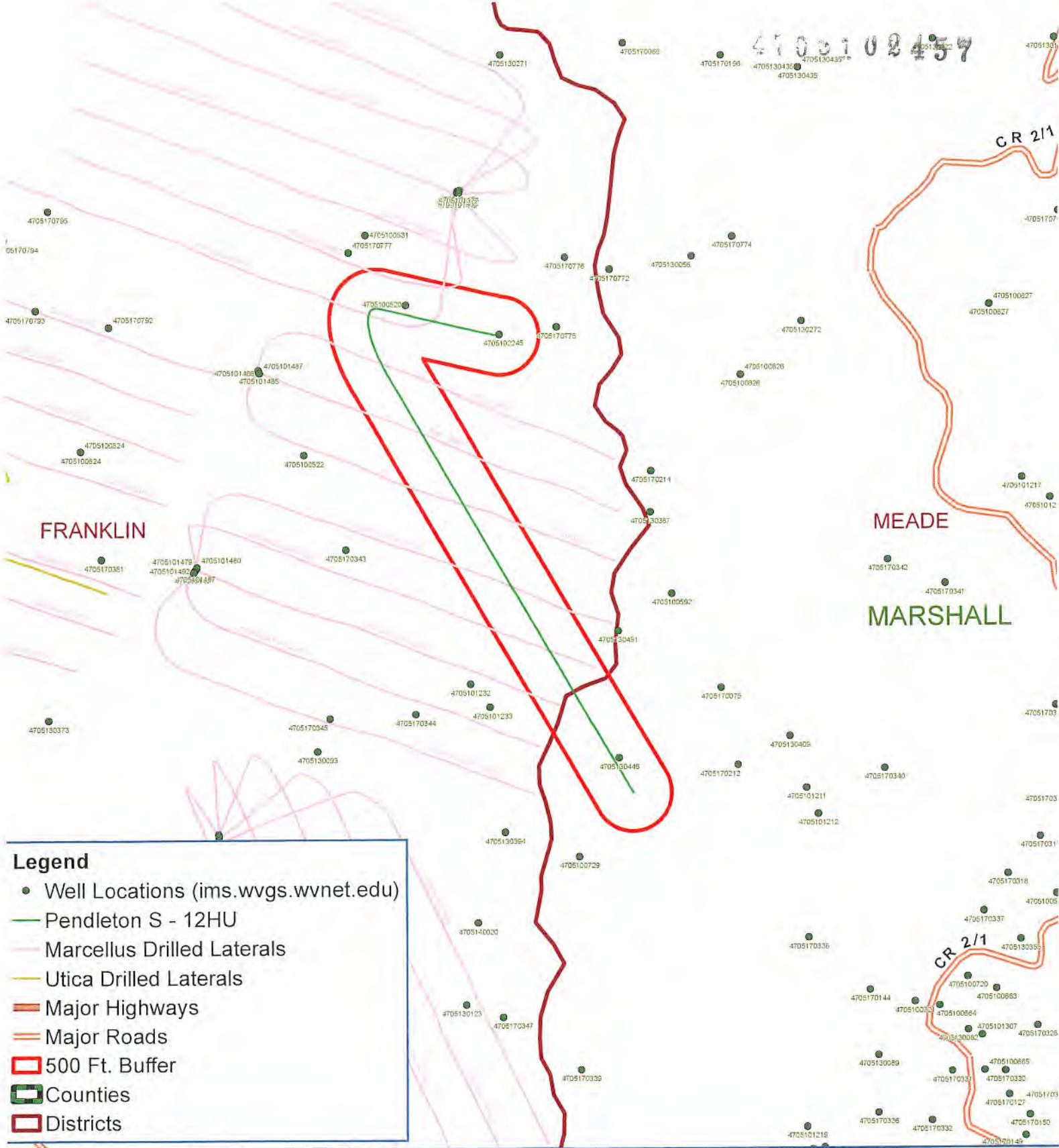


**Operators within 500' of Well Bores  
Pendleton S - 12HU**

**4705102457**

COUNTY	DISTRICT	TMP	MINERAL OWNER/LESSEE	ADDRESS
MARSHALL	FRANKLIN	5-17-4	TH EXPLORATION II, LLC	1320 S. University Dr. Suite 500 FT Worth,TX 76107
MARSHALL	FRANKLIN	5-17-6	TH EXPLORATION II, LLC	1320 S. University Dr. Suite 500 FT Worth,TX 76107
MARSHALL	FRANKLIN	5-17-8	SWN PRODUCTION COMPANY	10000 Energy Drive Spring, TX 77389
MARSHALL	FRANKLIN	5-17-8	EQUINOR USA ONSHORE PROPERTIES INC	2107 City West Blvd. Suite 100 Houston, TX 77042
MARSHALL	FRANKLIN	5-17-8	TH EXPLORATION II, LLC	1320 S. University Dr. Suite 500 FT Worth,TX 76107
MARSHALL	FRANKLIN	5-17-8	TH EXPLORATION, LLC	1320 S. University Dr. Suite 500 FT Worth,TX 76107
MARSHALL	FRANKLIN	5-24-2	TH EXPLORATION II, LLC	1320 S. University Dr. Suite 500 FT Worth,TX 76107
MARSHALL	MEADE	9-20-1	TH EXPLORATION, LLC	1320 S. University Dr. Suite 500 FT Worth,TX 76107
MARSHALL	MEADE	9-20-2	TH EXPLORATION, LLC	1320 S. University Dr. Suite 500 FT Worth,TX 76107
MARSHALL	MEADE	9-20-4	TH EXPLORATION, LLC	1320 S. University Dr. Suite 500 FT Worth,TX 76107

08/26/2022



- Legend**
- Well Locations (ims.wvgs.wvnet.edu)
  - Pendleton S - 12HU
  - Marcellus Drilled Laterals
  - Utica Drilled Laterals
  - Major Highways
  - Major Roads
  - 500 Ft. Buffer
  - Counties
  - Districts



# Pendleton S - 12HU Franklin District Marshall County, WV



Notes:  
All locations are approximate and are for visualization purposes only.



Map Prepared by:  
  
08/26/2022

### 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. Enverus and RS Energy Group Well Data service: Public nationwide data service that pulls directly from State agency Oil and Gas databases
2. Farm Maps
3. Topo Maps: Recent and older (contact WVGES)
4. Check with DPS

Contacted Adam Picard 724-485-9331, [apicard@dpslandservices.com](mailto:apicard@dpslandservices.com), DPS GIS (7/25/2022) to have him make maps of the wellbores with his information. DPS utilizes WVGES maps for their mapping seems it is the best publicly available. See attached map he provided.

#### Request maps for:

1. Wellbore with Enverus 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

**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
4705100520	Fruchtman, M.	2091' TVD	Big Injun (Price Fm & equivs)	unknown	No, this well is not deep enough to be within the expected fracture propagation from the proposed Point Pleasant stimulation.	
4705102245	Tug Hill Operating, LLC.	11787' TVD (proposed)	none	none	No, this well will not be drilled to the proposed depth or perforated. This is a canceled permit.	Permit canceled by Tug Hill Operating, LLC.
4705130446	Manufacturers Light & Heat Co.	unknown	unknown	unknown	Unknown but unlikely. The well likely represents an old shallow well that is too shallow to be affected by fracturing of the proposed Point Pleasant well. Well is plugged.	Well was plugged 7/7/1962.

WV Geological & Economic Survey:

**Well: County = 51 Permit = 00520**

Report Time: Thursday, May 26, 2022 5:09:35 PM

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LON_DD	UTME	UTMN
4705100520	Marshall	520	Franklin	Glen Easton	Cameron	39.754478	-80.738202	522426.8	4400540

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
4705100520	1/17/1964	Original Loc	Completed	Herbert Kelly	1				Herbert Kelly	Fruchtman, M.			

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	
4705100520	1/17/1964	12/6/1963	1309	Ground Level	Cameron-Gamer	Price Fm & equivs	Price Fm & equivs	Development Well	Development Well	Gas	Spudder	Nat/Open H	2091		2091		254		

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
4705100520	1/17/1964	Water	Unknown Water	Vertical				135					0
4705100520	1/17/1964	Water	Unknown Water	Vertical				1665					0
4705100520	1/17/1964	Water	Unknown Water	Vertical				1940					2
4705100520	1/17/1964	Pay	Gas	Vertical				2080	Big Injun (Price&eq)	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
4705100520	Original Loc	Sewickley coal	Well Record	833	Reasonable	1	Reasonable	1309	Ground Level
4705100520	Original Loc	Pittsburgh coal	Well Record	922	Reasonable	6	Reasonable	1309	Ground Level
4705100520	Original Loc	1st Salt Sand	Past WVGES Staff Geologist	1639	Reasonable	104	Reasonable	1309	Ground Level
4705100520	Original Loc	3rd Salt Sand	Past WVGES Staff Geologist	1840	Reasonable	100	Reasonable	1309	Ground Level
4705100520	Original Loc	Maxton	Past WVGES Staff Geologist	1956	Reasonable	15	Reasonable	1309	Ground Level
4705100520	Original Loc	Greenbrier Group	Well Record	1976	Reasonable	64	Reasonable	1309	Ground Level
4705100520	Original Loc	Big Lime	Well Record	1976	Reasonable	64	Reasonable	1309	Ground Level
4705100520	Original Loc	Big Injun (Price&eq)	Well Record	2040	Reasonable	0	Reasonable	1309	Ground Level

WV Geological & Economic Survey:

**Well: County = 51 Permit = 02245**

Report Time: Thursday, May 26, 2022 5:10:06 PM

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX	DISTRICT	QUAD_75	QUAD_15	LAT_DD	LON_DD	UTME	UTMN
4705102245	Marshall	2245		Franklin	Glen Easton	Cameron	39.753455	-80.733897	522795.9	4400427.6

Bottom Hole Location Information:

API	EP_FLAG	UTME	UTMN	LON_DD	LAT_DD
4705102245	1 As Proposed	520896.4	4403611.2	-80.755969	39.782188

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	TF
4705102245	-/-	Dvtd Orgnl Loc	Cancelled	Alpine Farm LLC			N-9HU Pendleton		Eli A & Fannie Mae Wengerd et al	Tug Hill Operating, LLC		11787 Pt Pleasant 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	M
4705102245	-/-	-/-	1272	Ground Level																	

WV Geological &amp; Economic Survey:

Well: County = 51 Permit = 30446

Report Time: Thursday, May 26, 2022 5:10:30 PM

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LON_DD	UTME	UTMN
4705130446	Marshall	30446	Meade	Wileyville	Littleton	39.738478	-80.728457	523267	4398766.7

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
4705130446	-/-/1901	Original Loc	Completed	Adam Frohnapple	1	1218		2885		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_BEF	G_AFT	O_BEF
4705130446	-/-/1901	-/-	1221	Ground Level				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

## Plugging Information:

API	PLG_DT	DEPTH_PBT
4705130446	7/7/1962	0



**TUG HILL**  
**OPERATING**

**Well Site Safety Plan**  
**Part A – Site Specific Data and Figures**

**Well Name: Pendleton S-12HU**

**Pad Name: Pendleton**

**County: Marshall**

*Handwritten signature: Steven J. ...*  
*5/26/22*  
*MSJK*

UTM (meters), NAD83, Zone 17

Northing: 4,400,422.33

Easting: 522,799.16

**KEY CONTACT FOR WELL SITE SAFETY PLAN  
DEVELOPMENT AND MAINTENANCE**

**Jerry V. DeRosa, Director EH&S Affairs**

**(724) 338-2029 (office)**

**(412) 736-5767 (cellular)**

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Office of Oil and Gas  
JUN 06 2022  
WV Department of  
Environmental Protection

**24-HOUR EMERGENCY PHONE NUMBER**

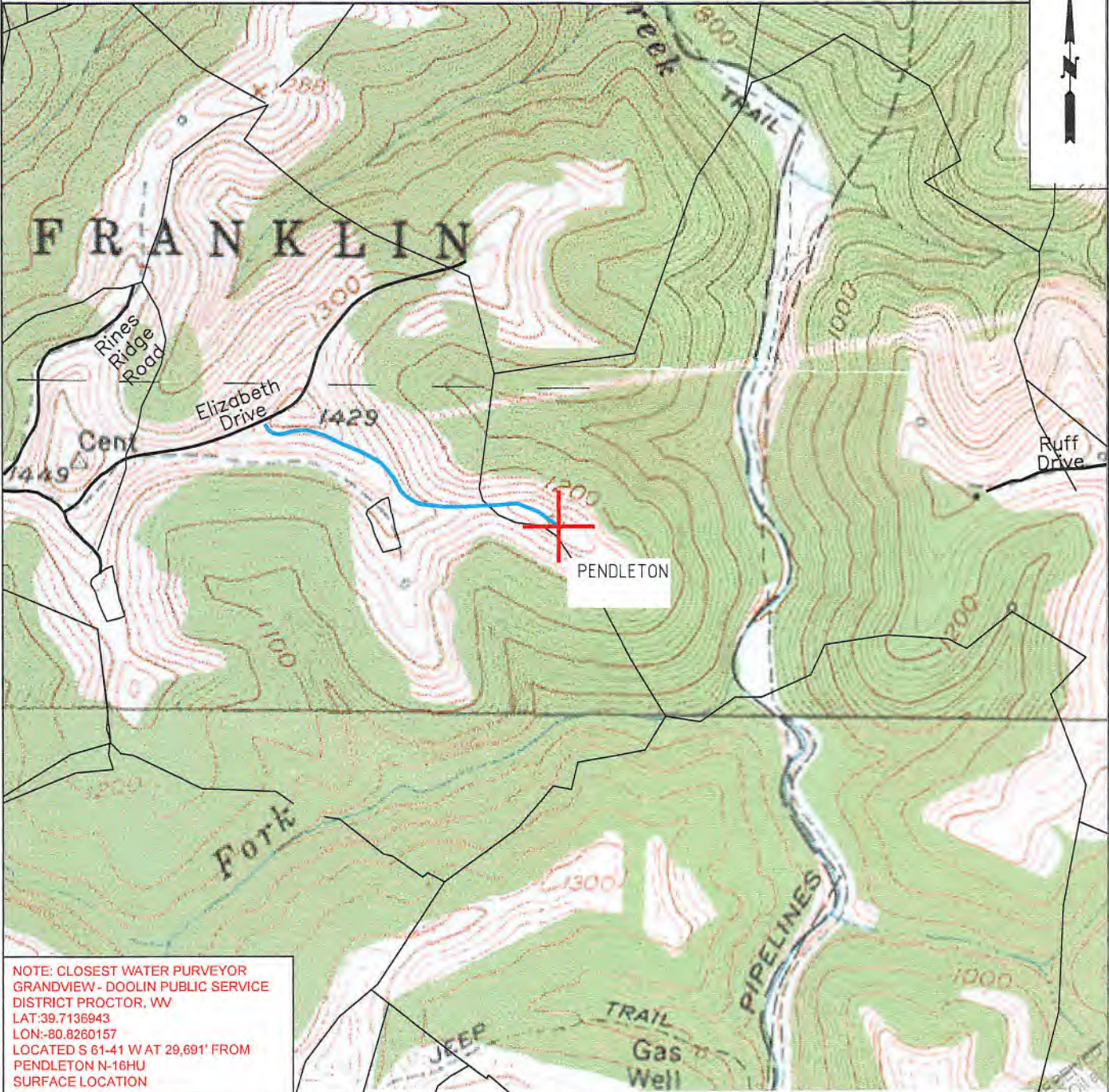
**(800) 921-9745**

**08/26/2022**




# Pendleton Pad

THERE APPEAR TO BE NO (0) RESIDENCES WITHIN 2,000'.

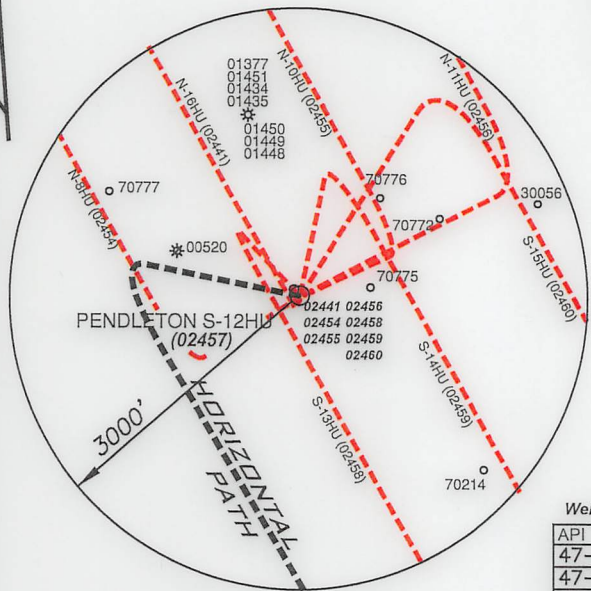
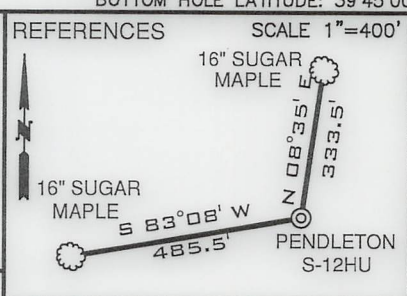
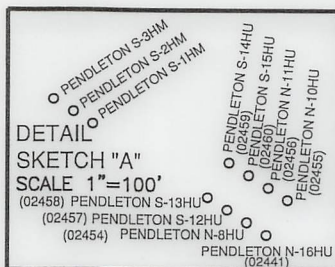


NOTE: CLOSEST WATER PURVEYOR  
 GRANDVIEW - DOOLIN PUBLIC SERVICE  
 DISTRICT PROCTOR, WV  
 LAT: 39.7136943  
 LON: -80.8260157  
 LOCATED S 61-41 W AT 29,691' FROM  
 PENDLETON N-16HU  
 SURFACE LOCATION

 <b>TUG HILL OPERATING</b>	<b>OPERATOR</b> 494510851 TUG HILL OPERATING, LLC 380 SOUTHPONTE BLVD SUITE 200 CANONSBURG, PA 15317	<b>TOPO SECTION</b> GLEN EASTON 7.5' <b>SCALE:</b> 1" = 1000'	<b>LEASE NAME</b> PENDLETON <b>DATE:</b> DATE: 03-16-2022
	Office of Oil and Gas JUN 06 2022 WV Department of Environmental Protection		

**PENDLETON LEASE  
WELL S-12HU  
175.8168± ACRES**

TOP HOLE LATITUDE: 39°47'30"  
BOTTOM HOLE LATITUDE: 39°45'00"



LINE	BEARING	DISTANCE
L1	N 01°15' E	2,863.13'
L2	N 76°10' W	2,388.14'
L3	N 77°32' W	312.91'
L4	N 76°36' W	212.53'
L5	N 76°23' W	1087.95'

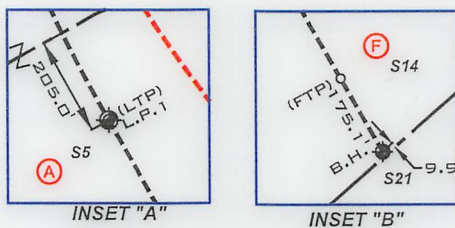
**Deep Wells Within 2400' of Proposed Well's Surface Location and/or 500' of Well Lateral**

API	OPERATOR
47-051-02441	Tug Hill Operating, LLC
47-051-02454	Tug Hill Operating, LLC
47-051-02455	Tug Hill Operating, LLC
47-051-02456	Tug Hill Operating, LLC
47-051-02458	Tug Hill Operating, LLC
47-051-02459	Tug Hill Operating, LLC
47-051-02460	Tug Hill Operating, LLC

**LEGEND**

- LEASED TRACTS
- SURFACE TRACTS
- WELL LATERAL
- POINT PLEASANT LEGS
- UNIT BOUNDARY
- (A) LEASE # (SEE 6A1 FORM)
- 400' BORE PATH OFFSET
- 500' WELL BORE OFFSET
- (FTP) PROPOSED FIRST TAKE POINT
- (LTP) PROPOSED LAST TAKE POINT

- NOTES**
- BORE PATH BASED ON GRID NORTH.
  - NO WATER WELLS WITHIN 250' OF WELL WERE FOUND, NO DWELLINGS WITHIN 625' OF PAD CENTER WERE FOUND.
  - OWNERSHIP TAKEN FROM PUBLIC RECORDS OF MARSHALL COUNTY, WV IN MAY, 2022. COORDINATES AND WELL TIES BASED UPON DIFFERENTIAL GPS MEASUREMENTS.
  - WELL LOCATION REFERENCES ARE BASED UPON THE MAGNETIC MERIDIAN.
  - ALL DEEP WELLS SHOWN ON THIS PLAT.
  - L.P. 1 AND (L.T.P.) ARE AT THE SAME POINT.
  - THE FTP IS OVER 500' PERPENDICULAR TO THE BOUNDARY.
  - BOUNDARIES ALONG ROADWAYS ARE BASED UPON MEMORANDUM BY DICKIE, MCCAMEY & CHILCOTE, P.C. FILE 0058304.0401147



**SURFACE HOLE**  
UTM. NAD83, ZONE 17  
IN METERS  
N) 4,400,422.36  
E) 522,799.15

**LANDING POINT 1**  
UTM. NAD83, ZONE 17  
IN METERS  
N) 4,400,280.46  
E) 522,348.71

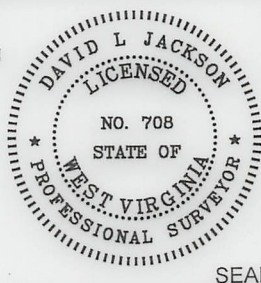
**BOTTOM HOLE**  
UTM. NAD83, ZONE 17  
IN METERS  
N) 4,398,632.06  
E) 523,322.19

CURVE	CHORD BEARING	CHORD LENGTH	RADIUS	ARC LENGTH
C1	N 89°11' W	62.71'	124.07'	63.39'
C2	S 53°50' W	58.39'	84.39'	59.62'
C3	S 19°49' W	73.84'	166.50'	74.46'
C4	S 01°02' W	101.44'	414.28'	101.70'
C5	S 10°45' E	180.12'	1038.65'	180.35'
C6	S 20°06' E	245.53'	1547.54'	245.79'
C7	S 26°54' E	226.41'	2345.62'	226.49'

FILE NUMBER \_\_\_\_\_  
DRAWING NUMBER: **PENDLETON S-12HU REV 3**  
SCALE: 1" = 2000'  
MINIMUM DEGREE OF ACCURACY: 1/200  
PROVEN SOURCE OF ELEVATION: **SUBMETER MAPPING**  
**GRADE GPS**

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 RULES ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION

*David L Jackson*



JACKSON SURVEYING INC.  
P.O. Box 1460  
Clarksburg, WV 26302  
304-623-5851

WVDEP  
OFFICE OF OIL & GAS  
601 57TH STREET, SE  
CHARLESTON, WV 25304

DATE: AUGUST 3, 2022  
OPERATORS WELL NO. PENDLETON S-12HU  
API WELL NO. 47-051-02457  
STATE COUNTY PERMIT

WELL TYPE: OIL \_\_\_ GAS X LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_  
(IF "GAS") PRODUCTION X STORAGE \_\_\_ DEEP X SHALLOW \_\_\_

LOCATION ELEVATION 1271.82' WATERSHED (HUC 10) FISH CREEK  
DISTRICT FRANKLIN COUNTY MARSHALL  
QUADRANGLE GLEN EASTON 7.5' LEASE NUMBER SEE WW-6A1 Form

SURFACE OWNER ALPINE FARM, LLC ACREAGE 249.07  
OIL & GAS ROYALTY OWNER ELI A. & FANNIE MAE WENGERD, ET AL LEASE ACREAGE 249.07  
PROPOSED WORK: DRILL X CONVERT \_\_\_ DRILL DEEPER \_\_\_ REDRILL \_\_\_ FRACTURE OR STIMULATE X PLUG OFF OLD FORMATION \_\_\_  
PERFORATE NEW FORMATION \_\_\_ OTHER PHYSICAL CHANGE (SPECIFY) \_\_\_\_\_

TARGET FORMATION POINT PLEASANT ESTIMATED DEPTH TVD: 11,765' TMD: 18,562'

WELL OPERATOR TUG HILL OPERATING, LLC DESIGNATED AGENT DARREN BROWN, CT CORP  
ADDRESS 1320 SOUTH UNIVERSITY DRIVE, SUITE 500 FORT WORTH, TX 76107 ADDRESS 5098 WASHINGTON STREET WEST, SUITE 407 CHARLESTON, WV 25313-1561

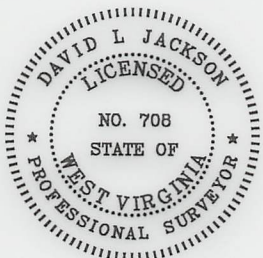
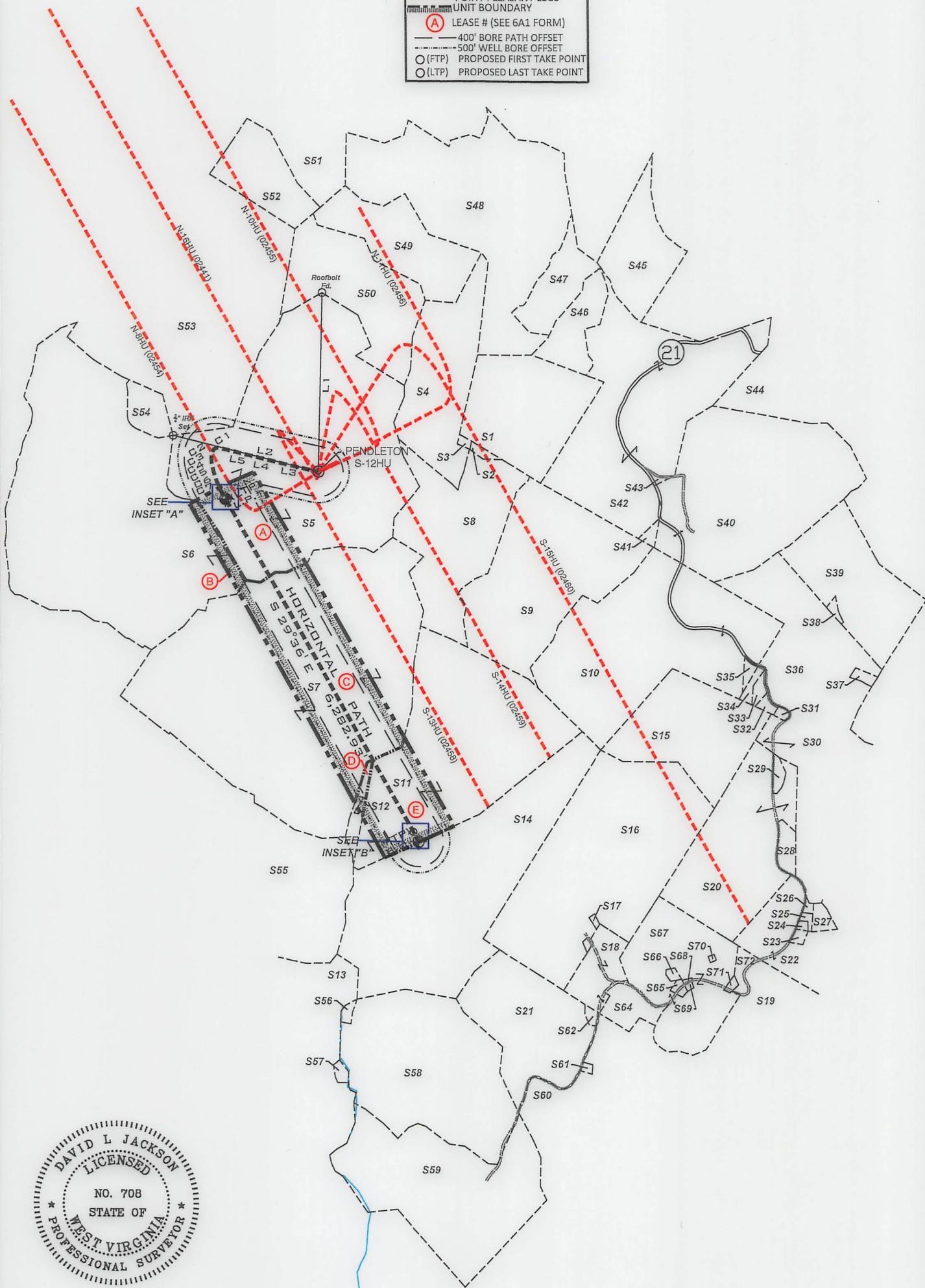
08/26/2022

COUNTY NAME PERMIT

form: wwg

# PENDLETON LEASE WELL S-12HU 175.8168± ACRES

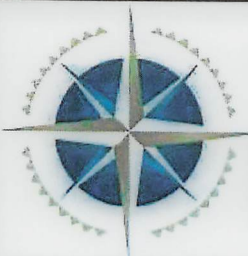
LEGEND	
	LEASED TRACTS
	SURFACE TRACTS
	WELL LATERAL
	POINT PLEASANT LEGS
	UNIT BOUNDARY
	LEASE # (SEE 6A1 FORM)
	400' BORE PATH OFFSET
	500' WELL BORE OFFSET
	PROPOSED FIRST TAKE POINT
	PROPOSED LAST TAKE POINT



P.S.  
708

*David L Jackson*

08/26/2022



**TUG HILL**  
OPERATING

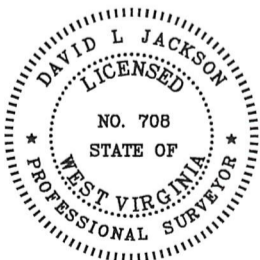
OPERATOR'S  
WELL #: 47-051-02457  
DISTRICT: Franklin  
COUNTY: Marshall  
STATE: WV

WELL PLAT  
PAGE 2 OF 4  
DATE: 08/03/2022

**PENDLETON LEASE  
WELL S-12HU  
175.8168± ACRES**

Parcels within Unit Boundary				
Tags	Number	Tax Map -Parcel	Surface Owner	Acres
A	S5	05-17-06	ALPINE FARM LLC	249.07
B	S6	05-17-08	ROGER H HALL JR	257.50
C	S7	05-24-02	ROY FRIEND YOHO	316.80
D	S12	09-20-01	MICHAEL JAMES PEKULA ET UX	5
E	S11	09-20-02	MICHAEL JAMES PEKULA ET UX	138
Adjoining Parcels Ownership Table				
	Number	Tax Map -Parcel	Surface Owner	Acres
	S1	09-16-04	BERTHA L KLUG	73.39
	S2	09-18-03	BERTHA L KLUG	1.33
	S3	09-18-04	BERTHA L KLUG	1
	S4	09-16-03	BERTHA L KLUG	71
	S8	09-18-01	THERESA MAE LONG THOMAS ET AL	58.66
	S9	09-18-02	BRIAN T KLUG	85
	S10	09-18-18	JAMES D. FROHNAPFEL ET UX	154.03
	S13	05-25-03	USA TIMBER AND LAND AUCTIONS LLC	181.548
	S14	09-20-04	SHELLIE J PEKULA	171
	S15	09-20-06	KEITH & KRISTY FERRELL REVOCABLE LIVING TRUST	64.74
	S16	09-20-05	GERALD A ET UX FROHNAPFEL - TRUST	164.143
	S17	09-20-5.2	WHEELING CATHOLIC DIOCESE	.447
	S18	09-22-04	WHEELING CATHOLIC DIOCESE	20
	S19	09-20-17	MARTIN L KLUG	49.78
	S20	09-20-07	SONNY M & LINDA L TAGG	72.828
	S21	09-22-3.2	MARK H MILLER	75
	S22	09-20-9	JOHN G JR & MARILYN S WEIGAND	48.131
	S23	09-20-9.4	HELEN B SHUTLER - LIFE	.78
	S24	09-20-10	JAMES MILLER ET UX	.50
	S25	09-20-9.3	JAMES MILLER ET UX	.80
	S26	09-20-9.5	JAMES MILLER ET UX	.666
	S27	09-20-9.6	JAMES MILLER ET UX	2.919
	S28	09-20-7.1	DAVID PAUL FROHNAPFEL	4.930
	S29	09-20-7.2	MICKEY R DULANEY JR	2.242
	S30	09-18-15	KEITH & KRISTY FERRELL REVOCABLE LIVING TRUST	29.5
	S31	09-18-15.1	NICHOLAS FROHNAPFEL ET UX	1.50
	S32	09-18-16.1	NICHOLAS C FROHNAPFEL ET UX	1.50
	S33	09-18-16.3	JOHN F WAYMAN EST	1.818
	S34	09-18-16.2	JOHN F WAYMAN EST	2.17
	S35	09-18-18.1	JOHN F WAYMAN EST	1.1
	S36	09-18-16	ROBERT F VILLERS	62.893
	S37	09-18-16.4	ROBERT F & APRIL L VILLERS	1.50
	S38	09-18-17.1	VINCENT JOHN WAYMAN	1.010
	S39	09-18-17	VINCENT J WAYMAN ET UX	68.99
	S40	09-18-06	LOUIS FOX	141.75
	S41	09-18-5.1	LOUIS FOX	1.583
	S42	09-18-05	BERTHA L KLUG	122.437
	S43	09-18-5.2	LOUIS FOX	0.933
	S44	09-16-20	LOUIS T FOX	83.174
	S45	09-16-11	JAMES G RICHMOND	67.88
	S46	09-16-07	BERTHA L KLUG	26.105
	S47	09-16-06	ROBERT M & NANCY R McCARDLE	31
	S48	09-16-05	ROBERT M & NANCY R McCARDLE	133
	S49	09-16-02	ROBERT M & NANCY R McCARDLE	53.40
	S50	05-17-05	ALPINE FARM LLC	76.96
	S51	09-16-01	ROBERT M & NANCY R McCARDLE	46.80
	S52	05-16-13	DAVID ALAN RUBCICH ET AL	33.31
	S53	05-17-04	ALPINE FARM LLC	212
	S54	05-17-07	ALPINE FARM LLC	10.8
	S55	05-24-3.3	CHARLES E BERTRAND & DEBRA K BERTRANO	120.43
	S56	09-22-1.1	CNG TRANSMISSION CO	1.43
	S57	05-25-3.2	CONSOL ENERGY HOLDINGS LLC XVI	1.43
	S58	09-22-01	LOUIS T FOX	124.57
	S59	09-22-02	MARK H J MILLER ETAL	124.80
	S60	09-22-03	MARK HILARY MILLER	63.73
	S61	09-22-3.3	MARY C WRIGHT	.617
	S62	09-22-3.1	MARGARET ANN MYSLIWIEC - LIFE	1.1
	S63	09-20-22.6	MARY MARGARET STINE	0.1185
	S64	09-22-5.1	HILARY G MILLER EST	10.62
	S65	09-20-22.7	JOAN L KLUG	1.06
	S66	09-20-22.8	JOAN LOUISE KLUG	.80
	S67	09-20-22	JOAN L KLUG	70.2398
	S68	09-20-22.4	JOAN L KLUG	0.165
	S69	09-20-22.5	JOAN L KLUG	.3767
	S70	09-20-22.3	GRANDVIEW-DOOLIN PSD	0.23
	S71	09-20-22.1	MARY MARGARET STINE	0.2
	S72	09-20-21	MARY MARGARET STINE	3.25

08/26/2022



P.S. 708 *David L Jackson*



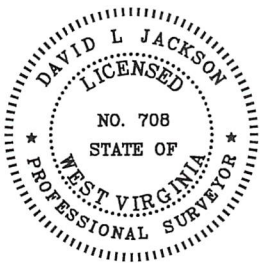
**TUG HILL**  
OPERATING

OPERATOR'S  
WELL #: 47-051-02457  
DISTRICT: Franklin  
COUNTY: Marshall  
STATE: WV

WELL PLAT  
PAGE 3 OF 4  
DATE: 08/03/2022

**PENDLETON LEASE  
WELL S-12HU  
175.8168± ACRES**

LEASE ID	TMP	TAG	GRANTOR, LESSOR, ETC.	DEED BOOK/PAGE	
10*14114	5-17-6	A	ELI & FANNIE MAE WENGERD	671	323
10*14460	5-17-8	B	GERTRUD GODDARD, ET AL	735	515
10*14024	5-24-2	C	ROY FRIEND YOHO AND DARLENE J YOHO, ET AL	665	508
10*39661	9-20-1	D	SHELLIE J PEKULA AND MICHAEL PEKULA	1126	542
10*39661	9-20-2	E	SHELLIE J PEKULA AND MICHAEL PEKULA	1126	542



P.S. 708 *David L Jackson*

08/26/2022



**TUG HILL**  
**OPERATING**

OPERATOR'S  
WELL #: 47-051-02457  
DISTRICT: Franklin  
COUNTY: Marshall  
STATE: WV

WELL PLAT  
PAGE 4 OF 4  
DATE: 08/03/2022



August 3, 2022

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

RE: Pendleton S-12HU

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.

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

Sincerely,

A handwritten signature in blue ink that reads "Amy L. Morris".

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

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

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

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

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

**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 *AmyL Morris*  
 Its: Permitting Specialist - Appalachia Region

LEASE ID	TMP	TAG	GRANTOR, LESSOR, ETC.	GRANTEE, LESSEE, ETC.	ROYALTY	DEED BOOK/PAGE	ASSIGNMENT	ASSIGNMENT	ASSIGNMENT	ASSIGNMENT	ASSIGNMENT	ASSIGNMENT	ASSIGNMENT	ASSIGNMENT		
10*14114	5-17-6	A	ELI & FANNIE MAE WENGERD	GASTAR EXPLORATION USA INC	1/8+	671 323	N/A	N/A	N/A	N/A	N/A	N/A	Merger of Gastar Gastar Exploration USA Inc to Atinum Marcellus I LLC: 23/353	Merger of Gastar Exploration USA Inc with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14460	5-17-8	B	GERTRUD GODDARD	GASTAR EXPLORATION USA INC	1/8+	735 515	N/A	N/A	N/A	N/A	N/A	N/A	Merger of Gastar Gastar Exploration USA Inc to Atinum Marcellus I LLC: 26/183	Merger of Gastar Exploration USA Inc with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
1288082-001	5-17-8	B	RONALD GODDARD	CHESAPEAKE APPALACHIA LLC	1/8+	690 611	Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc: 24/338	Memorandum of Operating Agreement & Financial Statement between Gastar Exploration USA Inc, Atinum Marcellus I, LLC & Chesapeake Appalachia, LLC: 740/394	Chesapeake Appalachia LLC to SWN Production Company LLC: 33/110	Statoil USA Onshore Properties Inc to SWN Exchange Titleholder LLC: 33/424	SWN Exchange Titleholder LLC merged with/intro SWN Production Company LLC: 19/624	Statoil USA Onshore Properties Inc changed name to Equinor USA Onshore Properties Inc: 2/427	Merger of Gastar Exploration USA Inc with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67	
1288082-002	5-17-8	B	FRANCIS R GODDARD	CHESAPEAKE APPALACHIA LLC	1/8+	689 175	Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc: 24/338	Memorandum of Operating Agreement & Financial Statement between Gastar Exploration USA Inc, Atinum Marcellus I, LLC & Chesapeake Appalachia, LLC: 740/394	Chesapeake Appalachia LLC to SWN Production Company LLC: 33/110	Statoil USA Onshore Properties Inc to SWN Exchange Titleholder LLC: 33/424	SWN Exchange Titleholder LLC merged with/intro SWN Production Company LLC: 19/624	Statoil USA Onshore Properties Inc changed name to Equinor USA Onshore Properties Inc: 2/427	Merger of Gastar Exploration USA Inc with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67	
1288082-003	5-17-8	B	WAYNE GODDARD	CHESAPEAKE APPALACHIA LLC	1/8+	690 610	Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc: 24/338	Memorandum of Operating Agreement & Financial Statement between Gastar Exploration USA Inc, Atinum Marcellus I, LLC & Chesapeake Appalachia, LLC: 740/394	Chesapeake Appalachia LLC to SWN Production Company LLC: 33/110	Statoil USA Onshore Properties Inc to SWN Exchange Titleholder LLC: 33/424	SWN Exchange Titleholder LLC merged with/intro SWN Production Company LLC: 19/624	Statoil USA Onshore Properties Inc changed name to Equinor USA Onshore Properties Inc: 2/427	Merger of Gastar Exploration USA Inc with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67	
1288082-004	5-17-8	B	MARTHA BAILEY	CHESAPEAKE APPALACHIA LLC	1/8+	695 366	Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc: 24/338	Memorandum of Operating Agreement & Financial Statement between Gastar Exploration USA Inc, Atinum Marcellus I, LLC & Chesapeake Appalachia, LLC: 740/394	Chesapeake Appalachia LLC to SWN Production Company LLC: 33/110	Statoil USA Onshore Properties Inc to SWN Exchange Titleholder LLC: 33/424	SWN Exchange Titleholder LLC merged with/intro SWN Production Company LLC: 19/624	Statoil USA Onshore Properties Inc changed name to Equinor USA Onshore Properties Inc: 2/427	Merger of Gastar Exploration USA Inc with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67	
1288082-005	5-17-8	B	PAULETTE F PARKER	CHESAPEAKE APPALACHIA LLC	1/8+	695 368	Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc: 32/247	Memorandum of Operating Agreement & Financial Statement between Gastar Exploration USA Inc, Atinum Marcellus I, LLC & Chesapeake Appalachia, LLC: 740/394	Chesapeake Appalachia LLC to SWN Production Company LLC: 33/110	Statoil USA Onshore Properties Inc to SWN Exchange Titleholder LLC: 33/424	SWN Exchange Titleholder LLC merged with/intro SWN Production Company LLC: 19/624	Statoil USA Onshore Properties Inc changed name to Equinor USA Onshore Properties Inc: 2/427	Merger of Gastar Exploration USA Inc with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67	
1288082-006	5-17-8	B	JUDY PROCK	CHESAPEAKE APPALACHIA LLC	1/8+	722 339	Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc: 32/247	Memorandum of Operating Agreement & Financial Statement between Gastar Exploration USA Inc, Atinum Marcellus I, LLC & Chesapeake Appalachia, LLC: 740/394	Chesapeake Appalachia LLC to SWN Production Company LLC: 33/110	Statoil USA Onshore Properties Inc to SWN Exchange Titleholder LLC: 33/424	SWN Exchange Titleholder LLC merged with/intro SWN Production Company LLC: 19/624	Statoil USA Onshore Properties Inc changed name to Equinor USA Onshore Properties Inc: 2/427	Merger of Gastar Exploration USA Inc with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67	
1288082-007	5-17-8	B	BRUCE GODDARD, SR.	CHESAPEAKE APPALACHIA LLC	1/8+	732 489	Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc: 32/247	Memorandum of Operating Agreement & Financial Statement between Gastar Exploration USA Inc, Atinum Marcellus I, LLC & Chesapeake Appalachia, LLC: 740/394	Chesapeake Appalachia LLC to SWN Production Company LLC: 33/110	Statoil USA Onshore Properties Inc to SWN Exchange Titleholder LLC: 33/424	SWN Exchange Titleholder LLC merged with/intro SWN Production Company LLC: 19/624	Statoil USA Onshore Properties Inc changed name to Equinor USA Onshore Properties Inc: 2/427	Merger of Gastar Exploration USA Inc with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67	
1288082-008	5-17-8	B	RONALD W. GODDARD	CHESAPEAKE APPALACHIA LLC	1/8+	695 223	Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc: 32/247	Memorandum of Operating Agreement & Financial Statement between Gastar Exploration USA Inc, Atinum Marcellus I, LLC & Chesapeake Appalachia, LLC: 740/394	Chesapeake Appalachia LLC to SWN Production Company LLC: 33/110	Statoil USA Onshore Properties Inc to SWN Exchange Titleholder LLC: 33/424	SWN Exchange Titleholder LLC merged with/intro SWN Production Company LLC: 19/624	Statoil USA Onshore Properties Inc changed name to Equinor USA Onshore Properties Inc: 2/427	Merger of Gastar Exploration USA Inc with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67	





LEASE ID	TMP	TAG	GRANTOR, LESSOR, ETC.	GRANTEE, LESSEE, ETC.	ROYALTY	DEED BOOK/PAGE	ASSIGNMENT	ASSIGNMENT	ASSIGNMENT	ASSIGNMENT	ASSIGNMENT	ASSIGNMENT	ASSIGNMENT	ASSIGNMENT	ASSIGNMENT
1288082-018	5-17-8	B	PAUL D CRONE	CHESAPEAKE APPALACHIA LLC	1/8+	698 234	Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc: 23/479	Memorandum of Operating Agreement & Financial Statement between Gastar Exploration USA Inc, Atinum Marcellus I, LLC & Chesapeake Appalachia, LLC: 740/394	Chesapeake Appalachia LLC to SWN Production Company LLC: 33/110	Statoil USA Onshore Properties Inc to SWN Exchange Titleholder LLC: 33/424	SWN Exchange Titleholder LLC merged with/intro SWN Production Company LLC: 19/624	Statoil USA Onshore Properties Inc changed name to Equinor USA Onshore Properties Inc: 2/427	Merger of Gastar Exploration USA Inc with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
1288082-019	5-17-8	B	BOBBY D CRONE	CHESAPEAKE APPALACHIA LLC	1/8+	698 232	Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc: 23/479	Memorandum of Operating Agreement & Financial Statement between Gastar Exploration USA Inc, Atinum Marcellus I, LLC & Chesapeake Appalachia, LLC: 740/394	Chesapeake Appalachia LLC to SWN Production Company LLC: 33/110	Statoil USA Onshore Properties Inc to SWN Exchange Titleholder LLC: 33/424	SWN Exchange Titleholder LLC merged with/intro SWN Production Company LLC: 19/624	Statoil USA Onshore Properties Inc changed name to Equinor USA Onshore Properties Inc: 2/427	Merger of Gastar Exploration USA Inc with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
1288082-020	5-17-8	B	KAREN L CAMPBELL	CHESAPEAKE APPALACHIA LLC	1/8+	698 609	Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc: 23/479	Memorandum of Operating Agreement & Financial Statement between Gastar Exploration USA Inc, Atinum Marcellus I, LLC & Chesapeake Appalachia, LLC: 740/394	Chesapeake Appalachia LLC to SWN Production Company LLC: 33/110	Statoil USA Onshore Properties Inc to SWN Exchange Titleholder LLC: 33/424	SWN Exchange Titleholder LLC merged with/intro SWN Production Company LLC: 19/624	Statoil USA Onshore Properties Inc changed name to Equinor USA Onshore Properties Inc: 2/427	Merger of Gastar Exploration USA Inc with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
1288082-021	5-17-8	B	EDWARD F SOLTIS REVOCABLE TRUST	CHESAPEAKE APPALACHIA LLC	1/8+	700 325	Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc: 29/325	Memorandum of Operating Agreement & Financial Statement between Gastar Exploration USA Inc, Atinum Marcellus I, LLC & Chesapeake Appalachia, LLC: 740/394	Chesapeake Appalachia LLC to SWN Production Company LLC: 33/110	Statoil USA Onshore Properties Inc to SWN Exchange Titleholder LLC: 33/424	SWN Exchange Titleholder LLC merged with/intro SWN Production Company LLC: 19/624	Statoil USA Onshore Properties Inc changed name to Equinor USA Onshore Properties Inc: 2/427	Merger of Gastar Exploration USA Inc with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*39661	9-20-1	D	SHELLIE J PEKULA AND MICHAEL PEKULA	TH EXPLORATION LLC	1/8+	1126 542	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*39661	9-20-2	E	SHELLIE J PEKULA AND MICHAEL PEKULA	TH EXPLORATION LLC	1/8+	1126 542	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

STATE OF WEST VIRGINIA     §  
   §  
COUNTY OF MARSHALL       §

**ASSIGNMENT, BILL OF SALE AND CONVEYANCE**

THIS ASSIGNMENT, BILL OF SALE AND CONVEYANCE (this "*Assignment*"), dated effective as of 7:00 A.M., local time, where the respective Assets are located, on July 1, 2020 (the "*Effective Time*"), is between **Atinum Marcellus I, LLC**, a Delaware limited liability company ("*Assignor*"), whose mailing address is One Riverway, Suite 710, Houston, TX 77056-1988, and **TH Exploration II, LLC**, a Texas limited liability company, whose mailing address is 1320 S. University Drive, Suite 500, Fort Worth, Texas 76107 ("*Assignee*"). Assignor and Assignee are each, individually, referred to herein as a "*Party*" and, collectively, as the "*Parties*."

Capitalized terms used but not defined herein shall have the respective meanings set forth in that certain Asset Purchase Agreement dated as of November 13, 2020, by and among Assignor and Assignee (the "*Purchase Agreement*").

Section 1. Assignment. The conveyance and assignment herein shall be deemed effective as of the Effective Time.

For Ten Dollars (\$10.00) and other good and valuable consideration (the receipt and sufficiency of which are hereby acknowledged), Assignor does hereby forever GRANT, BARGAIN, SELL, CONVEY, ASSIGN, TRANSFER, SET OVER AND DELIVER unto Assignee, and Assignee does hereby acquire, the undivided interests in the Leases (as defined below) set forth on Exhibit A-1, and all other of Assignor's right, title and interest in and to the interests and properties described in subsections (a) through (k) of this Section 1 (without duplication) (such right, title and interest, less and except the Excluded Assets, collectively, the "*Assets*");

(a) The oil and gas leases, mineral leases and Royalties located in the Covered Counties (which Covered Counties include, for the avoidance of doubt, the county in which this Assignment is filed of record), including those described on Exhibit A-1 together with any and all other right, title and interest in and to the leasehold estates created thereby, subject to the terms, conditions, covenants and obligations set forth in such leases or other instrument creating such rights or interests or on Exhibit A-1 (such leases, Royalties, and mineral interests, collectively, the "*Leases*"), together with any related interest in the lands covered by the Leases or lands unitized, pooled, communitized or consolidated therewith (the "*Lands*");

(b) All of the oil and/or gas wells identified on Exhibit A-2 hereto (the "*Wells*"), and any other oil, gas, or other wells located on any of the Leases or the Lands, in each case, whether producing, non-producing, shut-in, temporarily or permanently abandoned or otherwise;

(c) All rights, titles and interests arising under any unitization, pooling and/or communitization agreements, declarations or designations for drilling, spacing and/or production units related to any of the Leases, Wells or Lands, including the units described on Exhibit A-4;



June 1, 2022

WV Department of Environmental Protection  
Office of Oil & Gas  
601 57<sup>th</sup> Street, SE  
Charleston, WV 25304  
Attention: Charles T. Brewer

RE: Pendleton N-12HU

Subject: Road Crossing Letter

Dear Taylor:

Tug Hill Operating, LLC will not be drilling, extracting or producing any minerals under any WV County or State Routes in the area reflected on the Pendleton N-12HU well plat.

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

Sincerely,

A handwritten signature in blue ink that reads "Amy L. Morris".

Amy L. Morris  
Permitting Specialist – Appalachia Region

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

**Date of Notice Certification:** 06/01/2022

**API No.** 47- 051 - \_\_\_\_\_

**Operator's Well No.** Pendleton N-12HU

**Well Pad Name:** Pendleton

**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>522,799.16</u>
County: <u>Marshall</u>	Northing: <u>4,400,422.33</u>
District: <u>Franklin</u>	Public Road Access: <u>Rines Ridge Road (County Route 76)</u>
Quadrangle: <u>Glen Easton 7.5'</u>	Generally used farm name: <u>Alpine Farm, LLC</u>
Watershed: <u>Middle Fish Creek</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 checked="" type="checkbox"/> NO PLAT SURVEY WAS CONDUCTED</p> <p><input checked="" type="checkbox"/> 3. NOTICE OF INTENT TO DRILL or <input 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><b>OOG OFFICE USE ONLY</b></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><input type="checkbox"/> RECEIVED</p>
--	---

RECEIVED  
 Office of Oil and Gas  
**JUN 06 2022**  
 WV Department of  
 Environmental Protection

**Required Attachments:**

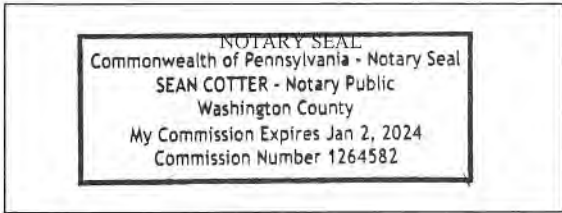
The Operator shall attach to this Notice Certification Form all Notice Forms and Certifications of Notice that have been provided to the required parties and/or any associated written waivers. For the Public Notice, the operator shall attach a copy of the Class II Legal Advertisement with publication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

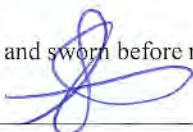
08/26/2022

**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>Amy L. Morris <i>amylmorris</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 1 day of June.  
  
 \_\_\_\_\_ Notary Public  
 My Commission Expires 1/2/2024

**Oil and Gas Privacy Notice:**

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

WW-6A  
(9-13)

API NO. 47- 051 -  
OPERATOR WELL NO. Pendleton S-12HU  
Well Pad Name: Pendleton

**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:** 6/1/2022    **Date Permit Application Filed:** 6/3/2022

**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: Alpine Farm, LLC (Well Pad and Access Road)  
Address: 7932 TWP Road 662  
Dundee, OH 44624-9602

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

SURFACE OWNER(s) (Road and/or Other Disturbance)  
Name: Ray J. Miller  
Address: 1538 Township Road 660  
Dundee, OH 44624

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

SURFACE OWNER(s) (Impoundments or Pits)  
Name: \_\_\_\_\_  
Address: \_\_\_\_\_

COAL OWNER OR LESSEE  
Name: Consol Energy, LLC Attn: Casey Saunders  
Address: 275 Technology Drive, Suite 101  
Canonsburg, PA 15317-9565

COAL OPERATOR  
Name: \_\_\_\_\_  
Address: \_\_\_\_\_

SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)  
Name: No water purveyors within 2000'  
Address: \_\_\_\_\_

OPERATOR OF ANY NATURAL GAS STORAGE FIELD  
Name: \_\_\_\_\_  
Address: \_\_\_\_\_

\*Please attach additional forms if necessary

**08/26/2022**

**Notice is hereby given:**

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

**This Notice Shall Include:**

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

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

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

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

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

**Well Location Restrictions**

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



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

**Water Well Testing:**

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

**Water Testing Laboratories:**

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

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

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

**Written Comment:**

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

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

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

### **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.

WW-6A  
(8-13)

API NO. 47- 051 -  
OPERATOR WELL NO. Pendleton S-12HU  
Well Pad Name: Pendleton

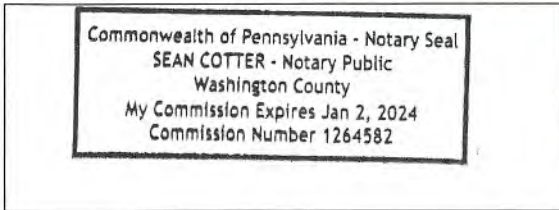
**Notice is hereby given by:**

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

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

**Oil and Gas Privacy Notice:**

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

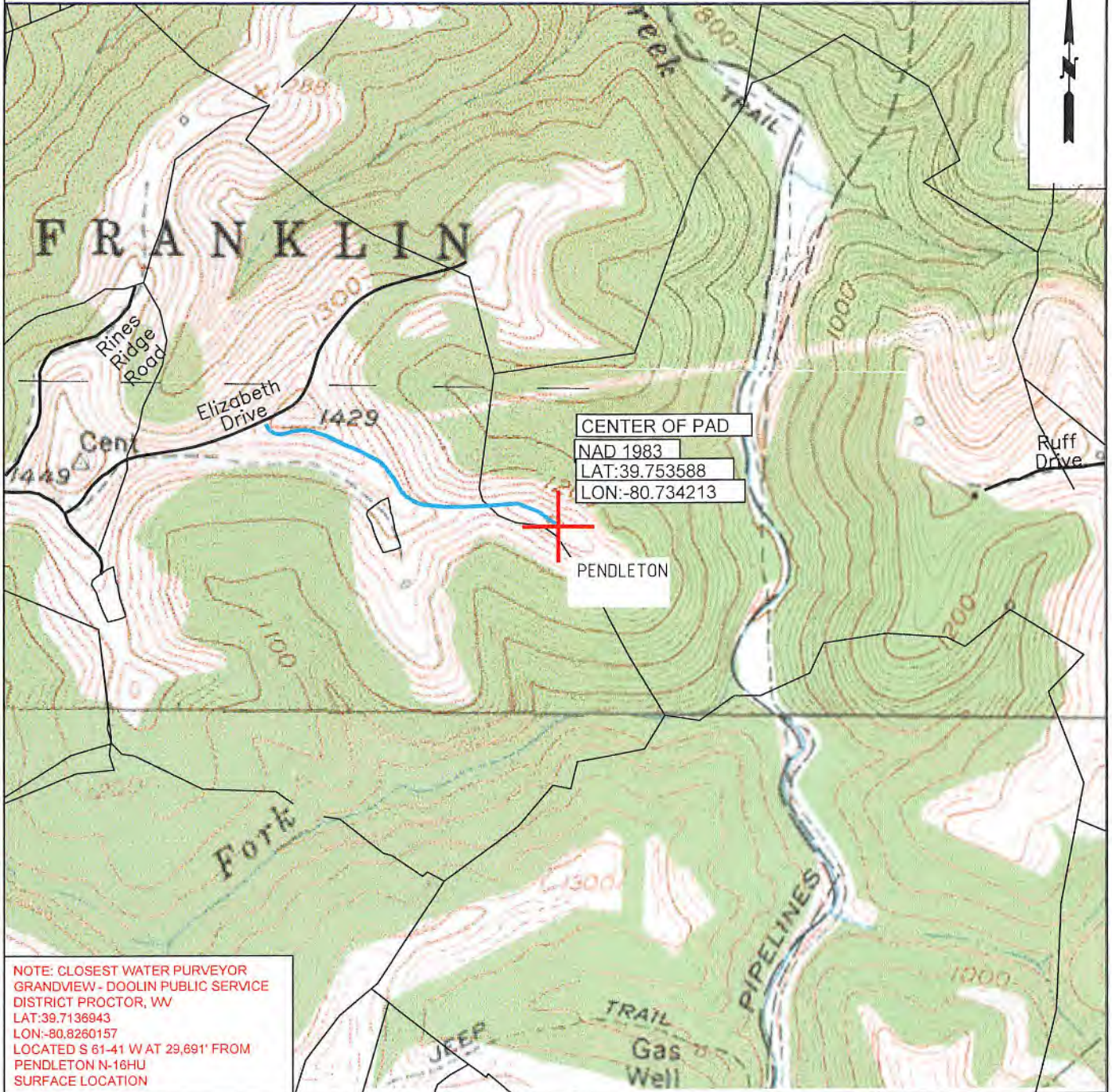



Subscribed and sworn before me this 1 day of June, 2024.  
*[Signature]*  
\_\_\_\_\_  
Notary Public  
My Commission Expires 1/2/2024

08/26/2022

# Pendleton Pad

THERE APPEAR TO BE NO (O) RESIDENCES WITHIN 2,000'.



 <b>TUG HILL</b> OPERATING	OPERATOR	494510851	TOPO SECTION	LEASE NAME
	TUG HILL OPERATING, LLC 380 SOUTHPOINTE BLVD SUITE 200 CANONSBURG, PA 15317		GLEN EASTON 7.5'	PENDLETON
			SCALE: 1" = 1000'	DATE: DATE: 03-15-2022

08/26/2022

**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:** 1/29/2019      **Date of Planned Entry:** 2/8/2019

**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: Eli and Fannie Mae Wengerd (Well Pad and Access Road)  
Address: 7932 TWP Road 662  
Dundee, OH 44624-9602

Name: Ray J. Miller (Access Road)  
Address: 1538 Township Road 660  
Dundee, OH 44624

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

COAL OWNER OR LESSEE

Name: CONSOL Energy, LLC Attn: Casey Saunders  
Address: 1000 CONSOL Energy Drive  
Canonsburg, PA 15317

MINERAL OWNER(s)

Name: Eli and Fannie Mae Wengerd  
Address: 7932 TWP Road 662  
Dundee, OH 44624-9602

\*please attach additional forms if necessary

**Notice is hereby given:**

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

State: <u>West Virginia</u>	Approx. Latitude & Longitude: <u>39.75344; -80.73397</u>
County: <u>Marshall</u>	Public Road Access: <u>Rines Ridge Road (County Route 76)</u>
District: <u>Franklin</u>	Watershed: <u>Fish Creek</u>
Quadrangle: <u>Glen Easton 7.5'</u>	Generally used farm name: <u>Eli and Fannie Mae Wengerd</u>

Copies of the state Erosion and Sediment Control Manual and the statutes and rules related to oil and gas exploration and production may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57<sup>th</sup> Street, SE, Charleston, WV 25304 (304-926-0450). Copies of such documents or additional information related to horizontal drilling may be obtained from the Secretary by visiting [www.dep.wv.gov/oil-and-gas/pages/default.aspx](http://www.dep.wv.gov/oil-and-gas/pages/default.aspx).

**Notice is hereby given by:**

Well Operator: Tug Hill Operating, LLC

Telephone: 724-749-8388

Email: amiller@tug-hillop.com

Address: 380 Southpointe Boulevard, Plaza II, Suite 200  
Canonsburg, PA 15317

Facsimile: 724-338-2030

**Oil and Gas Privacy Notice:**

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

**08/26/2022**

**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:** 06/02/2022      **Date Permit Application Filed:** 06/06/2022

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

- CERTIFIED MAIL                                       HAND  
RETURN RECEIPT REQUESTED                                      DELIVERY

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

**Notice is hereby provided to the SURFACE OWNER(s)**  
(at the address listed in the records of the sheriff at the time of notice):

Name: Alpine Farm, LLC (Well Pad and Access Road)  
Address: 7932 TWP Road 662  
Dundee, OH 44624-9602

Name: Ray J. Miller (Access Road)  
Address: 1538 Township Road 660  
Dundee, OH 44624

**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>522,799.16</u>
County:	<u>Marshall</u>		Northing:	<u>4,400,422.33</u>
District:	<u>Franklin</u>	Public Road Access:	<u>Rines Ridge Road (County Route 76)</u>	
Quadrangle:	<u>Glen Easton 7.5'</u>	Generally used farm name:	<u>Alpine Farm, LLC</u>	
Watershed:	<u>Fish Creek</u>			

**This Notice Shall Include:**

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

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

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

**Oil and Gas Privacy Notice:**

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



WEST VIRGINIA DEPARTMENT OF TRANSPORTATION  
**Division of Highways**

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

D. Alan Reed, P.E.  
State Highway Engineer

Jimmy Wriston, P. E.  
Secretary of Transportation  
Commissioner of Highways

November 22, 2021

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

Subject: DOH Permit for the Pendleton Pad, Marshall County  
Pendleton S-12HU Well Site

Dear Mr. Martin,

This well site will be accessed from a DOH permit #06-2010-0110 which has been transferred to Tug Hill Operating LLC for access to the State Road for a well site located off Marshall County Route 76 SLS MP 1.91.

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. This letter is valid for permitting purposes for one year from the date of this letter.

Very Truly Yours,

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

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

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



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

**Pendleton Wells**

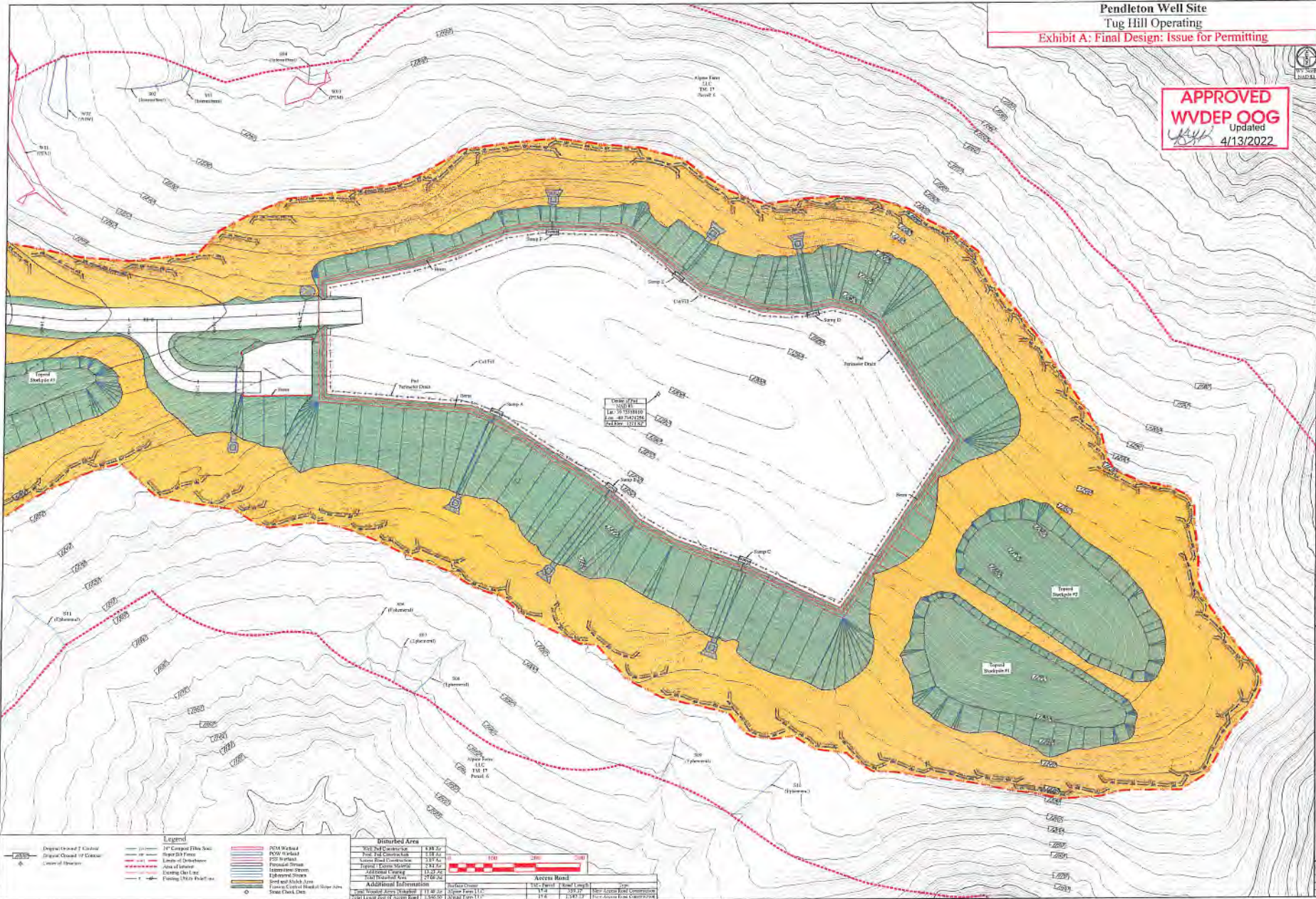
<b>PRODUCT NAME:</b>	<b>CHEMICAL DESCRIPTION:</b>	<b>PRODUCT USE:</b>	<b>HAZARDOUS COMPONENT:</b>
GBW-20C	Hemicellulase Breaker	Breaker - Water	None
ALPHA 1427		Biocide	Glutaraldehyde – CAS#000111-30-8 Quaternary ammonium chloride CAS# 007173-51-5 Alky dimethyl benzyl ammonium Chloride (C12-16) – CAS#068424-85-1 Ethanol – CAS# 000064-17-5 Water – CAS# 007732-18-5
FRAC SAND	Silica Sand (various Mesh sizes)	Proppant	Crystalline silica (quartz) CAS# 14808-60-7
S-8C, Sand	Silica Sand (100 mesh)	Sand	Silica – CAS# 14808-60-7
GW-3LDF		Gellant - Water	Petroleum Distillate Blend – Proprietary, (Not Associated with Diesel Fuel) Guar gum – CAS# 009000-30-0
FRW-18		Friction Reducer	Hydrotreated light distillate CAS# 064742-47-8
Scaletrol		Scale Inhibitor	Ethylene glycol – CAS# 000107-21-1 Diethylene glycol – CAS# 000111-46-6







**APPROVED**  
**WVDEP OOG**  
Updated  
4/13/2022



**Legend**

Dependent 7' Contour	14" Concrete Filter Box	DCM Washed
Dependent 10' Contour	Super 200 Filter	P20 Washed
Contour Interval	Line of Construction	12" Concrete Storm
	Existing Chute	Soil and Ashok Stone
	Existing Utility Right-of-Way	Frame & Concrete Headwall Slope Area
		Stone Check Dam

**Disturbed Area**

DCM Washed	13,982.45
P20 Washed	1,188.42
12" Concrete Storm	1,188.42
Soil and Ashok Stone	1,188.42
Frame & Concrete Headwall Slope Area	1,188.42
Stone Check Dam	1,188.42
<b>Total Disturbed Area</b>	<b>18,726.14</b>

**Aspen Road**

Aspen Road	11.8	11.8	11.8
Aspen Road	11.8	11.8	11.8
Aspen Road	11.8	11.8	11.8

**TUG HILL**  
OPERATING



THIS DOCUMENT  
PREPARED FOR  
TUG HILL  
OPERATING



Ernest and Sediment Control Plan  
**Pendleton Well Site**  
Franklin District  
Marshall County, WV

Date: 04/13/2022  
Scale: As Shown  
Designed by: ZS  
File No:  
Sheet 8 of 20